HEALTH CARE CRISIS IN AMERICA, 1971

HEARINGS

BEFORE THE

SUBCOMMITTEE ON HEALTH

OF THE

COMMITTEE ON LABOR AND PUBLIC WELFARE UNITED STATES SENATE

NINETY-SECOND CONGRESS

FIRST SESSION

ON

EXAMINATION OF THE HEALTH CARE CRISIS IN AMERICA

MARCH 23, 24, 31, AND APRIL 6, 1971

PART 5

Printed for the use of the Committee on Labor and Public Welfare

U.S. GOVERNMENT PRINTING OFFICE
59-661 O WASHINGTON : 1971

COMMITTEE ON LABOR AND PUBLIC WELFARE

HARRISON A. WILLIAMS, JR., New Jersey, *Chairman*

JENNINGS RANDOLPH, West Virginia
CLAIBORNE PELL, Rhode Island
EDWARD M. KENNEDY, Massachusetts
GAYLORD NELSON, Wisconsin
WALTER F. MONDALE, Minnesota
THOMAS F. EAGLETON, Missouri
ALAN CRANSTON, California
HAROLD E. HUGHES, Iowa
ADLAI E. STEVENSON III, Illinois
JACOB K. JAVITS, New York
WINSTON PROUTY, Vermont
PETER H. DOMINICK, Colorado
RICHARD S. SCHWEIKER, Pennsylvania
BOB PACKWOOD, Oregon
ROBERT TAFT, JR., Ohio
J. GLENN BEALL, JR., Maryland

STEWART E. MCCLURE, *Staff Director*
ROBERT E. NAGLE, *General Counsel*
ROY H. MILLENSON, *Minority Staff Director*
EUGENE MITTELMAN, *Minority Counsel*

SUBCOMMITTEE ON HEALTH

EDWARD M. KENNEDY, Massachusetts, *Chairman*

HARRISON A. WILLIAMS, JR., New Jersey
GAYLORD NELSON, Wisconsin
THOMAS F. EAGLETON, Missouri
ALAN CRANSTON, California
HAROLD E. HUGHES, Iowa
CLAIBORNE PELL, Rhode Island
WALTER F. MONDALE, Minnesota
PETER H. DOMINICK, Colorado
JACOB K. JAVITS, New York
WINSTON PROUTY, Vermont
RICHARD S. SCHWEIKER, Pennsylvania
BOB PACKWOOD, Oregon
J. GLENN BEALL, JR., Maryland

LEROY G. GOLDMAN, *Professional Staff Member*
JAY B. CUTLER, *Minority Counsel*

CONTENTS

CHRONOLOGICAL LIST OF WITNESSES

TUESDAY, MARCH 23, 1971

WEDNESDAY, MARCH 24, 1971

WEDNESDAY, MARCH 31, 1971

TUESDAY, APRIL 6, 1971

STATEMENTS

ADDITIONAL INFORMATION

THIS PAGE INTENTIONALLY LEFT BLANK

HEALTH CARE CRISIS IN AMERICA, 1971

TUESDAY, MARCH 23, 1971

U.S. SENATE,
SUBCOMMITTEE ON HEALTH OF THE COMMITTEE
ON LABOR AND PUBLIC WELFARE,
Washington, D.C.

The subcommittee met, pursuant to recess, at 10:15 a.m., in room 6202, New Senate Office Building, Senator Edward M. Kennedy (chairman of the subcommittee) presiding.

Present: Senators Kennedy, Eagleton, and Dominick.

Committee staff members present: LeRoy G. Goldman, professional staff member to the subcommittee; Jay B. Cutler, minority counsel to the subcommittee.

Senator KENNEDY. The subcommittee will come to order.

Health insurance is an integral part of the health care system in this country. The vast majority of Americans are covered by health insurance and rely on it to protect them from the soaring costs of sickness and hospitalization.

We are gravely concerned that this reliance is misplaced. We see evidence that the insurance carriers are trapped in the same health care crisis then as the consumers.

They do not seem to be able to control the rising costs of health care. They can only raise their premium to cover higher costs.

They do not seem to be able to assure that hospitals and physician services are used wisely. They can only add complicated conditions and exclusions to their policies—and raise their premiums even further. In many ways the insurance carriers seem to be the collecting agents or money changers of the health industry.

They appear to be the agents of the hospitals and physicians, rather than the consumer.

However, it is fairer and more realistic to say that insurance carriers are trapped in the same troubled American health care system that victimizes all of us—consumer, insurer, and provider alike.

We are here this morning to hear from several of the largest and best known insurance carriers in America. Blue Cross and Blue Shield have become household terms in this country. They are exceptional among insurers—by virtue of being the oldest and largest health insurers in the country, by virtue of their efforts at community and social service, and by virtue of being nonprofit organizations.

Americans have come to expect the most from Blue Cross and Blue Shield. Indeed if any insurance carriers can change and improve our health system, we would expect Blue Cross and Blue Shield to be among them.

We welcome them here today, and look forward to hearing their insights into why there is a health care crisis and what can be done about it.

We will hear first this morning from a Senator who has had a strong interest in the health insurance area and has conducted hearings previously of the Blue Cross organization. We welcome the Honorable Philip A. Hart, senior Senator from Michigan. Senator Hart is a member of the Commerce and Judiciary Committees; I have the honor of serving with him on the Judiciary Committee and very much admire and respect his work there.

He is a man of intelligence and integrity, and it is my pleasure to extend a special welcome to him.

STATEMENT OF HON. PHILIP A. HART, A U.S. SENATOR FROM THE STATE OF MICHIGAN

Senator HART. Thank you, Mr. Chairman.

I apologize for being late. I am overwhelmed by the fact that the committee was in place and ready to go when I arrived. That is perhaps the most encouraging note I have seen in a long time with respect to delivering health care in this country.

I come with an additional apology. I don't know how many of the committee find that most of the mayors of their States have arrived in Washington, and I had to fight my way out of the office, which explains why I am late, and made a solid commitment that I was not running out on them, that I would be back at all.

Mr. Chairman, I have prepared, and if there is no objection, would ask that there be printed in the record, a full statement, and I will attempt to summarize it.

Senator KENNEDY. It will be so admitted.

Senator HART. Your opening statement, I think, is a very fair and balanced description both of the problem and the limitations that attach to some of the proposed solutions. One of the great temptations is to explain the inadequacy of our performance with respect to the delivery of health care on the existence of some evil fellow, some bad actor, and you point in whatever direction your tendencies and philosophies would suggest.

Some will point to the private insurance carrier, others will point to organized medicine, some will point to cheating welfare people.

In my book there is no bad actor involved. All of us as a people share a common guilt. We do have the means to deliver adequate health care to everyone if we would discipline each other and ourselves to begin with.

Though, coming from a big spender this sounds heretical, merely dumping more money into the existing structure is not an answer. It may ease our common conscience for awhile, but it is not the answer.

Improvement on a vast scale has to be taken, and we find that it is not the emotionally appealing description of a little child dying who could have been saved if he had just been vaccinated, or the oldster who is bedridden with arthritis when medications could have saved him.

It is not that sort of story, or the mother dying needlessly in childbirth, that is going to persuade us to do what we should have

been doing. It is the fact, all of a sudden, that the spectacular costs of the present system delivering so inadequate a product now make all of us say, "That is enough."

Then it really is not the heartrending emotional story that we have been pitching in an effort to improve the thing that will get the improvement. It is the fact that all of a sudden the present system just costs too much for what we are getting that is going to move us in the direction we should be moving in.

That is not a very humanistic view of ourselves, but I think it is a realistic one. If that is a case, in attempting reform we have to be as realistic as the motive which persuades us. We have to again resist the attrative temptations to rush into another system only because it is different, not necessarily better.

Now, if you are beginning to wonder whether I am really a witness in support of S. 3, let me reassure you, I am. I am grateful that you permitted me to cosponsor, and I support its philosophy.

Mr. Chairman, you, and I have spent a good many hours over a long number of years identifying some of the bits and pieces that make up the total cost of health care for this country in those antitrust and monopoly subcommittee hearings, and we should always acknowledge that Senator Kefauver began it in 1958.

I think we have had a series of hearings which identify some of the failures in our delivery system. Some, incidentally, which identified the visions of an individual or occasional group of bad men, but basically reflected that indifference to a problem.

In my prepared statement, I point out a number of these identified inadequacies. The most recent phase of the investigation into hospital costs took us into a brief analysis of the role that Blue Cross was playing in holding down hospital costs, and I think that what we learned, supplies strong testimony against the administration proposal that would reconsider that when we consider a new health plan we simply pour more money into the existing system, relying upon competition between private insurance companies to hold down the bill.

While spokesmen for Blue Cross, whom you will hear today, were optimistic in their hope that they could do more in the future in holding down costs by encouraging the use of other than the most expensive facilities, I don't share that optimism entirely.

It is here, that this committee can ask itself most helpful questions.

In my prepared statement I point to five areas where very substantial savings, in hospital bills alone, could be attained. We suggest a saving available in five areas about $5 billion a year.

The chairman's opening statement identified the inherent problem in engaging as the principal in driving a new health care program, a private carrier who, unless very basic reform is attached to it, cannot be an effective disipliner of either the physician or the hospital, and will continue, whether or not it is comfortable or not, being largely an agent for collection purposes.

As you know, when Blue Cross started out it was available generally. It is a social insurance, protecting all that needed it. Under the competition from the commercial health insurance companies as they

came into business, Blue Cross switched from writing entire communities at a single rate and went to experience rating, and in doing so they became like the commericals, seeking the groups to which, that file fewer claims.

Nongroup business was written, but at higher rates for less protection. Even despite this taking of the best risks, the record of the commercial insurance companies is not very impressive. You are familiar with the comparisons. Social security only requires 5 cents to deliver $1 in benefits. Private property and casualty companies require 22 cents for $1 in benefits delivered under group plans, and 45 cents under individual plans.

The life companies do better with group, 13 cents to deliver $1 in benefits, but match the 45 cents for individual plans.

As I understand the administration's proposal, the bulk of our families headed by an employed individual would be covered by a private group health insurance plan. The President's message, as I read it, indicates that these plans will offer far more in the way of benefits than those which are presently offered, and thus one reasonably can expect that the administrative expense, which I have discussed in this paper, will go up and the pressure of delivering increased benefits.

The cost of these plans will be passed off to the public in the form of price for the service rendered or the product manufactured. In effect, we will all be paying more to maintain a private health industry whose record is at best subject to some criticism.

That is really why I testify before you this morning. I think that S. 3, your bill, Mr. Chairman, is good because it will eliminate some of those sad stories which traditionally we have recited in order to persuade ourselves to reform our health delivery system.

It is an effective proposal because it goes about this humanistic job in a very realistic way, offering incentives, dollar and cents kinds ofincentives to health suppliers so that they will provide good medical care to all at a price that is within reason.

I thank you for introducing the bill.

I am glad to be its cosponsor, and share with you the hope that out of this committee and the testimony that you will hear it can be improved and refined, and that the Congress soom will have an opportunity to act upon it.

Senator KENNEDY. I want to thank you, Senator Hart, for your statement, and your comments here. I feel that you have had a rather unique view of the opportunities and limitations of the Blue Cross system in terms of our own study of this area.

Could you tell us just a little bit about your own hearings into this?

Senator HART. The thing, I suppose, that would be most relevant for your consideration is the question "To what extent is a private insurance carrier able to discipline the practices which go into the cost of delivering the care?"

Senator KENNEDY. I would like to hear your impressions on both cost controls and quality standards. I think these are perhaps two of the most important elements, here.

Senator HART. I am less comfortable when talking about their ability to effect quality standards. My impression, based on the testi-

mony, is that it is extremely limited because the physicians and the hospital administrators are sort of like the Pentagon witnesses. They are the experts, and how does a poor old insurance fellow going to tell them that really you should have kicked that man out of bed, or you should not have admitted him to the hospital to begin with, or that you really don't need that piece of equipment?

On the business of even disciplining some of their own local plans, and there are some 75 Blue Cross plans across the country, there was a dramatic example when the Richmond, Va., plan came under scrutiny, wasteful expenditures in that plan had gone on for a long period of time, the local plans directors become aware of it, whether or not because of newspaper inquiries or exposes I am not sure, but in any event they did.

The national Blue Cross association when we asked them about it assured us that, yes, they did have some weapons to ride herd on this sort of wasteful practices. Yet the director of that Richmond plan testified that, "Oh, no, we run the show our way."

My conclusion, based on our hearings, that until there is an effective Federal focal point which is able to effectively supervise the administrative expenditures and require maintenance and observance of quality standards, we are falling short of that point we should seek if it is our purpose to give truth to the claim that every American has a right to good health care.

This does not mean that the Federal Administrative Agency will be free of mistakes or foolishness, either, but there will be a different incentive. The incentive, why blink it—the insurance carrier, though labeled "nonprofit" is the maintenance of a nonprofit profitability. This is not the description of a Federal activity. That is, indeed, why Federal activities are generally subject to criticism. But we pay a price to achieve the social objective, a price that we do exact of the delivery system, the standards which might on the nonprofit profitability scale be uneconomic.

Senator KENNEDY. In your review of Blue Cross in efforts to hold down costs, was there anything which would make you feel we should make them the principal vehicle, as has been suggested, for a very significant extension and expansion of health services to the American people?

Senator HART. No, Mr. Chairman, that is a flat answer. What we would be asked to do would be to pay more, I think, than otherwise would be the case, and we would be paying more in order to retain a private health insurance industry, and that in my book, at least up until this point in the testimony and hearings, is not justified.

Senator KENNEDY. Senator Eagleton?

Senator EAGLETON. Senator, I have two questions. One is specific, based on your hearings in the Commerce and Judiciary Committees, and one philosophical.

The specific one is, with respect to the previous hearings you held on Blue Cross and Blue Shield, what did your hearings, in zeroing in on the point that Senator Kennedy and you have raised by your own testimony, in terms of cost control, develop or reveal in so far as what might be called almost an incestuous relationship between Blue Cross-Blue Shield and the hospital administrators in so far as interlocking directorates and the like?

Senator HART. The interlock was the rule, not the exception. There was an explanation made that these were the experts, and it was not surprising, "Where else could we go?" But as criticism was directed toward the practice, I think the policy increasingly with local plans is to seek to get a better balance, not necessarily a nonprofessional majority, but at least more nonprofessionals, nonhospital, nondoctors, on to the local board.

But my assumption is that it continues to be the rule and not the exception.

Senator EAGLETON. Since the record is clear, I take it that interlocking boards of directors are the rule and not the exception. On boards of Blue Cross and Blue Shield plans you will find individuals from hospitals, and in the same area, on the hospital boards you will find Blue Cross and Blue Shield types, and thus with this interlock, with friendly brothers in law, as it were, supervising each other, cost control is unrealistic.

Senator HART. It is, as I see it.

Senator EAGLETON. I like those short answers to my demogagic questions.

Senator HART. That was not a demagogic question, I assure you. As long as we understand why this happens, I can understand how you would organize that way if you were charged with the responsibility for a nonprofit operation.

Senator EAGLETON. Nonprofit is what, an anology?

Senator HART. I am trying to suggest, and there is not any word of art that I am aware of, that labeling something a nonprofit operation does not mean that it is a social vehicle and it is not a function that is unaccountable for the deliverers of service and it does not free itself by the label nonprofit from some of the inhibitions that attach to this free competitive society.

Senator EAGLETON. Thank you.

My second question, then, more in the philosophical vein is this: In these hearings to date, we have heard from various spokesmen, various advocates of different proposals. In the testimony of several weeks ago, when Mr. Woodcock and his medical advisors, not affiliated with the UAW but the Committee of 100, appeared, it developed in the record, that under any plan, be it S. 3, the Kennedy plan, or the Nixon-Richardson plan or one the AMA has kicked around somewhere, and others, a common problem develops in all of these: The question of medical manpower through the full gamut and I am talking about MD's, nurses, paraprofessionals, et cetera.

The testimony that day was whatever plan we have moved to, even if we remained with the extant nonplan, or to a new one, it would be at the very least, according to their testimony, a decade, if we even started today on a crash, massive program of development of additional medical manpower that will be needed.

So I ask this philosophical question based on that testimony. Have we not in this country on so many previous occasions promosed so, so much, and delivered so little, whether it be in the area of nutrition, housing, or education, or pollution control, lights at the end of tunnels in wars—the list of promises is endless.

The list of fulfillment is not existent. Don't we run the risk in this of once again making great promises, A to Z medical care for every-

body, regardless of whether you are black, white, rich, poor, north, south, and we are going to deliver that to you and the sick are going to be made well and the poor are going to have services tanta mount to what millionaires can afford in the current market and so on and so forth. We are going to make these promises again and know full well that the day we make the promise we are at least a decade away from being able to deliver on it even if we had a crash program to develop the medical manpower starting today, and I have not seen the crash program take off.

So don't we run a real risk of further disenchantment, further disillusionment which really pervades the whole atmosphere of this country as we are here in the latter third of the 20th century?

Senator HART. Yes, Senator, I think we do.

What is the alternative?

Senator EAGLETON. Right.

Senator HART. I think first we should discipline ourselves in advertising what this will do. We should acknowledge the limitations which attach for a period of time. I doubt as we attempt to sell it whether we will remember to do that very well, but we should.

But if we don't make this kind of commitment with inevitable disappointments to follow, we are never going to have the goad to to kick us into getting a crash program, to make the delivery a reality.

I am not able to say that if the enactment of the Kennedy program or any of these other programs occurs that we will then do what is necessary to as quickly as possible provide the facilities which will enable it to be delivered in full, but I am sure that if we don't make the commitment we won't do those things.

I have said that if we only find a formula that would persuade us to do this in this area what we did in the pursuit of man on the moon, we would be in better shape. If it is a decade, put the chart up on the wall, and every 6 months measure how many paramedics are on one line, and how many new hospitals, and how much out-patient treatment is developing as opposed to in patient, and so on, and keep it on schedule, and when it falls back come up with the resources that is needed to return it to schedule.

Everybody makes that speech, but there is one element in the commitment to the moon which kept us on schedule, and that was that we now thought the Russians would get there first.

If we could just find a Russian who is out to sabotage the Kennedy health program, then maybe we would have found the formula. [Laughter.]

Senator KENNEDY. You don't have to look quite that far. [Laughter.]

We want to thank you very much for coming Senator Hart. Your Antitrust Subcommittee has been reviewing the whole question of procedures and costs under Blue Cross. I know you have a great deal of understanding of this area. The question of insurance is obviously one of the most fundamental problems we face in the health care crisis.

So your comments and experience are very valuable to the committee and I want to tell you we appreciate your coming.

Senator HART. Thank you, Mr. Chairman.

Thank you, Senator.

(The prepared statement of Senator Hart follows:)

PREPARED STATEMENT OF HON. PHILIP A. HART, A U.S. SENATOR FROM THE STATE OF MICHIGAN

Mr. Chairman: When one tackles the subject of a national health system, the temptation is to get a bit maudlin. Thoughts of children laying pale and wan in hospitals with diseases that vaccination could have prevented—visions of oldsters too crippled with arthritis to leave their homes when medication could make them viable—stories of mothers dying needlessly in childbirth—all are too common and tend to cloud the mind of the would-be reformer.

Yet it is ironic that all of this emotionalism—which has certainly existed for hundreds of years—has never been sufficient to bring the nation as a whole to the point of endorsing the "right" each citizen has to good health care. Only when the spectacular costs of the present system burst in full view did critics and proponents of the system cry almost with one voice "Now is enough."

This type of mirror does not reflect a very humanistic view of us as a people. But it is realistic.

And, in attempting reform, we must be equally realistic.

We must resist the attractive temptation of being influenced by the number of sad stories that an ineffective health care sysem is producing so that we rush into another system only because it is different—but not necessarily better.

At this point, I suppose you are wondering if your witness is a cosponsor of your plan for a national health insurance (S. 3) or a member of the entrenched opposition.

Let me make the record clear on that: I do wholly and entirely support the philosophy of S. 3. I suspect the plan would have had a common sense appeal to me even if the Senate Antitrust and Monopoly Subcommittee, with you, Senator Kennedy, actively participating had not worked rather consistently for almost 13 years on the bits and pieces that make up the total cost of health care for the nation.

As you know, that work began under Senator Kefauver in 1958 with the investigation that led to the Drug Amendments of 1962. The major thrust of those amendments was to lower the costs of drugs by encouraging the use of generic prescriptions and to remove from the market ineffective drugs which were not only wasting patient dollars but prolonging illnesses by delaying the use of effective medications.

It is only now—nine years later—that the regulatory agencies have reached the point of actually ordering large numbers of those drugs judged to be ineffective off the market.

It was only after another set of hearings by the Subcommittee on Antitrust and Monopoly that FDA changed its policy with respect to the combinations of drugs used for weight control and many of these expensive and irrational drugs were removed from the market.

It was also the investigation by the subcommittee which led to my proposal to lower costs of care by prohibiting doctors from profiting by sale of products they prescribe. We learned during that investigation that doctors were selling drugs to patients under the brand name of their own repackaging company for as much as 10–15 times the price of the same drug under its generic name. We learned also that patients of doctors who owned their own pharmacies were likely to get more prescriptions than from a non-pharmacy owner. For example:

In one Kansas county with two pharmacies, one owned by a physician and one by a pharmacist, the doctor-owned pharmacy in the second quarter of 1964 submitted 94 percent of all the welfare prescriptions claims originated by the two pharmacies. In another county, one doctor-owned pharmacy turned in 50 percent of all welfare Rx claims for the entire county during the quarter.

More recently, the subcommittee tackled the knotty question of whether competition could be overlayed on our present hospital system to slow—if not halt—the increasing cost of hospital care. As you well know, hospital costs have been leading the pack in the skyrocketing health care expenses. The consumer price index has risen to 256 for hospitals, compared to 155 for doctors' fees and 127 for the general index.

The most recent phase of that hospital cost investigation took us into a brief analysis of the role that Blue Cross was playing—or could play—in holding down hospital costs.

What we learned there I think supplies the strongest testimony against President Nixon's proposal that when we consider a new health plan we simply pour more money into the present system—relying on competition between private insurance companies to hold down the bills.

Mr. McNerney—who will testify today—also appeared at our hearings. He was frank in admitting that Blue Cross has not done the job it might have in holding down costs by encouraging use of facilities other than the most expensive, the hospital.

Where he and I must part company is on the optimistic hope that more will be done in the future.

Mr. Chairman, it is perhaps crass but human nature is such that "money talks." This is recognized in S. 3 which offers economic incentives to the health service suppliers to bring down costs.

There is presently no such incentive for private health insurers. Instead you get what we have today—the collection agency idea with premiums going up, up and up with more and more persons being priced out of the market.

Let's just take a look at what could possibly happen to hospital costs if there were an incentive to lower them.

Based on testimony at our hearings, hospital bills could be cut by one-third—some $5 billion a year.

And we were told by experts this could be done while producing better health care.

Here are the highlights of where those savings could come:

1. We should be able to keep 30 percent of patients out of hospitals by treating them as out-patients, in the doctor's office or at home. Potential savings: Two billion dollars a year.

2. Ten percent of the patients who now overstay in the hospital could be discharged on time. Potential savings: One billion, 200 million dollars a year.

3. Transferring educational expenses for interns, residents, nurses and paramedical personnel from patients' charges to the community at large could save those least able to pay, the sick, another $1 billion a year.

4. Making more efficient use of hospital staff would add $1 billion to the savings.

5. Eliminating contracts where the pathologist frequently gets one-third of laboratory income could cut—we were told—patients lab bills by two-thirds.

On top of that we must add the savings earned by careful regional planning which could avoid overbuilding and overequipping of hospitals. Clearly this would save sums approaching the billions. Blue Cross noted during our hearings that they had no control over construction costs.

And effective utilization of existing hospitals would cut the need for building more. For example: Keeping patients out of hospital beds who didn't need them in 1968 would have meant we needed 60,000 fewer beds. The capital investment represented by these is two billion, four hundred million dollars.

Fortunately, prodded by the regulations of Medicare, utilization review committees are being set up in hospitals to effect some of these savings. But there is a lesson there for those looking to reforming the health delivery system. The utilization review committees—in the main—came after the government said they were necessary. They were not implemented under the influence of the private insurance carriers.

Surely, when we finally pass reform legislation it is clear that at a minimum we must have a system which will give the impetus to holding down costs.

As you know, from my cosponsorship of your bill, I doubt seriously if Federal regulation alone would be the most effective way of doing the job.

Most consumers, I suspect, assume that as their purchasing agent the insurance companies are being as cautious as possible in paying bills submitted by hospitals.

But my mail pile and testimony in the hearings raises questions about that. Both have produced cases where patients were billed for medication or treatment that was never delivered, yet the insurance company paid the bill even over the patients' protests.

It's something like the statement from the chief execuive officer of the Richmond (Va.) Blue Cross plan.

He told us that the plan has 30 some auditors and has the right to audit the books of member hospitals.

When I asked what happened if an audit turned up wasteful practices, he responded:

"Well, Mr. Chairman, I am not aware of our audits ever uncovering wasteful charges, and I really wouldn't know what we would do if we ran into them."

Blue Cross itself—with its 75 local plans plus the national—raises some interesting questions as to whether this is the most efficient way to handle payouts. For example: The state of New York as eight Blue Cross plans, each with a well-paid president (the New York City plan pays its President $81,875 per year), full staffs and facilities. Normally the chairman of the Antitrust Subcommittee would applaud such diversity because it might foster competition to the benefit of consumers. However, in this case the plans operate in exclusive territories with no interplan competition and the question of duplicity and unneeded expense is a real one. Presumably, the same duplicity and unneeded expense would be permitted to exist under the administration's proposal.

Just as there are questions as to the effectiveness of Blue Cross' clout in bringing down hospital expenses, there are an equal number of questions as to who—if anyone—can bring down administrative expenses of the local Blue Cross plans.

The Richmond plan came under scrutiny for its administrative expenses in May of 1970. By August, they had decided they didn't need the fourth floor of their new $5 million building and rented it out. One hundred and three full-time and 35 part-time employees had been cut from the payroll, at an estimated annual savings of more than one-half million dollars. The number of cars rented for the employees had been cut from 119 to 64. These averages were part of what we learned about during our investigation. There were others such as the $198,000 contributed to a profitmaking data processing center—$42,000 of it without the board of directors' approval. And there was the car rental deal given to one firm—even though another bid was $30,000 less.

Many of these wasteful expenditures had gone on for some period of time before the board of directors detected them. The national Blue Cross Association assured us that they had some weapons to ride herd on this. Yet the director of the Richmond plan told us, "We run the show our way."

Mr. Chairman, as I said, I am generally devoted to the principle of free competition. But unfortunately, I fear in the health insurance field it has ended up in companies competing for the good risks and forcing many to pay out of their own pockets. If you compete for good health risks, it operates against the concept that good health care is a right.

As you know, when Blue Cross started out it was available generally. It was a social insurance—protecting those who needed it.

Under the competition from the commercial health insurance companies, as they came on stream Blue Cross switched from writing entire communities at one rate and went to "experience rating." In doing so, they became like the commercials—seeking the groups to write that file fewer claims. The nongroup business was written, but at higher rates for less protection.

Even despite this taking of the best risks—the record of the commercial insurers is not very impressive. While the Social Security Administration only requires 5 cents to deliver $1 in benefits, the private property and casualty companies require 22 cents for $1 in benefits delivered under group plans and 45 cents for individual plans. The life companies do better with group—13 cents to deliver $1 in benefits—but match the 45 cent rate for individual plans.

As I understand the Administration's proposal, the bulk of our families headed by an employed individual would be covered by a private group health insurance plan. The President's message indicates that these plans will offer far more in the way of benefits than those which are presently offered. Thus, one can reasonably expect that the administrative expense previously referred to will go up under the pressure of delivering increased benefits. The cost of these plans will be passed off to the public in the form of price of the product manufactured or the service rendered. In effect, we will all be paying more in order to retain a private health insurance industry, whose record is, at best, highly questionable.

I guess that leads me to the real nut of what I came here today to say. This is that S. 3 is good because it will write happy endings to the sad stories

that we all get so upset about. But it is an effective proposal because it goes about this humanistic job in a realistic way: offering incentives—the dollar and cents kind—to health suppliers so they will provide good medical care to all at a price that is within reason.

I applaud your bill and am happy to be a cosponsor.

Senator KENNEDY. Our next witness this morning is Walter McNerney, President of the Blue Cross Association. In addition to his work at Blue Cross, Mr. McNerney has served as the chairman of HEW Secretary Finch's task force on medicaid and related programs in 1970, is presently a consultant, committee on insurance and prepayment plans of the American Medical Association, is a member of the task force on program development and administration for comprehensive health programs in college communities for the American College Health Association, and is a member of the medical care section panel, who are editorial consultants to the publication Medical Care of the American Public Health Association.

These are just a few of his accomplishments.

Mr. McNerney, we welcome you here this morning.

STATEMENT OF WALTER McNERNEY, PRESIDENT, BLUE CROSS ASSOCIATION; ACCOMPANIED BY BERNARD TRESNOWSKI, SENIOR VICE PRESIDENT, GOVERNMENT OPERATIONS, BLUE CROSS

Mr. MCNERNEY. Thank you, Mr. Chairman. Mr. Chairman and members of the subcommittee my name is Walter McNerney. I am the president of the Blue Cross Association, as the chairman has stated, which is the National Association of some 74 Blue Cross plans in the United States.

Next to me is Bernard Tresnowski, who is a senior vice president in charge of government programs.

Mr. Chairman, we appreciate your kind reference to our organization in your introduction. We are proud of it, and we welcome this opportunity to discuss the status of our health care system and ways to improve it.

I would like to ask your permission, Mr. Chairman, to submit my written testimony for the record at this point, and to proceed with some selective reference to it for the sake of today's deliberations.

Senator KENNEDY. It will be admitted in the record at the end of your testimony.

Mr. MCNERNEY. The 74 not-for-profit Blue Cross plans in the United States represent a confederated system which we feel is responsive to both local and national finance. The roots of individual plans are deeply imbedded in the community, and yet all plans are united in a national system necessary to provide services for a mobile industrial society.

Since its founding in December 1929, Blue Cross and its concept of not-for-profit, voluntary service have grown until today more than 74 million Americans, or 36 percent of the total population, have regular Blue Cross membership.

This includes, incidentally, 6 million elderly persons who supplement their medicare coverage with Blue Cross, 5 million government

employees and dependents in the Federal employee health benefits program, where we have 60 percent of all participants enrolled.

As intermediary for medicare, medicaid and other programs, Blue Cross serves an estimated additional 23 million citizens, and this includes administrative work in model cities projects, neighborhood health centers and other programs serving the health needs of the underprivileged.

All together, we touch the lives of 97 million Americans, nearly half the people in the United States, and pay nearly $11 billion in claims—that is in 1970.

Our public responsibility and accountability are reflected in the fact that 87 percent of all Blue Cross enrollment is in plans which are required by law to have their subscribers rates and contracts submitted to the State insurance regulatory body for approval.

Since the formative years of Blue Cross, plans have been subject to public regulation through special enabling legislation recognizing them as nonprofit service organizations and requiring filings, disclosures, and approval of items such as subscriber and hospital rates, and annual statements, and financial reports, and also, Blue Cross governing boards to which reference has been made this morning are composed of hundreds of community representatives as well as provider representatives who serve without pay devoting many hours each month to assuring that Blue Cross meets the needs of the people it serves as effectively as possible.

Another significant element in Blue Cross' responsiveness to its subscribers is that throughout its history Blue Cross plans have assured continuity of coverage by assuring that subscribers coverage would not be canceled because of poor health and resulting high risk.

Subscribers moving from one plant area to another would be guaranteed covered by their new plan, and this has been a distinguished service to the American population.

Also, to provide health care services coverage at a cost which can be borne by a broad segment of the citizens, Blue Cross initiated the concept of community rating.

Competitive forces have made it impossible to continue this universally, although some plans do, but we follow the practice of pooling small groups and individuals to spread the risk as widely as possible providing coverage to many who would otherwise be unable to secure any decent measure of health care cost protection.

Also, Blue Cross has played a major role in seeking ways to make more effective use of monies being spent on health by our citizens. This is a difficult role. However, we have exploited several alternatives. First of all, we have carefully defined what we consider allowable costs and we have established limitations on what we will pay providers.

We will not pay for all they ask. We have developed new reimbursement techniques over the years and now are involved in a series of reimbursement demonstrations as well as programs.

To determine the necessity appropriateness, of the treatment provided our subscribers, Blue Cross uses procedures such as claims review, involving nurses and doctors, and we are tying this to

utilization review so that there is a judgment made as to the quality of care.

To help insure an appropriate investment of capital, Blue Cross has been an active supporter of community health planning. Last year we spent $1 million to support area wide planning and 23 of our plans require member hospitals to prove need for facility expansion.

Further, to reduce the incentive for patient use, which is the most expensive element of health care in the hospital, that is, Blue Cross has been working with Blue Shield to expand rapidly the broad range of benefits available to subscribers, including many out-of-hospital benefits.

Amont these benefits are extended care, home care, out-of-hospital drug coverage, dental care, preadmission testing, out-patient psychiatric treatment, and other services.

The measure of our expansion is seen by the fact that since the second half of 1969 the number of covered out-patient visits of Blue Cross subscribers exceeds the number of their in-hospital admissions. Also, we are developing prepaid group practice benefits as an alternative to traditional patterns of providing care.

Six plans have operational programs, including Massachusetts. A dozen plans are either actively developing or planning such programs and several others are in the preliminary work area.

Further, Blue Cross subscribers receive the care they need without paying for it at the time of illness, and therefore are removed from the onerous paperwork that often deprives them of their rights.

Added to this we have worked with hospitals to improve their efficiency through cooperative programs and industrial engineering and computer services.

To increase citizens understanding of their needs and of the system itself we have a public health education program.

More than 7 million copies of such books and as those on mental health, infant health, health careers, and the mental and physical health needs of adolescents and the middle aged have been distributed through Blue Cross plans.

The guidance work in seeking more effective patterns of care, Blue Cross conducts a variety of programs. Presently under way is a study of differences in usage and cost. Examining the experience here in Washington as between Group Health associations and the Blue Cross, and Blue Shield, under the Federal employees program, and we are implementing a demonstration program on a nationwide basis to test the capacity of the entire health care system to implement the uniform system for reporting costs and reporting hospital discharge data.

Further, in pursuit of further efficiency and effectiveness within our own ranks, we have increasing implemented an intensive review of plan performance which is now being expanded to include standard setting and technical assistance, and leading to recommendations to the plans for change.

All of this, I think, demonstrates the fact that we are far more than a conduit for money, or only passively interested in services received. We have an active interest in how that money is spent.

In regard to our relations with government, Blue Cross includes in its work intermediary ship under part A of medicare, administrative duties for medicaid in 26 States, and CHAMPUS in 33 States and the District of Columbia, plus 5 model cities programs and two neighborhood health centers.

The largest of these programs is medicare where the vast majority of persons are serviced by Blue Cross through its administrative work for the Social Security Administration.

Since medicare's inception, the Blue Cross system has processed more than 50 million claims, and handled payment of approximately $17 billion in benefits for the Nation's elderly.

In medicare and other Government programs the Blue Cross system has developed new techniques working for the Government for increasing these programs effectiveness, such as the magnetic tape to tape system, which helps eliminate errors and so forth. Savings from this alone are over a million dollars a year.

About our administrative costs, to which reference was made indirectly. One index of our efficiency is the fact that in serving these large numbers of subscribers in 1970, Blue Cross plans averaged only 5.5 percent of subscription income for administrative expenses. This rate has been low, ranging between 4.5 to 5.8 percent over the past 10 years.

A comparison of Blue Cross and combined Blue Cross and Blue Shield operating expenses with that of any major carrier highlights the efficiency of our system.

In the medicare program Blue Cross provides the administrative services at a cost of 1.68 percent of the funds handled for that program.

While the medicare record indicates Blue Cross's effectiveness, it also demonstrates the fact that the cost of administering the program for private carriers or for the Government for that matter are highly dependent on the task performed.

Under an adaptation to change, let me say that in the early years Blue Cross assured, and attempted to assure, people in this country of availability of care through payment to providers.

Often these providers lacked money. Often, the people lacked the money to avail themselves of care. Our early design, our early operations, reflected this concern. Due to this concern our focus in the 1930's, 1940's, in the 1950's, was on increasing the supply, increasing the capacity of the health care system in this country, and it was in the 1950's, the 1960's, and now in the 1970's that our concern shifted to a greater concern with productivity in assuring that the money was judiciously spent.

Blue Cross is now working to assure that that money was well spent. As I say, benefits are being expanded, more emphasis is on primary care and the use of cost controls and incentives is being broadened.

Another way in which Blue Cross is changing is reflected in the incerasing number of consumer representatives on our governing boards. Many plans now have a majority of their board members representing consumers, while others are working to achieve this.

In fact, the board of governors of the Blue Cross Association has gone on record favoring consumer majorities on all plan boards and the evolution is under way.

The tie that Blue Cross has had with hospitals, over four decades which has served this Nation well, benefited subscribers directly is under examination continually. Currently, it is under intensive examination.

But I would not want to suggest that the relations between Blue Cross plans and hospitals have been or are harmonious. You have seen, I am sure, the well publicized disputes in Massachusetts, New York and Philadelphia, indicating that the well and sick communities are each having their point of view felt.

Having discussed Blue Cross, its framework and its operations, I would like to make some remarks about the setting in which we now find ourselves with reference to the health care crisis which is the them of this testimony.

Whatever one's dedication or determination would hold, I would hold no one agency, public or private, acting alone can impact significantly the problems of financing delivery of care.

The attack must be on several fronts and it must be coordinated. The health system is complex and diversified, and effective interventions must be forceful and imaginative. The spate of legislative changes introduced in the last decade have demonstrated that change is not easily accomplished.

Senator Eagleton referred to unfilled promises. As the task force which I have the privilege of chairing put it in calling for greater competition, "The concept that any single formulation of resources could solve all the Nation's health care problems is as ridiculous as that a single remedy could cure all kinds of ailments."

We recognize with others that there is an important minority of our citizenship that is not protected adequately against the cost of health services. Too many do not have access or get the care they need, and the Government has a strong role to play in picking up that slack.

We in Blue Cross have not the reasons to do it. Further, we recognize that all of us who purchase services must focus on purchasing them reasonably, that is, use the money to the best we can to impact the delivery system toward greater efficiency and effectiveness.

Senator KENNEDY. What possible incentive is there for you to be concerned about that?

All you have to do is just raise your rates to cover higher costs.

What possible incentive is there within the Blue Cross to try and have some kind of cost efficiency?

Mr. MCNERNEY. The incentive within hospitals, Senator, similarly not for profit organizations, is to render good care to the American public. It has been their tradition, it is their tradition. You could ask the same question, "Why are they interested in doing that?"

Senator KENNEDY. That is not my question. My question is, what possible incentive is there in Blue Cross for lowering of the costs when you are set up in such a way that any increase is just passed along to the consumers by increasing your rates?

Mr. McNERNEY. There are three things I would call to mind. One, our boards are comprised of people in the community who are interested in purchasing good care for our subscribers. There are labor leaders, there are industrialists, there are people who are trustees of hospitals and others.

Second, We can't simply raise our rates to the American public. The bulk of our business is under rate regulation of State authorities.

Senator KENNEDY. What percentage is under State authorities?

Mr. McNERNEY. About 87 percent of our business.

Senator KENNEDY. In how many States?

Mr. McNERNEY. I will have to give you that information, but in the majority of the States, I would think. I will give you that figure, if I may.

(The information referred to had not been supplied when this publication went to press.)

Senator KENNEDY. Is 87 percent audited by various State agencies?

Mr. McNERNEY. Yes.

Senator KENNEDY. And it has to be approved in terms of volume in 87 percent of the cases?

Mr. McNERNEY. Yes. Further, we are in a market where if we were to indiscriminately raise our rates we would be out of the market.

Senator KENNEDY. What alternative is there to the people? Where else can they go?

What else can they do?

Mr. McNERNEY. They have alternative carriers——

Senator KENNEDY. You mean the private carriers that only pay one-third of the health costs in the country. Is that a viable alternative?

Mr. McNERNEY. You must keep in mind that a part of that purchase is conscious. People have elected not to buy more coverage. Among the poor we have a different problem, namely that they can't afford to get it. Something must be done about this.

Senator EAGLETON. One question about State regulations. Do you seek to come under State regulations, or do you seek to avoid coming under State regulations?

Mr. McNERNEY. We have—some of the plans over the years, Senator, have not sought State regulations.

Senator EAGLETON. Quite the opposite; haven't we resisted with vigorous lobbying efforts not to come under?

Mr. McNERNEY. Some plans have, although the vast majority of them have, rather than that, tried to shape that regulation.

Senator KENNEDY. You say you recognize that an important minority of citizens are not protected adequately against the cost of health services. Does this mean a majority are adequately protected?

Mr. McNERNEY. I think that that reference refers to the fact that there are some 15 to 20 million people in this country that have practically nothing.

They have neither Government nor private care, and further, they have——

Senator KENNEDY. Wouldn't it be better to say that there is a large segment that does not have any coverage, rather than the poor minority are not protected?

Mr. MCNERNEY. I did not say that, protection is there because hospitals don't turn these people away. They do get care. I would like to see the care they get improved.

But there are community instruments, if they are willing to avail themselves of them that will give them protection.

The controls and incentives I would like to underscore that we all seek are ineffective without leadership and organization.

Those of us who operate out in communities and neighborhoods know this fact, and I think, Senator, that a special obligation in this regard falls on the Congress and the Department of HEW. At no other points do so many other relevant forces converge and demand resolution.

Too much new legislation has been added and addressed to expediences rather than the fundamentals. HEW must regear itself, sponsor better coordinated programs and evaluate results while zealously protecting the public interest.

Blue Cross has spent considerable money to make areawide planning work. We can do more, and we can do it more consistently, I concede that, but it would help, however, to have a clearer notion of what the Government commitments are in terms of goals and processes. Currently, such programs as comprehensive health planning, regional medical programs, Hill-Burton and the Children's Bureau may overlap and even contradict each other.

A mechanism also must be found with Government services to put health services in better perspective. We have seemed so proccupied at times with the disease process that we overlook many of the factors outside the health field that are greater determinants of morbidity and mortality than many of the health conditions we talk about—education, housing, income, et cetera.

I would like to say further in paraphrasing that we feel strongly the consumer must be involved in both the public and private sectors to a greater degree than he is now to add to the elective process in creating greater responsibility in the system, both in terms of boards and in terms of advisory committees and other devices.

Further, we must consciously educate that consumer to better purchase the care that he receives. There is no way that we in Blue Cross or the Government can design a foolproof maze the consumer must be taught to meet us halfway. In seeking improvement in the health system, many of us, I think, share a remarkable number of objectives and subobjectives. Most of us want to moderate costs increases. Most of us want to prevent financial hardship. Most of us want to purchase care on a more economical basis and be responsive to changing public preferences. Most of us want programs that are relatively easy to administer and acceptable to providers as well as consumers.

Beyond this point of consensus there is, finally, fairly widespread acceptance of the fact that the health field is, in classical economic terms, free of competition to a great extent, and lacking true consumer's choice, it will not, through the animating force of self-interest, automatically find efficiency.

Planned interventions are needed, but there is some concern about extremes.

A proper strategy of intervention will be hard to reach.

It is encouraging to note that our country is pragmatic when the chips are down. We see resort over the years to such interforms as COMSAT, public utilities and port authorities. In the health field we are now going through a sifting process attempting to change certain values.

It won't be easy. We place conflicting values on uniformity on one hand and flexibility on the other; we see varying interpretations of limited facts, different convictions, on such essentials as the proper role of Government and lack of conviction on such key issues as to how to address the problem of long term care.

I feel we must guard against the temptation to move from the disabilities of one extreme to those of another, from excessive fragmentation to excessive rigidity.

In plotting the move, let us recognize that the present system is a mixed blessing, not all bad or all good. We suffer from distribution problems, but we have the third highest concentration of doctors per unit of population in the world.

A few years ago we had no community health centers, and now we have over 400.

If 12 new medical schools in the past 5 years seem modest we should reflect on the fact that other countries have added precious few in this century.

Whereas the morbidity and mortality rates among our poor populations are high, and we must act to change this fact, overall we have seen a significant decline in infant mortality, et cetera. In fact, we have fewer mental patients than we did several years ago.

Frustration among the poor in getting care is pervasive. In fact, we have commissioned a survey of this sort including the total population, with special subsamples of areas, and we have reported this to the public. But confidence on the other hand in medicine is increasing among the rich and poor alike.

The public sector has played an indispensable part in identifying problems and in the development and of corrective action programs. But it must accept some share of the accountability for unfilled promises with the rest of us.

The excess number of costly beds we have in some sections of the country and overlapping supportive functions relate, in part, to the enthusiasms with which some public programs met the shortages after World War II and the equal enthusiasm with which improved health subsequently became equated with bricks and mortar.

Observation of programs in and out of the health field reveals that there are problems inherent in Government as well as private policy and operation.

I recognize the unfilled needs inherent in a myraid of private transactions, but I also see the dangers, given a set of goals on which we can agree, in the tendency of large systems living under the lash of legislative committees to be conservative, to minimize differences.

Much depends, perhaps on the product. However, I think we could all agree that health services, bedded, as they are, in subjective

as well as objective considerations and in a strong tradition of professionalism demand an unusual degree of decentralized sophistication and flexible administration. We have all heard health referred to as neighborhood business as well as a national issue; it is with reason.

In sifting our alternatives, reference to other countries is often made. These are tricky, as are comparisons in other fields. Life styles vary considerably with major consequences to the health of the population.

Economic and population characteristics vary, as do basic economic prejudices. We often see differences in morbidity and mortality. How often do we see that under essentially state financed programs there is practically no group practices, for example, in the Common Market countries; that there is little challenge of usage patterns in any country?

In one recent instance, the population of the country is trying to negotiate doctors off per capita payments so that those soldiering can be identified through "piece rates."

If we are seeking incentives and controls at a more dynamic level from prescribed budgets, a monolithic financing scheme does not seem to be the answer, if comparisons have any value.

I hope that the subcommittee will evaluate carefully the relative merits of various alternatives in seeking change; personally, I have reservations about the ability of a monolithic financing system, as I do about a monolithic delivery system to reach the goals we seek.

There are the hazards of bureaucracy often cited, to be sure. As part of this, one must ask himself whether it is possible to have little or no pluralism in financing of health services and lasting pluralism in delivery.

The odds are against it. Beyond these considerations lie the problems of underfinancing. In a political setting, health has only relative value. The frontiers should be supported by private transactions as well, more than one source of money serves not only to endorse innovation but to protect health against the more compelling problems of inflation, international trade, war, roads, wage settlements, etcetera.

Preoccupation with high expenditures, we may fail to recognize the ever present danger of under expenditure—because the health field is vulnerable not only to the realities of political priorities, but to the hard to change tendency of people to be interested in getting well, but not in staying well.

Put another way, the percent of the GNP we are now spending in health can be viewed as a measure of our dynamism or our profligacy.

Probably it is both. Certainly it is neither alone.

The health system does, in fact, need more leadership and coordination. Can we view the strategy involved in a different framework?

In it, the Government would play a key role with a heavy accent on Federal leadership. Government would guide, not direct; not motivate, no demand; assist, not provide; and evaluate, not ordain.

It would be an integral part of the management of the system.

With the necessary minimum of regulation, the management function is seen as formulating policy, establishing objectives, fashioning

incentives, evaluating results, and always, protecting and promoting the public interest—with the policies, goals, incentives, results, and public interest comprehending not just the Federal health programs and their beneficiaries but the health care systems as a whole and the whole population.

In short, government would accept the challenge of governance which it is designed and equipped to do and not attempt extensive operations which it is less designed and equipped to do.

It would capitalize on the considerable assets of the private sector through not only setting goals and other ladership functions, but through performance contracts in major part based on specification of desired outcomes rather than specific methods of operation, and evaluation and information systems that can assess performance in terms of output or results. Further, not every facet of the health field should be under contract. Given greater leadership and structure key areas can respond adequately to private demand.

This approach rests on the firm belief that neither the public or private sector can get the job done alone. The assets of both are needed in moving ahead on both the demand and supply sides of the problem.

Furthermore, it suggests the need to pace demand and supply through a process that avoids the type of corrosive inflation we have seen in the health field since 1965, which affects medical as well as institutional services.

In the last 3 or 4 years of new expenditures, only approximately 30 percent represent new services or new citizens served in both areas. The idea that a magic wand can be waved over this situation through a comprehensively operated financing or delivery system causes me serious doubt.

All things considered, I tend to place more stock in a certain amount of honest adversary relationship and a greater accountability through greater consumer as well as electorate input.

Can Blue Cross, as an example of private mechanism, rise to the above challenge? The answer is "Yes." The desire and ability are there.

Clearly a system that touches the lives of so many people has a significant amount of accumulated skill and material and system resources that are responsive to changing needs and demands.

The record is clear that Blue Cross can operate effectively in a variety of circumstances, for example, in the private market, in medicare, the Federal employees program and CHAMPUS.

I hope that we all appreciate that medicare's success on an ongoing basis is, in significant part, attributable to the performance of prepayment plans, whose role was essential in starting the program.

To fail to exploit the assets of Blue Cross would constitute a needless duplication of investment and skill, but also and of greater importance, it would seriously undervalue the worth of a blending of public and private capabilities in getting things done.

Thank you, Mr. Chairman.

Senator KENNEDY. Thank you very much, Mr. McNerney, for a very comprehensive statement.

Do you really feel that time is sort of running out on Blue Cross or that Blue Cross really is necessary in terms of meeting the health care crisis in the future?

Do you see a role for it?

Mr. McNERNEY. I don't think there is any doubt of that, Senator. I have been with this institution now 9 years, and I am proud of it.

I have cognizance of its capabilities. Inherently, they are strong, and I do believe that the public would be better served with the Government heavily—with the Federal Government involved—setting goals, establishing evaluation mechanisms, fighting for the public interest, but getting a great deal of the work done through performance contracting so that there can be introduced honest and very satisfactory discussions about what the best way is to do it.

Accountability can be built in the system that does not exist. Changes in the private as well as the public sectors, I think, are called for.

But the combination is the key.

Senator KENNEDY. What sort of accountability are you referring to, what sort of setting of goals? How much direction do you want from the Federal Government; and how much Federal enforcement would you like to see?

Mr. McNERNEY. I would like to see the Federal Government be more explicit about healthg oals, not only that we want to improve the health of the population, but that we would like to target infant mortality, which is now at X rate, and by 5 years have it down to lower rate, and marshal the resources of HEW in translating that into broad financing programs toward that end.

When it came to paying for the care, how it is paid, the tactics of utilization review and so forth, I think that can be reduced to specifications, and these contracting out. I would expect under those circumstances that Blue Cross and others who might be involved would be more regulated.

I would think, for example, the Federal Government would be deeply interested in regulating us under such programs. I would expect, that is, as our public accountability were brought into bolder relief as a result of these targets, that the evolutionary forces toward the consumer representative on our board would naturally increase.

I would expect that an audit of our performance according to the contract, such as we have now.

Senator KENNEDY. You mean public disclosure, for example?

Mr. McNERNEY. Now, we publically disclose, through State auspices, all our business. It is on record. I would expect that there would be further public disclosure.

Senator KENNEDY. You would welcome that?

Mr. McNERNEY. I would welcome that.

Senator KENNEDY. To provide additional assurances to the American people that they have access to this kind of information, and to

show consumer participation on these various boards, you would welcome legislation or regulations which would insure greater citizen participation?

Mr. McNERNEY. I cannot conceive of objecting to legislation responsibly implemented to increase our accountability. I think we would welcome that.

I think one point I tried to make is, and I don't mean this to be impertinent, a great job is required here in Washington as well.

This dual concept rides very heavily on a department of HEW that is geared to getting things done, and I think the hesitancy we hear expressed toward the private mechanisms must also be expressed in this regard; we must proceed with a certain degree of caution.

Senator KENNEDY. Do you feel, then, that the private insurers and the "Blues" can assure an adequate health care through the voluntary insurance system?

Mr. McNERNEY. I am convinced we can. We now offer to the American public benefits covering practically the total health care dollar. They are not all being purchased. The consumers priority started with the hospital and worked out. We have already talked about those who can't afford it.

Senator KENNEDY. I think you refer to that on page 6 of your testimony.

You say that among the benefits now offered by most Blue Cross plans, are extended care, home health services, out of hospital drug coverage, dental care, preadmission testing, out patient psychiatric treatment, and the rest.

Of the 96 million people in the country, how many are covered by that program?

Mr. McNERNEY. I would have to submit for the record if I might the precise answer to that question.

Senator KENNEDY. Well, just approximately, and then I will let you correct the record.

Mr. McNERNEY. All right. I think the important point to be made is that vision, dental care, preventive care, home care, are now purchased by a small minority of the American population, even though the benefit is there.

Senator KENNEDY. The great majority of them are not covered?

Mr. McNERNEY. They have not purchased it, correct.

Senator KENNEDY. Even though most Blue Cross plans at least permit such coverages and have a wide variety of plans available, most Americans are not covered in these areas.

Mr. McNERNEY. The leaders in collective bargaining in management and labor are now quickly swinging to many of these areas.

I think a distinguished example would be auto and steel businesses.

Others will follow. But there are many competing needs for those fringe benefit dollars, as you know.

(The information subsequently supplied follows:)

Broadening of Benefits

While traditionally Blue Cross benefits have largely covered the cost of a hospital stay, Plans are taking significant steps to increase benefits covering out-of-hospital services in an effort to help control health costs. We believe that we must reduce the incentive for a patient to occupy an expensive hospital bed and that many procedures can be performed as effectively and more economically outside the hospital.

Areas in which Blue Cross has broadened out-of-hospital benefits include:

-- Drugs. Fifty-two Plans now offer coverage for outpatient prescription drugs. Enrollment for prescription drug benefits was significantly increased during the 1960's under major medical coverage. Fifty-five million Blue Cross subscribers now have this benefit under extended benefit contracts compared with 36 million in 1965. Under separate out-of-hospital drug benefit programs, including the United Auto Workers Drug Program, 10.8 million persons have coverage for out-of-hospital drugs. In 1965, the separate drug benefits were not offered and the greatest growth has taken place since October, 1969.

-- Dental. In 1960, Americans spent less than $2 billion on dental care, and in 1966, more than $3 billion. This year, Americans will spend close to $4 billion, and the demand for dental services is expected to continue to increase. Throughout the decade of the 1960's, only 1 to 3 percent of the total U. S. population had coverage for dental care. Now, the Blue Cross Association is urging its member Plans to offer dental coverage to their subscribers. While in 1965, one of our Plans offered specific dental benefits, 43 Plans now offer coverage for dental care, and about 400,000 subscribers have this benefit. The intent of our dental coverage is to emphasize preventive care.

-- Pre-Admission Testing. Pre-admission testing can shorten the patient's stay in the hospital by performing appropriate tests prior to admission, thus making available at time of admission medical data needed for prompt treatment. This also reduces the cost of the inpatient stay. While this benefit has been offered only within the last three years, 43 Blue Cross Plans currently provide the coverage to more than 28.3 million subscribers.

-- Home Care. Thirty-six Plans now provide home care coverage to 22.8 million subscribers. Estimates show that 75,000 patients -- or at least six percent of those in hospitals on a given day -- could benefit from care at home with a savings of from 10 to 25 percent. In Rochester, New York, for example, 800,000 members of the Rochester Blue Cross Plan are eligible for the area's home care program, which currently is handling 220 patients a day at an average daily bill of $12, as opposed to an average daily hospital bill of $70 -- a savings of 83 percent.

-- Outpatient Psychiatric. Sixty-four Plans offer this benefit and approximately 12,300,000 subscribers are covered.

-- Nursing Home Care. Thirty-four Blue Cross Plans offer benefits for nursing home care and have enrolled 12.6 million subscribers.

-- Rehabilitation. Some rehabilitation services are covered in the basic hospital contracts offered by all Plans. More broad rehabilitation benefits are held by 6.3 million subscribers.

-- Vision Care. This is a newer benefit, and, as a result, only 65,500 members are covered under vision care programs which are preventive in nature. Vision benefits which involve hospital care are included in regular contracts.

Senator KENNEDY. I suppose one of the questions that we have to resolve in terms of the health crisis in the country is whether we are going to rely upon the private insurance companies as the vehicle for meeting the health care crisis.

You indicate that you feel Blue Cross is well equipped to serve as this vehicle if given some guidance from the Federal Government.

Well, if we look back over the history, we see Blue Cross said the same thing in 1949. This Senate Health Committee held hearings then under the chairmanship of James Murray on the health crisis in the country. At that time Mr. Paul Forling, who was your counterpart, testified that the services that Blue Cross, Blue Shield, then provided could be reasonably offered to all through voluntary health insurance in our country.

That was 1949, and you are along way from doing it.

Then we take your own testimony in opposition to medicare the year before it was enacted, 1964, testifying before the House Ways and Means Committee on January 23.

Mr. MCNERNEY. From the public policy point of view, some of the aged lack purchasing power, and the essential problem of the government is put this purchasing power in their hands.

Blue Cross accepts the problem of providing help to the aged, and we have no apology for the way we have measured up to that obligation.

Financial help is needed to complete the job in the community concept.

Senator KENNEDY. It seems that the thrust of your comments in the statements today follow these earlier comments. We are back to the point where we have a major health crisis in the country today, and Blue Cross says they can handle it. I suppose the question for members of Congress is why we should believe that you can do the job any better in the future than you have in the past.

Mr. MCNERNEY. Let me remark on a few of these, if I may.

Senator KENNEDY. Certainly.

Mr. MCNERNEY. I think it would be well to recount then in regard to medicare—premedicared ays—the Blue Cross in fact had 5.6 million aged on its roles, which was a disproportionate number in terms of what we would be expected to have on a pro rata basis.

We extended our resources in that direction as far as we could, and still maintain our position reasonably in the market. After all, we can raise rates just so far before this becomes a factor in who will buy or be able to buy our care.

We allowed people who become 65 to automatically convert. We subsidized the rates that the aged paid, and so when I made the statement we were making a real effort, I meant it.

I mean it now.

As far as the fact that I feel, and felt, there should be a strong role, I would come back to the fact that none of us can do it alone. I don't think the Blue Cross should, for example, be given the responsibility for all of the inflation and all of the fragmentation we now have, and yet at times this seems to be the implication.

The fact is that the Government and the private sectors must share this responsibility. Both had very serious problems in this regard. It is tricky to intervene to begin with. Perhaps we all have to do better.

But, for example, the inflation and rising costs that we have seen since 1965, whereas they may relate in part to whether Blue Cross again has assiduously pursued all providers at all times, let us be also cognizant of the fact that 7 billion new dollars were put in our

health care system without corresponding preparation for it on the delivery side.

The advent of that money could have only one impact, and that would be to raise prices both of hospitals and doctors. Now to hold one agency accountable for that major event, for example, I think confuses the issue.

The very instruments that the Government is using now, direct payment of the hospital as opposed to indemnity to the person when he is ill, auditing of hospital records, recertification that the doctor must go through that the patient needs the care while he is there, are Blue Cross devices that have been used for 30 or 40 years.

I say these are not the final answers.

We are trying new approaches, but let's put in perspective what is a problem which is attributable to the totality of the situation, what are forces over which few of us have control, and those which are directly accountable to Blue Cross for example.

Senator KENNEDY. I don't think anyone is suggesting that the whole burden in the health care crisis has to rest with Blue Cross, but what I am suggesting is that in reviewing the record of the steps that have been taken by Blue Cross to hold down costs, I fail to see where that record has been good.

Mr. MCNERNEY. In responding to that, we do—let's be clear—negotiate how much we will pay a hospital, what we will pay for and what we don't. In your State you have seen a great deal of argument about that. We audit to be sure that those expenditures were in fact incurred.

In our plans we see a variety of methods—we won't pay for an increase that exceeds the previous year by so much, or you have to have a performance relative to your peer group of so much.

In Rhode Island, our payments are on a prospective basis.

Senator KENNEDY. What is your rejection rate then in terms of refusals to pay?

Mr. MCNERNEY. We have got some figures I can give you in the medicare business, at least in round numbers here. I would have to subject evidence on that, but before I ask Mr. Fresnowski to comment, that is only part of the point.

Where something is refused or not is simply a matter of whether it fits the contract or not. The greater isue is our efforts to prenegotiate costs, to relate our payments to area wide planning and to look through utilization to review the tone of the service.

Mr. FRESNOWSKI. The most recent information we have available shows that Blue Cross under medicare rejected 0.7 percent of inpatient hospital claims, 2.6 percent of out patient hospital claims, 13.1 percent ofextended care facility claims, 3.7 percent of home health agency claims, and 3.8 percent of claims for so called ancillary services, X-ray and so on.

The net result of this claim review that was reported in the January 1971 issue of the Social Security Administration Bulletin where they reported the rate of increase in cost under the medicare part A program, whereas for fiscal 1969 it was, as compared to fiscal 1968, 23 percent. This rate had dropped by two-thirds, down to an 8-percent increase for fiscal 1970.

They attributed this to a reduction in the average length of the stay for in-patient hospital services from 13.4 days down to 12.8,

and also a significant reduction in the outlay for cost of extended care facilities.

Both of these services are administered in majority part by the Blue Cross system.

Senator KENNEDY. Dr. Gilespie, who is a cardiologist at Georgetown Hospital, said last spring that there are nine hospitals in the District of Columbia with open heart surgery departments, and only four needed.

There are 34 such units in New York City and less than half of them are needed. You have duplicative facilities, obviously, which drive up the cost. Does Blue Cross pay for those?

Mr. MCNERNEY. We pay for services in participating hospitals upon audit and the rest. But shouldn't we keep in mind that those hospitals were licensed by the State, that in those States all 50, now, there is comprehensive health planning charged by the Government to discriminate among and between those that are needed and not needed, and that the role of the financing mechanism such as Blue Cross would be, yes, to encourage the growth of planning and to relate its payments to that planning when it exists.

But my challenge in return is, where is that planning that has been a Federal bill, in three or four parts, Hill-Burton, regional medical, comprehensive health planning, and Childrens Bureau?

It is conspicuously absent.

Senator KENNEDY. Do you think nine hospitals with open heart surgery departments are needed in the District of Columbia?

Mr. MCNERNEY. No.

Senator KENNEDY. What is your department doing to discourage this?

Mr. MCNERNEY. Our way of dealing for this——

Senator KENNEDY. Do you resist paying for it?

Mr. MCNERNEY. All right. Our way of dealing with this is to encourage area wide planning mechanisms that can begin to impact who can have these type units, and whether the hospital can exist or be expanded.

Now, you recognize the difficulty of this in your own bill by making reference to the fact that you would take this problem on in future building without particular reference to buildings that exist.

It is hard to walk in and say, "This person or that person won't do."

But our bent is getting at this through licenses, through areawide planning, and then relating payment as these programs take hold.

Senator KENNEDY. Yes, but I suppose the taxpayer wants to know, if you don't think these units are necessary, why do you go ahead and pay the bills for them?

Mr. MCNERNEY. Well, there is a patient admitted by a physician, and his life is at stake. I think—and maybe $4,000 or $5,000 is at stake, maybe $10,000 or $20,000. I think that is hardly the time to adjudicate an issue like that.

The better way, I think, of getting at this is to have a mechanism that prevents this from happening in the first place, and there I conceed we have a strong role to play, as does State government, as do Federal programs like comprehensive planning.

We have taken on recently the Jewish Hospital in Long Island, and complained about its costs. We had a lot of friends at one point. Then you take on issues like that, where is the backing?

In Michigan, we have excluded hospitals from participating status in Blue Cross, have been sued, gone to the supreme court of the State, finally have been upheld. But the citizens response to this sort of thing is often volatile, it is ofter direct, and this responsibility must be shared.

Senator KENNEDY. Of course, we have to be concerned about the emergency case who is brought to one of the nine hospitals and needs open-heart surgery, but on the other hand, I wonder what the quality of open-heart surgery is going to be in under-utilized units.

We have heard the testimony of some of the most distinguished heart surgeons, Dr. DeBakey and many others, who say the numbers of open heart units in this country far exceed the need—and that we are not capable of providing quality open heart surgery and care in all of these units.

Hospitals are spending hundreds of thosands and even millions of dollars in terms of these kinds of services, and in effect driving the cost of health insurance premiums up.

We wonder, again, what kind of mechanism exists within the Blue Cross to hold costs down.

Mr. MCNERNEY. We understand, of course, that the Government is supporting through NIH grants, many of the capabilities that give rise to this duplication.

I don't mean to impugn the Government for that. I say we have got to collectively attack this. I think the Government financing programs face the same problems we do, medicaid, medicare and the rest of it.

The duplication, Mr. Chairman, extends beyond heart surgery. It goes into other areas as well.

Senator KENNEDY. Exactly.

Mr. MCNERNEY. I am cognizant of that, but I am stressing the need for a concerted attack on it, and whereas we have been taken to court, and whereas we have had our lumps on this, we have negotiated in many major centers for it.

There have to be key reference points. That is in part what I mean by government leadership.

Senator KENNEDY. Who at Blue Cross does the negotiating with hospitals when they come in looking for new kinds of equipment?

Mr. MCNERNEY. We have a——

Senator KENNEDY. You have boards for it?

Mr. MCNERNEY. The staff, obviously, has to do a lot of the work.

Senator KENNEDY. Aren't these the same boards that have doctors and hospital administrators on them?

Mr. MCNERNEY. They have. It varies with the board. Our board composition reflects like the political apparatuses do, the complexion of this country. They vary. But on them you will find some doctors, some hospital administrators, some hospital trustees, and some public.

There has been a shift toward more public.

Senator KENNEDY. Do you think personally that the doctors who are residents or have an association with those hospitals ought to be sitting on those boards?

Mr. MCNERNEY. You made an important point earlier that Blue Cross must be concerned about quality as well as quantity. In exercising all the muscle, we have got to be very careful that inadvertently we don't back into poor quality.

These men are there to reflect professional ideas on programs that are effective, which is a combination——

Senator KENNEDY. They may be participating in decisions which affect their hospitals. Maybe you could make a stronger case in terms of quality if they weren't there. Should they be participating if they have an association with that hospital, should they be participating in decisions which are going to mean raises in premiums?

Mr. MCNERNEY. The majority of the boards, if you combine the public and the hospital trustee, don't have any personal gain involved in these decisions, and I think that is the key to it.

Senator KENNEDY. Why not? Why don't they have?

Mr. MCNERNEY. Well, they are not paid for being on the board, sir.

Senator KENNEDY. But doctors get paid for operations. If they set up an open-heart surgery unit, don't they get compensated for operations in that unit?

Mr. MCNERNEY. I am talking about the non-M.D. element of the board, which is the vast majority of the board. The number of doctors on in my experience, are in no position to realize a personal gain when you put one physician against several million people.

I don't think that is a disk, although it is something we have to be cognizant of. By keeping that type of interest distinctly as a qualitative input in the minority.

Senator KENNEDY. In terms of these boards trying to hold down the cost, there is the case which I am sure you are familiar with in Philadelphia, where Blue Cross board chairmen Donald Creswell and Frank Baker cut the 3-percent overhead payments to hospitals and trimmed back payments to certain hospitas on the grounds that their costs were out of line with comparable institutions, Presbyterian, University of Pennsylvania Hospital, and Lancow Hospital—all those were above average.

Creswell and Baker were defeated in their bid for reelection.

The hospital brought 3,200 proxy votes, and the consumers only had 1,000. I was wondering what your reaction to that would be.

Mr. MCNERNEY. I personally don't like to see a power play like that, and I was very pleased that the board unanimously elected this man as chairman, falling back on the rule that the chairman need not be a member of the board.

Senator Kennedy. Was that after the story was all over the front pages or before? It was a major news item in Philadelphia.

Mr. MCNERNEY. Pardon?

Senator KENNEDY. Was that before all the publicity about the strong arm action?

Mr. MCNERNEY. The election——

Senator KENNEDY. What I am driving at is this, do you have hundreds of these kinds of cases around the country where conscientious board members are attemping to effect some kind of cost controls and are being spurned by the hospital associations?

This particular one happened to be dramatized and recorded and commented on. I think, as you would agree, it was a power play, and then there were some adjustments made afterward.

But even with the adjustments made afterwards, I do not think Crewswel can vote.

Mr. MCNERNEY. But we should recognize that he is a hospital trustee representative. Therefore, one can't assume that because you

are from a hospital that you will be supported by all hospitals. It is a very tricky business. But I think I would rest——

Senator KENNEDY. I would be willing to accept that point if you can give assurances that those who are on the various boards around the country who are trying to drive costs down are not going to be subjected to the same kind of purging that this fellow was subjected to.

Mr. MCNERNEY. I think that is a exceptional circumstance, and I don't know whether it has been introduced in the record on not, Mr. Chairman, but some 22 of our plans representing over half of our enrollment have majority public on the board. If you add the hospital trustee, then it becomes 76 percent of our plans have majorities.

So there is quite a shift underway, but this still operates under the philosophy that there should be some minority professional expertise to give balance to the decision.

Senator KENNEDY. What kind of power do you have to guide these local boards in these various States to broaden, for example, the consumer interests? Can you issue regulations and have them enforced?

Mr. MCNERNEY. We can under our prime contracts. For example, the association is prime contractor for medicare, for Federal employee programs, for CHAMPUS. We are in position to dictate performance under the contract, and that would involve 40 percent of our business.

Beyond that, condition of membership is Blue Cross associations because the device that we use bring compliance.

Now this is a federated system, and a great deal of exhortation is involved, as well as these two devices that I have just talked about, but the changes have been dramatic.

Senator KENNEDY. Senator Eagleton, Senator Dominick has to go to a Republican policy meeting.

Senator EAGLETON. All right. I yield to Senator Dominick.

Senator DOMINICK. Thank you, Senator Eagleton, and Senator Kennedy.

I want to say that I have a personal interest in this, and won't be on this, because I happen to be a subscriber to the Blue Cross program, which is one of the oldest in existence. I got it when I was working in New York in 1936, and I have never changed it.

I want to say that it has been fabulous, so far as I am concerned. It is incredibly good. It has been very adequate for my family and myself.

I thought I would start out by just laying a little ground work if I can. First of all, just to get the record straight, Blue Cross does not build any hospitals, does it?

Mr. MCNERNEY. No.

Senator DOMINICK. Whether a hospital is going to be built or not is determined by the local community support and the amount of government money applicable to it. Sir, isn't that correct?

Mr. MCNERNEY. Largely.

Senator DOMINICK. Isn't it also true that Blue Cross does not really have very much say as to whether a hospital should or should not be built in a community?

You may not want to authorize them as a provider, but if the community wants it they can build it anyhow, is that correct?

Mr. MCNERNEY. Right.

Senator DOMINICK. On this question of whether the doctors are getting unnecessary equipment at hospitals, is it not also true that the doctors who may be on the board who have agreed to a hospital providing the services are not necessarily those doctors who are going to do any open heart surgery.

Mr. MCNERNEY. Right.

Senator DOMINICK. They might be diagnosticians or pediatricians, or whatever. I think there was an implication that the doctors on the board were doing it for their own benefit.

I don't think this follows at all, and I wanted the record to indicate that as far as I was concerned. One of the things that really interests me is your statement that there is now a broad range of other types of care than hospital care available under Blue Cross programs.

That is on page 7 of your statement.

I happen to be one of those who have rejected these. I have kept a 1936 contract, despite all the urging of Blue Cross and Blue Shield and everybody else. Don't you feel that there should be an element of choice for patients as to what type of coverage they have as well as to what type of doctor or what doctor they wish to go to?

Mr. MCNERNEY I feel that the element of choice, or, to put it another way, the exercise of option, is probably one of the most reliable controls that we can keep alive in the health care system, both because it serves satisfaction and a great deal of medical care is that, and because the interests of providers and consumers playing against one another, seek, I think, the most effective care.

I would agree that it is an extremely important point, one of our most successful programs, the Federal employee program, has 30 odd options in it, and every year or two there is an open season. People get to select not only how the care is paid, but the benefit structure, and I think it is quite a good program.

Senator DOMINICK. I was very interested in pages 6 and 7 of your statement, where you say that a measure of Blue Cross benefit expenses effectiveness is that since the second half of 1969 the number of covered outpatient visits by Blue Cross subscribers exceed the number of in hospital admissions.

Is this an indication to you that people are moving away from hospital care into the outpatient or extended cover, or other types of care which can prevent them from the expenses of hosptials——

Mr. MCNERNEY. There has been a slight diminution in patient days over the past few years, but very slight. More, I think, this represents the use of the hospital by people who might have gone to the doctor's office or some other agency or source.

There has been a 50-percent increase in the past 5 years in the outpatient services of American hospitals.

This is an encouraging trend, because it moves the hispital, which is a well organized apparatus, into greater surveillance over the problems of illness, and our benefits, fortunately, are making it possible to make that choice, both for the doctor and for the patient.

Senator DOMINICK. On that same page, you talk also about increasing the hospitals operating efficiency. You point out that 20 Blue Cross plans have initiated cooperative programs in such areas as industrial engineering and computer services, including cash.

How does it happen that you have 20 plans which do this, and the other plans don't?

Mr. McNERNEY. It is the concept that Blue Cross would not only pay, negotiate, audit, but not move into the provision of services. It reflects a change in attitude, I think, of those of us within Blue Cross and the public as to what role we should play.

Then there are some practical considerations to force. As you know, the EDP development is a fairly recent thing. We had to get our own house straight before we could then turn around and offer to share its assets with the providers, which we are now doing for a variety of purposes such as the engineering aspects. The health field has resisted the rationale of the engineer more successfully than almost any other.

Only now we are beginning to make the breakthroughs that are based on the assumption that there are systematic ways of doing things, as well as cavalier ways of doing things.

Senator DOMINICK. Are you doing these regional plans in post-regional areas, where the hospitals are in a metropolitan area, or are you doing it in scattered areas around the country?

Mr. McNERNEY. The 20 plans are scattered, and the programs are the result of some type of spark that took place based on local leadership, although we are continually feeding ideas from Blue Cross Associations as to what is possible and what could be done.

Senator DOMINICK. Have hospitals accepted these plans, or was there opposition, and does it still continue?

Mr. McNERNEY. There is skepticism of how much can be gained through the application of engineering principles and EDP for example——

Senator DOMINICK. Do you have any figures on whether this has resulted in a reduction of hospital overhead costs?

Mr. McNERNEY. We do have figures from southern California and Pittsburgh which say there have been real gains. I will have to submit those for the record.

Senator DOMINICK. I would appreciate it if you would because I think this is an area that is becoming ever increasingly important as we go on in the health care problems we have.

(The information subsequently supplied follows:)

COOPERATIVE PROJECTS WITH HOSPITALS

In helping to assure that it is receiving maximum return for the people it serves, in terms of the health care services their dollars buy, Blue Cross also has developed cooperative ventures with the hospitals it serves. These include the program known as CASH, which was formed seven years ago by Southern California hospitals and the Los Angeles Blue Cross Plan, to improve the effectiveness of personnel and the quality of patient care. The CASH program's work has resulted in annual cost reductions of $20 million thus far for 184 subscribing hospitals representing 50 percent of all hospital beds in California.

A research program conducted by the Pittsburgh Blue Cross Plan with three area hospitals resulted in cost-saving recommendations of $365,000 annually for the methods of improving hospital cost controls through incentive reimbursement methods and the development and implementation of industrial engineering techniques. More than $100,000 in cost-saving recommendations have been implemented to date by participating hospitals. Additional cost-savings will be realized by the hospitals in a continuing program of implementation of the recommendations. The 21-month program was carried out under a $117,050 prime contract awarded in June, 1968, to the Health Services Foundation, the educational and research arm of the Blue Cross Association, by the HEW National Center for Health Services Research and Development. Of this amount, $105,438 was directed to Pittsburgh Blue Cross for the development of the study and the in-hospital demonstration.

Senator DOMINICK. I was very interested in Dr. Schwartz, who was working on it. I have been very interested in what you are doing in it. The two ideas don't necessarily go together. There is a California company which is offering computerized diagnostic service and this type of thing, which Dr. Schwartz is talking about, but in any event whether we are talking about administration or whether we are talking about patient diagnosis, obviously, you have the crucial computer problems, language, reliability of input; you have privacy; you have a lot of things of this kind which are important to try and work on.

I don't see how we can do it immediately, but I am glad to see you are making progress on it.

Mr. MCNERNEY. Those of us who have had experience with computers are very humble on that subject.

Senator DOMINICK. Let me ask you a question, Doctor, because this has always been of interest to me.

Let's take a specific case. In order to get away from myself, let me take Senator Kennedy, if you don't mind.

Senator KENNEDY. So far. [Laughter.]

Senator DOMINICK. Let's say he is sick and he has a doctor that he really likes and has great confidence in in Massachusetts, and that doctor has a team that he works with, and he goes to a hospital in Massachusetts which is not covered by Blue Cross, even though he has Blue Cross coverage.

Now, what do you do about that? Does it mean he has to pay for it, or what happens under those circumstnaces?

Mr. MCNERNEY. We have a category called the "nonparticipating hospital" and we are torn between penalizing the person when he is ill——

Senator DOMINICK. That is why I took Sentoar Kennedy rather than myself.

Mr. MCNERNEY (continuing). And what we do is pay a lesser rate. In other words, it does leave the subscriber with some out of pocket that he would not have had had he gone to the other institutions.

At the same time, it does not leave him bereft. It is a compromise solution.

Senator DOMINICK. Do you have any figures on what the difference is if you are involved in a nonparticipating hospital as opposed to a participating one?

Mr. MCNERNEY. Let me say 75 percent as opposed to 100 percent payment, and then offer for the record what the facts are.

(The information subsequently supplied follows:)

BLUE CROSS METHODS OF PAYMENT TO PARTICIPATING AND NON-PARTICIPATING HOSPITALS

All Blue Cross Plans are required to have written agreements with at least 75 percent of nonfederal short-term hospitals in their respective service areas. Hospitals which have signed such agreements are "participating" or "contracting" hospitals. These agreements include a definition of allowable hospital costs, define the responsibility of the Plan with respect to the frequency of hospital reimbursement, define the responsibility of the hospital in quaranteeing service to Blue Cross subscribers, and insure the right of inspection of the records of the hospital and specify the licensure or accreditation standards a hospital must meet in order to be eligible for participating status.

Although methods and amounts of payments to non-participating hospitals vary widely, the usual procedure is to pay either a specified indemnity allow-

ance, commonly $10 to $25 per day, or a percentage of charges, usually 70–90% for covered services. Examples of the common procedures are the Texas Plan, which pays 75% of covered charges and the Pittsburgh Plan, which pays $25 for the first day and $10 per day thereafter. The Southern California Blue Cross Plan pays 100% of regular benefits when the admission is due to accidental injury and 75% for admissions resulting from illness.

Senator DOMINICK. This brings up the point of freedom of choice, which I think is of enormous importance both psychologically insofar as the patient is concerned and insofar as the doctor is concerned.

I can understand why it may be that you may have to pay a little more under those circumstances, but let me ask you this. We have had some testimony here before us that coinsurance, or deductions, or whatever it may be under insurance programs, have the overall effect of either reducing usage or reducing costs.

Do you have any comment on that? In other words, do you find that as a result of paying only 75 percent of a nonparticipating hospital cost to a patient who is covered, instead of 100 percent, that the patient tends to go to the participating hosptial?

Mr. MCNERNEY. I think that tendency is there. and for understandable reasons, but if you ask my general feeling about deductibles and company payments, I think their use should be highly selective.

In general, I am against very widespread use of them.

They are not only putting the burden where it does not belong, on a sick person at the time of illness to make a controlled decision, over which he has very little impact, but they are expensive to administer on the part of carriers or the Government or anyone you want to name.

I can see selective use of copayments when the firm putting up the money cannot afford any more. In that case, it would be only a moderately effective control. It would save money for the firm and it would be easier to administer than the deductible.

Blue Cross has been built and grown, as you know, on a service contract that makes minimum reference to either device, and maybe that is why we have got so many people.

Senator DOMINICK. How do you go about making a contract with a hospital, Where do you run into problems? The fact that the hospital says in order to provide the quality of care we have got to have a higher payment, or do you find it among the staff that says, "We have got to have higher pay", or do you find it amongst the board of trustees, or whatever it may be—let's take a private hospital—which says, we want to put a new wing in, and you don't think it is necessary.

What would that be?

Mr. MCNERNEY. In examining hospital costs over the last 5 years, the major component of the cost is labor.

The major increase in cost is attributable to changes in the labor costs. I am not talking about the doctors, but the people who are on the payroll.

In my view, these people deserve more money than they were getting, and I am glad to see that they are now paid more, but it does underscore the fact that in paying the hospital, Blue Cross has only a relative accountability for a very significant part of that rise in costs.

To be more specific, it is about 70 percent of the cost of the hosptial. The physician——

Senator KENNEDY. On that point. You are including all staff now, not just the people who are working down in the kitchen and doing the routine work. You are including interns as well, and other trained professional personnel?

Mr. MCNERNEY. I am including anybody who is on salary in the institution, Mr. Chairman.

Senator KENNEDY. So it is not just the kitchen workers and the elevator operators. It has been the nurses, interns, and residents as well.

Mr. MCNERNEY. Right, across the board. You are right. I was going to go on and say that we are obviously not involved in paying the physicians. Blue Shield is. A great amount, of course, of the hospital's feeling toward the need for more money, more facilities, more expansion, is derived from the feeling that the medical staff would like to do a better and more comprehensive job.

So a very different decision must be struck.

Senator DOMINICK. When you say you are against a monolithic system, eight of delivery or financing, I would assume by this that you are not, then favorably supporting S. 3, which is the chairman's bill?

Is that—that is not before us, I point out for the eighth time.

Mr. MCNERNEY. And therefore I should not comment. Well, if I were to have commented, I would say that there are certain things in the bill that are obviously very good. Its objectives, the problems it addresses, and I can firmly support them.

It makes a great contribution in terms of calling everyone's attention to the need to impact the delivery system. I part ways when it comes to the fact that this particular design will do it. I don't think it will. I think inherent in a monolithic system is conservatism, rather than innovations, that being a political fact of life, and I am afraid in the long run with most of the money changing through one source, it will result in underfinancing health.

Senator DOMINICK. Insofar as the delivery system is concerned, have you had a chance to analyze the administration proposals?

Mr. MCNERNEY. I have looked at them; yes.

Senator DOMINICK. Do you have any favorable or unfavorable reaction as to them?

Mr. MCNERNEY. I would be willing to present to you a more comprehensive set of reactions than I can give you ad lib, but let me make a few remarks and then you can decide. I feel the American Medical Association proposal in the present form in which it seems to be evolving does not impact the delivery system adequately. It leans too much on a myriad of private transactions to effect some very major changes that we have got to make over the next 10 or 20 years.

As far as the administration's proposal is concerned, I am very glad to have any administration now begin to view the problem in a broad perspective, which is being attempted—manpower, financing, delivery, et cetera.

I have reservations about the deductible and copay provisions in the mandated benefits. I honestly don't think they are realistic and hope to be able to have an opportunity to say so.

Senator DOMINICK. But in general, the diversified approach that is presented by the overall administration program seems to you, at least, to be more desirable than a monolithic type.

Mr. MCNERNEY. With reference to that one point, it does attempt to keep active not only more than one source of finances, but to let interplay various methods of payment and organization. I think that is a sound principle.

Senator DOMINICK. You have commented on the operating costs on page 10 and page 11, pointing out that your operating expenses of Blue Cross plans in 1970 averaged about 5.5 percent of subscription income.

At the top of page 11, you say that you provided administrative services to medicare at 1.68 percent of the funds handled for the program.

Is this because a number of the indirect costs of social security are not included in medicare, or is it because the volume of medicare is so much larger that your percentage of administrative costs go down?

Mr. MCNERNEY. I hasten to add in the paragraphs following, Senator, that one has to be very particular about the task he is talking about. I think that performance is related in part to volume, yes. It is related to in part, the fact that the Social Security Administration has functions to perform that we don't, they keep the eligibility files.

They have numerous contacts with the beneficiaries of the programs in terms of their rights, publications, et cetera. They enunciate the regulations. That all takes money.

So that you have to add that increment to ours. I would be tempted to say that some of our efficiency is reflected, however, in those figures. I think if one compares that preformance to others, I think you would find this highly creditable, compared to all participants in the program.

Senator DOMINICK. We have had considerably testimony about prepaid care delivery programs. In my own State, we have a statewide foundation now established for the purpose of trying to provide options for people who subscribe under this type of program.

You have, as I uhderstand your testimony, at least six prepaid groups plans that are in existence. Can you give us any estimate of whether there is a cost saving involved in these plans as opposed to the other types of plans?

Mr. MCNERNEY. We are embarked now on a study precisely of this point, involving the FEP subscribers here in Washington. It is exhaustive in that it tried to get into costs, use, attitudes, satisfactions, et cetera.

I will feel a lot more comfortable when those results are published.

As things stand now, I think there is no doubt that under HIP and similarly distinguished programs, the admission rate shows less than it is in more widespread programs like Blue Cross, for example.

What is more obscure is what the total costs are in view of the difficulty of measuring leakage outside the system and the rest of it. We hope to be able to pin some of these factors down.

Let me hasten to add that I believe firmly that we must get this benefit, a prepaid group benefit, into the market on a broader scale. I don't think it is the only answer to care. On the other hand, I think it is an option that the subscriber should have before him so that continually he can evaluate the facts in selecting his coverage.

Senator DOMINICK. In other words, you feel it should be one of the options available to the subscriber.

Mr. MCNERNEY. Yes.

Senator DOMINICK. And there should be different types of prepaid plans among which he can make the choices.

Mr. MCNERNEY. Right. The only confidence I have that a plan is right is how it compares to other plans. If you make a stereotype out of your concept, you lose perspective, and I would urge that in group practice there be varying practices, as you are now implying.

Senator DOMINICK. I will preface this with this comment. I have a bill, which is not before this committee; it is before this Post Office and Civil Service Committee. But in any event, present law requires that a foundation type program can contract to provide care for Federal employees only if it has had successful experience operating a similar plan.

If you are starting a new foundation program, obviously you don't have experience, so you are completely thrown out and you have no opportunity of competing to serve Federal employees.

What is your feeling about the medical association's efforts to try and start some of these foundation type pre-paid care programs?

Mr. MCNERNEY. The foundation movement is potentially a great force for good, or a step backward, and at the moment we are poised between the two. If the foundation, in fact, becomes a way that groups of doctors can preserve for service against all other ways of doing things, which some of them might be, I think they are a disservice.

If here they evolve into a more responsible mechanism with internal controls, then I think it could be another thing. What does concern me is this: Most foundations operate on the principle that 100 percent of the board be physicians, and so that the consumer input is practically zero, and yet most bills before the U.S. Congress agree that they will contract with these mechanisms without the question of whether they will be responsive to the community.

Personally, I would like to see at the policy level, as is levied against us, the concept of greater consumer participation to be sure that what is going on has a blend of quantity as well as quality to it.

Senator DOMINICK. I think that could be easily arranged in most of these foundations, such as they are. It has been interesting to me that the medical association is willing to do this, and furthermore that the members of that association in the various States have been willing to open their books and to stay within the rates which will mean that the foundation remains alive.

Otherwise, it is going to go busted and the insurance companies won't cover them, et cetera, et cetera.

Mr. MCNERNEY. I think you recognize, of course, that a great amount of Blue Shield growth was built precisely on this principle, the service contract, and I think Mr. Parish will have an opportu-

nity to elaborate on that, but there is no doubt of the soundness of that principle, a prenegotiated amount of money within which the physician agrees to live.

Senator DOMINICK. Thank you, Mr. Chairman. I am going to have to leave.

I should say for the record that Senator Packwood apologizes for not having been here. He had a markup on another committee.

Senator KENNEDY. Senator Eagleton?

Senator EAGLETON. Thank you, Mr. Chairman.

Mr. McNerney, you are obviously a very knowledgeable person and extremely articulate. I am constrained to say, though, in listening to your prepared testimony and in reading the 23 pages thereof, quite frankly it reads to me somewhat like a concurring opinion from Justice Frankfurter, and it is heavy on semantics, circumlocution, and artful use of sometimes obscure phraseology.

It in no wise, in my judgment, gets to the future issue that is before this committee and before this country. How are we going to deliver quality medical care to people of less than adequate means, and now in this day and age even people of moderate means that cannot afford it?

I think the history of your own organization, and you should be justifiably proud of any organization by which you are employed, that although you had offered for hire a broader range of programs is one is affluent enough to purchase them, you have narrowed the scope of your operations through the years insofar as group plans are concerned.

In terms of medical care for the Nation, I am not satisfied that Blue Cross and Blue Shield and other private carriers will make any significant dent in this problem nationwide.

I emphasize and underscore that for those of above moderate means, those who are in organizations such as labor organizations that collectively bargain for some of these benefits, perhaps adequate services share being provided, but for a huge segment of this country, I don't think they are, and I must say I can't find in your statement where you address yourself and your organization to that issue.

Would you care to comment on that?

Mr. MCNERNEY. Yes. I am sorry for the obscurity. The nationwide capabilities of Blue Cross, which is one segment of what you are talking about, I think are demonstrated by the fact that we have seven out of the 10 largest industries in this country enrolled. They did not enroll with any particular passion toward Blue Cross. If their prejudice was in any direction, it would be in a more commercial direction.

I think it is indicative of the fact that over the majority if not all of the States in this country for various industrial complexes, we are able to deliver a product which has been negotiated through collective bargaining. That causes them to keep enrolled.

As far as how many people we affect in this country, whereas a lot of them are through large groups, the major industries, we touch groups of two, three, four, five, 10, 15, people, throughout the United States, and we touch individuals, people who are under individual contract, many of them could not be construed to be middle-

class or above middle-class, many of whom, incidentally, had medicare started, did not want to give up Blue Cross.

They had that much faith in it, and had had that good experience in it, and in collaboration with the government we had to talk them into giving it up.

Now there is no doubt that we cannot tax people, therefore, the money that we get and can use has to come from rates. Therefore, those below some level are going to need government help. We recognize that fact. We endorse that fact. We have never denied that fact.

If one addresses it, the question, have we used the resources that we have got and been able to get through charging rates to the benefit of the community? I think our record is very good, both in terms of the breadth of territory over which we have been able to provide the benefit and the depth of the benefit.

Senator EAGLETON. Let me explore another area than that has been touched upon by Senator Dominick, this question of cost control and cost analysis, keeping down costs, et cetera.

It appears to me throughout the whole fabric of the medical insurance problem, dealing not only with Blue Cross and Blue Shield, but also, and you touch on it on page 6 of your testimony, with respect to utilization review, et cetera.

Then it appears to me that the present system is all together too cosy in its interrelationships, earlier in a comment to Senator Hart, I referred to it as almost a quasi-incestuous relationship. There is an old bromide that I think is true, to the effect that you should never get into a poker game between two brothers-in-law and a stranger, especially if you are the stranger.

I think in the medical insurance field the consumer is the stranger, and he is caught then between the insurance carrier, the hospital, your review panels, that all together are, I repeat, too cosy.

There is no adequate review in the present system, an arm's length review and also in the utilization of beds and hospitals. How can it be, really, when a group of doctors are on a staff of hospital X in city Y, and that group of doctors reviews what Dr. Jones does in terms of admitting patients to the hospital and the utilization of beds, and after they get through the Jones case, he gets on the panel and Dr. Smith gets off, and they then look at Smith's utilization, and so on, right down the line.

Aren't we just deceiving ourselves that there is the adequate check and balance that ought to be inherent in a viable system?

Mr. MCNERNEY. Could I start by counteracting with another bromide? If you don't think we have a system, try to change it.

Senator EAGLETON. That is what monolith Kennedy is trying to do.

Mr. MCNERNEY. Every time I want to say we have a non system and then contemplate the difficulty of changing it, I think there is a system there.

The fact it is difficult to favorably affect use and cost is seen by the fact that, for example, in Sweden where there is a very comprehensive government payment system, the costs have been going up more than here.

In Canada, they moved to a government system for hospitals in about 1958. The costs have gone up for hospitals more than here. I am not making that point to depreciate either system, but it does underscore the extreme difficulty of impacting a service that people, in fact, want, and up to this point where the providers have been underpaid and are now moving into decent payments, and where the people who did not get enough service are now getting services in here that they did not get before.

Seven percent of the gross national product, I don't think is too much. That does not say that we should not be concerned about it, or its rise, or be determined to be sure that it is optimally expended, but I do want to say this, there are outside major forces, inflation in the economy as a whole, a labor intensification industry, an increased demand, publically edicted—bills here in Washington saying, "these people need and should get his care"—that have had a very major impact on these costs.

They are not easily brought into control. Now, as to the consumer, I said in the paper and I repeat now, I think a greater impact is needed from the consumer. Where the consumer has rushed in too quickly, as in some neighborhood health centers and in some other areas, the evidence is that the impact on costs is not necessarily that quick, nor is it going that even.

It is apt to be very rough going. I think we have got to accept the fact once and for all that there is a very sophisticated challenge to the public and private sectors, one, in exercising the right of law of regulation, franchise, and results, and the other neogtiating in what is essentially a neighborhood business around this country. If we look for simplistic, easy ways of intervening, we are not going to find them.

That, I think, is true, and it is going to have to sooner or later be taken into the ultimate design of the system.

Senator EAGLETON. You were chairman not too long ago of Secretary Finch's task force—parts of our age is the task force—there are hundreds of them—and in your task force report you endorsed the development of HMO's.

Mr. MCNERNEY. Yes.

Senator KENNEDY. How does Blue Cross and Blue Shield fit into an HMO or to put it more bluntly, if you were to use the concept of an exanded HMO system, couldn't they operate efficiently, functionally and with cost consciousness totally without the utilization of Blue Cross?

Mr. MCNERNEY. First of all, let it be clear I do endorse that concept. The concept is under definition, and there are some very knotty problems connected with it.

I would expect that if then it came out now the way it is discussed, Blue Cross would be in fact an HMO in some areas. Why not?

If the definition is for somebody to take the risk for a defined population for comprehensive services, who is better equipped to do it? If one contemplates putting together various production units of hospitals, extended care units, et cetera.

But beyond that, I am at the point where I am worried about any one pattern taking over a total system.

This country is variegated. It has a lot of diversity to it. There is not any magical answer. The HMO again gained certain headway. Other forms will come in and compete with it under almost any circumstances you want to name.

So as far as our future and HMO is concerned, I say they are compatible.

Senator EAGLETON. You had an exchange with Senator Dominick on the question of participating and nonparticipating hospitals, and it was your ballpark estimate subject to further clarification at a later date that we apparently have a situation, when a patient covered Blue Cross is admitted to a nonparticipating hospital he is covered for 75 percent of the payment, and then used the figure of 100 percent payment in a participating hospital.

Does that mean a 100-percent payment covers total cost of the bill for that given patient to the day of discharge, for the full gamut of medical services rendered at the hospital, 100 percent in all cases paid?

Mr. MCNERNEY. My reference was to 100 percent in cases of what we contracted to pay for.

Senator EAGLETON. One-hundred percent of coverage.

Mr. MCNERNEY. Right. That would leave the average patient in this country a very small amount to pay, TV, private duty, a private room, et cetera.

Senator EAGLETON. What about maternity cases, a family with Blue Cross and the mother goes to the hospital with a baby delivered. What do your figures show as to percent of payment there?

Mr. MCNERNEY. Our dominant pattern is a comprehensive payment. Blue Cross plans, however, offer more than one contract, and in one major plan I can think of the maternity contract that is purchased in the majority by the population does have a limit on it, an indemnity.

Senator EAGLETON. What is that?

Mr. MCNERNEY. I don't know what that is.

Senator EAGLETON. Are there plans with a $10 a day limit?

Mr. MCNERNEY. Oh, no. I would like to submit for the record the degree of the bill we pay, and with particular reference to the maternity case, what our performance is.

Senator EAGLETON. Could you supply them for us at your pleasure, some typical cases of so-called standard coverage? Don't pick your super deluxe, 3X, special. Take poor old Senator Dominick's plan, the 1936 model, and what benefits might accrue in terms of percent of total bill, in specific cases, but not excluding maternity care.

Mr. MCNERNEY. I would be glad to.

(The information subsequently supplied follows:)

BLUE CROSS PLAN BENEFITS

Blue Cross Plans operate generally on the service rather than the indemnity principle. A total of 88% of Blue Cross contracts are written on a service basis to offer the subscriber maximum protection. Under this approach, allowable elements of hospital costs are defined in an agreement negotiated between the hospital and the Blue Cross Plan. The hospital agrees that payment for these defined costs shall represent total reimbursement except for amenities. These costs are often, but not always, less than hospital charges. According to contract, the subscriber can be billed only for services not covered by Blue Cross, such as private room, telephone, and television.

To further protect the subscriber, the frequency and amount of Blue Cross payments to hospitals are defined in the reimbursement agreement. Blue Cross Plans also audit hospitals to insure that costs are reasonable and appropriate. Medicare, when formulated, adopted this general format.

The effectiveness of this approach is illustrated in 1969 data, which indicate that the 74 Blue Cross Plans in the United States paid 90.6% of the hospital charges to its nearly 71 million subscribers. Because reimbursement agreements are often on a cost rather than a charge basis, the remaining 9.4% was not all paid by the individual. The hospital accepts as full payment amounts that are less than charges.

Forty-two Plans covering 72% of Blue Cross membership covered at least 90 percent of the average hospital bill in 1969. For example, the New York City Plan covered 95.4% of subscriber bills; Boston Plan, 89.3%; Kansas City Plan, 90.4%; and Denver Plan, 92.1%.

The scope of benefits under various contracts held by large national corporations illustrates the protection Blue Cross offers. (See Insert A attached.) It is estimated that the Company A's program described covers 95 percent of the hospital bill. A similar figure for effectiveness is seen in the FEP high option program.

For normal maternity coverage under the Blue Cross basic National Account Contract, the subscriber group is offered a choice of benefits. Full service benefits are offered along with full service benefits limited to ten days and $80 and $100 indemnity programs. The indemnity approaches are offered because they significantly lower costs to the group and expenses to the individual are predictable.

HOSPITAL BENEFITS	Company A	Company B	Company C
Number of Days	120 days	365 days	365 days (730 for employees with 10 years service)
Deductible	None	None	None
Room Allowance	Semi-private	Semi-private	Semi-private
Private Room Allowance	Average Semi-private		Most Common Semi-private
Ancillary Allowance	Full	Full	Full
Normal Maternity	Full	Full	10 days
Outpatient			
Emergency Accident	Covered	Covered	Covered
Time Limit	72 hours	24 hours	48 hours
Minor Surgery	Covered	Covered	Covered
ENROLLMENT	1,000,000	1,157,511	154,000

Note: The enrollment figure indicates the number of contracts involved; the number of persons covered is $2\frac{1}{2}$ to 3 times this figure.

INSERT A

59-561 O - 71 - pt. 5 ---4

Dramatic individual cases involving large amounts of money are common. Under the Federal Employee Program, there are hundreds of cases where Blue Cross and Blue Shield have paid over $50,000 in benefits. Examples are a fifty-one year old male with disease of the urinary tract and renal failure for whom $109,823.23 in medical and hospital bills was paid, and a sixty-six year old female with a cardiovascular accident which involved total payments of $56,640.44.

To illustrate more routine cases, the set of tables below lists individual cases for each of five common diagnoses in selected Blue Cross Plans.

Blue Cross Plan #1

	Appendectomy	Maternity	T & A	Bronchial Pneumonia	Myocardial Infarct
Type Contract		Comprehensive			
Hospital Charge	$520.25	$875.55	$286.00	$1,442.20	$1,043.30
Paid by Blue Cross	$520.25	$875.55	$286.00	$1,422.20	$1,043.30
Length of Stay	5 days	6 days	1 day	20 days	12 days

Blue Cross Plan #2

	Appendectomy	Maternity	T & A	Bronchial Pneumonia	Myocardial Infarct
Type Contract		Full Cost			
Hospital Charge	$541.65	$444.50	$154.70	$502.45	$868.85
Paid by Blue Cross	$538.65	$441.50	$154.70	$502.45	$798.65
Length of Stay	7 days	4 days	1 day	8 days	12 days

Blue Cross Plan #3

	Appendectomy	Maternity	T & A	Bronchial Pneumonia	Myocardial Infarct
Type Contract		All 120 Day Basic			
Hospital Charge	$345.00	$456.00	$87.10	$414.00	$3,174.00
Paid by Blue Cross	$345.00	$456.00	$87.10	$414.00	$3,174.00
Length of Stay	5 days	5 days	1 day	6 days	46 days
**Type Contract					
Charge (2)	$426.80	$501.95	$137.00	$474.00	$4,747.90

** If the patient would have had no Blue Cross coverage, the charges would have been as indicated on Charge line (2).

Senator EAGLETON. I am curious about how you deal with a hospital and how you sign a hospital up and what flows from there. Could you tell us a little about such difficulties as you have experienced here in Washington with the Washington Hospital Center a few months ago, or maybe it was a couple of years.

The point of time escapes me, but they were on your books and they went off your books. I guess they are back on your books again.

Mr. MCNERNEY. Did you say books or backs?

Senator EAGLETON. Book and back. What happened?

Mr. MCNERNEY. As to the first part of your question, a contract is struck between a Blue Cross plan and a hospital that says under X conditions the hospital will be paid for X services, that there are certain rights of disclosure, audit, of the expenses, et cetera.

That is the basic nature of the contract, in turn, the hospital says it agrees to render those services for that price.

The problem in the Washington situation was money. The hospital felt that the plan was too niggardly in its payments. The plant felt in the community interests it should not pay any more.

That resulted in a cancellation of contract, a reaffirmation of contract, and I suspect now a settlement will be made.

That represents a reasonable compromise between the two points of view. But, again, it shows a certain dynamism to that relationship.

Senator EAGLETON. Are they a participating hospital at this time?

Mr. MCNERNEY. I think they are at the moment.

Senator EAGLETON. Why is it in the forms that are filled out when one applies for Blue Cross and Blue Shield and continues to reapply, or renew, or be admitted to a hospital, require that the individual being admitted, either to the program or to the hospital, divulge the extent of his personal income?

Mr. MCNERNEY. Well, there were times when the nature, for example, of the Blue Shield, the doctor payment contract, was related to your income.

In other words, the agreement that was bargained was that up to a certain income level the doctor would agree to accept this premium as full payment.

If you were above a certain level, he could charge a small extra charge, and there had to be some coding so that the physician would know in which category you fell.

Senator EAGLETON. That used to be the case, you said?

Mr. MCNERNEY. There still is some of that. Mr. Parish would be a better position than I to give you an idea of the quantity of that. On the Blue Cross side, that type of differentiation is not traditional. In other words, the hospital had a unified card; unless the difference was one of contract.

That was not related necessarily to income.

Senator EAGLETON. A contract between whom, the consumer and the plan, or the plan and the hospital?

Mr. MCNERNEY. No, between the consumer and the plan. For example, you can buy from Blue Cross, let's say, a contract that covers hospital emergency room, out patient, extended care facilities. You could also buy one that included, in additional, some home care, vi-

sion care and others. That has to be coded in some way so that the contract flowing from the subscriber to the Blue Cross plan can be done.

But that is not an income thing.

Senator EAGLETON. The recording of patients income, existing and potential, is a horse of another color insofar as ancillary and additional charges are concerned.

Mr. MCNERNEY. You understand that under our limited Blue Shield involvement in it, the worker has agreed to divulge his income because that was bargained as the contract.

When you refer to what the hospital does when the patient is admitted that is a hospital procedure separate from the transactions we are talking about.

Senator EAGLETON. You are getting away from that in your plans certainly in Blue Cross. You don't require that any one seeking to participate in a program be required to divule their income?

Mr. MCNERNEY. I would have to submit a statement on that, in a system this large.

(The information subsequently supplied follows:)

BLUE CROSS INCOME DISCLOSURE REQUIREMENTS

For basic Blue Cross coverage, no Plans require income disclosure or a means test of any sort. The basic concept of Blue Cross since its inception has been to provide care on the basis of a valid identification card. No means test is required other than payment of dues.

There is a single exception in the Blue Cross. One Plan in its Extended Benefits (Major Medical) Coverage only specifies that the contract may be denied if over 50% of the group earns $15,000 or more per year.

Senator EAGLETON. Would you care to comment whether there is any reason for a patient to divulge the extent of his income on admission?

Mr. MCNERNEY. I think most of us find a means test repugnant at the time of illness, and I hope we can get away from that practice.

Gradually, I think we are. As prepayment as moved from paying a small percentage of consumers expenditures to a larger percentage, that problem will become diminished, but I don't like that fact, and I know a lot of people who resent it.

Senator EAGLETON. Thank you, Mr. Chairman.

Thank you, Mr. McNerney.

Senator KENNEDY. Mr. McNerney, when Blue Cross was established a number of years ago, a crucial compromise that was set up that allowed the Blue Cross to serve as a fiscal intermediary for the distribution of medicare funds for health services to the hospitals in this country.

There is a real question whether medicare could have been passed, at least at that time, without permitting Blue Cross to play such a role.

At that time, there was a strong body of opinion within the Congress that the best and most effective way to protect the consumer was to require arrangements to be made directly between the social security system and the hospitals. Many felt this would have provided the kinds of arms length transactions that best protect the consumer.

Congress chose, however, to use the intermediary approach. Blue Cross was challenged with that responsibility, and as a result over the period of recent years millions of additional persons have been touched in one way or the other by your various policies.

You have the greatest number of policyholders of any carrier in the business. We have a health care crisis in the country of enormous magnitude and I for one do not see how you and your organization can escape a major responsibility for our lack of controls of cost and quality to help meet the health care crisis.

Now medicare has been made a whipping boy time and time again, but Blue Cross was challenged by Congress to put controls on costs and quality. If we are in the health care crisis which the President has described, which the Secretary of HEW has described, and which, more importantly, the Joe Q. Citizen has described, with long waiting lines in the hospitals, inability to get a doctor, and all the other problems, the Blue Cross bears much of the responsibility. Why shouldn't we go back to the other approach Congress considered and let the social security system make arrangements directly with the hospitals, and thereby eliminate the back scratching that exists and has existed between hospitals and boards established through Blue Cross?

Couldn't we do a better job through the social security system, of driving costs down and driving quality up?

Certainly the record of Blue Cross in this area has not been one of the better chapters in the history of our health crisis. How do you react to that?

Mr. McNERNEY. I react this way. I think our performance under medicare has been distinguished in getting that program off the ground and in making it work.

I think the credit must be shared, public and private. I don't think the Congress, whatever its complexion at that point, could have made a wiser decision.

Senator KENNEDY. With all the existing programs, with all the deductibles, with all the coinsurance, with all the exemptions, with all the paperwork isn't every patient's claim, really, a threat to the balance sheet of Blue Cross?

Mr. McNERNEY. We don't feel it that way, and our paperwork was less than anybody's and still is. I think as far as the larger question is concerned—let me put it this way. A citizen is in a very awkward position in criticizing either the Government or others, and I don't, again, want to be impertinent in that regard.

But the rising costs situation in this country is one, it is a problem we all must share. It has a lot to do with whether there is good planning or not, or whether there is good leadership or not.

Senator KENNEDY. Of course, you testified before the Ways and Means Committee, "just put the purchasing power in the hands of the aged, and we will look out after the rest."

Now that is what the Congress did. They put purchasing power in the hands of the aged, and now we are getting complaints——

Mr. McNERNEY. But to split the program in its design—we are administrative agents in that program. We worked hard with the Social Security Administration——

Senator KENNEDY. Would you repeal medicare?

Mr. MCNERNEY. I would not. We feel a very integral part of it.

Senator KENNEDY. You have been extremely responsive in your answers today, but I, for one, feel strongly that your organization is a very integral part of the whole health crisis, and I think any fair evaluation would indicate that there has been woefully little done by Blue Cross in to hold these costs down or drive quality up.

Mr. MCNERNEY. As long as we avoid an idealistic comparison, I think I can say "who has done better?"

I think our track record is without peer and I include the public and private sectors. I think we can do a lot better, Mr. Chairman.

We are under tremendous pressure to do a lot better. When you have a constituancy this large——

Senator KENNEDY. I can understand that. I also see, up in my neighboring State of Rhode Island, that in the plan 65, Blue Cross and Blue Shield asked for a 63 percent increase. Thousands of citizens showed up at the meeting down there.

In Pennsylvania I see that Blue Cross increased rates in August of 1970, 25.3 percent, is now requesting a 20 percent rate increase, and is expected in August of 1971, to request an additional 25 percent rate increase.

Can you give the American people any assurances that you are not going to request these monumental increases?

Mr. MCNERNEY. I would have been more reluctant to deprive the American people of the primary causes of that inflation, namely bringing for the first time under prepayment and Government programs people who did not have adequate coverage and giving the workers in the field which I consider to be a good wage.

But those are by far much more contributing factors than Blue Cross' performance. I am not sure you realize, but in the last 4 years of new expenditures in the health field, 70 percent for doctors and hospitals has been absorbed by inflation.

This is a factor which reflects all sorts of things, but not the last among them a problem that our economy as a whole is having. Our efforts, I think, where as we have got to do better, we can stand comparison in real life with anybody's tools, and that is the important place to keep it, the comparison, and also to keep the comparison of our accountability on a relative scale.

Senator KENNEDY. I have heard you use examples in which there is direct regulation of health service resources, as in a number of the European countries. You've mentioned Sweden and Canada, and their rates of cost increase.

One thing I think remains extraordinarily clear, after having tens of thousands of citizens showing up at meetings on health services here—to my knowledge there is not a political party in Western Europe that has suggested the repeal of the health programs instituted

in those countries. Yet in this country from, the top to the bottom of our society, we see the deepest despair and frustration over the delivery of health services. So I am not willing to accept that we have done the best we can do by using Blue Cross and therefore ought to just continue to use them as the vehicle for the future expansion of the program.

As for other insurance carriers, you point out there is very little in the administration's program which would give us any satisfaction that if we use these carriers we will not just cause additional inflation.

Mr. McNERNEY. Senator, if I could make one brief comment here, I think it is a rare bill that is repealed. So when you look at the Common Market countries and those on the continent and ask them to go back, it is unlikely that they will go back very far or change very much in a short period of time.

But in these same countries, I think we should be aware of the fact that the doctor is much freer to use resources and practices of medicine than he is in this country in terms of the disciplines he is under and the surveillance that is practiced, yes.

Now, I hestitate to go much further because these comparisons beyond a certain point I think, get very difficult to follow.

But one thing that I feel quite importantly we have come to unique decisions in our economy and in our society, whether it be COMSAT or the public utility or whatever, where, ingeniously we seek new solutions, but we don't slavishly imitate some of these foreign schemes which have problems that should be looked at, which should be measured, and which should be avoided.

I have come to the conclusion that a collaborative effort may be the answer.

Senator KENNEDY. You have expressed some rather encouraging reactions to deductibles, coinsurance, and means tests. Is there anything you can do to establish regulations in the various Blue Cross programs to work toward the elimination of those features?

Mr. McNERNEY. Mr. Chairman, I can't claim a lot of credit in this area, but historically Blue Cross has made minimum references to deductibles and copayments, on the theory that the controls are better exercised in another way, rather than on the sick patient.

On the means test, we are in a different position than the Government, obviously, persons can pay for rates or they can't. So that could not become in our system a point of contention.

I worked against it personally both in the task force and in other ways.

Senator KENNEDY. The Blue Cross was established in to be a community based service organization, and now we find experience rating going on quite frequently. Almost half of the enrollees in my

own State of Massachusetts are experience rated. Do you think experience rating is really consistent with the purpose of the Blue Cross in terms of community service?

Mr. McNERNEY. We moved to experience rating because the competition in the market dictated it. Importantly, however, we did not go to what I consider the more pernicious and extreme points of experience rating.

We lumped together all of the individuals who are on a nongroup contract and for the small groups we lump them together so that no one group experiences would be detrimental to the family, et cetera, and have tried to strike a midway course between these extremes by pooling and then among the peoples having some subsidies flow.

So that there is left an accountability here and in a very real sense, and in Massachusetts it is demonstrable and in Michigan it is demonstrable. There was a period under the community rate where people in the rural areas by paying an average rate were subsidizing those in the urban areas who were facing higher costs of care.

Senator KENNEDY. We have had letters written to us about people who are denied job employment opportunities because of the impact they would have on a group rating. I understand that this has happened in a number of cases. It obviously dramatizes the unfortunate nature of this whole approach, and is contrary to the intent of Blue Cross' charter and tax exempt privileges.

We again want to express our appreciation for your appearance. I think what we have to really attempt to do in this committee and in the Congress is balance future promise against past performance.

I think myself that the insurance industry really has to prove its case in terms of its ability to discharge the increased burden and responsibility which the administration is attempting to place on it.

Even the administration has indicated by its statements that they want significantly increased regulation before they place this responsibility on the insurance industry.

Millions of Americans are satisfied with medicare; many don't feel that the benefits are sufficient, but as a means, as a way to achieve better health they are satisfied with the concept. The question which is fundamental for the Congress, the Senate and the American people, is whether a system which is doing a job for 25 or 30 million senior citizens in this country can work for the rest of the American people.

I want to thank you very much for your appearance here this morning. The subcommittee is going to recess for 45 minutes and we will reconvene at 2 o'clock.

(The prepared statement of Mr. McNerney follows:)

A Statement by

WALTER J. McNERNEY
PRESIDENT, BLUE CROSS ASSOCIATION

Prepared for

SUBCOMMITTEE ON HEALTH OF THE
COMMITTEE ON LABOR AND PUBLIC WELFARE
UNITED STATES SENATE

March 23, 1971

Mr. Chairman and members of the subcommittee, my name is Walter J. McNerney. I am president of the Blue Cross Association, the national organization of the 74 Blue Cross Plans in the United States.

I welcome this opportunity to discuss the status of our health care system and ways to improve it.

In our work over a span of 41 years to provide our subscribers with coverage of the costs of illness, we have been and are aware that changes are needed in the organization, delivery and financing of health services in the United States.

We are vitally concerned with problems of rising health costs, of gaining access to facilities and services, and of guaranteeing the effectiveness and quality of the services provided.

As spokesmen for the Blue Cross system, I and other Blue Cross executives have spoken out on the issues involved in improving the thrust of our health care delivery and financing. We have testified to several Congressional committees, have participated in conferences called by the Secretary of Health, Education and Welfare, have served on Federal task forces, and have discussed our views on the health care system's needs at many public forums.

More importantly, the Blue Cross system itself has been working to improve our health care system's effectiveness. The unique structure and origins of Blue Cross make it especially sensitive to the forces involved in shaping our system and enable it to be an active partner with others in search of improvement of the quality of health care provided to our people.

THE BLUE CROSS SYSTEM AND OPERATION

The 74 non-profit Blue Cross Plans in the United States represent a confederated system which is responsive to both local and national demands. The roots of individual Plans are deeply imbedded in the community, yet all Plans are united in a national system necessary to provide services for a mobile, industrial society.

Size of Enrollment

Since its founding in December of 1929, Blue Cross and its concept of non-profit, voluntary service have grown until today, more than 74 million Americans—or 36 percent of the population—have regular Blue Cross membership. This includes more than six million elderly persons who supplement their Medicare coverage with Blue Cross complementary coverage programs and the more than five million government employees and dependents in the Federal Employee Health Benefits Program who have

chosen Blue Cross coverage. The Federal Employee group of Blue Cross represents more than 60 percent of all participants in this program and is the largest voluntary employee group in the world.

As intermediary for Medicare, Medicaid and other public programs, Blue Cross serves an estimated additional 23 million citizens. This service in the public sector includes administrative work in model cities projects, neighborhood health centers and other programs serving the health needs of the underprivileged. Thus, Blue Cross, through its private and public duties, serves more than 97 million Americans, nearly half the people in the United States. In providing these services, Blue Cross paid nearly $11 billion in claims in 1970.

Whether we are serving an individual, direct-pay subscriber in a rural area, a 10-member group at a small-town bakery, or any of the seven of America's 10 largest business organizations whose employees are enrolled in Blue Cross, our focus is health, not alien purposes, and we are responsible to the people we serve.

Public Accountability

Our public responsibility and accountability are reflected in the fact that 87 percent of all Blue Cross enrollment is in Plans which are required by law to have their subscriber rates and contracts submitted to the state

insurance regulatory body for approval. Since the formative years of Blue Cross, Plans have been subject to public regulation through special enabling legislation recognizing them as non-profit service organizations and requiring filings, disclosures and approval of items such as subscriber and hospital contracts, rates, annual statements and financial reports.

Also, Blue Cross governing boards are composed of hundreds of community representatives, as well as provider representatives, who serve without pay, devoting many hours each month to assuring that Blue Cross is meeting the needs of the people it serves as effectively as possible.

Another significant element in Blue Cross' responsiveness to its subscribers is that throughout its history Blue Cross Plans have assured continuity of coverage by assuring that subscribers' coverage would not be cancelled because of poor health and resulting high use, that group subscribers could convert to individual coverage when leaving the employ of their firm, and that subscribers moving from one Plan area to another would be guaranteed coverage by their new Plan.

Also, to provide health cost coverage at a cost which can be borne by a broad segment of an area's citizens, Blue Cross initiated the concept of community rating. While competitive forces have made it impossible to

continue this concept universally, some Blue Cross Plans still follow this practice while others create pools of small groups and individuals to spread the risk as widely as possible, providing coverage to many who would otherwise be unable to secure any decent measure of health care cost protection.

Indeed, the Blue Cross system, born in the Depression as a response to a social need, has led the way in enabling Americans to secure health cost coverage, until today more than 160 million of our civilian, non-institutionalized population have some form of private health cost protection. Adding those covered only by government programs, at least 190 million of our civilian population have some form of health cost coverage. Probably fewer than 15 million, including many now in long-term institutions, have no protection.

Blue Cross also has played a major role in seeking ways to make more effective use of the monies being spent on health by our citizens. We recognize that the ways in which Blue Cross subscribers' funds are spent can have a highly useful impact on the organization and delivery of health care.

Blue Cross Incentives and Controls

Some of the ways Blue Cross has been working to help control costs and

to see that appropriate services are provided to its subscribers include the following:

— To carefully define allowable costs and establish limitations on payment, Plans utilize various methods of reimbursing providers of care. Negotiations with providers often are long and difficult, as each strives to fulfill its views on what is best for the community.

— To develop new and even more effective reimbursement techniques, Blue Cross Plans are conducting a wide variety of programs and experiments. One major area being investigated is the use of prospective reimbursement which shows great promise as a method for review and negotiation of expenditures before they are made, putting the hospital or other providers at risk to a greater extent than other methods. One such program is the state-wide prospective reimbursement plan being initiated by Rhode Island Blue Cross with the state's hospital association.

— To determine the necessity and appropriateness of treatment provided its subscribers, Blue Cross uses procedures such as claims review, which increasingly are being tied to utilization review. Blue Cross Plans are active in encouraging and assisting utilization review, with

more than 15 Plans providing data profiles on patient use of hospital and extended care facilities for use by utilization review committees. Another method for determining appropriateness of care is the use of recertification programs. Thirty Plans require attending physicians to recertify the necessity for continued care after a specified period of hospitalization.

— To help assure an orderly development of the health care delivery system and the appropriate investment of capital, Blue Cross has been an active supporter of community health planning since the movement's inception. Last year, 48 Plans contributed in excess of $1 million to support area-wide planning and 40 Plans provided direct services to the planning agencies. A total of 23 Plans require member hospitals to prove need for facility expansion and 40 other Plans are working toward requiring conformance with a planning agency's recommendations.

— To reduce the incentive for patient use of the most expensive element in health care, inpatient hospital care, Blue Cross has been working to expand rapidly the broad range of benefits available to its subscribers, including many out-of-hospital benefits. Among the benefits now offered by most Blue Cross Plans are extended care, home health care, out-of-hospital drug coverage, dental care,

59-661 O - 71 - pt. 5 ---5

pre-admission testing, outpatient psychiatric treatment and other outpatient services. A measure of the Blue Cross benefit expansion's effectiveness is that since the second half of 1969 the number of covered outpatient visits by Blue Cross subscribers has exceeded the number of in-hospital admissions. In the 5-year period ending in 1969, the rate of covered outpatient visits rose by more than 50 percent. Also, Blue Cross is actively developing prepaid group practice benefits as an alternative to traditional patterns of providing care. Six Plans have operational prepaid group practice programs, including the Massachusetts Plan's participation in the Harvard Community Health Program; a dozen Plans are either actively developing or planning such programs; and several other Plans are conductin preliminary work in this area.

— To assure that Blue Cross subscribers receive the care they need without paying for it at time it is needed, Blue Cross Plans contract with local hospitals for services to their subscribers. The contracts guarantee the provision of service and spell out the method and basis of payment by the Plan for its subscribers' care. Thus, Blue Cross collects dollars from its members, "paying back" hospital and other health care services when they are needed.

— To help increase hospitals' operating efficiency, more than 20

Blue Cross Plans have initiated cooperative programs in such areas as industrial engineering and computer services. This includes the CASH (Commission For Administrative Services In Hospitals) program formed seven years ago by the Los Angeles Blue Cross Plan and Southern California hospitals to improve the effectiveness of personnel and the quality of patient care. The CASH program thus far has resulted in annual cost reductions of $20 million for 184 subscribing hospitals.

— To increase citizens' understanding of their health care needs and the health care system itself, Blue Cross conducts an extensive program of public health education. More than 7 million copies of the Blue Cross public health education series of books—on topics such as mental health, infant health, health careers, and the mental and physical health needs of adolescents and the middle aged— have been distributed by Blue Cross Plans. The Plans have also conducted many public service campaigns in the areas of health maintenance and preventive medicine.

— To guide its work in seeking more effective patterns of financing and delivering care, Blue Cross conducts a variety of research programs. Presently under way is a comprehensive study of differences in usage and costs between group practice and more traditional forms

of health care delivery, examining the experience under the Group Health Association and the Blue Cross and Blue Shield Federal Employee Programs in the District of Columbia. And we are emplementing a demonstration program to test the capacity of the entire health care system to implement a uniform system for recording and reporting hospital discharge data. Both of these projects involve funding through the National Center for Health Services Research and Development. Blue Cross also has conducted many research projects on the impact of new benefit arrangements on cost and usage and ways to use technical engineering and purchasing skills to reduce cost and organize services more efficiently. Experiments in reimbursement and proposals to test new ideas for cost containment also are underway.

To further increase its own operating efficiency, the Blue Cross system conducts, through the Blue Cross Association, increasingly intensive reviews of Plan performance. This program which is being expanded to include standard-setting and technical assistance, develops recommendations to help Plans improve performance on a timely and efficient basis. Also, through its UNIT (Universal National Information Technology) program, the Blue Cross system is working to expand and enhance its data processing capabilities to provide more effective service to subscribers and to lower costs of EDP operations.

All of the aforementioned ways in which the Blue Cross system works to continually improve its performance accrue not only to the benefit of our traditional, private sector business, but also to the public programs implemented by Blue Cross together with federal and state governments.

Blue Cross and the Government

The Blue Cross role in government service includes its work as intermediary for institutional benefits under Part A of Medicare and its administrative duties for Medicaid programs in 26 states and CHAMPUS (the Civilian Health and Medical Program of the Uniformed Services) in 33 states and the District of Columbia. The largest of these programs is Medicare, where the vast majority of persons taking part are serviced by Blue Cross through its administrative work for the Social Security Administration and 91 percent of the hospitals, 88 percent of the home health care agencies, and 52 percent of the extended care facilities taking part in the program.

Since Medicare's inception, the Blue Cross system has processed more than 50 million claims and handled payment of approximately $17 billion in benefits for the nation's elderly.

In Medicare, and the other government programs, the Blue Cross system has developed new techniques for increasing these programs' effectiveness,

such as the magnetic "tape-to-tape" computer program which speeds Medicare claims processing and helps to eliminate clerical errors at the Social Security Administration's Baltimore records center. This system has lowered the time required to process claims under Part A from 18 days to two. Savings from this system will exceed $1,250,000 in the current fiscal year alone.

Low Administrative Costs

One index of the Blue Cross system's efficiency in its operations is the fact that, in serving its subscribers, the 1970 operating expense of Blue Cross Plans averaged only 5.5 percent of subscription income. This rate has been consistently low, ranging between 4.5 and 5.8 percent in the past 10 years. Also, a recent Social Security Bulletin shows that in 1969 claims represented an expenditure of 97.8 percent of premium income for both the group and individual members of Blue Cross. A comparison of Blue Cross and combined Blue Cross and Blue Shield operating expense with that of other major carriers further highlights the efficiency of our system.

In the Medicare program, Blue Cross provides its administrative services at a cost which equals only 1.68 percent of the funds handled for the program.

While the Medicare record indicates Blue Cross effectiveness, it also demonstrates the fact that the costs of administering a program for private carriers or the government are highly dependent on the tasks performed.

In its private sector work, Blue Cross operations include many activities not performed for Medicare, such as enrollment and marketing functions, actuarial and rating services, central certification and public relations. Also, it should be noted that there is a limit below which administrative expenses or retentions should not go. They generate the impact on claims expenses where the vast majority of total expense lies—and they can be too low.

Thus, the real key when measuring administrative expense is the impact of the program on the cost and effectiveness of the services provided its beneficiaries.

Also, the major duties which Blue Cross has assumed in the Medicare and Medicaid programs are indicative of the fact that through the years Blue Cross has changed—and is continuing to change—to meet the needs of our citizens.

Adaptation to Change

In the early years of the Blue Cross movement, assuring access to care was the major need, many people had great difficulty in affording care and providers often lacked sufficient funds to provide adequate services. The problem caused by a shortage of facilities and services were heightened by World War II.

Blue Cross benefits and its contracts with providers of care reflected this major concern with obtaining hospital care.

Due partly to the success of our system in the 1930's and 1940's in fulfilling its commitment to subscribers to help increase the health care system's capacity, Blue Cross began to shift its emphasis during the 1950's to a greater concern with productivity and assuring that subscribers' funds were being spent in the most effective way.

For while the effectiveness of the health care system was increasing in major strides, health care expenditures and costs were increasing at a faster pace than that of the general economy. The hospital field, which, like most labor intensive enterprises, is particularly vulnerable to the forces of inflation, recorded some of the sharpest gains in cost.

It became evident—especially as both private and federal spending for

health grew rapidly in the 1960's—that more emphasis needed to be placed on the proper expenditure of the money available, rather than merely increasing the amount of money to be spent on health care.

Blue Cross now is working to assure that the money it spends impacts the delivery system in desirable ways: benefits are being expanded, more emphasis is being placed on primary care, alternatives to the use of expensive hospital beds are being stressed, and the use of cost controls and incentives is being broadened.

Another way in which Blue Cross is changing is reflected in the increasing number of consumer representatives on Plan governing boards. Many Plans now have a majority of their board members representing consumers while others are working to achieve this. The board of governers of the Blue Cross Association has gone on record favoring consumer majorities on all Plan boards.

The financial and administrative relationships between Blue Cross and the providers of care are continually changing and have been under careful re-evaluation for some time. The ties Blue Cross has had with hospitals for four decades have in most instances, over those years, benefited the subscriber directly and were a vital factor in creating the American hospital system. But, the need for further change in these relationships is apparent, and it is in process.

This is not to suggest that relations between Blue Cross Plans and hospitals always have been harmonious. For example, the recent well-publicized disputes in Massachusetts, New York and Philadelphia indicate that the pressures of the well and sick communities are each being felt.

STRENGTHS AND WEAKNESSES ATTRIBUTABLE TO PUBLIC AND PRIVATE SECTORS—NEITHER ALONE

Whatever one's dedication or determination, no one agency, public or private, acting alone can impact significantly the problems of financing or delivery. Our attack must be on several fronts and it must be reasonab coordinated.

The health system is complex and diversified. Effective interventions must be forceful and imaginative. The spate of legislative changes introduced in the last decade has demonstrated that change is not easily accomplished even with the best of intentions in the public and private sectors. As the Task Force on Medicaid and Related Programs put it, in calling for competition among various organization modes, "The concept that any single formulation of resources could solve all the Nation's health care problems is as witless as the notion that a single remedy coul cure all kinds of ailments."

Blue Cross' accountability is important, but it is relative.

We recognize, with others, that an important minority of citizens are not protected adequately against the cost of health services. Of these, too many do not have access to or get the care they need. The government must help provide adequate purchasing power to these persons, even in the face of the serious inflation we are now experiencing in the health field. Human compassion demands it. And, we must seize the opportunity to minimize inflation through judicious expenditures. Blue Cross' ability to assist those with insufficient means is limited. Over the years we have done a great deal, but we recognize fully the need for government action beyond the extent of present programs.

All involved in the purchase of services must recognize the need to purchase care reasonably. Money alone cannot guarantee effectiveness and efficiency of care. Spent without an incentive for change in the present delivery system, additional funds can lead to disastrous cost rises. Agencies in the public and private sectors have implemented incentives and controls. The record of none is preeminent. All must join the quest for better programs so that various methods can be evaluated and the leverage extended.

Controls and incentives are ineffective without leadership and dynamic organization. Those of us who operate in communities and neighborhoods across the country know this fact. A special obligation in this regard fall. on the Congress and the Department of Health, Education and Welfare. At no other points do so many relevant forces converge and demand resolution. Too much new legislation has been additive rather than substitutive and addressed to expediencies rather than fundamentals. HEW must regear its operation to concentrate on measurable objectives, enunciate workable policies, sponsor better coordinated programs and evaluate results, while jealously protecting the public interest. Blue Cross has spent considerable money and effort in making area-wide planning work. We can do more and do it more consistently. It would help to have a clearer notion of what the government commitments are in terms of goals and processes. Currently, such programs as Comprehensive Health Planning, Regional Medical Programs, Hill-Burton, and the Childrens Bureau may overlap and even contradict one another.

A mechanism must be found, with government help, to put health services in better perspective. Many of the chief determinents of disease lie outside the programs and orientations of most health programs. Preoccupation with acute services is part of the problem, when more primary or rehabilitative care is needed. Also, health must be seen in the context

of the total life style of education, family living, housing, income, etc. The cost of getting people well as opposed to keeping them well in an increasingly urbanized society are incalculable and, in an economy of scarcity, it is too often those who need health care the most who suffer the shortages.

Government and private programs need consumer input. Both tend to become obsessed with internal needs rather than effective service if all decisions are made by "professionals." To assure that care is rendered at a time and place and in a way satisfactory to the consumer, the consumer must participate in decisions and be taught both what his rights are and how to purchase care. None of this will come about without concerted programs involving organizational change and health education. It is impossible for government or Blue Cross to design a foolproof maze; the consumer must be taught to meet it half way. And, it is he, the beneficiary of service, less sidetracked by aspirations of personal achievement, who holds the key to service innovations and to change. The electorate is not enough, nor is the event of an out-of-pocket payment and the demands associated with it. Policy-making officials at any level of government need to provide for consumer representation, as do we in prepayment.

Today's problems of financing and delivery cannot be appreciated unless

seen in this type of context. The roots are widespread. They invade both the public and private sectors and involve the fundamentals of public policy and management. Neither law, regulation, nor public or private contract is exempt. The strengths and weaknesses of HEW and Blue Cross are in a real sense interrelated.

CONSENSUS ON SEVERAL KEY POINTS—LESS ON OTHERS

In seeking improvement in the present health system, many points of view share a remarkable number of objectives and subobjectives. For example, most of us are determined to moderate cost increases by promoting greater efficiency and economy, to prevent financial hardship for individuals and families, and to seek administrative arrangements that are not only economical but also responsive to changing public preferences easy to administer and generally acceptable to providers as well as consumers.

There is, at last, fairly widespread acceptance of the fact that the health field is aberrant in classical economic terms, peculiarly free of competition and the type of consumer choice that leads, through self interest, to efficiency and economy. Thus, the need for planned

interventions is recognized in many quarters, even though there is uncertainty about what balance to strike between the extremes of laissez faire and top-down manipulation.

Inevitably, agreement on a proper strategy of intervention will be hard to reach. It is encouraging to note that our country tends to be pragmatic when the chips are down, drawing selectively on what seems to work. In facing social and economic challenges we see, as a result, successful resort to performance contracting, in which both the government and private sectors play important roles, and such interforms as COMSAT, public utilities, and port authorities.

In the health field, we are now going through a sifting process, attempting to preserve certain values and change others. It will not be easy. We face conflicting emphases on such values as uniformity and flexibility, varying interpretations of limited facts (nationally and internationally), differing confictions on such essentials as the proper role of government and lack of confiction on such key issues as how to address the problems of long-term care.

SEARCH FOR PROPER BLEND OF
PUBLIC AND PRIVATE EFFORTS

In any event, we must guard against the temptation to move from the

disabilities of one extreme to those of another; from, for example, excessive fragmentation to excessive rigidity.

In plotting the move, let us recognize that the present system is a mixed blessing—not all bad or all good. We suffer doctor distribution problems, but we have the third highest concentration of doctors per unit population in the world. A few years ago, we had no community mental health centers. Now we have over 400. If 12 new medical schools in the last five years seem modest, we should reflect on the fact that some countries, with which we draw comparisons, have added precious few in this century. Importantly, whereas the morbidity and mortality rates among our poor populations are unconscionably high and we must act to change this fact, overall we have seen significant delcines in infant mortality, diseases of early infancy, maternal mortality, hypertensive heart diseases, a decline in the actual number of mental hospital patients and a viable growth in medical science and new techniques. Frustration among the poor in getting care is pervasive (Blue Cross commissioned a survey of the general population with special subsamples in depressed areas, including inner cities, Appalachia, and Spanish-speaking areas to define the problems and report them), but confidence in medicine has increase among the rich and poor alike—and with it demand.

The public sector has played an indispensable part in identifying problems and in the development of corrective action programs. But, it must accept some share of the accountability for unfilled promises with the rest of us. The excess number of costly beds we have in some sections of the country and overlapping supportive functions relate, in part, to the enthusiasm with which some public programs met the shortages after World War II and the equal enthusiasm with which improved health subsequently became equated with bricks and mortar.

Observation of programs in and out of the health field reveals that there are problems inherent in government as well as private policy and operation. I recognize the unfilled needs inherent in a myriad of private transactions, but I also see the dangers, given a set of goals on which we can agree, in the tendency of large systems living under the lash of legislative committees to be conservative, to minimize differences. Much depends, perhaps, on the product. However, I think we could all agree that health services, bedded, as they are, in subjective as well as objective considerations and in a strong tradition of professionalism demand an unusual degree of decentralized sophistication and flexible administration. We have all heard health referred to as neighborhood business as well as a national issue: it is with reason.

59-661 O - 71 - pt. 5 ---6

International Comparisons Complex

In sifting our alternatives, reference to other countries is often made. These are tricky, as are comparisons in other fields. Life styles vary considerably with major consequences to the health of the population. Economic and population characteristics vary, as do basic economic prejudices. We often see differences in morbidity and mortality. How often do we see that under essentially state financial programs there is practically no group practice, for example, in the Common Market countries; that there is little challenge of usage patterns in any country? In one recent instance, the population of the country is trying to negotiate doctors off per capita payments so that those soldiering can be identified through "piece rates."

NEED TO EVALUATE BASIC ALTERNATIVES CAREFULLY

If we are seeking incentives and controls at a more dynamic level from prescribed budgets, a monolithic financing scheme does not seem to be the answer, if comparisons have any value.

Monolithic Financing System

I hope that the Subcommittee will evaluate carefully the relative merits of various alternatives in seeking change. Personally, I have reservations about the ability of a monolithic financing system, as I do about a

monolithic delivery system to reach the goals we seek. There are the hazards of bureaucracy often cited, to be sure. As part of this, one must ask himself whether it is possible to have little or no pluralism in financing of health services and lasting pluralism in delivery. The odds are against it. Beyond these considerations lies the problem of under-financing. In a political setting, health has only relative value. The frontiers should be supported by private transactions as well—more than one source of money serves not only to endorse innovation but to protect health against the "more compelling" problems of inflation, international trade, war, roads, wage settlements, etc. Preoccupied with high expenditures, we may fail to recognize the ever present danger of under expenditure—because the health field is vulnerable not only to the realities of political priorities, but to the hard to change tendency of people to be interested in getting well, but not in staying well. Put another way, the percent of the GNP we are now spending on health can be viewed as a measure of our dynamism or our profligacy. Probably it is both. Certainly, it is neither alone.

The health system does, in fact, need more leadership and coordination. Can we view the strategy involved in a different framework?

Public—Private Financing System

In it, the government would play a key role with a heavy accent on Federal leadership. Government would guide, not direct; motivate, not demand; assist, not provide; and evaluate, not ordain. It would be an integral part of the management of the system.

With the necessary minimum of regulation, the management function is seen as formulating policy, establishing objectives, fashioning incentives, evaluating results, and, always, protecting and promoting the public interest—with the policies, goals, incentives, results and public interest comprehending not just the Federal health programs and their beneficiaries, but the health care system as a whole and the whole population.

In short, government would accept the challenge of governance which it is designed and equipped to do and not attempt extensive operations which it is less designed and equipped to do. It would capitalize on the considerable assets of the private sector through not only setting goals and other leadership functions, but through performance contracts in major part based on specification of desired outcomes rather than specific methods of operation, and evaluation and information systems that can assess performance in terms of output or results. Further, not every facet of the health field should be under contract. Given greater leadership and structure key areas can respond adequately to private demand.

This approach rests on the firm belief that neither the public nor private sector can get the job done alone. The assets of both are needed in moving ahead on both the demand and the supply sides of the problem. Furthermore, it suggests the need to pace demand and supply through a process that avoids the type of corrosive inflation we have seen in the health field since 1965, which affects medical as well as institutional services. In the last three or four years of new expenditures, only approximately 30 percent represent new services or new citizens served in both areas. The idea that a magic wand can be waved over this situation through a comprehensively operated financial or delivery system causes me serious doubt. All things considered, I tend to place more stock in a certain amount of honest adversary relationship and a greater accountability through greater consumer as well as electorate input.

BLUE CROSS ROLE

Can the Blue Cross, as an example of private mechanism, rise to the above challenge? The answer is yes. The desire and ability are there.

Clearly, a system that touches the lives of so many people has a significant amount of accumulated skill and material and system resources that are responsive to changing needs and demands. The record is clear that Blue Cross can operate effectively in a variety of circumstances, e.g., in the private market, in Medicare, the Federal Employee Program and

CHAMPUS. Medicare is a program that has shown many strengths. I hope that we all appreciate that its successes on an ongoing basis are, in significant part, attributable to the performance of prepayment plans, whose role was essential in starting the program.

To fail to exploit the assets of Blue Cross would constitute a needless duplication of investment and skill, but also, and of greater importance, it would seriously undervalue the worth of a blending of public and private capabilities in getting things done.

AFTER RECESS

Senator KENNEDY. The subcommittee will come to order. Our final witness this afternoon is Mr. Ned Parish, executive vice president of the National Association of Blue Shield Plans.

Mr. Parish has been an administrator in the health care prepayment field for more than a quarter of a century, he has also served on innumerable committees and commissions dealing with the financing of health care, including the AMA's commission on the cost of medical care, the committee to establish part B carrier criteria for the medicare program, and the committee that organized the first conference on private health insurance in 1967 which was convened by the Secretary of HEW.

He is presently a member of the American Public Health Association.

Mr. Parish, we welcome you here and appreciate your testifying before us.

We welcome you, Mr. Parish, and extend our appreciation for your patience for staying with us through the morning and this afternoon.

STATEMENT OF NED F. PARISH, EXECUTIVE VICE PRESIDENT (PRESIDENT-ELECT), THE NATIONAL ASSOCIATION OF BLUE SHIELD PLANS, ACCOMPANIED BY JAMES D. KNEBEL, ASSISTANT EXECUTIVE VICE PRESIDENT, AND LAWRENCE C. MORRIS, JR., VICE PRESIDENT

Mr. PARISH. Thank you, Mr. Chairman. As you have indicated I am Ned Parish.

With me are two other officers of the corporation, on my left is Mr. James Knebel, assistant executive vice president and on my right, Mr. Lawrence C. Morris, Jr. vice president for planning.

We appreciated your opening remarks of this morning, Mr. Chairman. They are eminently fair and to the point.

My testimony today has two points: One is to discuss the nature of Blue Shield and to comment specifically upon some of its characteristics. The other is to offer an analysis, with recommendations, of the basic position of the American system for the delivery and financing of health services. Before doing that, however, I would like to speak for a few minutes about Blue Shield.

As a national institution of significant size, Blue Shield is about 30 years old. In this period of time, we have grown to serve 64.5 million people in private business, and an additional 16.6 million as carriers for the programs of Federal and State governments.

When we began, the American medical care system had a relatively narrow economic system. Fewer people saw physicians, and they saw them less frequently. The majority of physicians had little training beyond the internship, in part because so many patients were unable to provide an adequate economic base for the highest quality of medical care.

From the economic base that we helped to make possible, more people have been exposed to medical care, have learned its value,

and want more and better care. It is the social pressure of this awakened desire, expanding much more rapidly than the supply of health resources, that has created a turning point, which is the true meaning of the word "crisis."

We would readily agree that the American system for the delivery and financing of health care needs improvement. How could anyone adopt a contrary attitude? Indeed there is no system, anywhere of any kind, that does not need to have improvement. The issues must be, how badly do they need it, and in what particular areas?

What corrective measures can be practically applied, and at what price?

Unfortunately, a great deal of oratory and unsubstantiated hypothesis has been injected into the current dialogue about what priorities the Nation should place on health, the proper role of personal health services in achieving national health, the commitment of resources to achieve health objectives, and above all, the embodiment of these decisions in a defined national health policy. I would like to say, parenthetically, that we have been most favorably impressed by the potential for rational decisionmaking in Senator Kennedy's and Senator Javits' proposal for a national council on health issues and by the analytic approach of Senator Pell's systems analysis legislation. The price of error is an unsuccessful restructuring of our health care system can be disastrously high.

The capacities of the prepayment system, while subject to limitation in some areas and still under development in others, are clearly a significant national resource. We should like to comment on some aspects of Blue Shield in order to place in perspective some of the incomplete information your committee has received.

Specifically we want to discuss the nature of Blue Shield, comprehensiveness of benefits, benefit cost, and the administrative costs of delivering those benefits.

Blue Shield is composed of 73 plans, each with its own service area, usually a State. The plans are organized for the most part under special State enabling legislation. As a result of this, they come under the surveillance and regulation of the State insurance commissions to a degree unusual for commercial insurance companies. They are without exception not-for-profit corporations with local boards of directors.

The plans are linked together by membership in the National Association of Blue Shield Plans, which owns the trademark "Blue Shield" and administers membership standards—attached as an appendix—as a condition of using the trademark.

(The information referred to had not been supplied then when this hearing went to press.)

Mr. PARISH. These standards are designed to protect the interests of the public by assuring fiscal soundness, adequacy of performance, reasonableness in benefit pattern and level of payment, clarity and truth in advertising and promotion, due attention to a utilization review and cost control, an acceptable refund of benefits to the subscriber, and other characteristics we find desirable.

Blue Shield plans usually work with companion Blue Cross plans, offering prepayment for professional services while Blue Cross covers institutional services.

For economy and efficiency, some staff functions are usually supported jointly. There is usually a board of directors making policy for Blue Shield and a separate board making policy for Blue Cross.

While we encourage the most effective possible cooperation at plan level, and engage in many joint activities nationally, Blue Shield and Blue Cross are separate entities.

It is necessary to speak generally and in terms of usual practices, since the autonomy of the individual plans is very real, within the framework of the membership standards. The price of this decentralization is some lack of uniformity, but we feel that it is justified by the values imparted by local boards of directors, representing the concerns of the public and the medical profession, and by the accountability of each plan to its own community.

There has been considerable discussion of the inadequacies of private health coverage in providing comprehensive protection. However, we have made available considerably more comprehensive coverage than all but a very few subscriber groups have been willing to support.

The membership standards of NABSP require that all plans make available for national contracts a comprehensive coverage program. If purchased in full, in conjunction with a comprehensive Blue Cross contract, this program covers essentially all necessary medical care.

The specific items included are surgery, wherever rendered; anesthesia, radiation therapy, diagnostic X-ray, wherever rendered; laboratory and pathology services, wherever rendered; medical services in the hospital, home or physician's office; psychiatric care; treatment of pulmonary tuberculosis, mental disorders, drug addiction and alcoholism; maternity care; well baby care; emergency care; consultations; physical therapy; physical examinations; inhalation therapy; ambulance services; prosthetic appliances and braces; and the rental or purchase of durable medical equipment.

We are continuing to develop this program. We intend to include coverage for dental care, prescription drugs, and those eye care services not associated with disease.

These particular services are not yet underwritten throughout the Nation, although some plans offer them in basic coverage.

All of the plans cover some of them in their supplemental contracts. One problem is the difficulty of providing high-volume, low-unit cost services at reasonable administrative cost. Nevertheless, we expect to be able to deliver them universally in a matter of time.

It is illuminating to examine what types of services would not be covered by such a program. They would include such discretionary expenditures as nonprescription drugs and surgery for beautification. Coverage of these items would skyrocket their utilization, with dubious benefits to the patient. Also excluded are workman's compensation cases, and services provided by Government or by an employer. Obviously these are separately financed.

With these qualifications, Blue Shield can, in conjunction with Blue Cross, cover essentially all of the nondiscretionary health bill. But having stated what we can cover, we must also state for whom. No carrier can cover the expenses of those too poor to fund cover-

age. We will discuss this in a few minutes. And no carrier can cover the expenses of those who can, but elect not, to fund good coverage.

The role of consumer discretion in the adequacy of health coverage is vastly underestimated.

Very clearly, many consumers have elected to assume more personal risk rather than utilize the best prepayment that the best carriers are willing and able to deliver.

We believe that some of the information the committee has heard regarding benefit cost has been misleading through incomplete interpretation. Raw data on what carriers have paid for medical expense conveys an impression of inflation that goes beyond the facts. Certainly there has been inflation in medical costs. There is no way to insulate a major service industry from the effects of an inflationary economy. But two factors—changing patterns in the use of medical services and expansion of the benefit pattern—have recently accounted for more change in the total cost of comprehensive programs than has inflation.

There is an excellent example of this in the Blue Shield component of the program for Federal employees.

From its beginning in mid-1960 through 1969, the Blue Shield premium for the Federal employees program rose 112 percent—an average annual rate of nearly 14 percent. On the surface, it would appear that Blue Shield failed utterly to hold the cost of benefits in line with the income of its subscribers. What actually happened is that three elements took effect.

The premium was raised 25 percent by the addition of new benefits, most notably outpatient diagnostic X-ray and laboratory service, a significant improvement supporting both preventive care and intelligent hospital utilization.

The premium was raised an additional 45 percent by increased utilization. That is, having good coverage the Federal employees tended to take advantage of it by seeing physicians more often, and deferring fewer elective procedures. This raised the cost of the program considerably, but presumably it contributed to the better health of the subscriber, which is a major objective of comprehensive coverage.

Senator KENNEDY. This increased utilization, can you give us figures for that for the record?

Mr. PARISH. Yes. I would be happy to.

(The information referred to follows:)

FEDERAL EMPLOYEE PROGRAM; BASIC BLUE SHIELD—INCIDENCE RATES[1] 1961-69

	1961	1969	Percent increase 1961-69
Surgery	3.7	6.2	67.5
Anesthesia	.8	1.0	25.0
In hospital medical cases	1.2	1.6	33.3
Maternity	.5	.3	−40.0
Weighted average[2] increase over 8 years (percent)	45		

[1] Incidence rate is defined as the quotient of the number of services divided by the number of contract months in force during the respective years.

[2] A weighted average is appropriate since increases in incidence rates have varying impacts on the subscription rates depending upon the type of service.

Mr. PARISH. And finally, the premium was raised 42 percent for higher unit payments to physicians. This is an average annual increase of 5.25 percent. This is entirely reasonable because there has been a shift in the program from partial indemnity payment to payment in full, in most areas.

Administrative costs for the coverage of professional services are higher than for coverage of institutional services, for the obvious reasons that a specific illness typically involves one hospitalization, if that, but may involve several professional claims, amounting, in total, to less than the hospital bill.

Furthermore, income per contract for Blue Shield coverage of professional services is substantially less than for institutional coverage.

Thus, more claims must be processed as a percentage of a lower gross premium. In 1969 Blue Shield administrative expenses nationwide averaged 11 cents for each dollar of premium collected.

Senator KENNEDY. With respect to the 25 percent premium increase does that reflect any inflation? Do you have knowledge that there is inflation built into that?

Mr. PARISH. Yes, there is inflation. As we indicated here, there is no way to keep this out.

Senator KENNEDY. But can you indicate what parts of those increases are because of inflation?

Mr. PARISH. Not at this time. I am sorry. The major portion of this would be accounted for in the 42 percent increase in higher unit payments to physicians. The reason for that is the fact that the program has shifted in the last 2 years, now mandatory in 1969, that instead of a fee schedule approach, partial indemnity with the beneficiary or subscriber having to pay something out of pocket.

That has shifted to the payment in full program, which obviously results in higher payments to physicians, but also to the greater predictability on the part of the individual for his medical bill.

Senator KENNEDY. Earlier today we are talking about the Blue Cross's attempts to refuse payment for what they considered to be excessive costs.

Blue Shield has various review procedures. When your review procedures reveal that the treatment offered does not warrant full payment of the physician's bill, does the payment of the balance of the charge become the responsibility of the individual policyholders?

Mr. PARISH. I am not sure I understand the question completely, Mr. Chairman.

Senator KENNEDY. If you make a decision that a payment is excessive and you refuse to pay it, who pays it?

Does that become the obligation of the policyholder?

Mr. PARISH. In the so-called paid-in-full program, which operates on the fee basis, if the physician is a participating physician in that program, he may not charge any additional amount to the subscriber. If he is a nonparticipating physician and if he has made a prior agreement with the subscriber, then the subscriber is obligated for the amount agreed to in that prior agreement.

Senator KENNEDY. What happens, say in the Federal health program, when you have a fee for $100, and Blue Shield allows you $50 for that procedure. What happens to the balance? Who pays for the balance?

Mr. PARISH. If that Federal employee's program—and the vast majority of subscribers to the Federal program are covered under the usual, customary and reasonable approach—the fee paid as determined by the plan through its own determination that what is paid for that procedure is payment in full for that procedure. And the physician, if he is a participating physician in the program, may not charge additionally to the subscriber.

He has agreed to this by a specific agreement. If he is not a participating physician and if no prior agreement—turn it around the other way—if there was prior agreement with the patient that he would even be liable for an additional amount of money, whatever it might be, then the patient is obligated to pay that.

If there was no prior agreement, then the plan and the program will defend that situation and would support the nonpayment.

Senator KENNEDY. You would pay that?

Mr. PARISH. Not necessarily pay it. To use a term, we would hold the patient harmless in that instance. He would not be required to pay it. Some other arrangement would have to be made. Either the plan would stand for it, or the physician would reduce the charge.

Senator KENNEDY. What does it mean when you hold him harmless? Does he pay?

Mr. PARISH. No, he does not pay.

Senator KENNEDY. How about the example where someone is traveling across the country, gets sick and does not find out whether the doctor is participating or not. When he gets the bill, and finds that under your schedule only a certain amount of that is paid, what happens to that? Will he have to pay the excess?

Mr. PARISH. The Federal program is a national program, and so that particular problem does not come into it.

Senator KENNEDY. There must be certain parts of the country where they don't have the kind of facilities or necessarily the personnel who, even though the plan is national in nature——

Mr. PARISH. It would be relatively difficult to encounter that since we are broadly based across the country and each of the plans is handling its local business with its local physicians, and that physician pretty well knows, unless he is brand new to the community, he knows here exactly where to go for this kind of information, to his home base plan.

In the final analysis——

Senator KENNEDY. What percent of the physicians practicing in Washington are participating, for example?

Mr. PARISH. I don't know, but we can supply that.

(The information subsequently supplied follows:)

NUMBER OF PRACTICING PHYSICIANS SERVING WASHINGTON, D.C. AND FOUR ADJOINING COUNTIES BY WASHINGTON BLUE SHIELD PLAN

There are 4,802 privately practicing providers of professional service in the District of Columbia and the four adjoining counties served by the Washington Blue Shield Plan. An estimated 550 of these reside in portions of the adjoining counties not served by the Plan in its private business, where participation becomes a factor. Of the remaining 4,252, 3,882, or 91.3%, hold participating contracts, in the following distribution:

Physicians (M.D.)	3,607
Physicians (D.O.)	12
Dental surgeons	152
Podiatrists	111
Total	3,882

Senator KENNEDY. What percentage in the country?

Mr. PARISH. I can't give you precise figures but it would be, if I may be permitted a ballpark figure, it would be in the 1980's in terms of percentage. In private practice. We make that distinction, because there are any number of physicians, M.D.'s, for example, who are teaching physicians or who are serving in Government or teaching, or that sort of thing, that are not included as an active practice group.

(Information subsequently supplied for the record follows:)

NUMBER OF PHYSICIANS SERVING NATIONAL BLUE SHIELD PLAN

In 1970, there were an estimated 196,180 physicians in the active private practice of medicine in areas served by Blue Shield Plans. Of these, a total of 149,280 physicians (74.5%) have signed *individual* participating agreements with their Blue Shield Plans.

A number of Blue Shield Plans do not use *individual* participating agreements. Plans in seven states have formal agreements with appropriate medical societies, covering their entire membership, in lieu of individual agreements. An estimated 31,960 physicians in private practice (19.5%) are involved in these agreements.

A combination of 149,280 individual participants and 31,960 participants under medical society agreement totals 181,240 Blue Shield participating physicians, or approximately 93% of all physicians submitting charges for services to Blue Shield subscribers.

It is worth noting that Michigan Blue Shield has formal participating agreements with 68% of its physicians. Through a unique system of "per case participation," Michigan physicians, *in fact*, participate at about 90%. The additional de facto participation raises the total figure about 1250 physicians, and results in gross participation of just under 94%.

Senator KENNEDY. How does an individual know if a physician is participating or not participating?

Mr. PARISH. He does not. He does not have a little book that would tell him. With that high percentage of physicians participating in the program, there would be a good chance of getting one. The obvious way is that he asks, and obviously if he can't ask, then he has to take the chances under an emergency situation.

That would be treated as an emergency situation anyhow, and would be covered as if it had been participating.

Senator KENNEDY. I would like in questions put to you later, to develop these thoughts with you a bit, because we have had a lot of people who have written into the committee and told us about these experiences. I am not sufficiently familiar with of the details of these plans and programs to know exactly what some of those problems are, but I would like, if I could, to develop this further with you and your staff.

Mr. PARISH. In return for administrative cost the Blue Shield subscriber gets in addition to claims payment, relief from having to pay the physician and seek reimbursement later, claim submission by the physician's office without trouble or expense to the subscriber—Blue Shield compensates the physician through a guarantee against collection loss—control of claims expense, confidentiality between

himself and his employer concerning the details of the illness, and most importantly the security of protection.

The employer also receives services from the plan. He gets education for his employees concerning their benefits; education for professionals regarding the coverage, utilization review, peer review of unusual utilization or charging patterns, a virtual absence of paperwork and experience reports on how his money is being spent, to afford him full surveillance of his expenditure.

A significant, but often overlooked factor in administrative cost is the social responsibility assumed by Blue Shield. The most important area is the continuing protection of the disabled or unemployable subscriber. It is the policy of Blue Shield that no subscriber be denied continuing coverage solely for reasons of health or of employability, whether dictated by health or layoff.

Obviously, this impacts not only upon administrative costs but upon benefit costs. We consider it a major obligation to make coverage available to the whole community without regard to health status, employability, or hazards of occupation. Nor do we change, in most cases, administrative cost differentials in the nongroup subscriber.

We believe, too, that we have an obligation to assist where possible in the implementation of public policy, and we have, for example, developed programs for foreign visitors at the request of the Department of State.

We have extended coverage to discharged servicemen at the request of the Department of Defense. We have covered VISTA Volunteers for the Office of Economic Opportunity. We have participated in model cities programs for the Department of Housing and Urban Development. We are now working with the Department of Health, Education, and Welfare on programs of coverage for migrant workers. Rarely, if ever, have these programs recouped their expenses.

We are also concerned with the welfare of the public. In the past 2 years Blue Shield plans and the national association have spent over $1.5 million on an eminently successful program to educate young people about the hazards of drug abuse.

Our program has drawn commendation from the President, the House Subcommittees on Education, the Departments of HEW and Justice, and the National Institutes of Mental Health. Its effects have reached far beyond its direct cost, since the media have been very generous in their contributions of space and broadcast time. We are now launching a program of equal magnitude directed at alcoholism.

It has been alleged that the Social Security Administration is able to administer health care programs more cheaply than Blue Cross and Blue Shield. We do not know, and we doubt that anyone with access only to public information does know what the precise costs of administering the programs of Government are.

Certainly they have never been published. The expenses of the Bureau of Health Insurance, for example, exclude administrative, statistical data processing, accounting, and other support services received from other agencies of SSA, and by no means indicate the total cost of administration.

Furthermore, SSA Administrative expenses now incorporates services from other branches of HEW, the Treasury Department, the Bureau of the Budget, the General Accounting Office, and possibly other agencies of the Government.

And Government accounting procedures make no provision for the depreciation of buildings and equipment, which is a significant element of the plans' cost.

Mr. Chairman, we have felt a need to clarify some of the record regarding the prepayment system. We have tried to do this briefly. We would like now to turn to a discussion of some of the issues confronting the Nation on the financing and delivery of health care services.

No one doubts that the present systems can be and should be improved. However, what exists is not a nonsystem, but a series of subsystems, sometimes competitive, usually complementary, and almost always derived from the needs, resources, and specific circumstances of a given area. Radical change could not be effected without a breakdown of health care delivery if it were imposed without regard to those needs and circumstances. And it is doubtful that a Government-operated system could decentralize its authority and decision making ability to the local level enough to avoid this.

Senator KENNEDY. Why do you say that?

Mr. PARISH. I think if I could proceed to another point in the testimony, Senator, I could make it clear, but it has to do with structure of Government itself, the extremely detailed fiscal responsibility and the accountability.

Senator KENNEDY. Doesn't it work under social security?

Mr. PARISH. We debated this issue with Social Security itself, sir. We felt strongly, and I think safe to say, continue to feel strongly, that a decentralization of, for example, the recordkeeping of the medicare program would have resulted in a more efficient administration.

Senator KENNEDY. There is nothing inherent in a Government-operated system that means it can't be regionalized to local groups in terms of the record keeping and other kinds of procedures.

Mr. PARISH. I recognize that, Senator, and we operated initially and for a period of several months prior to the initiation of the medicare program on the assumption that it would be decentralized. We had a task force, if you will, of people in Washington working with the Social Security Administration on that very point.

Suddenly, by regulation, that was shifted, so that all records were then kept in Baltimore, requiring the round-trip determination of

eligibility, et cetera. The determination of whether or not the deductible has been met, and those things which we felt, and as I say, still feel would have been better kept at the local level.

Senator KENNEDY. You have the local social security offices in different parts of the country.

Mr. PARISH. They maintain no records in that respect.

Senator KENNEDY. Is there anything that is explicit or implicit in the Social Security System which prohibits the opportunity for decentralization?

Mr. PARISH. To the best of my knowledge, there is nothing in the law which would prohibit the decentralization no, sir.

The health care system is, in fact, no more disorganized and uncoordinated than the demands that have been made upon it. It works remarkably well to do what it was designed to do; bring the highest possible level of training to bear upon the specific problems of the individual patient who uses the system, giving lesser priority to economy in the delivery of care, or to service to those who, for whatever reason, do not present themselves to care.

This orientation is now widely questioned. But no clear-cut new orientation is likely to emerge until new objectives are well defined, acceptably priced, and supported by realistic incentives.

Senator KENNEDY. Isn't the real problem the lack of money, or the availability of doctors, or confusion on where to go? Don't these problems prove that the system is not really working in many cases?

Mr. PARISH. Again, as I indicated, there is no question that the system needs improving. If we have responsibilities, or if we have created a problem, I think it has been the problem of providing the economic health base for more and more people against virtually constant supply of providers, and this has created the clouding, the problems which you, for example, in your bill addressed very perceptively.

Senator KENNEDY. Do you agree that a solo practitioner that is being paid fee for services is inefficient?

Mr. PARISH. I would have to answer that at least two ways, Senator.

One, it depends on his location, and while I am not a——

Senator KENNEDY. Where is the solo practioner efficient and where is he inefficient?

Mr. PARISH. A solo practice in a small town might be a very efficient practice.

Senator KENNEDY. The number of these seems to be getting smaller very fast

Mr. PARISH. This is one of the charges made, that the rural and intercity groups are not getting physicians, and I think there is truth to that.

Senator KENNEDY. This is a problem. Why is there such a shortage of physicians in these rural and intercity areas if that is an efficient way of delivering health care systems?

Mr. PARISH. It may depend on the individual. I know physicians who would not move from a rural area no matter what.

In terms of the economy, it tends to indicate that the solo practitioner is disappearing. You are getting all kinds of group practices; groups of physicians getting together to share common facilities, common offices, records, other areas of prepaid group practice, with a capitation system. All of these things are beginning to merge.

Senator KENNEDY. Does Blue Shield do anything to encourage these new approaches?

Mr. PARISH. Oh, yes.

Senator KENNEDY. What sort of things?

Mr. PARISH. In the instances of group practice, we have by official action of the plans in our own meetings, encouraged the development—urged plans to develop these group practices and other alternative forms of health care delivery within their own plan area. We do this because we are firmly convinced that until and unless there is a real viable choice by the individual, none of these things, none of the claims that have been made for these various forms of practice, will be proven or disproven and we have plans now—I don't have an accurate count, but several plans have moved into this area—Rhode Island, Wisconsin, Pennsylvania, are a few examples.

It is not being done reluctantly, but with the idea of giving people a choice that they can make or exercise.

Senator KENNEDY. This morning, Mr. McNerney described how Blue Cross tries to negotiate hard bargains with the hospitals in terms of payments of services.

What does Blue Shield do in terms of hard bargaining with doctors to keep fees low?

Mr. PARISH. Again, depending on the program. But using the program which has emerged as the dominant prepayment theme in the future, namely, the payment-in-full concept, we have by our membership standards, and it is an appendix to the testimony here, indicated a series of requirements which that plan must have in order to qualify as a member in providing a favorable approach.

Under that they have to make this program pay based on the usual, customary, and reasonable charges of physicians. This now takes into consideration the patterns of charges for similar services provided under comparable circumstances in the same geographic area. Such provision shall show evidence of professional support, shall contain provisions for the development of individual physician charge patterns, and shall have regular review and analysis.

(The information referred to follows:)

APPENDIX I

MEMBERSHIP STANDARDS OF

NATIONAL ASSOCIATION OF BLUE SHIELD PLANS

PREAMBLE

These Membership Standards provide objective criteria for evaluating the effectiveness of a Plan's service to the public, to the medical profession, and to Blue Shield as an interdependent association of Plans. The intent of each standard is clear, and is to be met. It shall be the duty and responsibility of the Board of Directors as provided in Chapter VI of the Bylaws to determine a Plan's adherence to these Standards.

SECTION 1. PLAN APPROVAL

A Plan shall have substantial support of the medical profession, evidence of which shall be approval of the Plan by the appropriate medical society or societies.

SECTION 2. NONPROFIT OPERATION

A Plan shall operate on a not-for-profit basis. A Plan organized under laws other than nonprofit enabling acts shall include in its bylaws a specific provision for operation on a nonprofit basis. No director, officer, or any other individual shall receive, directly or indirectly, any profits from the operation of a Plan. Compensation for services performed or reimbursement for expenses incurred shall not be considered profit.

SECTION 3. FREE CHOICE OF PHYSICIAN

Subject to express provisions of law, there shall be free choice by the patient of any duly licensed physician practicing in the area served by the Plan.

SECTION 4. PARTICIPATING PHYSICIAN AGREEMENTS

If a Plan utilizes Participating Physician Agreements, which in any way affect the services and/or benefits provided in the subscribers' certificates, such Plan shall secure and maintain the participation of not less than 51 per cent of the eligible doctors of medicine practicing in the area served by the Plan.

SECTION 5. PATIENT-PHYSICIAN RELATIONSHIP

The personal relationship between patient and physician shall not be abridged.

SECTION 6. SUBSCRIBER BENEFITS

Benefits may be provided on a service or indemnity basis, or both.

A service benefit Plan shall provide acceptable proof of an adequate attempt to provide a maximum family income limit high enough to include potentially a substantial majority -- 75 per cent or more -- of the population in its area of operation. Such income limits shall be related to a schedule of maximum payments for eligible services that is based upon the normal average medical charges for such professional services rendered in the area for persons within the income levels specified for service benefits.

An indemnity Plan shall provide acceptable proof of an adequate effort to establish and maintain a schedule of payments that approximates the normal average medical charges for eligible services rendered in that area for persons in the lower and medium income groups, comprising a substantial majority -- 75 per cent or more -- of the population in its area of operation, thus providing its subscribers in these income groups with a reliable assurance that the Plans' payments will meet the actual costs of the services covered by their contracts.

Where indemnities are paid to the subscriber, it shall be clearly stated that these indemnities are for the purpose of assisting in paying the charges incurred for medical service and do not necessarily cover the entire costs of medical service, except under specific conditions.

Each active member Plan shall make available a paid-in-full program, based upon the usual, customary and reasonable charges of physicians and which takes into consideration the patterns of charges for similar services provided under comparable circumstances in the same geographic area. Such programs shall show evidence of professional support; shall contain provision for the development and maintenance of individual physicians' charge patterns; and shall have regular professional review and analysis consistent with Plan responsibility to both physicians and the general public.

Effective June 1, 1970, such program shall include the Blue Shield Comprehensive Contract as approved by the membership on April 6, 1970.

SECTION 7. PUBLIC POLICY

A Plan shall be organized and operated to provide the greatest possible service to the subscriber.

A. A Plan's subscribers' certificates shall state clearly the benefits and the conditions under which such benefits will be provided. All exclusions, waiting periods, and deductible provisions must be clearly indicated in promotional literature and in the certificates.

B. A Plan's promotional activities shall be reasonable and shall avoid any misleading statements.

C. A Plan's medical/surgical claim expense over a reasonable period shall be not less than 75 per cent of earned subscriber income.

D. A Plan shall submit evidence that its practices provide for utilization review and control designed to safeguard the interests of all persons served by the Plan. Criteria for measuring the effectiveness of a Plan's utilization review program shall be established by the Board of Directors.

SECTION 8. REPORTS AND RECORDS

A. A Plan shall maintain such records as may be required by the Board of Directors and shall submit such reports and information as the Board may require.

B. A Plan shall notify the National Association of Blue Shield Plans of any changes pertaining to the operation of the Plan, such as changes in its bylaws, major policies, membership of governing board, officers, certificates, rates, fee schedules, promotional literature, or other items of importance.

SECTION 9. FINANCIAL RESPONSIBILITY

A. A Plan shall maintain such reserves as are legally required; they shall also be reasonably sufficient to protect subscribers' and physicians' interests.

B. A Plan shall establish and maintain accounting practices which conform with recognized accounting principles and will afford a reliable financial statement. All operating statement data submitted to the Board of Directors shall be on an accrual basis.

C. A Plan shall provide adequate liabilities for medical/surgical claims reported but not yet paid and unreported medical/surgical claims, and shall reflect these liabilities in its operating statement.

Plans having less than 1.25 months of average monthly medical/surgical claims expense in this liability account shall submit at the request of the Board of Directors satisfactory evidence that its liability account for claims outstanding is adequate.

D. A Plan shall maintain an adequate reserve for contingencies over and above all liabilities. A Plan's reserves, exclusive of liability items included in paragraph (C.) above, shall be sufficient to meet medical/surgical and operating expenses for a period of three months.

A Plan which does not meet this requirement, and has not added at least 2 per cent of gross income to its contingency reserves during the preceeding twelve-month period, exclusive of liability items included in paragraph (C.) above, shall produce evidence satisfactory to the Board of Directors that its financial policies are sound.

E. A Plan shall submit to the Board of Directors a certified annual audit report, containing a minimum of such information and certifications as the Board may require.

SECTION 10. PROFESSIONAL RELATIONS

A Plan shall maintain, as part of its regular organizational structure and operation, an active program of professional relations directed toward securing and maintaining close cooperation with practicing physicians and with its approving medical societies, which shall include the following:

A. A Plan shall submit to the governing board of its approving medical society(ies) an annual report of Plan operations and progress, and shall solicit and welcome the advice and guidance of its approving medical society(ies) in all matters of medical policy, in the composition of Plan boards and committees having jurisdiction over medical matters, and in the formulation of administrative procedures affecting professional relations.

B. A Plan shall utilize committees of the approving medical society or shall establish and maintain a committee or committees, a majority of whose members shall be doctors of medicine, responsible for recommendations concerning (1) the establishment, review and modification of schedules of payment for professional services;

(2) the review of medical claims requiring individual consideration and the establishment of claims administration policy.

C. A Plan shall publish a physician manual which shall include its schedule of benefits and other basic information pertaining to the operation of the Plan.

SECTION 11. PLAN PERFORMANCE

Each Plan shall be expected to effectively administer all programs in which it participates, based on guidelines established by the Board, and, where indicated, the Plan shall be expected to take corrective action to improve performance to acceptable levels within a reasonable period of time.

SECTION 12. INTERPLAN OBLIGATIONS OF MEMBERS

Active membership in the Corporation involves the following obligations, in addition to those set forth elsewhere in the Bylaws and Membership Standards.

Each active Member shall participate in the following programs as presently operated or as may be duly changed by action of the Corporation:
(1) The Interplan Pooling Agreement on Name and Symbol.
(2) The Interplan Transfer Agreement.

SECTION 13. ON SITE SURVEYS

The National Association of Blue Shield Plans shall periodically review each Plan's adherence to the Membership Standards by whatever means may be deemed appropriate.

On occasion, such review may include an on site survey of the Plan. A written report on the survey shall be submitted to such Plan and to the Board of Directors. Within thirty days of the receipt of such report, the Plan may submit its comment to the Board of Directors.

*SECTION 14. STANDARDS SUBORDINATE TO LAWS GOVERNING PLANS

The foregoing Membership Standards, and each section and clause thereof, are subordinate to any law or governmental regulation governing the operation or activities of a member Plan, and the

foregoing standards shall not be interpreted, construed or applied to require any Plan to violate the law or governmental regulation governing its operation or activities, or to impair a Plan's membership in the National Association of Blue Shield Plans, if the Plan is acting under requirements of law or governmental regulation.

*For the membership year beginning in April 1971, this section will be renumbered Section 15, and a new Section 14 added, which reads as follows:

SECTION 14. PUBLIC REPRESENTATION

Each Plan shall provide for public participation in its affairs through adequate representation of the public on its Board of Directors. The adequacy of such representation shall be evaluated by the National Association of Blue Shield Plans' Board of Directors.

Mr. PARISH. In addition there is a requirement that the plan must operate a utilization review program. That is saying that we collect data, plans collect data on individual physicians' charges. Those charges are compared against other physicians charges within that same community. The relate to the skills, the training, the education of that physician so that the physician who just arbitrarily, let's say, decides that he is going to change his charge pattern and upgrade all his fees by 50 percent simply because he decides that is a good thing to do will not be paid on that basis.

Senator KENNEDY. What is to prevent M.D.'s from agreeing to higher fees for themselves? In terms of the establishment of various fees, you get the input from medical societies, from the doctors themselves. In fact the fees do keep going up.

It is difficult for me to see what steps are being taken by the Blue Shield to help control costs. I think I would accept that your procedure may prevent an individual doctor from raising his fees by 50 percent, but does he really need to do that when all the doctors all round are regularly raising their fees through Blue Shield, and all the total fees are going up, and going up rather dramatically, by 42 percent?

Mr. PARISH. Yes, Senator; but that 42 percent has to be taken into account. That is because of increased coverage, and the increase in fees is related also to the increase in living costs over the 10-year period.

But I venture to say there is a 5.2 percent increase per year, and that is probably less than the overall increase in general services. I can't make that as a flat statement, but I believe it to be correct.

So that, sure, his fees have gone up, and he is entitled to that. We feel strongly he is entitled to the same degree of increase that—afterall, he has office rent to pay and employees to pay and all the rest of it, but the point is, he can't do this every time he chooses to do it, as an individual physician or as a group.

Most plans have a specific time limit for an increase, once a year, and then only when demonstrated that these fees—that the increase—is justifiable.

Senator KENNEDY. Do you have any program to encourage doctors to go into group practice, and do you offer any kinds of incentives to the doctors themselves?

What kind of leverage do exert to get the physicians into the group practice or health maintenance organizations?

Mr. PARISH. We have not attempted to do that. That is the responsibility and the option of the physician himself. Our position on this has been that if there are physicians who want to practice in this kind of a setting, and if there are people who want to purchase

that kind of coverage then we stand ready, willing and able to assist in that by two different financing methods.

Senator KENNEDY. You don't see any responsibility to——

Mr. PARISH. To tell a physician how to practice? No, sir, we do not.

Senator KENNEDY. You are there, in other words, to represent the physician.

Mr. PARISH. No, quite the contrary.

Senator KENNEDY. If you are willing to accept that group practice is a more efficient way to deliver health services, then don't you have a responsibility to the consumer to encourage this more efficient delivery system?

If you are here to say you are not prepared to encourage or to require physicians to get on into more efficient patterns of care, then I fail to see what possible continued justification there is for your organization.

Mr. PARISH. No. 1, the efficiency of capitation medicine has not yet been proved. There are no reliable statistics on this point.

No. 2, my reference to group practice——

Senator KENNEDY. You are not sold on capitation?

Mr. PARISH. No. It has not been proven.

Senator KENNEDY. Who is supposed to prove it?

Mr. PARISH. We are, and we are attempting to do so. We are actively encouraging our plans to get completely involved in this and we have solicited a grant from the Government along with the Group Health Association of America (GHAA) for the purpose of selecting areas of the country where we will try to get from ground zero a viable prepaid group practice plan going in specific communities under the auspices of the Blue Shield plan in that area—the auspices of Blue Shield and GHAA. We are doing it in some areas on our own, but we are trying to establish them through the national association, in conjunction with GHAA, and the Blue Cross Association.

Senator KENNEDY. If you felt the system was more efficient and the doctors did not want it, what would you do?

Mr. PARISH. If we felt the system really was proven to be more efficient?

Senator KENNEDY. Yes.

Mr. PARISH. To the extent that we could be persuasive in this area, we would be persuasive to the degree of what leverage we have.

I don't know what that would be.

Senator KENNEDY. If you don't know, nobody else knows.

Mr. PARISH. We will find out.

(The information subsequently supplied follows:)

Blue Shield Efforts in Capitation (Present)

1. NABSP has applied for Federal funds, in conjunction with the Group Health Association of America, Inc. (GHAA) and the Blue Cross Association, to support a demonstration project to develop two organized prepaid group practices on a community-wide basis, in half the time it has historically taken, through the combined strengths of the three Associations.

   NOTE: Prepaid group practice programs are to be developed under the auspices of local Blue Shield and Blue Cross Plans. Several Blue Shield Plans have expressed interest in taking part in this study, including those in Chicago, Kansas City, Pennsylvania, Rochester (New York), Columbus, Ohio and Minneapolis.

2. Project Conversion -- This is an approach to the development of prepaid group practice health plans which offers a method for converting fee-for-service clinics to capitation. This provides Blue Shield Plans with an alternative for organizing and establishing prepaid group practice plans based upon pre-existing medical groups.

3. NABSP has organized its staff to meet the demands of prepaid group practice. A plan for organized development of the components essential to capitation programs has been approved and will enable our Association to support its Blue Shield Plans as a technical assistance agency in this area of health care delivery. The proposal gives high priority to data collection, EDP usages, professional relations, marketing and enrollment, and legal assistance.

4. NABSP has designed a system which permits Blue Shield Plans to enter into capitation programs with minimum disruption for physicians and the corporate plan. This system has been presented to the Department of Health, Education and Welfare and has received recognition as one which may meet the requirements of Health Maintenance Organizations as proposed in legislation now pending in Congress.

Blue Shield Efforts in Capitation (Future)

In the future NABSP will continue to study the feasibility of all alternatives in the delivery of health care. We will expand our field of interest to encompass the entire range of health services including financing, as well as delivery of health services. NABSP is and will concentrate on areas such as:

Automated Multiphasic Health Testing

- as a means of providing improved delivery of health care in the form of preventive medicine.

- as a means to bring about better utilization of the physician's time through creation of new careers in medical services.

Surgicenters

- as a means of providing quality health care at reduced cost.

It is true that capitation group practice offers certain advantages to physicians; it is equally true that there are disadvantages. The beauty is in the eye of the beholder. To the extent that physicians have an interest in group practice, NABSP and Blue Shield can be persuasive to our fullest capacity. It is not our intention, nor will it ever be, to attempt to compel the participation of physicians in prepaid group practice. Just as we feel that there is no one way to cope with the problems of the medical care system, we are convinced that there is no one way for all physicians to practice medicine. Our obligation is to offer a practical choice to the patient. We have commited to do so.

Senator KENNEDY. You have extraordinary power in setting the fees. You have the power of the purse. That is the big stick, so to speak, and if you are convinced that these prepaid group practices are more efficient, then we are asking what you are prepared to do about it, assuming that they are.

You say, "Well, we are going to try to encourage them. We don't know whether they are or not, and if we make a determination they are, we are going to try to encourage them." If they are not prepared to do it, what are you going to do?

You are going to reassess what your strengths are in trying to influence physicians and they you will see where you go from there?

Mr. PARISH. We have been successful in the past in influencing physicians.

Senator KENNEDY. Not in holding fees down.

Mr. PARISH. I think we have. It is a matter of judgment.

Senator KENNEDY. Do you think the American consumer feels that?

Mr. PARISH. No, I don't think so. We are dealing with an unpopular situation to begin with. Nobody wants to pay for illness.

Senator KENNEDY. Not at the increasing charges they experience.

Mr. PARISH. I bought a television the other day, and I bought a smaller set and paid more for it than I did 3 years ago. I enjoy that, and I can look at that, by medicine is different.

Senator KENNEDY. You don't think the increases have been the result of inefficiencies, overlaps, duplications?

Mr. PARISH. I think they have been largely a result of providing a large economic health base against a constant supply of providers. This is something we have no resources to combat. We have no influence over the educational process of physicians.

We can't make more doctors.

Senator KENNEDY. You have an influence over the fees.

Mr. PARISH. We don't think the fees are the problem. It is the utilization.

Senator KENNEDY. We have Blue Cross in there and they say, "It really isn't the hospital costs that are the problem, it is something else."

We have representatives of Blue Shield in here and they said, "It really isn't the fees the doctors charge, it is really something else."

Every time we have a different group, they always say, "It isn't us," it is always somebody else.

The person that is the one that is shortchanged in all this is the consumer, and the consumer is the one that is trying to get decent health care.

Mr. PARISH. We completely admit in this testimony to start with that certainly there is an increase in physician's fees. The only contention is that this is not the only part of the problem, nor is it the only——

Senator KENNEDY. It is the only part you have influence over, the only part that you have some kind of control over. It is important for us in Congress, in evaluating where we go from here, to look at your organization and find out what steps have been taken to hold down costs and assure quality.

When you say that even if you are convinced that another system is more efficient and more effective, then the only kind of leverage that you have is to try and encourage doctors to change, then I say it is about time that we in the Congress who are interested in the consumer find wome way to insure that doctors change.

Mr. PARISH. May I make two comments on that, Senator?

Number one, I believe I said, and if I did not, I should have said, that when and if we are convinced that a capitation system of medical care was more efficient, would do a better job for the people, we would then look at what we could do, and we don't know what those circumstances are yet.

Senator KENNEDY. Why do you have to wait to look at it?

Mr. PARISH. Because we don't believe that that system yet has proven to be as efficient as a lot of people think it is.

Senator KENNEDY. You don't find a place in the country, not a part of the country, where pre-paid group practices are more efficient?

Mr. PARISH. Not in any concrete sense, no. I do not have any viable statistics in that area that would prove or disprove that statement.

Senator KENNEDY. The President has stated that he has found it.

Mr. PARISH. I understand.

Senator KENNEDY. And the Secretary of HEW suggests they have located it.

Mr. PARISH. Yes, through testimony of people who argue that way.

Senator KENNEDY. There are many Members of Congress and Senators who believe in this approval. Yet we find you are reluctant, with all the kind of skills and background and wherewithal you have, to indicate that you have studied it, and, second, what the results of such studies are.

Mr. PARISH. Quite the contrary, Senator, we are studying it. We have not made any judgment on this yet. It is not big enough to make a judgment on.

Senator KENNEDY. What is not big enough?

Mr. PARISH. That system of prepaid capitation medicine—prepaid group practice. It services a small portion of this country and in isolated areas. I think we learned one thing in this business, not to make that kind of an assumption. You have to live with it awhile.

Senator KENNEDY. There are hundreds of thousands, and millions of people who are living with it every day and suffering poor health, and you—pardon?

Mr. PARISH. I don't understand your statement.

Senator KENNEDY. You don't think there are thousands of people right now waiting in emergency centers in the major hospitals of our country, thousands of people who are trying to get doctors who can't, or thousands of people who are getting operated on that should not be operated on?

You don't feel the sense of outrage that the President of the United States, the Secretary of HEW, that practically every person that has appeared before this committee, with the exception of the AMA, feels about what is happening with respect to health in this country at this time?

Mr. PARISH. We have a great concern and we are trying to do something about it, and we have tried to do something about it since it began.

Senator KENNEDY. Are you doing anything more about it now?

Mr. PARISH. Yes, we are moving into the areas of prepaid group practices. We are extending our utilization review mechanisms and cost controls. We are doing a very great deal in this area, sir. It just does not get turned around overnight. That is the only point I am making.

Senator KENNEDY. It is going to be difficult to get it turned around when the most you are ready to do is to try and persuade doctors.

Mr. PARISH. Again let me go back to my point——

Senator KENNEDY. Let me just suggest that until you are prepared to use the control of the purse, you are not going to be able to get a handle on the extraordinary kinds of increases in cost that we have seen.

Let me ask you this: In the President's message he points out, for example, that we have twice as many surgeons in California as we have in other parts of the country, and four times as many tonsillectomies. What do you think the reason for that is?

Mr. PARISH. I have not seen the statement. I am sure that California plan's record would prove or disprove this. I would be happy to check into that.

Senator KENNEDY. I would have thought you would have told us about things like this, rather than our telling you.

Mr. PARISH. With 75 plans there are lots of things that individually I just don't know. I would be happy, on any question you or the committee might have, to furnish the answer. But that kind of a statistic, I am sorry, I just don't know.

Senator KENNEDY. I am sure you have greater resources for these kinds of information than we do.

Mr. PARISH. We do, and I will get it for you.

(The information referred to subsequently supplied, follows:)

We are investigating the incidence of tonsillectomies with our California Plan, and will comment as soon as we receive data. However, we would appreciate some clarification of this question, so that we can be sure we are supplying the information the Committee wants.

Senator KENNEDY. Quite frankly, it would even be marvelous if you came up and said, these are the outrageous situations that do exist, and this is what we are trying to do about them. That action on your part would reflect the sense of urgency that the American people are feeling.

Mr. PARISH. I can only say that we are deeply concerned and we will do something, or are trying to do something.

Senator KENNEDY. I apologize for the interruptions. Please continue your testimony.

Mr. PARISH. The national health policy should consider the relative costs and benefits of programs for producing health personnel; for public health management and reporting; for modifying environmental factors influencing health; for assuring adequate family income, for health education; and for the financing of personal health services. It should also explore the potential of new ap-

proaches to health care, and consider such special needs as custodial care.

We propose, therefore, that a national council on health policy be established, within the office of the President.

The council would develop and submit to the President a statement of national health priorities based upon specific objectives necessary to promote the Nation's health. It would also submit a legislative program with recommended appropriations, to achieve those objectives.

The program would include a continuing assessment of the strengths and weaknesses of the delivery and financing of systems as they exist from time to time, and would be aimed at achieving again specific results through an orderly process of innovation and development. However, it should permit maximum administrative latitude in achieving the desired results. Recently developed alternative delivery systems could not have evolved had they had to meet administrative requirements built on older systems.

A national health policy will in all probability call for adequate financing of health care for the whole population. But decisions as to when and how to apply specific coverages involve not only policy, but the availability of services.

Since there is probably not enough medical service in existence to offer totally comprehensive care to the whole population, some phasing-in of benefits will be the only alternative to promises which cannot be fulfilled.

The phasing-in process should be in accord with the priorities of an overall health policy, and synchronized carefully with the expanding capacities of the delivery system.

The need for health financing is already reasonably well met for a substantial portion of the population by a combination of public and private coverage and personal resources. Those for whom it is not met tend to be the poor, the medically indigent, and the catastrophically ill.

Coverage for the whole population will be expensive, and must compete for funding with other national priorities. If public funding for health is to have practical limits, the efficient use of the funds available requires that they be used for personal service only to the extent that private funds are not available.

Therefore, the interests of the national health will be most effectively and intelligently served by keeping the cost of basic personal health services in the hands of those for whom they are not a hardship.

A delivery system evolving toward defined goals and financed for the bulk of the population by private means, strongly implies financing the care of the poor through an underwritten system.

Separate systems mean duplication of costs and lack of integration. They may also imply, accurately or not, separate standards of quality.

Government programs must conform to regulation to a degree that increases their cost and seriously inhibits both new methods of administration and accommodation to new methods of delivery. This is not necessarily the fault of the supervisory agency.

Government is structured, properly enough, for extremely detailed fiscal accountability. To preserve this accountability through channels remote form their central office, agencies must adopt regulations based upon usual circumstances, from which exceptions are not easily made.

In a underwritten program by contrast, the carrier is accountable for its experience and its results. It has freedom of administration, subject to the requirements of prudent management, responsibility, and public acceptance. It is not only able, but impelled to experiment to meet new situations, to make intelligent exceptions and to focus on results.

Competition between health carriers has benefited the public. We believe it should continue. Government should purchase coverage on behalf of the poor on the basis of normal competitive business procedures and the potential of the carrier to achieve the objectives of national health policy.

However, there will have to be basic changes in the conditions of competition. Price competition made feasible only by substandard benefits and minimal administration has no place in a system aimed at providing everyone with adequate coverage.

A realistic system of qualification of carriers should be developed, based upon their ability to serve the reasonable needs and expectations of the public.

The criteria for qualification should be raised rom time to time in coordination with an expanding supply of medical services as developed by national health policy.

We suspect, Mr. Chairman, that the potential of the private carriers for promoting constructive modification of the delivery system have received insufficient attention. Major developments now current and offering promise either for the effectiveness of the economy of the health care system include health maintenance organizations, prepaid group practices, neighborhood health centers, surgical care centers, model cities projects, foundations for surgical and medical care, and better use of allied health personnel.

Not all Blue Shield plans have had an opportunity to work with these developments. But Blue Shield plans are working with each of them and are making significant contributions to the choices of the subscriber, and to innovation in the health delivery system.

An important consideration in any system to assure the universal availability of health care financing is cost maintenance. It has never proven feasible or possible to put greatly increased amounts of money into health services without inflating the costs, simply because the supply remains—in the short term—relatively constant.

This in one factor underlying our feeling that benefits should be upgraded over a period of time.

We are concerned, too, by the hypothesis that medical costs can be controlled simply by appropriating a given amount of money and forcing the delivery system to live with it. This theory ignores both the effect of increasing utilization on total cost and the fact that the impact of inflation varies from service to service.

Cost containment is turn can be influenced primarily through utilization review and methods of physician reimbursement. We believe

that of the two, utilization review holds the greater promise, in the long run, for influencing the cost of a given level of benefits under a program.

For example, one large eastern Blue Shield plan has a utilization review program involving routine claims investigation, special claims investigations, investigations of complaints from subscribers, prepayment review of unusual claims, and statistical and computer review of accumulated data.

At the end of 1970 actions of this plan's utilization review program resulted in savings of over $2 million based on refunds, claims payment and liability reductions, and miscellaneous sources. During 1969 such savings were estimated to have been $1.7 million.

Effective utilization review and provider information systems should be criteria for qualifying carriers under national health policy. As our appendix demonstrates, utilization review is a requirement for the use of the Blue Shield trademark.

Senator KENNEDY. Would you tell me a little bit about your view on the question of deductibles and coinsurance? I thought we had some very valuable comments on those matters earlier form Blue Cross, and I was wondering what your views are.

Mr. PARISH. Mr. Chairman, I have never in my experience, a rather lengthy one, seen any concrete evidence—of statistics—that provide any rationale to the value of deductibles.

I have a strong personal feeling that they don't work. If they are large enough to deter abuse, which is one reason that they are alleged to be in there, then you run the risk of delaying coverage or doing without needed services.

If they are too small to accomplish that, then they have no effect on utilization and are simply an annoyance.

As far as administratively, they are expensive to administer, and difficult. I think if we have one thing that has been learned with medicare, it is this front-end deductible which requires people to accumulate bills and then finally present them, for payment, and we have traditionally paid from the first dollar.

To paraphrase Mr. McNerney, this morning, we have made minimal use of deductibles, and then only in cases of X-rays, or something like that.

But I repeat, I just don't see them.

Senator KENNEDY. Is this true of coinsurance as well?

Mr. PARISH. Coinsurance is better. It does share—it has the effect, the rather good effect, I guess—of the individual sharing and recognizing, perhaps, the value of the benefit a little more. But since those copayments are 80 percent on the part of the carrier and 20 percent on the part of the individual, I am not terribly sold on those, either, but it is a method, one way of holding down the premium cost, for example.

Particularly in the instance of medical care, it does allow the individual physician some leeway so that he may forgive the other 20 percent if he chooses to do so.

Senator KENNEDY. That is very helpful.

I think the attitude of Blue Shield as well as Blue Cross on this is very revealing and extremely interesting. Let me ask you as well about this. You refer to the regulation of Blue Shield.

What regulation would you establish?

Mr. PARISH. You are speaking now of Federal regulations?

Senator KENNEDY. Yes, Federal regulations.

Mr. PARISH. I think we touched on a couple of points in the testimony itself. Perhaps the simplest way to answer it would be that we provide our own membership regulations. They are called standards of membership, and we think rather highly of those, since most exceed any requirement of the State to begin with. I think that if there were to be a mandated program throughout the country it ought to be mandated with a very hard look at the private sector where it would be used. There ought to be a hard look at the track record of those companies who would be qualified to carry out—administer—any National health effort.

A very sad experience is to look through the published charts such as the Argus or the Spectator, and see the number of companies, individual companies, that are, incidentally, not members, I am sure, of the HIAA or the other responsible organizations, with returns that are literally disgraceful.

Senator KENNEDY. You have been very helpful and responsive to the questions that you have been asked and I want to thank you for your appearance here. The subcommittee will stand in recess until tomorrow morning at 9:30.

(Whereupon, at 3:20 p.m. the subcommittee recessed to reconvene at 9:30 a.m., March 24, 1971.)

THIS PAGE INTENTIONALLY LEFT BLANK

HEALTH CARE CRISIS IN AMERICA, 1971

WEDNESDAY, MARCH 24, 1971

U.S. SENATE,
SUBCOMMITTEE ON HEALTH OF THE COMMITTEE
ON LABOR AND PUBLIC WELFARE,
Washington, D.C.

The subcommittee met at 9:40 a.m., pursuant to call, in room 6202, New Senate Office Building, Senator Edward M. Kennedy (chairman of the subcommittee) presiding.

Present: Senators Kennedy and Pell.

Committee staff members present: LeRoy G. Goldman, professional staff member to the subcommittee; Jay B. Cutler, minority counsel to the subcommittee.

Senator KENNEDY. The subcommittee will come to order. Senator Packwood has asked me to express his regrets at not being able to attend today's hearing.

Of the many facets of the health care crisis in America, one of the most troublesome is that of a child whose life is shortened, crippled, or left unfulfilled because of bad health.

There are too many children in this rich country whose parents can't find health care, can't afford health care, or simply can't understand the importance of health care for their children.

For the poor, even emergency care frequently involves long trips to a hospital emergency room, long, long, waits in line, degrading questions over how the hospital bill will be paid, and hurried and impersonal attention at last from an over-worked physician or resident.

We understand that in the face of this, the minor complaints of children are frequently never brought to a physician, and that these children do not receive the immunizations, dietary supplements, dental care, corrective shoes, glasses—and all the other services middle-class Americans take for granted.

If this is true, an unconscionable number of poor children must grow up with limbs still twisted and all sorts of unnecessary health problems.

The crisis in health care for children is not limited to the poor, however. All parents whose children are afflicted with birth defects, chronic disorders, or other long term illnesses find themselves involved in a tangle of specialty care which they cannot understand, and which they cannot afford.

Exclusions or limitations on insurance often leave such parents on their own to pay the enormous bills, and all too frequently the system leaves them on their own to grasp and grope through referral after referral, and to sort out sometimes conflicting opinions.

All children have a right to a level of health care which gives them every possible opportunity to live a full and productive life in our society. This subcommittee is anxious to learn more definitively the extent of the health care crisis for children, and how we should respond to it.

I have a statement of the senior Senator from the State of Minnesota, Hon. Walter F. Mondale, who was unable to be with us today and I order that it be printed at this point in the record.

(The statement of Senator Mondale follows:)

STATEMENT OF HON. WALTER F. MONDALE, A U.S. SENATOR FROM THE STATE OF MINNESOTA

Mr Chairman, few sights are more pathetic than the frightened, pleading eyes of a sick child.

I cannot imagine a person being able to turn his back on that sad sight if there were anything at all that could be done for the youngster. And yet every day, in this land of plenty, thousands of sick children do not receive proper medical care, simply because their parents cannot pay for it. These children are conveniently out of sight, and so they are tragically out of mind.

Obviously no one seeks to perpetuate these conditions. The question is no longer whether something ought to be done, but rather how best to reach the children who need help.

I have long had an interest in the problems and chaired hearings looking into them in the last Congress. We will soon be having additional hearings which will view this matter in the context of child development legislation.

Taken in this present context, of national health needs, it is clear that concentrated efforts to keep children healthy will pay long range health benefits. A childhood illness left untreated can easily create a lifetime of health problems.

The import of these hearings is broad indeed. I welcome the light they shed on this vital topic, and I commend the Chairman and the witnesses here today for their role in helping bring us closer to the goal of adequate health care for all Americans, and particularly for children. I intend to work closely with the Chairman, as well as with other subcommittees, in assuring that we reach this goal.

Senator KENNEDY. Our witnesses this morning are experts in the delivery of health care to children. Several have had extensive experience among the poor. We look forward to their testimony.

I would like to welcome our first witness this morning, Dr. William Weil, professor and chairman of the Department of Human Development, the College of Human Medicine of Michigan State University.

From 1964 to 1968 Dr. Weil was a program director for a national foundation birth defects center; from 1965 to 1968 he was the A. I. DuPont professor for handicapped children at the University of Florida.

The immediate past president of the Society for Pediatric Research, he presently is chairman of a training grant review committee of the National Institute of Child Health and Human Develop-

ment; and is a member of the committees of Nutrition and of Handicapped Children of the American Academy of Pediatrics.

Finally, Dr. Weil is also secretary-treasurer of the Council of Academic Societies of the AAMC.

Dr. Weil, we welcome a man of your background here and look forward to your testimony.

STATEMENT OF DR. WILLIAM WEIL, CHAIRMAN, DEPARTMENT OF HUMAN DEVELOPMENT, MICHIGAN STATE UNIVERSITY, EAST LANSING, MICH.

Dr. WEIL. Thank you, sir.

I think I will omit telling you a little bit about myself.

You have said more than I intended. For the last 2 years, I have been privileged to meet the House Subcommittee on Labor, Health, Education, and Welfare of their Committee on Appropriations and discussed with them some of the overall aspects of health manpower needed to care for the children of our country.

I outlined the need for a moderate increase in the number of practicing pediatricians, to keep pace with the growing population, and the need for a major commitment to the development of a large group of physician associates, in order to provide care for the 25 percent of our child population not receiving care today.

This year it is a special privilege for me to meet with your committee and I would like to review briefly the overall problem of child health care in this country.

Adequate health care for children, as a major determinant of the effectiveness of the next generation of adults, requires the country to place special emphasis on the child population as we determine our health priorities.

I should like to begin by quoting a quote from an article in the 1969 American Journal of Obstetrics and Gynecology:

> That in this land of abounding wealth, during a time of unexampled prosperity, probably more than one fourth of the population is living in poverty, is a fact that may cause great searching of the heart. There is surely need for a greater concentration of thought by the nation upon the well being of its own people, for no civilization can be sound or stable which has as its base this mass of stunted people.
>
> This statement was written in 1899 by Seebohm Roundtree, after a study of the poor in York, England. In spite of the miraculous accomplishments that have taken place in every field of human endeavor during the 70 years since these remarks were recorded, the "mass of stunted people" make up 20 per cent of the population of our "prosperous" nation today.

I do not intend to reiterate the countless statistics which are purported to illustrate the inadequacies in our current health care situation in this country. High infant mortality rates, the wide disparity in care for white and black, for poor and rich, for central urban and suburban dwellers are all too well known to repeat again.

As we move into an era when optimal health services are to be offered to all, it becomes increasingly important to consider the ability of the health professions to meet the public expectation. A first step in evaluating this question is to recognize the difference between health service demands, needs, and requirements.

My own definitions of demand for health services is that it reflects the viewpoint of the consumer and is probably determined more by social values and social pressures, than by health status or illness burden. The actions of two groups exert a powerful influence on the consumers' views: the standards set by health professionals modulate the social value assigned to health services; the statements of public policy made by social leaders modulate the social pressures for health services. Because professionals generally must attempt to continually upgrade standards, and because social leaders must generally make policy which represents progress, demands for health services in a socially aware society can be expected to exceed any existing level of supply.

The health service needs of a society are rarely equivalent to the health demands. The need for health services is the result of political evaluation. Health needs are determined in large part by that level of care which will safeguard the public health, and will satisfy, but not of necessity meet, the demands for health services in a manner that is socially acceptable and economically feasible. Health needs do not necessarily reflect existing, average, or optimal levels of care.

Health requirements, on the other hand, generally represent the views of the health professional which are based on health status, disease burden, the state of the art and concepts of optimal social and individual preventive medicine. For social stability, demands, needs, and requirements must be reasonably concordant with each other and with our capability to meet them.

Since the demands, needs, and requirements for health care today appear to exceed, clearly, the capability of current health manpower working within the existing system, change in the method for the provision of health services is gaining increasing social acceptance.

If an increase in the professional manpower pool and modulation of health services are to be effective in meeting health needs and satisfying health demands, then the changes must be supported and identified clearly in statements of professional standards and expressions of public policy. Discordance between the profession, the body politic and the public can result only in frustration.

The background against which we must examine our problem shows one-half million women delivering babies with inadequate maternity care,[1] 3.5 million children under 5 having no contact with a physician in a year,[2] over 15,000 unnecessary infant deaths in 1970,[3] a mortality rate among black children 2 to 11 months of age almost three times that of white children,[4] a maternal mortality rate almost four times greater for black mothers than for white,[5] one-third of our chronically ill children getting inadequate care.[1]

And I could go on and on, but don't intend to.

Senator KENNEDY. You refer to these figures on appendix 1. What is the source of these figures? Is it the Children's Bureau?

---

[1] Maternal and Child Health Care Programs Program Analysis, Dept. HEW, 1966–6, (esp. ch. 2, p. 7 and app. A–2).
[2] Volume of Physician Visits. National Center for Health Statistics, series 10, No. 49. (esp. table 20).
[3] Monthly vital statistics report. (National Center for Health Statistics) vol. 19, No. 12, Mar. 4, 1971.
[4] Mortality of White and Nonwhite Infants in Major U.S. Cities, E. P. Hunt and E. E. Huyck, HEW Indicators, Ja., 1966. (esp. pp. 2, 6, 12 and 13).
[5] Statistical Abstract of the United States 1968.

Dr. WEIL. That is the chronically ill. These other figures are taken from a variety of sources, primarily from the National Center for Health Statistics, a series of documents which relate physicians visits to age, and the mortality data from other Federal documents, such as infant and perinatal mortality in the United States, and so on.

(The information referred to follows:)

APPENDIX I.—ESTIMATED NUMBER OF CHILDREN WITH CHRONIC HANDICAPPING CONDITIONS[1]

	Estimated number handicapped in 1965	Age group	Estimated percent of total	Estimated number in 1970
Eye conditions needing specialist care[2]	11,404,000	5–17	23.0	12,500,000
Emotionally disturbed	4,600,000	5–19	8.5	5,400,000
Speech disorders	2,829,000	5–20	5.0	3,270,000
Mentally retarded (varying degrees)	2,440,000	0–20	3.0	2,720,000
Orthopedic	2,153,000	0–20	2.8	2,425,000
Hearing loss	725,000	0–20	.9	900,000
Cerebral palsy	406,000	0–20	.5	465,000
Epilepsy	400,000	0–20	.5	465,000
Cleft palate-cleft lip	95,000	NA	NA	120,000
Congenital heart disease	(3)			

[1] Source: Children's Bureau, 1966 report (footnote 1).
[2] Includes refractive errors.
[3] 25,000 born each year; 7,000 die in first year.

Senator KENNEDY. During the testimony of the American Medical Association, we reviewed with them to some extent this infant mortality rate. It is awfully difficult to get pegs, or standards, or yardsticks, with which to evaluate the dimensions of the health care crisis, but I personally feel that infant mortality at least is one good indicator.

However, we had the members of the AMA discount the infant mortality figures in relationship to other countries. They questioned whether this was a useful or valid yardstick for other nations, and I was somewhat concerned that they were trying to gloss over an enormous problem. Yet these are just cold statistics, and judging from your testimony they don't even begin to reflect the tremendous human suffering and loss that loved ones feel in terms of these infant deaths.

I would be interested in any kind of elaboration you can give of the horrendous situation that apparently exists among these children.

Is it getting any better, is it getting worse?

Dr. WEIL. There has been a gradual improvement in infant mortality. There is a gradual bringing together of some of these discrepancies, but it is slow, and I think I feel very, very strongly, as you do, that these are, as I have stated, unnecessary deaths.

Senator KENNEDY. Yes.

Dr. WEIL. On the other hand, I don't think we are going to solve the problem of infant mortality entirely by improving health care. We can't look at this as a single entity. Housing, crowding, nutrition, these are all factors which are equally involved here, because we can look at——

Senator KENNEDY. I am willing to accept that, but I don't accept, I am unwilling to accept, this observation as a sort of substitute for necessary action.

Dr. WEIL. I would agree with that 100 percent.

Senator KENNEDY. There are all kinds of problems that we are facing in our society that demand action. But I don't think that our failure to provide nutritional resources, adequate housing, employment or education for various groups in our society means that we should not be attempting to provide quality health care. I know that is not what you are driving at, and I would be interested in any elaboration you could give of that particular paragraph.

Dr. WEIL. Well, we have been working recently in a Spanish-speaking Mexican-American——

Senator KENNEDY. Does this affect only the Spanish speaking and the poor blacks, or does it affect poor whites?

Dr. WEIL. Yes; this is a problem that affects not only those economically underprivileged, but affects every child in the country to some extent.

Senator KENNEDY. This is not a problem involving just a particular part or ethnic group of our society, is it?

Dr. WEIL. It is accentuated in the central cities, with poverty, it is accentuated with minorities, it is accentuated in the rural areas.[6,7,8] We have rural counties in Michigan which have infant mortality rates which are identical to the central city of Detroit. There are counties in Florida, where I lived, where there is no physician, no medical care.[9]

There are counties in other parts of the country in identical situations. There are woefully inadequate facilities for emergencies in great segments of the country, and many of these children who are injured in accidents, who are poisioned and so on, have great difficulty getting to decent emergency services, particularly in the rural areas, and this is more of a problem in the rural areas than in the urban.

Senator KENNEDY. If you could steer our staff, where would we get information on the rural areas, the extent to which children have been disadvantaged in terms of health, in terms of infant mortality?

Dr. WEIL. I think Dr. Hansen might speak to this a little later. He has had experience in the rural areas.

Senator KENNEDY. Fine. How would you characterize that paragraph? These are statistics, but the thrust of these hearings, obviously, is an attempt to try, among other things, to gather the sense of the health crisis in this country.

Dr. WEIL. All I can say is that it is shameful, that with the resources we have, the kind of country we have, that we should have to get up and reiterate year after year after year this kind of information.

---

[6] The Relationship of Certain Biologic and Socioeconomic Factors to Fetal, Infant and Early Childhood Mortality. H. C. Chase. Dept. HEW, Childrens Bureau. 1964.

[7] Weight at Birth and Survival of the Newborn. By Geographic Divisions and Urban and Rural Areas. National Center for Health Statistics. Series 21. No. 4. (see esp table 16).

[8] See also ref. 2. table 1 of [7].

[9] Distribution of Physicians, Hospitals and Hospital Beds in the U.S., 1967. J. N. Haug and G. A. Roback, American Medical Association 1968.

That is absolutely appalling. There are countries with much less in the way of resources than we have who are doing a much better job in getting health care to all of the children of their country, which we are not doing.

Senator KENNEDY. That is Sweden. But that is a homogeneous society. We here in America are a polyglot group of different ethnic backgrounds, and therefore it is more difficult in terms of our society.

Dr. WEIL. Perhaps some of the comparisons are invidious, but we also have much greater resources than many of these other countries. We have the technical skills, we have the people. We have not utilized them well. We are operating under what must be considered a system of medical care that is not in keeping with our needs today, and we just have not taken the time to concern ourselves with these problems, and particularly with children.

They don't vote. They don't have a lobby, and we feel very frustrated at times that we can't present their case more effectively, because so much of what happens to our next generation of adults depends on the children.

There are data from the draft, for instance, which suggests that better care for children would have increased available physically fit manpower, not just for the military, but for our whole society, 10 percent had they been given proper care as children. (See footnote 1, table 2.7.)

These were individuals with visual defects, auditory defects, with physical deformities, who end up, not receiving care, as less than productive adults. This is a shameful situation.

Shall I go on?

Senator KENNEDY. Yes.

Dr. WEIL. Improvement in these data requires changes in the public, in dollars and in manpower.

Education of the public toward better utilization of their health system will be an extremely potent tool for increasing health care effectiveness. Of special interest in pediatrics and obstetrics, an increase in the public interest and activity in disease prevention and health maintenance is essential.

Money poured into direct payment for health care increases the demand for care, exacerbating shortages and increasing the cry for change. But change costs money. New governmental programs have been superimposed upon the varied existing component modes for the provision of care without considering the totality of health needs. These new programs are probably creating not only an inflation of health care costs, but by discoordinate reallocation of scarce personnel, may actually result in a decrease of the total services provided.

One limiting factor in the health budget is the point at which additional cost will no longer produce a proportional increase in the productivity of the population concerned.

As an example, a doubling of the funds for health professions education, in order to produce an across-the-board doubling in the number of health personnel, could conceivably result in more health care. But a marked increase in health expenditure would be neces-

sary in order to provide a reasonable level of activity and income for the individuals trained.

One alternative to such a spiralling cost resulting from a general increase in health manpower could be selective increases in health personnel which, through greater efficiency and changing emphasis, would increase the gross national product at a rate greater than the increase in population, by increasing individual productivity. This could result from creating a healthier and more productive adult population. Improving the health of children is the most effective way to create a healthier adult population.

Since I cannot speak extensively about public education or the financial aspects of health care, I would like to turn to the manpower problem. This has several dimensions which include the total number of physicians, their geographic distribution, their specialty distribution, and organization of the system in which they work, including the better utilization of other health professionals.

First let us look at our current supply of health manpower. (App. II.) There is approximately one physician in active practice for every 1,000 individuals in the population.

(Appendix II follows:)

APPENDIX II.—TOTAL HEALTH PROFESSIONS, 3,375,000 (4 PERCENT OF LABOR FORCE)

Total physicians	330,000
Active M.D.'s	[1] 300,000
Private practice (solo and group)	200,000
Public health	3,000
Teaching and research	27,000
Post-M.D. training	45,000
Military	15,000
Other Federal	10,000
Active O.D.'s	10,000
Retired M.D.'s and O.D.'s	20,000

[1] Includes 53,000 foreign graduates.

Dr. WEIL. However, in different regions of the country this varies from one physician to 800 population to one physician to 1,430, and in the state of Mississippi it is one to 1,650.

The same problem of geographic distribution is reflected in pediatrics with ratios from one pediatrician to 12,000 population to one to 22,000 and in obstetrics with one to 5,000 to one to 16,000. Expressed in another way, from one region of the country to another, there is a range of 17 pediatricians per 100,000 children to 32 pediatricians per 100,000 children; the number of obstetricians varies from 26 per 10,000 births to 47 per 10,000 births.

Using average figures we can next examine the extent to which our current child health manpower can provide for today's child population.

One can make an estimate of the actual number of children who could be provided with comprehensive care by the average working pediatrician. Assuming 7,000 visits per year for a pediatrician, four visits per year per child (80 minutes of care per child per year for health and illness), each practicing pediatrician could care for 1,750 children a year.

On this basis, the 11,000 pediatricians currently in practice in the United States could provide minimal level care for 20 million children. This is approximately one-third of the child population.[10] This assumption is supported by the data of the national health survey which indicates pediatricians accounted for almost one-third of the children's visits to physicians' offices in 1966–67. Then assuming that one-fifth of the time of the 63,000 general practitioners is spent in child care, we can show by three alternative calculations that we cannot possibly meet our country's child health care needs today:[11]

(1) If children visiting pediatricians average four contacts per year, just adequate for good care, pediatricians care for 1,750 patients each or a total of 20 million children.

If the remaining 40 million children are seen by general practitioners, these average only two contacts per child per year and two-thirds of children receive only 50 percent of appropriate care.

(2) If pediatricians and general practitioners both average 2.8 contacts per child per year, and if 4.0 is considered appropriate, only 70 percent of appropriate care is being provided.

(3) Alternatively, if the children seen by the general practitioner receive the same level of care as that given by the pediatrician (four contacts per year), then the general practitioners care for 22 million children, leaving 18 million with no care.

No matter how this is calculated, at least 25 percent of the health care required for children is not being delivered.

Senator KENNEDY. Tell me how you get those four visits per year and also the one-fifth of the time.

Dr. WEIL. All right. Briefly, it comes from two sources. One is what actually takes place in upper and middle class families. The children average four contacts per year with the doctor, taking all ages one through 18.

The recommended figures come from the recommended standards of the American Academy of Pediatrics.[12]

The time general practitioners devote to children is a guess, 20 percent to children, 20 percent for maternity health and 60 percent for other health problems, and this has been supported in two or three other people's independent guesses, and that is all it is.[10]

We have no data. It is one of the amazing things, that we have so little data in this country about our health care system, partly because it is a diffuse, independent——

Senator KENNEDY. What kind of data would you want to have for youth?

Dr. WEIL. I would like to know how many doctors we have in practice, where they are practicing, how many people they are caring for, with what level of care, how much is going on in the office, how much in the emergency room, how much in the hospital.

If we had that data then, as we began to change our system we could have some idea of what we are doing.

---

[10] Maternal and Child Health Information, No. 13, March 1971, p. 1.
[11] Infant and Perinatal Mortality in the United States, National Center for Health Statistics, series 3. No. 4.
[12] Standards of Child Health Care, American Academy of Pediatrics. 1967.

Right now, many of us agree we have to change the system of care. We have to get care better distributed. We have to look toward more group practice, prepaid care, and so on.

But having done it, one of the real problems is to measure what we have done. Part of the difficulty is that we don't know where we are. We can quote infant mortality, other kinds of mortality statistics, but to specifically say "What is our health status today, and what are the problems we are having" so that we can tell whether we are doing better 5 years from now is almost impossible from the data we have now.

I think what we have to do is to try to get systematic collection of this kind of data. I think certain steps are being taken by the CDC and so on, but I think this is not yet available.

Well, by these various calculations and assuming what I have said is so, we can provide care, no matter how you cut it, for 75 to 80 percent of the children.[13]

Senator KENNEDY. You are familiar with the national center for health statistics?

Dr. WEIL. Yes.

Senator KENNEDY. That, as I understand it, is the principal health data collecting agency within the Federal Government.

Do you think that ought to be expanded?

Dr. WEIL. Certainly much of the information I have been able to get, I have gotten from their publications. There is much that I would like to be able to get which they have not been able to collect. I don't know how much of this is a limitation in their program and how much of this is the almost impossibility of getting certain kinds of data in our rather diffuse program for health care in this country.

Senator KENNEDY. As I understand it, its authority was expanded last year, but they have not gotten more money.

Dr. WEIL. This does not surprise me.

I am not up on the specifics.

Senator KENNEDY. I think that is a good point, though.

Dr. WEIL. If we have the ideal situation, with the medical manpower we have, we would end up with no more than 75 or 80 percent of the care necessary being given.

Certainly we are certifying just over 600 pediatricians each year but are losing 200–300 per year due to death and retirement. In the next 10 years the number of children under 15 will increase 17 percent and at the current rate of pediatrician production we will have an increase of about 30 percent in pediatricians.

However, at the same time, if current trends continue, a 20 to 25 percent decrease in the number of general practitioners will more than offset this gain.

This is shown in Appendix No. 3, "Physicians Providing Child Care."

---

[13] Pediatric Practice in the United States, Yankauer, A., Connelly, J. P., and Feldman, J. J. Pediatrics (Suppl.) 45 : 521, 1970.

(Appendix III follows:)

APPENDIX III.—PHYSICIANS PROVIDING CHILD CARE

	1970	1980	Change
Pediatricians	11,000	14,100	+28
General practitioners + 5	12,000	9,400	−22
Total	23,000	23,500	+5
Children<15	60,000,000	70,000,000	+17

Dr. WEIL. The situation for obstetrics is basically the same as for pediatrics with an increase of 10 million women in the child bearing age and an increase in births as great as 25 percent unless marked changes in family planning occur.

(Appendix IV follows:)

APPENDIX IV

[In millions]

	1970	1980
Children 0–14	60	70
Women 15–44	42	52
Births (general fert. R.-88)	3.7	4.6

Dr. WEIL. Using these figures we have a method, based on maintaining the status quo, this is no increase in manpower from where we are now, except as the population grows, for estimating the requirements for physicians 10 years from now. These figures, as shown in appendix V, are based on several assumptions which are indicated in the appendix and an additional assumption that general practitioners spend 20 percent of their time giving child care and 20 percent giving maternity care. All of these assumptions are on the conservative side and if they are in error, it will make the situation in 1980 even more difficult.

Senator KENNEDY. As I understand what you are saying through page 7, at least a quarter of the children in this country are receiving no care at all.

Dr. WEIL. I can't answer that directly. Either a quarter are receiving no care, or——

Senator KENNEDY. Or up to two-thirds are receiving inadequate care.

Dr. WEIL. It is one way or the other. Either we have 75 percent of our children receiving reasonable care and 25 percent none, or most of them receiving inadequate care, but everyone getting a little bit. It is probably somewhere in between.

You can calculate it either way, saying everybody gets a little, and it is not enough for anybody, or that 3-quarters get a reasonable amount and a quarter get none.

Senator KENNEDY. Three-quarters getting a reasonable amount? Do you really think that that is the case, given the distribution?

Dr. WEIL. No, I don't.

Senator KENNEDY. See if you can sharpen it a little bit.

Dr. WEIL. This is where we don't have the kind of information we need, but my guess would be that probably one-third of the children are getting reasonable care.

Senator KENNEDY. And two-thirds are getting what?

Dr. WEIL. Two-thirds are getting zero to inadequate or minimal care.

Senator KENNEDY. Of all the children in this country?

Dr. WEIL. The children in this country, from one coast to the other. We know, however, that there are more problems in the Southeast than in the Northwest. There are more problems in some States than in others.

It is interesting that States without medical schools have a lower ratio of physicians to population than States with medical schools.

Senator KENNEDY. If this is such a wealthy country, why is health care so uneven?

Dr. WEIL. There are three things. We have inadequate manpower, and it is poorly distributed and operating poorly in a system that does not have anything to hold it together.

We have inadequate financing, and we have problems in access into the system for many people.

We have bad distribution, that is, both geographic and within the profession, specialty, nonspecialty, primary care, specialist care.

We have dollar problems, and we have public problems in terms of getting access to the system.

Senator KENNEDY. Doctor, this leads me to the principal vehicle that we have relied on over these years to influence the distribution of resources—the private insurance companies.

You have just painted what I think is a devastating indictment of our current health situation among children. You have given the reasons for it, but they come back to the fact that we have been relying on the private insurance carriers, and in spite of all their good intentions expressed before this committee and others, they are just not the vehicle to do the job.

Dr. WEIL. I agree with you, because the private insurance companies by themselves have first of all fundamentally no control over the way in which medicine is practiced. They have no way of insuring people who can't afford private insurance, and these are two critical elements.

If you can't have some kind, or produce some kind of change in the system, simply paying for care is not going to do anything for anybody. It will help a small segment get care and avoid catastrophic kinds of expenses, but the private insurance company system generally does not pay for ambulatory care, for the care of the patient who is not in the hospital, and the majority of sick children are taken care of not in hospitals, where there is no coverage.

Senator KENNEDY. That is an important point, as I understand it. Insurance privately covers only those that go into the hospital, and, as you point out, most of the problems which afflict children are treated in ambulatory situations.

Dr. WEIL. They should be, and they are by and large, but there are still more children in hospitals than ought to be because of an

old problem: if they need an expensive workup done and on a child for a complex problem, it will only get paid for if the child is in the hospital. It won't get paid for, even though it might be possible to do it, on an outpatient or office basis.

So we see a certain amount, I am sure, of hospitalization resulting from the fact that this is the only way there can be third party coverage.

Senator KENNEDY. That increases costs and adds to the inefficiency of the system.

Dr. WEIL. Yes. You add the hospital costs to the cost of the tests, and the hospital costs may be unnecessary.

Senator KENNEDY. Could you give us any idea in terms of how often that happens?

We hear that frequently. A patient needs an X-ray, but their insurance does not cover outpatient care. If they get admitted into the hospital, it will be covered.

Dr. WEIL. It is hard to get at that sort of information. Utilization reviews and this sort of thing attempt to do that, but the number of times is a question I can't answer.

I think it is a significant figure, and when we look at the differences between fee-for-service practices and prepaid medical care programs, we find that the amount of hospitalization is reduced by as much as 50 percent for children under prepaid programs in which total health coverage, both in patient and out patient, is paid for, and I think this is then at least one indication that there must be some excessive amount of hospitalization going on under our current system.

Senator KENNEDY. Well, would it be inaccurate to suggest that private insurance is really biased against children?

Dr. WEIL. Yes, I think it is in some ways. That is a difficult question, but, to some extent this is true. Perhaps it is more true for children than for adults. I think that our insurance system as we have it today is biased against the optimal provision of health care at the lowest possible cost, and I think this applies more to children than it does to adults.

The other point that I wanted to make, and I think that because of time I will not go through all this, but I think if we are going to provide health care for our population we are going to need to increase the number of physicians we train.

For the time being, if we are going to give any kind of emphasis to child health care, the number of young people are increasing greater than the total population, and we have got to put special emphasis on the training of physicians for child health care, both primary care doctors, family doctors, as well as pediatricians.

But I think equally important we have to realize that without a fantastic upheaval of medical education we could never train enough physicians to give all the care that is necessary for children, and we have to look to the use of the physician assistant, or physician associate as a major kind of health care deliverer in the next period of 5 to 15 years.

These people are available in our country. They can be trained, they can provide health care at a cost which will reduce the overall

expenditure, and I think provide it in ways which will make it more readily available to everyone.

I think that with that, I would like to close my own statement at this time and let you hear from some of the others who are here.

The data in appendix V indicate that to have 55,000 general practitioners, 16,600 pediatricians, and 21,100 obstetricians by 1980—numbers that will simply maintain our current level of physicians in child and maternal health to the population being served—we will have to increase pediatric and obstetric training by 30 percent and increase training in family practice five-fold.

To accomplish this will require new incentives as we will have to recruit a larger percentage of each graduating class into these professions for the next 5 to 10 years, because not until then will the increasing enrollment in medical schools begin to be reflected in a significant increase in graduates.

(Appendix V follows:)

APPENDIX V

	1970	1980
General practitioners	60,000	
Loss [1]	15,000	
Current gain [2]	2,000	47,000
Possible gain [3]	10,000	55,000
Pediatricians	11,000	
Loss [1]	2,900	
Current gain [2]	6,000	14,100
Possible gain [3]	8,500	16,600
Obstetricians	16,000	
Loss [1]	4,400	
Current gain [2]	7,000	18,600
Possible gain [3]	9,500	21,100

[1] Assumes even distribution by age and 40 active years for general practice, 38 for pediatrics, and 36 for obstetrics.
[2] Assumes current estimates of 200, 600, 700 per year for general practice, pediatrics, and obstetrics respectively.
[3] Assumes a fivefold increase in students going into general practice, an increase of 250 more students going into pediatrics and into obstetrics over current levels.

Dr. WEIL. If we take a broader view of the health professions involved in the care of mothers and children, there are several other manpower pools we have not effectively tapped. These include young women, women whose children are all in school, and discharged medical corpsmen. From these groups, plus other young people not currently entering the health professions, we should be able to develop a growing body of physician associates.

Preparation for the health professions and services, in large part, has been outside the mainstream of education in this country. Probably, in no other field of endeavor is there an educational structure like that of the health occupations.

Today's general educational pattern progresses with regularly decreasing numbers through achievement levels such as high school graduation, 2 years of college, 4 years of college, and graduate education—each a stepping stone to the next in a pyramidal fashion. But in the health fields, the three largest occupational groups are medicine, with 12 years of post high school education; and aides, orderlies, and licensed practical nurses with 0–1 years of education after high school, and there are no educational bridges between these three groups.

A comparable trimodality for the distribution of income reflects the organization under the current system; the high costs of the services provided are in relationship to the costs on training. Without modification of the system, a more economic method for training existing types of personnel or of proportional reduction in training costs, would make very little difference to the total expenditures for health services.

A more reasonable approach is the development of intermediate professions with intermediate tasks, skills, roles and incomes. In fact, in the very long run, it may turn out that we should be training proportionately fewer, highly skilled and highly paid physicians under the current MD concept, and buffering the overall health service with a more evenly distributed spread of services.

If a pediatrician, using today's methods, can provide good care for no more than 1,500 children, and if by 1980 we wished to provide such care for all children, then in addition to a five-fold increase in students going into general practice or family medicine, we would have to recruit 2,400 students a year into pediatrics—¼ of each graduating class for the next 10 years. This seems beyond our capabilities.

Alternatively let us increase the family practitioners as described previously and increase the pediatricians at a rate that seems feasible—about 30 percent above our current one—and then examine how we can equip the physician to provide good care to 3,000 children instead of 1,500—in other words, let us find a way for the physician to double his productivity rather than doubling the number of physicians for one of these alternatives, or the other, or a combination of both, will ultimately be a demand, a need and a requirement.

One solution to this problem is the wider use of the allied health workers. In 1900 there was one allied health person per physician. By 1975 it has been estimated that the number will approach 20 such individuals per doctor. Within these numbers we should be able to find a method that will utilize these individuals so that they can effectively multiply the physician's productivity.

One such method, which should be independent of the type of practice setting, i.e., solo, group, fee for service, or prepaid, is that involved in the wide usage of the physician assistant or associate.

One attempt at examining the feasibility of such a method is given in appendix VI.

(Appendix VI follows:)

APPENDIX VI

THE FEASIBILITY OF UTILIZING HEALTH ASSOCIATES

If we assume that the average physician taking care of children can deal with approximately 7,000 health visits per year or 3 - 5 per child under our current system, the same physician must handle twice this number when working with the health associate. In addition, for the pediatrician to be maximally effective, he himself will see many children briefly but have more time to provide thorough and extensive evaluation of the problems that require his level of expertise. Thus, we can assume that the average physician dealing with children will spend more time with approximately 3,500 visits a year under the new system and this will leave approximately 10,000 visits for the primary attention of the health associates. This proportion coincides with the estimates arrived at by Bergman, et al. and approximates that noted in the Yankauer survey. We estimate that pediatricians and general practitioners providing child care will each require either two or three health associates, seeing either 5,000 or 3,000 visits per year per health associate to achieve this goal. Thus, the need for the country at large will range between 60,000 and 100,000 child health associates for total coverage. If we assume that 100 schools could produce this group in a five year time period, 120 to 200 health associates must be graduated each year from each school with such a program.

To determine the economic feasibility of the health associate concept we will assume a solo practice pediatrician with a gross income of $60,000 a year, overhead of $25,000 and a net income of $35,000. Taking care of 1,200 children a year with approximately 5 visits per child per year the cost per child will be $50/child/year.

If, with two health associates, he can now take care of 2,600 children a year and if these health associates have a net income of $10,000 each, the total personal income for the physician and his associates will be $55,000. The overhead will have increased to approximately $50,000 and therefore the gross required will be $105,000; divided by the 2,600 children this will give an annual cost of $40.30 per child per year. If we alternatively assume the pediatrician will require three health associates for such a volume, the gross income required will be $115,000 with the net child cost of $44.20. Given a salary of $15,000 per year per health associate, with two health associates per pediatrician, the child cost will remain at $44.20 and with three health associates per pediatrician, at this increased salary level the cost will be $50 per child per year as under our present system. However, the added benefits will be improved care for each child as well as having provided care for twice the number of children in the country.

PRIVATE SOLO PRACTICE - 1200 child/yr.

Gross	Overhead	Net	
60,000	25,000	35,000	
			Cost $50/child/yr.

Ped + 2HA - 2600 child/yr.

Gross	Overhead	Net	
		35,000	
		10,000	
		10,000	
105,000	50,000	55,000	
			Cost/child/yr.=$40.40

Ped + 3HA - 2600 child/yr.

Gross	Overhead	Net	
		35,000	
		30,000	
115,000	50,000	65,000	=$44.20/yr.

P+2HA (@$15,000 each)

Gross	Overhead	Net	
115,000	50,000	65,000	=$44.20/yr.

P+3HA (@$15,000 each)

Gross	Overhead	Net	
130,000	50,000	80,000	=$50.00/yr.

Dr. WEIL. In essence it suggests that for comparable, or reduced costs/child, this system would allow us to care for all children in this country and at a level of care exceeding that which we have today.

Senator KENNEDY. How do you change the system of care?

Dr. WEIL. There have to be incentives built into the system. These can be economic incentives, social pressure type incentives. They can be incentives created by making the field of child health care a more ideal one in which to work.

The pediatrician among medical specialists is probably the one with the lowest general level of income. He is working with a population in which, by and large, the parents are young, their own incomes are small, and the numbers are massive.

So he sees large numbers of children from relatively lower income families than do the other specialists. He spends an unbelievable period of time with general medical problems which a lesser trained individual could deal with.

I think that if we could create in this country a cadre of people who could associate themselves with the pediatrician or a family doctor and provide much of the general health care for children and let the physician use his rather advanced training for the more complex problems, we would improve the working arrangements in which pediatricians operate and thereby increase the incentives by making the job a better and more attractive one.

Senator KENNEDY. We are really going to need the help of the medical societies in order to relax State laws and utilize paramedical personnel. This is really an area where the medical societies have to help and assist.

The Federal Government can help provide the resources to universities and colleges for the training of returning corpsmen, for example, and setting up different kinds of programs, but unless the medical societies are willing to accept it, it is going to be extremely difficult.

Also we get into the question about national standards permitting national licensing, and permitting these paramedical personnel to help and assist. This too is something on which we are going to need a lot of help.

Dr. WEIL. It is interesting that at this point, the survey done of pediatricians and of the public with regard to health assistance for child health is well in the majority now of physicians and the public being ready to accept this kind of input.

Senator KENNEDY. It seems that those who are really on the firing line, so to speak, are willing to have this kind of help and assistance. The younger persons, the medical students and so forth, seem willing. They seem excited about the possibilities of paramedical personnel.

I think this is going to provide a challenging opportunity to take on some of the more entrenched elements in our society.

Dr. WEIL. I would like to make a final point. One thing we forget when we are talking about an increase in manpower—not only do we have to provide for the training of these people, but we have to begin to provide for the training of the teachers.

Our training grant programs now through the NIH which have provided us with our faculties, are being cut every year, and they are down to where there were seven new training programs last year in child health.

There had been 43 just a few years ago, and this is our source of faculty, and I think this is a major problem. Five years from now we are going to regret seriously the fact that we have not trained enough faculty to carry out the education of the people we need.

Senator KENNEDY. I am glad you mentioned that; it is an area where there have been, as you point out, very severe cuts. Let me ask you finally, are these problems you have identified related solely to the children of poor people, or do they affect, also, the middle income children, whose families have a $10,000 or $12,000 income year?

Dr. WEIL. I think they affect all children. As a matter of fact, to some extent the people of the lowest income bracket may be less affected than those somewhat above that, the reason being that there are now fairly good assistance programs in many areas for the very underprivileged economically.

There are crippled children's programs which have been excellent—they have been poorly funded, but have been excellent. There is medicaid, and a number of other programs for the very serious problems for the people who have essentially no dollars.

The group that doesn't qualify for this, who are just above that level, and doesn't have enough yet to be able to afford care entirely on their own are the ones that perhaps are hurt the very most. This is particularly true when it comes to chronic disease, because inevitably the private insurance situation fails for the chronically ill.

A child with a myelomeningocele birth defect called "split spine," may have medical care costs exceeding $20,000, $30,000, $40,000 in the first 5 years of life.

Most insurance companies don't stand still for that kind of payment. The coverage is not broad enough. It runs out after x dollars have been spent, or x visits have occurred, or so many days of hospitalization have taken place, and then it is inevitable that the families are left with the bill and if they are beyond the level where they can get help from crippled children or medicaid, then it is a catastrophe.

Then they face the problems of education and so on, already badly damaged economically, socially and psychologically as a result. So there is a great group of people in the middle income level who are being hurt today by medical care costs, or whose children are not getting the kind of care that they ought to, and we see this repeatedly, little incidents like a family that has a child with a little fever, and the question is to call the doctor or not.

Well, they just had filled out their various tax forms and they had the rent due, and they know if they call the physician then and they have to bring the child down, this is $9 or $7, or something, so "Well, it is just a 102 temperature, let's forget it, maybe it will go away."

So this is postponed, and the next day the same kind of decision is made. At some point, as this child is developing meningitis they will

contact medical care, but it may be just a little longer than it should have been.

I don't think there is one of us who works in hospitals who does not feel, "If they had only come into the medical system a day earlier, 12 hours earlier, 2 days earlier, the end result might be different."

I am certain that there are financial restraints—restraints in any family that delay these kinds of decisions.

Senator KENNEDY. You are opposed to deductibles?

Dr. WEIL. I don't pose as an expert on the various kinds of insurance programs.

Senator KENNEDY. But you do see how they inhibit people from getting health care. I think you have just made a good case for preventive medicine.

Dr. WEIL. I hope I have.

Senator KENNEDY. You hear frequently from those who believe in the deductibles that, "Well, if we don't have that $10 or $8 problem facing that parent, they are just going to come down and abuse the devil out of the system, and waste a lot of doctor's time."

What is your reaction?

Dr. WEIL. At least my experience in this has been that that does not occur. I have had the opportunity over the years to provide health care to many people on an essentially free basis because they were medical students, or professional colleagues, and so on, and I work entirely with the families, not with the physicians, but with his wife and their children, and as professional courtesy, we never charged these families, so they had essentially unlimited access.

I saw these families regularly for preventive care, maintenance of health care, and I never felt abused. When they had a problem or a question, I was available, and I enjoyed it, and I think the illness record of these families was such that it was less than in the general fee for services situation.

I have friends in California who have their practice divided between fee for service and prepaid health care. The illness burden in their prepaid health care service is less than it was in their fee for service group.

They have then no deductible. They have free access to the system.

Senator KENNEDY. Where is that?

Dr. WEIL. This is a group headed by Dr. Alex Rogerson, in Berkeley, Calif.

Senator KENNEDY. Thank you very much, Doctor.

Dr. WEIL. Thank you.

Senator KENNEDY. If you will, remain here, and there might be other questions.

Senator KENNEDY. I would like to welcome our next witness, John P. Connelly, who is an associate professor of pediatrics at Harvard Medical School and executive director of the Bunker Hill Health Center of the Massachusetts General Hospital.

Dr. Connelly is also chairman of the American Academy of Pediatrics and of the liaison committee of the American Nurses Association.

In addition to this busy schedule he acts as a consultant to the National Center for Health Services, Research and Development at

HEW and is a consultant to the Office of the Assistant Secretary for Health and Scientific Affairs, at HEW.

Dr. Connelly, I appreciate your taking time out from your busy schedule to be with us this morning.

I want to welcome you, Dr. Connelly, from my State of Massachusetts. I have had an opportunity to visit the Bunker Hill Health Center. I guess it was about a year ago.

Dr. CONNELLY. Yes, sir.

Senator KENNEDY. I was as startled by the various statistics that you related to us at that time. We are aware of the work that you are doing and very appreciative of your testifying here before the committee this morning.

We welcome your testimony.

STATEMENT OF DR. JOHN P. CONNELLY, ASSOCIATE PROFESSOR OF PEDIATRICS, HARVARD MEDICAL SCHOOL, AND EXECUTIVE DIRECTOR, BUNKER HILL CENTER OF THE MASSACHUSETTS GENERAL HOSPITAL

Dr. CONNELLY. Thank you, Senator.

Our testimony is organized such that Dr. Weil would cover many of the broad issues already discussed so far this morning. With your permission I would like to focus specifically on the MGH Bunker Hill Health Center and the problems that we are attempting to solve there because this highlights, I think, the major, or some of the major, problems that are facing the health care system; namely, the problem of access of medical care, the cost of medical care, the necessary manpower to deliver such care, and, finally, the quality of medical care.

It may be useful to first describe the center, to give a frame of reference. The center, as you know, is an extension of the Massachusetts General Hospital to the 16,000 Charlestown residents. It represents a major partnership between the Boston Department of Health Hospitals, and the Boston Archdiocese and the school departments.

Twenty-five percent of the space and personnel are devoted to psychosocial health. Other specialists are scheduled as the need is identified. We assume the responsibility for health care programs in Charlestown before we got there, and school aid programs for the eight public and parochial elementary, one junior high school, and one high school.

We have been operational since December 1968, and there are approximately 12,000 patients registered to date.

In terms of why the Massachusetts General is in the area I have described, we feel that it is basically a loss of the general practitioner. This loss is reflected in the first chart which depicts a phenomenal change in medical practice from 1963 to 1967.

If one assumes that the internists and pediatricians could provide the primary medical care that the general practitioner has in the past provided, you see there is a gain in the pediatricians and internists of 3,751, but a corresponding decrease of the family doctor of 5,852 or a net decrease to the Nation of 1,100 primary caretakers, or said another way, the yearly output of 10 medical schools.

In our State of Massachusetts the deficit is 135 caretakers, the yearly output of one medical school. To further focus down on the local situations, Boston has the highest concentration of physicians in the world.

Senator KENNEDY. Do you have any recent statistics on what is happening in the last year or two in these medical schools?

We heard testimony, as I remember, last fall from the medical students association which indicated that there was a movement by many of the younger medical students into the primary caretaker area. They wanted to get out, so to speak, where the action is. They wanted to be involved in the delivery of health services. They were more interested in moving into these areas than the specialties. The specialties were of less interest to them than the real health crisis.

I am wondering whether recent statistics show this at all, or whether the trend is still pretty much as reflected in your table 1 toward the specializations.

Dr. CONNELLY. Well, the delay in collecting a significant trend is approximately 2 years, so you could not accurately picture that.

I can say about the Harvard Medical School students who come over to the health center that there is an increased interest and a significant change in their attitudes about the delivery of primary care in areas of need specifically. That is an impression. Whether they follow up on it I don't know.

The student indicates he would like to have an alternative to going into the military, such as serving in an area of medical need, whether urban or rural.

I might contrast the general practitioner in the past who located his office with little regard to the socioeconomic status of the neighborhoods. They are quite different than the specialists in primary care; that is, the pediatrician and internist, who have set up shop in more affluent surroundings.

The census tract in Boston and Brookline, in 1960, containing 40 percent of the most affluent population, housed the offices of 90 percent of the pediatricians and internists.

You could reverse that and look at it from the other side of the coin. It means 10 percent of the internists and pediatricians are responsible, or will be responsible, for 60 percent of the populations of greatest need.

Finding no one in at the general practitioner's office, today's urban resident seeks out the emergency ward. This is reflected in an astonishing increase in the MGH emergency ward per annum; namely a 100 percent increase in the last 10 years.

We focus on numbers here, which do not really describe the problem of a mother who has to change streetcars twice to bring a sick child to an emergency room. A patient is coming into the MGH emergency ward every 3 minutes, 24 hours a day, 365 days a year. This poses fantastic problems of personnel, quality, and space. Young children are brought in, next to a major accident case, the young drug addict who is high, or the drunk who is brought in for detoxification.

Separating all these things out takes a major upheaval in the hospital, which in the past has not considered this their primary func-

tion. Hospitals adapt to these circumstances, but it is not an ideal way to receive care. If a patient waits 6 to 8 hours in an emergency room with a sick child and there are other children at home, this could hardly be called sensitive, personalized care.

Senator KENNEDY. How often is that the case?

Dr. CONNELLY. Very frequently.

Senator KENNEDY. Is that the usual situation in the emergency rooms in major hospitals?

Dr. CONNELLY. Six to eight hours is not an unusual wait. One has to wait in line to get seen; and then may have to have an X-ray, and wait in line there; and then have to have the X-ray interpreted, and wait in line there; and finally be discharged; I might say at fantastic cost, because emergency rooms are geared to serve patients who have a major emergency, an expensive process.

Well, if hospitals provide all the facilities to meet major emergencies, the highest cost items, this cost has to be shared by everybody who comes into the emergency room.

Now, a child coming in for a minor illness such as a sore throat, which is a potentially serious illness, but at the moment is a minor illness, he has to share the same cost, or average out the cost of a patient who comes in with a cardiac arrhythmia, or a heart attack.

Besides this, patients may get a different doctor every time, and be referred to the follow-up clinics again with a different doctor, who has to review the whole medical history all over again, which is time consuming. The point is continuity and the personalization is not possible when patients receive episodic care in emergency rooms or outpatient departments.

Senator KENNEDY. What do you do about that?

Dr. CONNELLY. Set up health centers in Charlestown, as one possible solution. That is an access problem, and the people are forced into emergency rooms because of lack of access.

Senator KENNEDY. How long do they have to wait in Charlestown?

Dr. CONNELLY. I would say the longest wait we have known in our 2 years of operation is half an hour to an hour.

I am going to intermittently depart from the prepared text hoping we may learn more that way.

(The prepared statement of John P. Connelly, M.D., with attachments, follow:)

TESTIMONY
before the
Senate Health Subcommittee
March 24, 1971

by

John P. Connelly, M.D.
Associate Professor of Pediatrics, Harvard Medical School;
Executive Director, Bunker Hill Health Center of the Massachusetts General Hospital

The Bunker Hill Health Center of the Massachusetts General Hospital is a community health service of the Massachusetts General Hospital in Charlestown, Massachusetts. The Center is primarily but not exclusively for the 16,000 Charlestown residents. It represents a major partnership endeavor between the Boston Department of Health and Hospitals, Boston and Archdiocesan School Departments, and the Massachusetts General Hospital in the health field.

The Center offers primary health care to all who wish to avail themselves of its services. There are no restrictions of income, age or disease. Two teams -- each consisting of a full-time internist and/or family physician, pediatrician, nurse, nutritionist and social worker -- constitute the primary caretaking units. Part- (half) time physicians supplement these teams. There are full time ophthalmologists and dentists in the Center. Twenty-five percent of the space and personnel in the Center is devoted to psychosocial health. A full-time psychiatrist, psychologist, as well as mental and social health workers are integral and supportive team members. Other specialists are scheduled regularly as the need is identified. All professionals have Massachusetts General Hospital appointments in their respective departments.

City of Boston public health services, such as well-baby clinics, dental services for kindergarten through Grade 8, tuberculosis control has been assigned to the Massachusetts General Hospital. The responsibility of the school health programs of the Boston and Archdiocesan School Departments has also been assigned to the Center physicians. Besides these preventive and screening services, prima family-centered care is offered in an unfragmented continuum.

Operational since December 1968, the Center has been registering new patient at a rate of approximately 400 per month. There are approximately 12,000 patient registered to date.

The question arises -- why is the Massachusetts General Hospital in a decentralized health center? -- As we analyze today's major health problems in the health care delivery system, they revolve around four basic issues:

A. Access
B. Cost
C. Manpower
D. Quality

Lack of access to medical care basically is a result of the loss of general practitioners throughout the land. This is reflected in Chart 1 which depicts a phenomenal change in medical practice from 1963 - 1967, vis-a-vis general practitioners, internists and pediatricians. While there has been a gain of pediatricians and internists of 3,751, there has been a corresponding decrease in family doctors of 5,852, resulting in a net deficit of 2,101 primary caretakers or the yearly output of nine to ten medical schools. In Massachusetts this net deficit is 135 primary caretakers, the output of one medical school.

Table 1

General Practitioners, Internists and Pediatricians in Solo, Partnership Group or Other Practice, U.S.A. and Massachusetts, 1963-1967*

	U.S.A.			Massachusetts		
Year	General Practitioners	Pedia-tricians	Internists	General Practitioners	Pedia-tricians	Internists
1963	68,609	9,327	21,238	2,169	335	766
1964	67,055	9,664	22,172	2,072	355	802
1965	65,744	9,919	22,717	2,026	360	826
1966	64,063	10,089	23,210	1,964	358	862
1967	62,757	10,364	23,952	1,898	355	882
Change: 1963-67						
Number	5,852	+1,037	+2,714	-271	+20	+116
Percent	-8.6	+11.1	+12.8	-11.1	+5.6	+16.3

Boston, with one of the highest concentrations of physicians in the world, as a result faces an increasingly critical shortage of primary care physicians. General practitioners have tended to locate their offices with little regard to the socio-economic status of the neighborhoods. They are dissimilar to specialists in primary care, viz. the pediatrician and internist who have set up shop almost exclusively in more affluent surroundings. For example, the census tracts in Boston and Brookline that in 1960 contained the 40% of the population in the most favorable circumstances housed the offices of 51.5% of the general practitioners and 90.2% of the internists, pediatricians and obstetricians who were located in the community.

Finding no one in at the family general practitioner's office, today's urban resident seeks out the hospital emergency ward or outpatient department with his problem. This is demonstrated in Table 2 reflecting the Massachusetts General

*Source of data: Distribution of Physicians, Hospitals and Hospital Beds in U.S.A.: 1963, 1964, 1965, 1966, 1967. Department of Survey Research, American Medical Association, Chicago, Illinois.

Hospital Emergency Ward visits per annum from 1960-1969 -- a 100% increase in 9 years.

Table 2

M.G.H. Emergency Ward Visits per Annum

1960	38,258
1961	41,296
1962	42,792
1963	47,191
1964	53,172
1965	56,073
1966	58,085
1967	62,530
1968	66,176
1969	78,050

There is little evidence that solo practice, fee for service, primary care physicians will return to the inner city. Federal programs such as Title XIX or XVIII (Medicaid and Medicare) have placed purchasing power in the hands of the poor and also made it possible for the physician to increase their income substantially in more favorable settings.

Health centers which could be described as multispecialty group practices are being experimented with. The staffing of such programs remains a problem -- the answer most probably lies in the large city, university and referral hospital where the ratio of hospital physicians in Boston has increased from 119.4 per 100,000/population in 1940 to 289.4 per 100,000/population in 1961. Such hospitals have the administrative expertise, manpower backup and capital to really effect change if they are willing to decentralize into communities which turn to them for primary medical care (I.E. the focus on preventive health services, on health maintenance, or management of persons with acute and minor episodes of illness and on maintenance of patients with slowly progressive chronic illnesses where the one-to-one relation over time between the physician and the patient may be the most important component.

In examining our hospital Emergency Ward usage, Charlestown was the heaviest user per population base of the Massachusetts General Hospital (Table 3).

Table 3

	MGH Inpatient Admissions (adm./1,000/yr.)	MGH Clinic Visits (visits/1,000/yr.)	MGH EW Visits (Visits/1,000/yr.)
Boston	12	160	35
Cambridge	13	140	25
Chelsea	29	300	55
Charlestown	32	360	120
East Boston	23	310	65
Dorchester	8	100	20
Roxbury	5	100	20

It is an ideal community to serve in that it is one mile from the Massachusetts General Hospital, approximately 2 square miles in area, has the second largest and oldest housing project in the Commonwealth, has a cross section of income, and is relatively isolated: surrounded on three sides by water and the fourth by railroad tracks. In addition, a George Robert White Building -- a City Health Unit -- was available to deliver care. The community was one of many in the area north of Boston which came to the Massachusetts General Hospital seeking help for their increasing severe primary care problem.

We were able to respond because of a willingness on the part of the City Health Department to assign public health responsibilities to the Massachusetts General Hospital in return for the use of this building as well as the willingness of the Archdiocesan and City School Departments to assign the health care responsibilities of the ten public and parochial schools to the Massachusetts General Hospital. The key to the success of this venture lies in the availability of a Children's Bureau (Maternal and Child Health Service, Department of Health, Education and Welfare) grant for basic underpinning and the willingness of the Massachusetts General Hospital to commit its own capital funds to supply those services not covered by the Children and Youth grant. One must mention that private volunteer agencies such as the Easter Seal Society, Forsyth School of Dental Hygienists, Harvard Medical, Dental and Public Health Schools, as well as the Center for Community Health and Medical Care add key elements which assure family centered, continuous, comprehensive, unfragmented, coordinated and personalized care. Care is organized in teams consisting of community mental health, internal medicine, dentists, pediatricians, nurses, nutritionist. Specialists are brought to the Center as needs demand.

As shown, sensitivity to community concerns, i.e. the type and content of care received, is reflected in the Committee on Community Programs which has representation from the concerned groups within the hospital (Department Chiefs) and their counterpart groups in the community.

The services offered are shown on the flyer that was distributed. Likewise, the brochure reflects that our doors are open 365 days a year with basic daytime, weekend and occasional evening coverage, backed up by the Massachusetts General Hospital Emergency Ward. The Center is now a significant source of medical care to Charlestown and surrounding communities.

One of the key elements to the medical care process is the Evaluation Unit. Fundamental changes which this unit have made, under the direction of Dr. Gordon Moore, and in cooperation with the Harvard Center for Community Health and Medical Care, are the establishment of a unit medical record with the Massachusetts General Hospital, as well as a family record, and the establishment of a data retrieval system by use of a medical encounter form for gathering data for the Children's Bureau, as well as for internal management use.

This data is put into computers daily and reported quarterly. Examples of the type of information secured are on the following tables.

A) Registrants by payment status

Using this data, we hope to arrive at a prepayment program with the help of two recent fellows from the Harvard Center for Community Health and Medical Care (Drs. Robert Robertson and Irene Butter).

B. The households registered at Bunker Hill for the first three quarters of 1970 reveal that we are reaching the public housing as well as the more affluent members of the area. It also shows that contiguous Boston areas will and are increasingly turning to the Center for medical care. We feel it is important that our Center not be viewed as a clinic for poor people, but for anybody without regard to income or any other restriction usually associated with health centers.

The volume and duration of encounters by professional service for the third quarter of 1970 is shown in Table 4. These have particular significance vis-a-vis cost particularly in the area of psycho-social health which consumes the largest amount of time per encounter, yet poses the greatest challenge not to mention the greatest expectation of the public.

Table 4

MGH-BHHC
Volume and Duration of Encounters
September 1970

	Number	Duration (Minutes)
Pediatrics	716	18
Internal Medicine	679	24
Dental Health	463	43.8
Social Service	283	55.8
Mental Health	199	48
Nursing	421	28.2
Nutrition	224	30.6

Table 5 depicts encounters by duration of visit by provider. Only pediatrics and internal medicine is shown. Basic differences in such specialties is reflected in the average duration of visits for pediatricians at 17.5 minutes versus the average duration of visit of 24.3 minutes for internal medicine.

Table 5
MGH-BHHC
Encounters by Duration of Visit
by Provider
March-June 1970

Provider	Total Visits	Average Duration of Visits (Minutes)
PEDIATRICS		
A01	155	13.1
A02	793	20.6
A03	703	15.9
A04	94	15.0
A05	625	16.2
A09	79	22.5
		Average 17.5

Table 5 - Continued

Provider	Total Visits	Average Duration of Visits (Minutes)
MEDICINE		
A20	584	21.1
A21	655	20.6
A22	241	34.1
A23	45	25.8
A24	152	38.0
A25	53	15.1
A26	16	45.0
		Average 24.3

The content of Health Center practice is shown in Table 6. I would draw particular attention to the fact that primary medical care has a significant psycho-social, preventative, acute and minor illness component. If one looked at this care from only the medical practice, the percent of consultations for various groups of conditions is reflected in Table 7. This table compares the recent report on primary care from the British Medical Association with the Bunker Hill Health Center practice. We really are not dissimilar in our breakdown as you can see.

Table 6

MGH-BHHC
Content of Center Practice
March-June 1970

% of Consultation for Various Groups of Conditions

	%
Emotional	19.1
Respiratory	17.0
Preventative	14.2
Trauma and Musculo-skeletal disorders	11.5
Dental Treatment	6.1
Dental Prevention	6.0
Cardiovascular	4.5
Endocrine	3.9
Obstetrics-Gynecology	3.2
Dermatology	2.6
Eye	1.3
Gastrointestinal	1.0
Genitourinary	1.0
Other	9.0

Table 7

MGH-BHHC
Content of Medical Practice
March-June 1970

% of Consultations for Various Groups of Conditions

	%	BMA*
Respiratory	25.5	33
Preventative	18.0	10
Trauma and Musculo-skeletal disorders	13.0	8
Emotional	7.0	12
Cardiovascular	6.0	7
Dermatology	5.0	10
Obstetrics	3.5	
Eye	3.5	
Endocrine	3.0	
Genitourinary	3.0	
Gastrointestinal	1.5	10
Other	13.4	10

* British Medical Association

In cooperation with the Harvard Business School, Professor Robert Anthony and Mrs. Regina Herzlinger, a doctoral candidate, this basic data system has been implemented into a cost management control system.

The management control system is, in essence, a feedback mechanism in which the efficiency of practitioners and services are calculated and continually distributed back to those producing the services. The system implemented at the Bunker Hill Health Center calculates the following unit cost data:

1. Cost per practitioner, by individual practitioner;
2. Cost per service, by service code;
3. Cost per service per practitioner;
4. Cost per department for different services; and
5. Overall unit costs of Bunker Hill

The implementation of the system enables assessment of the relative efficiency of different practitioners by measuring the volume and duration of their encounters and their effective costs. It, thus, provides an impetus for low volume, high duration practitioners to improve their performance. This sytem also enables measurement of the impact of volume on costs. In some departments, incremental volume may lead to additional costs because the department is at a very near optimal capacity. In other departments, the marginal benefits of incremental volume exceed the marginal costs -- because the department is operating below capacity.

In addition, the system measures the extent and efficiency of task delegation by measuring the costs of physicians and nurses operating as a team. It, thus,

provides an incentive for greater task delegation -- for the greater the delegation, the lower the costs. The system also measures the cost of the "overhead" or support departments, as a percentage of total and unit costs.

When coupled with a profit-sharing system, the basic control system provides a monetary incentive for efficiency by:

1. Changing volume of encounters;
2. Decreasing duration where appropriate;
3. Controlling "overhead" costs; and
4. Examining fee structures.

An example of the usefulness of such a cost management system is seen in Table 8 which shows the cost per encounter by department for the month of October 1970. Pediatrics reflected the lowest cost and was therefore used as the norm. Internal medicine was 25% more expensive per encounter and dental health 16%. Social service and mental health are 130% and 227% more expensive per encounter than a pediatric visit. Yet this is the area of greatest need and, I might add, the area of greatest expectation from the public who are looking to the medical profession to solve the alcoholism, broken home, drug addiction, and other neuroses.

Table 8

MGH-BHHC
Cost per Encounter
October 1970

	%
Pediatrics	N
Internal Medicine	(+) 25
Dental Health	(+) 16
Social Service	(+)130
Mental Health	(+)227
Nursing	(+)160
Nutrition	(+) 35

Since this is the area of greatest challenge, it may be worthwhile comparing the number of hours spent in direct patient care versus the number of hours available. Such a comparison is shown in Table 9. The only comparative time motion data comparing similar variables was done by Bergman and Wedgwood* in private pediatric practices which confirm pediatricians spend only approximately 50% of their available hours with patients.

*Bergman, A.B., Dassel, S.W., and Wedgwood, R.J.: Time-motion study of practicing pediatricians. Pediatrics, 33:254-263, 1966.

Table 9

MGH-BHHC
Number of Hours Spent in Direct Patient Care
Versus
Number of Hours Available
October 1970

	Hours Available	Hours in Direct Patient Care	% Spent in Direct Patient Care
Pediatrics	431	215.9	50
Internal Medicine	515	274.9	53
Dental Health	653	337.7	52
Mental Health	851	158.4	19
Nursing	1,528	199.4	13
Nutrition	176	114.2	65
Social Service			
Regular Staff	704	261.0	37
Trainees	384	108.0	28

Considering such high cost items as community mental health, the relatively smaller amount of time spent in direct patient care confirms the need to re-examine the modus operandi of these specialties and to aggressively consider task transfer to such persons as case aides and assistants of all functions not absolutely requiring the highly skilled resources of social worker, psychiatrists, psychologists, psychometrists, etc.

Appendix 1

THE PAST DENTAL BEHAVIOR AND PRESENT DENTAL HEALTH STATUS OF A SAMPLE OF CHARLESTOWN RESIDENTS

Myron Allukian, D.D.S.,M.P.H.

David Rosenstein, D.D.S.

William Bunch, B.S.

Dr. Allukian is presently Director, Community Dental Health, Department of Health & Hospitals, City of Boston; Chief, Dental Health Service, Bunker Hill Health Center; Assistant Clinical Professor in Ecological Dentistry, Harvard School of Dental Medicine.

Dr. Rosenstein, formerly a student at Harvard School of Dental Medicine, is now a student at University of California, School of Public Health, in Berkeley.

Mr. Bunch is a 4th year student, Harvard School of Dental Medicine.

Introduction

Before a community dental program can be properly planned, some knowledge of the need and demand for dental health and care should be ascertained. The present study was so designed by the Dental Health Service of the Bunker Hill Health Center with the aid of the Evaluation Unit of the Health Center. Two dental students from the Harvard School of Dental Medicine were also involved in the study. One of the dental students (B.B.) interviewed the subjects and the other (D.R.) analyzed the results.

Method

Adult patients who were sitting in the waiting room of the Health Center were interviewed over a ten consecutive day period by a dental student, during the summer of 1969. The interview lasted from five minutes to twenty-five minutes depending on the number of individuals in the interviewees family. The interviewee was asked questions about his own pattern of dental behavior and that of all members of his family. The collected data was then transferred to marginal punch cards and analyzed.

Results

Approximately 104 individuals in the waiting room of the Health Center were asked to be interviewed. Of these, 102 consented, and were interviewed. After the interview, the name of each interviewee was looked up in the medical records to determine if the interviewee was registered at the Health Center. Out of the 102 interviewees, 92 were registered at the Health Center, and they made up the sample population of interviewees. The total sample of interviewees and their family members numbered 459 individuals.

The family status of the 92 interviewees, median age of 34 years, is shown in Table I and the age distribution is shown in Table II.

Table I

Family status of the 92 Interviewees
Charlestown, Massachusetts 1969

76	were mothers
7	were fathers
8	were siblings
1	other

Table II

Age Range	Number of Interviewees
15-19	3
20-29	24
30-39	28
40-49	19
50-62	9
624	9

The 92 interviewees and their families made up a total of 459 family members which represented the entire sample. This came to about five members per household. The age distribution of all 459 family members is given in Table III.

Table III

Age Distribution of All 459 Family Members Surveyed

Age in Years	0-4	5-9	10-14	15-19	20-29	30-39	40-49	50-62	62+
No. of Family Members	76	92	71	34	56	58	41	15	16
Per Cent of Total Sample	17%	20%	15%	7%	12%	13%	9%	3%	4%

The status of all 459 family members is given in Table IV

Table IV

Status of All 459 Family Members Covered by Survey

	No. of Individuals	Per Cent
Pre-school	95	21%
School	177	39%
Keeping House	54	12%
Working Full-time	70	15%
Unemployed	5	1%
Disabled	12	3%
Retired	11	2%
Military Service	2	1%
No record	33	7%

Tables III and IV were included to give some idea of the make-up of the total population sample size. The age distribution of the total population sample is fairly representative of Charlestown except in the age groups of 0-4, 5-9 and 10-14 where there seems to be a slightly higher proportion of children (5-10%) in this sample. There were also less adults proportionately in the age groups 50-62 and 62+.

The welfare status, demand for dental treatment at the Health Center and felt dental need for the 92 interviewees is given in Table V.

Table V

Of the 92 interviewees, median age 34

83% - were interested in dental services at the Health Center
70% - felt they now needed treatment
66% - were not on welfare
71% - had last seen a dentist for an emergency visit
38% - had seen a dentist within the last year

Table VI

The present status of missing teeth of the 92 Interviewees, median age 34

34% - completely edentulous (no natural teeth)
Of these, 23% had no dentures (false teeth)

52% - edentulous in the upper jaw
1% - reporting having all their natural teeth

The number of partial and full denture wearers for the upper and lower jaws of 92 interviewees is shown in Table VII.

Table VII

Denture Wearers Among 92 Interviewees

	Upper	Lower
Full Denture	43	24
Partial "	14	8

Fifty-seven interviewees, or 62% of this sample wore a partial or full denture.

Table VIII gives the reason for the last dental visit for the Charlestown families. Approximately 71% of the 92 adults, and 45% of the 459 total sample received emergency care at their last visit.

Table VIII

Percentage distribution of Reasons for Last Dental Visit, for 92 Interviewees and all 459 family members. Charlestown, 1969

Reason for Care	92 Interviewees	All 459 Family members
Emergency	71%	45%
Check-up	8%	12%
Treatment	17%	33%
Other	4%	10%

Table IX gives the percentage of edentulous individuals for the Charlestown interviewees and the U.S. as shown by the U.S. National Health Survey, 1960.

Table IX

Percentage Edentulous Individuals For Charlestown and the U.S. - 1969

Age	Charlestown	United States
15-24	7	1
25-34	24	4
35-44	35	10
45-54	40	22

Discussion

Although one may consider the sample population under study to be biased as they patients waiting to be seen in a health center, one must remember that they were not dental patients, therefore one would not expect them to be different dentally from the general population at large in Charlestown. Although 64% of the total sample of 459 individuals received some form of dental treatment within the last year, only 26% of the total sample received definitive treatment, not emergency care.

The fact that 62% of 92 interviewees wore a partial or a full denture shows markedly that the number of missing teeth among adults is quite high. This is also reinforced by the finding that 52% of the interviewees were edentulous in the upper jaw, and 34% were completely edentulous. This was also compared to national figures in Table IX.

Although the interviewee sample size may be considered to be small, the difference in percent of edentulous individuals by age between Charlestown and national figures is so great, that one should consider them seriously. In the 15-24 age group, 7% of the Charlestown interviewees were edentulous as compared to only 1% of the same age group from the National Health Survey, a seven fold difference. These have also been substantiated somewhat by the clinical impressions of physicians from the Health Center who have noticed more dentures among school children than what they normally encounter in other communities.

The differences between Charlestown and the rest of the nation in terms of dental need are substantiated by the findings of three large military studies which show New England to have more dental disease (World War II) and higher draft-rejection rates for dental causes (World War I) than any other part of the then United States. (a)

Dental treatment is both expensive and time consuming. The two most effective ways to deal with this disease are fluoridation and expanded duty dental auxiliaries. Fluoridation can prevent tooth decay by up to 70% and expanded duty dental auxiliaries would help us give more care to more people at possibly lower cost. If we are ever to make meaningful impact into the dental health needs of Charlestown or the U.S. we would need universal fluoridation and expanded duty dental auxiliaries.

(a) Dunning, J.M. Journal of Dental Research 32, 811-829, (1953)

APPENDIX 2

WHAT IS THE BUNKER HILL HEALTH CENTER?

A Community Health Service of the Massachusetts General Hospital established in Charlestown to bring the hospital closer to the people it serves.

WHO IS ELIGIBLE FOR CARE?

Children and adults of all ages are eligible. The Center is primarily but not exclusively for Charlestown residents.

WHAT ARE THE SERVICES OFFERED?

Bunker Hill Flag 1775

Pediatrics	Surgery
General Medicine	Cardiology
Mental Health	Neurology
Nursing	Allergy
Family Health Services (Social Service)	Otolaryngology (Ear, Nose and Throat)
Dentistry	Dermatology (Skin)
Radiology (X-Ray)	Speech and Language
Nutrition	Orthopedics
Medical Laboratory	Urology
Ophthalmology (Eye)	Gynecology
Obstetrics	Physical Therapy

WHEN ARE OUR DOORS OPEN? – 365 days/year

Days: Monday thru Friday
8:30 a.m. – 5 p.m.

Saturdays
9:00 a.m. – 12:00 noon

Sundays & Holidays
9:00 a.m. – 11:00 a.m.

Evenings: Wednesday
6:00 – 8:00 p.m.

Tuesday (Specialty appointments only)
6:00 – 8:30 p.m.

Patients will be served by the Massachusetts General Hospital Emergency Room for all hours other than above.

HOW DO YOU GET HELP?

You may:
Call for an appointment – 241-8800.
Be referred by your physician or private and public agencies.
In case of an emergency, come in immediately.

HOW DO YOU GET REGISTERED?

Registration is the same as for the Massachusetts General Hospital and registers you for the hospital as well as for the Health Center.

WILL INSURANCE COVER THE EXPENSES?

Some medical insurance policies cover our care. Others do not. If you have any type of insurance coverage, be sure to tell us. It is always wise to bring your certificate or policy number with you and to check your coverage with your insurance company. We will gladly help if we can.

WHO ARE THE COOPERATING AGENCIES?

U.S. Department of Health, Education and Welfare - Maternal and Child Health Service; Boston Department of Health and Hospitals; Boston and Archdiocesan School Departments; Catholic Charitable Bureau; Department of Welfare, Commonwealth of Massachusetts; Harvard Medical School; John F. Kennedy Family Service Center, Inc.; Easter Seal Society; Forsyth School of Dental Hygienists; Harvard School of Dental Medicine. Harvard Center for Community Health and Medical Care.

TELEPHONE #241-8800

10-70

Appendix 3

A JOINT STATEMENT

OF THE

AMERICAN NURSES' ASSOCIATION
Division on Maternal and Child Health Nursing Practice

AND THE

AMERICAN ACADEMY OF PEDIATRICS

GUIDELINES ON SHORT-TERM CONTINUING EDUCATION PROGRAMS FOR PEDIATRIC NURSE ASSOCIATES

January 1971

JOINT ANA-AAP STATEMENT

1. Introduction

The American Nurses' Association and American Academy of Pediatrics recognize collaborative efforts are essential to increase the quality, availability and accessibility of child health care in the U.S.A. In order to meet the health care needs of children, it is essential that the skills inherent in the nursing and medical professions be utilized more efficiently in the delivery of child health care.

Innovative methods are needed to utilize these professional skills more fully. One such innovative approach is the development of the Pediatric Nurse Associate* program. This program will enable nurses, both in practice and reentering practice, to update and expand their knowledge and skills. It is essential that physicians become more aware of the skills and abilities of the nursing profession and that such skills be expanded in the area of ambulatory child health to enable both the nurse and the physician to devote their efforts in the delivery of child health care to the areas of their respective professional expertise.

The expansion of the nurse's responsibilities would encompass some of the areas that have traditionally been performed by physicians. Proficiency and competence in performing these new technical skills associated with the expanded responsibility should be viewed as increasing the sources from which the nurse gathers data for making nursing assessment as a basis for diagnoses and action and thus contributing directly to comprehensive nursing. Nurses must therefore be prepared to accept responsibility and accountability for the performance of

* The titles "Pediatric Nurse Associate" and "Pediatric Nurse Practitioner" are used interchangeably.

these acts and must have the opportunity to be engaged in independent as well as cooperative decision making.

The ANA and AAP are agreed in developing the following guidelines and concepts for short-term continuing education courses for Pediatric Nurse Associates (PNA).

II. Functions and Responsibilities

As nursing functions have changed over the years, and nurses have assumed responsibilities that have formerly been performed by physicians, the two professions have issued joint statements concerning the changes. The continuing discussions between the American Nurses' Association and the American Academy of Pediatrics concerning the preparation of nurses for pediatric ambulatory nursing practice represents a formalized joint effort of both professions to collaborate and plan for the reorganization of certain health care services to children.

The following responsibilities in ambulatory child health care include those which are inherent in existing nursing practice:

Secure a health history.

Perform comprehensive pediatric appraisal, including physical assessment and developmental evaluation on children from birth through adolescence.

Record findings of physical and dev elopmental assessment in a systematic and accurate form.

Advise and counsel parents concerning problems related to child rearing, growth and development.

Advise and counsel youth concerning mental and physical health.

Provide parents and other family members with the opportunity to increase their knowledge and skills necessary for maintenance or improvement of their health.

Cooperate with other professionals and agencies involved in providing services to a child or his family and when appropriate coordinate the health care given.

Identify resources available within the community to help children and their families, and guide parents in their use.

Identify and help in the management of technologic, economic and social influences affecting child health.

Plan and implement routine immunizations.

Prescribe selected medications according to standing orders.

Assess and manage common illnesses and accidents of children.

Work collaboratively with physicians and other members of the health team in planning to meet the health needs of pediatric patients.

Engage in role redefinition with other members of the health team.

Delegate appropriate health care tasks to non-professional personnel.

III. Continuing Education Programs

A. Goals

The goal of continuing education programs for preparation of Pediatric Nurse Practitioners is to provide knowledge, understanding and skill that will enable them to assume a direct and responsible professional role in ambulatory child health care. The programs should build on previous nursing knowledge and skill and include some knowledge and skills that conventionally have been the province of the physician. Experimentation is indicated as the health professions

attempt to change their functions.

On completion of the program, the Pediatric Nurse Associate should be able to:

Secure a child's health and developmental history from his or her parent and record findings in a systematic, accurate and succinct form.

Be able to evaluate a health history critically.

Perform a basic pediatric physical assessment using techniques of observation, inspection, auscultation, palpation and percussion and make use of such instruments as the otoscope and stethoscope.

Discriminate between normal and abnormal findings on the screening physical assessment and know when to refer the child to the physician for evaluation or supervision.

Discriminate between normal variations of child development and abnormal deviations by utilizing specific developmental screening tests and refer children with abnormal findings to the pediatrician.

Provide anticipatory guidance to parents concerning problems of child rearing, such as: feeding, developmental crises, common illnesses and accidents.

Recognize and manage specific minor common childhood conditions.

Carry out (and) or modify a predetermined immunization plan.
Identify community health resources and guide parents in their use.

Make home visits in view of presenting health problems.

Make decisions arrived at prospectively and collaboratively with the physician, in addition to decisions involving a level of traditional nursing judgments. Trust and a close state of interdependence are essential for this collaborative decision making.

B. Planning

Collaboration between nursing and medicine is vital in achieving understanding of the preparation of Pediatric Nurse Associates. In order to ensure such collaboration, it is necessary that nursing and medicine assume equal responsibility for planning the Pediatric Nurse Associate short-term continuing education programs.

Planning should take into account national, regional and local needs for ambulatory child health care. Planning should involve district and state nurses' associations, district or chapter chairmen of the AAP, and nursing and medical schools. Active participation should be sought from consumer groups, since their orientation to the changing roles of physicians and nurses will determine to a significant extent the effective utilization of these professionals.

C. Organization and Administration

Every attempt should be made to establish the educational programs to prepare Pediatric Nurse Practitioners under the aegis of accredited collegiate nursing programs. Whenever possible the program should be developed in collaboration with a Department of Pediatrics of a College of Medicine. Programs should conform to the existing policies

and regulations governing the conduct of comparable, educational programs. As in the delivery of care, the organization and implementation of the educational program should be a joint Pediatric and Nursing effort. The educational programs should be financed as are other continuing education programs sponsored by the institution. A variety of funding sources may be included.

D. Services and Facilities

The program should provide:

A health service for evaluation and maintenance of mental and physical health of the students.

A counseling service for student guidance.

Library facilities which contain an adequate supply of books, periodicals, and other reference materials related to the curriculum.

Appropriate teaching aids and classroom facilities.

Clinical facilities for demonstration, student observation and directed practice experience in public and private ambulatory and applicable inpatient settings. These facilities should be in institutions, clinics or private offices which have sufficient qualified, experienced child care personnel, and adequate numbers of patients to provide the type and amount of experience for which the student is assigned.

E. Faculty

Collaboration between nursing and medicine is vital in achieving the goals of the program. For this reason, the planning and implementation of the curriculum should be a joint effort of both professional groups.

The medical and nursing codirectors of the program should be qualified through both academic preparation and experience as practitioners. The faculty should meet the same requirements as other faculty of the sponsoring institution.

Medical input will be primarily in those areas of health care that have traditionally been within the province of medicine. Since the acquisition of new knowledge and skills is intended to enhance professional nursing practice, appropriate nursing faculty should assume major responsibility for the development and implementation of the program.

It is envisioned that wherever appropriate, other members of the health team, for example, psychologists, nutritionists, and social workers, would aprticipate in teaching in order to assist students in gaining perspective of the interdependent role and contributions of other health professionals. The nursing codirector of each program is also the logical person responsible for the coordination of the educational input of these other health professionals.

Other instructional staff should be qualified through academic preparation and experience to teach the subject (or subjects) assigned.

The student-instructional staff ratio should be in at least the same proportion as similar education programs organized by the sponsoring institution.

Joint appointments for faculty between Departments of Pediatrics and the Schools of Nursing are recommended.

59-661 O - 71 - pt. 5 ---11

F. Course Content

Curriculum should build on existing nursing knowledge and skills, updating and adding depth in the areas of normal growth and development, clinical pediatrics and the behavioral sciences. It should provide a systematic program to increase the nurse's ability to make a more discriminative and accurate assessment of the developing child.

GROWTH AND DEVELOPMENT--A comprehensive review of growth and development and normal variations, including the use of the Denver Developmental Screening Test, or a comparable instrument.

INTERVIEWING AND COUNSELING--Principles of the interviewing process and basic approaches to counseling parents in child-rearing practices.

FAMILY DYNAMICS--Study of attitudes and knowledge needed to identify factors that affect interaction between family members and critical periods in family life. Review of socio-cultural patterns and their influence on family health.

POSITIVE HEALTH MAINTENANCE--Basic child care, including physical assessment, nutrition, immunization programs, safety and accident prevention, dental health measures, and other aspects of anticipatory guidance.

CHILDHOOD ILLNESS--Review of systems and the most commonly seen pediatric illnesses, with emphasis on prevention, management, early recognition of complications, and the more common emotional adjustment problems of each age group; importance of health education for families in providing better health care in the home.

COMMUNITY RESOURCES AND DELIVERY OF CHILD HEALTH CARE SERVICES--Review of community resources, traditional modes of delivery of services,

the referral process, and new patterns of providing comprehensive health care.

FAMILY/NURSE/PHYSICIAN RELATIONSHIP--Interpret goals of the nurse/physician team and role changes required for practicing in an expanded role. Review elements of working within a system while changing the system.

CLINICAL EXPERIENCE--Planned field experiences and directed practice which provide a transition from theory to application should be incorporated into the program. These activities should allow for the application of previous and ongoing learning under the direction of competent instructors and practitioners. There should be qualified preceptors in each field of practice to which students are assigned under the general direction of the codirectors of the program.

G. Admission of Students

Only registered nurses are eligible for the programs.

Policies for selection of students should be developed by the faculty of the sponsoring institution in cooperation with those responsible for conducting the programs. Admission criteria should be based on education and experiential factors, taking into account local needs and resources. Careful assessment of each applicant's qualifications is indicated, to assure that those admitted have a common core of knowledge and skill. If the applicant lacks preparation in an area regarded as essential, he or she should be guided to correct the deficit before entering the program, or to enroll in a supplemental course concurrent with enrollment in the Pediatric Nurse Associate program. Pre-testing for admission and appropriate placement appears

advisable in the following areas: knowledge of growth and development of children, care of children with common health problems, child psychology, and family dynamics.

Because a larger purpose of this course is to change the current delivery practices of pediatric health care by placing in action working models of "pediatric team" care, it is recommended that the trainee already hold a job within a practice setting that serves as a source of comprehensive health care for all children in a family. It is recommended that each nurse accepted as a trainee be guaranteed by her employer the opportunity to function in an expanded role in the practice setting in which she works. Adoption of this expanded role by the nurse makes it necessary for her to relinquish responsibility within her work setting for non-patient care tasks of an indirect and clerical nature. These tasks can be assumed by trained assistants, aides and secretaries.

H. Length of Program

Experience to date has indicated that a minimum of four months of educational experience is needed to attain the desired objectives.

The program should include a combination of classroom work, clinical practice and work experience composed of approximately four hours of class and eight to twelve hours of supervised clinical practice each week, with the remainder devoted to on-the-job work experience.

I. Evaluation

Special licensing or accrediting of programs or certification of individuals who complete the programs would be premature at this stage.

Opportunity for experimentation in educational programs and in manpower utilization is essential for full exploration of ways to improve health services. The candidate who successfully completes the program should be provided with a certificate of completion, or other written statements, according to the policies of the educational institution under whose aegis the training was conducted.

It is imperative that the educational, attitudinal and economic aspects of the continuing educational programs for the Pediatric Nurse Associate be evaluated within each program. The data collected from ongoing evaluation can be utilized to modify and upgrade existing programs in the area of prerequisites, curriculum, facilities and faculty.

Each program should conduct ongoing evaluation of graduates to include:
Adequacy of care rendered.

Acceptance of expanded role by self, pediatrician and recipients of care.

Productivity measures and cost effectiveness analysis.

IV. General Information

Inquiries regarding school programs and careers for Pediatric Nurse Associates should be addressed to the: Maternal and Child Health Division, American Nurses' Association, 10 Columbus Circle, New York, N. Y. 10019; or, Office of Allied Health Manpower, American Academy of Pediatrics, 1801 Hinman Avenue, Evanston, Illinois 60204.

American Academy of Pediatrics
Committee on Pediatric Manpower

Robert D. Burnett, M.D., Chairman
Donald J. Frank, M.D.
Paul S. Goldstein, M.D.
John Rhodes Haverty, M.D.
Henry K. Silver, M.D.
Alfred L. Skinner, M.D.
H. Luten Teate, M.D.
John P. Connelly, M.D., Consultant

Joint Ad Hoc Committee of
American Nurses' Association,
Division on Maternal and Child Health Nursing Practice
and the
American Academy of Pediatrics

John P. Connelly, M.D., FAAP, Co-Chairman
Robert D. Burnett, M.D., FAAP
Donald J. Frank, M.D., FAAP
Stanley L. Harrison, M.D., FAAP
Robert A. Hoekelman, M.D., FAAP
Patricia Chaney, R.N., PNA, Consultant
Elda S. Popiel, R.N., PNA, Consultant
Wesley J. Duiker, AAP Staff
Arlene K. Burroughs, R.N., ANA, Co-Chairman
Pearl H. Dunkley, R.N., ANA
Gertrude Church, R.N., ANA
Gellestrina Di Maggio, R.N., ANA
E. Jane Furnas, R.N., ANA
Iris R. Shannon, R.N., ANA
Audrey F. Spector, R.N., ANA
Gladys Sorensen, R.N., ANA
M. Elaine Wittmann, R.N., ANA

JAMA, Feb 12, 1968 • Vol 203, No 7

Membership is now available in the Harvard Community Health Plan to employees of Boston area organizations and their families. You may be among the 30,000 people living in greater Boston who are offered the opportunity to join.

Blue Cross and a number of insurance companies are offering this new choice to many of their enrollees through employer, union and other group health benefit plans. If you are offered this new "dual choice" option and if you live within the geographic enrollment area shown on page 11, you may select the Harvard Community Health Plan or decide to maintain your present medical expense coverage -- whichever you feel might better serve your family's needs. Once each year you will have the opportunity to decide whether or not to continue your membership in the Plan.

This booklet tells you about the Plan. It describes the broad range of preventive and treatment services available, the group practice of medicine in both the new Harvard Community Health Plan Center and the participating Harvard affiliated hospitals, and the advantages of prepaid comprehensive family health care.

The Harvard Plan is a comprehensive medical care plan for families living in the greater Boston area.

It provides personal, continuous, *day-to-day care as well as care for major illness -- care in the medical office, in the hospital and in the home.* It helps to protect your family's health by emphasizing preventive services and prompt medical treatment.

To meet your health needs, the Plan draws upon the extensive resources of the Harvard Medical School and several of its affiliated hospitals. It has developed an integrated system of health services that assures effective care at any time of the day or night, while at the same time securing for each patient a *personal physician* who can provide and guide his care.

Plan members are also protected in the event of emergency either within the Plan's service area or when traveling outside. Payment will be made for physicians' and hospital services given in non-Plan affiliated hospitals as a result of an emergency illness or accident. (Details in chart on pages 8 and 9.)

The Harvard Community Health Plan offers quality medical care around the clock through a coordinated group practice of physicians, nurses, counselors and others. The group practice is closely affiliated with a Harvard Medical School Teaching Hospital and offers the benefits of this affiliation.

If you enroll, you may select one of the two participating medical groups. One is associated with the Beth Israel Hospital. The other is a combined Medical Group drawn from the Peter Bent Brigham Hospital, Boston Hospital for Women and Children's Hospital Medical Center. These are groups of specialists . . . in surgery, internal medicine, maternity care, pediatrics, ear-nose-throat problems, skin conditions, radiology, mental health, etc. . . . all of whom form a unique pool of knowledge which can be drawn upon to serve your needs.

You have the opportunity to choose a personal doctor for yourself and for each eligible member of your family from the Harvard Plan Medical Group you join

For adults the personal doctor will usually be a specialist in internal medicine; for children he will be a specialist in pediatrics.

Your physician supervises your total care. He will be responsible for seeing to it that you get the care and attention you need. You call him for advice, he sees you when necessary, and he arranges for laboratory tests, hospitalization and the services of other specialists when required. When he is temporarily unavailable, coverage is provided by other members of the physician group who have access to your medical records. There is always a physician available who can care for you.

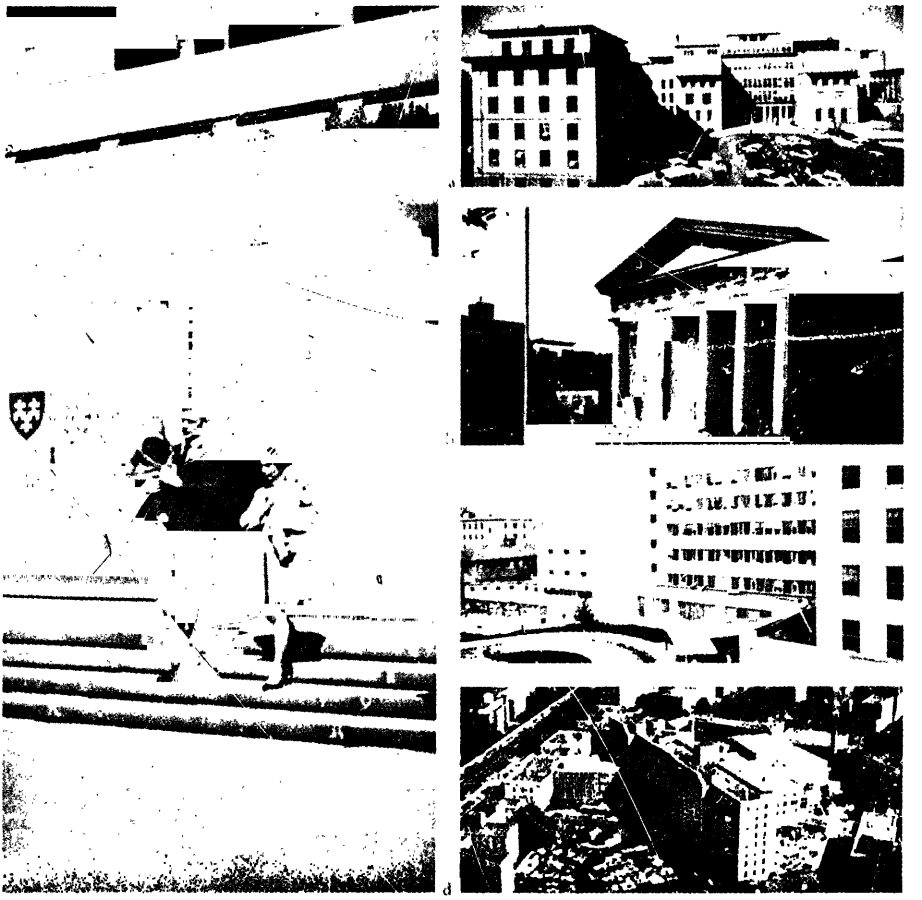
Most health services are provided at the Harvard Community Health Center, a modern, newly equipped facility that houses the doctors' offices, laboratory and X-ray facilities, 24-hour emergency call service, a pharmacy, nursing services, counseling services and health education activities. This is truly a "one door-whole family" health center. Without leaving the building, you can see the doctor, have X-ray or laboratory tests and purchase drugs.

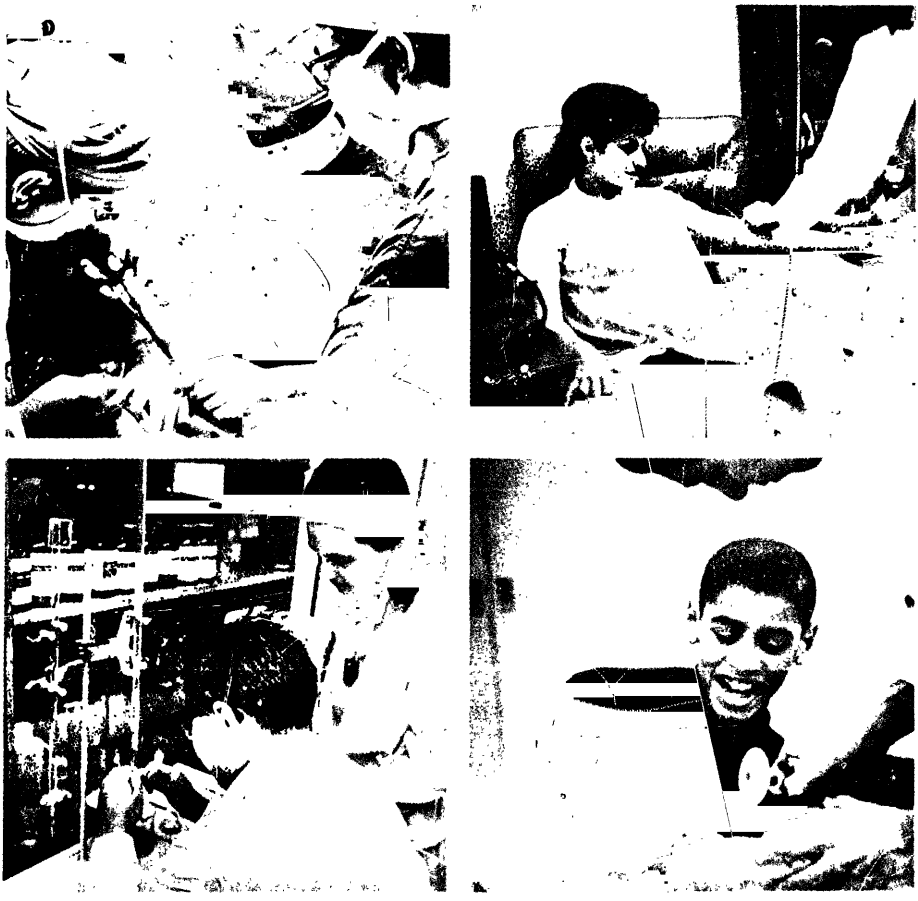
The Plan's first Health Center – in Kenmore Square at 690 Beacon Street – is easily accessible via public transportation or automobile from any part of the greater Boston area. Limited parking in the building is available to members.

All hospital services, including room and board, use of operating room, prescribed special duty nursing, drugs and medication, X-ray exams and therapy, are fully covered. They are described in detail in the chart on pages 8 and 9.

In the hospital your own group doctor plus appropriate specialists, such as a surgeon, maintain prime responsibility. Moreover, the Plan gives you the benefit of care in a teaching hospital where a team of physicians – residents, interns and other clinical specialists – will get to know you well by participating in your care. There are always informed and responsible physicians in the hospital who can add to the thoroughness with which your illness is diagnosed and treated, and who can deal with any situation which might arise at any time of the day or night.

a Boston Hospital for Women
b Peter Bent Brigham Hospital
c Children's Hospital Medical Center
d Beth Israel Hospital





Services ranging from preventive care to complete hospital treatment to post-hospital care

Coraplete Physicians' and Surgeons' Services

Complete Hospitalization

Regular Physical Examinations

Maternity Care

Infant and Child Care

Extended and Intermediate Care Services

Drugs and Medications at Reasonable Cost

Round-the-Clock Emergency Care

Eye Care

Mental Health Services

Complete Laboratory and X-Ray Services

Immunizations

Physical Therapy

Home Health Care Services

Nursing Services

Counseling Services

Out-of-Area Coverage

Where	What	You Pay
In the Health Center	Doctor Office Visits --	
	During Scheduled Hours	$1 per visit
	After Scheduled Hours	$3 per visit
	Adult or Pediatric Physical Check-Up	$1 per check-up
	Eye Examinations	$1 per visit
	Laboratory and X-Ray Services	No Charge
	Physical Therapy, when prescribed	No Charge
	Casts and Dressings	No Charge
	Immunizations and Injections, when administered by Plan Health Center Personnel	No Charge
	Nursing Services	No Charge
	Counseling Services	No Charge
	Drugs and Medicines	Provided at reasonable charge
In a Participating Hospital	Physicians' and Surgeons' Services, Including Operations and Specialists' Consultation	No Charge
	Room and Board in Semi-Private Accommodations** - General Nursing -- Use of Operating Room - Anaesthesia	No Charge
	Laboratory and X-Ray Services	No Charge
	Radiotherapy	No Charge
	[illegible]	No Charge
	[illegible] Nursing	No Charge
	[illegible] blood is replaced	No Charge
In Your Home	Doctors' Home Calls, when judged necessary by Plan Affiliated Physician (within designated Home Call Service Area)	$5 per visit
	Organized Home Health Care Services, when arranged by Plan Affiliated Physician, not including meals, housekeeping and personal comfort items.	No Charge
Maternity Care in the Health Center and Participating Hospital	Pre-Natal Care	$1 per visit
	All Doctor and Hospital Services for Mother and Child During Confinement - Caesarean Sections - Interrupted Pregnancy	No Charge

[illegible] dental care [illegible] on page 9

**Private room at [illegible] rate as well be provided when medically [illegible] Specific type of [illegible] each [illegible] will be subject to bed availability. Admission policies will be based on medical need and there may on occasion be a wait for [illegible] accommodation.

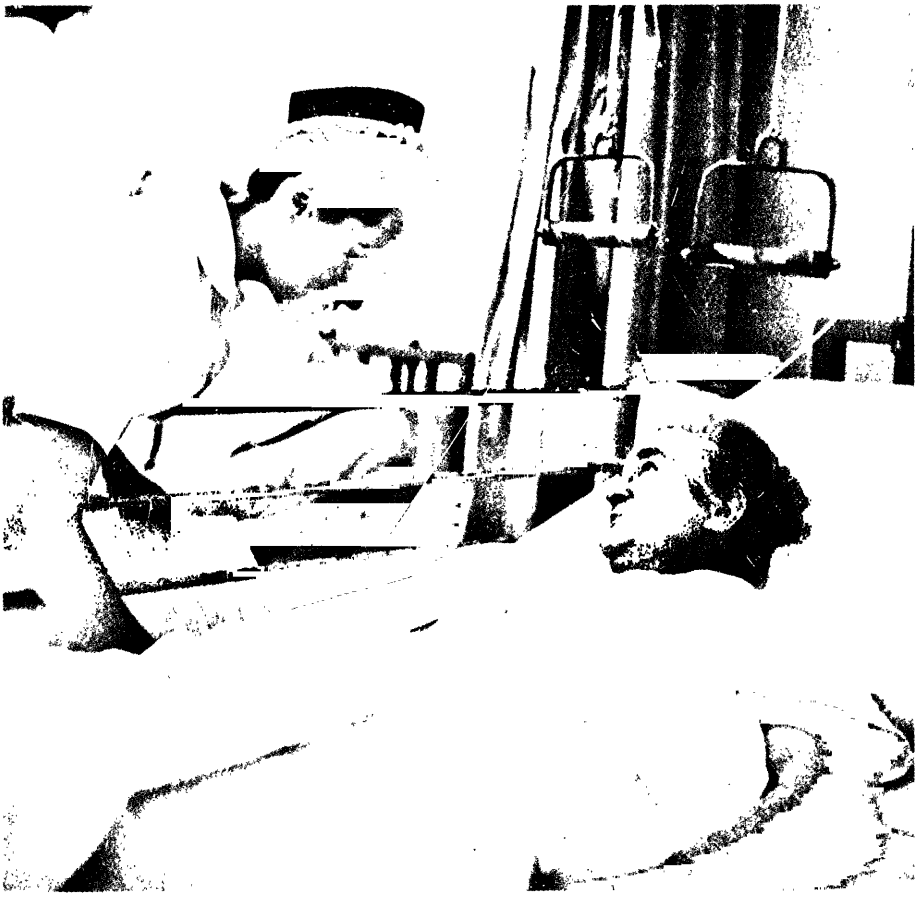
Mental Health Services*	In the Plan Health Center or Designated Hospitals in any 12-month period	
Outpatient	One or Two Visits for Evaluation	$1 per visit
	Subsequent Visits up to Fifteen	$1 per visit
	Subsequent Visits in Excess of Fifteen	$10 per visit
Inpatient	Room and Board, Professional Services, Drugs, Nursing Care, Shock Therapy, for up to 45 days When Admission Arranged by Plan-Affiliated Physician	No Charge
Day-Night Services	Plan-Affiliated Physician May Substitute Two Day or Night Sessions for Each Day in the Hospital	No Charge
Extended and Intermediate Care	Room and Board for Non-Custodial Conditions When Admission is Arranged by Plan-Affiliated Physician – for up to 100 Days	No Charge
Non-Appointment and 24-Hour Care in Center and Plan-Affiliated Hospital	[illegible]	$1 per visit
	[illegible]	$3 per visit
	Ambulance Service (Authorized by Plan Personnel)	No Charge
Emergency Care in Non-Plan Affiliated Hospitals**		
Within 30 Miles from Nearest Plan-Affiliated Facility	Payment for emergency physicians' and hospital services in non-Plan affiliated hospitals in case of accidental injury or emergency illness when treated in the emergency ward of the hospital, or when admitted to the hospital as a registered inpatient, when the condition so treated was of such a nature that the member's health would have been jeopardized had he been taken to the nearest Plan-affiliated facility.	
30 Miles or more from Nearest Plan-Affiliated Facility	Payment for emergency physicians' and hospital services in non-Plan affiliated hospitals in case of accidental injury or emergency illness when treated in the emergency ward of the hospital, or when admitted to the hospital as a registered inpatient.	

*Benefits are limited to psychiatric conditions which are judged subject to significant improvement through relatively short-term therapy. According to judgment of psychiatric staff personnel, services may be provided by a psychiatrist, clinical psychologist or psychiatric social worker in individual, group or family therapy sessions.

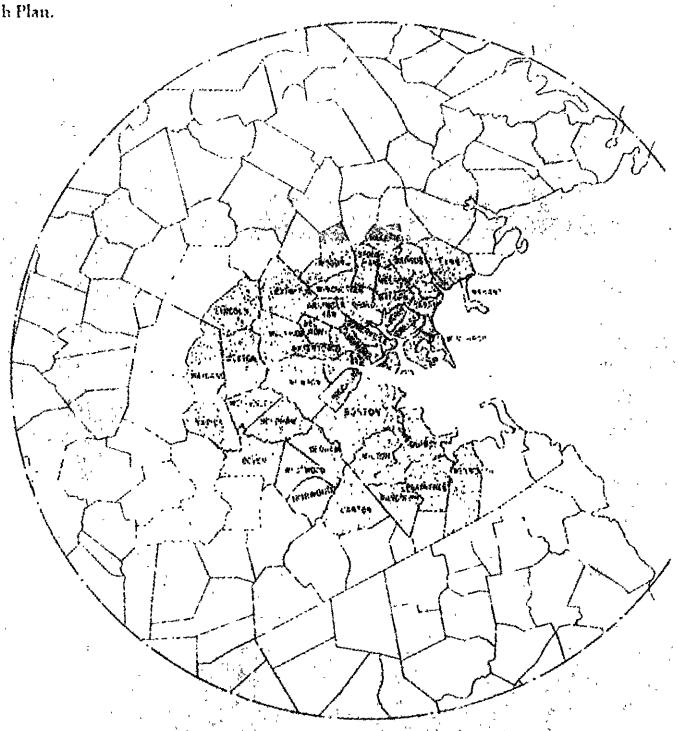
**Payment for emergency care in non-Plan affiliated hospitals is for services rendered before the member's condition permits him to travel to the nearest Plan-affiliated facility and for which full details are furnished the Plan. (Payment for inpatient hospitalization guaranteed only if authorization is obtained from the Plan prior to admission.)

This table summarizes the Plan's principal benefits. They are presented in detail in your Blue Cross or Insurance Company group contract. These benefits apply to persons under the age of 65, not eligible for Medicare. Other rules governing eligibility, date coverage commences or terminates, contributions, etc., will be as determined by your Group Plan.

9



Cities and towns that are shaded in the map constitute the Enrollment Area of the Harvard Community Health Plan.



Arlington
Belmont
Boston
Braintree
Brookline
Cambridge
Canton
Chelsea
Dedham
Dover
Everett
Lexington
Lincoln
Lynn
Malden
Medford
Melrose
Milton
Nahant
Natick
Needham
Newton
Norwood
Quincy
Randolph
Revere
Saugus
Somerville
Stoneham
Wakefield
Waltham
Watertown
Wayland
Wellesley
Weston
Westwood
Weymouth
Winchester
Winthrop
Woburn

Services covered by the Harvard Plan are considerably broader than those covered by more traditional health benefit plans.

Aside from nominal charges for some services, Plan members do not have to pay the usual "out-of-pocket" fees for non-hospital care such as doctor visits, infant and child care, maternity care, laboratory tests, psychiatric care and other covered services Therefore, the average family's *total* medical expenses should be lower even though the Plan's premium may be higher than that of your present health benefit plan. *Your care is prepaid . . . Whenever you and your family need it.*

Prepayment for broader care encourages visits to the doctor before serious illness develops and enables physicians to prescribe the most appropriate treatment. *Members do not have to be sick to benefit from their health care plan.*

The Harvard Community Health Plan has been developed as a model of quality prepaid comprehensive family health care. Its purpose is to create a pattern of care in which expanding knowledge of medicine and of its organization can be most effectively applied for your benefit. If your family would like to participate in this program, contact the department at your place of employment that handles your present Health Benefits Plan.

Dr. CONNELLY. Dr. Weil mentioned the differences between hospital care and ambulatory care—97 percent of the patients who come to Charlestown get taken care of at Charlestown. We have to refer to the hospital only 3 percent of the cases, and that would include such rare serious services as hand surgery, or a special neurological consultant, et cetera.

Medicine and pediatrics are basically ambulatory specialties which should be delivered in communities, not in hospitals. I might add one other statement if, when a contagious epidemic occurs in hospitals, 50 to 75 percent of patients can be discharged immediately, which can be interpreted to mean that the vast majority would not need to be hospitalized if local or community health care were available.

Senator KENNEDY. What percent of the expenses of running the Bunker Hill Center are covered by insurance?

Dr. CONNELLY. Sixteen percent of patients pay cash, the remainder have some form of third party payment approximately equally divided between commercial insurance carriers and Titles eighteen or nineteen.

The crunch is felt in the 16 percent cash payers who fall just above the income level to qualify them for medicaid. Working people such as policeman, fireman, or government workers who live in our area definitely restrict their use of medical resources because of fiscal considerations.

Well, if I may, I will skip pretty much the prepared testimony to get on to the points that I would like to make.

Senator KENNEDY. Dr. Hansen, will you join them at the table to help answer some of these questions before making your formal statement?

Dr. HANSEN. Thank you, Mr. Chairman.

Dr. CONNELLY. One of the important points, again, that Dr. Weil made is that if you go out to deliver health care, you ought to find out what you are doing when you get out there—through evaluation.

We have established with the Childrens Bureau, and other Federal Funding, the data collection system that allows us to examine the cost of medical care as it is delivered, at least in Charlestown.

Senator KENNEDY. How are you ever going to get the general practitioners back into the city?

Dr. CONNELLY. The incentives that keep them there vary from altruism to monetary incentives. I think the alternative to military service for physicians to serve in these areas will at least provide some help. Another approach is used in Canada, in the Province of Quebec, where the fifth year of medical school is spent in rural areas as a prerequisite to graduation. There is no such imprint period in the American medical school for a student to make a decision to go into such areas.

The new M.D. has no comparative data about where to practice. When he makes a decision, he makes it without a reality base.

I would make rural practice training opportunity available to him, if possible.

Senator KENNEDY. Do you think the forgiveness of loans to medical education would be an incentive?

Dr. CONNELLY. To those who have to get the loans, yes, Senator.

Dr. WEIL. This is a problem I think we all face. With the formation of a medical school at Michigan State, one of the ways we are attempting to get at this is by having the educational program of these students take place in the community hospitals in the small communities in central Michigan. Our students actually receive as much as 18 months of their training in community hospitals away from the university. By getting some experience with medical care in this setting, using general practitioners as teachers, we are going to give the student an opportunity to really find out what this is all about, and then perhaps make some intelligent decisions about this kind of career.

I think coupled with perhaps some educational and financial incentives, this kind of opportunity will give him a choice that may very well bring him back into primary health care.

Dr. CONNELLY. Shall I go on to page 7?

Senator KENNEDY. Yes.

Dr. CONNELLY. In the table which reflects a cost issue and a philosophical issue, pediatrics, as you can see, is a high volume, low duration specialty and if one skips down to social service and mental health, these of necessity are low volume, high duration specialty.

Now, some health planners would say that no social service or psychiatric or mental health commitment will be made in the service that they organize. If that is so, then somebody has to do it, and to put it back on to the pediatrician or the internist you will thereby increase his duration and volume and not have solved the problem at all.

I gave this chart to the last AMA session, in Boston, and several physicians from the floor asked questions about it. One of the questions, or several of the questions were, "How do you not get into that?"

In other words, how do you keep the winning combination or the low cost items and not get into the high cost items?

I think it is terribly important that one meet the public's expectations. We had a young student from Cambridge, England, survey the people in Charlestown. We prepared six case histories and interviewed 25 parents who do not use the health center and 25 who do use the health center. Among the case histories were, "What would you do with a child who had a problem with drugs, alcoholism, and violence"?

In all cases they want the health source to be involved in solving that problem.

My message is that health care is going to be very costly because of this issue. Significant psycho-social problems take a lot of time, and time costs money.

Well, just to go on to table 6, this confirms the encounters by duration of visit, that pediatrics takes about 17 minutes a visit, and internal medicine is 24 minutes per visit.

The content of health center practice is shown in table 4. Twenty percent of the primary health care demands are in the psychosocial area which, again, as I pointed out, are very expensive.

Other kinds of illnesses, are as shown. We were able to compare the primary medical care delivery at Bunker Hill with the recently published content of primary medical care in England.

We can see that in England they see a few more colds than we do. We have a bit more trauma; we have a heavier commitment to preventive medicine, and we have less gastrointestinal disease.

One of the important studies at Bunker Hill is in cooperation with the Harvard Business School and specifically Professor Robert Anthony and Regina Hertzlinger, a doctoral candidate, who have given us a cost management control system from which we have been able to get costs per practitioner, cost per service, cost per service by practitioners, cost by department for different services, and overall unit costs.

The implementation of the system enables us to assess the relative efficiency of different practitioners by measuring the volume and duration of their effective costs. It thus provides an impetus for the low volume practitioners to improve their practices.

In some departments, incremental volume may now lead to additional costs because the department is already operating at full capacity. In others, it exceeds the marginal costs because the department is operating at less than capacity.

It is a feedback mechanism that we give to our practitioners, quarterly compatible with quality they improve their performance in order to help us realize our ultimate goal of being a nonprofit but self sustaining enterprise.

That, I might add, is not a likely possibility in the near future—if we could go on to the cost per encounter, you will see that pediatrics, because it is a high volume, low duration specialty, is the least expensive encounter.

Internal medicine basically because it needs 25 percent more time, per encounter. Social service and mental health are significantly more expensive per encounter, and this is a question that again becomes philosophical. As you organized medical care, how much can you afford and how much can you afford to attack the major problems of mental health?

Given the mandate by the public that that is an area that they expect the medical profession to solve then the medical profession in turn has to respond to that by including and making these services available, but probably will always need to be supported from public funds.

How much support is the question?

The degree to which you can support any of these programs is a question that your committee will no doubt wrestle with.

In terms of the manpower question, you could take how physicians or professionals use their time, how much is available and how much is spent directly with the patient, and that is shown in the last table. You can see the pediatricians spend about half their time in direct patient care. This is confirmed in a study done in private practice and published by Drs. Wedgewood and Berman, that indeed pediatricians spend only about half of their time with patients.

Now, if we examined social service it is useful to realize how they have to budget their time. It is the usual and necessary modus oper-

andi of this specialty to need to spend an hour with the patient defining the problem, but then it may be necessary to spend up to 4 hours trying to arrange help for the identified problem, making less time available for more direct patient care.

In terms of mental health, you will note at the health center we spend only 19 percent of our time in direct patient care. This is a deliberate effort on the part of the center to be—to spend the time available at with the so-called gate keepers. The mental health workers are in courts and schools and Headstart programs in order to try and indoctrinate healthy attitudes with the persons who will have the most influence and time with them.

The traditional health education has not been a successful program, which is sad because if you rate what Dr. Weil said, the mother decided when to bring her child to the doctor. She decides. That means that the mother should be fully instructed in some basic health facts to make elementary decisions.

This is not being done.

If we looked at this another way, we could say 95 percent of the medical care in this country is given by parents, but they have to be instructed in how to give the medical care, and I am not impressed that they were.

Would you care to comment on that, Dr. Weil?

Dr. WEIL. I agree with you.

Senator KENNEDY. Are there any programs now with respect to instruction for parents in health care? Do we do anything out of the Department of Education to provide evening courses, for example, to parents, during the hours when the facilities are not being used?

I would think in terms of nutrition or in terms of health that these would be areas of need. Does anything like this go on today that you know about?

Dr. CONNELLY. This is the heart of how we are trying to attack the problem in the area that we serve, but I think it is not a universal phenomenon. I think funds are directed into educational systems without a health input that is significant and while there may be health consultation at the delivery point, you don't see nurses or physicians entering schools trying to influence or to provide data or facts for future parents to make decisions about.

Part of this may be the way Federal funds are channeled at the delivery point. The Title V funds that go into education departments do not have a significant health (medical) input, except in a consultant role.

One would hope that the medical input could be increased from the medical professions.

Senator KENNEDY. What kind of a turn out do you think you would get at Charlestown at the high school if you had a program once a week on health and nutrition for the children?

Do you think the mothers would come?

Dr. CONNELLY. Yes. We have it on a voluntary basis now, and it is a very popular program. Also, I personally give 1 hour a week to the high school to cover various health issues, and found the response is very satisfying.

I think, also, you could educate children about some of the major hazards they will face, drugs, alcohol, violence, marital happiness, nutrition, dental care of themselves and their children. This is an area where the Federal Government could make a significant impact.

Dr. WEIL. I think another area where this can be looked at very carefully is in the day care center programs, as these evolve. Because as the mothers come in to drop the children off, and for a few minutes are held there, 10 minutes of the day of continuous input into these families proves very effective as a method of health and nutrition education.

Dr. HANSEN. Let me express a dissenting opinion here. I have got some question about whether such programs actually work, because I think what we are talking about is separating education from service and treatment. I think what probably makes the difference is the kind of experience people have with the health source, and I would like to give some data of Geiger from Columbia a point indicating that as a result of receiving good health care without all the usual hassles, people's attitudes about health improved dramatically.

I don't think we can change attitudes without a good experience. I think if we are going to put people into the same old medical care system, we are going to have the same negative attitudes towards that care.

I would like to discuss that later.

Dr. CONNELLY. I would like to conclude my testimony by describing the nurse practitioner who has been able to share tasks, and provide primary care in a setting in which the physician is available.

We have six nurse practitioners at the health center in Bunker Hill. The health center has graduated 150 of these young women who go into various sites, half of them in private practice, the other half in some form of public health delivery.

The American Nurses Association and the American Academy of Pediatrics have last week issued joint guidelines for the content and the supervision and production of these nurse practitioners.

I think they will make a significant impact in meeting the manpower issue. Again, only we can redistribute or get incentives to redistribute the medical care personnel into areas of need.

Senator KENNEDY. Doctor, how many general practitioners do you have at Charlestown?

Dr. CONNELLY. We have three general practitioners.

Senator KENNEDY. Outside the health center?

Dr. CONNELLY. Yes. We have three general practitioners—excuse me. We have two whose major practices is in Charlestown. We have two others who are very elderly, or who have another area of interest.

Senator KENNEDY. How old are they?

Dr. CONNELLY. The average age of the general practitioner in Charlestown is about 62. This is a very common phenomenon in the inner city. The Massachusetts General Hospital has been asked by communities to assume medical care because their doctors are retiring and not being replaced—areas such as the North End, East Boston, the West End, Chelsea—all have come.

Senator KENNEDY. What is your financing?

Dr. CONNELLY. We have a Childrens Bureau grant and capital funds from Massachusetts General Hospital, to provide service which the Childrens Bureau does not provide. Additionally we have contracted arrangements with voluntary agencies such as the Easter Seal Society.

Senator KENNEDY. What percent of your budget comes from reimbursements that you receive from patients that you treat?

Dr. CONNELLY. I don't think I understand the question.

Senator KENNEDY. The reimbursements that you receive from the parents as well as children in Charlestown, what percentage is that of your budget?

Dr. CONNELLY. The children and youth grant provides comprehensive medical care at no cost to qualifying children under 21 years of age. Reviewing all patients who use the health cost, 16 percent of the patients pay cash because they have no insurance coverage. Half of the remaining group have a third party commercial insurance coverage which sometimes covers ambulatory services. The others have title 18 and 19 Federal coverage.

Senator KENNEDY. Thank you, doctor.

Our final witness is Dr. Christian Hansen, assistant professor, Department of Community Medicine, Rutgers University Medical School, New Brunswick, N.J.

After completing his residency in pediatrics, Dr. Hansen joined the Division of Indian Health of the Public Health Service and worked with the Apache, Hopi, and Navajo tribes in Arizona.

He then spent 2 years in the Peace Corps serving Turkey and Cyprus, before rejoining the Division of Indian Health, this time working mostly with the Sioux Tribes in South Dakota. For 5 years he has worked with health centers around the Nation in Boston, Mississippi, and Trenton and in 1968 he was part of a three-man team sent to Nigeria Biafra by the American Friends Service Committee to look into conditions in that country at the time of the civil war.

Dr. HANSEN. I am very impressed with your background and your service, and I welcome you to the Senate Subcommittee on Health.

Senator Williams wanted to be here to introduce you, but he is in an executive markup and was unable to be here. But he wanted to have the opportunity to present you to this committee.

We want to welcome you here.

STATEMENT OF DR. CHRISTIAN HANSEN, ASSISTANT PROFESSOR, DEPARTMENT OF COMMUNITY MEDICINE, BURGERS UNIVERSITY MEDICAL SCHOOL, NEW BRUNSWICK, N.J.

Dr. HANSEN. I want to talk about some of my experiences on the firing line. I want to put some of my thoughts and experiences before you, and perhaps at the end of my comments I will make some recommendations. I would certainly emphasize what you and Dr. Weil said. We talk about a crisis in health care, especially for poor people, but it seems to me that we are not responding as though, indeed, it is a crisis.

It seems to me that crisis means there is a kind of catastrophe and that something has to be done quickly. Yet there is a great deal of somnolence and certain amount of gradualism that has affected the medical and health professions for years.

We are just not responding. If we had epidemics of infectious disease you would see people from the Communicable Disease Center, Atlanta, Ga., and other places coming out to meet the emergency. We have in some ways epidemics of sickness and death and yet we are not responding. We seem reluctant to admit that there is a real crisis and that poor people especially are dying because of not being able to get the medical care they need. This says nothing about all of the sickness in poor mothers and children that goes without any kind of care because they can't get a doctor. If they could they can't afford to pay for it or there would be no program to cover it in this country where the sources of payment are a hodge-podge and where many people fall between the cracks. Dr. Alonzo Yerby said a few years ago that he estimated that there were about 13,000 people who died in New York each year as a direct result of being poor. I suspect that not a few died because they could not get the medical care they needed.

For example, the medicaid experiences in New Jersey suggests that only one-third of eligible people are getting care. This is partly because there was no attempt to get the doctors into this program beforehand, there was no effort made to recruit pediatricians to open up their private offices to treat poor children.

I think what we really need to improve the healthy care of poor people is a good, solid source of primary care. That means a doctor and a nurse and all kinds of health assistants in a health center to take care of them when they get sick.

This primary care is what is especially lacking for poor people. This is true in many rural parts of all of the States. I have had the opportunity of seeing areas of great need in rural parts of this country on Indian reservations in North and South Dakota, Arizona, and New Mexico. This problem especially affects minority groups, such as Indians, poor black people, poor white people, and Spanish-speaking people in center city and rural areas.

We have to give special attention to who is available to provide the care where people are. This is often the key factor in determining whether a child lives or not. There is evidence that the increased death rates among infants, especially among poor infants that Dr. Weil mentioned, and the tremendous disparity between them and people who are better off, occurs between 1 and 2 and 12 months of age.

What affects these infants during this time are the adverse environmental conditions, the stress, poor housing, contaminated water and sewage systems, and inadequate diet and the fact that when the infants get sick there is nobody to give them the penicillin for the pneumonia or to treat the diarrhea. These are two diseases which cause the death of many poor infants.

In the South and elsewhere, poor black people have to determine whether they are "$5" or "$10" sick. Whether or not they can afford this cost of the doctor's office visit or whether they should wait to

see if things improve if they can't afford it. Unfortunately they often have to wait too long and then it is too late. The infant dies and becomes another statistic in the endless reports of a State health department.

There has been some disagreement as to whether or not additional medical personnel would make a difference in the health status of poor people. I think that there is not much question but that more doctors and nurses treating sick people and then adding the preventive measures would result in better general all-around health especially in rural areas. There are great shortages of medical staff in center city and rural areas.

We are trying to practice preventive medicine with low-income people when they don't have a good source of primary care, where they can be treated when they are sick.

You can't sell preventive dentistry and medicine if people try to find care and get all kinds of harassment and have a bad experience in hospitals and clinics.

Health personnel have to meet people where they are, and where they are is where they are sick. Through the treatment of sickness, you add preventive measures, and that takes quite a bit of time and effort to get results, but it can be done.

There was a report in the New York Times about some studies that indicated that annual physical examinations did not decrease morbidity or mortality.

I suspect those studies involved people who were better off and who did not have the problems of stress, unemployment, depression, and so forth, that we see among poor minority groups in this country. Health center programs in urban areas have found large populations of poor people suffering from years of medical neglect right in the shadows of some of our great medical centers. The Senator is no doubt familiar with all the statistics which indicate higher rates for almost all diseases, especially acute infectious and chronic diseases as well as incredible amounts of dental problems in people of all ages, especially children.

We have not even mentioned the unmet dental needs of center city and rural poor children. All of us physicians could testify to the countless numbers of young children that we have seen with many teeth sheared off and decayed at the gum line—others with gaping holes from cavities. Crash programs such as Headstart which I heartily support have reached out to many of these children through its important medical program. But unfortunately in some areas there has been little support from the medical and dental community for Headstart.

We also have to understand, as Dr. Weil mentioned, that poor mothers and children get sick and die from different kinds of things than middle-class people. We as pediatricians have been writing about and studying the fact that poor children have more untreated streptococcal infections with resultant serious rheumatic heart disease and other complications. They live in poor housing and the small children eat lead paint from the walls and some of them die and we are never aware of the correct diagnosis. They die more often from accidents, many of which are preventable. This is not

just the fault of the medical profession but if we were to work together with parents in meaningful ways we could save a lot of children's lives. There are many less dramatic examples that I could give if time allowed.

We don't see middle class mothers dying in childbirth. We know that there are high mortality rates for poor mothers, and this is three to four times as great for them. This may be partly because of a lack of prenatal care, but it is also because of the fact that when they come for care and delivery they are suffering from all of the results of medical neglect of chronic conditions, anemia, poor nutrition, stress, and probably other factors that we have not been able to identify.

It certainly is true, as we found in the Tufts Delta Health Center in Mississippi (see below), that there are other factors that affect people's health besides the lack of doctors and nurses.

But I feel that we must not use this as an excuse for inaction. I think we must not say that the problems are beyond us as doctors and nurses. I think we have to get involved in poor housing, hunger, unemployment and exploitation.

Traditionally health people have said:

I can't be concerned about poor housing. I can't be concerned about the fact that this malnourished child with pneumonia does not have enough to eat. All I can do is treat the pneumonia.

We have to get involved in these kinds of issues if we are going to have a lasting effect upon people's health and well-being.

There is a lot of talk about the environment today. Others point out that we were not concerned about the rats in Harlem until they started to spread to Park Avenue. We were not concerned about the problems of Harlem until other people in New York City started to be affected by them.

Recycling waste is in vogue. That is fine, but we should talk about recycling of human lives. We have a foetal monitor which is a system in which the status of the foetus is determined as the mother goes through labor.

This is a luxury since we don't have good maternity care for all. We have this monitoring, but we don't have fetal feeding. I think our priorities are all mixed up.

There has been discussion about the fact that raising peoples expectations in health is not desirable. How are we going to meet people's demands for more medical care? Some would say that we have to improve the system of health care delivery before new demands can be met. It seems to me we were not going to do this until we create the demand. I think when we get the demand we will find ways to improve the delivery system. Otherwise, we will postpone the necessary change.

I think Federal legislation for health is necessary, but what really matters is what happens at the local level where people are. We have seen local problems in implementing legislation concerning desegregation. We have also seen it in health, in education, et cetera. We have read reports, for example, where several hundred thousand dollars of unused medical funds were returned to the Office of Education for migrant children, and then in New Jersey we hear complaints

that migrant families cost the hospitals $50,000 in unpaid medical bills.

I think we also have to look at the quality of medical care that people get. It is not sufficient merely to provide more hospitals or clinics or more doctors' offices. We have to be certain that people of all economic levels receive the best possible medical care. We can do this only by building in some quality control so that there are constant checks on what doctors are doing for their patients. We have to get away from a double standard of care—one quality for the rich and a poorer quality for the poor.

We also have to look at the attitudes of the doctors and nurses who are treating poor people. It is not enough to hire traditional types of doctors and nurses and put them in a new setting and assume that you automatically have a first-rate new program. Attention must be given to their attitude, sensitivity, and orientation and more and more consumer groups are doing just that. They do not always like some of the attitudes they find. There is a healthy questioning of the credentials of medical people who want to work in urban ghettos. In the Trenton Health Center, for example, the personnel committee of the board interviews all of the physicians for the medical staff before they are hired. This is a healthy start.

There is no sense in mounting a health education campaign about heart disease which tells people to get a checkup, and then when they try to get a checkup they are turned away.

I have seen this happen. I talked with many patients to whom this happened in parts of Mississippi and I am not trying to malign Mississippi. I think some of the problems in the rural South are not too different from the problems in other rural areas of the country.

I think we can lower the infant death rates and this has been shown in the Tufts Delta Health Center in Mississippi. But for the past couple of years, in other places, figures indicate the death rates for poor infants are actually going up.

I think there are some reasons for this. We are getting better reporting, and the higher figures represent a certain amount of better reporting. But they also indicate medical help and shortages of people, et cetera.

We have to practice "catchup medicine." This means we have to bring low-income people with many different kinds of health problems up to a maintenance level and then work to keep them healthy.

This takes time. Some of the skeptics point to maternal and infant care programs, and say, "Show us where these have made a difference." In some instances it is hard to show improvement quickly because we are faced with mothers who have all kinds of medical problems, such as untreated urinary tract infections, for example.

There may be some association between the mother's urinary tract infection and prematurity, which often results in mental retardation and other problems. Some of this is preventable with special programs to reach such mothers.

What I am saying is two different things that are related. I am suggesting that in many ways the traditional system of doctors, nurses and hospitals has not worked, and yet for many poor people we need at least the traditional parts of the system, doctors and

nurses and drugs and X-rays and laboratories in the new setting of the health center.

Data from one health center has shown that you can properly take care of 85 percent of people's health needs on an ambulatory basis. This makes a lot more sense than putting people in a hospital for diagnostic tests which can be done on an ambulatory basis. This is one area where private insurance plans actually create a problem as they encourage unnecessary hospitalizations for studies which could be done in the OPD.

I know the Senator was at the dedication of the Columbia Point Health Center in Boston several years ago where I had the opportunity of working with Dr. Geiger for a year. The Columbia Point Health Center was the first OEO supported neighborhood health center in the United States and was developed by Dr. Jack Geiger and colleagues in the Department of Community Health and Social Medicine of Tufts University Medical School. It provides comprehensive family health care for residents of a low-income high-rise housing project in Boston and has been operating since 1965. It has become very popular with the residents and 83 percent of the people there are using the center as a primary source of medical care. You may be familiar with an article that showed that after 2 years of that center's operation, there was an 85-percent reduction in the number of hospitalizations for some of the people served by that program.

That article is published in the New England Journal of Medicine.

I think that is impressive guidance of the center's effectiveness. Much to a lot of people's surprise, poor people there make good use of the center, and as a result of good ambulatory care, they are kept out of the hospital. When they are admitted to the hospital, their hospital stay is shortened.

This is because there are doctors and nurses to take care of them when they come out of the hospital and their stay is shortened, in many instances.

Some have said that health center care is too expensive and it may be. Dr. Geiger has some figures which show that health care at Columbia Point may cost $200 per person per year. People say that that does not compare well with what the Kaiser plan costs on the west coast; about $125 per year. But when you compare the populations served, you realize that you are not comparing similar situations. We need more health centers built in areas of need. I think we need a health center in every rural county in this country, and several of them in all the major cities. If we can't mount this kind of a program where it is needed then I think it raises real questions about the commitment that we as a Nation and we as professionals are willing to make. Our patient is sick. We have the diagnosis and some ideas about the cure but we say that it is to expensive!

Senator KENNEDY. The Kaiser plan does not serve the poor in any event.

Mr. HANSEN. That is right. But, as you know, Kaiser received a grant from OEO in Portland that enabled them to pay the insurance premiums of a group of poor people who were then cared for by the Kaiser Health Center. I think that kind of program is desir-

able, because I would like to see health centers become a central source of care for people of all economic levels.

Senator KENNEDY. I would, too, but in terms of the comparison of your figure at Columbia Point and the Kaiser plan, that is not exactly a comparable figure.

Dr. HANSEN. That is right, because the populations served are not comparable. But they did have this pilot project which demonstrated they could include low-income people into a source of care where regular subscribers were receiving care, I think that kind of a program should be expanded and duplicated around the country.

I want to make a few remarks about my experience with the division of Indian Health, because it makes me feel that we should be planning a Division of Rural Health of the U.S. Public Health Service, and a Division of Urban Health.

What we have here since 1955 is a Federal program that has been responsible for providing total health care for Indian people on reservations. Since 1955, through the Public Health Service we have been providing care for about 425,000 Indian people. The budget is in the millions of dollars. We don't have that kind of commitment for urban or rural health at the Federal level. I think we are going to need special programs like this to meet the need.

There has been criticism saying, "we have enough public crash programs. Let's put the money in the private sector."

I think that we actually need more so-called crash programs, for example, I think if it had not been for the OEO health programs, we would not be as far along as we are today in raising some of the issues of need and finding some of the answers. I think that some important issues began to be raised in 1965 when OEO started to get into the health center business. I think it has had a positive effect upon the rest of the medical care system. It has drawn attention to the health needs of poor people. It has stimulated medical schools and hospitals to get involved in community health and it supported the development of health centers which are some of the most innovative and effective sources of care in areas of great need.

I am trying to, think of some comparisons between the Division of Indian Health program with all of the problems that that program faces and programs and problems in other rural areas. In many ways the problems they face are involved with people with poor housing, poor diet, no jobs, hopelessness in 1971. There are many Indian families on reservations who don't have a safe water supply, have only a privy outside their back door, who don't have adequate diets, food to eat and many of whose children are incompletely protected against polio and other diseases.

I think there is no question but that poor people just don't get adequate health services. When we look at the rural South, the situation is equally depressing. The Tufts Delta Health Center to be described below went into an essentially all black community about 4 years ago, and found that there the median annual income was about $900 per year.

There were 75 percent male unemployed, and those people who did have jobs had meaningless kinds of jobs, some still picking cotton in the fields for 10–12 hours for $5–$10 per day.

We found 80 percent of families without any inside water, with outside privies with contaminated water and with broken down housing. That is the kind of situation in which Dr. Jack Geiger and his colleagues mounted what I think is the most exciting medical care program in the U.S.A. today.

The Tufts Delta Health Center was developed through the efforts of Dr. Jack Geiger and associates in the Department of Preventive Medicine at Tufts University Medical School, Boston, as a pilot demonstration project in community health services for a poor rural black population of northern Boliver County in Mississippi. The center's medical program began in the fall of 1967 and continues to provide ambulatory medical care for about 15,000 low-income people who qualify under OEO guidelines.

The health center offers complete ambulatory services in a new medical facility containing examining and consultation rooms, emergency room, laboratory, X-ray, clinical and nursing services, social service, and related environmental improvement and community organization programs. The staff consists of doctors, nurses, assistants in all areas, social workers, home economists, sanitarians, community organization specialists, laboratory and radiological technicians, a clinical phychologist, and other related desciplines. The community health action section of the health center was instrumental in developing a farm food co-op owned and operated by the poor people which raised 1 million pounds of produce to feed hungry members during the first winter of the program's operation.

The center is based in a small, previously all-black town of Mound Bayou which has a population of about 3,000 people. The town serves as a medical and social center for people from all parts of the county and from neighboring counties. There are two small hospitals which, although in separate buildings, recently merged under a common board and now jointly receive OEO funds for community health services. These hospitals provide important inpatient services for patients in the Tufts program.

Mound Bayou was the first all-black town in the United States founded by freedmen after the Civil War. It has a black mayor and black-owned and operated stores and businesses and is thus a unique rural community. It was chosen as the site of the Center because of documented medical need in the area, the interest of the community, and because it was a safe place in which a mixed black and white staff could live and work together to develop a program in rural health care.

Mound Bayou is in a major cotton-producing area, but with the introduction of mechanical cotton picking and the use of herbicides, there has been increasing unemployment for many unskilled males and females. Housing and sanitary conditions for many of the families are extremely inadequate. Seventy-five percent of the families in the target area of the Center live without inside water and 90 percent of them live without flush toilets. In Boliver County, in 1964, the infant mortality rate reported was 56.2 per thousand live births for black infants. It is felt that the actual rate is higher because of incomplete reporting and underreporting—Mississippi continues to have the highest infant mortality rate year after year of all 50

States. This is related directly to the poverty of black people—the infant mortality rate in 1969–70 represented a continuing increase in the black rate. This accompanied a high maternal mortality rate for blacks in 1969–70, being more than three or four times higher than the corresponding rate for whites. It may be particularly contributed to by generally poor prenatal care and the fact that only 60 percent of black births were in a hospital and attended by a physician. Of all the other births, 47 percent occurred at home with the majority attended only by a "granny-midwife". A "granny-midwife" is a person skilled in the home delivery of mothers and nominally under the supervision of a public health nurse. She has been a great tradition in the South and she has done a superb job in doing home deliveries for poor mothers who could not afford other care. Unfortunately she is dying out and is not being replaced. There is thus a gap in medical personnel caring for such mothers now.

The population of the area served has a high proportion of young people with a median age of about 15 years. Approximately 35 percent of the females are between the ages of 12 and 39 years of age, which are in the fertile age range. Hence the emphasis in the program on maternal and child health services. These data give some of the background setting for the area in which the Health Center program was developed.

Cost figures from that center suggest that with all of the attention given not only to medical care, but also to sanitation, to improving water supplies, digging safe wells, helping people to patch up their houses, providing food, starting some training programs, et cetera, that it costs in the area of $300 per person per year. The skeptics will say, "That is very expensive, we can't afford to duplicate that around the country."

But we are going to have to duplicate this kind of a program if we are to have any appreciable impact upon the health of rural people, not only poor blacks, but poor whites, and upon the health of the Indian people who move off the reservations.

This is another mistake I see. Indian people are encouraged to be assimilated into the mainstream. When they leave the reservation they get no or little health care. They are caught between the Federal Government which says "Now it is the State's responsibility," and the State says, "It is really your responsibility."

Now let me return to the Columbia Point Health Center in Boston. There is additional important data that I would like to mention that not only indicates a lesser need for hospitalization, but also which indicates that as a result of a positive experience with the Health Center, poor peoples' knowledge about the value of preventive medicine improved. Drs. Bellin and Geiger have this well documented.

Eighty percent of the Center's patients said they were seen within 30 minutes of going to the Health Center. That is the same figure that Dr. Connelly gave for his center. The center was able to remove the long waiting period in addition to everything else. Columbia Point is a special kind of situation, because the health center is right where the people are. I think this is where health centers should be,

not attached to a hospital some place, but scattered throughout the community, away from hospitals, providing the care where people are.

There is impressive evidence for improvements in peoples' attitudes. There was an increase from 17 percent to 60 percent of people after the Center started who had had a physical examination in the absence of any complaint. That is preventive medicine. Even though there is some disagreement, about whether this kind of examination makes any difference in people's health. When you are talking about poor people with a higher incidence of just about all chronic disease and unrecognized defects, it is going to make a difference.

Here is evidence that we can change some of the prejudices we have about poor people that they don't know what sickness is, and they don't do anything when they do get sick or they don't care or they are not smart enough to learn.

There was also a significant increase in the number of people who felt that symptoms they had were important enough to seek medical help. There was an increase in the number of people who went to a doctor sooner because of complaints.

There was an increase in the number of people who felt that it was important to have a general health check up even though they were not sick. Ninety-five percent of them mentioned something they liked about the center, and only 7 percent something they did not like. Obviously it is not perfect. But they chose the health center over all other sources of care, 3 to 1. Because of the health center's being there, and cost was not a barrier, there was a decrease of the number of people who had to go into debt in order to pay for medical care.

What this indicates is that it was the positive experience with health care that counted. There was no special health education program except what each doctor and nurse did as they cared for patients. Many of these special problems have failed miserably in the past because they have not been tied in with a good source of care where people could go when they had a complaint and receive decent care.

This raises the important question—can the health center create informed dissatisfaction with traditional methods of care?

I think it can, and I think that it should, because traditional methods, as all our data indicate have not worked for many people up to the present time.

Now I would like to discuss the issue of family planning and how that relates to the maternal and child health problems of poor people. There is a lot of interest now in family planning. I think that poor people, especially poor black people in Mississippi and I don't pretend to be their spokesman, but I think I can make this point,—are beginning to wonder, "Why all the concern about family planning? The medical establishment has not been too concerned about our other health needs. Why the push?"

People are rightly suspicious. This point has been made many times but I would like to emphasize again that if family planning services are not provided in terms of total health care for people they are going to fail and poor mothers are not going to accept them.

I did a study of over 150 mothers in Mississippi which demonstrated that with very little effort but with total health care, that you can interest poor mothers in family planning. All our prejudices that poor people are so ignorant they won't take the pills, they can't learn how to use them, they don't care about how many babies they have can be disproven with the right approach. We were able to interest 154 mothers in voluntary family planning services. Two-thirds of the mothers came into the program post delivery and one-third were recruited as I was taking care of their children. We cared for them until they were pregnant, we helped them deliver in hospital, we cared for their sick children, et cetera.

There is an important message for pediatricians that the number of children a mother has and especially, how close together they are can affect the health of the children. If you can extend the interpregnancy period you can significantly reduce the incidence of prematurity with all of its associated problems. The evidence is that child spacing gives the mother a chance to recover. It is something we should all know. Dr. Beasley in New Orleans has some excellent data that demonstrate this. If we can allow a mother to have a rest between pregnancies and this is what family planning and child spacing is all about, then we can reduce her poor outcome.

One-third of the mothers in my study had had five or more pregnancies. They had actually had a mean number of nine pregnancies. That is a lot of children. Many of them had had children year after year after year without a rest.

Senator KENNEDY. You are talking to a ninth child. [Laughter.]

Dr. WEIL. Let me slip something in here. We were with a veterinarian friend of mine. He said, "Do you know why man is different from a horse? We can breed a horse year after year after year and keep getting excellent foals."

The point is that horse nutrition and cattle nutrition is so much better than human nutrition, that I don't think the problem is simply numbers of pregnancies and how rapidly they occur, but they occur in poorly nourished women a great deal of the time. If we look at obvious examples we can find plenty of mothers from good economic levels with good nutrition who had pregnancy after pregnancy and who have just as big babies year after year after year if they are well fed, if they are well nourished, if their housing is good. The place where we really run into trouble is the undernourished, poorly housed, poorly fed individual.

What you are saying is certainly of great importance.

Dr. HANSEN. The point I would like to make to the Senator is that when we talked to the mothers, who had an average of nine pregnancies, they expressed a desire to have had only four children. Many of them never realized before that it was possible to control their reproduction. There have been studies that have suggested that poor mothers, especially in developing countries, have large number of children because they know that many of their children are going to die before they are 5 years of age. I would wonder if this kind of thing applies here, because of the high rates of infant deaths. Many mothers whom we cared for in Mississippi who lost a small infant or child in the past.

Mothers said, "If this sort of service had been available before and not as a punitive measure pushed by racist welfare people as a means of controlling the poor black population we might have been interested." If family planning is presented in the setting of total health care, people respond. Four-fifths of these mothers were still active in the program 2 years later.

I also want to point out, and this relates to Dr. Weil's comments, the high-risk nature of the mothers we were caring for. Eleven of the 54 mothers had had a history of a stillbirth or infant born dead.

Altogether at least one-third of them had had a poor outcome in the past. Yet this is the kind of mother who will use family planning if it is presented correctly. Fifty percent of the mothers had had low-blood counts, or anemia, during the time they were pregnant. This is directly related to their not having enough food to eat while pregnant.

We have to be careful how we offer family planning and I think that if we are not people are not going to accept such services.

HEW has about $3.5 million for family planning ready to give for services in the State of Mississippi. If this is not done with the right kind of approach, this money could be wasted and poor black people alienated more.

Senator KENNEDY. How does that compare to other States, do you know?

Dr. HANSEN. I don't have figures about that. I have some figures for New Jersey. It is about half a million dollars. I and others begin to wonder about this push for family planning for poor black people in the South.

The other point I would like to make before I come to some final statements is that what was very obvious to us working in center city Boston and Trenton and in the rural South, was that we were seeing people with tremendous health problems at both ends of the line of a forced migration.

We were seeing people as patients many of whom had moved from the rural South because of the lack of jobs and because of all of the other problems that they had. This is directly related to the recent discussion about the welfare crisis in center cities. What are we really talking about when we say "welfare crisis"? We are talking about poor black and poor Spanish-speaking families and poor white families from Appalachia flocking to the cities because they can't make it in the rural, and poor health is one reason.

We have to offer some viable alternative for people at the other end of the line. If we don't do something if only from the human compassion point of view to deal with people's health problems at both ends we will have failed as health professionals.

We find that many people want to stay. They want to stay in the South. This is their home, where they grew up, and many people would stay there if they had some hope of getting decent education, decent housing, some job retraining through manpower programs. But unfortunately, many manpower programs have failed because even if they have provided some training, there haven't been meaningful jobs available for people afterwards.

We talk about attracting industry especially to the rural South but unfortunately when industry goes down there, it very quickly practices the same discriminatory hiring practices as southern institutions. Poor black people don't get jobs, and if they do, they are still pushing brooms around and emptying trash cans. Is that manpower training?

I would like to turn my attention to the idea of a National Health Corps.

I think a National Health Corps is a good idea, but first we must plan a workable system in which the doctors, nurses, and dentists and all kinds of assistants are going to work. I don't think we should put dedicated staff of a National Health Corps, into the old hospital clinics. We should not put the young doctors and nurses into emergency rooms of hospitals.

We can not reasonably put them into the private practitioner's offices, because it is not going to work. We have to come up with carefully planned, health care system where such staff people will work. I would submit that the health center is the proper setting.

I would agree with the Senator that there is a tremendous amount of idealism and genuine enthusiasm on the part of young health professionals of all kinds.

I came from a free clinic last night started by medical students at Rutgers in New Brunswick. This came about as a result of their interest in reaching out to the community, and trying to find the children in center city New Brunswick who don't have their polio shots, who don't have measles immunization, and who have not seen a doctor or had a careful physical exam since birth. We are finding many such children. Their mothers will bring them if they are approached in a sensitive manner. Surprisingly, their apathy disappears. When a child doesn't have his complete immunizations at one year, he is also not going to have had the other examinations, the blood count to rule out the iron deficiency anemia, or the tuberculin test either.

These students are out there leading traditional departments of community medicine, saying, "Look, this is the kind of service we want to do, this is real, this is where sick people are." They have oftentimes received a very exciting response from community people they are trying to reach.

I would like to re-emphasize that even though we agree that we have a tremendous health crisis before us we are all guilty—of accepting this crisis without taking the immediate action required.

I don't know what is going to move us to act. We read the death and disease statistics year after year. The United States is still about 13th in infant deaths. We read that organized medicine says it is because of different reporting systems and the other countries are worse off than we in other figures. I have seen and I am sure you have seen the depressing effect that the death of a mother and a baby can have, not only on her family, but on the whole community. The infant death rates in this country do indicate that our health care is very poor for a lot of people.

We must think of this in terms of human wastage and the implications this has for people's mental health as well as for their physical health.

I would like to summarize by saying again that what we need, especially for low-income people, is a good source of primary care where they can go when they are sick. I don't think the private practitioner's office can be this place or the emergency room, or the hospital clinic.

Hospitals take care of people when they are sick and they do a fairly good job of this.

But what we have in hospital clinics is a system of forced servitude, with "charity" required from the doctors. This says that in return for your staff privileges in this hospital, you have to work in the clinic. Doctors respond but reluctantly.

So mothers are required to come at 7:30 in the morning for maternity care in clinics and some don't come and we wonder why. No system of charity medicine will ever meet the need.

When we opened a storefront maternity program in Trenton in the evening, it was a tremendous success. We were offering mothers convenience, sensitivity and a private physician relationship through a coalition of public health workers and private practitioners reimbursed for their services.

We couldn't have operated the Trenton Neighborhood Family Health Center, which is HEW funded, unless we had recruited private practitioners who were interested in working with us because we had HEW funds to pay them. They provided a continuous relationship with the mother, avoided the kind of thing we have heard where the doctor spent 15 minutes going through the chart because he wasn't familiar with the mother. He sees the same mother each time and the patient sees the same physician each time she comes to the center. He delivers her in the hospital and he sees her post-partum. This is continuity of care and it is important.

This is an effective maternity program, it is not unique. We have to make this kind of program available all over the country to offer people in the proper setting a close personal relationship. Our initial data indicates a lowering of the sickness and death figures as a result of this program.

I haven't mentioned the entire area of physicians' assistants and pediatric practitioners especially. I will say that if such programs are planned correctly and introduced properly these work out. It has been said that we always do these experiments with poor people. Why not try some of these on middle-income people? There are some attempts to do this, which have been successful.

We can get patient acceptance if we make it very clear that we are not giving second-class care. We have to let people know that the doctor and the nurse and assistants are working as a team. The pediatric nurse will be able to see more children and there will be shorter waiting periods.

Such problems are a beginning answer to some of the manpower shortages we have in this country.

Senator KENNEDY. You have stated what is really needed. Do you think the President's plan will do it?

Dr. HANSEN. Senator, I am not completely familiar with the President's plan, but the parts that I am familiar with I don't like. I don't think that we can rely upon the private sector of medicine to make the necessary changes and to reach people who need care. Organized medicine simply is not inclined to make the effort.

I don't think that the answer is in only providing some kind of health insurance. We have to put some pressure upon the providers of health services to take care of people they have neglected in the past. Merely having a payment mechanism is not the entire answer.

I suggested that the medicaid program in New Jersey is not working as it should because people covered are not getting the care that they need. They have no option. They still have to go to the same old clinics in most instances.

I would hesitate to comment more on the President's plans, because I am not thoroughly familiar with all the details.

If there are specific parts of that plan that you would like my thoughts on, I would be pleased to comment.

Senator KENNEDY. I would like to ask any of you gentlemen, in terms of your interest and long experience in attempting to provide some help and assistance in areas of great need, have you run into instances where private insurance carriers are providing funding for initiating health programs?

Dr. WEIL. I think the Columbia, Md., project is primarily supported by—was initially supported by private insurance. This is the new town of Columbia.

Senator KENNEDY. What is the average income of that group?

Dr. WEIL. As far as I know, at least at this point, there is very little poverty in that group. This is a new town that is being planned with primarily people who have jobs and income and so on.

So, it is not a poverty area.

Dr. CONNELLY. Senator, you might be familiar with the Harvard prepayment plan, initiated by the Harvard Medical School with insurance carriers. There is a limited commitment to areas or people who are under certain incomes. The nature of it is that it won't survive unless they have a large population base that is over a certain income.

Senator KENNEDY. Is that open to the people in Cambridge?

Dr. CONNELLY. Yes.

Senator KENNEDY. Do the poor areas in East Cambridge have access to it?

Dr. CONNELLY. It is, but one has to pay the premium.

Senator KENNEDY. What is the premium?

Dr. CONNELLY. There is an experimental commitment by the Department of Public Welfare to pay $120 per annum, and this provides comprehensive ongoing care. There is a problem, however, that is it is located in Kenmore Square, and if you live in Cambridge, that is pretty far.

Senator KENNEDY. Maybe you could submit that plan for the record.

Dr. CONNELLY. Yes.

(The information referred to had not been supplied by the time this hearing went to press.)

Senator KENNEDY. You are all involved in "on the firing line" areas of health care. How do we get other doctors to go to those same areas as well? You have all shown a disposition to do it. I am sure it is at a considerable sacrifice in terms of your incomes as well as your time and comfort, and I know you three are extraordinarily committed and dedicated people.

How are we going to assure that we get other doctors to go out into shortage areas, either urban, or rural, or the Indian reservations?

Dr. HANSEN. I think the way the Division of Indian health hospitals and clinics have been staffed in the past are part of the answer. This is a two-year alternative to military service. It is a very positive alternative. I think many physicians go into it for this reason, but also some of them go into it with a certain amount of idealism. We must recognize this kind of service and service in other rural areas and in center city as just as important, if not more so, as military service.

I was concerned some years ago when there were successful efforts by the AMA to prevent this kind of two-year alternative service to be used in staffing OEO health centers. I think that this was a tragic move but typical of the AMA. I think that they also passed the same kind of legislation so that you couldn't spend your two years of service with the Peace Corps overseas. How short-sighted! Such an experience for young doctors can stimulate their interest in similar service in this country.

I think that we have to change this kind of legislation. I think we have to make it possible for physicians and dentists and nurses and other people to spend two years or longer, if they are inclined, in these areas of great need. I think we also have to offer attractive, salaries. There has been some improvement in these salaries so that you can work in a rural health center and you can make, between $22,000 and $25,000 a year if you are a specialist. I think that is a reasonable amount of money. We also have to change the whole approach to the education of such physicians, dentists, nurses, et cetera and show them that there are important health problems and expose them in the proper setting.

I think there is some skepticism on the part of older physicians that the idealism of these young students is going to continue, but I like to believe that is not true. I believe it is going to continue to grow and keep us older physicians on our toes.

Dr. WEIL. I think you have touched on the points that are important. I think there is probably going to have to be some legalistic kind of incentives, but in addition one needs to provide adequate income and an adequate working area, as you pointed out earlier, a kind of a center where they can do the job they are there to do effectively, efficiently, and I think that this will greatly enhance the attractiveness of this kind of program.

Senator KENNEDY. I suppose recruitment is important as well, for example, recruiting from inner cities with the hope that perhaps they will return to their home areas.

Dr. HANSEN. Yes, let me make a comment about that. Tufts Medical School in 1968 had only 14 black applicants, and of that number, eight were accepted. As a direct result of special efforts made actively to recruit black students on the part of the Tufts Medical School, in 1970 this number increased to 165 applications of whom 24 black students were accepted.

I think this is a significant effort made on the part of this medical school. Happily the same kinds of efforts are being made on the part of other medical schools, too.

But let me say that we shouldn't necessarily expect people from minority groups to go back to depressed areas and make the kind of commitment that the rest of us are not willing to make. We have to put this in perspective.

We must not say that because you are black and from the rural south, you ought to go back there to practice. It is the responsibility of all of us, black and white.

Some of the reasons black physicians have not returned to Mississippi to practice are obvious. If you look at the average age of the black practitioner in Mississippi, it was about 60 years, except for a few young very dedicated black physicians in Jackson who were determined to stay and "fight the system."

Additional young black physicians have been attracted back to Mississippi, working not in the old system, but in several new health center programs in the State. You know as well as I one of the reasons that they didn't go back to Mississippi before that. They couldn't get hospital privileges. All the black physicians in Mississippi were general practitioners until recently. If they wanted to admit a patient to a hospital in many instances, they would have to refer it to a white colleague. This is changing but slowly and not because of pressures from organized medicine.

We have to solve this kind of problem before we can expect physicians to return to work in a place of great need. Is the Federal Government disposed to press for compliance??

Dr. WEIL. I think we have to do two things. We have to be able to keep them there, and this is very important. We have to be able to give them the kind of special help in areas where their background is deficient, and then we have to be able financially, to support them while in medical school, and with the reduction in student loans, this group, at the time the medical schools are pushing hard to bring them into medical school, are being doubly hurt now because there is a further reduction in student loans to these students.

Senator KENNEDY. I understand, Dr. Weil, you have to catch a plane and have to leave in a couple of minutes.

We talked about the quality problem we are facing. Let's talk for a moment about wealthy people. Do those people to whom money is no problem regularly receive quality care for their children?

Dr. WEIL. No. I have to concern myself a little bit with living with my fellow practitioners for the rest of my life, but the answer has to be no.

I think that we have quite highly variable kinds of care for those who can afford it.

This is variable from city to city and community to community, but I have been literally shocked by getting out into the community hospitals where these people receive their care, and finding an extremely variable level of care to the same class of people.

There are complex reasons for this. There is the time available for a physician to spend on a patient's problem. When there is a community of 300,000 people and eight pediatricians, they are running every minute trying to get their office load taken care of. They really don't have the kind of time which is often necessary for the complicated and difficult problem.

There is the problem of an opportunity to get away from their practice to get their education updated. When they are in solo prac-

tice, who is going to cover for them? Who is going to take care of these people if they want to take a week or month off to get updated? If they want to take part in an educational program, where they will learn as well as teach, how will they find the time?

These are difficult problems. We have no way to reimburse them for the time they give us as educators, but we try to involve them because out of this educational role they learn.

Education and time are the real problems that the practicing physician faces in keeping his abilities up to date.

I don't think there are many physicians who want to give poor care, but the opportunity for them to get to the point where they can give good care, as there ought to be, with the knowledge we have today, is extremely limited, and as a result we see increasing problems our physician population ages, of being able to give up-to-the-minute kinds of care.

So having dollars is no guarantee whatsoever of being certain of getting adequate health care.

Senator KENNEDY. How can they be assured that they are going to receive high quality care, even the wealthy people?

Dr. WEIL. We have no truth in packaging law for medicine, and I am not quite sure how one would write it, but without something of that sort there is no way that I can think of that an individual can be certain that the care he is getting is the optimal that he could have with the funds he has available.

Senator KENNEDY. How can you improve on quality?

Dr. WEIL. I think one of the ways is something that is beginning to grow, and that is group practice. I think when there are a group of physicians working together to provide care, there is a lot of peer review that is informal.

The physician shares his problems with his colleagues, and if he doesn't know, probably somebody else in the group knows, and I think in general that if one could get this information, and I don't have it, one could find that there is a better likelihood of getting quality care in a group setting than in a solo setting.

Senator KENNEDY. If those wealthy people to whom money is really no problem can't be assured of getting quality care for their children, you can just imagine what happens to those of more modest income, let alone the poor people of this country.

It points up the dilemma, the real crisis that we are facing in health care for children in this country.

Dr. WEIL. We are running an antique car in a modern automobile race.

Senator KENNEDY. The system that has been used has relied on the private insurance system.

Dr. WEIL. The private insurance system in conjunction with the fee for service system, which is the heart of this, and I think this is doomed to fail, and pouring more dollars into it is not going to achieve any success whatsoever.

Dr. HANSEN. I have some further thoughts about that. I think what one of the things we have to do is to try to dispel some of the mystique of the physician. We have to discipline our colleagues who are practicing poor medicine according to standards that we enforce.

The problem now is that we act as though what goes on between the physician and patient is sacred and that if he makes a mistake, its alright.

We have to get physicians to realize that medical care is not somehow above surveillance. Patients should be made to realize that they are entitled to ask questions about what illness they have, what their diagnosis is, what their treatment is and why and what are the options.

For example, there has been a certain amount of resistance on the part of some physicians to labeling prescriptions. This is an indication of the way some physicians regard their patients. The doctors feel that they are a kind of a god and that they have most of the answers. The answers they don't have really don't matter.

If physicians object to the labeling of prescriptions the patient will not know what kind of medicine he has been given. He will never know what the side effects of that medicine are.

If we look at the area of the quality of the continuing education of physicians and relicensing we are dismayed. A physician can be licensed to practice medicine in 1922 and he can still be practicing medicine today on the license that he received 50 years ago—is that not true Dr. Connelly?

Dr. CONNELLY. Yes.

Dr. HANSEN. Something has to be done about that. We re-examine people who drive cars more frequently than we do physicians who make major life and death decisions. I think that this lack of re-examination is archaic.

If we are concerned about this quality of medicine practiced, we must do something to change this situation. We must re-examine physicians periodically. This could encourage those who are complacent to read the journals, go to scientific meetings and generally keep up with what is going on in medicine.

I am not saying all physicians are indifferent, but unless we make this change, many patients, regardless of their ability to pay, are going to get inferior treatment.

Consider the issue of chloromycetin, one of the drugs most good pediatricians avoid. We find that some physicians are still continuing to use this toxic drug in the treatment of minor respiratory infections for which it is never indicated. That is deplorable, and that is still going on because we have no way to police what doctors do, which drugs they use. There are beginning efforts to correct this.

When the issue of peer review is raised among physicians, it sends some of them "into orbit." You often times can't get colleagues to censure a doctor who is practicing obviously inferior and dangerous medicine.

Senator KENNEDY. Why not?

Dr. HANSEN. There are a lot of reasons for that. I think part of it has to do with the attitudes of physicians about themselves.

Senator KENNEDY. Are they different from other people?

Dr. HANSEN. I think that in the past the education of physicians has suggested that, we are somehow above the rest of humanity, we are a special kind of people, and our judgment and what we do should never be questioned. Any questions that are asked are seen as

some invasion of what has been called ad nauseum the sacred doctor-patient relationship by organized medicine.

As you know, you often have difficulty in getting physicians to testify against their incompetant colleagues. Just a month ago I learned of an instance of a physician in this country who had been personally responsible for the death of five patients, and he was still practicing medicine. His medical society knew it, and his colleagues knew it. That kind of thing just has to stop.

I may not have answered your question. I am not certain why we can't monitor ourselves. For many reasons we are not accustomed to doing this but we must start.

Senator KENNEDY. Do you want to add anything?

Dr. CONNELLY. I don't think I can add anything except some experiences as a result of the formation of the utilization review committee at the hospital that I work at. This committee is, besides making judgments by peers on the utilization of the hospital, is also making judgments about the content of the care, and this has been extremely effective in improving the quality of care, because somebody is finally looking in this very private relationship, not in a punitive way, but to help improve the person that may need some help.

Senator KENNEDY. Isn't it just a fact that you can't really expect doctors to censure doctors any more than you can expect lawyers to censure lawyers, or Senators to censure Senators?

It is part of a system.

Dr. HANSEN. I think all three groups are equally guilty if we can't say what the truth is. We have to speak the truth about our deficiencies. There is no question that each year people die in this country because of incompetent practitioners. I wouldn't be able to give any exact numbers. Their colleagues know this and excuse it and turn their backs and walk away. As though to say, the consumer be damned!

Senator KENNEDY. Senator Pell.

Senator PELL. I have no questions, Mr. Chairman.

Senator KENNEDY. Gentlemen, you have been very, very helpful to us this morning. You bring a varied experience in terms of understanding the problems that we are facing in our health care system. One of the most disadvantaged, as you have clearly shown, are children. Many are not receiving any health care, and a much larger percentage are receiving inadequate care. Even those that are receiving health care face a great question about the quality of that health care.

This should be a matter of the greatest concern to the American people.

You have given us great insight into the problem, and we will just have to try and see what can be done from this level through congressional action. As you point out so well, there is also a great deal that has to be done by the medical community in and of itself to meet its responsibilities.

I think you have been very frank and candid in making those comments. I want to thank you very much for your statements.

The subcommittee will stand in recess subject to the call of the Chair.

(Whereupon, at 12:10 p.m., the subcommittee was recessed subject to call of the Chair.)

HEALTH CARE CRISIS IN AMERICA, 1971

WEDNESDAY, MARCH 31, 1971

U.S. SENATE,
SUBCOMMITTEE ON HEALTH OF THE COMMITTEE
ON LABOR AND PUBLIC WELFARE,
Washington, D.C.

The subcommittee met, pursuant to call, at 10 a.m. in room 6202, New Senate Office Building, Senator Edward M. Kennedy (chairman of the subcommittee) presiding.

Present: Senator Kennedy.

Committee staff members present: LeRoy G. Goldman, professional staff member to the subcommittee; Jay B. Cutler, minority counsel to the subcommittee.

Senator KENNEDY. The subcommittee will come to order. Senator Packwood of Oregon has asked that his regrets be expressed at not being present at the hearing today.

Americans who live in the rural areas of this country have faced a rapidly escalating health care crisis. Technological changes in farming, forestry, fishing, and mining methods have resulted in unemployment and loss of income for many. For these and other reasons the standard of living in many rural areas has remained shamefully below that enjoyed by the majority of our population. Many rural families simply cannot afford the adequate housing, the adequate diet, and adequate sanitary facilities that most Americans take for granted. A family in such straits has little to spend on health care.

Yet, the very lack of housing, adequate diet and sanitary facilities makes these people more needy of health care. The cycle of poverty seems inexorably to raise a man's need for help at the same time that it removes his ability to obtain it.

It is easy to say in these situations that the total problem must be addressed—and not just the health problem. While there is truth in this assertion, health seems to hold a peculiar place in the poverty cycle. If a man is disabled or weakened by bad health, he is less able to do anything about his housing, his unemployment, his diet, or any of the other problems that confront him. Health care seems to us, therefore, to be a basic way of breaking into this cycle of poverty.

The health service problems in rural America, however, are not limited to those who cannot pay for care. We have heard references to hundreds of counties in America where there are no physicians available—where the nearest hospital or physician is so far away that health care is only sought out in emergencies.

For communities such as these, the "health care crisis" in America becomes painfully simple. For them it is a matter of where can we get a doctor? Availability of specialists and sophisticated facilities,

and even the costs of care take a back seat in the lack of any care at all.

A family should not suffer poorer health care because it lives in rural America—nor should it suffer poorer health care because it is poor. While it is no doubt harder to organize many health services in rural areas, we feel certain that the doctors, nurses, hospitals, and other health professionals of this country have the imagination and skill needed to vastly improve rural health services. We must find a way to mobilize this imagination and skill.

This morning we will hear testimony intended to clarify the extent and nature of the needs in rural areas, the kinds of solutions being attempted, and what further efforts are most promising. I would like to welcome first this morning Mr. Tony Dechant, president of the National Farmers' Union. Mr. Dechant joined the Farmers Union in 1943 and was elected president in March 1966, after serving 20 years as its national secretary treasurer. He is also chairman of the board of the National Farmers' Union Insurance.

In addition to his work in the union, Mr. Dechant serves on the executive committee of the International Federation of Agricultural Producers and is vice chairman of its policy committee; is vice president of CARE; is a trustee of the American Freedom from Hunger Foundation; and is director of the interagency Committee on the Food and Agriculture Organization of the United Nations.

Finally, Mr. Dechant is a distinguished member of the Committee of 100 for National Health Insurance. He is here today however to testify on the behalf of the National Farmers Union.

Mr. Dechant, I am impressed with the service you are giving. And we are pleased to have you testify.

STATEMENT OF TONY DECHANT, PRESIDENT, NATIONAL FARMERS' UNION, WASHINGTON, D.C., ACCOMPANIED BY WELDON BARTON

Mr. DECHANT. Thank you, Mr. Chairman.

I am gratified at the opportunity to testify before this distinguished committee in regard to the Health Care Crisis in America.

The National Farmers' Union is deeply concerned with the need to replace the existing health care situation in the United States with a more workable system for financing and deliverying health services.

About a month ago, February 24–27, Farmers Union held its 1971 national convention here in Washington, D.C. We included a plenary session on health as a part of that convention; the health session was designed to explore in a bipartisan manner some of the vital issues involved in the health crisis. Our membership heard alternative approaches to the health problem discussed by Leonard Woodcock, Roger O. Egeberg, and other spokesman.

As a part of National Farmers' Union's legislative target program for 1971, the voting delegates at the February 24–27 national convention called for:

Enactment of national health insurance legislation, with provision for expanding manpower and facilities as required for effective delivery of heatlh services to rural areas.

There is no better time than now to superimpose a more systematic and functional national health financing and delivery policy upon the existing patchwork of Federal-state-local-private arrangements that now exist.

Present arrangements in the health field have proven woefully inadequate—especially in controlling escalating costs of health services and in providing effective delivery of care to those who are ill. Furthermore, preventive health care is virtually nonexistent for the overwhelming majority of Americans.

What is directly needed today is comprehensive national legislation setting forth a health security policy for the United States—comparable in scope to the Employment Act of 1946. Just as the Employment Act provides the framework within which the Nation strives to help all those seeking work to secure meaningful employment, a national health security policy should spell out the right of all Americans to health care—including preventive, dental and psychiatric care—and authorize the network of policies and programs necessary to achieve the objective of good health care for all Americans.

Mr. Chairman, the Health Security Act of 1971—S. 3; H.R. 22—introduced by you and other members of the Senate and House of Representatives, and now pending before the Senate Finance and House Ways and Means Committees, contains essential provisions for a national health policy.

Your bill provides comprehensive benefits, virtually universal coverage, and financing under Social Security supplemented by general revenue. Its procedural requirement—through which payments for services by the health security program would be made directly to providers of such service rather than to individual recipients of services—is realistically designed to bring the runaway costs of medical care under control.

Furthermore, in at least two ways S. 3 goes beyond the problem of health care financing and facilitates the delivery of health services to those in relatively greatest need:

1. By placing health purchasing power into the hands of all Americans—thus enabling them to demand health services when in need—S. 3 can serve as a powerful inducement toward the acquisition and proper geographical distribution of manpower and other resources that are necessary for an effective health delivery system; and

2. By creating a permanent Resources Development Fund to improve and stregthen health facilities, manpower, and planning, S. 3 can directly strengthen and improve the health delivery system.

Mr. Chairman, the National Farmers' Union intends strongly to urge favorable action on S. 3 and H.R. 22 by the Senate Finance and House Ways and Means Committees and by the full House and Senate. At the same time, we will probably recommend certain amendments—including an amendment designed to achieve a proper balance between rural and urban areas in the allocation of money from the Resources Development Fund.

The National Farmers Union feels a special responsibility to speak to the health needs of rural people, although our membership is con-

cerned that no American, whether he or she lives in a remote rural place or a congrested urban area, is prevented for any reason from receiving good health care. Consequently, we would urge this distinguished Subcommittee on Health to do the following in order to serve rural health needs.

1. In its field hearings on the Health Care Crisis in America, we urge the committee to go into the small towns and rural communities and hear extensive testimony by farm and other rural people on their health situation and the unique requirements of getting health care to them when they need it; and

2. We urge the committee to use its jurisdiction and influence to extend and fund existing Federal Programs, and to facilitate enactment of additional programs that can give special aid to rural and other areas that exhibit a relative scarcity of health planning, manpower and facilities.

For the remainder of my statement, Mr. Chairman, I will sketch out the health situation in rural America and then suggest some programs and policies for health delivery that can help rural America to catch up with the rest of the Nation.

As previous witnesses before this committee have pointed out, health care in the United States compares unfavorably with many other "advanced" nations of the world. Within the United States, the health condition of rural people, and the health services available to them are clearly inferior to urban residents and to U.S. citizens generally.

The President's National Advisory Commission on Rural Poverty highlighted the rural dimension of the United States health problem in its 1967 report, "The People Left Behind." The Commission pointed out that, although as of 1962–63 about 30 percent of our population still lives in rural areas, only 12 percent of our physicians, 18 percent of nurses, 14 percent of pharmacists, 8 percent of pediatricians, and less than 4 percent of psychiatrists are located in rural areas.

In a February 1970 report, "Rurality, Poverty and Health," the Department of Agriculture's Economic Research Service used a five-group classification of U.S. counties to document rural-urban differences in manpower and facilities. The county groups ranged from the most urban and densely populated—group 1—to the most isolated and sparsely populated—group 5. I have included the relevant statistics in my statement for the record.

Senator KENNEDY. We will place the statistics you refer to in the record at this point.

Mr. DECHANT. Thank you, Mr. Chairman.

(The information referred to follows:)

Medical Personnel and Hospital Facilities Per 100,000 Population, 1966

	GP's	Dentists	Active Nurses	Specialists	Hospitals	Hospital Beds	Specialists Plus Hospital-Based Physicians Per 100 Beds
Metropolitan Counties (1 million or more)	34	70	328	137	1.8	401	34.2
Metropolitan Counties (50,000 to 1 million)	28	52	340	95	1.9	381	25.0
Counties next to Metro areas	35	39	254	38	4.0	323	11.8
Semirural Counties (at least 1 township with 2,500)	36	39	243	45	5.3	412	11.1
Isolated Rural Counties	33	27	126	8	6.3	209	3.8

Mr. DECHANT. The statistics show that the ratio of specialist physicians, dentists, and nurses declines sharply as rurality increases. Only for general practitioners is the ratio between medical personnel and population roughly identical in urban and rural areas. Rural counties have more hospitals than urban counties in relation to population but the rural hospitals are usually smaller, more often inadequately staffed, poorly equipped and lacking outpatient and extended care facilities.

Furthermore, even when allowances are made for the greater proportion of older persons living in rural areas, the incidence of activity-limiting chronic health conditions is greater in rural than urban areas. The Februrary 1970 report of the Department of Agriculture reported the following statistics.

Senator KENNEDY. These statistics also will be placed in the record.

Mr. DECHANT. Thank you, Senator.

(The information subsequently supplied follows:)

PERCENTAGE OF PERSONS WITH ACTIVITY-LIMITING CHRONIC HEALTH CONDITIONS,[1] BY PLACE OF RESIDENCE, 1963–65

Residence	Unadjusted for age (percent)	Age adjusted[2] (percent)
Large metropolitan areas	9.9	9.8
Other SMSA	11.4	11.9
Outside of SMSA:		
Nonfarm	14.6	14.1
Farm	16.5	15.4

[1] Includes heart conditions, arthritis or rheumatism, mental and nervous conditions, high blood pressure, visual impairments, and some orthopedic impairments.
[2] Age adjusted means that the effects of uneven age distribution among residences have been removed.

Mr. DECHANT. In addition to the greater incidence of health impairments in rural areas, the danger of these and other health impairments is compounded by the relative paucity in rural areas of transportation facilities by which either the ill can be rapidly taken to a treatment center, or effective treatment can be brought to the residence of those in need.

Rural people, moreover, are less prepared financially to cope with ill health. Only about 40 percent of farm workers are covered by any type of health insurance compared with coverage of 80 percent for the population as a whole. Further, relatively few rural residents have sick pay or other income maintenance benefits.

In sum, rural America, as compared with urban areas and the United States generally, is deficient in professional medical personnel, physical health care facilities, and ability to afford the financial cost of illness. Rural areas are ahead only in sickness and the ill health of its people. Clearly, catch-up programs of health services to rural people are required.

CATCH-UP POLICIES AND PROGRAMS FOR SCARCITY AREAS

Mr. CHAIRMAN. I know that some of the proposals that I am going to mention are covered in bills now before this committee, and that you will hold separate hearings on many of them later this

year. However, I want to touch upon them briefly at this time, since they can make important contributions to the delivery of health services in rural areas.

Both the Health Manpower Act of 1968 and the Nurse Training Act of 1964 would expire at the end of June of this year. Bills to extend both statutes are pending before your committee.

The Health Manpower Act and the Nurse Training Act contain provisions for forgiveness of repayment of Federal loans made to medical students and students of nursing, provided that after graduation they practice in areas of health manpower shortage. These forgiveness provisions—and especially the one for physicians—have not been very effective as inducements to practice in rural areas.

We think that the provisions should be extended and strengthened, by providing a much larger and somewhat faster forgiveness of loans for physicians and nurses. Doctors, for example, must be allowed to cancel several thousand dollars during the first year of practice in a rural area, to make the inducement truly effective.

In addition to physicians and nurses, the forgiveness feature might be extended to paramedics, assistant physicians, and medical technicians.

The Emergency Health Personnel Act, enacted by the Congress last year, provided that the Public Health Service of the Department of Health, Education, and Welfare may recruit medical doctors and allied medical professionals for service in rural and other scarcity areas.

Personnel for this program could be recruited form among the 30,000 military medical corpsmen, trained as medical subprofessionals, who leave the armed services each year. The Public Health Service is also authorized by the act to deploy some members of its Commissioned Officers Corps—a force of nearly 6,000 doctors and other professionals—to serve in scarcity areas.

The act authorized the expenditure of $10 million for fiscal year 1971, $20 million for fiscal year 1972, and $30 million for fiscal year 1973. Unfortunately, to this date the 1970 Emergency Health Personnel Act has not been funded and gotten underway.

The delay is tragic, for this program offers real promise of expanding health manpower in rural areas. There is reason to believe that indirect financial inducements such as forgiveness of educational loans are insufficient—that we are not going really to get additional health professionals into rural and other scarcity areas unless we have some sort of Government corps that can be assigned for a duration of time to these areas. In any event, this approach is one that ought to be included among our programs that are directed to the problem.

Mr. Chairman, we urge you and this committee to use your influence to work for immediate implementation of the Emergency Health Personnel Act of 1970 at a level of funding approximating the authorized figure. Funds for fiscal year 1971 could be included in the second supplemental appropriations bill, and further moneys should be carried in the regular HEW Appropriations bill for fiscal year 1972.

Clearly, this program could begin to make inroads to solving the health delivery crisis in rural America, and we cannot afford to delay its implementation.

Mr. Chairman, one thing that we have learned from the Peace Corps, VISTA, and other essentially voluntary programs is that humanitarian incentives can be more powerful than financial inducements in motivating people to carry out neglected and badly needed tasks and programs.

Parenthetically, Mr. Chairman, I have firsthand knowledge on this front, since my son and his wife have just returned from 27 months in the Peace Corps in Brazil. This experience should now be applied in the health field. We clearly need a national health service corps of the kind that we proposed in several bills introduced in the 91st Congress, and that have been reintroduced in the 92d Congress.

A national health service corps would provide a framework within which the idealism and social commitment of our young health professionals and medical school students could be put to work, serving the most disadvantaged people in our Nation. Furthermore, because such a corps probably would be made up in large part of unmarried young men and women as well as young married couples, the corps approach would be able to get around one of the real problems of getting and keeping physicians in small towns and rural places: the unwillingness of the wives of physicians to forego certain apparent amenities of living in larger urban communities.

As a means of strengthening the facilities component of rural health delivery, I strongly endorse the proposal for establishment of area health education centers that was made by the Carnegie Commission on Higher Education in its October 1970 Report. The Carnegie Commission called for 126 new area health education centers, which could be geographically distributed so as to bring essential health services within 1 hour of driving time for over 95 percent of all Americans.

According to the Carnegie Commission's suggestion, one or more health education centers would be located in each of the States. Because of their dispersion throughout rural America, in many cases such a center could go beyond strictly educational functions and serve as the hub around which a network of health delivery services could be developed.

The health centers could experiment with helicopters, cooperative ambulance operations, and other means of improving transportation facilities to serve the health care needs of surrounding rural areas. The center could emphasize preventive medicine, and home and outreach services.

The resources development fund, as provided in the Health Security Act of 1971—S. 3—could serve as a source of funds for these and other activities operated out of area health education centers.

To place rural health delivery and outreach programs into operation, for the most part we need not move into untested activities that may result in inefficient expenditures. For many outreach programs, pilot projects are in operation in various parts of the Nation that afford experience on which we can now draw.

One such project, operated under the auspices of the Arkansas Farmers Union under contract with the Department of Health, Education, and Welfare, is the community activities for senior Arkansans (CASA). Among other health outreach projects, CASA has operated a mobile medical unit to conduct medical examinations in rural areas in the vicinity of Little Rock, Ark.

Since its inception 2 years ago, this mobile unit has completed several thousand examinations, with a referral rate of about 40 percent. Clearly, many of these people who were found directly in need of medical care would not have received this check-up and referral in the absence of the CASA outreach program.

The project demonstrates not only that in this way the health of large numbers of medically deprived people can be measurably improved. It also shows that this can be done inexpensively. The CASA mobile unit was constructed in a school bus and equipped at relatively little expense.

Mr. Chairman, many of the recommendations that I have made for the strengthening of rural health delivery are, I will frankly acknowledge, rather ad hoc and stopgap in nature. They do not add up to a coordinated system of delivery services—although I think that the Carnegie proposal for area health education centers, if implemented and elaboarated to its full potential, could provide a foundation on which a more systematic structure of services could be built.

Parenthetically, let me say that the health problems of migrant farm workers are so massive and unique as to defy any attempt to treat them as part of an integrated rural health care delivery system.

In a real sense, however, a coordinated system of rural health care services will have to await the general redevelopment of rural areas and communities. Only as we revitalize and rebuild our smaller communities and rural areas will we overcome the cultural, social, technical, and economic factors that impede the natural flow of health services throughout the countryside areas of the Nation.

But we cannot await the greening of rural America generally before we supply essential health care to people who happen presently to live in rural regions. We must employ stopgap measures of health delivery today, while we work for more fundamental and long range policies and programs.

Mr. Chairman, we commend you and this committee for your leadership in combating the crisis in health care financing in America. We look to you also for continued leadership in delivering good health care to the American people, regardless of where they live and reside in the United States.

Mr. Chairman, I would be pleased to answer any questions that you may have.

I would like to introduce my associate, Dr. Weldon Barton, who has been working in this field.

Senator KENNEDY. We are glad to have you with us, Dr. Barton.

Mr. BARTON. Thank you, Senator.

Senator KENNEDY. How do rural people view the problems of getting health care? Is the problem the fact that care costs too much,

or that family doctors have gone away, or that there are no hospitals or specialists in the area, and they do not know where or how to seek the services, or that they distrust the health care they are receiving?

Mr. DECHANT. Mr. Chairman, cost is certainly a factor. As chairman of the board of a life insurance company that offers health and hospitalization coverages, we are forced into the necessity of constantly raising rates, premium rates, to try somehow to keep pace with escalating costs. And this is particularly tough in the rural areas, because farmers have not been sharing in the general prosperity of this Nation.

At the moment we are at 70 percent of parity, which takes us back to the days of the depression. You can go back to 1947 and find at that time the same amount of net farm income that we had in 1970. In other words, after 25 years we have the same net income.

Inflation raises the same problem in the rural areas as it does in the city.

We have taken 20 million people off the farms and out of rural communities during the last 20 years, and moved them to the cities. This is a rather senseless migration. This is why I have commented on the shortrun emergency stopgap measures that are needed, and of course the long-run revitalization of rural America.

Senator KENNEDY. With reference to financing, I understand that only 40 percent of rural Americans are insured, is that correct?

Mr. BARTON. If I could respond to that, Senator, this has reference to farmworkers in particular. This is a statistic taken from the Department of Agriculture's 1970 study that is reported in the formal statement. But it is with respect to farmworkers. And in terms of farm operators and their families, I think you would find a somewhat larger percentage insured.

Senator KENNEDY. Is the low percentage of insured related to the cost of insuring farmworkers or what? Why aren't there more people insured?

Mr. DECHANT. In the rural communities there is just no concerted effort, you see, to provide the coverage that you have in an urban center. I have said many times, Mr. Chairman, that in rural America we have our poverty fully hidden away. We have it dispersed, you know, in the small towns and the hamlets. In the cities the ghettos stick out like a sore thumb. But with some 27 percent of the Nation's population living on the farms and in rural areas, we have a very high percentage of the poverty of the Nation, over 40 percent. So the coverage just is not there. Because in the small towns there is just no concerted effort to do the job.

Farm organizations have been trying to provide services either through their own insurance companies or in combination with Blue Cross. But we just do not reach enough of them. There are many, many of them not covered.

Senator KENNEDY. Would they like to be covered by insurance?

Mr. DECHANT. By all means. Of course they want coverage. We have a floor in this country of sorts, you might say, for health needs. But I say a lot of the planks are loose and many of them are missing. And this is why I thought so well of the bill that you have in-

troduced, because I think it would start to do something on the economic front by providing a broader floor and a higher floor to cover all Americans, because this is key. There are many Americans now not covered. I think that this is inexcusable in this Nation not to have a floor under which all Americans could be covered. In addition to the economic program that I think your bill really gets at, and that is important, we are also concerned about delivery. Because in the rural areas this is a problem, how you really get health care out to where it is needed.

I was impressed with the Carnegie report, for example, and the map in the report showing the proposed location of the 126 centers. The fact that many of these would be located out in rural areas was very appealing to me.

Senator KENNEDY. If they want it, why aren't the insurance companies out there trying to sell it?

Mr. BARTON. If I could respond to that, I think I would say that these people would like in many cases to be covered. When illness comes, there is a tendency, I believe, particularly among rural people, not to plan ahead and look ahead as much, possibly, as you do in urban areas. Urban people interact more and talk with others about the possibility of their getting ill. But this is a real merit, it seems to us, in your proposal for comprehensive coverage that would get insurance to these people, a basic floor of coverage to all Americans, including all rural people, so that when illness comes, they are covered. This is the point, I think, at which they will appreciate the fact that they have the coverage in many cases.

Mr. DECHANT. Mr. Chairman, the other part of the answer to your question is, why aren't they buying it. It does relate itself to income, the fact that the farm sector has just not shared in the general income of this kind.

Senator KENNEDY. I imagine it is difficult for them to afford it, particularly with the kind of apparent farm policies that we currently have, in terms of providing a realistic income level to rural people. And this coverage is expensive.

Mr. DECHANT. And, Mr. Chairman, I want to express my personal appreciation and that of the Farmers Union members everywhere for the consistent support that you have given farm programs in this country. We appreciate it very, very much. They are the kind of programs that my organization has been promoting.

Senator KENNEDY. We appreciate that reference.

Let me ask you this. In your statement here you refer to this CASA program, Community Activities for Senior Arkansans, and the mobile health unit that went around and visited. I wonder if we have got any kind of information on the kind of problems that they found in these communities?

Mr. DECHANT. We can certainly explain them.

Senator KENNEDY. I think that it would be interesting to find out what they really discovered, what the real health problems were.

Mr. DECHANT. We will make it a point to supply the information. It was a tremendous operation. It was staffed by a Public Health Service doctor and several nurses. And we were amazed at the amount of referrals that were made for immediate treatment.

Mr. BARTON. We could add here, Senator, that in many cases they found relatively elderly people that had never seen a doctor, had never been to a dentist. They found this repeatedly. They found people that were ill, and could not get the transportation to facilities, could not get to a doctor in a physical sense. And certainly we can give you some detailed information in addition to this on the conditions that they found in those areas.

Mr. DECHANT. In working with health problems of rural people, Farmers Union discovered that one of the things they neglected most was securing a periodic medical checkup. It is very difficult for a person with limited income and no transportation to get to the doctor's office, which may be 20 or 30 miles away, for a physical examination. Many times this habit of not visiting the doctor "till they hurt somewhere," which may stem from either ignorance or apathy, can lead to diseases and illnesses which become acute.

In June of 1968 a supplemental grant was secured from the Administration on Aging to implement a mobile medical unit. This phase of CASA project is designed to provide a free multiphasic medical examination for the elderly in the remote rural areas.

The six counties chosen for the CASA project were selected because they offer an excellent cross section of the rural population of Arkansas. There are two counties which are in the mountainous section of the State, where the people are fiercely independent and self-reliant. There are two counties in the Grand Prairie-type region. One county is representative of the delta farming region and the other a mixture of all three types.

We believe that Arkansas offers, perhaps better than any other single State in the Nation, a wide range of the types of people found in the rural areas. Aside from the segment that has lived all or most of ther lives in Arkansas, there is also a large influx of people from other States across the Nation who come to Arkansas to retire.

Therefore, it is also believed that these figures are not only representative of the conditions of the rural elderly in Arkansas, but are also indicative of the older rural population of the whole Nation.

A 66-passenger schoolbus body was secured from a local manufacturer and the inside was constructed to provide a mobile clinic where medical examinations could be administered. This type of vehicle was decided on so as to offer a maximum of mobility and ease of operation.

The unit is staffed by a physician, two licensed practical nurses and a driver-maintenance man.

When the fieldworkers receive the unit's schedule from the home office, they secure exact locations, such as a local store, school, and so forth, where the unit can perform the examinations. They then publicize, through posters, newspaper articles, and announcements when and where the unit will be. Often they provide short-range transportation to the unit for persons unable to get there on their own.

Upon arriving at the unit, a short medical history and information is taken by one of the nurses. The patient then proceeds through a battery of tests especially selected and designed to detect the prevalent chronic diseases in the elderly. Many of these tests

give results not only of the disease tested for, but are indicative of other physical abnormalities.

When all of the results are received in the office, the secretary processses the records. If the patient shows an abnormality in any of the tests, he or she is sent a letter advising him to contact his private physician whose name was given to us when the patient came through the unit. His physician is, at the same time, sent a letter advising him of our findings and a copy of his medical record.

We do not attempt to make any diagnosis at the unit, nor refer a patient for a previously known condition. It is left to the private physician's discretion as to what further tests and/or treatment he may prescribe on the basis of our findings. After a period of time, a list of the patients referred is sent to the field workers. They, in turn, visit these persons to ascertain if they have visited their physicians and, if not, encourage them to do so.

We have been told that at least 85 percent of these people do see their physicians.

Since the unit began actual operation in November of 1968, we have examined over 3,200 people. Of these, we have referred 68.6 percent for at least one previously unknown condition.

The following statistics summarize the referrals:

ARKANSAS FARMERS UNION CASA PROJECT

REPORT ON REFERRALS OF MOBILE MEDICAL UNIT

	Height weight	Visual acuity	Blood sugar	Hema-tocrit	Blood pressure	Intra-ocular pressure	Electro-cardio-gram	Vital capacity	Urinalysis				
									PH	Protein	Glucose	Blood	Ketones
Number of persons referred	398	307	229	363	701	131	748	1,297	67	368	64	40	7
Percentage referred	12.2	9.4	7.1	11.2	21.6	4	23.1	40	3.6	19.9	3.4	2.1	.3

NOTES

From Nov. 5, 1968, to Aug. 15, 1969, total number of examinations, 3,236.
Urinalysis started Feb. 11, 1969. Total number of examinations including urinalysis, 1,843.

Total number of persons referred for at least 1 condition, 2,220.
Total percentage referred, 68.6 percent.

We have encountered many cases where the patient's condition was of such a serious nature that the need for immediate attention was indicated. In such cases, the person was referred to his physician at once. We have had many cases where doctors have told us that we have possibly prevented either death or disability by stroke by detecting abnormally high blood pressure in the patient.

Senator KENNEDY. You stress the importance of the Emergency Health Personnel Act, and point out that unfortunately the act has not been funded or gotten underway for fiscal year 1971.

What do you think the reason for that is?

Mr. DECHANT. There are higher priorities, I suppose. The President, as I understand it, has recommended, instead of the $20 million that is authorized, $10 million for——

Senator KENNEDY. That is for 1972.

Mr. DECHANT. Yes. And nothing for 1971. In other words, there were no recommendations and no funding for 1971. And this is why I was pleading that if it is possible through the supplemental appropriation procedure to do something in 1971, it would be most helpful. And certainly to the extent that we could move to the $20 million figure in 1972, it would be helpful.

I suppose is a matter of priorities. I happen to believe that this is a great priority in America, and one that we must get at.

Senator KENNEDY. You point out in your testimony the lessons learned from the Peace Corps, VISTA, and voluntary programs. Do you know of examples in rural areas that you might be able to describe to us where volunteerism and voluntary programs have had an impact in terms of health?

Mr. DECHANT. I do not have any specific examples, outside of the one in Arkansas. And in our green thumb programs, for example, we have found that in connection with operating green thumb and green light, which, as you know, employ elderly men and women, that they have many problems that no one is aware of, unless someone goes out and searches. And as these people heard about these employment possibilities, we suddenly became aware that they had health problems. And this is why I think a health corps could really start doing something on the rural front in finding out what the problems are. They are just out there vegetating; it is a very sad thing. They do not know what is available. A health corps could get into the rural areas and be most meaningful.

Our Peace Corps programs have been doing meaningful work abroad, as I indicated in my testimony. My son has just returned from 27 months in Brazil. He did not do it because there was any money involved: he did it because of a deep feeling and wanting to be helpful to people. And I think we can use these young people here in America to do the same thing.

Senator KENNEDY. In urban areas when indigent people have health problems they go to the public hospitals. What happens in rural America? What replaces the public hospital that exists in these urban areas? What do people do when they get sick and they have no insurance and no money?

Mr. DECHANT. Well, they can go to the welfare office, you know, to the county welfare, to see what kind of help they might get.

Let me give you a typical example of what happens. Someone comes down with a skin cancer or something. And many times, in a place like western Kansas, the only thing you can do is go to Denver. That is 200 or 300 miles away. So it is a problem of transportation. And if the person does not have any way to get to Denver or to Topeka or to Kansas City, then nothing happens. These people just stay out there. And up in the great northwest area where we have many, many thousands of Farmers Union members, the clinic at Rochester was always the answer, if you got sick you went down to the Mayo Clinic. Well, there are thousands that do that. But there are additional thousands of people who cannot afford to go. So they just stay at home. Nothing happens. They work with the local doctor, they go to the local hospital. There really is no effective way to get people where they can get treatment. It all depends on income. Those that can afford to go to Denver, go. And those that cannot, stay out in western Kansas.

I am using that as an example because I was born in the State of Kansas. I am familiar with how we operate out there. I had my own case of being down with TB. And the problem was, where could you go for treatment. It was a long way from the farm out in western Kansas.

Mr. BARTON. I would like to emphasize, Senator, the loss of dignity that is involved in this. If a person does get care, if he is indigent in a rural area, he goes to the local general practitioner in the small town near there. He may get some care, but he gets the type of care or the amount of care that that local doctor wants to give to him on a sort of a dole basis. And he is made aware of it, he or she is made aware of the fact that he is getting care as the doctor wants to put it out, so to speak.

So this is the reason again for a floor under health insurance so that these people can get care and get care with dignity as other Americans get care.

Senator KENNEDY. Who is working now in these rural areas to develop an innovative program to deliver health care to these communities? Are the commercial insurance agencies, local communities or physicians and hospitals doing anything? Is there anyone doing anything?

Mr. DECHANT. Unfortunately, Mr. Chairman, very little is being done. On the health front there is a dearth of information. For example, on housing. We have the Farmers Home Administration. And we have the Rural Housing Alliance. Our extension service out of our land grant universities bring all kinds of information to us on agriculture. In the health field there is a vacuum. Really nothing is happening. We may be asking our extension service of the university to start improving our health program, to start having seminars. The reason, Senator, that I was asking for some balance between urban and rural, is that it takes rural areas longer to gear up and take advantage of public programs than it does the urban centers. It takes time for them to work out applications. They don't have the expertise that we have in the urban centers. And the reason I am hoping that amendments can be added to provide a balance is

to make sure the money is not all gone by the time the rural people get geared up to apply.

Senator KENNEDY. Why do you think there is a vacuum in this area?

Mr. DECHANT. Well, for too long America really has not been doing anything about the health problem. I guess most of our measures have been emergency measures. And in rural America little or nothing effective has been done. The rural area desperately need revitalization, Mr. Chairman. In rural America we have to hit on all fronts. We have got a bad situation housingwise, healthwise, and I think it is time for America to adjust its priorities and end this senseless migration to the large cities, where we have 70 percent of the people now on 2 percent of the land space. In the long run we have to reverse this ridiculous situation and revitalize rural America.

I think at the moment we ought to start on the health front, the housing front, and let me also say, on the farm income front. Because this would solve a lot of problems.

Senator KENNEDY. That is a good note to end on. I want to thank you, gentlemen, for appearing before us. I think providing quality health in rural areas is going to be one of the great challenges of our time. Our own legislation tries to provide some innovations and ideas to help in this area, but it is going to be extremely difficult. Your comments have been very useful and helpful. And I want to thank you again. Many of us in the Congress whose programs come from urban States in the East rely on your organization to help us fill our responsibilities and obligations to the people that live in rural America. This morning you have spoken in behalf of the very important areas of social need in rural America. You are continuing the tradition of a great Farmers' Union. I want to thank you again for your appearance here.

Mr. DECHANT. Thank you.

Mr. BARTON. Thank you, Senator.

Senator KENNEDY. Our next witness this morning is Dr. J. L. Snyder, who is representing the Council on Rural Health of the American Medical Association; Dr. Snyder is also on the AMA's Committee on Health Care of the Poor. A physician from Fresno, Calif., and a member of the California Medical Association, Dr. Snyder serves the association on its committee on rural health, its commission on community health services, and is a delegate of its house of delegates.

In addition, Dr. Snyder is a member of the Advisory Committee of the California State Department of Public Health, a member of the California Governor's Agricultural Section of the Industrial Safety Conference, vice chairman of the Fresno City Comprehensive Health Planning Council, and a member of both the Fresno Foundation for Medical Care Regional Medical Program and the Southern San Joaquin Comprehensive Health Planning Council.

Dr. Snyder, I appreciate your making this long trip in order to appear before the Health Subcommittee. I see that you are an extremely busy man and look forward with great interest to your testimony.

Dr. Snyder.

STATEMENT OF LEOPOLD J. SNYDER, M.D., CHAIRMAN, COMMITTEE ON RURAL HEALTH, AMERICAN MEDICAL ASSOCIATION, ACCOMPANIED BY HARRY N. PETERSON, DIRECTOR, AMA DEPARTMENT OF LEGISLATION

Dr. SNYDER. Thank you, Mr. Chairman.

Mr. Chairman and members of the subcommittee, I am Dr. Leopold J. Snyder, a physician in the practice of internal medicine in Fresno, Calif. I serve as chairman of the American Medical Association's Council on Rural Health. With me is Mr. Harry N. Peterson, director of the AMA Department of Legislation.

We are pleased to be here in response to your invitation to discuss health care in rural areas.

We apologize for not getting the statement to you earlier. The logistics just did not allow it, I am sorry.

As its name implies, the council on rural health serves to identify and seek solutions to health problems in rural areas.

Our concern for the problems of health in rural, often inpoverished communities, covers a good many years. My own involvement in seeking solutions to those problems has taken me into virtually every quarter of the country.

The one great lesson I have gained is that any attempt to find single causes for these health problems, or simple solutions to them, is bound to result in total frustration.

The fact is, the health problems in rural and poor communities are like the familiar headache remedy—a combination of active ingredients. A purely medical solution to the problems in such areas would not be sufficient.

Rich or poor, rural or city dweller, our state of health is conditioned by such things as the circumstances in which we were raised, the environment in which we live, and the life-style we have chosen within that environment.

Whatever use we choose to make of medical manpower and facilities to meet the challenges of rural health, then, will be far more effective if we also attack the root causes of rural health problems. Socioeconomic factors, I assure you, play a very real, and sometimes devastating role in rural health.

Rheumatic fever, for example, is relatively rare among the well-to-do, but its incidence rises as one looks down the economic scale. Heart disease and diabetes mellitus are comparatively prevalent among the poor.

Cervical cancer occurs more often, and causes more deaths, among women of the lower economic strata. Premature births and higher infant mortality tend to be associated with both low income and low occupational status.

People's attitudes toward health care are among the barriers that need to be hurled in some rural communities. Just as some people prefer not to use the seat belts in their cars, people in some rural communities do not always take advantage of the available health resources.

In a Mexican-American community in the Southwest, for example, in my valley in California, a person with a mild disorder may pre-

fer to treat himself, or be treated by a member of the family or a neighbor. That may be true, even when there is a doctor or clinic in the vicinity.

If the sickness persists or worsens, a diviner is likely to be called in. The diviner may undertake to treat the malady with some home remedy, or he may recommend the services of a curandero—a person who is supposed to have received healing power from God.

Senator KENNEDY. I have not heard those terms before, the "diviner," and "curandero."

Dr. SNYDER. The Mexican-American will seek many of the folk ways in treating his illnesses long before he seeks medical care. He actually seeks emergency care, of course, rather than medical care in response to pain and suffering. But he has usually gone through a long period of self-help with the resources of his folk medicine before he does seek medical care. This is quite common in parts of Texas, New Mexico, and California. It is still very, very prevalent.

Senator KENNEDY. Do these people practice illegally? They are obviously not licensed.

Dr. SNYDER. They do not practice medicine. So the Licensures Act does not really cover them. They do not usually prescribe drugs. They do not perform specific procedures. And so generally they do not come under the licensing procedures. People tend to keep hands off of religious practices. I am not against this, though sometimes we find that these may be hazards to health.

Cultism, which is still rife in this country, is one of the blocks to adequate health care services.

Shall I go on, Senator?

Senator KENNEDY. Please.

Dr. SNYDER. In order to cope with rural health problems in any meaningful way, we need also to assess the resources available to us. What, for example, is the state of our rural health manpower today?

As you know, there are now more physicians in the United States than ever before. In 1960, there was one physician for every 712 Americans. Now the ratio is down to 632 to 1—a considerable improvement.

The fact remains, however, that these doctors are not always located where they are most urgently needed. As examples of the disparity in distribution, let me cite some figures. Here in urban Washington, D.C., there is a physician for every 340 persons. In rural Arkansas, the ratio is one doctor per 1,400 people. There are some rural counties throughout the country with no private practicing physicians, some 136 by the last statistics I have seen.

The urbanization that has been taking place among health professionals in recent years merely follows a pattern among the population as a whole. That is, people have been leaving the countryside and moving into the cities. A generation ago, in 1940, slightly over half of the American people lived in cities. Today, approximately seven out of 10 of our citizens are city dwellers.

Senator KENNEDY. Are the doctors moving to the cities faster than the rest of the population?

59-661 O - 71 - pt. 5 ---15

Dr. SNYDER. I do not believe faster—well, they may, as my testimony will show shortly, there is a tendency for people who are more highly trained, more highly educated, to go into the urban stream. This has been the tendency. I think they have followed rural populations and possibly outstripped the migration into urban centers. I think this may be valid. I do not know of any statistics concerning this.

The reasons for this migration are well known to social scientists. They tell us that, as rural communities experience a decline in population, or cease to expand the quantity and quality of services that make rural living desirable, the people who could contribute most to community betterment tend to leave.

They tell us, also, that people who are highly trained tend to be among the most mobile elements of the total labor force. That is particularly true of younger professionals. Consequently, it has been the younger doctors and nurses, generally speaking, who have been moving into the cities. Among doctors, at least, it is the older men who have tended to remain behind.

There have been other trends that affect the rural health situation. One is the recent trend among younger physicians to select fields of specialization, rather than enter general practice. This trend, too, has contributed to the shortage of physician manpower in rural areas.

On the other hand, increasing specialization assures the patient of a greater variety of medical skills. No one medical practitioner today can possibly cope with the myriad advances being made against diseases and disabilities.

Fortunately, in many parts of the Nation, those skills are accessible to rural dwellers. Modern, fully equipped medical centers may be farther away, but—thanks to the modern roads and highways—they may be as close, or closer, in terms of time.

This points up another important turnabout in the delivery of health care in the past generation. Formerly, the doctor traveled to the patient. Now, the patient usually travels to the doctor.

The resulting saving of time has enabled each physician to boost his productivity of services manifold. A University of Iowa study indicated that this gain in individual productivity in that State has been proportionately greater than the increase in numbers of doctors.

Though a large segment of people in rural communities have adequate access to quality health care, there is also a large segment which does not. In some instances, they live in remote localities, far from the nearest health center.

Senator KENNEDY. How large would you estimate this latter segment to be, Doctor?

Dr. SNYDER. Well, as we indicated previously, there are 136 counties in this country which encompass—I have the statistics some place—which encompass, as I recall, about a half a million people, having no private physicians at all in their community. There are 60 million rural people living in counties that are not contiguous to a major community, to a standard metropolitan service area.

Now, these, by virtue of roads, and by virtue of their own mobility, in the case of the middle class at least, have been able to find their own health care services. When we consider the 40 percent of this Nation's poor that live in rural areas, if they are any distance from an urban center, they are in trouble, simply because the physicians who are already present in those rural areas, who I might say, give freely of their time and energy and skills to the poor as well as the middle class, are just unable to take care of the total load.

Their immobility prevents them from very often coming to that physician's office during the time that the offices are open. So they very often appear at the public hospitals at midnight, causing great burdens there, which result in dislocation of the institution, but more importantly, dislocation of the families.

In other cases, their lack of adequate health service can be attributed to reasons of economics, immobility, cultural attitudes, and a host of other causes.

The American Medical Association believes every person should have access to adequate health care, whether he lives in a city, or some remote rural region, regardless of his economic circumstances. That is one reason the American Medical Association established its Council on Rural Health some 20 years ago.

During their testimony before this subcommittee on March 15, Drs. Parrott and Roth discussed a related matter, the AMA's medicredit bill. As you know, the medicredit program would remove the economic barriers to health care.

If I may be historical and fill you in on one function of the AMA, the AMA's Council on Rural Health meets regularly, and also meets regularly with an advisory committee, drawn from the leadership of other organizations concerned with rural health. They include the following:

The Cooperative Extension Service, the Farm Foundation, the National Association of Farm Broadcasters, the National Extension Homemakers Council, the National Grange, the National Safety Council, the Women's Auxiliary to the American Medical Association, the American Agricultural editors' Association, the American Dental Association, the American Farm Bureau Federation, the American Nurses' Association, the American Public Health Association, and the American Veterinary Medical Association.

The advisory committee assists the council in several ways:

(1) Provides a cross-section of rural health problems throughout the country.

(2) Helps to establish priorities on health problems.

(3) Gives guidance in programs to alleviate these problems.

(4) Helps to evaluate the council's efforts in the solution of the problems.

(5) Provides the council with an opportunity to interpret medicine's program and health promotion efforts to leadership of these organizations.

The council also works closely with State and local public and private organizations, in an effort to find the best health care solution in a given locality. Early in the game, we learned—to our dismay—that the problems of each locality are unique.

Therefore, some of the solutions have been unique and frequently innovative. What will succeed in upstate New York, may be a dismal failure down upon the Suwannee River, in Florida, or the San Luis Valley, in Colorado.

Some of the approaches in which we have been involved include neighborhood health centers; satellites to hospital centers; rural practices; utilizing allied health professionals; transportation and communications systems; mobile health units; and deployment of individual physicians.

Let me mention some projects that are currently underway. In Seattle, the University of Washington is providing former medical corpsmen with a 3-month refresher course on civilian medical procedures. Upon completion of the course, these former medics are sent to physicians across the State, who have agreed to act as their preceptors, and to employ them after 12 months of on-the-job experience.

Some of these men are already on the job, mostly in rural communities. This Medex program, as it is called, is supported by the Washington State Medical Association and its Education and Research Foundation, as well as the AMA's Council on Rural Health.

Also in the State of Washington, the AMA's Council on Rural Health helped initiate a rural health project in Adams and Lincoln Counties. Health providers and community leaders are working together to review their health service resources and deficiencies in hopes of establishing innovative health deliver. Medex people will be utilized. AMA's Education and Research Foundation has provided a $17,500 grant to share the first-year cost of this program with the Washington State Medical Association and its Education and Research Foundation.

Across the country, in Lawrence County, Ala., another project also involves the services of former medical corpsmen. In this Appalachian area, there are only six physicians to serve a population of 30,000.

Basically, the project has two modes of patient contact—a family care unit and outreach teams. The outreach teams introduce families to the community health service personnel, who can then begin the history-taking process and refer the family to the family care unit.

The University of Alabama has assumed the responsibility for recruiting former medical corpsmen to work as physicians' assistants in Lawrence County. The project was developed by the Tri-County Appalachian Regional Health Planning Commission.

Senator KENNEDY. About Lawrence County in Alabama, are you familiar with it personally?

Dr. SNYDER. I have not visited it. We have been extremely interested in this approach.

Senator KENNEDY. I am going down to the University of Alabama tonight. So I was wondering if you were able to add anything to that?

Dr. SNYDER. I am sure you will be able to ask the next witness more about this. We have been very impressed with this approach as

another way of approaching health care problems. I do not have personal knowledge of this. We felt strongly enough about it so we included it in a booklet of ours.

In Southern Monterey County, Calif., a small population is increased to 23,000 by a seasonal influx of migrant farm workers. A group of 10 physicians and 80 supporting ancillary staff members have undertaken to provide medical care to all eligible residents, including migrant farm workers.

Patients are cared for in the same facilities, by the same medical staff that serves the self-sustaining members of the community. Transportation—including a van, equipped for wheelchair patients—serves the entire project area. Grantee for the project is the Monterey County Medical Society, with funds from the OEO.

A community health program in Lafeyette County, Fla., is under the supervision of the Division of Ambulatory Medicine and Community Programs of the Department of Medicine at the University of Florida's College of Medicine. The program started on January 6, 1969, as a community-oriented, comprehensive health care service for the residents of the area.

A recently constructed county health clinic, with ample space for the abulatory care of all country residents, serves as the base of operations.

The purposes of the clinic are threefold: To provide a teaching and training experience for medical and nursing students and house staff in community medicine; to furnish medical service to a community where it has not been readily available; and to provide for the college of medicine a facility where problems of getting health care to people and getting people in need of health care to health professionals may be critically studied.

Thanks to Space Age technology, another significant approach may soon be attempted in the wilderness of southwestern New Mexico. This ia a 50,000-square-mile region of high mountain ranges and portions of the Chihuahua and Sonora deserts. Some 95,000 inhabitants of the region are served by only three physicians.

The program here calls for a central health center and a series of remote health stations. The stations will be staffed by persons trained in health care, but not as highly trained as a physician. They will be equipped with sensors, similar to those used by NASA to monitor the health of the astronauts.

Thus, a patient visiting one of the remote health stations will have attached to himself the electronic sensors, which will transmit heartbeat, respiration, blood pressure, and other vital data to the computer-controlled center, where a physician would monitor the symptoms and advise the allied health staffer by radio.

Mr. Chairman, I have mentioned only a few of the many efforts now being made by medical groups and others, to help make medical services more readily available in rural areas.

As part of the council's work program, we are now developing Guidelines for Community Organizations for Health Services in Rural Areas. These guidelines will be distributed widely. We hope

they will stimulate rural communities to develop rational approaches to solving their health service problems.

We have also produced a booklet entitled "Health Care Delivery in Rural Areas—Selected Models," which is now in its second edition. The examples of rural health delivery systems described in this publication vary widely as to sponsorship and services offered. Here again, we hope that communities seeking solutions to health problems, by study of the models described, may find ideas and programs that can be modified to fit their own needs.

Incidentally, I have seen some well-used copies of this booklet at the offices of the U.S. Public Health Service, in Rockville, Md. With your permission I would like to enter a copy into the record as an appendix to my remarks.

Senator KENNEDY. That will be admitted.

Dr. SNYDER. Thank you, sir.

(The material referred to by Dr. Snyder follows:)

Health Care Delivery in Rural Areas

Selected Models

FOREWORD

This pamphlet is written for those who are concerned with the delivery of health services to all people living in rural areas. Its purpose is to present an overview of the problem as well as selected plans and models for delivery of health services in certain rural areas of the nation. It is hoped that from such experimental models a number of plans will evolve which can be adapted and utilized by local health planning groups for their specific needs.

Bond L. Bible, Ph.D., Secretary
Council on Rural Health
Division of Health Service

Reviewed by Council on Medical Service
American Medical Association
September, 1969
Revised September, 1970

CONTENTS

Health Care Delivery in Rural Areas
Selected Models

Fifty-four million Americans (27%) live in rural areas. Trends in the U. S. toward urbanization and specialization in medical practice have resulted in a concentration of physicians in larger cities. A resulting maldistribution of physicians in certain areas leaves some rural communities without immediate access to medical care. In addition to the problems in communication and transportation imposed upon rural dwellers by the distances separating them, we find that rural people in the more sparsely populated areas have only about one-half the access to physicians, dentists, nurses, hospital beds, and other health resources when compared with the rest of the nation. The health problems of rural areas are further compounded by environmental hazards, an aging population, and a high degree of poverty. In addition, an increasing number of patients, greater demand for services, more difficult patient problems, more complex diagnostic and therapeutic procedures, and a greater need for continuing medical education are all placing increasing demands upon the physician's time and skill.

CHANGING PATTERNS OF RURAL LIVING

If one word typifies the present rural community, that word is *change*. Social and technological changes and the problems of adjustment to them are the underlying phenomena which most characterize society and social action today, both rural and urban. Among the changes affecting rural living are these:

- Declining population in outlying rural areas as a result of tremendous population shifts to urban, suburban, and rural fringe areas;
- A decline in the number of farm families;
- Rising technology and mechanization in all fields of endeavor;
- Industrialization in rural areas, especially on the fringes of metropolitan centers;
- Health care service area evolution;
- A trend toward larger units of action—school consolidation, church consolidation, multiple county and county-city organization, and joint action;
- Growing dependence on services beyond the immediate locality;
- Larger and more complex institutions;
- Growth of special interest organizations with specific programs and approaches; and
- Maladjustments of community services and local governments.

There is great diversity of the rural population in the pres-

ent day rural community. The occupational structure is changing—increased intermingling of non-farm rural residents with farm people—increased numbers of farmers working off their farms—more women employed outside the farm home—greater mobility of all people.

The urbanizing and broadening influences of modern communication media and transportation such as radio, television, newspapers, highways, automobiles, and airplanes touch even the most remote rural family and tend to gradually reduce rural-urban differences in health attitudes, needs, demands, and behavior. Nevertheless, differences still exist in availability of resources and facilities for human services in rural communities of America as compared with metropolitan centers.

Future trends and outlooks indicate that the changes affecting rural life will continue, and in some instances, at an accelerating rate. The shift out of farming will continue, as well as technological advances in agriculture. Much of rural America will become "mixed income" communities.

The school and education will assume an increasingly important role. Adult education will increase. The role of institutions serving the rural community will change, but not decrease in importance.

VARIATIONS IN PATTERNS OF LIVING

Feedback from community study leaders in the 21 community action study groups of the National Commission on Community Health Services points up one major conclusion—that there is no single blueprint for study and solution of health problems that is applicable to all communities in all situations. The cultural base of any community is important in determining how human and natural resources are treated.

The uneven distribution of population creates important differences throughout the nation. In 1960, two-thirds of the population of the U.S. were found to live in 212 standard metropolitan statistical areas (SMSA's) and the counties clustered about cities of 50,000 or more inhabitants. There were about 2,700 or 90% of the 3,043 counties in the U.S. identified as predominantly rural. Of the 2,700 counties, 250 have less than 5,000 inhabitants each. These statistics illustrate the problem of density of population vs. space.

Continuing regional disparities appear when data on the distribution of physicians, dentists, and nurses per 100,000 population are examined by year and region. The South's supply of physicians, dentists, and nurses was at a lower level than that of any other geographical region from 1921 to the present.

That the concept of region is often applicable to the development of health facilities is borne out by past regional developments in the Southwest, Northwest, and Far West.

Wide variations in patterns of living in rural areas are evidenced. About 14,000,000 rural people continue to live at a depressed level. Some may live in the midst of relative prosperity, but are bypassed by economic and social change. Rural America accounts for 27% of our total population, but 40% of the poor.

Some communities have become stranded where farmland has been depleted or forests and mines have been exhausted. In such places, people have little access to health or other community services. The greatest concentration of the deteriorating rural communities is in the Southeastern and Southwestern states. Others are scattered throughout the country. Rural people of the Great Plains share in general rural economic and social improvements, but suffer a growing handicap in their efforts to maintain adequate community health services as the population of the counties con-

tinues to decrease. Ease of transportation compensates to some degree for the greater distances to community services. The lack of arrangements to meet unexpected health emergencies affects all families in the Great Plains region.

Health care for migrant farm workers poses difficulties in all areas of the U.S. Working in isolated communities, uncertain income, lack of resident status, and limited availability of health services, are problems generally faced by migratory farm families.

SUITABLE MODELS ARE IMPORTANT

With the changing patterns of life—demographically, economically, socially—different models for the delivery of health care services are needed. Such suggested designs will provide directions and guidelines for rural community health planning groups to consider and, hopefully, to be able to revise and adapt to meet their local requirements.

Physicians and health workers have long recognized the need for community health planning to prevent fragmentation of services, needless duplication of services, and waste of money. They are also conscious of the need for efficient utilization of currently available health manpower and facilities.

Physicians are not needed in every hamlet, village, or township. Today's modern transportation makes it unnecessary for a physician to have an office in each area where relatively few people reside. In our educational system, the one-room rural school has given way to larger multi-room consolidated schools with modern facilities and adequate resources. The same trend applies to medical services for the rural population. In some areas of the nation where rural and small urban communities are contiguous, health resources and efforts can be combined in larger and more functional groupings which will comprise a population base large enough to support a full range of efficient and high quality health services and facilities.

Today's family physician locates himself so that he can do the most good for the greatest number of people. More patients are able to reach him in less time than his "horse and buggy" predecessor. A patient who is 15 or 20 miles away from his physician today is actually closer in terms of time than a patient 2 miles away was 50 years ago.

Patients and families can more easily come to the physician and his supporting staff than in the past. Increasingly, physicians' offices are clustering around community hospitals in the larger towns. Often, the newer hospitals contain office facilities for group practice, so that the emergency room, clinical diagnostic laboratory, and radiology facilities can be jointly used for ambulant outpatients as well as inpatients. Wherever it is not possible for dispersed rural populations to come to a town because of age, infirmity, or depressed economic conditions, techniques can be used to take a mobile office with allied health professionals and a simple laboratory to the people. In some very isolated rural areas it might prove more feasible to develop small permanent satellite health centers with a well-designed clinic building staffed by a physician's assistant in residence who could serve in a similar role to that of a corpsman in an isolated military post or on a ship. Other allied health professionals could be added as needed. The problem of ready communication with the physician is soluble by techniques developed for transmission of data in the space program.

The dimensions of a health service area within which residents should join to carry out integrated planning for delivery of health services are likely to be already marked by the trading or community patterns that have been drawn

by rural and city residents together as they drive to work, to shop, to college, to visit, and to recreational and cultural facilities.

The models described here are not to be construed as predictions, but as concepts. A description of a model does not imply endorsement of a particular method for the delivery of rural health services. With our changing times, other models will be conceived and developed as local conditions may dictate. It is hoped that from such experimental models a number of plans will evolve which can be adapted and utilized by local health planning groups for their specific needs.

Each community needs to make a critical appraisal of its situation to determine the most feasible arrangement for delivery of its health care. Some questions to consider are: 1) Is there sufficient population base at various age levels to warrant patient demand for one or more physicians? 2) Is the community capable of providing necessary financial resources to support personnel and facilities? 3) Where do people travel for medical care at present? 4) Are there readily accessible major health centers available in the larger community area?

SOME MODELS AVAILABLE

A Solo Practice Model carried out by the individual practitioner plays a basic role in the delivery of health services in all areas of our nation. The solo practitioner provides adequate, integrated medical care for many people. For a number of years, the physician practicing in a rural environment has utilized his resources to the best advantage. He delivers good medical care for a large number of people. He often trains his own medical assistants. He helps to provide sufficient health manpower to take care of the health needs of the people of his community. He functions with, and has access to, expert specialists. He serves as a personal physician, oriented to the whole patient, who practices both scientific and humanistic medicine. Quality health care ultimately depends on the caliber and conscience of the individual physician. Throughout our nation's history, the individual practitioner has carried on as one of the vanguards of medical care for the American family.

Many general practitioners and specialists provide their services through an individual practice arrangement. In a recent survey of a random sample of 1,837 physicians practicing in non-metropolitan areas of the U.S., 58% were engaged in solo practice.

A Community Health Program in Lafayette County, Florida is under the supervision of the Division of Ambulatory Medicine and Community Programs of the Department of Medicine at the University of Florida's College of Medicine. The program started on January 6, 1969, as a community-oriented, comprehensive health care service for the residents of Lafayette County, Florida.

Lafayette County is in north central Florida, 60 miles from Gainesville. The Suwanee River is its easternmost border and most of the 3,000 residents live along the River bottomland. The County seat and only community of any size is Mayo, a village of 800 people. The major industry is farming—cattle, dairy, and tobacco. There is a small boat building factory in Mayo. Six hundred people work for a pulp mill in an adjacent county, the source of major employment. This is a sparsely settled, economically poor, southern rural County. There are 400 Negro residents who live in Mayo in an area referred to as the "quarters." Although the one high school and kindergarten are integrated, two completely segregated grammar

schools still exist. There has been no private physician practicing in Lafayette County for 10 years.

In Mayo there is a recently constructed County health clinic which has ample space for the ambulatory care of all County residents. It houses the office of the County health nurse and serves as the base of operations for the Lafayette County Health Center.

The purposes of the clinic are threefold: 1) To provide a teaching and training experience for medical and nursing students and house staff in community medicine. It was felt this experience would have to be some distance from a medical center. Then the students could live and participate in a community and see firsthand how people identify their own needs and how medicine may begin to meet these needs. 2) To furnish medical service to a community where it has not been readily available. 3) To establish for the College of Medicine a facility where the problems of getting health care to people and getting people in need of health care to health professionals may be critically studied.

Citizens of Lafayette County comprise the Community Advisory Committee which was formed to help in the planning and operation of this health center. They insisted upon a fee for service for those able to pay. This has helped to make the clinic self-supporting and has emphasized that this is not a project directed primarily at indigents but to all residents regardless of their ability to pay. The clinic is demonstrating the potential of being self-supporting. Since opening, they have averaged approximately 25 patients a day and slightly less than 100 house calls a month.

One resident in medicine and 3 or 4 medical students live in Mayo. They are paid a small stipend to cover their additional living expenses. They staff the clinic which has liberal hours from 8:30 a.m. to 9:00 p.m. They are available, however, 24 hours a day, 7 days a week. All medical students will rotate through this clinic experience. In addition to providing care in the clinic or at home, the resident and students write a health column for the local weekly newspaper, and participate in the community by assisting the science teachers in high school and giving talks to local service clubs and church groups.

There were two initial goals of the project. First, it had to be a successful teaching and training experience for the medical student. Second, the citizens of Lafayette County had to be receptive to this concept of health care. Both of these goals have been met. At the present time this program in the delivery of rural health services is working well.

'Oklahoma's Project Responsibility provides a plan which involves a cooperative effort between the University of Oklahoma's Medical Center, the Oklahoma State Medical Association, and other related medical organizations. Basically, it is a four-phase program, with each phase running concurrently. The plan provides for: 1) a state-wide inventory of the health science personnel now serving the State of Oklahoma; 2) a projection of current and anticipated health needs based on step 1 and in consideration of public and professional demands; 3) a reevaluation of the medical school curriculum and its hospital training program in family medicine with a strengthening of the allied health programs in relation to social needs; and 4) the initiation of a pilot study program in the delivery of health services in a community of need. For the pilot study program, the community's health center will be considered as an integral part of the University of Oklahoma's Medical Center teaching program. The physicians in the health center—an internist, pediatrician, and general practitioner—will have active teaching appointments at the University. They will have a group practice arrangement on a fee-for-service basis. Residents in family practice and preventive medicine, as well as medical students and other health professionals from the University of Oklahoma Medical Center, will serve on a rotation system at the community health center.

The town of Wakita, located 135 miles northwest of Oklahoma City, population 450, has been selected as the site for the first pilot program. The citizens of Wakita have built a modern community health center which was dedicated on September 14, 1968.

Wakita is one of five small towns in Grant County. About 8,500 people live within a 25-mile radius of Wakita. The population has been relatively stable for the past decade. No other physicians or medical facilities are available within 40 miles. The County is predominantly an agricultural area with a few oil wells. The Wakita clinic includes 7 beds for acute illness, 20 beds for extended care, and 24 beds for nursing home patients in addition to offices for 3 physicians, and a pharmacy.

A Pilot Project in Rural Medical Care in New Mexico is in operation at the Hope Medical Center in Estancia, population 800. The project was developed by the chairmen of the Departments of Community Medicine and Epidemiology and Pediatrics at the University of New Mexico School of Medicine. It is being supported by Sears-Roebuck Foundation and the New Mexico Regional Medical Program.

The Hope Medical Center was originally built for a family physician with consultation from the Sears-Roebuck Foundation's Community Medical Assistance Plan. However, it had not been staffed for several years.

The project provides a rural-urban link for the delivery of health care by a specially trained nurse and a receptionist-technician working as part of a team under rigorous medical supervision and consultation from the University.

The plan for the project involves these steps:

1) A comprehensive survey of the people was made to collect data on the present health status of the population.
2) A designed pattern of preparation for the nurse was developed by heads of various departments of the medical school, and included some instruction in nurse midwifery. A very careful selection of the scope of practice for the nurse was determined by the panel of physicians relative to providing care, health maintenance, services in selected illnesses, and emergency care. It was agreed that at no time would the nurse make a decision which might be considered as medical diagnosis, but she would make obser-

vations of signs and symptoms for the supervising physicians to consider. In selected instances, predetermined standing orders would be instituted.

3) The health center has x-ray as well as laboratory facilities. All x-rays which the nurse is asked to take are sent by bus to the medical school for the physicians to review in preparing for subsequent telephone discussion with the nurse on any patient requiring further assistance from the physician. The physicians are available by telephone at all times, and the two physicians in charge of the project give one-half day a week in the center, at which time patients needing their particular attention are seen.
4) The nurse is required to cover the health center 5 days a week from 8:30 a.m. to 5:00 p.m., with the exception of Wednesday morning. At this time each week, she travels to the medical school to a) attend weekly pediatric rounds; and b) discuss specific problems with other department heads, and secure reading materials. These weekly visits are considered her planned continuing education.
5) The office nurse, who had helped to staff the center when the family physician was in charge, was interviewed and met the qualifications and experience desired for the position. She participated in a six-month concentrated preparation program designed by the panel of physicians at the medical school.
6) The respective medical and nursing practice acts were reviewed with the attorney general of the State in order to determine that the scope of planned practice was consistent with current requirements.

The clinic was opened on February 10, 1969, and the program as planned is working effectively. The staff is composed of a receptionist-technician, and a clerk. The program is operating on a fee system basis. The hope is that eventually it will be self-supporting.

The project will be under periodic evaluation to determine its future.

The area served by the Hope Medical Center is in the Estancia Valley, Torrance County, near the geographical center of the State and embraces the villages of Willard and Moriarty, the town of Estancia, and several small mountain communities. The trade area population is 6,000 with one physician available elsewhere in the County. The principal industries are farming and ranching.

Lawrence County, Alabama - An ideal Appalachian county in which to test innovations in the delivery of comprehensive health care is Lawrence County in northwest Alabama. The number of health personnel in the County has been rapidly decreasing without replacements. There are only six physicians serving a County of more than 30,000 persons.

The Tri-County Appalachian Regional Health Planning Commission in Alabama has achieved encouraging results in bringing together local medical, public health and community leaders working in concert with University of Alabama officials in Birmingham to seek solutions to the overall health care problems in the County.

Project goals include development and establishment of a model system for delivering comprehensive health care services to a rural community, establishment of evaluation, criteria, and identification of an effective financial supporting mechanism. The project will be funded by the Appalachian Regional Commission beginning September 1, 1970.

The model has two components of patient contact: first, a family care unit and second, an "out-reach" team. The outreach teams introduce families to the community health service personnel who initiate the history-taking process and refer the family to the family care unit.

The procedure for delivering primary care is functionally designed to best meet the needs of families within the community. The principles of family practice, including emphasis on outpatient service and preventive health care, will receive first priority. An advisory board from Lawrence County will assist in implementation of the program.

The University of Alabama School of Medicine is giving full support to the project. The University will assume responsibility for recruiting former medical corpsmen to work as physicians' assistants with the physicians of Lawrence County.

Demonstration in Organization of Community Health Resources is a project sponsored by the Pennsylvania Department of Health and funded through the U.S. Public Health Service in a five-county area in rural Pennsylvania. The project aims are: 1) to develop local community organization in a rural area in order to identify and coordinate existing community health services as well as to plan and implement supplementary programs; 2) to demonstrate local committee participation in community health education programs; and 3) to test a demonstration system in the delivery of health services to rural areas based on self-supportive community action.

To accomplish these objectives a behavioral scientist, a community organization specialist, and a secretary will be available to serve in an advisory capacity within the project area. This team, backed up by consultants from the central office of the Pennsylvania Department of Health, will collect and assemble data on health resources and utilization of health facilities in the five-county area.

The population of the five-county area is 236,400 with the bulk of the labor force in manufacturing or service industries. There are 6 general hospitals in the area with 104 extended care beds. A total of 37 ambulances operate in the area. Three of the five counties have only limited home health services. A variety of clinics for preventive services are sponsored by the Pennsylvania Department of Health. There were 277 physicians in the area in 1966, 123 of whom were located in Montour County where Geisinger Medical Center is located.

Interviews have been completed in 964 households randomly selected to provide a representative sample of the population of the project area. Survey data will be analyzed to determine knowledge of, attitudes toward, and utilization of, local health resources.

The field staff has provided the stimulus for the formation of a committee of local health leaders including representation of medical societies, hospitals, and nursing associations. This group is providing additional information on local resources and major health needs.

The advisory committee provides the nucleus of a larger committee composed of a more diversified representation of the area. This larger committee includes representatives of a variety of agencies and groups, both lay and professional. This group will, from its firsthand knowledge of the area and supported by reports from the project staff and professional committee, establish priorities for health planning for the project area.

As recommendations are formulated, appropriate remedial steps will be planned. It is anticipated that many activities will fall within the capabilities of the local area. Hopefully, the involvement of the community in program planning will provide the impetus for self-supportive local action. Through consultation, the field staff and state committees will assist local communities in securing state and federal support when community resources prove inadequate.

The Rural Health Project in Southern Monterey County (California) is an attempt by a private group of physicians to demonstrate that, with the collaboration of the county medical society, they can responsibly and efficiently conduct a program to provide comprehensive medical care to indigent patients. Within the purposes of PL 89-749, The Rural Health Project is an experiment concerned with developing a new way of organizing indigent care and at the same time providing the basis for comprehensive health planning at the local level.

The basic objective of the overall program is to provide comprehensive, high quality medical care to all eligible residents, including migrant farm workers. This care is provided in the same facilities and by the same staff as are utilized by the self-sustaining residents of the area. There is no segregation of care. A thorough medical evaluation of each patient is attempted, as well as the establishment of a continuing relationship with the physician and other members of the health team. In this manner, not only treatment for current medical problems is provided, but also education of the patient in the proper utilization of routine preventive care.

The grantee for the *Rural Health Project* (RHP) is the Monterey County Medical Society. The Southern Monterey County Medical Group is the delegate agency and provides physician services under a grant from the Office of Economic Opportunity. It is a private group practice operating a major clinic in King City, and two smaller offices in Greenfield and Soledad. There are 10 physicians in the group covering internal medicine, surgery, and general practice. A number of visiting staff provides specialized services. The George L. Mee Memorial Hospital and the Pioneer Hacienda Nursing Home are collaborating agencies in the project.

Physician services provided at the clinics, and laboratory and x-ray services at the hospital, are offered from 9:00 a.m. to 5:30 p.m., 5 days a week. The King City clinic is also open 5 nights a week to accommodate RHP patients who cannot come to the office during the day. The only charge for services rendered for beneficiaries of the project is a $1.00 fee for each prescription filled. This fee is waived on request. All medical services provided under the OEO grant are on a fee-for-service basis.

Transportation from all sections of the project area to the clinics and to the hospital is provided. Two station wagons and one small van, equipped for wheelchair patients, are

59-651 O - 71 - pt. 5 - 16

used. This service is available to all grant patients on request.

A research component is also embodied in the project plan. The use of public health and social welfare professionals in a private group and the feasibility of offering careers in the health field to members of indigent families are being demonstrated. "Health Aides" have been recruited from the eligible population itself and are being used to establish communication with the target population. Public health professionals added to the group's staff under the grant include a public health physician, a public health nurse, and a health educator.

The population of the project area is about 17,000. An additional seasonal influx of 6,000 migrant farm workers from March to October will run the total to 23,000. King City is a town of 4,000 people. The primary industry in the area is agriculture.

A total of 4,500 patients are seen monthly by the 10 full-time physicians and 15 days a month of specialists at the three group clinics. There are an average of 6,500 OEO eligible patients in the area. Together, the clinics and the Rural Health Project have a total of about 80 supporting (non-physician) staff members. The project has been in operation since June 11, 1967.

MEDEX. In Seattle, the University of Washington Medical School and the Washington State Medical Association's Education and Research Foundation have set up a program to train former medical corpsmen, who are brought into the Medical School for a three-month refresher course on civilian medical procedures.

The purpose of the MEDEX (from a French term meaning "physician extension") Project is to develop an extension of

the physician, a person trained by and for a specific physician, working under his supervision and available to help him 24 hours a day. MEDEX is a model of non-physicians extending primary care transferable to rural or urban settings.

Upon completion of the three-month training period, these MEDEX are sent out across the state to work in offices of physicians who agree to act as their preceptors and to employ them after 12 months of on-the-job training. The physicians selected are general practitioners with a knowledge of the experience of military corpsmen and who express an obvious need for help in their medical practice.

Special attention is paid to the selection of the corpsmen, the matching of the MEDEX and preceptors, psychologic adaptation to the civilian medical scene, and the development of the MEDEX's self-image, identity, and status. Based upon present experience, any large-scale attempts to utilize former military corpsmen in civilian settings should pay particular attention to these areas.

The first 14 MEDEX are now on the job, mostly in rural communities, and are sharply boosting physician productivity and morale. They seem to have gained the respect of nurses and other staff in physicians' offices and hospital staffs and are very well accepted by patients.

MEDEX is not a radical innovation in health manpower, nor is it a new training program being developed within a university. It is a joint project of potential uses of the MEDEX personnel and the developers-trainers-evaluators of the MEDEX program. It is an overdue effort resulting from a global perspective to pull together existing resources to meet a growing need in community health.

The AMA Council on Rural Health, in cooperation with the Washington State Medical Association and the Washington State Medical Education and Research Foundation, is currently exploring the feasibility of developing a project in delivery of comprehensive health care to the citizens of a two county rural area in Washington which will involve utilizing the health team efforts of allied health personnel, including MEDEX.

The "Cross-Road Medical Center," which involves the establishment of a multiple physicians' center, is sponsored by the Committee on Rural Medical Service of the Medical Society of the State of New York. The Committee has just finished a pilot study in three rural areas, composed of 30,000 people who are without a physician. Results from the study will be utilized in planning for the medical centers. The centers would embrace a geographical area, which is without a physician, of possibly four or five adjoining communities or towns cooperating to provide a population base which could support quality medical care, (approximately 10,000 to 30,000). Each center would be staffed by physicians from the surrounding area on a part-time basis, until permanent physicians can be obtained. The communities will provide a well-equipped facility, with a modern laboratory and staffed with trained personnel. These centers would be related to the hospitals and other medical centers in nearby cities, and the physicians would have staff appointments at these hospitals. The staffing of the centers may include specialists as well as family physicians. The determination of the type of specialist can best be ascertained by size, age, and general composition of the surrounding population. The Medical Society will utilize all resources available in the recruitment of physicians for the designated centers.

The Maine Coast Regional Health Facilities Plan is a unique method for delivery of rural health care. The Plan was conceived as a comprehensive medical care program to provide quality care, consisting of a central hospital with hospital-based specialists and outlying satellite clinics staffed by family physicians. The concept grew and evolved over two decades and was launched with the opening of a community hospital in Ellsworth. Three satellite clinics have been established and specialists travel to the clinics for afternoons of consultations. The organizational aspects of the plan are still in the process of development with the physicians and the institution.

Even though there have been many obstacles in the growth of the Plan, medical care has been provided for the patients on a continuous, comprehensive and quality-controlled basis.

Preschool and school clinics have been established and finally a contract for a school physician was obtained. Talks by physicians were given to civic clubs, professional groups, and church organizations. A weekly radio program was established and maintained for educational purposes.

Ellsworth is a city of less than 5,000 people, centrally located in the downeast area of coastal Maine. The two counties of Hancock and Washington contain fewer than 70,000 people and cover an area of approximately 3,000 square miles. Ellsworth is the largest town in the two Counties. Public transportation is practically non-existent.

The people of the area are primarily lobstermen, clam and worm diggers, wood cutters, blueberry rakers, sardine packers, boat builders, artists and writers, out-of-doors people, all seasonal workers, and all individualists.

In the two County areas, there are about 50 physicians and 7 hospitals, 3 of which are accredited. Initially, all of the physicians were in solo practice. Efforts have been made to develop a group plan for medical practice.

In the development of the Plan there has evolved a close relationship with State health projects. Physicians in the health center provide care to patients under the various programs on a fee-for-service basis as well as the usual contractual arrangement for a full day's clinic.

There is also an attempt being made to participate in the Regional Medical Program, comprehensive health planning, and mental health planning as well as the programs in education and Head Start.

Another aspect of the Plan has been the relationship with Harvard Medical School with fourth year students coming to Ellsworth on an elective basis to participate in a program titled "rural pediatrics."

In summary, the important aspects of the Plan are: 1) concern with the health needs of the people; 2) planning for comprehensive health care; 3) quality control; 4) continuing health education—for physicians, nurses, students, and the public; 5) interrelationship of private, public, and civic (volunteer) enterprises; 6) involvement of multiple disciplines; and 7) use of local talent and resources.

"A Physician-Monitored Remote Area Health Program" is a proposal prepared by the New Mexico Health and Social Services Department and NASA Manned Spacecraft Center. The proposal is under demographic study and review as to feasibility by State officials and agencies. The New Mexico Medical Society has a task force committee of physicians involved in the study and review process.

The program revolves around NASA-sponsored physician-monitored remote health centers which call for a system of facilities equipped with sensors like those used on astronauts

in space that send back medical information to physicians on the ground.

An individual living in a remote area could go to one of these health centers where health service personnel, persons trained in health care but not as highly trained as a physician, could attach the electronic sensors which would transmit heartbeat, respiration, blood pressure, and other information to a computer-controlled center where a physician could monitor the patient's symptoms and advise the allied health personnel about treatment. The allied health personnel could also talk to the physician by radio or television.

As currently visualized, a healthy patient would be enrolled in the remote health program during a regular visit to his physician or by a mobile survey unit. Medical history and other information would be recorded and stored in a computer.

The remote centers would be staffed by nurses and other allied health personnel, would be located at schools, and would be served by mobile units.

If a patient became ill, he could travel to the nearest remote center, if able, or be called upon by a mobile unit. The sensors could be attached to the patient and his life signs transmitted to the control center. A physician on duty at the control center would request the patient's file from the computer and the nurse and patient could talk to the physician by radio.

The physician could then prescribe medication or other treatment until the patient could be removed to a hospital.

If started, the first phase would involve the southwest corner of the State which includes 50,000 square miles of wilderness area, high mountain ranges, and portions of the Chihuahuan and Sonoran deserts. There are 95,000 persons in the area, served by fewer than 30 physicians.

The Iowa Medical Society Task Force on Health Manpower in Cooperation with the University of Iowa College of Medicine and the Health Planning Council of Iowa are working toward the improvement of delivery of health care services on a state-wide basis. A major project in 1968 was the sponsorship of meetings in the 16 functional economic areas delineated in the State. These meetings were designed to inform physicians about the medical manpower situation in Iowa, and to suggest ways to improve health care delivery through community planning.

A similar arrangement for meetings is scheduled for 1969. These sessions will involve physicians, other allied health personnel, and representatives from various other segments of the community. The purpose of the meetings is to explore the problem of what can be done at the local and area level to improve the availability of quality health care in the State.

The Task Force developed a general statement outlining the Medical Society's interest and involvement in medical manpower studies and projects as well as offering ideas and suggestions to alleviate existing inadequacies in the provision of health care. The Task Force also proposes that an increasing number of allied health personnel be utilized on the health team to assist physicians to make more effective use of their time and energy in dealing with the increasing burden of health problems.

One project conducted during the winter of 1968-69 was a series of informal meetings at each of the University of Iowa's several medical fraternities. These meetings afforded medical students an opportunity to visit with private practitioners and to discuss the advantages of practicing medicine in Iowa.

The preceptorship program has been reevaluated and updated to provide medical students with a valuable oppor-

tunity to observe the private practice of family medicine.

The Iowa Medical Society's House of Delegates in 1969 approved resolutions recommending selection of medical students most likely to remain in Iowa, tuition forgiveness program for physicians remaining in Iowa after graduation, an approach to the solution of adequate medical manpower through emphasis on the challenge of general practice of medicine, and a program to sell the wives of physicians on life in the smaller towns, such as county seats.

COMMUNITY INVOLVEMENT

The number of models developed and in the process of development is quite lengthy. It is not the intention of this paper to include an exhaustive summary of all plans.

This brief review of selected models of health care delivery clearly illustrates that the search for rural health manpower must generally be geared to an area-wide health care system. Nowhere can this be done better than in the small towns with which we are most concerned. They can identify their own nurses, active or retired, technicians, teachers who have health skills, or others who can be trained to perform relatively simple, but nonetheless critical, services. A nurse with special training or other specifically trained assistants can relieve the physician of many time-consuming professional activities and allow him to use his professional skills much more productively.

The focus in these endeavors is on community consciousness. The greatest investments will be in deliberate planning based on a belief in the rights of all its citizens to have access to good health care. With modest expenditure, small communities can establish efficient emergency care through the use of everything from a pool of private automobiles to well-equipped ambulances or (with greater expense), helicopters. With prudent screening in each locality, advance arrangements can be made to have groups of patients seen with the least possible loss of time at the physician's office.

It seems especially important for organizations concerned with the delivery of health care to rural people to be deeply involved with comprehensive health planning groups at all community levels. It is essential for rural leadership to be represented on community health planning councils so that they can speak for rural people and ensure good planning for future health care programs in their communities.

The elements of planning for the delivery of rural health services have only been sketched. What is most urgently required is a strategy for its development and implementation, an entirely local responsibility if it is to be successful.

CRITERIA FOR EVALUATION

Communities must establish measures or criteria for evaluating a proposed model for the delivery of health care services which may be adaptable to the local situation. Evaluation procedures should be built into each step in the total process encompassed in planning and implementing the health care system.

Logically, the process begins with an analysis of the local situation or medical service area. Such an area may include several communities and towns and may be multi-county in size, depending upon the population density and trading area. Facts are needed with regard to the health experiences and health needs of the people in the area. An inventory of the health manpower and health facilities available in the area should be made as well as health resources which may be called upon beyond that area. Consideration must also be given to the relationship of any new plan or model for health care delivery to the existing methods available.

Criteria for measurement of ideal community health services may be summarized as follows: 1) methods must be devised to utilize physicians and allied health personnel in the most efficient and economical way; 2) there must be adequate facilities in the medical service area—hospitals, laboratories, extended care facilities, and nursing homes—to provide needed services; 3) there must be an effective organizational and delivery pattern of services so that professional personnel and facilities are efficiently utilized to provide high quality health care; 4) there must be adequate funds or sound financing mechanisms to permit construction of needed facilities and utilization of services; and 5) the community itself must recognize the advantages of excellent health care, should seek to secure these advantages by establishing requisite facilities, and by attracting needed physicians and other health professionals where feasible or combining with other communities in an enlarged medical service area.

UTILIZATION OF RESOURCES

Education for health is a fundamental aspect of community health services and is basic to every health program. It should stimulate each individual to assume responsibility for maintaining personal health throughout life and to participate in community health activities. The community has a responsibility for developing an organized and continuing educational program concerning health resources for its residents. Each individual has a personal responsibility for making full use of available resources.

The objectives for health education, then, are to interest each individual in his own health and the means to improve it; to teach him where health services are available; to motivate him to use these services intelligently; and to enable him to discriminate between scientific health care and quackery.

The widespread concern about health manpower has extended beyond that of the growing need for physicians. We are now equally concerned with the preparation and effective utilization of those professions and services supportive to the physician in providing health care. To utilize the services of the physician most efficiently, a nucleus of appropriate people in the community can provide valuable assistance. The concept of the health team is not new, only the size of the team is being enlarged. Th physician-nurse arrangement has today been augmented with a cadre of additional allied health personnel. Problems are found in both the availability of personnel and in the manner in which they are utilized. However, the trend is certain that an increasing number of trained, responsible members can effectively assume their respective roles on the health team that is, in truth, a team.

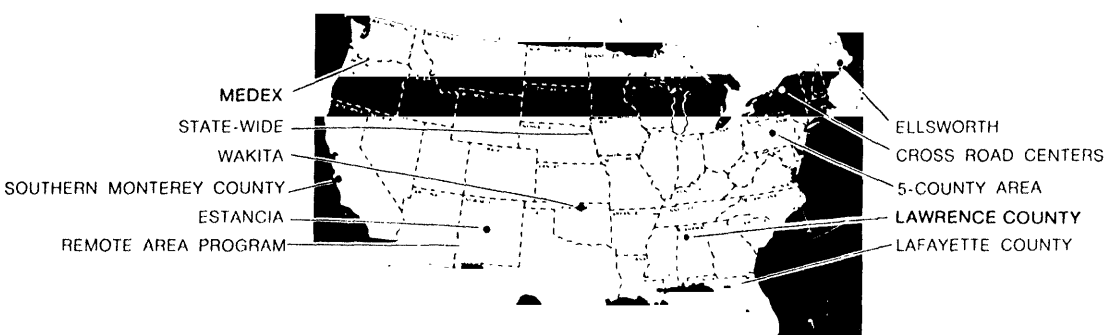
In conclusion, we can say that the way for each person to attain the goal of optimum personal health care lies within his community and its resources. Ultimately, the power is found within the people themselves. As Thomas Jefferson said, "I know no safe depository of the ultimate powers of society but the people themselves; and, if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion by education."

SUMMARY OF MODELS

PLAN	SPONSOR	LOCATION	DESCRIPTION	CONTACT PERSON
Solo Practice	Individual physician	Nationwide rural and urban areas	Individual physician carries on medical care for his patients	
Community Health Program	University of Florida College of Medicine with community advisory committee	Lafayette County, Mayo, Florida	Medical and nursing students with resident deliver health services under supervision of College of Medicine	R C Reynolds, MD Division of Ambulatory Medicine & Community Programs Univ of Fla Coll of Med Gainesville, Fl 32601
Oklahoma's Project Responsibility	University of Oklahoma Medical Center with state medical association and citizens of Wakita	Wakita, Oklahoma	State-wide program with pilot project in rural Wakita	Thomas N Lynn, Jr , MD, Chmn. Department of Community Health 800 N E 13th Street Oklahoma City, Ok 73104
Pilot Project in Rural Medical Care	University of New Mexico School of Medicine, RMP, Sears, and local community	Estancia, New Mexico	Nurse practitioner specially trained delivers services under direct supervision of School of Medicine	Robert Oseasohn, MD Department of Community Medicine and Epidemiology 915 Stanford Drive, N E Albuquerque, N M 87106
Lawrence County Alabama Plan	Tri-County Regional Health Planning Commission in Alabama	Moulton, Alabama	Delivery of comprehensive health care services through health team approach	Robert H Rhyne, MD Box 217 Moulton, Al 35650
Demonstration in Organization of Community Health Resources	Pennsylvania Department of Health and Public Health Service with local community advisory committee	Five county area in rural central Pennsylvania	Develop community organization, involve local groups, and test health care delivery system	A L Chapman MD Bureau of Planning Evaluation & Research Pa Dept of Health Harrisburg Pa 17120
Rural Health Project	Monterey County Medical Society, Southern Monterey County Medical Group and OEO Grant	King City, California	Provides comprehensive medical care to all residents including migrant farm workers	Noel Guillozet, MD 210 Canal Street King City Ca 93930
MEDEX	University of Washington Medical School and Washington State Medical Association's Education and Research Foundation.	Washington	Train returning corpsmen to serve as physician assistants	Richard A Smith, MD MEDEX 444 N E Ravenna Blvd Seattle, Wa 98115

Crossroad Medical Center	State medical society's Committee on Rural Medical Service and local citizens	Upstate rural counties in New York	Plans to establish medical centers in service areas with appropriate MD staff	Edward C. Hughes, MD 325 University Avenue Syracuse, N.Y. 13210
Maine Coast Regional Health Facilities Plan	Physicians and community citizens	Downeast area of coastal Maine	Comprehensive medical care program with central hospital and outlying satellite clinics	Morris A. Lambdin, MD Maine Coast Regional Health Facilities Ellsworth, Me. 04605
Physician-Monitored Remote Area Health Program	New Mexico Health and Social Services Department, NASA Manned Spacecraft Center and local citizens	Southeast corner of New Mexico	Remote health centers equipped with NASA sensors and other devices in direct contact with MD at control centers	Julius L. Wilson, MD 924 Canyon Road Santa Fe, N.M. 87501
Iowa State-wide Plan	Iowa Medical Society in cooperation with College of Medicine and State Health Planning Council	State-wide planning	Considering delivery and accessibility of plan for all of Iowa	Donald L. Taylor Iowa Medical Society 1001 Grand Avenue West Des Moines, Ia. 50265

LOCATION OF MODELS



Dr. SNYDER. As I am sure this Subcommittee is aware, the council's 24th National Conference on Rural Health, met last week at Atlanta, Ga. Some of the papers presented interesting new approaches to solving rural health problems. Among the 700 persons in attendance were physicians, nurses, allied health professionals, educators, hospital administrators, medical students, and health planners. Included, also, were representatives of voluntary health agencies, medical societies, public health agencies, and farm organizations. Sponsorship of this national conference is one of the activities of the council.

Mr. Chairman, I can sum up my remarks by saying that doctors are aware of the need for better health care in rural localities. Together with other groups and organizations, we are actively developing new approaches to the problems.

Experience indicates that no one approach will solve the health needs of every community, but solutions can be tailor-fitted as required. While medical solutions are being sought for these health problems, however, we believe that the root-causes to these problems—largely socioeconomic in character—should be identified and, where possible, resolved.

Thank you for the opportunity of presenting this statement on behalf of the American Medical Association. We shall be pleased to attempt to answer any questions which the committee may have.

Senator KENNEDY. Thank you very much for your helpful statement, Doctor.

Could you tell us a little bit about your meeting last week. What was the general reaction of the people who were interested in the problems of rural health and various existing Federal programs? Do most of the people feel that rural America gets short-changed in terms of even the existing Federal programs?

Dr. SNYDER. It is difficult for me to assess the feelings of every person there. I think generally those of us who are involved in attempting to provide health care services to rural America feel that Federal priorities have been directed toward urban areas. This has been of concern to many of us who have voiced these concerns loudly to members of the public health service as well as to our regional public health offices in our own communities. I do not believe there is any question that rural people have been very placid about their problems in general, and not just health problems, but the total quality of rural life. They are long-suffering, they think more about taking care of their animals very often than about taking care of the health needs of their families. I have made this personal challenge at farm organization meetings, and after the initial shock they agree that this is so.

The priorities for health in rural areas are low. Health education is essential if we are to raise the health level not only as a priority, but the intelligent use of health care resources as they become available.

Senator KENNEDY. Do you think that solo practice is going to be the best means of providing the kinds of quality care in these rural areas?

Dr. SNYDER. I think that we are going to find that there is as wide a variety of practice in rural areas as there is in urban areas. I think that the solo practitioner, as the predominant vehicle for the delivery of health care service in rural areas, will not exist long, because the physician who is presently in rural areas, as he gets older and more tired, is not finding any young physicians coming up the pike to take over his type of practice. So I think we are going to find a wide variety of associations and linkages in the use of manpower, transportation, technology, the whole gamut of services without which the vital use of personnel and the like will be inadequate—I think this is going to be the rural American health service in the future.

Senator KENNEDY. Of course, even the utilization of these paramedical personnel requires adjustments in various State statutes to permit them to begin to assume some of the less demanding tasks in health care.

Dr. SNYDER. This is one of the great debates of today, of course, just what place should the variety of health professional assume as a legitimate function. I think that every State Legislature is now wrestling with this. In California we have just recently passed legislation which will allow the physician's assistant to assume a role in the gamut of providing health care services. And the State of Washington has been dealing with this. There are still a number of questions to be answered, not only the certification or licensure—and we do not believe that these people should be licensed, but rather certified—there are a whole variety of questions—how to codify their duties, the whole relationship of the malpractice problem, which I know has been brought to you very strongly as a real problem to medicine today—all of these things need to be answered. There are no instant answers. We will need to have more experience.

Senator KENNEDY. What can you say about the quality of health care in the rural areas? We have had testimony raising questions about quality in the urban areas. I would think quality would be even more uncertain in the rural communities of America. Is there anything that you could say about this?

Dr. SNYDER. I presume you mean the quality of health care services specifically?

Senator KENNEDY. That is right.

Dr. SNYDER. Rather than health care?

Senator KENNEDY. That is right.

Dr. SNYDER. I think that we are dealing with a very, very human element. I think there is a wide scale of capability which is very, very strongly influenced by the volume of work that a man has to do. I have known many, many rural practitioners who are just—they are superb, I can use no less strong a word. They develop a wide variety of skills, and they have developed linkages with communities adjacent to them. They do practice a high quality of medical care. Again, there is every variety. I have seen other places where the quality of care has gone down simply because of the mass of work that a man is supposed to do, is forced to do. I think that we have tried to address ourselves to these problems. I think the regional medical programs are a good adjunct. But the American

Medical Association and the various State societies have addressed themselves to continuing education, and must increase their effort in order to assure the continued quality of care.

Senator KENNEDY. Could you tell us from your experience what you think are really the best ways of attracting the needed health manpower into these rural areas?

Dr. SNYDER. The best, of course, is quite a challenge, because I do not think we know what the best method is. I have opinions about a variety of ways that it can be done. I think that first, we must address ourselves to the maldistribution of health manpower and the causes for it. We have spoken of some of those, the urbanization, the deterioration of the quality of living in rural areas. I agree with the witness who preceded me, that until we attack those areas of quality of life in rural areas, that we will not really come close to solutions in health manpower. I believe that the variety of situations in this vast country is so great that to try to have one best solution is a task which cannot be accomplished. This is one of the reasons that we on the council have spent many months in developing guidelines for rural communities, in which we attempt to give some guidance to how rural communities can join in the service shed, recognizing that the small rural town is not going to have its individual physician, but to develop a service shed which will allow important regional development of a rural health service which will be more attractive to physicians to gather together in an association.

I think that we have to address education, I think we have to address transportation, and we have to address many elements in rural life in order to attract the providers of health care services. This is a rather diffuse statement. But I have seen it work in my own community. We worked with two rural communities outside of my city for 18 months to develop such a system with the purpose of attracting new physicians into the area, initially to be staffed by members of our medical society from the major community resource, which is the city of Fresno. I think every community must evolve its own destiny. I think this is the answer.

Senator KENNEDY. What does your organization, the AMA, do to alleviate this shortage of manpower in rural America?

Dr. SNYDER. We have a variety of approaches to this. In the first place, we have tried to define the problem. This is difficult, because again there is no one answer to it, although I think the quality of life in rural America is the chief answer.

We have worked very, very intensively with medical schools urging that medical students and all health science students be given community experiences so that they can make a more informed choice of their ultimate careers.

We have worked intensively with our advisory committee, which represents a national membership, to spread our concern and to share their concerns, hoping that it will get down to the community level where things have to happen. It cannot happen here in Washington, it has to happen at the community level. It cannot happen in Chicago at our headquarters, it must happen at the county society level.

We have developed statements such as our guidelines, such as this pamphlet which has been put in the record, and a large variety of

literature which goes to our considerable mailing list. We have worked with the AMA Physicians Placement Service and state placement services to try to match physicians with communities hoping that we can strike a spark between the two.

Those are just some of the things that come to mind.

There are many others. The Council on Rural Health is not the only council or committee of the AMA that is concerned with health manpower distribution. And though we try to coordinate our program, we do have some differences in approach. And this is the approach that I know best.

Senator KENNEDY. What do you believe to be the most urgent health problems in rural areas?

Dr. SNYDER. I think that the health problems in rural America are not different in kind than they are in urban America. I think there is some difference in degree, simply because there is more poverty. The rural area is a hazardous area. Sanitation is at a lower level, because it is less scrutinized. We have spoken of the other areas which so strongly affect health concerns. These are all part of the total societal problem.

If we are to get down into some areas of Texas and New Mexico, we find there has been a considerable amount of intermarriage, so we find that diabetes is a very great problem. Because of dietary habits gall bladder disease is a problem out of proportion to the rest of the population. We find that nutrition is a great problem, that there is inadequate information, inadequate knowledge of how to use foods. But basically the major health problem is the lack of priority, the lack of education on how to use resources that are available. The total lack of resources in the rural communities compounds the whole problem that we have mentioned.

Senator KENNEDY. If you had the opportunity to send resources into rural America, what sort of resources would you send in first? Would you build more hospitals?

Dr. SNYDER. This is after the communities were prepared by adequate community organization and health education and all the other things so that they could use resources effectively and efficiently, I presume?

Senator KENNEDY. Yes.

Dr. SNYDER. I could not pick out any single resource that I would send in first, because I strongly believe that medicine—that health care in a rural community is going to be a team affair. I think that I would send in teams of physicians—I would first of all send in the primary physicians, the family practitioner, the internist, and the pediatrician, hopefully the obstetrician and gynecologist, to form the nucleus of an association giving them support with laboratories and other technical aides, and making certain that transportation is added to their services, associating them with public health nurses and health aides, so that adequate followup can be done. And I would not build more hospitals, but rather use the hospital system that we have now in a series of linkages which would allow them to be used more appropriately.

Again, I have not emphasized one resource, because I do not see any one segment of the health industry offering total solutions, but

rather it would have to be appropriate placement of appropriate personnel. Again this will depend on resources already present, the distances involved. I cannot see replacing the brilliant nursing program in New Mexico with a large team for the care of 200 people. It just is not economically feasible—socially feasible.

Senator KENNEDY. How would you categorize the difference between rural health today and what it was, say, 20 years ago, 25 years ago? Are people sicker out there?

Dr. SNYDER. No, sir.

Senator KENNEDY. Are they healthier?

Dr. SNYDER. No, sir. I think that generally the population is actually healthier than it was previously. I think that our immunization programs reach deeply now to rural areas, possibly because of schools' insistence on most students having adequate immunization before entering school.

I believe that in my own experience the sophistication of rural people who have had contact with the health providers rises. My own experience is that rural patients, black, brown, or white, are more sophisticated, and know better how to use resources than they did. I think that generally with education going on through the cooperative extension service in nutrition, that nutritional status is much uplifted in many areas. This does not cover the total country, unfortunately, but I think there have been very significant advances.

Senator KENNEDY. Would you discuss the small community hospitals. What is their role? What is their role in providing health care. Should some of these be turned into ambulatory care facilities? How many offer ambulatory facilities now? Do we need more of them?

Dr. SNYDER. Again, we deal with a very, very human element when we speak of the small rural community hospitals. Some of us felt that the emphasis on the building of rural community hospitals 3 or 4 years ago was not wise. We feel that many of the community hospitals in isolated rural areas cannot offer adequate hospital services. We sometimes wonder whether we need to call them a different name. The rural hospital that is served by two or three physicians and tries to do the types of sophisticated work which we see in urban hospitals I think must fall short. However, we deal with the very human element of communities wanting their hospital just as they want their doctors. And I assure you they will fight long and hard to keep them. I think that they are providing services, however, in the rural area. They are keeping people close to home with illnesses which otherwise would carry them far away from their homes, with the dislocation of family and the like. And so they do do a job for rural America. I think that we have to learn new ways of linking the small community hospital with more sophisticated hospitals so that there can be a smooth transition of the types of services needed.

So concluding this rather rambling response to your question, I think that if we had more health resources in rural communities, that rural hospitals would be used more appropriately, and that there would be more ambulatory care. However, I would not like to destroy the rural hospital system until we have proven that there is a better way to take care of rural people.

Senator KENNEDY. I want to thank you very much, doctor. Your testimony has been very helpful. I do not think there is nearly the kind of focus on rural health that the need warrants in this country at this time. I think we are going to have a very difficult time trying to meet these problems. We see enormous health problems in the urban areas of the country, but I frankly am more optomistic about meeting those than I am about meeting the problems we see in rural America.

I want to thank you very much for coming here this morning.

Dr. SNYDER. Thank you for your courtesty.

Senator KENNEDY. I recognize the distinguished Senator from West Virginia for a statement.

STATEMENT OF HON. JENNINGS RANDOLPH, A U.S. SENATOR FROM THE STATE OF WEST VIRGINIA

Senator RANDOLPH. Thank you, Mr. Chairman.

Before taking the opportunity to present the next witness. I wish the record to reflect my commendation to the Subcommittee on Health through its chairman who presides today, and the members who join with them, in the very carefully programed hearings which are now in progress, covering in depth and scope many of the problems that are acute in both urban and rural America. From the standpoint of the strengthening of the health programs of the Nation and its people, I think no more important hearings are in progress, or have been in the past, or will in the remainder of the first session of the 92d Congress, then the hearings you, Mr. Chairman, are conducting.

I did ask the privilege of presenting Dr. Nolan this morning. He is not only a personal friend, but I wanted to underscore his preeminence in the area of aiding those persons who live in a State like West Virginia, which is a rural State—and perhaps there is only one more rural than West Virginia. We think of it as a State of manufacturing and mining. That is true. But we are a rural people, living in the valleys and on our hills. Because much of the population lives in small communities, often with great distances between these communities, communication is difficult.

I wanted to underline the efforts of Dr. Nolan at this hearing. Dr. Robert L. Nolan is the professor and chairman of our division of public health and preventive medicine at the West Virginia University Medical Center. He is also our professor of pediatrics at the University. Dr. Nolan is a creative and constructive leader in this field. He has done so very much to strengthen the general programs of our center in West Virginia.

A few years ago we in West Virginia did something that was perhaps innovative, in that we placed a special tax upon so-called soft drinks, with all that tax money going to construct the medical center at West Virginia University. It was a tax which our people—those selling the products, and those consuming the products endorsed—And the efforts that have been carried forward have been very, very constructive. We did not realize what problems we had until we faced them as we have.

Mr. Chairman, the testimony of all witnesses who come before you is important. But there are certain problems which I think Dr. Nolan has a special understanding of. And I am sure, as on prior occasions, that he will today make a major contribution to your most significant hearing.

Senator KENNEDY. I want to thank the distinguished Senator from West Virginia. He is the senior ranking member of this Labor Committee, and he is greatly interested in the problems of health. And I think that we are extremely fortunate, of course, in our full committee to have his energies and interests demonstrated time and time again. He has many responsibilities, but the fact, for example, that he was good enough to come down this morning and introduce this doctor is an additional indication of his very deep and sincere and continuing concern about the health of the people of his State and the people of the country.

So it is always a pleasure to see my colleague and friend. And I want to say how much we appreciate his kind words about Dr. Nolan. He underscores what I think all of us realize; that he has had a varied background and experience, and he is uniquely qualified to talk about the problems of rural health.

So, Dr. Nolan, I want to welcome you to this committee. And we are looking forward to your testimony.

Senator RANDOLPH. May I make this further comment, Mr. Chairman, that I have attempted even at night to have a synopsis made of your hearings, because I consider it a matter of prime importance. And I assure you of my personal and official support, within the committee and the Senate, of the broad purposes that you are so ably advocating in these hearings.

STATEMENT OF ROBERT L. NOLAN, M.D., PROFESSOR AND CHAIRMAN, DIVISION OF PUBLIC HEALTH AND PREVENTIVE MEDICINE, WEST VIRGINIA UNIVERSITY MEDICAL CENTER

Dr. NOLAN. Thank you very much, Mr. Chairman.

And thank you very much, Senator Randolph, for your gracious introduction.

Gentlemen, I appreciate your invitation to participate in this hearing today to present some observations and recommendations concerning health matters in rural areas.

For a variety of reasons studied by countless commissions and committees, rural people do not share in the same opportunities as the rest of their fellow Americans.

Rural health conditions in this country today are the heritage of decades of continuing neglect and indifference, which have left our deprived rural regions far behind the rest of the Nation. Whatever elements we attribute to the "health crisis" in the country today, these are severely aggravated in our rural areas, where conditions similar to underdeveloped countries often prevail.

Poverty in rural American dominates the lives of an estimated 14 million people, or one out of four living in rural areas, compared to one out of eight in urban areas.

In the urban ghetto, help can be summoned from the surrounding affluent regions; people and agencies are available who can give their skills to provide assistance. In an emergency hospitals do exist within the city, an ambulance may be found, and so may a doctor.

In the isolated rural areas there may be no ambulance, no hospital, no doctor, just no help available. The resources that we take for granted in the cities simply do not exist in many of our rural areas. These shortages in rural areas also affect those with financial resources, who must travel long distances for needed health care and also have no access to adequate emergency care.

Rural areas share the other liabilities of the ghetto: unemployment, inadequate housing, crowded dwellings, and discrimination. In addition, the rural areas are plagued by an absence of transportation which is almost complete, and which the new Railpax will not resolve, isolation created by geography, weather, and poor roads, lack of strong public or private institutions, dispersal of population impairing political effectiveness and community organization.

In many rural areas even water, waste disposal, electricity, and modern heating—basic needs associated with a modern civilization—and all lacking.

RURAL HEALTH ISSUES—WEST VIRGINIA ILLUSTRATION

The situation in West Virginia is illustrative of problems in other rural areas. Almost 60 percent of West Virginia's population is dispersed in rural areas, many living in relatively isolated "hollows," without access to health and medical services. There is a severe shortage of physicians, dentists, and nurses in these rural areas; in some counties there are no practicing health personnel available at all.

The State's own health task force report in 1967 noted:

(1) There were only 96 M.D.'s per 100,000 population, compared with a national average of 142 M.D.'s per 100,000. Furthermore, an undetermined number of these physicians (average age 53 years) were not in full-time practice. In the last 10 years over 60 communities with populations of less than 10,000 have been left without physicians as rural practitioners retired and were not replaced. In 13 counties there was only one physician for four times the patient population recommended by the American Medical Association (1/700), and in the six counties the population load for physicians was six times the recommended ratio.

(2) Although it was estimated that the State needed 720 public health nurses, as a minimum, there were only 136 so identified, or one-sixth the need. In addition, less than two dozen of these nurses were actually trained in public health.

(3) Of all West Virginia families, 32.6 percent had total incomes of less than $3,000 per year.

Senator KENNEDY. The people in West Virginia?

Dr. NOLAN. Of all the families in West Virginia at the time of this report in 1967 almost 33 percent had total family incomes of less than $3,000 per year. This represented 150,637 families. Only 44,193 families in this group were receiving welfare assistance. That

is, assistance payments based on 52 percent of need determined in the early 1960's.

Senator KENNEDY. What was the percent of those low income families that were actually receiving any kind of welfare assistance?

Dr. NOLAN. It was a little over one-fourth of that number of families.

Senator KENNEDY. Only one-fourth were actually receiving it?

Dr. NOLAN. The problem is that the eligibility line is so low because of limited State resources. This may have represented most of those who were in fact eligible who had been identified.

There is also a problem in such rural areas of identifying and assisting those who are eligible by existing State criteria and Federal criteria for benefits, but who do not have access to the system in order to get the benefits that they are legally entitled to. The rest had to fend for themselves and had no organized support for medical care.

(4) Local county health departments in the remote areas typically do not have a full-time health officer and have to rely upon an already overworked local physician for a few hours of part-time service per week. Programs and services in such departments are very limited and rarely are able to make a significant impact upon unmet individual health needs.

(5) Water and sewage services essential for health were found to be inadequate in 120,000 homes in West Virginia.

(6) Of the 521,142 homes in the State, 375,000 disposed of solid waste in such a manner as to create a nuisance and public health hazard.

(7) There was no adequate public transportation in rural areas for either ordinary or emergency medical care.

On pages 4-A, 4-B, 4-C, and 4-D we have summarized the data with regard to a typical West Virginia rural county in the northern portion of the state.

(The information referred to follows:)

Land area in square miles			645
Urban places in square miles			1.6
	1950	1960	1970
Persons per square mile	49.0	42.0	39.5

	Urban	Rural/farm	Rural/nonfarm
*Percent population	10.1	14.4	75.5

Table I

Population Distribution and Percent Change 1950 - 1970**

	Typical Rural County				State of West Virginia			
			No.	%			No.	%
Age Group	1950	1970	Change	Change	1950	1970	Change	Change
Under 5	3,929	2,206	-1,723	-43.9	240,107	139,021	-101,086	-42.1
5-19	9,284	7,585	-1,699	-18.3	562,809	508,309	- 54,500	- 9.7
20-44	10,336	6,917	-3,419	-33.1	720,383	511,954	-208,429	-28.9
45-64	5,232	5,552	+ 320	+ 4.4	343,727	390,833	+ 47,106	+13.7
65 and over	2,618	3,195	+ 577	+22.0	138,526	194,120	+ 55,594	+40.1
Totals	31,399	25,455	-5,944	-18.9	2,005,552	1,744,237	-261,315	-13.0

*Source: OEO Community Profile Project. Computer Printout, OEO, Charleston, W.Va.

**Source: U.S. Census.

Table II

Poor Families, 1960 and 1966

	Number of Families		Poor Families[a]				Percent U. S. Counties Having Lower Percent of Poor Families[a]		Percent County Families of State Total	Percent Poor Families in County of State Total
			Number		Percent					
	1960	1966	1960	1966	1960	1966	1960	1966	1966	1966
State of West Virginia	462,100	482,900	139,400	105,900	30.1	21.9			100.0	100.0
Typical Rural County	6,549	6,079	2,894	2,140	44.2	31.2	80	84[b]	1.4	2.0

[a]In the typical county in the United States in 1966 there were 1,221 families ranked as poor. This represented 15.1% of total families in that "typical" county.

[b]Eighty-four percent means that only sixteen percent of all U. S. counties had a greater proportion of poor families than this typical rural county of West Virginia.

Source: OEO Community Profile Project. Computer Printout, OEO, Charleston, W. Va.

4-c

Health Characteristics

Five year average infant mortality rate 1961-1965[1] 27.9

Physician to population ratio 1/4,242
Dentist to population ratio 1/8,485
Health officer part-time contributes approximately ½ day per week to public health duties
Public health nurse to population ratio 1/25,455
Public health sanitarian to population ratio 1/25,455

General hospitals 1
Beds 54

County Health department budget - 1970[2]

	Total	Federal %	State %	Local %	Per Capita Exp.
Typical Rural County	33,580	4.8	39.4	55.8	1.32
Monongalia County[a]	702,167	63.7	3.3	33.0	11.02

Approximate per capita governmental expenditures for health contrasting rural West Virginia with urban Washington, D.C.

West Virginia - Combined expenditures of W.Va. Departments of Health, Welfare, and Mental Health. 1970 Fiscal Year

7,823,000 State Department of Health
15,500,000 State Department of Welfare (Medicaid)
17,400,409 State Department of Mental Health
40,723,409 TOTAL

$\frac{41,000,000}{1,700,000}$ = $24.12 per Capita

District of Columbia - Total expenditures of the D.C. Department of Public Health. 1969-1970[b]

$\frac{89,000,000}{800,000}$ = $111.25 per Capita

Sources: [1]West Virginia Department of Health, The Past Twenty Years of Maternal and Infant Health in West Virginia. Compared with the U.S. 1946-65, June 1968.
[2]West Virginia State Health Department.

Footnotes: [a]Comparison with Monongalia County, where the resources of West Virginia University are located, shows relative inability of rural counties in lacking sophistication in grantsmanship and health manpower to compete for and capture Federal funds for health.
[b]District of Columbia figures include equivalent appropriation categories for mental health and welfare cited as separate items in West Virginia.

Other Socio-Economic Characteristics

Income[1]

Total Personal Income (1965)	$33,773,000
Total wages and salaries	21,917,000
Total transfer payments	5,277,000
Per capita personal income (1965)	1,271
Median family income (1960)	3,214
% families < $3,000 (1960)	46.4%
% families > $10,000 (1960)	3.6%

Public Assistance

Average Monthly Public Assistance Cases July 1968 - June 1969[2]

Total	360
OAA	128
AB	9
AD	85
AFDC	138

Education[3]

Median school years completed	8.6
% completed < 5 years	10.6
% completed high school or more	25.7

Housing[4]

All occupied housing units	7,681
All housing units with plumbing facilities	5,869
All housing units lacking plumbing facilities	2,656

Sources:

[1]Leyden, Dennis R. and Rader, Robert D., County Personal Income West Virginia, 1962 - 1965, Bureau of Business Research, W.V.U., December, 1968.

[2]W. Va. Department of Welfare: Annual Report, July, 1968 to June, 1969, Charleston, West Virginia.

[3]1960 Census

[4]1970 Census

5-a

Chart A

List of Medical Conditions Observed in Hidalgo-Staff County Health Survey

Conducted by Field Foundation March 3-8, 1970.

1. chronic sinusitis
2. chronic bronchitis
3. otitis media with perforation
4. unexplained adenopathy
5. failure to thrive
6. positive serology
7. T.B.
8. T.B. on I.N.H.
9. costochronditis
10. osteoarthritis
11. scoliosis
12. fractured rib, untreated
13. hypertensive cardiovascular disease
14. obesity
15. peptic ulcer
16. tapeworm
17. ascariasis
18. pin worms
19. hypertension, untreated
20. fungus infection of skin
21. varicose veins with thrombophlebitis
22. dental caries
23. epistaxis, recurrent
24. tinea corporis
25. I.V. septal defect
26. diabetes mellitus
27. splenomegaly
28. ovarian cyst
29. anemia
30. enuresis (age 12)
31. hematuria
32. bronchial asthma
33. bursitis
34. reactive depression
35. cholecystitis/cholelithiasis
36. cataracts, unoperated
37. hernia, unoperated
38. protein malnutrition
39. hyperkeratosis
40. conjunctivitis
41. impetigo
42. glaucoma
43. sarcoidosis
44. cardiomegaly
45. goiter
46. pyelonephritis
47. hearing loss
48. gastritis
49. glomerulonephritis
50. hemorrhoids, bleeding, untreated
51. pellagra
52. ariboflavinosis
53. epilepsy
54. seborrheic dermatitis
55. alopecia areata
56. cervicitis
57. rickets
58. hyperthyroidism
59. visual loss, untreated
60. infantile diarrhea
61. cerebral palsy
62. untreated fractured knee
63. scabies
64. chronic pancreatitis
65. iodine deficiency goiter
66. unbiopsied neck nodule, 3 cm.
67. diverticulitis
68. iron deficiency anemia
69. endometritis
70. feeble-mindedness
71. cystitis
72. urethritis
73. esophagitis
74. chronic alcoholism
75. exposure to pesticides
76. cleft palate, uncorrected, 6 years
77. spinal cord lesion with L_2, $_3$ deficit
78. congestive heart failure
79. maduromycosis
80. tonsillitis
81. psoriasis
82. recto-vaginal fistula
83. paraplegia, field injury
84. mental retardation
85. thrush
86. amebiasis
87. bilateral pterygium
88. ruptured lumbar disc
89. hiatus hernia
90. pyorrhea alveolaris
91. arteriosclerosis obliterans
92. tendon injury, unrepaired
93. umbilical hernia
94. laryngotracheobronchitis
95. bilateral scrotal hydrocele
96. birth defect
97. club foot
98. G.I. bleeding
99. congenital heart disease
100. migraine
101. strabismus, uncorrected
102. cellulitis
103. craniostenosis
104. cancer of prostrate
105. heart block
106. infantile hemiplegia
107. cystocele
108. emphysema
109. vaginal bleeding
110. broken hip

Dr. NOLAN. This illustrates more than other things the exceedingly low per capita and family income. For example, on page 4–A is illustrated the population ratio which characterizes this rural area.

West Virginia has lost 13 percent of its total population in the last 20 years. But it is also significant, looking at the last column of that page, to note the percent change, that it is the young people who have left, the people with skills that could help rebuild the rural areas, and that we have actually an increase in the proportion of aged during this period.

Senator KENNEDY. How do you account for that?

Dr. NOLAN. The State has made an effort to provide effective educational opportunity through its university and State college system, although its secondary and primary schools are very weak. And as the young people work their way up the educational ladder, they appreciate that opportunities outside West Virginia are far more attractive, and that their best hope for economic survival is to leave the State.

The man who helped me find my parking space this morning a block from here told me that he had worked in the coal mines in Mannington for 23 years, and he now works as a policeman for the U.S. Capitol, and that he had to come up here to find out that there were better ways to make a living, that he did not have to work in the coal mines all his life. And, many other West Virginians have come up here to get better jobs. Some of them are working with him on Capitol Hill in the police force. I think we see this pattern throughout the State.

Senator KENNEDY. How do you account for the increase in the elderly?

Dr. NOLAN. I do not think we have an in-migration of the elderly. But we are losing the younger population. Therefore the proportion of total population that the aged comprise is increasing primarily through the loss of the young. And I think there is also represented here, between 1950 and 1970, an actual total increase in the aged, representing a progression in age among the population group. So the trend I see is a loss of young people, an increase in the aged, and the resultant population distribution.

There may also be some retired people returning home, but I do not think that is a major part of it.

On table II we see the comparison between this typical rural county in West Virginia in terms of its numbers of poor families and the percentage standing nationally, and also the distribution for the State in regard to poor families.

Senator KENNEDY. Can you explain what this table shows line by line?

Dr. NOLAN. What we see in regard to the second line here, the typical rural county, is that the percent of poor families in that county, using the OEO guidelines, is 31.2 percent, and that its ranking in 1966 means that only 16 percent of all other U.S. counties had a greater proportion of poor families than this particular county. That is under the column "Percent U.S. Counties Having a Lower Percent of Poor Families." In 1960 its position was relatively

better, because 20 percent of U.S. counties had a more adverse position, that is, they had a higher percent of poor families. So that while the gross percentage has decreased from 44.2 to 31.2 percent from 1960 to 1966, the relative standing of that county has gotten worse, because affluence in the country as a whole has increased more rapidly than in this rural county. We are measuring this in relation to family income. The other line merely summarizes the overall picture for the State as a whole, not by county, but by population.

Page 4–C summarizes the situation in that same northern West Virginia rural county, indicating the present physician-to-population ratio; one doctor to approximately 4,200 people, and one dentist to approximately 8,400 people, and one public health nurse and one sanitarian for the entire county.

Also there is contrasted here the county health department expenditures for this typical rural county with the county in which the West Virginia University Medical Center is located. And this was offered to demonstrate that even Federal funds do not become available to the poor rural counties for health and other needs where there are no full-time personnel or sophisticated individuals available to apply for the grants and to develop techniques for matching funds. As it relates to the matching requirement, I would like to just comment briefly that the poor institutions and the poor counties often cannot match money to induce the participation of the Federal Government in various programs.

Senator KENNEDY. I think that information would be very helpful if you could submit it for the record.

Dr. NOLAN. I would be delighted to supplement my testimony in that respect.

Senator KENNEDY. If you could give us that it would be very helpful.

Dr. NOLAN. Yes.

There you see below the comparison for the State of West Virginia as a whole in regard to all health expenditures——

Senator KENNEDY. Does that participation by the local groups provide a cost-consciousness in the local community?

Dr. NOLAN. A cost conscious?

Senator KENNEDY. Yes, a cost consciousness.

Dr. NOLAN. I think it is highly desirable when it is available. But if a man is broke and he cannot put up the money, you cannot be conscious when you have to match 20 or 30 percent for a program and you only have a few dollars. Now, if the scale went down to an infinitiely small amount so that matching can be only token, then we could still have the cost consciousness, but we could also have the program.

I do not intend to sound critical in mentioning that but the——

Senator KENNEDY. I am not sold on cost consciousness.

Dr. NOLAN. In the District of Columbia, for example, the expenditures were—and of course the District of Columbia is not meeting all its health needs either—$111.25 per capita. But, comparison with the State of West Virginia's expenditures in similar categories shows $24.12 per capita.

We see on page 4–D that in this county, among other things, 46 percent of the families had less than $3,000 income in 1960—unfor-

tunately, we do not have the new figure—and 3.6 had incomes over $10,000 a year.

The median school years completed was 8.6; 10.6 percent of the population completed less than 5 years of school, but only 25.7 percent completed high school or more.

I am sorry to take so much time to go into that, but I wanted to offer an example of a county which is not the worst off in the State either; it really is in a median position in many respects.

Furthermore, in surveys conducted locally by physicians of our division, there has been well-documented inadequate housing, absence of water, lack of preventive medical services, and a variety of untreated medical conditions ranging from parasitism to heart disease.

Turning to the national picutre, over 130 rural counties have been identied without any private doctors at all. A study of Minnesota, North Dakota, South Dakota, and Montana revealed that as of 1965 two-thirds of the total of 1,600 towns were without physicians.

Looking both at our situation in West Virginia and nationally, in the rural areas we see that these circumstances have their expression in:

(*a*) Higher maternal death rates (one-half the 1,343 maternal deaths in the United States per year occurred in rural areas and small towns);

(*b*) Higher rates of disability and death from accidents (30–40 percent higher);

(*c*) Higher infant mortality rates in rural areas (one-third higher);

(*d*) Longer periods of disability and hospitalization for specific illnesses.

MIGRANT HEALTH PROBLEMS

The picture with regard to migrant health may be even worse than the worst situations in Appalachia. In March and April of last year I had the privilege of participating in a Field Foundation study of migrant health conditions, which included my own visits to Southwest Texas and South Florida. The complete report of that work was very ably presented by a group of physicians, who were my colleagues in this study, before the Senate Subcommittee on Migratory Labor on July 20, 1970.

Our team of physicians, which had intended to examine only 50 families in great depth at McAllen, Tex., found over 1,400 patients waiting for medical help. Most of these families were in seasonal agricultural work and unable to obtain needed medical treatment. Word had spread rapidly of our presence and over 900 people waited on the first day of the team visit, lining the streets around the small clinic made available to us in McAllen, Tex.

On chart A is a list of the untreated conditions that were observed during that survey. Infectious disease, metabolic disorders, malnutrition, and congenital defects, all of which had gone untreated, were quite common.

I think it is significant that the residents of this area who lack medical care flock to obtain health services when an opportunity is available. No public or private program was available to those who

had flocked to the survey team for assistance. Once more we had evidence that the migrants had been passed by, despite the ostensible existence of programs that were supposed to help them.

It was in this same area that a widespread epidemic of poliomyelitis occurred last year, which tragically proved the absence of adequate immunization there.

Typical of the migrant situation was the following individual case history:

In Hidalgo County, Tex., in a small crowded hut, we met a sick gentleman of 63 years of age. He looked much older than his age, quite weak and emaciated. He had worked in various parts of this country continuously as an agricultural laborer since 9 years of age when he left school to help support the family. He was willing and anxious to work, but too weak to do so. He had experienced weight loss, easy fatique, polydypsia and polyuria. Although a physician in a rural town had apparently diagnosed diabetes mellitus and prescribed insulin, his condition had not improved. The man did not understand the use of the insulin, and no one was available to explain to him or administer it. He had no electricity or refrigeration, which is necessary to preserve the insulin, and the insulin lay useless on a crossboard along the wall.

Although disabled, he was not eligible for social security disability or retirement and had no unemployment coverage. Local resources had paid for the physician's visit and the prescription, but there were no programs or persons with any kind of follow-up care or responsibility. After a lifetime of hard work helping to produce our food, we had excluded him from the benefits we make available to virtually everyone else.

This was a recurring theme that we saw in our visit to the agricultural areas.

As you know, last summer NBC had a documentary in regard to the migrant labor conditions which produced a great deal of response. And some of it was quite positive on the part of the industry as well. At that time Martin Carr of NBC also filmed a great deal of material concerning the health conditions. That did not become a part of the documentary. But I mention that in passing, and thought the committee might wish to make that material available to it. And I am sure that NBC will cooperate if you have that interest.

Recurrent themes observed in various rural areas have included:

(*a*) Refusal of local hospitals (even those built with Hill-Burton funds) to admit patients without a cash deposit.

Senator KENNEDY. Do you know examples of that?

Dr. NOLAN. Yes. In our interviews with families at Pahokee, Fla., this past spring, there was a recurrent comment by the residents that unless they had $50 in cash they could not be admitted even in the case of serious illness—what they saw as emergencies—for care in the local hospital, although it had been built, to the best of my knowledge, with Hill-Burton money.

In rural Appalachia we hear similar comments by people, both in our area and in other regions, that until money is available, the private community hospitals will not admit them for care.

I want to emphasize that that is not true of the State institution. There is no financial barrier in emergencies at the State institutions. But often hospitals which have been built with Federal funds are not required to care for patients without despoit money.

(*b*) Difficulties in applying for existing benefits under State or Federal programs;

(*c*) Discriminatory practices in school lunch programs in violation of statutes and regulations;

(*d*) Inability to qualify for Federal home impr[illegible] loans because of lack of financial resources;

(*e*) Refusal of categorical Federal health pro[illegible] example, family planning, maternal and child health, et c[illegible] to provide needed medical care for a diagnosis discovered [illegible] result of the project;

(*f*) Inability to find a job;

(*g*) Poor schools;

(*h*) Impassible roads; and

(*i*) No transportation.

It is widely acknowledged that health cannot be effectively separated from needs for equal opportunity and access to housing, environmental preservation, education, jobs, medical care, welfare, and all other public services. Yet we have not addressed ourselves as a Nation to any kind of comprehensive attack upon these problems.

Furthermore, the proposals now awaiting consideration, illustrated by the proposed Health Maintenance Assistance Act of 1971 (S. 1182), and the National Health Insurance Standards Act outlined in the President's 1971 Message on Health (House Document No. 92–49) are unlikely to result in effective delivery to needy rural areas and certainly not to those where seasonal agricultural workers live.

The area to which I have referred does not have the economic resources nor the technical ability to attract such programs as these proposals envision. And unless there are compelling incentives to serve these neglected groups, they can be expected to be left behind again.

The President's National Advisory Commission on Rural Poverty in 1967 aptly described rural poverty in the United States a national disgrace. The most powerful and wealthy Nation certainly does have the capacity to deal with these problems.

RECOMMENDATIONS FOR ACTION

In my judgment we have had enough studies and documentation. I respectfully offer these recommendations for your consideration:

(1) For appropriate committees in the Congress to give their combined consideration to the 1967 Reports by the President's National Advisory Commission on Rural Poverty: *The People Left Behind* and *Rural Poverty in the United States.* The recommendations of this Commission are well-developed, comprehensive, properly focused, and should be implemented forthwith.

(2) For prompt development of the National Health Service Corps authorized by Public Law 91–623, enacted December 31, 1970, but not yet funded nor planned for implementation.

When passed, as you know, that was called the Emergency Health Personnel Act of 1970.

(3) For establishment of a federally-financed rural network of community health services and health related programs to assure comprehensive health services for all residents in rural areas. The State and local communities have been and are unable to finance such programs.

(4) For economic incentives for health institutions (for example, medical schools, hospitals, health departments) to involve themselves more directly in the solution of rural health problems, and conversely economic penalties for those which decline to become so involved.

(5) For establishment by Federal statute of a new civil right to medical care for everyone in an emergency, with appropriate civil and criminal penalties for denial of this right.

(6) For establishment by Federal statute of a new civil right to medical care for every sick child, with appropriate civil and criminal penalties for denial of this right.

(7) For new statutory criminal and civil penalties applicable to any public official or employee obstructing, impeding, or delaying any public or private benefit to any person relating to health, education, welfare, or employment.

(8) For Federal rural multipurpose ombudsman program rendering direct assistance in health, education, welfare, employment, and other services to rural families throughout the country, and visiting each family at least once a year to assure rural family assistance.

(9) For economic and other incentives for individuals with needed skills to settle and work in rural areas.

(10) For prompt Federal action to halt all adverse land use practices such as strip mining, uncontrolled timbering, and pollution practices, which are destroying the natural beauty of our rural areas and threaten to make these regions uninhabitable.

(11) For establishment of a Rural Development Agency for human resources and needs within the Department of Health, Education, and Welfare, with responsibility for developing, coordinating, and delivering programs to people in rural areas.

(12) For allocation of 1 to 2 percent of all appropriations for health, welfare, education, and other personal service programs to assure the self-enforcement and delivery of benefits to prospective recipients. This could finance legal services for assuring availability to the beneficiaries.

(13) For allocation of at least 10 percent of appropriations for categorical health service programs to permit such programs to assume financial responsibility for diagnosis and treatment of health conditions discovered among their beneficiaries, which are not otherwise within the scope of their programs.

The present statute and regulations ordinarily prevent this approach.

(14) For an amendment to the U.S. Constitution to guarantee to every adult responsible for his own support or the support of others an opportunity for gainful employment consistent with his skills. The Federal Government should be the employer of last resort. We

must stop forcing people to subsidize our economic system through their own unemployment and resulting poverty. There is much productive work that can be done throughout the country, including work in the health professions.

(15) For an amendment to the U.S. Constitution to eliminate the present inequality of opportunity of all kinds for people in the various States by a new definition of "equal protection of the laws," requiring a uniform national standard and full equality nationally in the availability of all services and programs related to local, State, or Federal government. Inequality of opportunity in which government actively participates cannot be eliminated until we adopt a uniform, constitutionally mandated national standard of equality.

I believe implementation of these proposals could permit a unified comprehensive approach to rural health needs and arrest the progressive deterioration of rural America.

Thank you, Senator.

Senator KENNEDY. Thank you very much, Dr. Nolan.

Do you believe that we have a health crisis in the rural areas today, West Virginia and the other areas that you have studied?

Dr. NOLAN. Yes, I think that we do have a serious health crisis in these areas. While it is true that some programs have been made available in the past two decades to these areas in small ways that were not available before, the contrast in health opportunity between the rural areas—the distance has widened over the past two decades, and relatively our rural areas are worse off than they were 20 years ago by comparison with the rest of the country.

But I think there is a crisis in rural areas which goes beyond health matters, it goes to all the things related to health, and the opportunity for a happy life, and a productive life.

Senator KENNEDY. But there are steps, that can be taken to alleviate some of the harshness of the health crisis in rural America, are there not?

Dr. NOLAN. I would think so, even in the absence of a comprehensive approach as holistic as I have outlined, there are many things that we can do in the interim. Some of those are in the President's report, and some I have tried to enumerate today. One effort would be the implementation of the National Health Service Corps proposal which has already been passed and is law.

Senator KENNEDY. What do you think is the future of solo practice in rural America?

Dr. NOLAN. I think there is every evidence that it is coming to an end. The rural physicians are retiring, they are leaving and not being replaced. They are seriously overworked and understaffed. They are doing yeoman service. They should get support and assistance. But I think the days are over when we can expect young medical graduates or others to settle down by themselves and string it alone 24 hours a day anywhere. And in a rural area a man is seriously isolated from the resources he needs for his patients and for his family.

Senator KENNEDY. Would a Kaiser type of program, an HMO, work in West Virginia?

Dr. NOLAN. The Kaiser Permanente program does require, and implicitly the HMO proposal does, an employed population group, hopefully one that is concentrated well enough to permit the organization of group practice, although that is not a priority necessarily of the HMO proposal. I would say in a preliminary way that we do not have the financial resources, either public or private, to support either of those programs in most of our isolated rural areas. The financial power lies outside those areas, it lies with the Federal Government. And there would have to be some supplemention, and in some areas almost complete support, of rural health programs. That would depend on the resources in the particular locality.

Senator KENNEDY. You have painted a dark picture of the rural health situation. Is it even worse for those who live in rural America if their skins are black or brown?

Dr. NOLAN. Well, the majority of the rural poor are caucasian in rural America, not black or brown. However, there are large black population groups in rural areas and a large Mexican-American migrant seasonal worker population in Texas, Florida and elsewhere. I think that makes it easier to discriminate against them and identify them. But even if we eliminated ethnic and racial discrimination we would not eliminate the problems of rural poverty today.

I should also mention that there are rural areas, towns, communities, with financial resources that cannot attract physicians. So it is not just the paucity of money.

Senator KENNEDY. Really, one of our most important needs is the attraction of physicians into these rural areas, is it not?

Dr. NOLAN. Certainly physicians and dentists and others have to be the nuclei of any program.

Senator KENNEDY. What emergency measures do you think could be taken to attract physicians or these other skilled personnel?

Dr. NOLAN. Well, if we had implementation of the National Health Service Corps proposal, this would offer young physicians an opportunity to perform their military service in that program. And that was underlined in the exploration of that act so that there is no question that they would get credit for their 2 years of service with the Public Health Service under that program. That is an indirect incentive. But I think also the young people are looking toward an opportunity for service in this country, and such a program would offer them a vehicle for participation, without necessarily making an economic commitment of their own.

Now, as it relates to others outside the scope of Public Health Service organized programs, the support by the Federal Government of loans or grants for centralized rural clinic buildings and equipment could be an inducement. It might be desirable to have an income tax incentive for people with special skills who are willing to work in rural areas. We may wish to offer special educational incentives, both for the practicing professionals to get further postgraduate training themselves, and for their families to avoid paying a personal penalty for rural service.

Those measures would be helpful on a temporary basis for the individuals. And in addition, there could be incentives to relate rural health, medical and dental practice, with the larger medical centers,

so that the people in practice in the rural areas could get relief, and return to the major medical center for retraining, and also for some respite from the demands of practice.

Integrated programs of that kind would certainly be a professional incentive.

In the long haul I think we have to look at all the characteristics of rural life which are presently unattractive to young people and which are causing them to leave the rural areas and work toward their resolution in order to hold professionals in these areas for the future.

Senator KENNEDY. How would you characterize the quality of health care services in community hospitals in rural areas?

Dr. NOLAN. I think that they vary just as the quality varies even in the city, although we do not usually like to talk about it very much. We also have varying quality, for instance, in legal work. It is a characteristic of professional work, it is not at all one standard.

Senator KENNEDY. Does that go for the Senate too?

Dr. NOLAN. You are freer to comment on that than I am.

But the difficulty in the rural situaation is that physical resources for these offices and institutions are quite limited. There are very few diagnostic materials available directly to the physician. We do not have an integrated network, such as Dr. Snyder indicated is being explored in New Mexico, available in rural areas. We hope there may be in the future. And in addition, the doctors and other health professionals are seriously overworked. They just do not have enough time for each patient.

So I think I must conclude, somewhat painfully, that in most rural areas, while the major problem is shortage of facilities and manpower, and communication, and referral services, and a whole variety of things, that the quality of care compares unfavorably with the median levels in the city and the suburban areas. There is just more time to spend with patients in an area where there is one doctor with 340 people than where there is one doctor for 4,200 people. And this is not a reflection upon the individual practitioner himself. If you are going to handle 10 lawsuits in one afternoon you are not going to do as good a job with any of them. And we have the same problem with medical care. But, I would say that rural people do not have access in general to the same quality of care as those in other areas.

Senator KENNEDY. I think this observation supports what I feel is the situation and that is that the physician is trapped by the system. And it is the system really that produces this kind of result rather than the physician himself.

I want to thank you very much, Dr. Nolan. You have been very helpful.

Dr. NOLAN. Thank you.

Senator KENNEDY. That concludes our hearing for today.

The subcommittee will stand in recess until Tuesday of next week. Thank you very much.

(Whereupon, at 12:20, the subcommittee adjourned, to reconvene on Tuesday, April 6, 1971.)

HEALTH CARE CRISIS IN AMERICA, 1971

TUESDAY, APRIL 6, 1971

U.S. SENATE,
SUBCOMMITTEE ON HEALTH OF THE COMMITTEE ON
LABOR AND PUBLIC WELFARE,
Washington, D.C.

The subcommittee was called to order at 9:40 a.m. in room 4232, New Senate Office Building, Senator Edward M. Kennedy (chairman of the subcommittee) presiding.

Present: Senator Edward M. Kennedy (presiding).

Committee staff members present: LeRoy G. Goldman, professional staff member to the subcommittee; Jay B. Cutler, minority counsel to the subcommittee.

Senator KENNEDY. The subcommittee will come to order. Today we resume our hearing into America's health care crisis. Specifically the subcommittee will take testimony on one of the most important elements of the health crisis—the quality of health care.

In testimony presented to the subcommittee since the inception of our hearings it has become clear that the cost of health care is out of control. As a Nation we now spend $70 billion each year on health and much of that is eaten up by the inflation which results from the inefficient way in which health care is organized and delivered. We have also learned that this Nation faces grave shortages of all kinds of health manpower. In addition, much of the manpower we do have is inequitably distributed. And we also know that the educational institutions which train this Nation's health manpower are in dire financial straits. As the dean of the Johns Hopkins School of Medicine said: "We are prestigious, but we are broke."

We also have learned that today's health care system is not designed for the benefit of those it should serve—the consumers of health care. All too frequently, inconvenience, inequity, and indignity are the results of having to seek health care in this country.

With ever increasing frequency, there is reason to believe that the quality of health care which is delivered is at best uneven. For example, in an article in the New England Journal of Medicine last fall, Brook and Stevenson looked into the delivery of medical care in the emergency room of the Baltimore City Hospital. They concluded: "Effective delivery of medical care was provided for only one-fourth of the patients." They further concluded: "By every criterion included in the study the medical care was both ineffective and inadequate." Any fair inquiry into the nature and magnitude of the Health Care Crisis requires an understanding of

59-661 O - 71 - pt. 5 ---18

the extent to which the quality of care is poor. We should have a system of health care in which the consumer has an adequate basis for knowing whether services rendered has improved his health, not affected it, or worsened it.

Today's witnesses are qualified to inform us in respect to this problem. And we will find their testimony valuable in terms of the extensive field hearings upon which the subcommittee is about to embark.

Our first witness this morning is Dr. J. Willis Hurst, professor of medicine and chairman of the department of the Emory University School of Medicine, and chief of medicine, Grady Memorial Hospital in Atlanta.

The author of six books and approximately 150 scientific articles on heart disease and one book on teaching medicine, Dr. Hurst has served as a member of the American Heart Association's Council of Clinical Cardiology and later as vice president of the council; as a member and later chairman of the subspecialty board in cardiovascular diseases of the American Board of Internal Medicine; as a member of the National Advisory Heart and Lung Council; as a member of the President's Commission on Heart Disease, Cancer and Stroke in 1964 and 1965; and as a member of the National Advisory Council on Regional Medical Programs. He is president-elect of the American Heart Association. Among his many honors, the most recent have been the Master Teacher Award presented by the American College of Cardiology and his selection by the American Heart Association as one of three American teachers to participate in "Four Cities of Cardiology"—Scandinavian Countries.

Doctor, would you be kind enough to come forward?

We will include in the record the article of Dr. Brook and Dr. Stevenson at the conclusion of the testimony of the witnesses this morning.

We welcome you, Dr. Hurst.

STATEMENT OF J. WILLIS HURST, M.D., PROFESSOR AND CHAIRMAN, DEPARTMENT OF MEDICINE, EMORY UNIVERSITY, ATLANTA, GA.

Dr. HURST. Chairman Kennedy, members of the subcommittee: five dangers to avoid.

Dangers await us unless the following concepts are considered as we attempt to solve the health care crisis.

1. THE EITHER-OR PHILOSOPHY

The popular technique of asking one to choose between two possible solutions to a problem may at times be dangerous. The proper answer may not be either of the solutions offered but may be something else. The "Peanuts" cartoon by Charles Schultz makes the point. Lucy is seen in her stand playing the part of a psychiatrist. She asks Charlie Brown the following question: "Do you prefer sunrise or sunset?" Charlie answers, "Sunset, I suppose." Lucy then responds by saying, "People who prefer sunset are dreamers! They always give up! They always look back instead of forward! Sun-

risers are gogetters! They have ambition and drive! Give me a person who likes a sunrise every time! Yes, sir! I am sorry, Charlie Brown * * * if you prefer sunset to sunrise I cannot take your case * * * you are hopeless!" Lucy then walks away. Charlie then remarks, "Actually, I have always sort of preferred noon." The design of Lucy's question restricted Charlie's response. The phrasing of some questions being asked today restricts one's response and, in my judgment, prevents a proper answer. For example, we hear that we must choose between the delivery of health care and medical research. This type of statement obscures the correct answer. The correct answer is that we must have both and that we must strive to achieve a proper balance between the two. We are led to believe that we must choose between the quantity of health care and the quality of health care. I disagree. I believe we need to increase the quantity of health care and the quality of health care. We are told that we need more general physicians and less specialists. The fact is we need more of both and we need a system to relate each group to the other. We are led to believe that we must choose between governmental support of medicine and the priavte support of medicine when the true answer is that we will need both. The list of such questions and statements is endless.

We must not fall into the trap and give a hasty answer when the truth may be in a third option. Voices will be raised to say that many of the third options will cost too much. My response is that it will cost too much not to look at third options. I am convinced that health care will not be improved in quality or quantity unless all citizens recognize that it will cost a great deal more than it costs now. The voices will say it can't be done. I will say that we must rearrange our priorities of values and that medical care should be near the top.

2. THE PURSUIT OF EXCELLENCE MUST CONTINUE

I realize that a discussion regarding excellence is not a popular subject but we must consider it because it is right. When it becomes difficult or nearly impossible to pursue the best then mediocrity will reign. All Americans must be inspired to give the best that is in them. The fact that a few medical scientists were able to improve the world of medicine and in turn the health of the people is why we haev a health crisis. Their research paid off. That is why we have something to deliver. Since we physicians do not yet know enough, then it follows that research must continue in order to have something to deliver. It also follows that we need a more effective delivery system in order to deliver the fruits of research.

The problem may be likened to an arrow. The sharp tip of the arrowhead should be made up of those individuals who choose to do research in the medical problems that plague mankind. The remainder of the arrowhead should be made up of those who spend their lives setting the highest possible standard for patient care. The long arrow shaft should represent the delivery of the bulk of medical care in the country. While the role played by individu-

als at the arrow tip, at the remainder of the arrowhead and at the arrow shaft is different, each must strive for excellence. The arrow will not enter its flight until the citizens place it into their financial bow and shoot it into the air. Should all of this be done, then our society will be on its way to solving the health crisis.

We must encourage our talented young people who will make up our future health personnel. Therefore, the institutions that train them must be supported. The medical students, interns, residents, specialty trainees, nurses, and allied health personnel must be appropriately supported. We cannot run the risk of training them to chance alone. We must develop a way to insure its occurrence and the training must be excellent.

When you have your heart attack—which you are likely to have—you must have a highly trained man at your bedside. This does not mean that there should not be far more generalists than specialists. It simply means that we must have both and that we cannot leave the development of either to chance. If you wish to prevent your heart attack—which you are likely to have—then you must support the development of research people to work on the subject because no one can guarantee you a method of prevention today. A young intern in my program recently diagnosed leukemia on himself and died in 1 month. He is on my mind. We need more research to prevent such tragedies.

Should excellence in the field of medical care not be held as a national goal, then we will be less than we could be. If excellence in medical care is not to be an objective, then it is likely that excellence will not be sought generally in this country. Should the pursuit of excellence be ignored, the spirit of man will die. The failure to appreciate excellence is dangerous indeed.

3. HEALTH EDUCATION IS NECESSARY IN ORDER TO DEVELOP A WORKABLE HEALTH CARE SYSTEM

In my opinion, a new health care system will not work unless a health educational system is developed in parallel with it. Without a health education system the citizens might underuse or overuse the new health care system. It takes health knowledge—not just health concern—to use a health care system properly. Accordingly, I urge that health be taught in every grade in school. We must start in the first grade and continue to teach health throughout the individual's student days. After he leaves formal school then a health education system must be available to him for the rest of his life. The physician's waiting room and the hospital lobby must become educational facilities for the patients who wait there. All hospitals must become educational centers for patients, visitors, and for those who work there. Remember a citizen today should know about as much about health as a physician knew 50 years ago.

Continuing education must become a way of life for physicians and all health care personnel. It is impossible to have a good patient-care program without continuing education for those who deliver the service.

It will be dangerous to underestimate the need for health education for all citizens including those who deliver the service.

4. COST ACCOUNTING IS NECESSARY BUT IT MAY BE DANGEROUS

We must never forget that human life and comfort are priceless. Whereas it may be necessary to put a dollar figure on health matters in order to have some simulance of order, it is inhumane and uncivilized to carry the concept to an extreme. I plead with all who hear my words not to be an extreemist in this regard. Any thoughtful person should recognize that the improvement of health care will cost many times what is currently expended. It will be dangerous to underestimate the cost of good medical care for all of the citizens.

5. WHO SHALL DO THE PLANNING?

The planners of a new health care system must involve people other than physicians. No one can doubt that. It will be dangerous, however, to plan without the help of physicians. Accordingly, I urge you all to seek the help of thoughtful physicians to assist you in planning for the future. Not to do so will be a mistake.

SUMMARY

Whereas I have stressed some of the dangers I see ahead of us, I wish to emphasize that I am in no way pessimistic about the future. I actually believe we are entering a golden era, an era that will show the profession of medicine serving mankind in its finest way. The dangers are highlighted in order to emphasize that we must have balanced programs. We must develop an approach that considers a proper balance between research, education, and patient care. This is no cliche. It is, I am absolutely certain, the truth. Just as a boat with too much weight at one end capsizes, an unbalanced health care system will sink and its passengers—the patients—will go down with it. The proper balance between research, education, and patient-care must become the common purpose of those who wish to improve the medical care of the citizens.

Senator KENNEDY. Thank you very much, Dr. Hurst.

Is the quality of medical care today in the United States uneven?

Dr. HURST. Uneven?

Senator KENNEDY. Yes.

Dr. HURST. Yes, it is uneven.

Senator KENNEDY. And how do you know how pervasive that problem is?

Dr. HURST. Your question is the extent to which it is uneven?

Senator KENNEDY. Yes. And how can we measure the quality of care?

Dr. HURST. I would think the proper answer to that question will be highlighted when Dr. Larry Weed makes his presentation.

One of our problems is that there is really an inadequate way to measure exactly what we are doing. Some of Dr. Weed's ideas I think will make it possible to make such measurements.

On the other hand, I am not certain that we should waste our time now trying to make precise measurements, because I believe there is sufficient evidence available so that one can be confident that it is right to state that it is uneven. I would say that it is uneven in two ways.

One would be the individuals who do not have an adequate income, who unfortunately may also be illiterate, who do not know how to use the health care system that we have now—which I think everyone would admit is inadequate. Accordingly, their participation in what we now have is inadequate.

At the other extreme, though, I would like to call attention to a large group of people who are college graduates and who are quite literate and who are financially able to obtain medical service. It does not follow that they know much about health. That is why I have pointed out here that we must have a health education system, because even if they go all the way through college they may not be knowledgeable about health. Accordingly, they may end up being able to pay for service and misuse the system in a way that is, to a degree, opposite to the first group that I was discussing. I do not know the size of that group, but it would be considerable.

So that I see glaring examples of underuse and overuse. Both occur because of inadequate health knowledge of the citizens themselves. It is not entirely the citizens fault. Our school system simply does not have a good health education system in it.

Senator KENNEDY. Of course, I suppose one of the philosophical problems we face in trying to strengthen the quality of health care by those involved in the practice of it is not unrelated to the kinds of problems that we face in other professions—I mean politicians and the Senators are slow in trying to police their own members; lawyers traditionally have been reluctant to police fellow members of the bar and I imagine this is certainly true in the medical profession as well.

At a time when there is a very general and legitimate concern by people across the length and breadth of the country about the quality of care, we ought to ask ourselves whether the old ways are really good enough. Are we just going to go ahead and make more elaborate the existing kinds of procedures in order to police quality health? Or are we going to really examine the peer review system? What would you say about this dilemma?

Dr. HURST. Well, I would draw a comparison to the current system of evaluating a research grant at the Institutes of Health. I do not believe that the current method is a perfect method, but I think it is the best one that has been conceived of by man thus far. It is as sound as the principles of our country.

If Dr. X wishes to receive a research grant, then he knows that he must write this material up in a proper way; that this is submitted; and that it is reviewed by his peers (the peers are of two types. One group inspects his facilities and program and another group, who is unknown to the grantee, reviews the material carefully); and that these men are honest people who may make mistakes but they are the best the country has to make judgments on such matters.

If he gets through that, he then faces the national council in the appropriate institute when again it is looked at by a group of peers that are expert in the field.

Accordingly, to be awarded a grant, he must have a very good peer review by knowledgeable people.

I would suspect that there could be some sort of parallel plan developed for the practice of medicine.

Senator KENNEDY. I do not underestimate the importance or the significance of review in research—that is obviously of great importance. But I feel we have much less ability to establish these kinds of criteria in terms of actual practice. Now how does someone in solo practice lend himself to peer review?

Dr. HURST. Let me restate it this way. As I indicated, I can see a parallel developing between the research system and the practice system. The new type peer review would not be a duplication of the current system. Let me explain further. At the present time I see hospitals working very hard to improve standards. You can also say that a physician enters the system with his patient at this point. A good medical record—as Dr. Weed will relate to you—makes it possible to have a good peer review internally. I would also point out that the hosiptal accrediting agency—a national body—which is an outside agency, is already in existence and means business. Further refinement of these techniques will bring results.

To move on, though, to your question about solo practice. I would see a system developing that goes something like this:

First of all, I would suspect that many group practices will develop. I would also hope that when a group develops, that they would be located in a building that is virtually attached to the hospital. This will improve efficiency and make it possible for them to organize themselves for night and day coverage for their patients that are ill in the hospital. They will be able to see their outpatients—their ambulatory patients—in one end of the hall and their very acuately ill patients in the other end of the hall.

Now if this happens, you could make these physicians—and their records—subject to the same audit system as the hospital. [See earlier discussion.]

Then I would see certain physicians working out in a community. The word "solo" practice might be the wrong word, although there might be only one physician in the facility. I would see him as a guiding force where many allied health people were involved. The facility would be very different, I think, to the current solo doctor's office. A new system would be established where the physician, with a team of nonphysician assistants, would be a guiding force for the health of a group of people. The physician, and his assistants, would have a specific relationship to a nearby hospital.

Now in that system the physician should fit into the organizational structure of the hospital to which he is related. He, and his assistants, should be going to the hospital many times per week to educational programs. This would solve one of the problems of solo practitioners, with the enormous workload they carry, who have no time to do what they want to do. At present there is no rela-

tionship established with nearby facilities and no real relationship established with an educational system.

Now what I have said is that with group practice developing in buildings attached to hosiptals that the physicians are able to organize themselves into educational systems, and fall under the peer review program and the national accrediting system program much more easily. I am also saying that the physician who is in solo practice but has paramedical people working with him, will also be organized into the educational system of a hospital to which he is attached. The solo practitioner would then fall under the same audit system that the hospital and group practice system falls under.

The audit system I have described will include all physicians and will utilize an internal peer review system and an external national accrediting system.

If you have a good recordkeeping system, as Dr. Weed will describe, you will have the essential element which is required for an assessment to be made. Our efforts to improve should not have punitive overtones. I believe we can do much to train young men to create better records; to accept an audit; to set high standards because it is the best way to take care of patients; it is the best way to retain sharp minds and it is the best way to engage in an educational system.

Senator KENNEDY. Well, thank you very much, Dr. Hurst. That is very helpful, and we appreciate your comments and your statement this morning. It is very valuable to the members of the committee. I want to thank you for appearing before us this morning.

Our next witness is Dr. Lawrence Weed, who is the director of the Promis laboratory, Medical Center Hospital of Vermont, Mary Fletcher Unit; and also professor of medicine, University of Vermont.

A member of the American Society for Microbiology, Dr. Weed has been an AEC fellow at Duke University, an assistant professor of pharmacology and medicine at Yale, director of medical education at Eastern Maine General Hospital, associate professor in microbiology and professor of medicine and director of outpatient clinics of the Cleveland Metropolitan General Hospital.

Dr. Weed has written numerous publications.

We want to welcome you here, Dr. Weed.

Senator Prouty of your State regrets that he could not be here this morning. He has some kind and generous remarks about you, Dr. Weed, and I am going to ask that those remarks be put in the record at this point, prior to your own comments.

(The statement of Senator Prouty follows:)

STATEMENT OF HON. WINSTON PROUTY, A U.S. SENATOR FROM THE STATE OF VERMONT

Senator PROUTY. Mr. Chairman, I regret that a prior commitment out of the City precludes my attendance at today's hearings of the Health Subcommittee of the Committee on Labor and Public Welfare.

I would have particularly liked to welcome a fellow Vermonter, Dr. Lawrence Weed, to our hearings.

Dr. Weed is a professor of medicine at the University of Vermont's College of Medicine. He also directs the Promis laboratory in the University's Medical Center Hospital. This center has attracted national and international attention. Dr. Weed's problem-oriented medical record system is being adopted by medical centers throughout the country.

As we seek new financing methods and new patterns of health care delivery, we must also develop new control mechanisms through responsive record systems. Dr. Weed has assembled an expert team and has made considerable progress towards reshaping our medical record system.

I commend Dr. Weed's genius to our subcommittee and while I could comment at length, I think my point can best be made by including at this point in the hearing record a copy of an editorial from the January 7, 1971 issue of the New England Journal of Medicine.

The editorial is entitled "Ten Reasons Why Lawrence Weed is Right." I believe this morning the members of the subcommittee will find many additional reasons why Lawrence Weed is right.

(The editorial follows:)

[From the New England Journal of Medicine, Jan. 7, 1971]

TEN REASONS WHY LAWRENCE WEED IS RIGHT

The innovations of Lawrence Weed concerning medical records are correct.[1] The purpose of this note is to encourage all physicians to hear what he is saying. Here are 10 reasons why we must.

In the first place, he has devised a medical-record system that encourages the student, house officer and practicing physician to use sound logic in his thoughts about patients. In this sense his system is the essence of education itself.

Secondly, the display system that he has created for medical data enables one to use the record as efficiently as one uses a dictionary.

Thirdly, he has devised a medical-record system that allows the physician to communicate his thoughts to nurses and other personnel who are assisting him in the emmediate care of the patient. This makes it possible for the physician to be the director of the health-care team involved in the care of the patient.

Fourthly, he has designed a medical-record system that enhances the continuing education of the physician and all who assist him in the care of patients.

Fifthy, the logic system and display of it prepares the student and physician for the computer world that is coming to our rescue. The system teaches those who use it how the computer can help us. Without such understanding the computer will be looked at as an unwelcome intruder.

Sixthly, group practices are increasing daily. The medical record will be the common bond between several doctors and a patient. If the medical record is of poor quality, or if the data cannot be found quickly, the "group" may be inefficient and could, after much effort, deliver less than the best medical care. Weed's system will improve the medical care given by a group.

Seventhly, certain types of clinical investigation require excellent records. Weed's system of record keeping will improve patient care by making it possible to do more accurate clinical research.

Eighthly, the attending man on a teaching service has, in years past, felt compelled to give an irrelevant lecture during ward rounds. Now—with Weed's display system—lectures on ward rounds will be eliminated. The Weed system makes it possible for the attending man to check a patient's medical problems and simultaneously to check the student's and house officer's ability to collect

data and interpret data, to develop a proper plan of treatment and to observe patients properly. Ward rounds can become patient rounds and *not* lecture rounds.

Ninthly, the traditional method of presenting the patient's medical history, the results of the physical examination and laboratory data has run its course. It is time for a change. The presentation of irrelevant medical data may be useful for a junior student if his teacher shows him it is not pertinent to the problem at hand, but the persistence of such a habit throughout the years impedes the development of logic. The Weed system encourages a more meaningful way of talking about patients.

Finally, patient care is improved directly or indirectly by each of the nine reasons listed above. This, of course, is the goal of all our efforts.

These 10 reasons—and there are more—all coalesce to enable a physician to improve the care of his patients, improve his learning and improve communications to others about his patients while he is spending his days and life with patients.

What has Weed said? He has emphasized the point that good patient care depends upon the education of those involved in the care, and to a large degree education depends upon good records. He has highlighted the medical record as a teaching document that should enable the physician to learn while he cares for the patient. He has suggested the following plan.[2] By enumerating the problems *by numbers* it becomes possible to develop plans that are clearly displayed by use of the same numbers. It becomes possible to write orders that are identified by the same numbers. It also makes it possible to number the items in the progress notes and in the discharge summary in the same way. Displaying the problem list at the front of the chart and displaying the initial plan, orders, progress notes and discharge note in a clear way (by the problem numbers) make it possible to develop a chart that is very meaningful for the doctor, nurse, student and patient.

Piet Hein, the Danish genius (the inventor of "Grooks"), points out,

> We shall have to evolve
> problem-solvers galore—
> Since each problem they solve
> creates ten problems more.[3]

The Weed system will not solve all our problems and it will create a few new ones, but it will improve the care of the patient and improve the education of those who work with it.

J. WILLIS HURST, M.D.

REFERENCES

1. Weed, LL: Medical records that guide and teach. New Eng J Med 278:593–600, 652–657, 1968
2. Weed LL: Medical Records, Medical Education, and Patient Care: The problem-oriented record as a basic tool. Cleveland, The Press of Case Western Reserve University, 1969
3. Hein P: More Grooks, London, Hodder Paperbacks, 1969

Senator KENNEDY. Dr. Weed, you may proceed.

STATEMENT OF LAWRENCE L. WEED, M.D., PROFESSOR OF MEDICINE, UNIVERSITY OF VERMONT, BURLINGTON, VT., ACCOMPANIED BY DR. HAROLD D. CROSS, HAMPDEN HIGHLANDS, MAINE

Dr. WEED. First of all I would like, Senator Kennedy, to mention that I have Dr. Harold Cross with me, who is a general practitioner from Maine. He and Dr. John Bjorn have written a book entitled "Problems Oriented Practice." And if I accomplish nothing but to have some of the people on the committee read this book, I think that alone will be the best contribution I can make. One of the problems has been that we in the academic life do not function

effectively with those who are out doing the work. And it is this lack of integration that has caused a lot of the problem.

Senator KENNEDY. It is not only that relationship, but it is also the relationship between those involved in the public sector and the practicing doctor. So do not leave us out when you are talking about those who have not been included in the working relationship and need to be.

If you would like to come up, Dr. Cross, you are more than welcome.

Maybe you could identify him for the record.

Dr. WEED. Dr. Cross is a practitioner with Dr. John Bjorn in Hampden Highlands, Maine. They have been in general practice since 1958 there. They have worked with us as we have tried to look at the system so that we would not run the risk of ending up with ideas that were just totally irrelevant and do not work anyway. So Harold is always there to point out, "You don't know what you are talking about," and we try to straighten it out. And over the years we have developed this sort of a relationship.

Well, now to get on with the matter of quality, I would like to state right at the outset that the medical record will be the principal focus of my remarks. And I do not hesitate to say that because we have not made it the principal focus in any discussion of the health care system, we keep ending up with pieces that do not quite fit together, and we do not know quite what has been accomplished with all our money and effort.

The very words "quality" and "efficiency" imply that you know what you are after and that you know whether you have gotten it after you are done. And without the medical record that seems to be impossible.

With your permission, I would like to go to the board so I can leave with the committee a framework upon which you can build a whole system.

I would like to start the framework not with the doctor's wants or the government's wants or insurance wants, but with the patient's needs. Ideally in this country there should be a list of the patient's problems sitting on his record. He should have a medical record in this country that you can open and find on the top page a complete list of his problems, with no ambiguity and no diagnostic guesswork. And that list should include social, medical, psychiatric, and demographic problems. [Blackboard discussion.]

We know that if problem one is pneumonia and problem five is no heat in the house, then to give him penicillin alone is inadequate and even deceptive.

If you will get a complete problem list in front of the average human being, his commonsense will take over. So we need the list in front of us. Now we do not have that, so we make decisions out of context. [Blackboard discussion.]

The next thing that has to happen to record is that plans should be titled and numbered with respect to problems. Miscellaneous lists of welfare orders cannot be evaluated problems. [Blackboard discussion.]

The list of problems is determined by the initial information.

What do we guarantee a patient? This means what questions, physical examination procedures, and laboratory work should be done in order to get a complete list of problems. On comprehensive care, do you want the $50 tune-up or the $100? The patient should know what we do and what he is paying for.

What I would like to do is quickly go through this simple scheme. Any layman would ask, "Why don't we have it?" We shall just take each box and say where we stand, and you will see how badly off the system is. But we can also say, "What can we do about it?"

Number one (box 1) is the data base. Every doctor in America makes the content of this his own personal matter. Some do certain things and some don't. Some look at eyes and some don't.

A physician wises up after a while. If he is going to be audited on what he did for the problems—as with certain auditing systems existing—he better not identify problems he cannot or does not choose to identify. If you don't ask eye questions or about ulcers, you can't be penalized for treating them wrong. A complete list of a person's problems is basic to any medical care system.

As long as this is allowed to be at the discretion of the doctor, in a very basic way he will make the list of problems suit his background and training. It is a human thing to do. No one disciplines him in an ethical, unemotional way. This poor specialist may be a gastroenterologist or a gastric surgeon who does nothing but take out stomachs and it's long since gone out of his mind how you find and formulate eye problems.

We do not have complete lists of an individuals problems. Pick up any medical record in America and at the end of the data base—the initial information—they scribble their impressions, not an honest, complete list of problems. This is not a scientific document. They will put "? perforated ulcer" or "rule out diabetes." You have to guess that the exact problem was unexplained abdominal pain or vaginitis.

They have been taught to guess. In the second year of school they may make guesses and even get a prize for whoever gets the most right. That's not the way it should work.

The physician should state what he knows is wrong with the patient—in simple honest terms—and what is going to be the next step he will take to further delineate the problem? That is what science is. We haven't had that.

Furthermore, at the end of the workup, we have the list of impressions but we simply have not kept it up to date. They scribble in the middle of the record. The doctor says that is the list of problems. The patient then falls "How could I put that on the list? he asks. That happened after she came in. But we wanted a complete list of problems. Why doesn't he add to it and keep it organized and up to date?

The minute you do not have a complete list in front of you, you deal with problems out of context. What I mean by that is if you have problem one is heart failure and problem five is a broken hip, the right treatment for the fifth problem requires prior treatment for the first (indicating.) [Blackboard discussion.]

Specialists do not keep complete problem lists too well. The patients, however, did not and cannot specialize. But we will talk about why we specialized.

So we do not have simple rules and discipline. It is a simple matter but it turns out now that what I think health-care systems need is a lot of very simple things, like what Lombardi did for football. He did a few simple things right every time. We just get too complicated about it. We should have a data base, a complete list of problems, plans, and progress notes titled and numbered with respect to each problem.

Progress notes are not numbered and titled with respect to problems. Rather they read "Doing well." Patient has diabetes, hypertension, gout, what does "doing well" mean? As James Thurber said when he was asked, "How is your wife?" In what away." It is meaningless. You have got to put down what problem you are talking about. And if you are not competent to deal with all of them, put them down—at least you are announcing the problem and saying, "They are within my expertise. But they must be dealt with." In the past we have had what you call "source oriented medical records." Data were recorded in groups according to source and not according to problem: all the temperature charts, all the orders, the nurses' notes, doctors' charts, laboratory data, X-ray data. And if you want to know what happened to Mrs. Jones' ear or her hip or her chest, you obviously have to read the whole record. Turn every page. Because you never know what fragment will drop out. On the lab sheets might be an ear culture. Why do you have it mixed with the urine test? Why are you putting those together? There's no point in that. What's his answer? His answer is, "Well, we have always done it that way."

Such a system of keeping data absolutely defiies any audit of any sort. That does not mean we should not have reviews and audits, but the minute you audit a person without telling him what the game is, without an organized structure in a scientific way, you absolutely will have guaranteed resistance to the audit because people do not take kindly to that.

We know it is arbitrary, but we must draw the line, set up the rules. The sine qua non is a set of rules and medicine does not have a set of rules. So you set up a set of rules and you make the medical record the basis of it.

Having done that, you then audit for performance. You continue to do that. The progress note is an important part of the record, like going from St. Louis to Seattle—you never go the same route twice. There is a tornado; that bridge is washed out every year; there is a detour sign. You weave your way through with multiple variables. The shape of your path is not known until the input stops. It is known only in retrospect. You get there if you know the goal. And simple rules of scientific behavior.

A doctor should be a guidance system. He should not be an oracle that tries to know all the answers. He should not be a memory machine. And everything we have done is to set him up as a memory machine, an oracle. If people say to you that isn't true, then just look at the way the examination is. You can judge a system by the

way the person is examined. He is given boards in this and that, and they examine him on what he knows and equate what a man knows with what he will do today, tomorrow, next year, in 20 years. You cannot do that.

Many mistakes in hospitals do not have to do with not knowing or not being easily able to find out; somebody didn't bother. And we go around saying when we find a mistake, "We better give him a course, a postgraduate course; we have to specialize more." But you simply should say, "Why didn't you look it up? Can't you read?"

But medicine has been a memory-based science, and what happens when you memorize? If you are going to be tested on your memory and you are scared of flunking, the inevitable result is specialization. "I will narrow to the eye and learn all there is about it." You force specialization when you force problems being dealt with out of context. And then you make the patient the chief negotiator for health care and he wanders around without a record like a guy without a bank book, trying to put the pieces together. He stands bewildered, in the middle of a disorganized system without a workable medical record.

There are other points, but I think that's enough to start.

Senator KENNEDY. How do you characterize the system in terms of the quality review we have at the present time?

Dr. WEED. At the present time, since no one has defined clearly to the doctor what the goal is and what the rules are, the quality review must be unfair.

Furthermore, we use what we call peer review, and even allow the peer to be someone in competitive or joint practice, and in any other field it would be called "conflict of interest." You cannot ask one person practicing in the community with another person to look at the other fellow if he is referring him cases. You do not ask one teller to review the other teller in the bank.

Now medicine has got to develop a set of rules and then people must audit from the outside. And in any system that is developed you should tie in, in my opinion, the financing to this set of rules, i.e., "We'll give you the money if the record is kept in this way." And if the patient is guaranteed random audits, you don't have to audit everything. It is the same as the Internal Revenue Service; they do not audit every return, but you are very careful around the first of April since you do not know if it is going to be yours that is audited.

That is the way medical audits should be handled.

They talk about the industrial defense establishment complex and race problems and Vietnam! One of our biggest problems, I think, in the whole country is this fantastic testing complex. We equate knowledge with performance. We have to develop a means for examining performance at random. And if a man always does the right thing, he defines the problems and handles them beautifully it is irrelevant if he memorizes anything or not. He is a problem solver. Whatever he did, he solved the problem.

Right now we take him away from his practice and we quiz him.

In 1918 a man, Dr. Codman, at Massachusetts General wrote a marvelous little book—I am sure the committee would love to get

ahold of it—and he prescribes looking at the end result. He was thrown off the Harvard faculty because of it. He died a bitter man. He printed the book at his own expense, and he says everything we are saying today. This was before World War II and NIH microbiology. The last chapter begins, "The day of the general practitioner is passing." That was in 1918.

But one can hope that there are reasons that they failed and we might succeed now. We can problem-orient our records so we can look at them and audit for thoroughness, reliability, sound analytic sense, and efficiency within those rules.

I do not think a doctor should be given the patient or the practice or the money to pay for his work whether it is from the Government or Blue Cross unless an audit of problem-oriented record is built in.

What Government in my opinion, should do for the people is what the people cannot do for themselves. And the one thing the doctors cannot do for themselves as individuals is set standards and review their own work. So we should spend much more money and time on the audit system of a problem oriented medical record.

Senator KENNEDY. Do you think you can expect the insurance companies to establish that?

Dr. WEED. I really do not know what groups will come to the fore. I am always impressed when you define the system very, very clearly, like with a football team, and when they all come out it is hard to tell sometimes whether they are good linemen or quarterbacks; some are good enough to be the waterboy; and I would like not to prejudge any group, no matter what. Let's define the game and let's have a go at it and see what you can do and give them some time; and if they do not succeed and come up with something rigorous, get on with it. In fairness to all groups now, they are like a bunch of contractors digging holes and the architect has not arrived; and they are criticizing what they have done, and it is at this point that the medical schools bear the blame, not the AMA or the practicing doctors. The medical schools send people out without a feedback loop. They let Ph.D.'s teach biochemistry without a system for looking at him in 5 or 10 years to see whether he was successful. We never should start any system without completing the feedback loop. Then it grows itself. There must be a disciplinary mechanism.

I have been pretty impressed as we have moved around the country that the conscience of patients and doctors is very, very powerful if you delineate a very clear way where you think they are wrong. They do respond. But there has been so much of the sort of bureaucratic mumbo-jumbo that they do not really feel inside the system is fair to them. No one has emphasized clearly enough that with our medical records we have no system.

You know, you fall down on this line, and a guy comes and says, "By the way, this is not the goal line; it is down here." Well, this is a nice time to tell me. They are so skeptical now that the game will not be fair.

I might bring up one point I think is crucial in the defining of the game. Say a committee like this were going to take this task and define the game and demand a specific type of medical record and

it was a condition for financing. There will be doctors (some of the most powerful voices in the American medical profession and the academic centers), who will rise up and say, "You can't do it. If you define you will do away with diversity, you will do away with the art of medicine. It's dangerous."

I think the answers to those questions are, number one, that without structure, as Stravinsky said, if you don't have something to work against, a well defined set of rules, in music or anything else, you do not have creativity, you have chaos. As Newton said, he moved because he could stand on the shoulders of the giants of the past, he worked from a very well defined system. But the trouble is we go around stepping on each other's feet. To be explicit does not interfere with progress; it allows us to progress.

Second, the art of medicine is to be honest with a patient; above all, to do what is right. It is nice if you have a pleasant manner and so forth to go along with it; but the worst thing is to have the patient wake up 6 months later and have her realize, not suddenly, but slowly, in a painful sort of horrible fashion, that that kind, sympathetic man did not know what he was doing. And then to realize on top of that that he was thrust into a system of data that was based upon his memory.

There is not a patient in the world who does not know intuitively that no doctor knows everything. And if your mother goes to that physician, you want the feeling that no matter what is wrong with her, he will solve it. You do not want the feeling that, "I hope she does not have something that was not on his medical boards or in his head."

Now if that is what you want, that is what you have to test for. There is no other route for testing that except through performance.

Senator KENNEDY. Do you think we ought to give licenses to physicians to practice for life, or do you think there ought to be a review after 10 or 15 years?

Dr. WEED. I think we should review performance, and at random, and the license can be removed at any time, like an automobile license or anything else.

I think that you have got to recognize in the system there will be a random audit, and I think that licensing boards in the United States—and now there are 50 of them, autonomous units—I think they have fallen into the trap of using the national testing services and national boards, and then saying he can practice in the State of Vermont, or somewhere else.

I do not think it has ever been presented to them in a realistic way how to audit performance.

Now we can easily define rules. Medical schools of this country should be charged by the Government—who is paying for things—they should be charged to come up with a goal and a set of rules by which we can audit for performance. And we will pay for the audit. And anyone who is audited in medical care in this sort of rigorous way, you can save a fantastic amount of money. This intellectual notion that when a man tries to carry so many problems per patient, seeing so many patients in a hospital, with hundreds of patients going through an officer—with the human memory as

a fundamental kind of machine, he is destined to fail. And as he fails, in his anxiety he spends money—"Let's get this and let's get that."

Senator KENNEDY. In your comparison up here, you talked about establishing the rules of the game. As you pointed out, doctors do not lend themselves to this kind of precision, or perhaps the human body does not lend itself.

Now I am all for establishing rules you can judge by, but I can remember one time I had a very bad dislocated shoulder from skiing up in your State when I was in college. The bone was coming out of the middle of my side; and the head of it had been shattered rather badly, and it was very badly torn. We went down to Boston and I was examined by the doctor. My father said, "Well, you ought to be examined by more doctors; get three or four doctors." So they all examined it. We came into a final meeting, and three doctors there thought it was important to operate, to remove these fragments that might cause difficulty later on. Then one doctor said, "No, don't operate." And I remember my father saying, "You can do whatever you want, but that fellow that says 'don't operate' has as many degrees as those who say 'operate.' And I would not go ahead and have them operate." Which I did not do, and thank goodness, it has worked very well.

I had a similar experience with my back, quite frankly, in terms of differences. I can see a doctor programing a data base, talking about a dislocated shoulder—and another doctor saying,

Someone is going to review me next April; and if I advise that fellow not to have the operation, disagree with three or four good doctors, I may have trouble when the computer bank comes. I better go ahead and tell him to operate because that way I know I am safe.

I am all for trying to establish a quality control audit, but the doctor that makes that kind of a case, you know, I think makes—go ahead.

Dr. WEED. Perhaps I was not as clear as I should have been. You are absolutely right. The set of rules should involve defining the data base (box No. 1), formulating all your problems (box No. 2), and developing titled and numbered plans and progress notes for each problem (boxes Nos. 3 & 4).

The physician must be expected to define the problem at the level of his understanding. Then we will look at what he did for the problem, look at his well-defined plan and progress notes that we will have in a good problem-oriented record.

The question will then be: Is that plan consistent with current medical standards of a rather broad spectrum? And to operate or not operate on your shoulder certainly is. So he can do either and still be right if he follows you carefully.

Then we will look above all—and this is what I meant to say—that so often a decision is not right or wrong; it is what you make it. This is true if you go through hospitals and look at fluid therapy where we worry about people being drowned, or mangled shoulders and everything else. The doctor should be a guidance system. If we decide not to operate, but if in 3 weeks or 3 days that shoulder doesn't function, we can change that decision.

As Whitehead says, you must teach people "sustain muddleheadness"; you teach tolerance of ambiguity, but you must have a data system that allows it. So what you are auditing for is thoroughness, reliability, and then sound analytic sense. Did he follow carefully, keep good data, after any decision and then readjust his course accordingly?

Once you have this sort of a structure, you can let the doctor look at himself. "Do you think you did that as efficiently as you could have?" He himself will say no.

So I think 95, 98 percent of the problem, the major part of the expense is at the level of audit on big problems and lack of discipline and neglect. And academic people will immediately pull you down to a specific example of some debate about some sophisticated thing in the neurological syndrome and say, "How would you decide that?" and then torpedo a whole audit system on the basis of 1 percent of the problems.

Senator KENNEDY. Doesn't this lend itself, though, to the kind of review that you would have of individuals who are having a general check-up more than those that have a particular pain or ailment? Unfortunately, people are often coming into the system only when something really hurts. There aren't that many consumers who know about preventive medicine.

I can see where this kind of a system, in trying to determine general health, could be enormously valuable. But what about the individual case, particularly of if it's very difficult?

Dr. WEED. Well, first of all, we developed this sort of a system in the presence of a busy general practice and we ran busy clinics in big city hospitals. This is where we found the system most useful. Also it was very useful on the busy wards where people came in with terminal diagnosis, or vague aches and pains. For example problem No. 3 might be bellyache. What is your plan for that? Now if the person puts down his plan for that is to measure the feet or give B-12 shots every week at $50 a shot, then you can sense right away there is trouble.

Now, we have used problem records of services for a long time, and they adapt themselves to this. But I think Harold might remark on this because he has been in practice.

Dr. CROSS. If you take an accident room, the emergency services that come in, and tally up what the common ones are, they are sore throats, ear aches, punctures, lacerations, and burns .If you wanted to do an audit the only consistent thing will will find is their name and address and the date and probably the doctor that saw them.

Well, now if you took the specific thing about puncture wound, practically everybody is educated enough to know there ought to be a tetanus shot. But you won't find this. We had a man die of tetanus who was employed in the hospital and went to the accident room. No tetanus shot, no record of one given.

They haven't defined what the data base is to be except it is the patient's name and address, who to send the bill to.

Now on the sore throat we could decide maybe we ought to give a throat culture. I think if we polled the people in this room we would have a lot of agreement on that. This will take care of prob-

ably 80 percent of emergencies that come in, and this information, you see ,once it is defined can be obtained.

Dr. WEED. But there is one other point I think that is crucial here about being explicit—if Harold had somebody that comes in with a sore throat and he looks at the data base he has the clinical judgment—he is the one who has to make a decision as to inadequate data. So he has a sore throat, he gets a culture and temperature and gives a penicillin shot. Two weeks later the patient comes in with pulmonary edema and nephritis. He goes back and he looks at the decision. He said it is clear why he missed that on the sore throat, he did not do a urine test that would have told him the patient has kidney and heart involvement. He doesn't panic, he knows where he is and he can reevaluate his system and update it.

Or as we said in this particular instance, he said well, just a minute, if you know the game you don't want to spend any more of her money or any more time, are there any other options?

Like in a football game, once you set the goal and you tell them they are not going to get points until you go over the line you think of things like forward passes. But as long as anything goes he will not grow and the system goes into this confusion.

Senator KENNEDY. There are those who will say that the delivery of health care, the practice of medicine doesn't lend itself to computerization evaluation, that these are very subjective, individual decisions and recommendations, and we just can't afford to have computers dictating medicine today. How do you react to that?

Dr. WEED. Well, first of all, I take each box, of course—first box No. 1, you want to ask questions and get a maximum amount of evidence. The evidence is overwhelming now in our laboratory and many places that the computer is useful here.

Senator KENNEDY. People will say well, if the computer can do it, why bother with the doctors? Let's just program everything into a computer and come out with a recommendation. Why do we need a doctor or professor?

Dr. WEED. The data base, getting the information, the computer does quite well—you have a chest pain, you get that. Paramedical personnel are doing a remarkable job on getting physical data. A 17-year-old girl is already doing the blood count, stool culture, and so forth. Pathologists have long since stopped looking at the patient himself for much data. Now the next thing is, even with this data base, to list the problems. How much of that can be computerized now? Very little. But there are certain things we can say, if the patient says sore throat we can put in the problem, list the plan. We want a culture, we want this, this, and that. If the urine is positive he will be admitted.

In other words, to the extent that the doctors will agree on a given series of acts every time for a given problem and you can write what you call an algorithym for him and that can be programed. To the extent they are not sure, that is when you have clinical judgment. Clinical judgment is a willingness to make a decision on inadequate data. It will be quite a long while before that formulating problems for patients is computerized, but it is our aim to do it; not that you want to use the computer itself, you want

to make that explicit pathway because it is from explicitness that growth occurs.

What about the computer for plans if a problem is clearly defined—it is amazing how you can get experts to agree on a plan.

Now your shoulder is an example of when it is difficult. You will need the doctor not the computer for a long, long time to handle it. But I would suggest that the success of your shoulder was not nearly so determined by yes or no to operate, but the competence of the man who took either step. If you had been operated on by a superb orthopod with a good anesthesticist you would have been all right. If you had been followed carefully by a good man, he didn't see the right progression, he would have moved in to operate.

Now going to the last two boxes from the planning to the progress notes, you will never computerize that completely, because if you have multiple problems it is like a chess game—the chessmen never change, the rules never change, but there are an infinite number of games. Your pathway through those variables is infinite, and you need someone to guide you.

The physician needs to be pulled out of box number one where he spends all the time asking questions and doesn't take time to explain. We need the physician to explain to you your problem. If you have diabetes and hypertension and depression you need him to help you to learn to live with these problems. That is theoretically what they went into medicine for, and if that doesn't interest them I really question if they should be doctors anyway.

There are chemists at MIT that can do the molecular biology far better than the average doctor in a medical school, and you really need the physician as a person who can capture and understand these data, use the computers as an aid. And as I said, you will never get all these steps done. Supposing you get 99 percent of that done. You get that done, what will that mean? Instead of you seeing five patients this afternoon, telling Mrs. Jones you can't see her until next week, you will see 65 patients this afternoon and you will get 200 people taken care of. I do not believe in listening to physicians arguments against paramedical personnel and computers until everybody is taken care of and they are sitting on their hands with nothing to do. But as long as half the population is getting no care it is almost immoral for them to talk about the fact that they might be displaced, because they talk about being displaced on one hand and then wanting 50,000 more doctors on the other. You can't do that.

Senator KENNEDY. Recognizing that this kind of plan doesn't exist today, how pervasive is the problem of quality care in the country?

Dr. WEED. With no rules and no goal line I can't answer you.

However, if you want to know what my feeling is, I think the overall quality is very, very bad, if you consider all the people.

When I talk about quality I want to talk about the whole 200 million people, I want to talk about all the problems. Not to think quantitatively about people as qualitative implications for most of the people. And to talk about high quality care to a single patient with pernicious anemia when there are nine patients out there with pernicious anemia that haven't been found yet, then you get 10-

percent score for quality with that definition, the quality is terrible. Whereas we are apt to talk about the quality of Dr. Jones's patients versus Dr. Smith's, wherein those differences are insignificant compared to the fact that this patient got none at all; and I think as far as efficiency is concerned I will agree with Ginsberg—I think we have to seriously question whether the problem is doctors.

If you train more doctors and plunge them into this present system I think you could make matters worse. I think, as Mr. Fuller says, one-quarter ton satellite is equivalent to 200 tons of transoceanic cable, and I think there are secrets in medicine—if you turn the right screw it would be incredible what could happen to efficiency.

Most efforts for efficiency have been directed to box No. 1, getting a data base. You either pay for and audit in all four boxes or you are kidding yourself, I think.

Senator KENNEDY. You say you have to change the system. Change it to what?

Dr. WEED. Well, I think the first rule should be that we will demand problem oriented records. Nobody will get funding for the care of any single individual unless there is a problem oriented record with a complete problem list, up to date progress notes in that record. Any doctor who doesn't agree to that, it is like any teller who doesn't agree to keep the books in the bank—she isn't going to work there--because he knows intuitively you cannot audit him and discipline him and be successful if there is not an organized way to keep the books.

The first step to that is all the medical schools must teach problem oriented records and audit of performance. We must systematically tie it to funding doctors. It has been proven over and over again that they are pragmatists, they learn very, very quickly if the demands are clear, and good for the patient, and you mean what you say. You walk upstairs with the surgeon, he scrubs, gets the green sheet, gets the purple sheet—he has a million rules that he never breaks. He is as compulsive as you can get. But you get them downstairs with information—and they are sloppy. You see, the trouble is people haven't come to think of information with the same rigor that they think of action. But information is the basis of action, and they will adapt when somebody makes the rule. We have a computer now, three terminals, on the ward, GYN-OB surgeons. The first month it was pretty rocky, but it is incredible how rapidly they have decided to take care of the whole patient.

Senator KENNEDY. Well, Doctor, I want to thank you. You have given us a most imaginative contribution about quality. We have talked a great deal about it, the administration has also. But you have perhaps developed it into a most precise and unique form, and it is a terribly exciting idea.

I would like to work with you, if we could, to see what could be suggested legislatively and whether we could make some proposals in terms of any health legislation that we have.

What you are really touching on is evaluation of quality. I think the American public is sick and tired of pouring billions of dollars into programs and not really realizing the benefits and value that come from them.

This has been true in elementary-secondary education. We don't really know what functions really work in educating a child. We have some ideas and some things borne out to suggest that they are obviously of value.

But the same thing is true of health. And what you have suggested here today is that we try to provide evaluation for the sick person who obviously is entitled to it and for the profession, in order to increase quality. It is a very imaginative program suggestion.

Dr. WEED. You will be plagued with this question and the art of medicine. I have found it useful to point out to the students, and they catch on very quickly, that music is art and living in Cleveland for 9 years and going and watching George Szell and Robert Shaw, you realize that they are great as was Toscanini because they are disciplined. When Toscanini says three beats in each measure he means three beats in every measure. He says the art will come out naturally. The Lord gave him the creative talent, you provide the discipline and art will take care of itself. Stravinsky, Wyeth; they all say that medicine is no different.

And I think if government could in some way provide this discipline the power in this generation of medical students is overwhelming—they have great capacity to deal with ideas. They are crying out for structure and discipline, and we don't even need to vaguely worry about imprisoning their minds because they take the challenge and they say, "Why did you do it that way, let's update it to this." And you start to work with their mind. But when you let them plunge in to no system, they say "What are you doing?" and if you just say "you will understand some day," as you get older you will have a rebellion on your hands.

Senator KENNEDY. Thank you very much.

(Further information received for the record follows:)

10/16/70

BACKGROUND PAPER FOR CONCEPT OF
NATIONAL LIBRARY OF DISPLAYS

The best possible medical care, documented in on going medical records on all types of clinical problems, should form the basis for a highly relevant undergraduate and postgraduate medical education and also be the foundation for a proven, up-to-date health care system.

> "In its current state it (the medical record) is an instrument full of serious faults being sometimes irregular, diffuse, objective, and incomplete. Developed standards for the preparation of the medical record do not exist. The medical record need not be simply a static, pro-forma repository of medical observations and activities grouped in the meaningless order of source - whether doctor or nurse, laboratory or x-ray department - rather than with respect to the problem to which they pertain; it can be problem oriented, and thereby it can become a dynamic, structured, creative instrument for facilitating comprehensive and highly specialized medical care."[1]

The information in that record has come directly from the pen of doctors, nurses, and paramedical personnel who in turn received their information from textbooks and journals and lectures.

> "Information is in itself a discipline, and it must be disseminated at the speed of light - understood and used, not necessarily memorized. The tyrannical use of the memory in the name of scholarship has caused great trouble, and the amount of information we try to absorb or merely memorize affects our ability to make full use of it. We physicians have memorized information so it would be available when we needed it, but therein was the trap. We never could remember enough; we could not retrieve from our memories accurately and quickly enough to cover all possibilities, and so we specialized and distorted the original problems or lost sight of them altogether.
>
> Think what we have naively expected of man's mind in the practice of medicine: In the four phases of medical action we have expected that the physician would get all the pertinent information, see the right clusters and accurately formulate the problems, plan properly for each patient, and never fail to follow through, making the necessary modifications. Furthermore, we expected that in the mind of a single physician somehow the information in journals and from meetings and the results of specialization would be instantly coupled to the multiple problems of a single patient so that maximally effective action would result.

Observation of action and study of the physician's per-

formance, even in the most sophisticated places, have clearly demonstrated that such expectations have not been fulfilled. We never did succeed in coupling the plight of a given patient in the middle of South Dakota or Harlem, or even in the university, with the best there is in medicine. The specific needs of a given patient will never match in all important details the information in the mind of a physician who is randomly trained, imperfect in recall, and never completely up to date.

In an educational economy where the media of exchange have been memory and facts and the pursuit of knowledge, we find ourselves bankrupt in terms of goals, quantity of quality care, analysis and meaningful synthesis. We saw no other way out, because up until now information energy has been gathered, stored and made available in crude and primitive ways. Before the electric light and electric motor were developed, hours and days were spent making candles to provide a few candlepower of light. Now with the flick of a switch, we take for granted the immediate availability of electrical energy for all sorts of tasks. But with information energy a professor of medicine or a town's most experienced physician can spend a couple of days scrounging around for a few facts he can believe, much as your great grandmother made the candles.

The computer can change all that and can do to the availability of information energy what the electric light and motor did for the effective use of electrical energy. The computer with the proper terminal can act as a true extension of one's mind, much as the automobile is clearly a useful and now indispensable extension of one's muscles. It may be upsetting to the world's best athelete that a 70 year old arthritic man can travel faster than the athlete when coupled to the right equipment and it may be upsetting to the world's best intellect that a mediocre mind can out perform it when coupled to the right equipment, but that is a reality that many will have to get used to. It is easy to get used to - if you worry more about getting jobs done and getting many people cared for than you do about who does it.

As there must be a source of electrical energy and as it must be regulated and directed, so must there be equivalent sources and direction for information energy. Up until now the human brain, operating at the patient's bedside and crudely replenished by random contacts with the literature, has been the source of and has set in motion all the information energy that was directed to the patient's needs. The average physician's brain fell behind in every way, and worst of all there was no central superbrain, complete and up to date, acting as a standard to which all could turn. Failure was not

met with new technics to develop a superbrain, fed by investigators and immediately available to us all at the touch of a finger as we approached problems. Rather we met failure with largely irrelevant discussions of the art of medicine and the need for compassion and pitiful attempts at human feats of memory that were doomed to failure.[2]

"Every patient can thus be guaranteed a minimal recorded data base of historical information routinely acquired by his interaction with an organized, computer-administered series of branching questions. The doctor will always be expected to audit this information, enlarge upon it where indicated, and integrate it with information he himself has elicited. In this way recorded historical data will no longer narrowly be based on a single encounter, and busy physicians, representing a wide spectrum of abilities, habits of thoroughness, attitudes, and levels of efficiency, will not risk the omission of important problems.

The statment of present illness and the progress notes, usually related in an unstructured manner, are the portions of the medical record that present the greatest difficulty in computerization. Although it has been awkward and too time-consuming to ask enough simple "yes-no" questions to obtain the desired record and then to print-out responses in narrative form, it has been possible to tie together logical choices from displays appearing in rapid succession on the TV-like screen. For example, the physician is first asked to identify the body system appropriate to the patient's present illness or identify the specific proglem when writing a progress note. He is then confronted with a display containing the common symptoms presented in diseases of that particular system or displays containing the appropriate and up-to-date choices for the analysis and management of a specific problem For example:

GASTROINTESTINAL

Jaundice	Dysphagia
Pain	Anorexia
Sore throat and/or mouth	Bleeding Mouth or gums
Gassiness	Abnormal Stools
Hiccuping	Vomiting

The physician indicates his choice of a symptom by touching it with his finger where it appears in the display on the screen. The next frame, which is displayed immediately and automatically on the screen, asks whether the symptom was gradual or sudden in onset. In like manner, a rapid succession of displays appears in which the following characteristics of the symptoms are presented:

Type of onset
When symptom commenced
Intensity
Quality
Severity
Location
Radiation
Number of episodes
Length of episodes
Time of episodes
Relieved by
Made Worse by
Associated with
Course, getting better, getting worse, staying the same

The frame displayed for each characteristic contains from two to ten choices, and if the number of descriptive choices makes it necessary, two frames are used in rapid succession for a given characteristic. The "type of onset" frame contains two choices, for example, whereas the "associated with" frame may contain ten or more, depending upon the symptom. (See Figure 1 for an example of a Present Illness from a patient's record.)

These frames not only provide a consistent, logical means for entering the present illness and progress notes but also are effective teachers of the physician. They continually call to mind a range of symptomatic characteristics, with regard, for instance, to abdominal pain, that will be the foundation of a sound diagnosis, These frames should be developed and approved by experts in each field, so that every patient gets the benefit of a high sophistication in the formulation of the branching series of questions employed in exploring his particular complaint, regardless of his particular physician's experience, specialty, and capacity for analysis. This approach, it will be observed, is based on recognition, as opposed to recall, and thereby introduces consistency and thoroughness into every performance. Similar displays have been developed for objective data."[1]

INITIAL GOAL FOR THE DEVELOPMENT OF THE MEDICAL CONTENT OF THE PROMIS*SYSTEM:

Starting with a method of organizing medical content in clinical records as defined by the problem oriented medical record, and a system involving the computer as a tool, it was necessary to translate medical content into a form which could be displayed for a medical user.

* Problem Oriented Medical Information System

-4A-

<PRES ILL - NEW PROB>

SX:

JAUNDICE
ONSET: GRADUAL (INSIDIOUS).
COMMENCED: 3 WEEKS AGO.
SEVERITY AT WORST: MODERATE.
PRECEDED BY REMITTENT FEVER, ANOREXIA, WEAKNESS/LASSITUDE,
OTHER PRODROMAL SX: PRURITUS, DARK URINE,
NAUSEA/VOMITING, LIGHT-COLORED STOOLS,
QUALITY: YELLOW.
CONTINUOUS SINCE ONSET W/FLUCTUATIONS,
LOCATION: INVOLV.SKIN/EYES:
ASSOCIATED WITH: WEIGHT LOSS-APPROX. 20 LBS., RUQ MASS, ABD.
PAIN/TENDERNESS, ANEMIA, CONCURRENT PREGNANCY.
OVERALL COURSE: FLUCTUATING.
PATIENT'S ATTITUDE: IS WORRIED, FEARS MEDICAL CARE, ACCEPTS
STATEMENT OF PROBLEM.

FIGURE 1

The first step was to create a skeleton structure, as a first approximation, which could then be rapidly and flexibly expanded into a body of medical information, coupled directly to an individual patient's clinical problem. The ability of the physician user to interact directly with the medical content by using the technology to do this, and the coupling of universe of medical content to specific problems are the two major characteristics of the system which underlie the approaches to developing the medical content, embodied in what we are calling "displays".

The initial process which took place in order to compile the medical content was a synthesis of remembered experience, a review of classical textbook descriptions of disease, and a review of the appropriate current literature. Since the initial goal was to create a structure as rapidly as possible, approximately within a year, this literature search was of necessity a first approximation. Once the initial skeleton (framework) was complete, direct interaction with consultants in the various subspecialities either in the form of soliciting written input - flow charts etc., or by working directly with consultants in front of the CRT* was the next step in building the content. This process, as well as updating from the current literature is currently going on.

The drug information frames were constructed in an attempt to provide the physician using the system with basic facts about commonly used drugs. Physicians seem to assume more knowledge then they possess about familiar drugs, but show no reluctance to look up the facts when using unfamiliar drugs. Hence, the

* Cathode Ray Tube (User Terminal)

emphasis in the system has been on frequently used drugs which are the usual offenders in adverse reactions. In order to establish which drugs would be included in the first edition of the PROMIS drug information system, the Pharmacy Department of the Medical Center Hospital of Vermont surveyed their files and extracted a list of the 130 most commonly used drugs at this center. Drugs were added to this list as treatments for specific problems were developed. At the present time 167 seperate drugs are represented in the system (not counting different preparations of the same entity). The drugs were classified according to the American Society of Hospital Pharmacists format and each major class was reviewed either by an experienced pharmacist or an internist interested in pharmacology. The information was largely abstracted from standard text books and articles in pharmocology with supplementation from the current literature as needed.* The drug data was organized in displays entitled - "Check Problem List For", "Side Effects to Watch For", "Drug and Test Interactions", "Usual Dosage", "Mechanism of Action", and "Metabolism and Excretion". All the information was then subjected to critical review by other physicians interested in clinical therapeutics.

The drug information contained on the displays cannot be viewed as a finished product, however. For the past year the medical library has been copying articles related to drugs from the current literature, and the facts derived from these articles will be incorporated into the displays as they are reviewed.

Present plans call for the frames to be reviewed twice during the next year, but significant new information can be added (and has been in the past) as it becomes available. In the past few months users have made many important contributions to the frames and it is anticipated that more changes will be made as interested users relate the drug information to specific problems. Ideally, these frames should be periodically subjected to critical review by experts who have been provided with the latest information from the medical literature. The present library literature survey and user review constitutes a crude beginning in the development of up to date, library of drug information displays.

*References

Textbooks:

Goodman and Gilman, The Pharmocological Basis of Therapeutics

Modell, (ed), Drugs of Choice 1970

Conn, Current Therapy 1970

Williams, Textbook of Endocrinology 4th ed.

Journals Frequently Consulted:

Clinical Pharmacology and Therapeutics

Clin-Alert

The Medical Letter on Drugs and Therapeutics

Specific Review Articles:

Dunphy, J.W., The Pharmacist's Role in the Prevention of Drug Interactions, American J. Hosp. Pharm. 26: pp 307-377, July 1969.

Elleing, M.P. and H.F. Kabat, Drug Induced Modifications of Laboratory Test Values, Amer. J. Hosp. Pharm. 25: pp 465-519, 1968.

Hartshorn, E. A., Drug Interaction, Drug Intelligence pp. 174-180, July 1968.

Husser, D.A., Inhalor Compilation of Drug Interactions, Amer. J. Pharmacy, pp. 109-156, July-August 1969.

Specific Review Articles (Cont):

Stuart, D.M., Drug Metabolism, Pharmindex, Sept, Oct. 1968.

Zupleo, A.G., Drug Interactions According to Therapeutic Activity, Pharmacy Times, pp. 38-50, Oct. 1969.

It is thus apparent that the medical content of the system is viewed as a textbook, or encyclopedia organized in a structure determined by two considerations: the problem oriented approach, in which current observations are systematically linked to each of the patient's problems; and the computer tool itself which permits an ever-expanding body of medical knowledge to be coupled via the computer to each of the patient's problems, not retrospectively, but "on line."

From this point on, what is needed is a library process systematically organized ~~in a non-~~regional, non-local setting to update, revise, maintain, and accredit the content of the body of medical knowledge currently in the system. This should be a systematic method of providing input from the whole spectrum of literature source material - the strictly library function - and input from consultants interacting directly with the medical content by using the computer system as his tool. The capability of the computer system to allow this direct interaction is what should be exploited in establishing a comprehensive approach to bringing current medical knowledge to bear directly on to the individual patient's problems. Until a concrete mechanism for doing this is accomplished, the present system cannot be disseminated for general use.

> "Until now, the storehouse of medical information energy has been the medical library. There has been no effort at the library level to couple directly all the available information on a given problem to the needs of a given

patient. The physician has been expected to explore the sources himself (although collective reviews have been disigned to help him) and to take the necessary time to do so. It is now possible to develop a library of displays which can be logically linked, by a touch of the physician's finger, to a large variety of problems. As a physician uses the terminal of the computer to define the problem or treat the patient, the latest information, precautions and options become immediately available to him. Such a library of displays will transform the medical library from an information repository to a coupling agency that will make information interact in specific ways with the problems to which the information is relavant.

The potential significance of a national library of displays related to medical problems through the computer as a point of interaction for the research and applied activities of us all is exciting to contemplate. The computer allows a speed and multiplicity of correlations of action and knowledge never before attainable. It is our hope that the present islands of independent and uncorrelated intellectual activities will be linked by a communication system that will reinforce that which is right and will force abandonment of that which proves false as multiple minds interact with similar problems.

If we allow the computer to act as our memory, what would happen if by chance one were stranded without the laboratories or computers? We might actually act more wisely because of the insight that computer displays had given us. One should not be ashamed to admit that a combination of logic, drill and repetition is the basis for good education and reliable performance."[2]

"In creating such a library of displays it is recognized that no absolute answers are known and becuase of this many will hesitate to define and explicitly relate new information to problems for the use of physicians. Such hesitancy grows out of the misconception that to explicitly define courses of action and alternative logic pathways is to fix and limit one's options and thereby inhibit progress and perpetuate error. In reality the reverse is true, explicit definition of logic pathways serves as a well-defined point of departure for discussion, action, feed-back loops, and correction of the computer displays. Intellectual growth requires that you define your facts and logic so that they can be systematically criticized and up-dated."[3]

"To leave the paper at the mercy of the fallible recall mechanism of the human mind introduces an unknown degree of omission of information into the system that makes impossible an audit in terms of these concepts of a sophisticated guidance system."[4]

"Patient interviews as we have conducted them, patient records as we have known them, conferences as we have stumbled through them - all must be given a better framework of discipline and form. This can be done through the creative use of modern means of precise and immediate communication. Until we accept the principle that great art does not exist in opposition to structuring and form but requires them, we will never be able to reap the great benefits that the electronic and computer age holds in store. What was precisely communicated on paper by Bach, faithfully performed by Casals, and captured in recordings by modern technology is now available to countless thousands. In the same way, medicine at its best can also be generalized and made available to all if, for each problem, the best current medical standards for defining and treating that problem are available by modern electronic means to each physician. And this aim can and should be achieved in such a way that, as the physician actually records his data and plans the treatments, the very communication tools he uses will have built into them the parameters of guidance and the currency of information he needs to define and solve problems. The best talent medicine has must be availabe to him through computer displays at the time he performs, because it is at the point of integrating knowledge and action that he needs help, not in learning the facts themselves.

I recognize that up-to-date and precise communication will not alone lead to the best in medical practice, any more than precisely transcribed music makes a great performer, but it is equally true that without precision and form much art can never be transmitted. There will always be individuals whose performance is superior in a total sense because of subtleties yet to be defined in medical practice, but for most patients the physician's "art" will be sufficient if they can be assured that their doctor is aware of the highest standards of medical practice and if he handles the data on their problems in a disciplined and orderly way."[1]

"The role of the computer in a diagnosis or, what is more appropriate to our discussion, formulation of the problems has been the subject of study by many investigators. Easy success in applying the computer to diagnostic problems was not to be expected and has not been achieved for several reasons. The word "diagnosis" is in itself ambiguous. We call an ulcer a diagnosis and a fever a symptom when neither term is clearly understood. Mathematics, and particularly Bayesian theory, has not been as helpful as one might have hoped because patients inconveniently do not provide either single

or mutually exlusive problems, nor do physicians show consistency either in behavior or in the quality of the data they employ. Furthermore, physicians randomly mix data collection and therapeutic action and thereby create new problems that defy traditional methods of analysis. The need for and value of help at the strictly diagnostic level has also been to some degree overrated. Rational management if often based on the physiological state of the patient, as measured by standard parameters, and not on any categorical etiological diagnosis. The quantitative aspects of disease in terms of criticality and severity frequently determine therapy, and they are not always implicit in the simple statement of the diagnosis.

What course of action should be followed in the face of the above difficulties? We should use modern computer techniques as described here and by others as well as all available resources of modern technology to make the initial data base as large as possible. "Diagnosis" is frequently obvious if all the data are available initially. A consultant's expertise consists often of little more than organizing a crucial element of information already available, so that the true nature of the problem become obvious. Modern techniques can provide a "synthetic" expertise of this type as they record and present massive amount of data in closely logical form. Gradually the computer will help the physician to become an intelligent "guidance system" by grouping certain abnormal findings and by directing the physician to obtain specific additional data as abnormalities appear. Understanding therefore will come securely in small steps. The recorded data in medicine and the relevant mathematical techniques are simply not available at this time to permit the massive quantum leap from a few symptoms to the hypothetical world of diagnosis - nor need they be for the intelligent, effective management of patients.

At the present time no operational system exists that permits a medical teacher or member of an accrediting agency to take a patient's record at random, select one of the patient's problems, review all the data pertinent to that problem in sequence, and so assess whether current medical standards are being properly applied. Also at the present time the details of the relationship between patient's problems and hospital resources and costs are very obscure. A medical record maintained by the technique described will make possible a fiscal management in which specific utilization of medical resources and services for the care of the patient, problem by problem, is a matter of the medical record. It will enable the hospital to establish a dynamic unit-cost-accounting system similar to that employed by more sophisticated industries. The advantages of such a system have broad and favorable implications for the

general management of health-care systems in the areas of fiscal planning, organization of resources, and measurement of efficiency, and in the effective, on-going education of medical students. The economic and organizational aspects of medical care, to a far greater degree than students are presently aware, will determine the quality and quantity of care they will be able to deliver.

Until medical education, medical care and medical research are done in a manner, using the technology, such that they reinforce and amplify one another (that is to be working on one automatically results in a contribution to the other two by the communication techniques involved) then we are doomed to further fragmentation, great expense, and massive undertakings that are never properly coupled to yield that which all three divisions are after and that is the best possible patient care for the maximum number of people.

GENERAL REFERENCES

[1]Weed, Lawrence L. Medical Records, Medical Education, and Patient Care. Cleveland: The Press of Case Western Reserve, University, 1969.

[2]Weed, Lawrence L. "Technology is a Link, Not a Barrier, for Doctor and Patient," Modern Hospital, pp. 80-83, March, 1970.

[3]Weed, Lawrence L., et.al. The Problem Oriented Medical Record--Computer Aspects. Cleveland: Dempco Reproduction Service, 1969.

[4]Weed, Lawrence L. "Quality Control and the Medical Record."

Senator KENNEDY. We have two more witnesses this morning, Dr. Bunker from Stanford University, and Dr. John Stubbs. We are going to have to take a recess at this point, and I apologize in terms of inconveniencing those witnesses. We will meet again at 1:30 and hear those two witnesses.

The subcommittee will stand in recess.

AFTERNOON SESSION

Senator KENNEDY. The subcommittee will come to order.

I would like to welcome our next witness, Dr. John Bunker, who is professor of anesthesia at the Stanford University School of Medicine. Even though Dr. Bunker now resides in California, he was born in Boston and was graduated from Harvard University and Harvard Medical School, so I want to express our great appreciation not only for his coming all the way from California, but also his service for many years at Massachusetts General Hospital and at Harvard.

Among his memberships, Dr. Bunker was on the pharmacology training committee of the National Institutes of Health from 1961 to 1965; was on the committee on anesthesia of the National Research Council from 1959 to 1970; has received many other distinguished honors.

We are very glad to welcome him to the subcommittee this afternoon, and we express our very sincere appreciation for your adjusting your program to meet our schedule, Doctor.

STATEMENT OF JOHN P. BUNKER, M.D., PROFESSOR OF ANESTHESIA, STANFORD UNIVERSITY MEDICAL CENTER

Dr. BUNKER. Thank you, Mr. Kennedy.

Mr. Kennedy, it is a privilege to speak to you today on the subject of the quality of medical care, and I wish to express my appreciation for the courtesy shown to me and to the university which I represent. I would like to take this opportunity to say, in addition, how pleased I am personally that the Subcommittee on Health has undertaken consideration of the complex, but enormously urgent issue of the quality of medical care.

Dr. Hurst set Dr. Weed up this morning, somewhat by collusion, I suspect. Dr. Weed set me up, but not by collusion because actually we have only talked recently on the telephone and I find that he and I have come to very similar points of view from very different backgrounds or experiences.

I too, would like to throw my vote with the computers. I am surrounded by computer experts at Stanford, and although I don't know how to run them myself, I am absolutely convinced that computers will be essential for the practice of medicine in the future, the reasons for which were well summarized this morning. And I am certainly not concerned about the possibility that I may be out of a job when the computer takes over; I rather liked Dr. Weed's suggestion that at the very least the doctor will be able to return to the patient, hold his hand, and help him to live with his problem, because it is interesting that this is the one thing that patients hold

against us most today, that we no longer do hold their hand and give them the compassion they need.

It is my purpose in my remarks today to make a formal recommendation, to recommend the public support of medical education, rather the contrary from the position that I think organized medicine has taken in the past. And I make this recommendation because I believe that it is only when the public pays for medical education will it be able to participate in determining how medicine will be taught and how it will be practiced.

My recommendation is based on considerations of the quality of surgical and medical care and of the impact of economic incentives on medical manpower and medical practice.

My personal, intense, concern with the quality of medical care in the United States derives largely from my experience as chairman of the national halothane study, a National Research Council sponsored study of the possible role of anesthesia in fatal postoperative liver failure.

In the course of the national halothane study all postoperative deaths occurring over a 4-year period in 34 specially selected hospitals were examined. In the process, we were able to bring together the most comprehensive data on surgical mortality which has ever been published in this country.

Incredible though this may seem, Dr. E. A. Codman, as Dr. Weed correctly pointed out, told us exactly what needed to be done over 50 years ago, and I would like to read a brief excerpt from Codman's recommendation. He asked that the medical professional "formulate some method of hospital report showing as nearly as possible what are the results of the treatment obtained at different institutions. This report must be made out and published by each hospital in a uniform manner, so that comparison will be possible. With such a report as this as a starting point those interested can begin to ask questions as to management and efficiency." In other words, the quality of medicine.

The distinguished doctors in Boston and, as a matter of fact, the American College of Surgeons, to whom Codman reported, chose not to do this, and here we are more than 50 years later, still in need of basic data on surgical end-results.

In the national halothane study we looked at all postoperative deaths. Death at best is a crude index of the quality of medical or surgical care, but it is certainly an important one. The most important observation of the national halothane study was that postoperative death rates varied greatly from hospital to hospital. The variation was 25-fold without adjustment for differences in patients cared for; after adjustment for differences in age, operation, sex, and preoperative physical condition, there was still a three-fold variation in postoperative deaths.

In other words, a 40-year-old woman entering for an elective hysterectomy would appear to have three times as great a chance of surviving in one hospital than another.

Now these data came from 34 carefully selected hospitals. They had to be good enough in their record rooms to provide us with the data. We don't know anything about what may occur in some of

the less well staffed hospitals where very possibly the results might have been even more striking.

Senator KENNEDY. Can you give us the hospitals? It would be enormously helpful for our subcommittee to have this information in terms of the range of——

Dr. BUNKER. The information is available. However, we did this carefully protecting the anonymity of all hospitals, and the code has never been broken. It may be broken with their permission, however, in a future study which I would like to tell you about and which we are just starting.

Senator KENNEDY. Well, could we have just the broad data without breaking the code?

Dr. BUNKER. I have a copy of the report that I can give you afterwards, the report of the institutional differences.

Senator KENNEDY. We will make a copy of the report a part of our appendix.

Dr. BUNKER. This was published by Professors Moses of Stanford and Mosteller of Harvard 2 years ago.

Senator KENNEDY. How many hospitals?

Dr. BUNKER. Thirty-four. We started with about 50 and 15 dropped out at once because they couldn't get us the data. Then we did the study with 35. The most distinguished of all the hospitals had to drop out because they couldn't find all the records for us to review. This was a teaching hospital where the professor often keeps all the records of his patients under his desk, and we were never able to get them all. So finally there were 34 hospitals.

Senator KENNEDY. And how extensive was the study itself? Was it very exhaustive?

Dr. BUNKER. We really don't know the explanation for the differences in postoperative death rates. There were two possible explanations that I should mention. One is simply that the quality of medical care varied this greatly.

The second is that there may still be considerable variations in the population. I mentioned that we corrected for many variables, but indeed we didn't have any really good scoring method for comparing Mrs. Smith in hospital A with Mrs. Brown in hospital B, and I am personally convinced that the criteria used by surgeons and other physicians for treatment vary enormously. In other words, some physicians will limit their practices to desperately sick patients where the indications are very clear, while other physicians and surgeons, very possibly for good reasons, will limit their practices to good risk patients where presumably the mortality would be much more favorable. To be able to make reliable comparisons of the practices of these two surgeons or the two hospitals which they represent ,or 34 or the whole country, isn't possible right now; but this is what in fact we are now preparing to do as a second National Research Council study.

Prof. Gardner Child from Michigan is the chairman of this study of institutional death rate differences, and I am the vice chairman. We are just in the process of selecting a staff for this study, and we conceive of this study as an investigation of the quality of medical care. We will start with surgical death rates, but in fact we really

want to know how quickly the patients returned to work, were they made more comfortable, are they better, was the objective of the operation achieved? These kinds of data are simply not available on a national basis, and even on a regional basis they are rarely available.

I suggest that there are two possible explanations of the observed differences in death rates. One is that there are genuine differences in the care available within one hospital or another, the other is that there are different populations, and I think that both are probably true to some extent. To answer these and related questions will require vastly more precise data than currently available, and possibly even beyond that called for by Dr. Weed this morning.

In the absence of reliable and objective data on the quality of medical care offered in the United States, we can say something about the selection of patients for surgical care and possible variations in hospital populations. Prof. Charles Lewis of UCLA has recently reported three and four-fold variations in the frequency with which common operations such as cholecystectomy, appendectomy, and hemorrhoidectomy are performed within a single State, Kansas. He was able to relate these variations in operation rates to the number of surgeons and hospital beds. The more surgeons and hospital beds in the community, the more operations were performed.

Senator KENNEDY. Why is this?

Dr. BUNKER. Well, our information on the indications for surgery is probably not sufficiently precise to indicate with the kinds of precision, for example, that Dr. Weed might call for exactly when an operation is in order. You and he talked a little about the indications for shoulder surgery. I have my own equivalent of your experience. I have torn cartleges in my knees, and I shopped around until I found a professor of orthopedic surgery who was willing not to operate on me. When I asked, "what will happen if I don't have my cartleges out?" he replied "we really don't know because we have not ever *not* operated." It is not a unique story. Unfortunately, although we know something about the risk of operating, we don't know much about the risk of not operating.

Perhaps even more seriously I am concerned about the fact that what information we do have of a basic nature about indications for surgery and end results may be used by our most prestigious institutions, but very possibly not in the community as a whole, and there is a wide variation in the practice of surgery.

Incidentally, I should mention that I say surgery because this is the world I live in—at least I am in the periphery of it as an anesthesiologist—but I don't believe that there is anything that I might say about surgery which isn't true for medicine as a whole. Surgery is just part of medicine. It is a little easier to talk about in some ways because there is a specific identifiable procedure which is the focus of your attention. It is easier to collect statistics about operations, but the problems are the same throughout medicine.

A year or two ago, I looked at the question of surgical manpower and operations in the United States and in England and Wales and I found very much the same kind of situation that Lewis described

for Kansas. There are twice as many surgeons in the United States as in Britain and we do twice as many operations. I don't know whether the British operate too infrequently, whether we operate too often, whether it is somewhere in between, or maybe both countries would be better served by more surgery. We don't have the evidence to date.

Senator KENNEDY. Well, is anybody trying to collect that evidence?

Dr. BUNKER. There is a great deal of activity on this front. In fact, I should report that the American College of Surgeons and the American Surgical Association have now mounted a very large scale review of the whole question of the delivery of surgical services in the United States, and they have the consultation services of some of our more distinguished leaders in organization of medical care. So I think we can expect from them within a year or year and a half a good position paper.

In terms of developing the new data which we need, this may take a decade, because we are really way behind. I can't believe the National Research Council study which I just described is going to take less than 10 years even to begin to get really reliable answers.

Returning to the question as to why there are such large variations in the volume of medical services, Lewis suggests that as more medical services are offered more are utilized—a sort of Parkinson's law. This extraordinary idea would appear to be totally inconsistent with the public image of medicine today as scientific and precise, each illness a discrett and identifiable entity, each calling for a specific remedy. Now I guess Dr. Weed pretty much dispelled that illusion this morning.

However, the public does have this image. I think even members of this medical profession would like to harbor this illusion. This image is not an entirely accurate one, and there are a good many factors which may help to explain the Lewis-Parkinson effect. First, cise yardsticks to measure the overall medical needs of the public. despite remarkable advances in medical practice, there are few precise yardsticks to measure the overall medical needs of the public. In the absence of specific guidelines, doctors tend to favor active intervention. When in doubt it is always easier for the physician to do something rather than nothing. It is easier to do something rather than nothing whether the something is operating or prescribing a drug.

Talcott Parsons, in an interesting comment as far as surgery is concerned, says "after all, the surgeon is trained to operate, he feels active, useful and effective when he is operating."

Second, the patient himself has no way to judge either his needs or the quality of his medical care, and he generally overestimates both. I think we in the medical profession are largely at fault in having allowed our patients to develop overexpectations of what medical care can provide. More medical care is equated with better medical care, and the patient's demands tend to increase in direct proportion to his affluence. Again, where there is doubt, doctors are apt to accede to their patients' demands.

Third, it is now increasingly clear that our medical resources fall far short of medical potential. There are not enough doctors or dol-

lars to bring the last word in medical care to all citizens. Therefore, when more medical care is offered, it is to be expected that more will be used. In other words, if there are more hospital beds and more surgeons in one community than another it should not be too surprising that more procedures are carried out. And, as a direct corollary, more medical care for one sector of the population means less for another when resources are limited.

The governments of countries where the organization of medicine is already under state control are well aware that their own medical resources are limited. Enoch Powell, the arch conservative of British politics, on completion of his service as Minister of Health, spoke of the "infinity of demand," and I think his perceptions are of sufficient interest to quote:

> There is virtually no limit to the amount of medical care an individual is capable of absorbing. The moment it was established that the cirvical smear test enabled incipient or prospective cancer to be diagnosed, this check-up became a "need" of very woman between relevant ages. But we would all benefit from having our incipient or suspected ailments detected and treated sooner: everyone knows that he suppresses or ignores medical conditions that could be alleviated or removed.
>
> Not only is the range of treatable conditions huge and rapidly growing. There is also a vast range of quality in the treatment of these conditions. Every general practitioner knows that he palliates with pills psychiatric or psychological disorders to which a great amount of skill and care could be justifiably (in a professional sense) devoted. There is hardly a type of condition from the most trivial to the gravest which is not susceptible of alternative treatments under conditions affording a wide range of skill, care, comfort, privacy, efficiency, and so on.

And his final point is an interesting one:

> There is the multiplier effect of successful medical treatment. Improvement in expectation of survival results in lives that demand further medical care. The lower (medically speaking) the quality of the lives preserved by advancing medical science, the more intense are the demands they continue to make. In short, the appetite for medical treatment vient en mangeant.

In the United States we are only just now recognizing our own severe limitations in medical resources and in particular medical manpower. The cry for a greater number of doctors has been raised; even more urgent is the need to examine how and where the doctors we now have spend their time and energy. More doctors in the wealthy communities mean fewer for the poor. An excess of surgeons means a shortage of pediatricians and general practitioners. More heart-lung machines means fewer medical dollars to invest in other medical needs. It is the paradox of American medicine that we provide luxury care for the wealthy, but often do not provide basic care for the poor.

This brings us to a consideration of the economic incentives which determine how and where medicine is practiced. And I think this is critical.

In a free market, medical services respond to economic forces, but in a manner which may not correspond to the public need. For example, fee-for-service reimbursement provides a strong monetary incentive for treatment of disease after it occurs, and relatively little incentive to prevent disease before it occurs. Fee for service also would appear to encourage physicians to concentrate in areas

that are glamorous and remunerative, while other areas, which are less glamorous and less remunerative, may be relatively neglected.

Most serious of all, fee for service encourages the perpetuation of time-honored one patient and one physician relationships; it tends to lock us into the practices which we learned as younger men when we get older. I like to tell about the nose and throat surgeon in the locker room a number of years ago. He was hidden behind a row of lockers and there were two young eye surgeons who were complaining that they had only done two or three cataracts that day, and the conversation went on in this vein. After a while the nose and throat surgeon rushed around the corner and said "You young men should be very grateful that you have something that can't be cured by penicillin." There didn't seem to be much left for him after mastoidectomy disappeared.

In a free market such as ours, medical manpower is unplanned and uncontrolled. Only very recently have we begun to make estimates of the total numbers of doctors needed in the immediate and distant future.

I am among those who don't feel that numbers of doctors is the highest priority item, and I am convinced that at least as important as the numbers is how we use those we have.

But the medical profession has made no attempt to determine how many physicians are needed in each specialty, and one can only speculate as to whether the present distribution of physicians by specialty is an appropriate one. Clearly there are acute shortages in some areas, such as general practice; and, on the basis of my comparison of surgery in England and Wales and in the United States, I have suggested that there may be an excess of surgeons in this country.

In the absence of planning, there are identifiable forces which determine the quantity and variety of graduate (residency) training. The physician, himself, usually has a clear career goal at the time of graduation from medical school. Having paid for much of his education, he understandably feels free to choose a medical specialty and a place of practice based primarily on his own personal preference.

The young physician's choice is, of course, limited to the spectrum of hospital appointments offered. The appointments offered are determined, in turn, primarily on the basis of the interests of the teaching staff, and the service needs of the hospital, which are very large—and therefore there is not really much of a limitation. There are many more teaching appointments offered, I would assume, than could be fully justified, and I think there can be little question of the fact that our training programs, our residency programs have been staffed largely on the basis of the service needs. I think this is unfortunate. Education is much too serious and difficult a matter to tie the care of the indigent to teaching programs.

In any event, nowhere does the national need enter into the decision as to what kinds of physicians to train.

The failure of our teaching institutions to respond to the public's needs can again be attributed, at least indirectly, to the free market. The public wants medical care and naturally chooses to buy it di-

rectly from practicing physicians. The public is willing to pay dearly for this immediate care, and therefore it is not surprising that little of the medical dollar is left over for medical education. Left to their own devices to find educational funds, and never entirely successful, the teaching hospitals concern themselves primarily with meeting parochial needs.

Reform in the organization of medical manpower and practice must begin in our medical schools and teaching hospitals, since it is in these institutions that the patterns for the future are established. The needed reforms will undoubtedly require a considerably greater investment by the public in medical education. Indeed, I believe that all, or most, of medical education must be paid for by the public, or its representatives in Congress, and that only then will the public be in a position to demand that its national medical interests be met by our teaching institutions and by medicine as a whole.

Specifically, I believe that medical students, interns, and residents should be supported by Federal grants awarded to teaching institutions, or by stipends paid directly to the trainee. In return, the institutions themselves, in consultation with appropriately constituted and appointed lay groups, could be expected to undertake the responsibility for coordinating the training offered to meet nationally or regionally determined manpower needs and to integrate postgraduate training into the patient care process.

In short, I suggest that only when the public pays for medical education can it participate in determining how medicine will be taught and practiced.

Senator KENNEDY. Well, now you have mentioned here this afternoon the fact that when you have an excess of surgeons it means you have a shortage of pediatricians and general practitioners. How are you going to turn that around? What should the Federal Government do in order to try and remedy that situation, or should we?

Dr. BUNKER. Let's talk about the numbers of surgeons. The young surgeon finishes the most prestigious training and sits on his hands for 5 years when he is at the peak of his abilities, and we hear this over and over again. I can't give you exact figures, but there can hardly be any question about this.

Approximately 10 percent of the physicians in Britain are surgeons. Approximately 20 percent of our physicians are "qualified" surgeons: That is certified by a surgical board or fellows of the American College of Surgeons. There is another 10 percent of our physicians who list themselves in the annual report published by the AMA as full-time practicing surgeons, but who do not have these qualifications. And there is another slightly less than 5 percent who list themselves as part-time surgeons.

It is a little hard to figure out what they all do. But by rough calculations one has to come to the conclusion that something like three or four operations are done a week by many men who list themselves as full-time practicing surgeons. There are simply too many surgical training programs, and since it is a glamorous specialty we wind up training too many surgeons.

I would suppose that the only way to control this would be to limit the numbers of men who are trained and the numbers of posi-

tions. I would think that if the Government should support our teaching institutions and support, for example, appropriate stipends for medical students and for residents after graduation while they are still in specialty training, the least that the Government should expect in return is that the medical schools as a group coordinate the numbers of men they train to meet national and regional needs.

Senator KENNEDY. Why don't the medical schools do that, and not have the Federal Government interfere? We always hear about the Federal Government interferring in these kinds of situations; schools jump up and down about the long arm of the Federal Government. Why don't the medical schools police themselves in this?

Dr. BUNKER. Well, I think that is a reasonable question, but there's no very satisfactory answer. I'm afraid we tend to our own knitting. We want to teach, we think we are good at it, and we build a teaching program around the staff of a size that we want and the numberber of patients we think we have to treat. In other words, the basis on which we select our men for training is quite literally our desire to teach and our needs to take care of those patients. And even at Stanford I find that our residents do provide the critical manpower for taking care of the very complex medical problems that we see.

We have a very distinguished heart surgical team, as you know, and Shumway is a brilliant surgeon, but it is the young men whom he trains who are there all night and all day and who keep some of their terribly sick patients alive. And this is true for other areas of medicine.

We are in very difficult financial straits at Stanford, however wealthy we may look from the outside, and I think this is true of all of the other medical schools. We are struggling with our local problems to the extent that we tend to overlook the needs of the country as a whole.

Senator KENNEDY. Now the President suggested capitation grants following publication of the Carnegie Commission Report. We have legislation in to raise them to more sufficient and adequate levels. Do you think it would be reasonable for us to put in restrictions on capitation grants for medical schools unless the school provides a better balance of numbers in its fields of specialization?

Dr. BUNKER. Absolutely. I am not personally convinced as to what form the support of the medical school should take, but I think if it comes from the people or their representatives you must and can expect a responsible approach to the question of how many specialists are trained.

Senator KENNEDY. How are we going to insure we are getting quality from those physicians who operate three times a week in order to keep in practice? We heard this morning that you can't expect to have peer review really be significant or important if one physician is tattling on another. And I agree that within the professions it is all pretty much the same, whether it is politics, medicine, law, or whatever. But how are we going to really get some quality control?

Dr. BUNKER. Well, I agree that doctors are not likely to police each other, particularly their close working associates. I don't be-

lieve that peer review will work without some very specific incentive. And I think those incentives can be found.

At the present time, of course, the economic incentive in the practice of medicine is fee for service; in other words, in support of solo practice of medicine. I believe that the incentives should be, can be, and already are in many groups on a group basis. Doctors are willing to police each other if they have an economic stake in it. If in a group practice you have a group of doctors whose incomes depend upon the success of the group as a whole they will not allow the incompetent physician to do something for which he is not qualified, and doctors do indeed police each other when they are economically tied to each other. So I believe very strongly in economic incentives in the practice of medicine.

I might also comment that as a corollary I do not support a national health service of the inflexible, monolithic variety such as the British have. They have problems almost as great as ours.

Senator KENNEDY. In terms of quality.

Dr. BUNKER. Yes; the doctors are very unhappy. They are underpaid and there isn't much incentive to put out a lot of extra effort.

I think that one can retain the advantages of enterprise and incentives that are so important in this country, and rightly so, but build medical practice around groups of physicians; and the groups of physicians must interact with groups of patients.

Senator KENNEDY. This is group practice rather than solo?

Dr. BUNKER. Group practice, doctors as groups, and paraprofessionals at all levels. In other words, groups of medical professionals working with groups of patients.

Now I commented a little earlier about how difficult it is for the individual patient to evaluate the quality of his medicine. But groups of patients do have ways, and they have already been very successful in consumer groups in setting standards, and in insisting on how they wish medical care to be organized. So I am very much in favor of the involvement of the public in the organization of systems. But I hope it can be kept local; I would like the incentives and the control, the responsibilities to be kept at a community level. By so doing, I think we can retain much of what is best in medicine in this country.

Senator KENNEDY. You talked earlier about luxury care for the more affluent people. Is luxury care always quality care?

Dr. BUNKER. No; there is some evidence that in fact beyond a certain point you do the patient harm by overdoctoring, so to speak. I don't consider that a major problem, however. But it is certainly true, that when the very rich buy medical care away from the very poor, it makes it that much harder to do a good job for the poor. And, interestingly, this is an issue in Great Britain right now. Four percent of the practice of medicine is in privately insured private practice in Britain, and they are arguing violently over the question of whether that 4 percent is draining off care which should be given to the people through the National Health Service.

I think it is of some concern, but that isn't where I would place my major emphasis. For example, although there may be some overdoctoring and there may be some unnecessary operations I don't

think this is a central problem. To suggest unnecessary operations implies bad faith on the part of the medical profession, and I don't think that that is the problem. There may be some scoundrels among us, and undoubtedly there are a few, but I think most doctors do the best they can, and they genuinely believe in what they do. But without the guidelines and without more appropriate incentives it is inevitable that medical care is distributed on the basis of ability to pay.

For instance, there are proportionately twice as many surgeons in California and Massachusetts as there are in Alabama and Mississippi and there are four times as many anesthesiologists; this must be economic in origin.

Senator KENNEDY. I think most middle class Americans who can afford health care somehow believe that they are getting quality health care at each instance. What is your reaction to that?

Dr. BUNKER. I think quality medical care in the country as a whole is far less than it could be, far lower than its potential.

Senator KENNEDY. You wouldn't get too much of an argument on that, but generally people feel that if they can afford either an insurance policy or can afford to go to a doctor, then they are receiving what they are paying for and they are getting quality care. What can you say about the kind of quality care that those in the middle income brackets receive? Are they getting quality care from the insurance company or from the physician?

Dr. BUNKER. I have stated in print that I thought the quality of surgery in Britain is better than it is in this country. But, you know, the only evidence I had for this is that in Great Britain surgery is done exclusively by men with the proper credentials and only 60 percent in this country is.

Senator KENNEDY. Isn't that a responsibility for medical societies in terms of policing their operation? There are so many sides to this question. If you want to keep the Federal Government outside on the problems of quantity and quality, you would have the various societies and medical associations really policing themselves. It is only when you come up against the question whether the consumer really needs to be represented that you get the strong arm of the Federal Government coming in.

Dr. BUNKER. Well, the medical societies in some areas are taking a responsible position. For example, in Santa Clara County the medical society is ahead of the medical school in the development of an experimental health services delivery system.

I think very possibly many medical societies try to represent what they conceive as the views of their constituents and perhaps view reorganization along some of the lines discussed today by Dr. Weed and perhaps alluded to by me as undesirable. I think we can expect and demand a lot from local medical societies. I doubt that they are going to take individual leadership across the country.

Senator KENNEDY. Doctor, I want to thank you very much for coming. I intend to insert into the record both your article in the New York Times of December 19th about when to operate, and a special article on a comparison of operations between surgeons of

the United States and those in England and Wales as part of the record at this time.

(Prepared statement of Dr. Bunker and articles referred to follow:)

THE QUALITY OF MEDICAL CARE, MEDICAL EDUCATION, AND MEDICAL MANPOWER

Mr. Kennedy, members of the Subcommittee, it is a privilege to speak to you today on the subject of the quality of medical care, and I wish to express my appreciation for the courtesy shown to me and to the University which I represent. I would like to take this opportunity to say, in addition, how pleased I am personally that the Subcommittee on Health has undertaken consideration of the complex, but enormously urgent issue of the quality of medical care.

It is my purpose, in my remarks today, to recommend the public support of medical education, because only when the public pays for medical education will it be able to participate in determining how medicine will be taught and how it will be practiced.

My recommendation is based on considerations of the quality of surgical (and medical) care and of the impact of economic incentives on medical manpower and medical practice.

My personal, intense, concern with the quality of medical care in the United States derives largely from my experience as Chairman of the National Halothane Study, a National Research Council sponsored study of the possible role of anesthesia in fatal postoperative liver failure. All postoperative deaths occuring over a four-year period in 34 specially selected hospitals were examined. In the process, we were able to bring together the most comprehensive data on surgical mortality which has ever been published.

Death at best is a crude index of the quality of medical or surgical care, but it is certainly an important one. The most important observation of the National Halothane Study was that postoperative death rates varied greatly from hospital to hospital. The variation was 25-fold without adjustment for differences in patients cared for; after adjustment for differences in age, operation, sex, and preoperative physical conditions, there was still a three-fold variation in postoperative deaths.

The cause for these differeneces is by no means clear. Two possible explanations should be mentioned. One is simply the quality of care varies greatly from one hospital to another. The second is that there may be marked variations in the populations served by different hospitals. Both are probably true to some extent. To answer these and related questions will require vastly more precise data than currently available, data and methods of the kind described earlier today by Dr. Weed. Currently the National Research Council is developing plans for a new study with exactly this purpose.

In the absence of reliable and objective data on the quality of medical care offered in the United States, we can say something about the selection of patients for surgical care and possible variations in hospital populations. Professor Charles Lewis of UCLA has recently reported 3- and 4-fold variations in the frequency with which common operations such as cholecystectomy, appendectomy, and hemorrhoidectomy are performed within a single state, Kansas; and I have reported two-fold variations in operation rates between England and Wales and this country. In both studies the numbers of operations were shown to vary directly in proportion to the number of surgeons or hopsital beds. Lewis, and others before him, suggest that this may reflect a sort of Parkinson's law.

Lewis suggests that as more medical services are offered, more are utilized. This extraordinary idea would appear to be totally inconsistent with the public image of medicine today as scientific and precise, each illness a discreet and identifiable entity, each calling for a specific remedy.

But the public image is not an entirely accurate one, and there are a good many factors which may help to explain the Lewis-Parkinson effect. First, despite remarkable advances in medical practice, there are few precise yardsticks to measure the over-all medical needs of the public. In the absence of specific guidelines, doctors tend to favor active intervention. When in doubt, it is always preferable to do something rather than nothing—whether the something is operating or prescribing a drug.

Secondly, the patient himself has no way to judge either his needs or the quality of his medical care, and he generally overestimates both. More medical care is equated with better medical care, and the patient's demands tend to increase in direct proportion to affluence. Again, where there is doubt, doctors are apt to accede to their patients' demands.

Thirdly, it is now increasingly clear that our medical resources fall far short of medical potential. There are not enough doctors or dollars to bring the last word in medical care to all citizens. Therefore, when more medical care is offered, it is to be expected that more will be used. And, as a direct corollary, more medical care for one section of the population means less for another.

The governments of countries where the organization of medicine is already under state control are well aware that their own medical resources are limited. Enoch Powell, on completion of his service as British Minister of Health, called it the "infinity of demand" and wrote:

"There is virtually no limit to the amount of medical care an individual is capable of absorbing. The moment it was established that the cervical-smear test enabled incipient or prospective cancer to be diagnosed, this check-up became a 'need' of every woman between relevant ages. But we would all benefit from having our incipient or suspected ailments detected and treated sooner: everyone knows that he surpresses or ignores medical conditions that could be alleviated or removed.

"Not only is the range of treatable conditions huge and rapidly growing. There is also a vast range of quality in the treatment of those conditions. Every general practitioner knows that he palliates with pills psychiatric or psychological disorders to which a great amount of skill and care could be justifiably (in a professional sense) devoted. There is hardly a type of condition from the most trivial to the gravest which is not susceptible of alternative treatments under conditions affording a wide range of skill, care, comfort, privacy, efficiency, and so on. Anyone who thinks that in treatment for a given condition there is a definite and limited quantum of demand would do well to consider why the oil sheikhs come to London consultants and the private wards of London teaching hospitals.

"Finally, there is the multiplier effect of successful medical treatment. Improvement in expectation of survival results in lives that demand further medical care. The lower (medically speaking) the quality of the lives preserved by advancing medical science, the more intense are the demands they continue to make. In short, the appetite for medical treatment *vient en mangeant.*"

In the United States, we are only just now recognizing our own severe limitations in medical resources and in particular, medical manpower. The cry for a greater number of doctors has been raised; even more urgent is the need to examine how and where the doctors we now have spend their time and energy. More doctors in the wealthy communities mean fewer for the poor. An excess of surgeons means a shortage of pediatricians and general practitioners. More heart-lung machines means fewer medical dollars to invest in other medical needs. It is the paradox of American medicine that we provide luxury care for the wealthy, but often do not provied basic care for the poor.

This brings us to a consideration of the economic incentives which determine how and where medicine is practiced.

In a free market, medical services respond to economic forces, but in a manner which may not correspond to the public need. For example, fee-for-service reimbursement provides a strong monetary incentive for treatment of disease after it occurs, and relatively little incentive to prevent disease before it occurs. Fee for service also would appear to encourage physicians to concentrate in areas that are glamorous and remunerative, while other areas, which are less glamorous and less remunerative, may be relatively neglected.

In a free market such as ours, medical manpower is unplanned and uncontrolled. Only very recently have we begun to make estimates of the total numbers of doctors needed in the immediate and distant future. At least as important as the numbers of physicians is how we use those we have. But the medical profession has made no attempt to determine how many physicians are needed in each specialty, and one can only speculate as to whether the present distribution of physicians by specialty is an appropriate one. Clearly there are acute shortages in some areas, such a general practice; and, on the basis of my comparison of surgery in England and Wales and in the United

States, I have suggested that there may be an excess of surgeons in this country.

In the absence of planning, there are identifiable forces which help to determine the quantity and variety of graduate (residency) training. The physician, himself, usually has a clear career goal at the time of graduation from medical school. Having paid for much of his education, he understandably feels free to choose a medical specialty and a place of practice based primarily on his own personal preference.

The young physician's choice is, of course, limited to the spectrum of hospital appointments offered. The appointments offered are determined, in turn, primarily on the basis of the interests of the teaching staff, and the service needs of the hospital. Nowhere does the national need enter into the decision as to what kinds of physicians to train.

The failure of our teaching institutions to respond to the public's needs can again be attributed, at least indirectly, to the free market. The public wants medical care and naturally chooses to buy it directly from practicing physicians. The public is willing to pay dearly for this immediate care, and there is not surprisingly, not a great deal of the medical dollar left over for medical education. Left to their own devices to find educational funds, and never entirely successful, the teaching hospitals concern themselves primarily with meeting provincial needs.

Reform in the organization of medical manpower and practice must begin in our medical schools and teaching hospitals, since it is in these institutions that the patterns for the future are established. The needed reforms will undoubtedly require a considerably greater investment by the public in medical education. Indeed, I believe that all, or most, of medical education must be paid for by the public, or its representatives in Congress, and that only then will the public be in a position to demand that its national medical interests be met by our teaching institutions and by medicine as a whole.

Specifically, I believe that medical students, interns, and residents should be supported by federal grants awarded to teaching institutions, or by stipends paid directly to the trainee. In return, the institutions themselves, in consultation with appropriately constituted and appointed lay groups, could be expected to undertake the responsibility for coordinating the training offered to meet nationally or regionally determined manpower needs and to integrate postgraduate training into the patient care process.

In short, I suggest that only when the public pays for medical education can it participate in determining how medicine will be taught and practiced.

[From the New York Times, Dec. 19, 1970]

When To Operate

(By John Bunker)

The National Center for Health Statistics has recently released the first comprehensive and reliable data on operations performed in the United States. Considering the fact that more than half of hospital admissions are surgical, this kind of information is long overdue. And, of course, such data are essential if we are to begin to plan, as we must for comprehensive medical care on a national scale.

The National Center reports that approximately 15 million operations were performed in this country in 1965, and again in 1966—the most recent years for which data have been made available—or one operation a year for every 13 persons. This might seem like a good deal of surgery, and indeed, it is twice as much as is performed in England and Wales, where the comparable rate in 1966, was one operation for every 26 persons. Not surprisingly, there are proportionately twice as many surgeons in the United States as there are in England and Wales.

Such remarkable differences in medical manpower and practices cry out for explanation, but, unfortunately, our knowledge of the indications for surgery are not sufficiently precise to determine whether American surgeons operate too often, or the British too infrequently. Probably both are true to some extent, and it seems reasonable to assume that the United States, as a wealthier country, can afford the luxury of operations that are desirable but not essential.

That wealth is a major factor in the distribution of physicians and medical care can be observed within the United States itself. Consider, for example, the discrepancy in numbers of surgeons between our poorest and our richest states: Alabama, Arkansas, Mississippi and South Carolina have proportionately half as many surgeons and half the per capita income of California, Connecticut, Massachusetts and New York. There are no published data on how many operations are performed in each state, but it seems likely that operation rates vary with the number of surgeons from state to state, as they do between the United States and Great Britain.

Detailed information on surgeons and operations for a single state, Kansas, has recently been made available by Professor Charles Lewis of U.C.L.A. Lewis compared operation rates and surgeons among 11 population regions in Kansas and made the startling observation of three to four-fold variations in rates for common operations such as appendectomy, cholecystectomy, herniorraphy, and tonsillectomy. The numbers of operations were shown to vary directly with the number of surgeons and hospital beds, and Lewis suggested that this might reflect a sort of Parkinson's Law.

Lewis suggests that as more medical services are offered, more are utilized. This extraordinary idea would appear to be totally inconsistent with the public image of medicine today as scientific and precise, each illness a discreet and identifiable entity, each calling for a special remedy.

But the public image is not an entirely accurate one, and there are a good many factors which may help to explain the Lewis-Parkinson effect. First, despite remarkable advances in medical practice, there are few precise yardsticks to measure the over-all medical needs of the public. In the absence of specific guidelines, doctors tend to favor active intervention. When in doubt, it is always preferable to do something rather than nothing—whether the something is operating or prescribing a drug.

Secondly, the patient himself has no way to judge either his needs or the quality of his medical care, and he generally overestimates both. More medical care is equated with better medical care, and he patient's demands tend to increase in direct proportion to affluence. Again, where there is doubt, doctors are apt to accede to their patients' demands.

Thirdly, it is now increasingly clear that our medical resources fall far short of medical potential. There are not enough doctors or dollars to bring the last word in medical care to all citizens. Therefore, when more medical care is offered, it is to be expected that more will be used.

The governments of countries where the organization of medicine is already under state control are well aware that their own medical resources are limited. Enoch Powell, the arch-conservative of British politics, says, in his new book, that the welfare state simply cannot afford an artificial kidney machine for every patient whoe kidneys fail. Dr. Esther Ammundsen, Director of the Danish National Health Service, points to the widening gap between what is medically possible and what is economically feasible. She goes on to suggest that "The day is not far away—yes, it may be here already—when we simply cannot supply the personnel necesary to care for each other."

In the United States, we are only just now recognizing our own severe limitations in medical resources and in particular, medical manpower. The cry for a greater number of doctors has been raised; even more urgent is the need to examine how and where the doctors we now have spend their time and energy. More doctors in the wealthy communities mean fewer for the poor. An excess of surgeons means a shortage of pediatricians nad general practitioners. More heart-lung machines means fewer medical dollars to invest in other medical needs. It is the paradox of American medicine that we can provide luxury care for the wealthy, but cannot provide basic care for the poor.

Dr. John Bunker, Professor of Anesthesia at Stanford University, is writing a book on anesthesia and surgery.

SPECIAL ARTICLE

SURGICAL MANPOWER*

A Comparison of Operations and Surgeons in the United States and in England and Wales

JOHN P. BUNKER, M.D.

Abstract There are twice as many surgeons in proportion to population in the United States as in England and Wales, and they perform twice as many operations. Fee-for-service, solo practice and a more aggressive therapeutic approach appear to contribute to the greater number of operations in the United States. More frequent use of consultation, closely regulated and standardized surgical practices and restrictions in facilities and numbers of surgeons appear to contribute to the lower rates of operations in England and Wales. Indications for surgery are not sufficiently precise to allow determination of whether American surgeons operate too often or the British too infrequently. Determination of surgical manpower needs requires better information on how much operative treatment the public health requires and must also take into account the total medical manpower needs of the country.

THE shortage of physicians' services in the United States has many causes, of which the inefficient use of the physicians' time and inequities in their distribution may have a greater role than any alleged deficiency in their actual numbers.[1] The disproportionate geographic concentration of physicians in wealthy sections of the country is common knowledge. Harder to identify, and therefore less

*Address reprint requests to Dr. Bunker at the Department of Anesthesia, Stanford University Medical Center, Stanford, Cal. 94305.
Aided by a grant from the Josiah Macy, Jr., Foundation.

Reprinted from the *New England Journal of Medicine* 282:135-144 (January 15), 1970

well appreciated, is the possibility of the maldistribution of physicians among the medical specialties. Evidence is presented herein that serious maldistribution does exist in that area of medicine with which I am most familiar – the operating room and its proprietors, anesthesiologists and surgeons.

It has long been the goal of anesthesiologists in the United States to provide all anesthetic care required for surgery, obstetrics and dentistry. In its efforts to achieve this goal, the growth of anesthesiology as a medical specialty has been dramatic: in 1940 there were 1000 physicians specializing in anesthesia; and in 1969 there are over 9000. But despite such rapid growth, it is estimated that anesthesiologists can personally provide anesthesia for less than half the patients undergoing surgery, and they can hardly begin to offer anesthetic care for obstetrics and for dental surgery. There is no evidence that further rapid expansion is apt to occur, and therefore there is little prospect that the shortage in anesthesiology manpower will diminish with time.

Although it is widely acknowledged that there is an acute manpower shortage in anesthesia, not much attention is given to manpower problems in surgery. It is assumed that there are probably enough general surgeons,[2] although there may be a shortage in some of the surgical specialties. But no serious thought seems to have been given to the possibility of an overall excess. Certainly, there is a marked imbalance in the ratio of anesthesiologists to surgeons, but is it possible that the imbalance is due more to an excess of surgeons than to a shortage of anesthetists? Evidence in support of this hypothesis will be developed by a comparison of anesthetic and surgical manpower and practice in the United States and in England and Wales.

There were 9024 physicians engaged full-time in the practice and teaching of anesthesia in the United States in 1967[3] for a civilian population of 197,430,000, and in England and Wales, also in 1967, there were 2298 physicians specializing in anesthesia[4] for a population of 48,391,000, 4.6 and 4.7 per 100,000 population respectively. At that time there were 74,746* physicians devoted to the full-time practice of surgery or its specialties in the United States[3] as opposed to 8,924† in Great Britain[4] – 39 and 18 per 100,000 population respectively (Table 1). There were, in addition, 10,850 physicians in general practice in the United States engaged in part-time surgical practice.[5] Thus, whereas the ratio of physicians engaged full time in the practice of anesthesia to population is almost exactly the same, there are proportionately more than twice as many surgeons in the United States as in England and Wales.

There are also proportionately more operations performed in acute, short-stay hospitals in the United States than in England and Wales. From sample statistics, collected by the National Center for Health Statistics for the Hospital Survey,[6] it is estimated that 14,000,000 operations were performed in the United States in 1965, a rate of 7400 per 100,000 population, and from sample statistics collected by the Ministry of Health for the British Hospital In-Patient Enquiry,[7] it is estimated that approximately 1,700,000 operations were performed in England and Wales in 1966, an operation rate of 3770 per 100,000 population. Comparison of these overall operation data must be made with caution, since there were many differences in how they were collected.† Comparisons of individual procedures, however, can be made with considerably greater confidence and indicate rates for many operations that are two or more times as great for the United States as for England and Wales (Table 2).

All anesthesia in Britain is administered by physicians, over 90 per cent of whom are specialists or in specialty training, whereas in this country less than 50 per cent of all anesthetics are administered by an anesthesiologist, or by a physician in specialty training. Eckenhoff[8] attributes this discrepancy to the greater operating-room efficiency and speed of surgery in Britain. Although marked differences in organization and efficiency of operating-room care do exist, the principal reason why the American anesthesiologist cannot keep up with his British colleague is that he has twice as much work to do.

Why are there proportionately more than twice as many surgeons in the United States, and why are twice as many operations performed? Socioeconomic, organizational, philosophical, geographi-

TABLE 1. *Physicians Engaged in Full-Time Patient Care and Clinical Training, General Surgery and Surgical Specialties, 1967.*

SURGEONS IN UNITED STATES*		SURGEONS IN ENGLAND & WALES†	
Private or group practice	56,636	Consultants	2,841
Hospital full-time staff	2,349	Other post-training hospital full-time staff	352
Medical-school faculty	2,000	Senior registrars	478
Residents & fellows	12,840	Registrars & senior house officers	3,906
Interns	921	House officers	1,305
	74,746	Other	42
			8,924

Adapted from Table 6, page 50, Distribution of Physicians, Hospitals, and Hospital Beds in the United States, 1967[3] (surgeons in federal employ [6003]) & in administration & research [540] not included)

†Adapted from Table 63, Part 2, page 166, Annual Report of the Ministry of Health for yr 1967.[4]

*These figures arbitrarily include surgeons in training. If only fully trained, practicing surgeons are considered, there are proportionately five times as many surgeons in the United States.

†For example, the United States data are based on up to three operations for each patient discharged, whereas the British data are based on a single operation per patient. This difference tends to inflate the United States data, possibly by as much as 30 per cent. On the other hand, the British figures include diagnostic procedures (cystoscopy, bronchoscopy, breast biopsy and so forth), whereas the United States figures do not, and in this case it is the British data that are inflated. It is estimated that approximately 4,500,000 diagnostic procedures are performed in the United States annually, enough largely to offset the multiple-operation effect.

TABLE 2. *Comparative Rates for Selected Operations.**

OPERATION	RATE/100,000 POPULATION			
	USA (1965)		ENGLAND & WALES (1966)	
	male	*female*	*male*	*female*
Thyroidectomy	9.8	68.5	8.7	42.3
Inguinal herriorrhaphy	508.0	51.1	294.0	29.2
Appendectomy	217.0	180.0	220.7	223.5
Cholecystectomy	94.5	273.0	32.2	89.9
All operations on eye	220.0	223.0	180.6	193.0
Extraction of lens	65.3	82.5	47.2	69.1
Tonsillectomy with or without adenoidectomy	637.0	641.0	322.7	321.9
Adenoidectomy without tonsillectomy	20.7	15.2	49.9	35.6
Hemorrhoidectomy	162.0	137.0	60.5	31.4
Circumcision	96.7		110.0	
Hysterectomy (including subtotal, total & vaginal)		516.0		213.2
All operations on breast	10.9	278.0	5.8	171.7
Partial mastectomy	6.5	196.0	3.0	100.6
Complete (simple) mastectomy		15.0	1.8	27.2
Radical mastectomy		51.0	0.5	25.1
Other operations on breast	4.4	16.0	0.5	18.8

*Calculated from sample statistics from U.S. Public Health Service[8] & from Registrar General's Office, Hospital In-Patient Enquiry. † U. S. figures based on up to 3 operations/patient (with exception of appendectomy, for which appendectomy is included only if "first listed"), whereas data for England & Wales based on 1 operation/patient, which is either "most serious operation," "first mentioned" or operation "related to principal diagnosis."

cal and population differences between the two countries all appear likely to be involved.

SOCIOECONOMIC DIFFERENCES

The key to an understanding of differences in medical manpower appears to lie in the British National Health Service (NHS). Surely, a socioeconomic system as different in organization and philosophy as the NHS should present differing demands for medical and surgical services, and on their utilization and quality. These possibilities have been considered in the past by many others, but it has been difficult to sort out the effects of this vast "experiment" in delivery of medical care from the effects of the many other dramatic changes in the practice of medicine that have occurred.

Social reorganization of medicine occurred with dramatic suddenness in Great Britain and was nationwide. So many changes took place simultaneously that it has been difficult to assess the effect of individual factors. In the United States, by contrast, social reorganization of medicine has occurred slowly, regionally and piecemeal. Specialized regional programs have been introduced, some as controlled experiments in delivery of patient care, and many of these programs can provide the basis for meaningful comparisons of the effects of some of the relevant factors. What are the effects of insurance in comparison with no insurance, of prepaid in comparison with indemnity insurance and of group practice versus solo practice? These are perhaps the principal issues to consider, and a good many data can be brought to bear on them.

Insurance, by itself, appears to increase the utilization of physicians' services, presumably in response to previously unmet medical needs. In a study of medical services conducted in 1953, Odin Anderson[9] reported operation rates for insured persons that were double those for the uninsured, with an even greater differential among low-income families. In attempting to explain these differences, Anderson considered it "very likely there is a higher proportion of so-called 'elective' surgery among the insured persons, and a higher proportion of 'emergency' or 'must' surgery among the uninsured persons."

The effect of insurance in increasing rates of operations vanishes when one goes from indemnity to prepaid insurance, and it is now well established that rates of operations for prepaid group-health plans such as the Health Insurance Plan (HIP) in New York City, the group-practice option of the Federal Employees Health Benefits Program and the Kaiser Foundation Health Plans are approximately half those of the usual Blue Shield fee-for-service insurance plan.[10-12] Such prepayment plans, however, are by their nature group-practice plans, and it is not clear how much of the effect is related to the method of payment and how much to the organization of physicians' services.

The effect of method of payment on the volume of medical and surgical services provided has acquired considerable notoriety. Fee-for-service invariably results in the provision of more services than provided by capitation or salaried plans[13,14] and has led to claims that fee-for-service encourages unnecessary operations.[13,15]

That the method of delivery of services may be of great importance is suggested in two recent reports of experimental programs in which comprehensive

TABLE 3. *Certified American Board of Surgery or Other Surgical Specialties, Excluding the American College of Surgeons.**

SPECIALTY	SURGEONS IN PRIVATE PRACTICE		SURGEONS NOT IN PRIVATE PRACTICE						SURGEONS IN GOVERNMENT SERVICE			TOTALS
	FULL-TIME SPECIALTY	PART-TIME SPECIALTY†	INTERN	RESIDENT	OTHER FULL-TIME	FULL-TIME MEDICAL SCHOOL	ADMINISTRATIVE MEDICINE	RESEARCH	AIR FORCE	USPH	VETERANS ADMINISTRATION	
Colon & rectal surgery	128	1		3	4	1	1					138
General surgery	2,848	57	1	67	222	134	6	15	272	41	112	3,775
Neurosurgery	465	1		5	15	52	1	8	18	1	10	576
Orthopedic surgery	2,967	7		9	59	77	4	6	170	10	32	3,341
Plastic surgery	338	1		43	12	11		1	33	1	2	442
Thoracic surgery	353			60	42	27			49	3	34	568
Obstetrics & gynecology	5,914	3		4	105	279	14	16	256	11	3	6,605
Ophthalmology	3,920	3		14	67	95	3	20	102	39	22	4,285
Otolaryngology	2,051	10		7	28	46	6	4	65	9	30	2,256
Urology	1,347			1	21	44	4	2	41	4	23	1,487
Totals	20,331	83	1	213	575	766	39	72	1,006	119	268	23,473

*One of the difficulties encountered in the attempt to assess surgical manpower is that there is no authoritative, published listing of surgical specialists. The AMA Distribution of Physicians, Hospitals, and Hospital Beds in the U.S.[9] lists all physicians on the basis of their principal area of activity – general practice, or individual specialty – but does not include information about specialty certification, nor does it include information on part-time specialization. The specialty boards can provide exact information on the total number of diplomas issued, but many do not keep records of how many surgeons are alive or practicing. Furthermore, there is no record of how many diplomates in 1 specialty may be certified in a 2d specialty. The surgical specialties present a special additional problem, since fellowship in the American College of Surgeons is considered equivalent to board certification as a criterion of training. The data presented in Tables 3-6 were prepared for this article from the magnetic tape files of the Medical Mailing Service, Inc., Chicago. They are based on physician data obtained by the AMA through July 16, 1969. Tables 3-6 are mutually exclusive &, added together, comprise all practicing surgeons in the United States.

†General practice with some specialty practice.

ambulatory health-care facilities were established and an examination made of their effects on utilization of health facilities. In one, the Tufts Neighborhood Health Center at Columbia Point in Boston, surgical admissions fell over the first two years of study to 24 per cent of the prestudy level.[16] In the other, a randomized, controlled clinical comparison was made between comprehensive, family-oriented pediatric care (experimental group) and conventional, hospital-based care (control group). Operation rates were three times greater for the experimental than for the control group during the first six-month period, but were consistently lower (50 to 70 per cent) than control during the subsequent four six-month periods covered by the report.[17] Method of payment was apparently not a subject of special consideration in either of these studies. However, by offering ambulatory, group-practice care without charge, prepayment was, in effect, also provided, and we are still left without clear evidence on the effect of group practice separate from that of prepayment.

Total hospital admissions rise with indemnity insurance and fall again with prepaid group-practice insurance plans. That is, they vary in parallel with operation rates. It has been assumed that the increases in hospitalization and operation rates with indemnity insurance reflect a response to previously unmet needs, although a second interpretation offered is that insurance is an invitation to unnecessary hospitalization and unnecessary operations. There are also at least two explanations for the decrease in admissions and operations with prepaid group plans. It is reasonable to consider that intensive ambulatory care may lead to improvement in general health, and hence to a decrease in the need for hospitalization. But, of course, it can be argued that in the absence of a fee, there is less incentive to perform procedures that are desirable, if not absolutely necessary. Other suggestions are that patients may accept group practice for routine care but go elsewhere for their operations, or that a younger and healthier group of patients participate in prepaid programs. The careful studies of Shapiro[18] have effectively ruled out these proposed alternate explanations, at least for the Health Insurance Plan in New York City, and the recently reported experience in the Neighborhood Health Centers for low-income families,[16,17] where the populations could be closely controlled, provides additional contrary evidence.

The group-practice effect is also reflected in a smaller proportion of surgeons needed in group practice, as well as a smaller number of operations performed. Roemer and DuBois[19] write that "It is significant that the ratio to population of surgeons, anesthesiologists and ophthalmologists in the United States as a whole is much higher than the ratio of these specialists found for the population of prepaid group-practice plans. (Solo surgeons seem to

TABLE 4. *Fellows of the American College of Surgeons, Excluding All Diplomates of Any Surgical Board.*

SPECIALTY	SURGEONS IN PRIVATE PRACTICE		SURGEONS NOT IN PRIVATE PRACTICE						SURGEONS IN GOVERNMENT SERVICE			TOTALS
	FULL-TIME SPECIALTY	PART-TIME SPECIALTY*	INTERN	RESIDENT	OTHER FULL-TIME	FULL-TIME MEDICAL SCHOOL	ADMINISTRATIVE MEDICINE	RESEARCH	AIR FORCE	USPH	VETERANS ADMINISTRATION	
Colon & rectum	32	2										34
General Surgery	2,732	624		2	34	18	21	1	13	5	29	3,479
Neurosurgery	36				1	3		1	3	1		45
Orthopedic surgery	197	2			2	2	1			2	1	207
Plastic surgery	18	1		1		1	1					22
Thoracic surgery	45				2	1	2				2	52
Obstetrics & gynecology	268	43			2	3	3		2		1	322
Ophthalmology	65	1									2	68
Otolaryngology	48	3				2	1					54
Urology	121	8		2	1	1		1	1		1	136
Totals	3,562	684		5	42	31	29	3	19	8	36	4,419

*General practice with some specialty practice

be either not working at full capacity or doing more surgery than is necessary – both of which points are probably true in some degree.)"

ORGANIZATION OF CARE

Whatever the relative contribution of insurance, prepayment and group practice, it is clear that the British National Health Service embodies all three, and all probably contribute to the observed differences between the two countries. That the NHS is a form of group practice might bear brief additional comment. The essence of group practice I take to be the ready availability and routine, or nearly routine, use of medical consultation. And, of course, the consultant system is the very essence of the NHS. The British surgeon is a true consultant. He sees patients only as they are referred to him by the general practitioner or internist, and he is entirely hospital based.* The American surgeon, by contrast, may function as consultant exactly as his British counterpart, he may accept patients without referral, or he may be the primary physician-general practitioner, referring the patient to himself for surgery and thus creating his own demand.

The question of referral is an important one, for surgeons and nonsurgeons are apt to have very different ideas of indications for surgery. That the internist and surgeon have different points of view is inherent in their specialty training, and this difference is reflected at its worst when surgeon and internist isolate themselves from each other, the internist often seeing himself as the patient's protector against surgery. But when two differing points of view are brought to bear on the problems of a single patient, it is very much to the patient's advantage. The essence of medical referral, or consultation, then, is the solicitation of more than one physician's opinion, and the advantage of the experience of more than one specialty.

Consultation is the way of life under the British National Health Service and is reflected in the specific designation of all specialists as "consultants." The registrar in specialty training is instructed from the outset to make frequent use of other specialists, and of course it is the assumed duty of the general practitioner to refer the sick to the hospital consultant for the treatment of all but simple illnesses. The system, if anything, works too well, and the problem of too early and too frequent referral by the general practitioner is a troublesome one. In the United States, by contrast, the physician is apt to err in the other direction. The physician or surgeon in residency training, allowed greater responsibility and independence than his British counterpart, may be reluctant to seek help lest he lose that responsibility for the patient's management. The surgeon in private practice may be reluctant to seek consultation, again for fear of losing his patient, perhaps now also for economic reasons.

An example of the quantitative effect of consultation is provided by experience of the United Mine Workers Medical Care Program. When a plan for reimbursement of surgical fees was offered to the United Mine Workers some years ago, there seemed to be an excessively large number of surgical procedures performed – that is, an excessive number of surgical bills were submitted. The Mine Workers Fund was concerned with the large amount of what appeared to be unnecessary surgery, particularly

*A small proportion (approximately 4 per cent) of patients are cared for outside the framework of the NHS as private patients.

TABLE 5. *Certified American Board of Surgery or Other Specialty Boards and Fellows of the American College of Surgeons.*

SPECIALTY	SURGEONS IN PRIVATE PRACTICE		SURGEONS NOT IN PRIVATE PRACTICE						SURGEONS IN GOVERNMENT SERVICE			TOTALS
	FULL-TIME SPECIALTY	PART-TIME SPECIALTY*	INTERN	RESIDENT	OTHER FULL TIME	FULL-TIME MEDICAL SCHOOL	ADMINISTRATIVE MEDICINE	RESEARCH	AIR FORCE	USPH	VETERANS ADMINISTRATION	
Colon & rectum	172				1		1		3			177
General surgery	7,670	42		6	177	430	40	24	127	26	221	8,763
Neurosurgery	543	2			12	70	3	1	5	1	8	645
Orthopedic surgery	1,790	3		2	19	61	6	1	30	3	18	1,933
Plastic surgery	404	1			6	18	1	1	15		1	447
Thoracic surgery	633	2		4	38	80	8	3	31	3	39	841
Obstetrics & gynecology	2,535	1			31	92	10	6	11	1	2	2,689
Ophthalmology	1,173	1			4	31	2	2	5	1	11	1,230
Otolaryngology	935	1			3	40	3		4	1	13	1,000
Urology	1,451	4		1	13	50	1	2	15	2	36	1,575
Totals	17,306	57		13	304	872	75	40	246	38	349	19,300

*General practice with some specialty practice

gynecologic operations and appendectomies. When a requirement was added that all operations be endorsed by preoperative specialist consultation, the number of operations fell by as much as 75 per cent for hysterectomies, 60 per cent for appendectomies and 35 per cent for hemorrhoidectomies.[20]

Quality control or peer review has long been of concern to the medical profession. Efforts to standardize the quality of medical care date back to Codman,[21] who in 1914 implored the medical profession and its hospitals to make public all clinical "end-results" – a goal that, unfortunately, has not yet been achieved. "Tissue committees" to review specimens removed at operation and internal and external medical audits are more recent efforts at standardization in the United States. Lembcke's papers on the methodology of the Medical Audit are of special interest and in particular his demonstration of the effect of such an audit in markedly reducing the volume of gynecologic surgery performed.[22] But despite considerable improvement achieved by the Joint Commission on Hospital Accreditation, nationwide quality control of hospital practice remains an unattained goal in the United States.

By contrast, a large measure of quality control is apparently inherent in the British National Health Service hospital and consultant system, and peer review by tissue committees and medical audits has not been considered necessary. Curran believes that the high level of quality control in British hospitals can be attributed to the central role of the consultant:

> The hospitals are organized in a hierarchical system that provides close supervision of all types of practice within the walls of these facilities. It is much tighter and more controlled than before the National Health Service was established. All patients are assigned to a consultant, the highest grade of the specialists. He supervises all care by lower-level doctors, from fully qualified staff physicians to residents and interns in training.[23]

Another byproduct of the NHS that should be mentioned is the more efficient use of the surgeon's time, which is achieved in such a planned and regulated medical service and which has recently been discussed by Eckenhoff.[8] Perhaps the main element in this efficiency is the organization of operating-room activities around a single surgical team working together for a specific period: one team (surgeon, assistant [or assistants], anesthetist, nurse); one operating room; and one "session" (that is, morning or afternoon). How different from the erratic utilization in American operating rooms described by Eckenhoff! A second contributing factor to operating-room efficiency is the centralization of special surgery, such as neurologic and thoracic surgery, in the large specialty hospitals for special diseases and procedures, such as the specialty institutes in the University of London. Whether or not one agrees that such disease-oriented centers are medically advantageous, there can be little doubt they facilitate a more efficient use of medical manpower.

DIFFERENCES IN SURGICAL PHILOSOPHY

Quite apart from socioeconomic considerations, there may be a genuine philosophical difference in attitudes of the two countries. In keeping with his national character, the American surgeon is more aggressive. He appears to hold higher expectations of what surgery can offer in the treatment of dis-

ease, whereas the British surgeon is more modest in his expectations, possibly more realistic, but also possibly missing opportunities for surgical cure.

Philosophical differences probably have their greatest quantitative effects in the large numbers of elective procedures for which indications may be equivocal, such as tonsillectomy, hemorrhoidectomy, cholecystectomy, hysterectomy, thyroidectomy and radial mastectomy (Table 2). Given the choice of administering or withholding therapy, whether the therapy is prescribing drugs or performing an operation, the American physician appears likely to choose active therapy. The British surgeon, faced with the same choice and carrying a heavier work load, is apt to avoid surgery if the indication is in question.

Cope recently suggested that surgical attitudes that are conservative and often out of date, and emphasize technic, may encourage unnecessary surgery in the United States; he cites the treatment of goiter and carcinoma of the breast as examples of the reluctance to relinquish conventional surgical approaches.[24] The rate for radical mastectomy for the United States, which is twice that reported in England and Wales (Table 2), presumably reflects the difference in enthusiasm for this procedure evident in the current surgical literature of the respective countries. Fundamental differences in attitude or philosophy do undoubtedly exist, but probably have less quantitative effect on volume of surgery than method of payment and organization of services.

Geographic and Population Differences

The relative concentration of a large population in the small geographic area of England and Wales should lend itself to a more efficient use of medical manpower, and, conversely, proportionately more physicians and surgeons might be needed to provide service over the length and breadth of a large country such as the United States. However, surgeons in the United States are not distributed in such a way as to meet geographic needs. To the contrary, they are concentrated in the heavily populated industrial areas to such an extent that trained surgeons in many of our prosperous communities have hardly enough work to keep busy, whereas there are acute needs for surgeons' services in other less populated areas. Furthermore, although it is true that Great Britain lends itself to a more efficient geographic organization of medical-care services, the British themselves have by no means escaped the problems of too many physicians in more attractive and wealthy areas, and too few in parts of the country that are less favorably situated. The NHS has done much to redistribute medical care by limiting the number of positions in the more desirable areas (a system of "negative inducement"), but acute shortages persist in some communities and continue to be a cause of concern. Differences in geographic needs may make a contribution to the differences in surgical manpower observed between the two countries, but it appears to be a small one.

Finally, in attempting to assess the observed differences in operation rates and surgical manpower between the United States and Great Britain, one must consider the possibility of differences in patient populations. A well advertised example of such a difference is the incidence of highway accidents, which is twice as great in the United States as in Britain, and more surgeons are certainly needed to care for the victims. Overall national accident rates, including those for industry, are only slightly greater for this country, however, and can account for only a small part of the manpower differences observed. Specific surgical diseases may, and certainly do, occur with greater frequency in one country than in another. Pearson and his associates,[25] comparing hospital populations in New England, Liverpool and Uppsala, have reported cholecystectomy to be performed four times more often in Uppsala than in Liverpool, and twice as often as in New England, the excess being attributed to prevalence of biliary-tract disease in Sweden. But regional differences in disease cannot reasonably be invoked to explain the consistently higher rates for the wide variety of other procedures reported by them for New England and in the present report for the United States as a whole.

Discussion

The fact that we operate nearly twice as often as the English and Welsh, or twice as often as we might under other political-economic circumstances, does not necessarily force the conclusion that we operate twice as often as the public health might justify. An alternate explanation might be that as a wealthier country, the United States may simply be affording the luxury of surgical procedures that are desirable but not essential and that the British public would be better served by more operations than are now performed in that country. For example, many British physicians believe that there are a large number of patients in need of surgery for cataract, and the long waiting lists for herniorrhaphy and prostatectomy are common gossip.* Any decisions about how many surgeons we need in America must, of course, be based primarily on how much operative treatment the public health requires. But this decision must also take into account the fact that with a limited total medical manpower pool, more physicians engaged in the practice of surgery means fewer for other possibly needier medical disciplines. Thus, we have the paradox of a country

*Waiting lists in Great Britain are a public statistic. No such national data are available in the United States. American physicians are inclined to assume that prolonged delays in hospital admission do not occur in this country. A recent comparison of hospital care in two communities (Arbroath, Scotland, and Waterville, Maine) showed that waiting time was very similar, at least for these two communities.[26]

TABLE 6. *Surgeons Neither Certified by Specialty Board Nor Fellows of the American College of Surgeons.*

SPECIALTY	SURGEONS IN PRIVATE PRACTICE		SURGEONS NOT IN PRIVATE PRACTICE						SURGEONS IN GOVERNMENT SERVICE			TOTALS
	FULL-TIME SPECIALTY	PART-TIME SPECIALTY*	INTERN	RESIDENT	OTHER FULL-TIME	FULL-TIME MEDICAL SCHOOL	ADMINISTRATIVE MEDICINE	RESEARCH	AIR FORCE	USPHS	VETERANS ADMINISTRATION	
Colon & rectum	270	178		12	1	1	2		1		3	468
General surgery	5,442	5,514	827	5,473	938	59	49	82	1,221	214	376	20,195
Neurosurgery	444	7		463	79	14		12	79	24	25	1,147
Orthopedic surgery	1,244	212		1,403	164	23	7	9	296	42	110	3,510
Plastic surgery	246	23		168	25	6			19	4	11	502
Thoracic surgery	135	5		126	45	4	3	6	11	1	17	353
Obstetrics & gynecology	4,834	2,898	59	2,381	543	118	20	64	623	35	20	11,595
Ophthalmology	2,125	168		1,095	135	34	2	36	200	62	46	3,903
Otolaryngology	1,244	251		687	75	30	3	19	178	19	65	2,571
Urology	1,157	172		772	103	27	3	9	213	23	101	2,580
Totals	17,141	9,428	886	12,580	2,108	316	89	237	2,841	424	774	46,824

*General practice with some specialty practice

that provides "luxury" surgery for the well-to-do but cannot provide basic medical care for the indigent.

That marked variability in surgical practices and presumably in surgical judgment and philosophy exists must be considered to reflect absent or inadequate data by which to evaluate surgical treatment, and specifically by which to compare operative with nonoperative treatment. Stated in other words, *the indications for surgery are sufficiently imprecise to allow a 100 per cent variation in rates of operation.* The risk of operating can be documented with mortality data, but comparable controlled data on the risk of *not* operating are, for most surgical diseases, not available. This, of course, is one of the big problems of surgery: that nobody has ever bothered to work out the natural history of any disease until what is regarded as an effective treatment for it has been found. Consequently, assessments of the natural history of disease must be made retrospectively and are grossly unreliable.

Although currently available data may not be adequate to define precisely the indications and contraindications for many operative procedures, it can be assumed that such wide variations in surgical practices must have marked effects on the public health. For example, a hospital that reserves operative treatment for the very ill can be expected to report very different postoperative death rates from those in another hospital specializing in minimally indicated operations in good-risk patients. It is well known that marked differences in postoperative death rates do occur from one hospital to another,[27,28] and in the past it has been assumed that these differences reflect differences in patient populations or in the quality of care. I believe that the decision whether or not to operate may turn out to be an even more important determinant in explaining such differences in outcome.

Lembcke,[29] in a classic paper, attempted to assess the indications for appendectomy by correlating appendectomy rates with mortality rates for appendicitis. He was able to demonstrate that higher appendectomy rates were associated with higher, rather than lower, overall mortality from appendicitis and concluded that "considerably more operations of this type are done than necessary. . . ." Comparable data for other surgical diseases are urgently needed. Mortality data alone, however, cannot provide an adequate basis on which to judge surgical success or failure, or on which to define surgical indications and contraindications. Quantitative data on other important surgical end-result indexes, such as complications, rehabilitation and relief of discomfort, are not available, but a substantial body of theory on the evaluation of the quality of medical care has appeared in recent years[19,30] and its application to the practice of surgery should receive a very high priority.

The direct measurement of the quality of medical care, by death rates or by other criteria, is, of course, exceedingly difficult; consequently, studies of the quality of medical care have relied heavily on other kinds of information such as internal and external audits and the qualifications of the physician rendering care. Thus, in the Columbia University Study of Medical Care under three different insurance plans in New York State, prepaid group practice (HIP) was found to be associated with fewer "unjustified" operations, and fewer operations were performed by "unqualified" surgeons than for

indemnity, Blue Shield insurance plans.[10] On this basis, the quality of surgical care offered by HIP was judged to be superior.

If the qualifications of the surgeon are considered a valid index of quality of care, the quality of surgery in England and Wales must be considered superior to that in the United States. Virtually all surgery in England and Wales is performed by consultant specialists and senior registrars,* or by house officers under their direct supervision. Furthermore, there are at least twice as many candidates as there are positions, thus providing an additional degree of quality selection. In comparison to the strict state control in England and Wales, regulation of surgery in the United States occurs at the local level or not at all. Individual hospitals may require board certification, or equivalent training, but many do not. Of the 68,000 physicians listed in full-time or part-time private practice of surgery, less than two thirds are certified by a surgical board or are fellows of the American College of Surgeons (Tables 3-6). There are no reliable national data specifying who does the surgery in this country, but it has been estimated that more than 50 per cent is performed by general practitioners or osteopaths. Whether fairly or not, it is to the "unqualified" surgeon that most "unnecessary operations" are attributed.[10,31]

Conclusions

At the outset I asked why the ratios of surgeons and of operations to population are half as large in England and Wales as in the United States. The observation that prepaid group practice halves the numbers of operations and surgeons strongly suggests that the organization of medical care is a major factor. From this assumption a tentative hypothesis is proposed. Group practice (whether privately organized in the United States or as a single large service in Great Britain) is a system that incorporates the wide use of consultation, and encourages a greater emphasis on ambulatory office care. There is evidence that these elements lead to improved public health, which in turn leads to a decreased need for hospitalization, including a decreased need for surgery. Increased use of consultation also appears to sharpen the criteria for surgery, resulting in a smaller number of operations where indications may be equivocal. Group practice also provides the opportunity for the more efficient use of medical (and surgical) manpower. Finally, the method of payment appears to play an important, if unmeasured, part. Surgical fees in the United States, although perhaps not as large as a generation ago, are still much greater than those in other areas in medicine, and the opportunity for large incomes may attract a disproportionate number of physicians into the practice of surgery. In addition, the "incentive" of a fee for service may tend to increase the number of operations in cases in which indications are borderline. The converse must, of course, be considered: that in the absence of such economic incentive, many procedures that are desirable but not essential may not be performed.

Until new evidence is available, it is reasonable to assume that there is a disproportionate number of surgeons in the United States, at least in relation to the total medical manpower pool, and it seems likely that some unnecessary surgery is being performed. Should anything be done? Many corrective forces are, in fact, already operative. The slow but steady growth of group practice and of prepaid medical plans has already had some effect on surgical practice, at least for the populations served. The growing power of large consumer groups, such as the Teamster's Union and the United Mine Workers, has been particularly effective in forcing standardization of medical care, including indications for surgery and qualifications of physicians undertaking surgery.[32] The development of federally supported regional medical programs may also have an effect by encouraging the centralization and more efficient use of major therapeutic facilities and procedures.

A final, important corrective force is the growth and maturation of surgery itself as a specialty, and the influence of the surgical specialty boards, with the parallel decline of the general practitioner as part-time surgeon. But, although the boards have provided exemplary leadership in the establishment of standards of practice, neither they[2] nor any other organization has accepted responsibility for determining or controlling specialty manpower needs.

I am indebted to my many colleagues in this country and abroad who have helped in the gathering of material for this review and who have offered invaluable criticism of the presentation, particularly to Drs. Dean A. Clark, Stanley A. Feldman and Lawrence M. Klainer for their continuing interest and assistance. Inclusion of data on rates of operation in Table 2 was made possible through the courtesy of Mr. Siegfried A. Hoermann, National Center for Health Statistics, Washington, D.C., and Drs. A. M. Adelstein and W. A. Wilson, General Register Office, London.

*The senior registrar has received not less than four years of surgical training.

References

1. Fein R: The Doctor Shortage: An economic diagnosis. Washington DC, Brookings Institution, 1967
2. Knowles JH: The quantity and quality of medical manpower: a review of medicine's current efforts J Med Educ 44:81-118, 1969
3. Haug JN, Roback GA: Distribution of Physicians, Hospitals, and Hospital Beds in the U.S., 1967. Chicago, American Medical Association, Department of Survey Research, 1968
4. Annual Report of the Ministry of Health for the Year 1967. London, Her Majesty's Stationery Office, 1968
5. Medical Mailing Service, Inc, Chicago, Illinois. Personal communication
6. National Center for Health Statistics. Personal communication
7. Ministry of Health: Report on Hospital In-Patient Enquiry for the Year 1966. London, Her Majesty's Stationery Office, 1968
8. Eckenhoff JE: Shortage of anesthetists: real or artificial? Amer J Surg 117:607-609, 1969
9. Anderson OW, Feldman JJ: Family Medical Costs and Voluntary

Health Insurance. A nationwide survey. New York, Blakiston Division, McGraw-Hill Book Company, 1956
10. Prepayment for Medical and Dental Care in New York State. RE Trussell, F van Dyke (directors of study). New York, Columbia University School of Public Health and Administrative Medicine, 1962
11. Perrott GS: Utilization of hospital services. Amer J Pub Health 56:57-64, 1966
12. Falk IS, Senturia JJ: The steelworkers survey their health services: a preliminary report. Amer J Pub Health 51:11-17, 1961
13. Roemer MI: On paying the doctor and the implications of different methods. J Health Hum Behav 3:4-14, 1962
14. Lees DS, Cooper MH: Payment per-item-of-service: the Manchester and Salford experience 1913-28. Med Care 2:151-156, 1964
15. Carter R. The Doctor Business. New York, Doubleday and Company, 1958
16. Bellin SS, Geiger HJ, Gibson CD: Impact of ambulatory-health-care services on the demand for hospital beds: a study of the Tufts Neighborhood Health Center at Columbia Point in Boston. New Eng J Med 280:808-812, 1969
17. Alpert JJ, Heagarty MC, Robertson L, et al: Effective use of comprehensive pediatric care: utilization of health resources. Amer J Dis Child 116:529-533, 1968
18. Shapiro S: End result measurements of quality of medical care. Milbank Mem Fund Quart 45:7-30, 1967
19. Roemer MI, DuBois DM: Medical costs in relation to the organization of ambulatory care. New Eng J Med 280:988-993, 1969
20. Draper WF: Personal communication
21. Codman EA: The product of a hospital. Surg Gynec Obstet 18: 491-496, 1914
22. Lembcke PA: Medical auditing by scientific methods: illustrated by major female pelvic surgery. JAMA 162:646-655, 1956
23. Curran WJ: Legal regulation and quality control of medical practice under the British Health Service. New Eng J Med 274:547-557, 1966
24. Cope O: Unnecessary surgery and technical competence: irreconcilables in the graduate training of the surgeon. Amer J Surg 110. 119-123, 1965
25. Pearson RJC, Smedby B, Berfenstam R, et al: Hospital caseloads in Liverpool, New England, and Uppsala: an international comparison. Lancet 2:559-566, 1968
26. Simpson J, Mair A, Thomas RG, et al: Custom and Practice in Medical Care. A comparative study of two hospitals in Arbroath, Scotland, U.K. and Waterville, Maine, U.S.A. London, Oxford University Press, 1968
27. Lee JAH, Morrison SL, Morris JN: Fatality from three common surgical conditions in teaching and non-teaching hospitals. Lancet 2:785-790, 1957
28. Moses LE, Mosteller F: Institutional differences in postoperative death rates. JAMA 203:492-494, 1968
29. Lembcke PA: Measuring the quality of medical care through vital statistics based on hospital service areas: I. Comparative study of appendectomy rates. Amer J Pub Health 42:276-286, 1952
30. Donabedian A: Evaluating the quality of medical care. Milbank Mem Fund Quart 44:166-206, 1966
31. Coller FA: Minutes of the Committee on Unnecessary Operations, American Surgical Association, 1952-1960
32. Falk IS. Some effects of insurance and of labor union attitudes on the practice and teaching of surgery. Yale J Biol Med 36:27-42, 1963

JOHN P. BUNKER, M.D.

ECONOMIC INCENTIVES FOR SOCIAL PROGRESS IN MEDICINE

THE THEME IS FAMILIAR: we can fly to the moon, but we can't solve our social problems. Neil Armstrong clearly hoped that his epic voyage, made possible by a vast investment in human and technical resources, might serve as the model for a comparable crash program for social progress. A year later, he is already disappointed that progress has been so slow. Technical achievement and social failure in the practice of medicine has received particularly widespread attention[1-3] and is the subject of the series of articles presented in this issue of PHAROS.

Social failure is generally attributed to some of mankind's baser qualities such as apathy and greed. Whatever the validity of such judgments, there are, of course, perfectly valid scientific reasons why technical progress is easier than, and must precede, social progress. The particular is always easier than the general. Indeed, the particular provides the basis on which to build the general, and therefore must precede it. Thus, development of the physical sciences preceded that of the biological sciences, with the social sciences submitting to precise or technical manipulation last of all.

The practice of medicine has grown hand in hand with the biological sciences to a pinnacle of achievement, while social medicine and the social sciences are only just beginning to submit to a quantitative experimental approach. Yet even with the rudimentary methodology for such studies now available, sufficient data can be marshalled to develop reasonable working hypotheses for the organization of health care services. The particular hypothesis which I would like to present is that the economic incentive of fee-for-service reimbursement and solo practice of medicine may have helped to stimulate the development of the science and techniques of medicine in the past, but today serves only as a deterrent to much needed social reforms in the organization of medicine.

The paradox of technical achievement and social failure is particularly striking in the practice of surgery. Modern surgery must be considered to represent the ultimate in the application of technique to patient care, its technical accomplishments on a par with those of modern industry (the achievement of heart transplant is frequently equated with landing man on the moon). Yet, just as we can manufacture enough food to feed the world but have not devised a social system to distribute it, so we can perform almost any operation, but don't know how to bring surgery to all the people. Consider, for example, the discrepancy in numbers of surgeons between our poorest and our richest states. Alabama, Arkansas, Mississippi, and South Carolina have proportionately half as many surgeons and half the per capita income of California, Connecticut, Massachusetts, and New York.[4] There are no published data on how many operations are performed in each state, but it seems likely that operation rates vary with the number of surgeons from state to state, as they have been shown to do within a single state by Lewis,[5] and from one country to another by Bunker.[6]

Dr. Bunker is Professor and Chairman of the Department of Anesthesiology at the Stanford University Medical School. He was the Director of the national study to evaluate the incidence of hepatic complications after halothane anesthesia, and has also carried out a comprehensive study of the rate of surgical operations per capita in Britain and contrasts it with the United States.

Lewis,[5] in his careful study of surgery in Kansas, reported threefold variations in rates for common operations, including appendectomy, cholecystectomy, herniorraphy, and tonsillectomy. He was able to relate operation rates to numbers of surgeons and hospital beds, and suggested that this reflected a sort of Parkinson's law. Bunker[6] reported comparable and parallel variations in operation rates and surgeons between the United States and England and Wales.

How can such wide discrepancies in surgical services be explained? Before attempting an answer, it may be helpful to examine in broad general terms the nature and purpose of operative surgery. Operative surgery consists of a wide variety of procedures, the indications for which vary from life-saving emergency to near-frivolous luxury. Arbitrarily, one might group these into four categories: 1) life-saving, such as a ruptured abdominal viscus; 2) urgent procedures, primarily for cancers; 3) procedures which may be desirable, but for which indications are often equivocal, including many tonsillectomies, hysterectomies, elective cholecystectomies, elective appendectomies, etc. (most prophylactic or preventive procedures fall in this category); and 4) luxury, including most cosmetic procedures.

It is likely that life-saving and urgent surgery is available to almost every citizen, with most of the geographical variation occurring in the "desirable" or "luxury"

categories. In comparing the West or Northeast with the South, the most obvious difference in the populations is their wealth, and it is readily apparent that surgeons and operations are distributed in proportion to regional wealth. From this, one might wonder whether a patient who can pay is more apt to get an operation. If the operation is of the "desirable" or "luxury" variety, that is, if the indications for an operation are equivocal, the presence or absence of a fee for service may well contribute to the decision. The surgeon may be influenced by a wish to sell his services, but a more important factor may be the patient's wish to buy a cure. The American patient, particularly if he is educated, has high expectations of what medicine, and particularly surgery, can accomplish. With an impatience in proportion to his affluence, he demands active therapy, whether it is an operation for his ulcer, or an antibiotic for his infant's fever.

Fee for service puts a price on a medical service, to be bought or sold like any other article of commerce, and establishes the market for which physicians compete among themselves. The physician cherishes this "time-honored relationship" which "seals the contract" between him and his patient. Fee for service, most physicians apparently believe, assures a strong and appropriate sense of responsibility to each patient. What it certainly does, in addition, is to empower the patient as a buyer of services.

That the usual checks and balances of the economics of supply and demand do not operate in the practice of medicine is well known to medical economists. One important reason is simply that the individual patient, as a buyer, has no way to judge either his needs or the quality of the product. The medical profession has oversold its product, exaggerating its success and at the same time minimizing its limitations, with the inevitable result that patients' demands far exceed their needs.

It is difficult for a physician to resist the patient's demands. If the patient prefers a gastrectomy—with the expectation of instant cure—to the effort and inconvenience of medical management, he will go from the surgeon who is reluctant to another who is willing. The same principle holds throughout medicine, of course; another obvious example is that of the pediatrician who most readily accedes to the mother's demand for antibiotic treatment and inevitably has a bigger practice than his therapeutically more cautious colleague in the next office.

Additional pressures on the surgeon to operate come from other members of the medical profession. When the internist or pediatrician refers a patient, it is usually with the expectation that an operation will be done, not that an opinion will be provided. Indeed, if the internist believes that an operation should be performed, and the surgeon disagrees, it is likely that the patient will simply be sent to a different surgeon. Not only will a surgical fee be lost, but the delicately balanced system of medical patronage may be jeopardized, and as a result, many surgeons are willing to abrogate to other physicians the decision whether or not to operate.

In addition to the economic incentives of fee for service, and the pressures from the patient and other physicians, the physician is strongly motivated towards active treatment by his natural desire to help his patient. It is much more difficult to say to the patient, "There is nothing I can do to help you," than it is to say, "An operation (or a drug) may help you. I am not sure, but I should like to try." Given only an even chance, the patient will usually prefer to take the risk. Unfortunately, for many treatments the relative chance of being improved and the risk of a bad result are not known.

Thus all incentives encourage active therapeutic intervention: the patients want help; the physician wants to give it; and the high priority on intervention is reflected in a large fee if something is done, and no fee, or a small one, if nothing is done. A good argument can be made that fee for service has been an appropriate stimulus to the rapid growth of the science and technology of medicine, just as our classical free enterprise economic system has provided the incentive for technological development in industry. But capitalism and free enterprise have not provided incentives for social progress, and it is clear that the incentives of fee for service run counter to solution of the problems of social medicine.

Fee for service provides a strong incentive towards treating the sick, but relatively little incentive towards keeping the healthy patient well. Fee for service can thus be considered an incentive against health, since a healthy man will not "buy the product." It would be outrageous to imply that physicians want their patients to be sick, but it is certainly true that the incentives encourage them to concentrate their efforts on curing patients once they have become ill, rather than on keeping them healthy in the first place.

In prepaid group practice, by contrast, the physician is paid whether the patient is well or sick, and there is a very strong incentive to keep patients healthy and out of the hospital. There is reason to believe that an increased emphasis on ambulatory and preventive care may decrease the need for hospitalization, including surgery, and it is well known that hospital admissions and operation rates are much lower for patients in prepaid groups than when reimbursement is on a fee-for-service basis. (It should be acknowledged, however, that in the absence of a fee, operations which are desirable but not essential may not be done under prepaid arrangements.)

Whether or not the interests of individual patients can be best met under a free-enterprise, fee-for-service medical system, it is clear that the medical needs of all patients are not. Physicians quite naturally tend to concentrate in more affluent geographical areas, and the patient who can afford it demands and receives a large amount of medical service, the poor receiving the least. It is inherent in a laissez-faire, free-enterprise society that the rich can obtain the luxuries of medicine, while the indigent may not receive basic medical care. The inequitable geographical distribution of surgeons and

operations would appear to be consistent with this interpretation.

If the economic incentive of fee for service fails to provide an economic incentive for social medicine, is there another system which might? For most other countries, this question has been answered by state control of the organization of medical care, including reimbursement on a prepaid or capitation basis. The British National Health Service is the prototype most familiar in this country, and the author has recently compared the effects of differences in medical organization in England and Wales, and in the United States on the quantity and quality of surgical care.[6]

There are twice as many surgeons in proportion to population in the United States as in England and Wales, and they perform twice as many operations. Fee for service, solo practice, and a more aggressive therapeutic approach appear to contribute to the greater number of operations in the United States. More frequent use of consultation, closely regulated and standardized surgical practices, and restrictions in facilities and numbers of surgeons appear to contribute to the lower rates of operations in England and Wales. Indications for surgery are not sufficiently precise to allow determination of whether American surgeons operate too often or the British too infrequently, but it seems likely that both are true. If it appears that there may be "over-doctoring" in the United States, there seems also to be "under-doctoring" in Great Britain. Viewed as a whole, the relative absence of economic incentives does seem to have a negative effect on the quantity of patient care offered under the National Health Service.

If we are now to progress to a solution of outstanding problems in social medicine, it will probably be necessary to forgo the individual incentive of fee for service. But, in the process, I hope that we will not discard all or virtually all economic incentive, as the British and others have done. Rather, it should be possible to construct a system which will retain much of the advantage of American free enterprise, but which will at the same time meet the needs of groups of patients, rather than individual patients. We already have, in group practice, the opportunity for group incentive, with members of the group sharing in economic and other benefits resulting from performance of the group as a whole, including efficiency. We also have, in consumer groups, the opportunity for group bargaining, a most satisfactory alternative to the unfortunate effect of the individual patient and his uninformed yet often overly insistent demands on the medical profession.

National medical insurance is imminent in the United States, with the likelihood of an early change in reimbursement mechanisms to some form of prepaid, capitation basis. With the advantage of the experience of the British and other national prepaid plans, it should be possible for us to avoid the monolithic, incentiveless organization they have chosen. Prepaid group practice, in which the controls and incentives are locally maintained, and in which such groups of physicians relate to relatively small groups of patients, would appear to provide the greatest likelihood of retaining the best of our current medical care system and at the same time beginning to meet the great needs of social medicine immediately facing us.

REFERENCES

1. Reuther, Walter P.: The Health Care Dilemma: New Directions. J. Med. Ed. 45:96, 1970.
2. McNerney, Walter J.: Why Does Medical Care Cost So Much? New Eng. J. Med. 282:1458, 1970.
3. Stead, Eugene A.: Why Moon Walking Is Simpler Than Social Progress. Pharos, 34:3, 1971.
4. Haug, J. N. and Roback, G. A.: Distribution of Physicians, Hospitals, and Hospital Beds in the U.S., 1967. American Medical Association, 1968.
5. Lewis, Charles E.: Variations in the Incidence of Surgery. New Eng. J. Med. 281:880, 1969.
6. Bunker, John P.: Surgical Manpower. A Comparison of Operations in the United States and in England and Wales. New Eng. J. Med. 282:135, 1970.

Reprinted from
THE PHAROS OF ALPHA OMEGA ALPHA
January 1971, Vol. 34, No. 1, Pages 20-22

Senator KENNEDY. I want to thank you for these comments. You have been willing to speak your mind and talk about the conclusions of some very extensive studies on this whole question of quality. Quality control has to be something which really should originate with those that are practicing rather than from legislation. But we are coming to the point where we can't expect that to be the case and we are going to have to try and do something here at the legislative level. You have given us some provocative recommendations on it which will be of great value.

So I want to thank you very much for coming.

Our final witness will be Dr. John Stubbs, who is a general surgeon certified by the American Board of Surgery. After graduating in medicine from McGill University in 1956, he spent 8 years in postgraduate training in Montreal and in Oxford, England. This included 1 year in general practice. He is a Fellow of the Royal College of Surgeons of Canada.

After completing his formal training in surgery, he has been engaged actively in the practice of general surgery in Bermuda. This year he is on sabbatical and is working as a Sloan Fellow at the Massachusetts Institute of Technology.

Before you get started I might ask you, Doctor, are there too many surgeons?

STATEMENT OF JOHN STUBBS, M.D., GENERAL SURGEON AND SLOAN FELLOW, SLOAN SCHOOL OF MANAGEMENT, MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Dr. STUBBS. Definitely.

Senator KENNEDY. The introduction ought to reflect that you are a member of Parliament in Bermuda; is that correct?

Dr. STUBBS. Yes, sir; I am. But of my qualifications I think the most relevant today is that year in general practice.

In my view the issue of the quality of care in America today particularly revolves around the enormous imbalance that has been generated in this country, particularly over the past two decades, between generalists and specialists. True, specialists societies have recently shown some genuine interest in this, but I think this has come very late in the day.

Today I would like to make the bold claim that there are too many surgeons, particularly far too many general surgeons. I think this claim can be made for many other branches of surgery as well. I take the example of neurosurgery, where there are more neurosurgeons in the State of Massachusetts serving a population just over 5 million than there are in the United Kingdom serving a population of over 50 million. And I think this has very important implications regarding both quality and cost.

And the other side of this oversupply of specialists in general, and surgeons in particular, is the way in which we have allowed to run down our primary care physicians—and by this I mean general practitioners, internists, and pediatricians.

The overall figures for this country of generalists stood at 94 per 100,000 of population in 1931. This had dropped to 75 in 1949, and

in 1965 stood at 50. That is an aggregate figure. In certain parts of the country it is much worse.

Senator KENNEDY. That is the number of GP's to the population?

Dr. STUBBS. No, sir; it is the number of generalists, including general internists, pediatricians, and general practitioners.

In the tristate region of Massachusetts, New Hampshire, and Rhode Island Dr. Osler Peterson at Harvard conducted a recent survey, and he discovered that only one-third of the total physician population fell into this generalist group. What is probably even more alarming is that of the 2,000 odd general practitioners only 20 percent were under 50 years of age. In East Cambridge, with a population of 65,000, there are now 11 doctors' offices, and these doctors' average age is 59. In nearby Chelsea, with a population of 28,000, there are six primary care physicians, and four of them are over 60.

This undersupply of generalists serves, I think, further to magnify the quality and cost implications of our oversupply of specialists. More and more the American public is being driven to the yellow pages or to the advice of friends to seek specialists' help—frequently when the illness could be better managed at less cost by a properly trained generalist.

Now there are some, but they are rare, that claim that modern medical technology has made the generalist obsolete. Surely with the growing array of narrow specialists, there is more pressing need than ever for a generalist to serve as arbiter, friend, and competent guide to the bewildered patient as he enters the confusing maze of modern medicine.

Important as this function is, the generalist is needed as much, if not more, for the provision of medical care, both as regards prevention and treatment. And I have no sympathy for those who say that the generalist is merely the portal of entry of the patient into the health care system. I think this reveals a bias. It reveals both arrogance and ignorance. In my view, for the overwhelming majority of the ills of man, the generalist is not the portal of entry to the system—he is the system.

I would like to touch briefly, because it is relevant to the question you asked Dr. Bunker, on how this terrific imbalance has come about.

Following the salutary suggestions of Abraham Flexner in the early part of this century the whole pattern of American medical education changed, and it changed substantially for the better. But this development has gone along to the point where it is beginning, I think, to have very deleterious effects. In this process, with the growing complexity of modern medicine, the specialist emerged and he came very soon to dominate the medical schools and the medical curriculum. Today in our major medical schools the only models that are really held up to the medical student that he can emulate are those provided by specialists. The generalist has been very much pushed aside. He has a very minor role in medical school faculties.

In our hospitals, which have become more and more the focus and the work place of the specalists, more and more hospitals have

become disinclined to admit generalists onto their staffs, who have no higher post-graduate qualification, to give them admitting privileges. This is a particular phenomenon in the metropolitan areas, but it is a spreading tendency, and the import of this tendency is not lost, I am sure, on medical students when they are looking toward their future career structures.

Other witnesses today have stressed the essential focus that the hospital provides for continuing medical education. It provides the arena in which doctors of all types rub shoulders together, and the place in which we can effectively monitor the quality of care which our colleagues provide.

This process involves on the one hand, sir, medical schools encouraging specialization without any real responsibility for the overall needs of the community; on the other hand, sir, we have in hospitals a growing proliferation of specialty training posts.

Without any question the most potent stimulus for this exponential growth of residency training posts has been the service function provided by these residents. They are cheap labor. I say that with feeling, having been through this process myself.

A professor of surgery at Harvard recently admitted privately to me that it is this service function indeed which is the most significant stimulus for the growth in training programs. Further, he feels that there are far too many approved programs and that the quality of training provided in most of them can only fairly be described as poor. And I think the implications of this seasoned judgment are obvious.

Certainly good quality medical practice must be based on good quality training. He pointed out that last year 25 percent of the available surgical residencies were not filled, 25 percent were filled by foreign medical graduates, and only the remaining 50 percent were filled by United States and Canadian graduates. And this has been the invariable pattern over the past two decades in the majority of the medical specialties. The number of available training posts in hospitals has consistently exceeded the number of trainees willing to fill them. This stands in marked contrast to the bottleneck that exists at the portals of entry to our medical schools.

To document this more completely I have some AMA figures which are appended to the written testimony.

The medical profession is aware of this problem. Recently the American College of Surgeons and the American Surgical Association formed a joint committee under Dr. George Ziederman of Johns Hopkins to look into surgical manpower needs, and I would only hope that this committee would also include productivity and quality analyses in their deliberations. I think they have the expertise to do this.

Senator KENNEDY. Who decides about these programs?

Dr. STUBBS. The various specialty boards collaborate with a committee of the American Medical Association. Together they have formed 19 residency review committees which determine which programs are approved for residency training; and there is terrific pressure from the hospitals to gain approval for their programs.

Senator KENNEDY. If the AMA really wanted to provide some leadership in this area, I would think they could police this with some authority, could they not, in terms of the development of various programs in these respective hospitals?

Dr. STUBBS. They could, but no one seems to have taken on the responsibility of looking at the national needs regarding manpower in the surgical and medical specialties. It would be more than optimistic to expect this particular group effectively to provide that function because we are faced with overlapping membership and confiicts of loyalty and interest on the one hand, and terrific pressure to get men to provide these service functions as residents.

Senator KENNEDY. And who suffers as a result of that?

Dr. STUBBS. Well, I think we all suffer, the whole system suffers.

Senator KENNEDY. It is the consumer who is the sufferer in terms of availability of adequately trained personnel.

Dr. STUBBS. Yes indeed. We have turned the tap off virtually on what I think should be the bedrock of our medical care system, the primary care physician, and it is the implications of this regarding quality that I think are most serious.

Senator KENNEDY. What about the suggestion that a surgeon must have a recommendation from a primary care physician for surgery, unless it is obviously an emergency?

Dr. STUBBS. In my view, sir, this is the only rational and effective way of organizing medical care.

Senator KENNEDY. It is a feature that just so happens to be in our bill.

Dr. STUBBS. I was delighted to find it there.

Now regarding the number of surgeons one can look at the statistics that have been quoted by Dr. Bunker from a rather different point of view. The National Center for Health Statistics of HEW——

Senator KENNEDY. If I could just return to this point where you say you think it would be useful if we had that kind of inclusion. What about the argument that this would interfere in the professional judgments which surgeons are trained to make in various situations. They have specialized in a particular area, and know that subject much more than a generalist. Why would surgeons allow dictation by these generalists whose proficiency and understanding in these areas is at best superficial?

Dr. STUBBS. Well, I don't really feel there is any logical support for that argument. If the patient has a problem, as was so eloquently demonstrated this morning—if he has got a problem that can be ameliorated by surgical intervention and he fails to refer such a patient, time will tell the error of this particular judgment, and the generalist knows this. His broad training minimizes the risk.

The other point, sir, is that specalists claim expertise in one narrow area, but their patients frequently develop—in the course of their professional responsibility in a particular illness within the area of their expertise, such patients frequently develop other problems. Every doctor is constrained constantly to examine his patient as a total system, and we all share the need to know when our patients are in need of other doctors who have other expertise than

our own. This need applies equally as much, if not more, to specialists as to generalists.

In 1965, which is the last year for which detailed validated statistics are available, 14-million operations were performed in the United States. And these were performed by 74,700-odd surgeons. Simple arithmetic dictates that this presents an average of 190 operations per year or 3.8 operations a week. I don't think anybody could reasonably suggest that 3.8 operations a week is fair productivity for these very expensive resources, namely surgeons.

I think, though we do not have precise statistics, we know that it is generally agreed that on average perhaps 10 operations a week is a more acceptable level of surgical productivity. Certainly some surgeons are busy, and much busier than that average would suggest. But if we assume that 20,000 of the 70-odd thousand surgeons are busy and are performing on average 10 operations a week that would account for 10 of the 14 million operations, which would leave the remaining 4 million operations shared among 54,000-odd surgeons. And this brings us to the much more alarming realization that such a large number of surgeons may average 74 operations a year or approximately 1.5 operations a week.

Senator KENNEDY. What percentage of physicians average 1.5?

Dr. STUBBS. We have no precise statistic. I took 20,000 as a purely arbitrary figure for the number of surgeons busy in surgery. But that would leave the majority of surgeons——

Senator KENNEDY. Why can't we have these statistics? I mean why can't we get them? Why aren't we entitled to them?

Dr. STUBBS. I think we must get them, and I think the National Center for Health Statistics is making every effort to provide this valuable information. However the center requires expansion of its resources to collect the data we need.

It is my firm belief that no surgeon can possibly maintain his professional competence if he is doing so little surgery.

Perhaps, sir, the most compelling evidence comes from a personal survey conducted by Dr. James Maloney of UCLA. Dr. Maloney took a 2 months sabbatical and personally interviewed 94 internists, pediatricians, and surgeons in the principal teaching hospitals of the nine leading medical schools in the country. And he found that university surgeons—by the way, this article was delivered as a presidential address of the American Society of University Surgeons. He found that university surgeons performed between 2.2 and 3.5 operations a week. And this includes both major and minor procedures. He found this small number of operations performed is not through choice, but was "a source of major dissatisfaction. It was an almost universal complaint among strictly full time surgeons that they had inadequate clinical material to maintain their professional competence."

I think things have got to get pretty bad before people are prepared to admit something so forthrightly.

I think, sir, this article of Dr. Maloney's contains so much cogent evidence that I would ask that it be considered for inclusion in the record.

Senator KENNEDY. We will have that included at the conclusion of your remarks.

Dr. STUBBS. What can be accepted as a reasonable level of activity for surgeons? Well, aggregate figures don't mean very much. I think a cardiac surgeon who does three or more operations a week could be considered busy, whereas four groin hernias could be comfortably repaired in a morning.

However, I have conducted a detailed analysis of my own practice over a 2½ year period. Results are subjective and introspective, but on the basis of that analysis I would say that a reasonable level of productivity would average 10 to 15 operations a week, and it is my considered opinion that fewer than four operations a week is insufficient to maintain professional competence.

Senator KENNEDY. Are there any standards now that are established? I mean does anybody say that you have to perform so many of a certain type in order to maintain competence?

Dr. STUBBS. No, sir.

Senator KENNEDY. Does a patient know how many times a doctor has operated?

Dr. STUBBS. No, sir.

Senator KENNEDY. I am a pilot, and in order to keep up a proficiency for instruments, I have to fly so many hours a month to keep up my rating. To keep your flying license you have to do the same kind of thing—you have to takeoff and land—procedures which are established. And you just wonder why there aren't such standards established for something which is so much more complex, complicated, demanding, and important.

Dr. STUBBS. Well, I have often used that analogy myself, and I think in surgery we could learn a lot from the quality monitoring procedures involving airline pilots. However, though, I don't think that analogy should be taken too far because airline pilots are flying planes that have a fairly standard performance, and we are dealing with a very different situation. I don't think it would be possible to establish the precise criteria that are appropriate in that setting, but I think we could go a long way in that direction, and indeed I think we should.

Senator KENNEDY. What happens to those people who only perform the two or three surgical operations a week? How do they make up for income?

Dr. STUBBS. I was coming to that point. Our work in Boston includes a detailed study of one of the community hospitals which is also affiliated with Harvard. We found that most of the private surgical inpatients look to their surgeon to provide primary care. I conducted this survey myself, and I would ask questions like "well, what would you do if you woke up in the middle of the night and you had a bad cold. You had chills and fever and felt very much sicker, and had chest pain and thought you might have pneumonia? Who would you call?" And in the majority of the instances the patient would name their surgeon as the provider of primary care whom they would call in such circumstances.

And I think because we have this tremendous imbalance I am not entirely critical of this. Thank goodness, surgeons are willing to provide this service. There are just not enough generalists to fulfill this function.

However, I think there are two very important implications that come out of this. The first is obvious. I think it is basically unsound to have surgeons who are paid on the fee for service basis, who are comparatively underemployed, and who provide primary care, receiving patients off the street with all manner of ills. I just don't think these circumstances are designed to encourage the sort of cautious conservatism which are in the best traditions of American surgery.

The second effect is a little more difficult to appreciate, but I think probably in its impact on quality of care it is more important. And that is once specialists are providing primary care the whole rational structure of this medical team is destroyed. The system is effectively undermined. The specialist is now in competition for clientele with the generalist. Under these circumstances it is only natural that the generalist is rather less willing to refer his problems and to seek consultation from his competitor.

Now at best, under the most favorable circumstances, I think this reticence to refer problem patients merely reduces the productivity of the generalist and prolongs the discomfort of the patient. I think under the worst circumstances it could cost the patient his life.

Finally, there is this matter of untrained, self-trained, and unqualified surgeons. This has been a problem in this country, and comparisons with the United Kingdom here I don't think are entirely valid because this is a vast country with enormous geographic differences, and in some of the peripheral parts of the United States if untrained surgeons weren't providing care, surgical care, the choice is none at all. So I think this consideration has to be tempered with some understanding of the history and demography of the United States. And I think this is a declining problem because more and more these untrained surgeons are being replaced by well-trained surgeons who have the wisdom to escape from the comparative glut of the metropolitan centers.

Regarding recommendations, in medicine we have avoided for too long appropriate systematic analysis of what we do, how quickly, and how well we do it. We have surrounded our activities in a cloud of mystery and false professionalism. We have developed a credibility gap regarding both our motives and our miracles. At the same time we have turned a blind eye to those basic organizational and administrative problems which are central to the system's ills. Without any intended arrogance, we are inclined to consider ourselves and our activities inappropriate for the sort of cost-benefit analysis which has been so helpful in business and Government. We have turned to Government for money without understanding the need for public accountability. We want the funds from regional planning without any real measure of control. We have promised standards of quality which we frequently fail to deliver.

I am convinced personally that the Federal Government must lead the way in our collective analysis of the system, in formulation of our goals, and in designing and implementing the necessary major reforms. The traditional leaders of my profession, coming as they do from the medical schools and principal specialist societies, have too narrow a view of the system to be entrusted with these

tasks alone. The defense of their sectional interests will inhibit them from recruiting the necessary analytic and management talent required for the essential total systems analysis and reform.

I think central to this reform is the need rapidly to expand our production of generalists and sharply curtail our output of specialists. In my view, this will do more to raise the quality of medical care in America than any other single measure.

An introductory paragraph of S. 3 states, and I quote, "Specialty services will be covered if, on referral, they are performed by qualified persons." It is a little difficult to know quite what is implied. But I think it is capable of proper elaboration into a constructive plan that can be implemented in stages to assist the creation of a better balance between specialists and generalists.

On an introspective note I look to my own experience, and my experience in general practice in particular, as it improves the quality of the work I do as a general surgeon. For this reason I make the proposal that a period of a year or two in general practice be made a prerequisite for entry into residency training. I think this would do those who return and take specialty training a world of good. Many of them, once they get into general practice from which they are almost totally isolated in their medical school experience, would learn the joys and rewards that come from general practice, and many of them would stay on there.

Regarding the issue of quality of care, this can only be analyzed by some form of peer review. But that is a vague statement. The critical question is what form this peer review should take. I don't think we should take the commercial airline pilot analogy too far and have some branch of the Federal Government providing rotating inspectors. But I do think that professional societies must be encouraged to extend their interests beyond training and beyond qualification to include continued periodic review.

In my view, we can remove some of the invidious burden of responsibility which is inherent in our present system by doing this. I don't think the public interest is best served by our present system where the entire task of continued monitoring of the quality of care rests on those of our peers who happen also to be our intimate colleagues and in many cases our close personal friends.

I have been in this position myself as chief of surgery in a small community hospital, and it is an impossible professional situation.

Along with this peer review I think we need better aggregate measures of outcome, of the results of what we do, the sort of thing alluded to by Dr. Bunker. These measures of outcome need to be much more precisely defined.

You heard Dr. Bunker's reservations regarding comparisons among hospitals. But by appropriate refinement I think these measures will allow us effectively to compare what happens in one institution or what is done by one doctor with what is done elsewhere in our pursuit of excellence. I think this will become even more essential as ultimately, I think as inevitably, we come to accept the need for effective regional planning and control, and particularly prospective budgeting in hospitals.

I would like to close by making one final comment. It is generally agreed there are enormous variations in the quality of care. However, I think for those who can get care the general standard is high. The failures regarding quality I think are more failures of the system than due to any malevolence or negligence on the part of individuals.

I also think quality of care is a proper subject for public debate, but I think all who join in such debate must recognize the sensitivity of this subject and the importance of the patient's faith in his doctor. And this is important not from the doctor's point of view, but from the patient's. So I think all who join in such debate must realize this. Also I am convinced that most doctors are consistently worthy of this faith.

(Prepared statement of Dr. Stubbs follows:)

Testimony of Dr. John Stubbs

Before The

Senate Subcommittee on the Health Care Crisis in America

April 6, 1971

This year at the Sloan School at MIT, in association with two other Sloan Fellows, I have been studying management information systems appropriate to community hospitals. The year has provided both the time and the perspective necessary to analyze some aspects of the health care crisis in America. A substantial part of our work has involved the broad subject of quality of care and I have given this matter considerable thought and study.

I want to discuss particularly the implications for quality of care which stem from the simple fact that there are, in most specialties in America today, far too many specialists. Certainly, there are far too many general surgeons. The same bold claim can be made for neurosurgeons and for many other subspecialties as well. There are, for example, more neurosurgeons in the state of Massachusetts serving a population just over five million than there are in the United Kingdom with its population of just over fifty million.

This over-supply of specialists presents serious problems relating both to the quality and to the cost of medical care in America today. These implications deserve to be examined in considerable detail. They are serious and significant and the analysis, I hope, will draw attention to

an area in modern American medicine where major national reform is needed to restore balance and sanity to the system.

In my view, the need to improve the quality of care is directly and causally related to the need to correct the irrational and damaging imbalance which currently exists between our large and growing number of specialists and the worstening shortage of generalists. While we have been building our supply of qualified specialists, we have allowed the number of general practitioners to decline at an alarming rate over the past two decades. Even if internists and pediatricians are included with general practitioners and family care specialists, the total number of doctors who are properly trained and equipped to provide primary care is declining rapidly. The total number of such doctors stood at 94 per 100,000 in 1931. By 1949, the number had fallen to 75 and in 1965, the figure stood at 50.

Dr. Osler Peterson at Harvard has recently reviewed the medical manpower resources in the Tri-State Regional Medical Program area of New Hampshire, Rhode Island, and Massachusetts. Only one-third or 4,174 of all physicians in the Tri-State area are engaged in family practice. This includes general practitioners, general internists, and pediatricians. He found the pediatricians and internists were concentrated in the metropolitan areas and their numbers were increasing slowly, if at all. He discovered a marked increase in other specialists, who care for fewer patients than general practitioners and who tend to work in the metropolitan areas only. "Of the 2,451 general practitioners only 20% are under 50 years of age." Dr. Peterson concluded, "Seeing a doctor

in 1975 promises to be very difficult unless there is great change." In East Cambridge, Massachusetts, with a population of approximately 60,000, there now remain only eleven doctors offices and these doctors have an average age of 59 years. In nearby Chelsea with a population of 28,000, there are six primary care physicians, four of whom are over 60 years old. While these examples are drawn from the Boston area, I believe they reflect national trends. Even if the Boston experience is extreme, I believe the imbalance shown here between specialists and generalists accurately reflects the direction in which the whole nation is heading.

This under-supply of generalists serves further to magnify the quality and cost implications of our over-supply of specialists. More and more, the American public is being driven to the yellow pages or to the advice of friends to seek specialists' help - frequently when the illness could be better managed at less cost by a generalist. Rare are those who seriously claim modern medical technology has made the generalist obsolete. Surely with the growing array of narrow specialists, there is more pressing need than ever for a generalist to serve as arbiter, friend, and competent guide to the bewildered patient as he enters the confusing maze of modern medicine.

Important as this function undoubtedly is, the generalist is needed as much if not more for the provision of medical care, both prevention and treatment. Those who describe generalists as "the first points of contact with the system of delivery of health care" speak with a bias which reveals both arrogance and ignorance. For the overwhelming majority of man's ills the generalist is more than a portal of entry into the system,

he is the system. And it is my firm belief that the vast majority of these ills are better managed by generalists and at substantially less cost than by a specialist or panel of specialists.

How have we arrived at this chaotic imbalance between numbers of specialists and numbers of generalists? The answers to this question should be avidly sought for more reasons than academic, historical interest. Only when we have frank, forthright, and accurate answers will we know what forces must be mobilized to effect constructive reform, the directions that reform should take, and what forces we can expect to resist such reform.

The Medical Schools

Early in this century, medical schools in North America began to implement the suggestions of Abraham Flexner. They created clinical teachers well-trained in the basic sciences who built the scholarly environment of the modern teaching hospital and applied the scientific method to clinical practice. This was in healthy contrast to their predecessors who were clinicians first and foremost and who had little understanding of science. As the complexity and power of modern scientific medicine grew, specialists emerged in response to an obvious need. Soon these specialist clinicians came to dominate the teaching scene and the generalist was displaced and then all but eliminated from medical school faculties. Soon the only effective personal models to which students were exposed were those of specialists practicing at the frontiers of clinical knowledge. It is natural and inevitable under these circumstances that fewer and fewer students were inspired to take

on the subtle challenges of generalist practice. Specialist training seemed more and more obviously to them to provide the only path to clinical excellence.

To an increasing extent, medical schools emphasized basic sciences at the expense of developing those elemental clinical skills required of good history-taking and physical examination. These subtle skills, and the joys and human rewards of their application in doctor-patient contact, were largely supplanted by the intellectual thrills of the technology-assisted search for esoteric biochemical diagnoses. Astute interpretation of the patient's reply to a timely question - a skill impossible to quantify and difficult to analyze and to teach - was de-emphasized in favor of heavy reliance on a growing battery of elaborate and costly laboratory and radiologic investigations. As the pattern changed and the technology-based specialist became dominant, it was inevitable that the medical student became more reliant on science, which he thought he understood, and less aware of clinical skills, some of which he hardly knew existed. Always nebulous, these elemental and essential skills soon acquired the aura of myth as less and less time was devoted to their development and as fewer and fewer teachers were available to teach by example. The consequent erosion of medical school support of the generalist reached a point in the past decade when medical students made simplistic equations between the specialist and excellence on the one hand and the generalist and mediocrity on the other.

Perhaps the pendulum has come full swing and is now returning. The recent appearance in several medical schools of departments devoted to family practice suggests that it has. Others are more cynical. They point to the recent sharp decline in research funds provided by the federal

government through the National Institutes of Health and the effect of this decline in putting a sharp cramp on the funding of medical school faculty. Whatever the motive for this recent change, the fact remains that specialists are still dominant among those to whom medical students are exposed. The models are the same and they quietly convey the same message. One may well ask how many deans would rejoice at a sharp rise in the proportion of their graduates who enter general practice. Harvard and Stanford claim special license and point to their role in training future clinical teachers. Yet these schools serve as models for those less obviously prestigious. As a result, we find the pursuit of presumed or preceived excellence as a major factor promoting the glaring imbalance between specialists and generalists. However laudable this motive may be when viewed from the narrow perspective of the medical school, the effects on the total system of delivery of health care are little short of disastrous.

The Practicing Specialists

Schooled in modern scientific medicine and working in the comparative safety of the modern hospital, he is surrounded by fellow specialists who provide mutual comfort and support. As he is less and less aware of the distinctive skills of the generalist, he lends quiet encouragement to those lay attitudes which place him socially and professionally on a higher rung of the ladder of personal success than his colleagues in general practice.

However, this harm is probably trivial in its consequences. Much more serious is the persistent empire building which has become common

practice among hospital-based specialists. Here I refer specifically to the rapid increase in the number of post-graduate residency training programs available in the United States. The specialist adopts the model of his teacher who by definition is actively engaged in residency training. There is the widely held belief that the good surgeon must also be training young surgeons in his turn.

More practical and much more important are the service functions provided by residents in training. They are still a source of comparatively cheap labor. They soon acquire sufficient skill to deal competently with all the minor and less interesting details of patient care. And on the whole, they seem anxious to assume the additional responsibilities which accompany the heavier reliance placed on their judgement and skill at night and on weekends and holidays. Without question, a residency training program does a great deal to regularize the hours of work of specialists.

Then there is the prestige factor which is of some considerable influence. Society holds in even higher esteem than nuerosurgeons, neurosurgeons who train other neurosurgeons.

A professor of surgery at Harvard recently admitted privately that the service function of residents has been the most significant stimulant to the growth of training programs. He feels there are far too many approved programs and that the quality of training provided by most of them can only fairly be described as poor. Too often, the major emphasis is on service with far too little attention paid to the training experience. The consequences of poor quality of training on the quality of care later provided by these specialists when they enter practice are obvious. Good training must necessarily be the essential foundation on which good

good practice is based.

He based his judgement on experience gained as an examiner for the American Board of Surgery, where he has been shocked by the lack of preparedness of so many candidates who present themselves for examination.

He pointed out that last year 25% of the available training posts in surgery remained vacant. Twenty-five percent (25%) were filled by foreign medical graduates, most of whom will remain in the United States, and 50% were filled by United States and Canadian graduates. Thus, the demand by potential trainees for specialty training has not influenced this proliferation of training programs.

This has been the invariable pattern over the past two decades in all the major specialties. The number of available training posts has consistently exceeded the number of trainees willing to fill them.

Provision is made to review residency training programs. In 1967-68, 2,055 of the total of 4,518 programs were reviewed. Approval was withdrawn from 128 programs, and 134 new programs were added to the approved list. While the growth rate may be slower in recent years, it is obvious that facilities for specialty training are abundant and there is no evidence that the recent trend of vast expansion in training posts will soon be reversed.

The medical profession is aware of the problem. It has freely admitted that the rate of training medical specialists has been almost totally unrelated to national needs for specialists. In surgery, evidence of this awareness is provided by the American College of Surgeons and the American Surgical Association which recently formed a joint committee

under Dr. George Zeiderman of Johns Hopkins University to study and report on surgical manpower needs of the nation. This committee has both the resources and expertise properly to analyze the problem. One can only hope that the committee include productivity and quality of care analyses in their study.

Hospitals

American hospitals vary enormously in size, and in other dimensions of comparison almost as much, so that generalizations regarding their influence on the balance between generalists and specialists are particularly dangerous. However, one can trace a certain trend which if continued may have seriously damaging impact on the quality of care in America. Starting with the metropolitan teaching hospitals and extending for varying distances toward the periphery, one can observe a disinclination to extend admitting privileges to generalists who lack some higher post-graduate medical qualification. This trend increases the professional gulf between generalists and specialists and removes generalists from the natural center for continuing medical education. In North America, by a slow process of evolution, we are moving in the direction of reproducing the appalling circumstances which prevail by fiat in the United Kingdom where generalists are effectively excluded from proper association with good hospitals. The trend against appointment of general practitioners to the staffs of the better general hospitals is undeniable, at least in the larger metropolitan areas. It produces a predictable and significant influence on those medical students and interns who might otherwise be attracted into general practice.

59-661 O - 71 - pt. 5 ---23

The Acceleration Effect on General Practice

As their numbers decline, the remaining generalists are under pressure from rising workloads. Some have responded by increasing their productivity with the aid of ancillary staff. Others have protected their shrinking leisure time by cooperative effort in the context of group practice. Others have given up in despair and retreated into the comparative comfort of specialization. This merely adds to the burden on those who remain and accelerates the process of attrition.

Cultural Changes and the Mass Media

As our society has become more mobile and our human contacts more institutionalized and less personal, the continued relationship through time between generalist and patient has been more difficult to establish and to maintain. The value of this contact has become less obvious to the patient. With increasingly sophisticated hospital-centered medical technology, the patient becomes less aware of the basic elemental value of careful history-taking and physical examination. "My head aches, doctor; how about taking an x-ray!" He is equally impatient of questioning, and both doctor and patient now tend to retreat too readily to the impersonal safety of ancillary tests and theraputic trials.

Television particularly has wrought a revolution in patient expectations. Marcus Welby not withstanding, the emphasis has been on hospital-centered specialist practice with heavy reliance on expensive modern technology.

Fads have succeeded one another in successive waves - tranquilizers, vitamin B-12 injections, vitamin C, and copper bracelets. Steroids,

transplantation surgery, and multi-phasic diagnostic screening have all been oversold. Expectations have been inflated beyond measure. Currently, the computer is proffered as the final solution to all that ails the system.

Are There Too Many Surgeons?

Present evidence strongly supports the view that there are too many qualified surgeons and that this glut is most apparent in the larger metropolitan areas. All doctors seem busy, including surgeons, and it is tacitly assumed by most who describe the "doctor shortage" that specialists are fully and productively employed within their respective areas of medical expertise. This inference, I believe, is unjustified and as a result, the absolute shortage of medical manpower is probably substantially less than several of these estimates would suggest.

There have been no direct measures of productivity of surgeons, but it seems reasonable to look to numbers of operations performed per surgeon in a given period of time as the most reliable surrogate measure we might find. Good surgical care involves much time and effort outside the operating room, and the number and type of operations performed are only very crude measures of a surgeon's productivity. In addition, those surgeons who practice in teaching hospitals usually have University appointments which involve them in many other important and time-consuming activities.

With these reservations, it seems reasonable to examine the evidence contained in Dr. John Bunker's article on Surgical Manpower. From evidence gathered in the Hospital Discharge Survey conducted by the National Center for Health Statistics of the Department of Health, Education, and Welfare, he concluded that 14 million operations were

performed in the United States in 1965, the last year in which detailed, validated statistics are available. This total excludes diagnostic and obstetrical procedures. These 14 million operations were performed by 74,746 surgeons, a total which includes surgeons in training, opthalmologists and orthopedic surgeons, but does not include the 10,850 physicians in general practice in the United States engaged in part-time surgical practice. This provides an average number of 190 operations performed in hospital per surgeon during the year, or 3.8 operations per week.

There are many criticisms of such figures, but the errors are probably compensating. Exclusion of obstetric and diagnostic procedures reduced the average as does exclusion of operations performed in private offices and clinics. However, exclusion of general practitioners who do part-time surgery, and a great deal of it in peripheral hospitals, substantially lowers the denominator and raises the average number of operations per surgeon.

No reasonable surgeon would claim this represents an acceptable level of productivity. Indeed, a conservative estimate of ten operations per week would be a widely accepted figure for average optimum productivity. Some surgeons are genuinely busy. If 20,000 such surgeons averaged ten operations per week, this would account for 10 of the 14 million operations. This would leave 54,000 surgeons sharing four million operations in 1965, an average of 74 each per year or 1.5 operations per week. It is my firm belief that no surgeon can possibly maintain an acceptable level of clinical competence when he is doing so little surgery over a protracted period. Surgical care

of high quality cannot possibly be provided under these circumstances.

Many reasonable people would share my personal discomfort at such facile manipulation of these data. In response, I offer the suggestion that imperfect as they may be, these conclusions have been derived by conservative extrapolations from the best figures available. The results tend to provide strong support for the private complaint of countless urban American surgeons that they are grossly underemployed in their specialty.

More recent data are derived from a survey conducted in 1970 by Medical Economics. This included only "major" operations performed by general surgeons and showed that 68% of surgeons averaged less than four operations per week. As Owens remarked, "One general surgeon in eight performs 400 or more major operations a year, while another one in eight does fewer than 100."

In Boston my colleagues and I are conducting a small survey of general surgeons and our results to date support the evidence I have already presented. In private interview with the surgeons involved in this survey, there is the frequent complaint that they have far too little surgery to do and some have claimed that they feel less proficient now than when they had completed their residency training a few short years ago.

Perhaps the most compelling evidence comes from a survey conducted by Dr. James V. Maloney from the Department of Surgery, UCLA School of Medicine and the RAND Corporation. He personally interviewed 94 internists, pediatricians, and surgeons in the principal

teaching hospitals in nine of the nation's leading medical schools. He found that this group of university surgeons performed between 2. 2 and 3. 5 operations per week. This includes both major and minor procedures. He found that this small number of operations performed is not through choice but was "a source of major dissatisfaction. It was an almost universal complaint among strictly full-time surgeons that they had inadequate clinical material to maintain their professional competence." Dr. Maloney adds, "One of the most serious problems related to the data presented is the question of maintenance of the professional competence of the clinical faculty of medical schools. Is it possible for a professional person to maintain his clinical competence under these circumstances?"

Mr. Chairman, Dr. Maloney's article contains some of the most important evidence we have regarding quality of care. I submit a copy of this article and ask that it be considered for inclusion in the Record.

Turning directly to the subject of quality of care as it relates to surgery, I want to report a longstanding belief which is widely held in the medical profession. Other things being equal, we have to come to expect lower morbidity and mortality associated with surgery when such operations are performed by well-trained surgeons who have gained wide experience in performing many such operations. Strong as this impression is, strong as is its intuitive appeal, the supporting data are scarce. The most recent edition of a popular American textbook of surgery makes a strong plea for collection of such data to assess the roles of hospital and surgeon in operative risk. "It may well be that the surgeon, or the one who calls himself one, may be in some hospitals

the major factor in the total picture of surgical risk."

Granted that there is some minimum acceptable level of operative activity for surgeons - what is it? Certainly, it must vary with the type of surgery and the character of the surgeon. A cardiac surgeon is considered busy if he performs three or more major operations a week whereas four groin hernias can comfortably be repaired in a morning. What I propose is an aggregate figure for general surgeons, based on a detailed analysis of my own practice over a two and one-half year period. But first I must caution against extrapolation of this subjective assessment to other types of surgeons or even to all general surgeons. With these reservations, I suggest that an average of 10 to 15 procedures a week, major and minor, is an acceptable level of productivity. Fewer than four a week, for extended periods, is, in my view, insufficient to maintain professional competence.

Surgery is merely a part of the larger subject of medical care, but it is the part I know best. Our work in Boston includes a detailed study of one of the community hospitals affiliated with Harvard University. We found that most of the private surgical inpatients look to their surgeon to provide primary care. With our present shortage of general practitioners, it is fortunate that these surgeons have the time and are willing to provide such care. However, I am firmly of the opinion that this care is more costly and of poorer quality than primary care provided by experienced generalists. There are two consequences of this study which bear further analysis.

The first is obvious. It is basically unsound to have surgeons paid on a fee-for-service basis, comparatively under-employed, who provide primary care and receive patients off the street with all manner of complaints and illnesses. Surely these circumstances are not designed to encourage the cautious conservatism which the best traditions of American surgery have consistently encouraged.

The second effect is more difficult to appreciate, and yet I believe it is much more serious in its consequences. When specialists such as surgeons provide primary care, the whole balance and rational structure of the medical team is distorted. The proper professional relationships among doctors is undermined. The specialist is now in competition with the generalist for primary care patients. Under these circumstances, it is only natural that the generalist is less willing to refer his problem patients. He is less inclined to seek consultation from his competitor. At best, this reticence merely reduces the productivity of the generalist and prolongs the patient's discomfort. At worst, it may cost the patient his life.

Finally, there is still some surgery performed by un-trained, self-trained or unqualified surgeons. This becomes less of a problem each year as these men are progressively replaced by well-trained surgeons who have seen the wisdom of escape from the comparative manpower glut of the metropolitan centers. However, some still persists and much of it is of poor quality.

Recommendations

In medicine we have avoided for too long appropriate systematic analysis of what we do, how quickly, and how well we do it. We have surrounded our activities in a cloud of mystery and false professionalism. More recently we have developed a credibility gap regarding our motives and our miracles. We show a fierce loyalty to some narrow part of the system. At the same time we turn a blind eye to those basic organizational and administrative problems which are central to the system's ills. Without any intended arrogance, we are inclined to consider ourselves and our activities inappropriate for the sort of cost-benefit analysis which has been so helpful in business and government. We have turned to government for money without understanding the need for public accountability. We want the funds from regional planning without any real measure of control. We have promised standards of quality which we frequently fail to deliver, and yet we are inclined to resent suggestions that we refine and apply better measures of the quality of our work.

I am convinced the federal government must lead the way in our collective analysis of the system, in formulation of our goals, and in designing and implementing the necessary major reforms. The traditional leaders of my profession, coming as they do from the medical schools and principal specialist societies, have too narrow a view of the system to be entrusted with these tasks alone. The defense of their sectional interests will inhibit them from recruiting the necessary analytic and management talent required for the essential total systems analysis and reform.

Central to this reform is the need rapidly to expand our production of generalists and sharply to curtail our output of specialists. In my view, this will do more to raise the quality of medical care in America than any other single measure. An introductory paragraph of S3 contains the sentence, "Specialty services will be covered if, on referral, they are performed by qualified persons." It is difficult to know quite what is implied. It would seem to be capable of elaboration into a constructive plan, which could be implemented in stages, to assist the creation of a better balance between specialists and generalists.

By introspection I know the value of experience in general practice in improving the quality of my work as a general surgeon. For this reason I suggest that a period of a year or two in general practice be made a prerequisite for entry into residency training.

Regarding the issue of quality of care, this can only be analyzed by some form of peer review. The critical question is what form should this take. The present methods of measuring the quality of our resources (physical plant and personnel) and of our administrative and clinical procedures have done a great deal to improve and to maintain standards of care. In this regard the Joint Commission on Accreditation of Hospitals has provided a salutory influence, but their work needs to be extended and their methods refined.

The specialty professional societies need to be encouraged to extend their concern beyond training and certification to develop methods of periodic review of professional competence. In this way we can remove some of the invidious burden of responsibility inherent in our present system. I don't think the public interest is best served by

placing the entire task of continued monitoring of the quality of our care on those of our peers who happen also to be our intimate colleagues and frequently our personal friends as well.

Along with effective peer review, we need better aggregate measures of outcome, the only measures which focus on the product of our labors. Percentage of survival of patients suffering their first myocardial infarction, and the percentage of elective cholecystectomy wounds which become infected following operation are two examples of measures of outcome which need to be precisely defined if they are to be useful. With these sorts of measures we can better compare our individual, departmental, and hospital performance with others who are striving for excellence in other institutions. This will become increasingly important as we ultimately accept the need for effective regional planning and control and prospective hospital budgeting.

May I make a final comment? While there are undoubtedly wide variations in the quality of medical care in the United States today, the general standard of care, for those who can get it, is high. Our failures are more often due to failures of the system than to individual malevolence or negligence. The issue is certainly a proper subject for public debate, but all who join in such debate must understand the central importance of the patient's faith in his doctor. This faith has always been worthy of careful nurture for the good of the patient, not that of the doctor. It is my firm conviction that the vast majority of doctors are consistently worthy of that faith.

TABLE I

Internships in the United States

Year	Positions	Positions Filled	Filled by Foreign Medical Graduates	Percentage Filled by Foreign Medical Graduates	Positions Vacant	Percentage Vacant
1949-50	9,124	7,313	?	--	1,811	20%
1954-55	11,048	9,066	1,761	19%	1,982	18%
1959-60	12,580	10,253	2,545	25%	2,327	18%
1964-65	12,728	10,097	2,821	28%	2,631	21%
1968-69	14,112	10,464	3,270	31%	3,648	26%

59-661 O - 71 - pt. 5 --24

TABLE II

Residencies in the United States

Year	Positions	Positions Filled	Filled by Foreign Medical Graduates	Percentage Filled by Foreign Medical Graduates	Positions Vacant	Percentage Vacant
1949-50	18,669	17,490	?	--	1,179	6%
1954-55	25,486	20,494	3,275	16%	4,992	20%
1959-60	31,733	27,590	6,912	25%	4,143	13%
1964-65	38,750	31,005	8,153	26%	7,749	20%
1968-69	42,644	35,047	11,231	32%	7,597	18%

(The article by Dr. Maloney, referred to, follows:)

[From Surgery, July 1970]

SOCIETY OF UNIVERSITY SURGEONS—A REPORT ON THE ROLE OF ECONOMIC MOTIVATION IN THE PERFORMANCE OF MEDICAL SCHOOL FACULTY

(by James V. Maloney, Jr., M.D., Los Angeles and Santa Monica, Calif., *From the Department of Surgery, UCLA School of Medicine, and The RAND Corporation*)

John W. Gardner[6] recently analyzed the counterpoised forces that are responsible for the success of our society. On the one hand there is the "let-the-best-man-win" philosophy, which grants special privilege to the individual who exhibits intelligence, creativity, and motivation; on the other, there is the concept that "all-men-are-created-equal," which assures certain inalienable rights to the individual regardless of his capacities. These forces establish the critical lines of tension in modern society. Each makes a valuable contribution. Mr. Gardner concludes: "This tension will never be resolved and *never should* be resolved. Failure to accept this reality has led to a lot of nervous indigestion and unnecessary commotion."

Note: Travel funds to support this study were made available to the author through the scholar program of the John and Mary R. Markle Foundation. Computer facilities and other support were provided by The RAND Corporation. Support of the author's subbatical leave was through the Special Fellowship Program, National Health Institute, National Institutes of Health (HE–45545).

The author dedicates this paper to his wife, and symbolically to the wives of all academicians, for their forbearance in tolerating husbands whom this study demonstrates statistically are neglectful of them ($p = < 0.01$).

Presidential Address presented at the Thirty-first Annual Meeting of the Society of University Surgeons, Pittsburgh, Pa., Feb. 12 to 14, 1970.

I have been impressed with the analogous relationship of intellectual motivation and economic motivation as forces shaping the destiny of the clinical departments of medical schools.

At the turn of the century Abraham Flexner demonstrated that economic motivation in pure culture had caused educational disaster in the medical schools of the United States and Canada. The perceptivity and vision of this one man introduced the scientific method into clinical teaching, established the concept of the university hospital, and promoted the idea of a cadre of clinical teachers whose first obligation was to medical education. Since the time of Flexner, the subject of economic motivation has been a pariah, unacceptable for discussion in polite circles of the academic community. For example, current discussions by Kornberg[11] and Durant[2] of motivations in medicine ignore the subject. The John and Mary R. Markle Foundation recently sponsored a conference on "Motivations in Medicine."[10] During the three-day symposium involving experts in motivation and leaders in academic medicine, not a single mention was made of economic motivation. It is appropriate, therefore, to examine economic motivation as a force, for better or worse, in determining how medical schools serve the needs of contemporary society. The examination should rely, not on emotion and opinion, but upon objective data obtained and evaluated under the rigorous constraints of the scientific method.

Flexner never considered as an absolute the plan to remove economic motivation by the strict full-time salary plan. Rather, he looked upon it as an experiment which he had initiated. Flexner viewed himself as an investigator who identified the problem, designed the experimental protocol, and obtained a research grant from the Rockefeleir General Education Board. Now, a half century later, it remains for us to observe the results, analyze them statistically, and draw conclusions.

METHOD OF STUDY

The objective of the study was to evaluate the effect of intellectual motivation and economic on patient care and teaching, and on the extent to which individual faculty members and institutions were meeting the needs of society in the field of medical education. Background information and definitive data were obtained from nineteen university medical schools. Information from eleven of these institutions was gathered over a period of years either during the author's employment in them or by interview with department chairmen, deans, and university presidents. The information grained was used to design the protocol for a personally conducted survey of 94 faculty members from clinical

departments at nine medical schools during a two-month period in 1969. The nine institutions were a group selected on the basis of their recent greatness, current prominence, or promise for the immediate future. The institutional salary plans are outlined in Table I.

TABLE I.—REMUNERATION PLANS AT INSTITUTIONS SURVEYED

School	Number of interviews	Method	Remarks
A-J			
K	8	SFT	Long standing.
L	9	SFT	Do.
M	8	SFT	Changed abruptly from GFT to SFT 5 years ago.
N	8	SFT/GFT	In transition from GFT to SFT. New appointees in past 3 years are required to be SFT.
O	29	GFT/SFT	Optional with individual (SFT salaries 150 to 180 percent of GFT salaries).
P	10	GFT/SFT	Departmental group practice at discretion of Chairman's Executive Committee. Income related to "productivity," clinical and otherwise. Premium paid to faculty accepting clinical responsibility.
Q	9	GFT/SFT	Departmental option.
R	3	GFT	In transition from voluntary faculty for 5 years.
S	9	GFT	In transition from voluntary faculty for 3 years.
19	94		

[1] Background information and anecdotal data.

In order best to evaluate the role of motivational influences in the performance of the clinical faculty, the survey questionnaire was directed to the following two points: (1) How does the faculty member spend his work week (teaching, research, administration, patient care, travel and so on)? (2) Is he paid a guaranteed salary (strict full time, SFT) or is his income dependent to some degree on money earned in clinical activity (geographic full time, GFT)?

All interviews were conducted personally by the author. Subjects for interview were selected by a person at the local institution in response to a request for interviews "with a range of individuals in the departments of medicine, pediatrics, and surgery of all ranks for the purpose of doing a study on 'how faculty members spend their time.'" With one exception, all subjects worked at the principal university teaching hospital rather than at Veterans Administration or other affiliated hospitals. Distribution of the individual's time during the seven days immediately preceding the day of the interview was determined. The interviewer recorded and categorized each task performed by the faculty member from the time he entered the hospital until he departed. Hours spent working, writing, or studying at home were not considered work hours. Subjects almost invariably employed a detailed office diary, probably accounting for the excellent correlation betwen total hours spent at the hospital and the sum of the total hours spent at the tasks recorded. Opinions volunteered by the subjects were enlightening in disclosing the tensions and concerns existing in various medical schools, but subjective observations were not included in the data base.

Information on the following eighteen variables was recorded during a 30 minute interview:

1. *Age and specialty.*
2. *Academic rank.*
3. *Research grants.* Total direct costs of extramural research support from all sources for which the faculty member was named principal investigator.
4. *Teaching time.* Subcategorized into time spent in teaching house staff, students, residents and students together, and lectures. Time spent by a pediatrician in supervision of a resident service where the faculty member did not have personal, total responsibility for the care of the patient was categorized as teaching time. Time spent in the operating room by surgeons supervising residents was categorized as teaching time unless the surgeon had personal, total responsibility for the care of patients.
5. *Research time.* Subcategorized into time spent in the laboratory, conference, planing, writing of manuscripts, and grants administration.
6. *Administrative time.* Subcategorized into time spent on matters relating to hospital, department or subdepartment, school, university, and national

activities (societies, consultation for the National Institutes of Health, and the like).

7. *Patient care time.* Subcategorized into care on the hospital ward, in private office, in the operating room (surgeons), and "other." Despite the confusion introduced by the question of "identifiable personal service" as defined by third party agencies, an experienced observer has no difficulty in determining who is the patient's doctor. (Who does the patient say he is? Whom does he telephone when he is ill at night?)

8. *Work week.* Hours spent at the hospital each week computed independently from the foregoing time distribution on the basis of elapsed time between arriving at end leaving the hospital. Travel time is excluded.

9. *Travel time.* Time spent on professional travel in conection with medical meetings, consultation for the federal government, university business, etc.

10. *Saturday time.* Hours spent in the hospital on the Saturday preceding the interview.

11. *Sunday time.* Hours spent in the hospital on the Sunday preceding the interview.

12. *Satisfaction with financial remuneration.* Each individual was asked if he were "satisfied" with the financial compensation for his work. No discussion was held on the point, but the response was graded as "yes," "no," or "equivocal."

13. *Visibility index (VI).* This is based on data contained in the subject's curriculum vitae and bibliography, and is an arbitrary measure of scholarly, clinical, and political eminence. The scale is a Paper Unit (P.U.), one of which is assigned for each scientific publication appearing per year when averaged over the most recent two calendar year period. Varying numbers of additional P.U.'s were assigned according to a scale of values.*

14. *System of financial remuneration.* "Strict full time" (SFT) refers to the receipt of a fixed salary determined by academic rank, institutional policy, or salaries in the competitive marketplace, "Geographic full time" (GFT) refers to remuneration schemes in which a base salary is paid by the university (usually much less than SFT salaries), and the individual is expected to earn some increment above this (usually limited by a ceiling). If salary is fixed, but adjusted annually on the basis of earnings, the GFT clasification was used. The essential element of the GFT classification is personal economic incentive.

The preliminary survey of ten universities suggested that considerable difficulty would be encountered in obtaining an objective measure of participation by individual faculty members in personal patient care. It was found, for example, that several national surveys of faculty time distribution included as "patient care time" hours spent on ward rounds teaching the house staff. The interviewer's data sheet was, therefore, designed to record the hours that the faculty member operated in the normal patient-physician relationship. The faculty member was asked to cite the number of instances in the preceding seven days in which he personally did any one of the following *and* recorded the results in writing: (a) examination of a patient's nasopharynx, (b) measurement of blood pressure by sphygmomanometer, (c) auscultation of the heart and lungs, or (d) a rectal examination. Answers were so frequently in the negative that it was embarrassing to both subject and interviewer. Therefore, items 15 through 18 were developed to determine more obliquely if the faculty member was actually spending time in care of the sick.

15. *Patients in hospital.* The number of hospitalized patients under the personal care of the subject on the day of interview. This was assumed to be an index of the subject's clinical activity, and was more objective than an estimate of the number of outpatient visits.

16. *Examinations/operations.* The number of complete examinations or consultations performed by nonsurgeons in hospital or private offices during the

* Coeditor of book (4 P. U.), principal officer of regional or special interest society (4), membership in the most selective one or two national societies in the subject's specialty (4), special consultant to military, national only (5), president of regional or special interest society (6), Markle or Guggenheim scholar (6), special consultant to the National Institutes of Health (6), editor of major journal, or principal editor or author of major textbooks (7), principal officer of major national society, or president of special interest society (7), president of major national society (10), member of specialty board (10), member of NIH study section (10), Lasker or Nobel prize (15). The assignment of 15 Paper Units to a Nobel prize was intended as a gentle reminder that the visibility index should not be taken too seriously. Several individuals seriously suggested, however, that points be *subtracted* for very great honors and accomplishments. Their rationale was that distinctions such as the first organ transplant or the first solo circumnavigation of the globe generate a disruptive spirit in an individual by attributing to him instant omniscience in such diverse fields as world politics, theology, and medical education.

week. Brief or return visits were excluded. For surgeons, it is the number of operations at which he was present when he had personal, total responsibility for the patient's care.

17. *Emergencies.* The subject was asked the number of times he had found it necessary to return to the hospital from home for medical emergencies during the previous three months.

18. *Autopsy permissions personally obtained.* It was considered likely that the physician who is personally responsible for the case of a patient, and has the normal patient-doctor relationship, would be the one to console the family and ask for permission for autopsy in event of the patient's death. If he were only administratively responsible for patients on a hospital ward, it seemed likely that he would avoid this most unpleasant of all medical experiences and defer to the patient's real physician. Statistical analysis later confirmed these suppositions by indicating that this variable was one of the best to separate GFT from SFT faculty. Each individual was asked to state how many months it had been since he personally had obtained an autopsy permission. If he stated "more than a year," "don't remember," or "never," 99 months was arbitrarily recorded. Results are presented in terms of the percent of physicians who had obtained a permission within the previous twelve months.

RESULTS—OBJECTIVE

Approximately 14,000 original and derived datum points were collated, computerized, and analyzed by the Biomed Programs[1] for the determination of means, standard deviations, probability coefficients, correlation coefficients, discriminant analysis, and step-wise discriminant analysis.

Available techniques permit the simultaneous evaluation of the entire data package to determine the significance of various factors in determining the behavior of the individual faculty members.

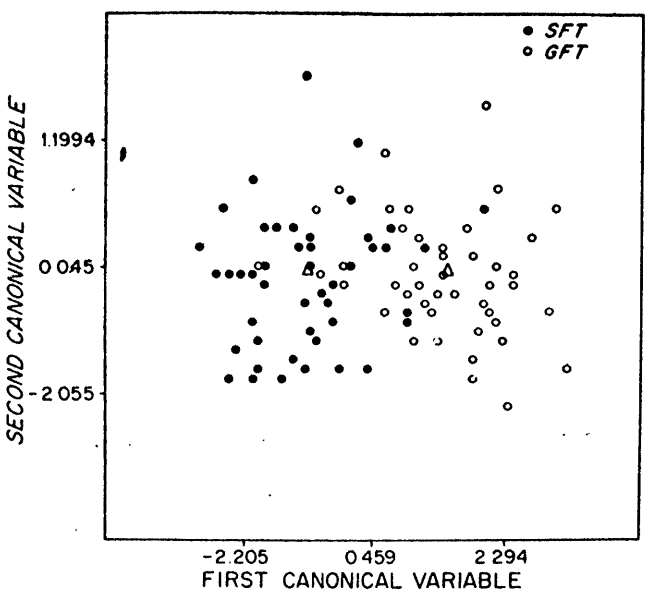


Fig. 1. Stepwise discriminant analysis of 17 behavioral factors comparing GFT and SFT faculty (14,000 datum points). Each point represents one faculty member, the location of each point being determined by the individual's behavior in relation to the 17 variables measured (expressed as a 17 term linear equation). Approximately 150 original and derived datum points are used in determining the behavioral characteristics of each individual. So great is the influence of economic motivation that the faculty can be separated into SFT and GFT groups on the basis of their behavior (computer-generated graphic display, retouched). The relative importance of each behavioral factor is indicated by F values and probability coefficients in Table II. Triangles indicate means for the groups.

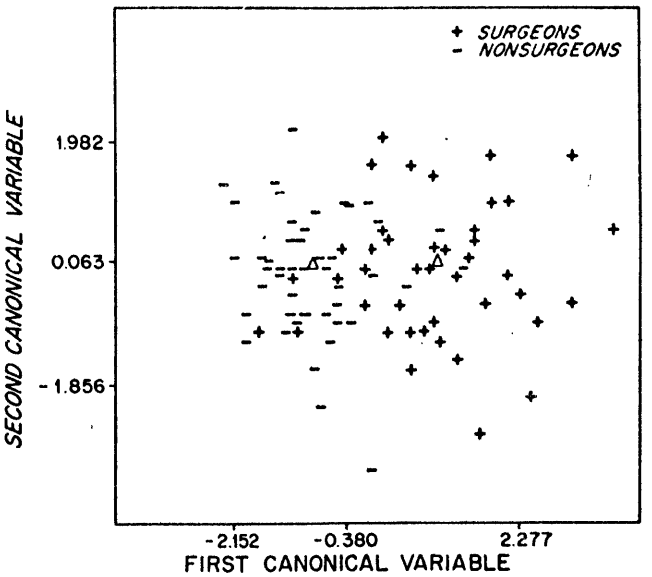


Fig. 2. Stepwise discriminant analysis of 17 behavioral factors comparing surgical and nonsurgical faculty (14,000 datum points). The behavioral characteristics of surgeons and nonsurgeons are so different that they are readily separated into two populations.

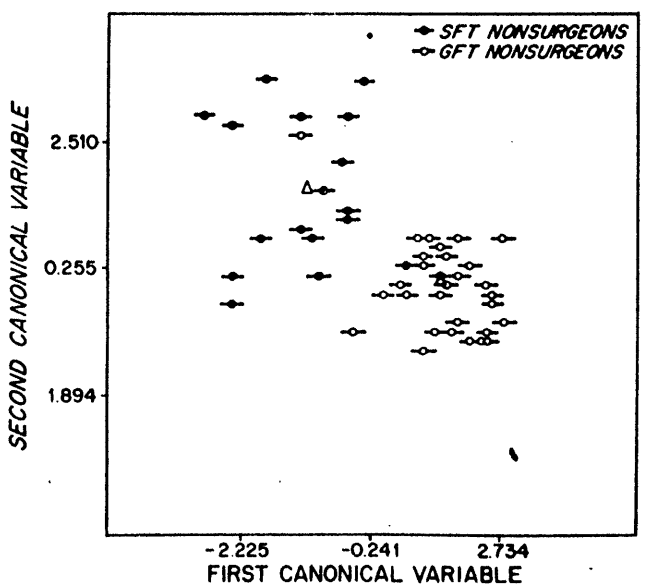


Fig. 3. Stepwise discriminant analysis of 17 behavioral factors comparing SFT vs. GFT nonsurgeons (approximately 7,000 datum points). The distinct separation of the two groups is evidence of a very strong economic motivation in the behavior of nonsurgeons.

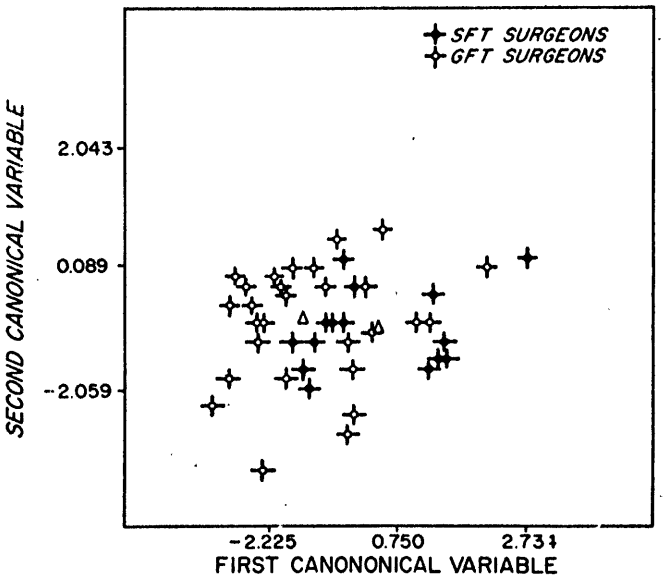


Fig. 4. Stepwise discriminant analysis of 17 behavioral factors comparing SFT and GFT surgeons (approximately 7,000 datum points). The considerable overlap in the two groups shows the lesser role of economic motivation in the behavior of surgeons. Nevertheless, there is a highly significant statistical difference between the groups.

Fig. 1 is a computer-generated graphic output demonstrating a clear separation of the faculty members into two distinct groups based upon whether they are paid a straight salary or required to earn a portion of their salary by clinical practice. This is especially remarkable when one considers that the in-put data involved the physician's activities during a single week when personal illness, holidays, and profesional travel would tend to make such a short survey period produce erratic results.

Fig. 2 demonstrates that there is a distinct difference in the behavior patterns of surgeons and nonsurgeons, quite independent of differences related to economic motivation. Although the objective of the investigation was to compare GFT and SFT faculty, the appearance of this difference between medical specialties requires that medical specialty, as well as method of remuneration, be considered in the presentation of data.

Fig. 3 compares SFT and GFT nonsurgeons. The wide separation of the groups on discriminant analysis is evidence of a high degree of economic motivation affecting the behavior of nonsurgeons.

Fig. 4 compares a group of SFT and GFT surgeons. There is considerable overlap between the groups, suggesting that economic motivation plays a much lesser role in the behavior of academic surgeons than it does among academic nonsurgeons.

TABLE II. IMPORTANCE OF VARIOUS BEHAVIORAL CHARACTERISTICS IN DIFFERENTIATING SFT SURGEONS, SFT NONSURGEONS, GTF SURGEONS, AND GFT NONSURGEONS. F VALUE DETERMINED BY DISCRIMINANT ANALYSIS

Variable	F	p[1]	Discrimination
Patient care	16.622	<0.001	4 groups
Autopsy	15.452	<0.001	Do.
Examinations/operations	8.215	<0.001	Do.
Patients	6.645	<0.001	Do.
Emergencies	6.195	<0.001	Do.
Sunday time	5.299	<0.005	Do.
Satisfaction	5.297	<0.005	Do.
Research	4.593	<0.005	Do.
Saturday time	4.191	<0.01	Do.
Workweek	3.108	<0.01	Do.
Grants	2.842	<0.05	Do.
Age	2.378	<0.001	GFT versus SFT.
Visability index	1.297	<0.05	Surgeons versus nonsurgeons, stepwise.
Travel	1.105	n.s.	
Administrative	0.651	n.s	
Teaching	0.649	n.s.	
Rank	0.648	n.s.	

[1] The symbol p = probability coefficient. Although a single variable with a "not significant" (n.s.) probability coefficient may not differentiate the groups, a combination of "not significant" variables may do so. It is important to note that this table is for discrimination among 4 groups. Combination of subjects into 2 groups, instead of 4, may produce significant values for p (e.g., age and visibility index).

Most observers will not be surprised at the different behavioral characteristics of SFT and GFT faculty. For nearly half a century, GFT faculty members have been considered to be economically motivated, to do little research, to have minimal extramural grant support, to be distracted from their teaching obligations by clinical practice, to spend little time with the students, to neglect administrative matters, and to lack scholarly distinction. In contrast, SFT faculty are viewed as having intellectual rather than economic motivation, to engage actively in research, to have abundant grant support, to spend much time teaching, to be available to the students, to carry a heavy administrative burden, and to achieve national and international recognition for their scholarly activities. Surgeons are considered to possess an exaggerated form of the undesirable characteristics of the GFT faculty.

Interestingly, all but one of these shibboleths are false!

If SFT and GFT faculty members behave differently, it is of importance to determine if these behavioral characteristics are desirable or undersirable in relation to their effect on the school's ability to achieve its mission.

Table II lists the variables in decreasing order of importance in their ability to differentiate GFA surgeons, GFT nonsurgeons, SFT surgeons, and SFT nonsurgeons.

The graphic presentations in Figs. 5 to 8 present the behavior of each of the 4 groups of faculty. They are arranged in order of decreasing importance of the variables in differentiating the groups.

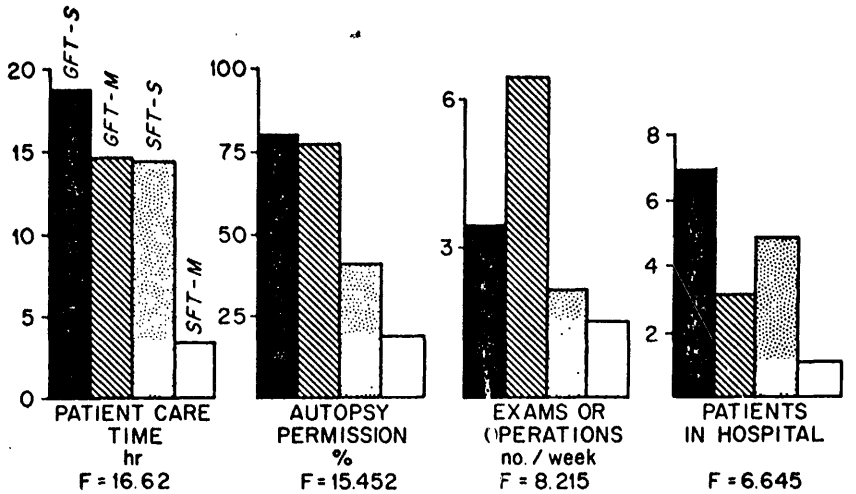


Fig. 5. Comparison of the behavioral characteristics of four groups of faculty, clinical activity. *GFT-S*, geographic full-time surgeons; *GFT-M*, geographic full-time nonsurgeons; *SFT-S*, strict full-time surgeons; *SFT-M*, strict full-time nonsurgeons. Autopsy permission refers to the percent of the group which obtained personally autopsy permission on a patient during the preceding 12 months. F values are determined by discriminant analysis for differences among four groups. Differences in this illustration are significant to the level, $p = < 0.001$. Surgeons tend to behave in a manner which is characteristic of their specialty, irrespective of the method of remuneration. In contrast, there is evidence of a high level of economic motivation in the behavior of nonsurgeons.

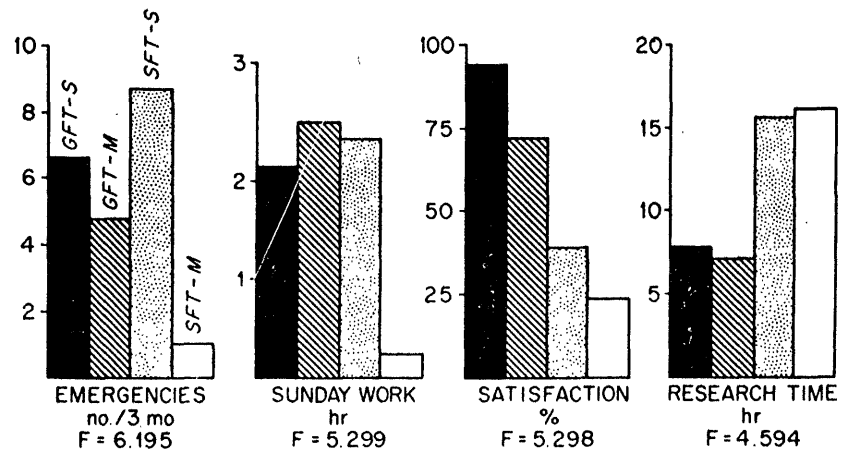


Fig. 6. Comparison of behavioral characteristics of four groups of faculty, time distribution, and satisfaction with remuneration. See legend, Fig. 5. Surgeons, whether GFT or SFT, behave in a manner similar to GFT nonsurgeons. In contrast, strict full-time nonsurgeons illustrate a profound effect from lack of economic motivation. The latter group rarely leaves home at night and does not work on Sunday. A high degree of dissatisfaction with financial remuneration is expressed by strict full-time nonsurgeons, although data from this study, combined with that of Goldberg,[9] shows they receive the highest hourly rate of remuneration. Strict full-time faculty spend approximately twice as much time in research-related activities as geographic full-time faculty, in keeping with the popular conception of the behavior of the two groups.

Clinical activity (Figs. 5 and 6). SFT and GFT surgeons and GFT nonsurgeons spent the same amount of time per week in giving personal medical care (14.5, 18.9 and 14.6 hours, respectively, $p = n.s.$). In contrast, the average SFT nonsurgeon spent only 3.4 hours a week ($p = < 0.001$). Actually, the median time is far less because 45 percent of all the hours of personal medical care was provided by two individuals. Each worked in a department of from 40 to 80 individuals, all of whom were reluctant to see patients. Each volunteered that he had little interest in research, was hired specifically to see patients, and was, for purposes of promotion, considered an "exception." Of the remaining 30 SFT nonsurgeons in the survey, 13 spent no time whatever during the week preceding the survey in the practice of medicine.

Evidence of the role of economic motivation in the behavior of nonsurgeons is seen in the data concerning physical examination/operations, and emergencies requiring the physician to leave home. SFT surgeons do an average of 2.2 operations per week, as contrasted to 3.5 for GFT surgeons. The fact that fewer operations are performed by the SFT surgeons is not by choice, but it is a source of major dissatisfaction. It was an almost universal complaint among SFT surgeons that they had inadequate clinical material to maintain their professional competence. They stated that this was due to the fact that GFT nonsurgeons preferentially referred all surgical cases to GFT surgeons. Moreover, the unwillingness of their associate SFT nonsurgeons to see patients created a shortage of clinical material in the teaching hospital. This complaint is supported by the data which show that GFT nonsurgeons performed 6.6 full examinations per week, whereas SFT nonsurgeons performed only 1.5 ($p = < 0.001$). Similarly, although SFT and GFT regularly responded to emergency calls at night (8.8, 6.6, and 4.8 per 3 month period, respectively), SFT nonsurgeons rarely did so (1.1 per 3 months, $p = < 0.001$).

Another objective measure of involvement of the physician in clinical medicine is the number of hospitalized patients under the physician's personal care on the day of interview. GFT surgeons averaged 7.0, SFT surgeons 5.0, GFT nonsurgeons 3.3, and SFT nonsurgeons 1.2 ($p = < 0.001$).

One of the most serious problems related to the data presented is the question of maintenance of the professional competence of the clinical faculty of medical schools. Is it possible for a professional person to maintain his clinical competence under these circumstances? A partial answer to this question was obtained in the early phases of the study by asking the subjects to identify their family pediatrician as SFT or GFT. It was clear that a large fraction of the SFT faculty do not choose their SFT colleagues to provide their personal medical care. The data were not included in the statistical evaluation because the reason for the question proved transparent, which necessitated that it be discontinued.

Teaching, administrative, research, and travel time (Figs. 6 and 8). Contrary to popular belief, the GFT faculty spends more time in teaching than SFT faculty, and surgeons spend more time than nonsurgeons, although the differences are not statistically significant (GFT-S, 13.0; GFT-M, 12.4; SFT-S, 11.7; SFT-M, 10.7 hours, $p = n.s.$). A similar difference is observed in administrative time where the GFT surgeons and GFT nonsurgeons spend more time than their SFT confreres (GFT-S, 14.3; GFT-M, 12.8; SFT-S, 12.5; SFT-M, 11.0 hours, $p = n.s.$).

In the entire study, the only support for the common view about the difference between GFT and SFT faculty members was in the data on time spent in research. SFT surgeons spent 15.6 hours and SFT nonsurgeons 15.9 hours per week in various activities related to research. The comparable figures for the GFT faculty were 7.7 hours for the surgeons and 7.5 hours for the nonsurgeons ($p = < 0.01$).

The 13.4 hours per week spent by SFT nonsurgeons in traveling may well be related to economic motivations (SFT surgeons, 3.3; GFT surgeons, 8.2; GFT nonsurgeons, 7.8; $p = n.s.$). During the course of interviews it was stated candidly that the purpose of this travel was often for the honorarium involved. The recent data of Goldberg[8] indicate that 17 percent of 1,370 full-time medical faculty consult for commercial pharmaceutical houses. If one considers it unlikely that surgical specialists are so involved, it is apparent that a large fraction of nonsurgical faculty are being motivated by economic influences to spend time away from the medical school.

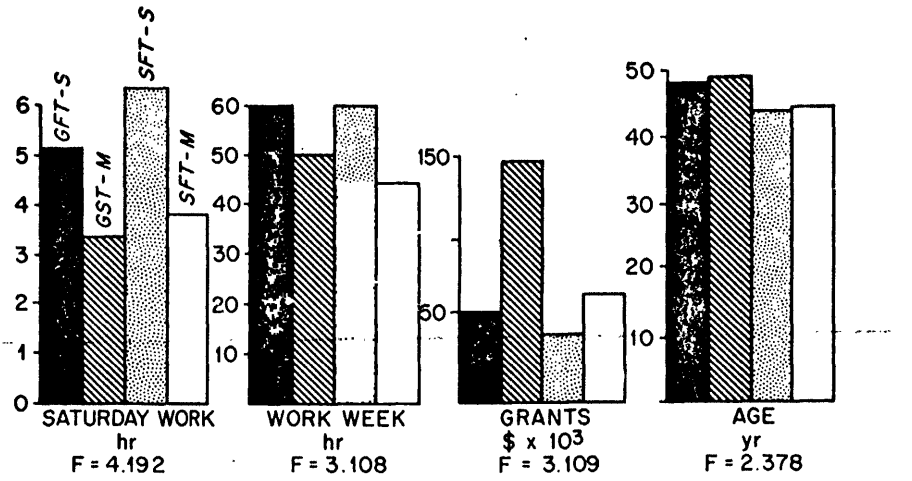


Fig. 7. Comparison of behavioral characteristics of four groups of faculty, intensity of personal effort, grant support, and age. Surgeons work longer hours on Saturday than nonsurgeons. No evidence of economic motivation is apparent from the length of the work week for surgeons, since both groups work 60 hours per week regardless of method of remuneration. GFT nonsurgeons work a 50 hour week, and SFT nonsurgeons work 45 hours. The difference between extremes is two normal working days per week. Extramural grant support is significantly higher among GFT nonsurgeons. Data obtained from the Statistics Branch, National Institutes of Health, indicate that federal grant support of GFT surgeons is 29 percent greater than SFT surgeons at institutions in survey. Mean age of SFT faculty is 4.6 years younger than GFT faculty. This is interpreted as supporting the empirical observation that SFT institutions are having difficulty recruiting and holding distinguished faculty.

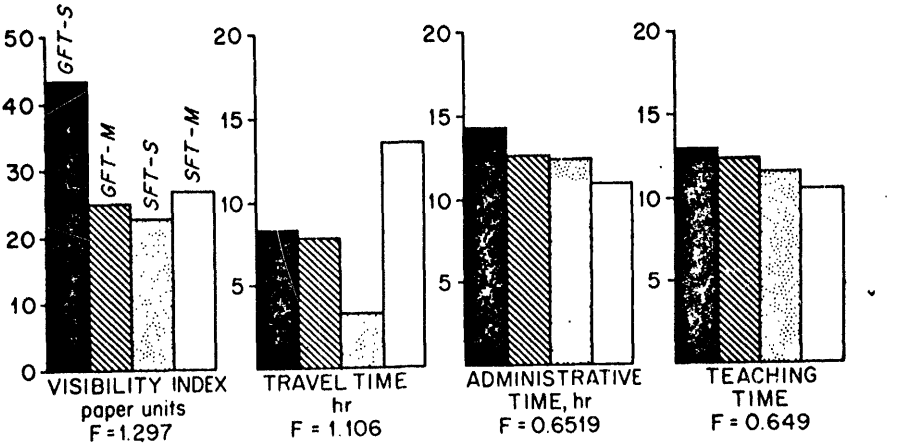


Fig. 8. Comparison of behavioral characteristics of four groups of faculty, visibility index, and distribution of time. Differences between groups for variables illustrated in this slide are not significant at the $p = 0.05$ level (exception is the higher visibility index for GFT surgeons on stepwise discriminant analysis). Contrary to the popular image, SFT faculty do not spend more time at teaching and administration.

Intensity of personal effort (Figs. 6 and 7). There are striking differences in the hours spent at the hospital (work week) according to economic motivation and medical specialty. There is no evidence of economic motivation among the SFT and GFT surgeons, with a work week of 60.0 and 60.1 hours, respectively. GFT nonsurgeons work a shorter week of 50.6 hours, and SFT nonsurgeans work the shortest work week of 45.5 hours ($p = < 0.05$). The difference between the extremes amounts to two normal work days each week. Again, the data are suggestive of a high level of economic motivation influencing the behavior of nonsurgeons.

There is a highly significant difference in the weekend behavior of the faculty, depending on their specialty and method of remuneration. Both SFT and GFT surgeons work significantly longer hours on Saturday (6.4 and 5.1 hours) than do SFT and GFT nonsurgeons (3.7 and 3.3 hours, $p = < 0.005$). On Sunday there is a striking change which sets apart the SFT nonsurgeons from the other three groups, SFT surgeons, GFT surgeons, and GFT nonsurgeons spend significant time each Sunday visiting their patients (2.4, 2.1, and 2.6 hours, respectively, p = n.s.). In contrast, the straight salaried nonsurgeons work an average of 12 minutes ($p = < 0.005$). Actually, 25 of the 28 SFT nonsurgeons who were in the city did not come to see their hospitalized patients on Sunday. Three possible explanations for this observation come to mind: (1) patients of SFT nonsurgeons are not ill on Sunday, (2) SFT nonsurgeons have few patients in the hospital, and (3) SFT nonsurgeons do not have the same personal interest in the care of their patients as GFT nonsurgeons and surgeons. The first possibility is unreasonable; the second two are probable. Again, strong economic motivation in the behavior of nonsurgeons is suggested. Lacking specific remuneration for the clinical activities, they neglect them.

Autopsy permission (Fig. 5). Only 19 percent of SFT nonsurgeons and 40 percent of SFT surgeons personally obtained an autopsy permission in the 12 months preceding the interview. In contrast, 82 percent of GFT nonsurgeons and 85 percent of GFT surgeons had done so.

Requesting permission for an autopsy is one of the most agonizing tasks in a physician's clinical experience. However unpleasant the circumstances, the compassionate physician who had had a warm relationship with his patient and the family does his best to console the family in their time of grief. The physician's presence under these circumstances is a measure of the quality of his personal relationship with the patient and the patient's family. The question regarding autopsy was a highly fortuitous substitute for the earlier question relating to the performance of specific acts in the physical examination. Since those who were interviewed did not understand its purpose, the question avoided embarrassment to those who were providing essentially no personal medical care. From the statistical viewpoint it was one of the most valuable variables in the entire study in differentiating SFT from GFT faculty ($p = < 3 \times 10^{-5}$). In most variables in the study, the SFT surgeons behave more like their surgical colleagues than like those who are remunerated in the same manner. In the autopsy variable, however, there is definite evidence of a deteriorating patient-doctor relationship among SFT surgeons associated with the absence of economic motivation.

Grants (Fig. 7). Extramural grant support is another variable which shows results contrary to the conventional image of SFT and GFT faculty. GFT surgeons average $54,060 compared to $43,657 for SFT surgeons. GFT nonsurgeons average $144,333 compared to $68,274 for SFT nonsurgeons ($p = < 0.05$).

The results, based on interviews in this survey, were further checked against computer-collated data obtained through the Statistics and Analysis Branch, National Institues of Health. The average annual grant support for research projects and program projects in the departments of surgery included in this study was 29 percent greater in the GFT than in the SFT departments. Since grant awards are made through the study section system by peer judgment on the basis of excellence, this is further evidence that the popular image of GFT and SFT faculty is incorrect.

Age and visibility index (Figs. 7 and 8). The SFT faculty was significantly younger than the GFT faculty (43.9 vs. 48.5 years, $p = < 0.001$). There is positive correlation coefficient for age and visibility index ($r = 0.408$, $p = < 0.005$). This gives evidence to the empirical observation that SFT institutions are having difficulty recruiting and holding distinguished faculty.

The visibility index for GFT surgeons was 43.1, for SFT nonsurgeons 27.0, for GFT nonsurgeons 25.1, and for SFT surgeons 22.8 ($p = n.s.$). By the special technique of stepwise discriminant analysis, surgeons were found to have a higher index than nonsurgeons ($p = < 0.05$).

Satisfaction with remuneration (Fig. 6). A high degree of dissatisfaction with financial compensation was expressed by the SFT faculty. Only 24 percent of the SFT nonsurgeons were "satisfied"; 38 percent of the SFT surgeons were satisfied. In contrast, 72 percent of the GFT nonsurgeons, and 88 percent of the GFT surgeons were "satisfied" ($p = < 0.005$). No information on absolute levels of salary could be obtained in this survey because it was based on a personal interview. Data from this study, however, can be combined with the data from the recent survey of Goldberg [9] on income of 1,370 full time faculty members. It is interesting that those showing the greatest dissatisfaction are actually receiving the highest hourly remuneration.

RESULTS—ANECDOTAL

During the survey, large amounts of data were recorded in addition to those forming the computerized data base. Since much of it was tainted by personal experience, opinion, and bias, it is excluded because of the constraint of objectivity imposed on the study. Some data were objective and others sufficiently interesting to recount.

Community and professional relations. A striking contrast was noted in the relations which the SFT and GFT institutions had with both the public and the professional community. At SFT institutions, patients experienced delays and difficulty in obtaining consultation from faculty members who had no incentive for seeing them. At two different universities it was sometimes necessary to send hospitalized patients by taxi to outside medical offices for consultation. In contrast, an interesting event occurred during an interview with a professor of cardiology operating a division on a GFT basis. A physician telephoned in from a community hospital 70 miles distant, saying that he had a patient with a myocardial infarct, in shock, who was too ill to be transferred to the university medical center. A member of the faculty was dispatched to assist the community physician until the patient could be moved. It is not surprising that this university has the least problem with clinical material and finances of any in the survey. Practice income at this school supports many SFT faculty members and has contributed in a major way to the building program. It is interesting that a premium is paid to those faculty accepting clinical responsibility and that there is an incentive relationship between productivity and income.

An effort was made to get some objective measure of the degree of alienation of the SFT faculty from their professional colleagues. Two large metropolitan areas were selected in which an SFT and GFT instituion coexisted. A list was then obtained from the county medical society in each city of all members of standing and *ad hoc* committees over a period of three years. University catalogues were used to determine the number of men from the SFT and GFT schools active in the affairs of the county medical society. In a sample of 702 physicians the preponderance of GFT over SFT faculty was in a ratio of 6 to 1. Poor relations with the professional and patient community seemed well correlated with the shortage of money and clinical material which existed at the SFT institutions. The SFT schools in general had active services where they were providing a type of medical care not available elsewhere (heart surgery, renal dialysis, transplant surgery). For ordinary medical care, however, patients who could afford an alternative were choosing to obtain their medical consultations at other than the SFT teaching hospitals. The reaction of several universities has been to investigate prepaid and other health plans to establish a population of patients who would serve as teaching material and also pay in advance for their own medical care. Regrettably, there is nothing about advance payment that is likely to change the disinterest that many medical school faculty exhibit in the care of the sick. For such a plan to succeed, it will be necessary to adjust the motivational influences under which the faculty operates. When this has ben done, paying patients will come in abundance to the teaching hospital and participation in a health scheme becomes inconsequential.

Financing medical schools. Anecdotal fiscal data were obtained from several institutions to illustrate the profound effect of economic motivation on the behavior of the faculty. The total income at one major SFT institution from the regular clinical departments was $90,000 per annum,* which sum reverted to the dean's office. Under a policy enunciated by a new dean, 25 percent of this fund was turned back to the individual departments for the support of professional expenses such as travel, dues, and subscriptions for the individual faculty members. Within three years the private practice income increased 7.7-fold to $700,000 per year. One department was able to hire six new faculty members with the overage. The recognition of the motivational influences by the administration resulted in the creation of income from a "virtual endowment" of 17.5 million dollars ($700,000 represents a return of 4.5 percent from a balanced investment fund of that amount).

Three of the GFT schools selected for this survey have departments of surgery which are generaly considered to be among the most outstanding in the nation. The excellence of the schools was evidenced by (1) the largest extramural grant support in the survey and probably in the nation (data from this study), and (3) the high fraction of residents entering academic medicine. Each department appears to acquire and retain outstanding faculty by use of this "virtual endowment" principle. An educated guess based on the amount of clinical activity and the number of full-time faculty suggests that the income taken out of the economy to support the individual and other activities of the department may represent a virtual endowment of 50 million dollars. Interestingly, one of these departments received negligible support from its university.

In contrast, another institution which had a thriving teaching service at an affiliated Veterans Administration hospital ruled that the $50.00 consultation fee paid to faculty members for visits be returned to the dean's office. Within several years, the quality of the house staff, the effectiveness of the teaching service, and patient care deteriorated profoundly.

Two deans spoke of attempting to duplicate the success of the private clinics which appear to support excellent programs of research, teaching, and patient care on income generated from practice income. It was clear that they were unaware of the economic motivation built into the operations of clinics which, on the surface, appear to be SFT. Although the schemes are kept highly confidential, they include such plans as awarding points for patients operated upon, patients referred to clinic internists, papers published, and visiting professorships. Year-end bonus payments are then made on the basis of points accumulated.

Quality of education. The overemphasis on research, the denigration of clinical activities, and the introduction of an elective curriculum have already had measurable effect on the quality of medical education in one school. Several years ago, students from this institution scored among the top schools in the nation in the grades achieved by its students on examinations of the National Board of Medical Examiners. Recently, its students scored among the poorest performing schools.

An alternate hypothesis. It might be argued that the behavioral characteristics of the SFT faculty revealed in this study were due, not to lack of economic motivation, but to a high level of intellectual motivation. Thus, it might be said that individuals with a high level of intellectual motivation naturally select themselves into SFT institutions, whereas those who are economically motivated end up at GFT institutions. One institution in the survey offered a unique opportunity to test this hypothesis. Computerized records of clinical activity, plus a change in institutional policy, permitted the behavior of the same individuals to be observed in continuity over a period of years under both GFT and SFT systems of remuneration. The school formerly paid salaries which were low compared to others, but individuals were permitted to supplement their income by clinical practice. Several years ago an optional SFT system was instituted, in which the faculty member was guaranteed a salary of from 150 to 180 percent of the GFT salary (depending on academic rank), provided that

*It was the cause of considerable wonderment to Flexner in 1925 to learn that, where individual fees were once as high as $12,000, an entire school under the strict full-time system generated only $10,000 per annum.[5 13] Considering the much larger size of modern departments, and the effect of inflation, it would appear that SFT faculty today have even less interest in seeing patients than they did a half century ago.

he returned all fees from private practice to a dean's fund. The fees from private practice for the group of 28 medical and surgical specialists who elected SFT is now $1,137 per man per annum ($2,540 for surgical specialists, $903 for nonsurgical specialists). Although no figures are available on the total income of GFT faculty, it can be estimated from the ratio of hospital admissions per annum for the SFT and GFT groups from the computerized records. In the same controlled environment GFT faculty averaged 7 to 11 times as many admissions as SFT faculty (depending on specialty). More important, the fraction of the group who were present through the change in policy and elected SFT showed an abrupt cessation of clinical activity. (The dean has announced that henceforth SFT faculty will be required to earn their supplementary salary.)

It is not reasonable to expect intellectual motivation to be affected by a school's economic policy change. Therefore, it is not intellectual motivation, but rather lack of economic motivation, which causes SFT faculty to neglect clinical medicine. The alternate hypothesis is rejected.

Conclusion. *Without economic incentive, clinical faculty of medical schools will not accept personal involvement in the care of the sick if they have any reasonable alternative which permits them to maintain their self-respect.*

RESULTS—SUBJECTIVE

I should like now to come to the real objective of my interest in this subject. It is not economics. My concern is with the quality of medical care which is being taught by example to the current generation of students and which will affect medical care in our country for a generation to come. There is but one purpose of a medical school: the instruction of undergraduate and graduate students of medicine in the care of the sick. Research creates the scholarly atmosphere in which this is better accomplished. Clinical medicine cannot be taught on an objective basis like the physical sciences. Since we do not understand the nature of the cognitive process and the inductive reasoning which characterize "clinical acumen," the teaching of medicine is largely preceptorial in nature. The student acquires from his teachers, who serve as models, their methods of history taking, physical examination, reasoning, acquiring knowledge, and relating to other human beings.

Do we wish students to expect their patients to become ill only at convenient times, excluding nights and Sundays? Do we wish them to learn by example that a history and a physical examination are unnecessary parts of the care of the sick? Should the student be led to believe that practicing medicine consists of intellectual gymnastics at the foot of the patient's bed three mornings a week, without acceptance of personal responsibility for the course of medical events? Is it acceptable that the physician's relationship with the patient be so impersonal that a stranger be sent to console the family and ask for an autopsy permission? Are an hour or two per week in clinical activities summated over several decades adequate to produce physicians of sufficient clinical stature to serve as a model for the students? My answer to these questions is in the negative. The extent to which there is disagreement with this view is a measure of the seriousness of the problem in medical education.

At the turn of the century physicians were clinicians with no interest in science. It was Flexner's dream to create for the clinical teacher a scholarly environment in which the scientific method could be applied to clinical practice. Instead we have developed scientists who have no interest in clinical medicine. The motivational influences necessary to achieve an appropriate balance between science and clinical practice are so manifest in the results of this study that no discussion is required.

CRISIS OF THE 70'S

An appreciation of the role of economic motivation in the performance of medical school faculty is essential if we are to deal effectively with the three major problems facing medical education in the coming decade: (1) quality of medical education, (2) financing medical education, and (3) delivery of health care. The current crisis had its origin thirty years ago. The costs of medical education were so high that they could not be supported by either endowment or student fees. Society viewed medical education as benefitting the individual

rather than itself, and therefore undeserving of public support. Organized medicine feared federal control might accompany federal support of education. The conscious decision was therefore made by an influential few to support medical education obliquely through research grants, since both Congress and the public viewed medical discovery as benefitting all.

Some schools employed grant funds to create a scholarly atmosphere in which better to teach the care of the sick, to build a faculty in depth, and to make scientific contributions which were always considered of secondary importance to the school's primary mission of educating physicians. Other schools used grant funds to develop clinical departments numbering over 100 full-time physicians who did superb basic and applied research, but who demonstrated little interest in the care of the sick (invariably SFT schools). A third group of institutions failed to compete successfully for research grants and have been little influenced by the grant program.

The economic conditions in the nation that have required severe reductions in the grant program have had little effect on medical education in the first group of school Research has been curtailed, but the faculty is supporting itself in the practice of medicine. The second group of institutions has lost the grant support for its faculty and now suffers both a fiscal crisis and a shortage of clinical material. These SFT schools have unhappy relations with the patient community and the referring physicians, and therefore lack the clinical material on which to teach and to support their faculty. Failure to appreciate the role of economic motivation in the performance of medical school faculty, and to keep in mind the primary objective of the university medical school, is in large measure responsible for the severity of the crisis.

It is curious that the university whose principal mission is teaching clinical medicine in a scholarly environment should suddenly become interested in the delivery of health care. The answer seems to be that given by Willy Sutton, the often apprehended bank robber, when asked why he insisted in robbing banks: "Cause that's where the money is!" The enthusiasm for participating in prepaid health schemes at several universities surveyed was related to the severity of their fiscal crisis and shortage of clinical material. These problems in turn were related to the unwillingness of the faculty to give personal medical care.

To this observer, it appears that academic medicine is attempting to reestablish by these health care plans a captive consumer group to replace those we have lost from our free clinics.

Could anyone be so unfamiliar with the character of the American consumer as to assume he would accept the impersonal type of medical care found in this survey when more personal care is available at the same or lower cost elsewhere? Only when university medical centers have eliminated the demeaning nature of their outpatient departments and deliver a type of medical care acceptable to the consumer will they be able to compete effectively in the provision of prepaid health services. Once these improvements have been made, the shortages of finances and clinical material will have disappeared. It then becomes inconsequential whether or not they participate in such schemes.

The "delivery of health care" is about to be seized as a substitute for "research" as a *raison d'etre* for the medical school. Perhaps we will never learn.

LEADERSHIP

No asset is as valuable as appropriate leadership in solving the problems which presently face medical schools. Deans, but more particularly department chairmen, must have a clear concept of the primary mission of the medical school. It is important what value judgments individual faculty members place upon care of the sick, research, a scholarly environment, delivery of health care, and interest in the social problems of the day. Teachers of medicine influence the attitudes of 10,000 medical graduates each year—not by what they say, but by the example they give. There is need for appreciation of the attitude expressed by Dean Sherman M. Mellinkoff [12] of my own school: "Many a doctor in academic medcine, or medical educator in an administrative position, tends to belittle 'clinical research' to deny what the clinician does best and to deify 'basic research' as though the ultimate objective of medicine were not human betterment, but that of the winning of Nobel prizes. This trend is a sad one, and fortunately not universal, for it tends to encourage shabby imitations of

profound basic research on the one hand and the illusion that clinical excellence is acquired in the laboratory on the other."

It is incumbent upon the chairmen of clinical departments to conduct a critical self-examination. They must learn to manipulate the motivational influences imposed upon the faculty in such manner that the department best fulfills its obligations. Lester Evans[6] stated: "The answer lies not so much in the manipulation of the organization and operational pattern, but rather in the individual and collective attitudes and behavior of the teachers and students who constitute the university."

If one substitutes for "manipulate the organization and operational pattern" the words, "manipulate the curriculum," we have located where much of the administrative effort of our medical schools has gone in recent years. It is interesting to conjecture what would have happened if the same amount of energy had been expended in manipulating the attitudes and behavior of the teachers as revealed in this study. But then, it is difficult for us to recognize our own attitudes and behavior when we are continually operating in a frame of reference which we ourselves have constructed. As John Gardner[7] said, "Most organizations have developed a functional blindness to their own defects. They are not suffering because they cannot solve their own problems, but because they won't see their problems. They can look straight at their faults and rationalize them as virtues or necessities."

CONSTRUCTIVE APPROACHES

The first step is to separate the roles of federal funding, conceptually if not in fact, in the support of medical research and medical education. In the twenty years since the federal research grant program was initiated, the climate has changed. It is now generally recognized that neither endowment funds nor student fees can pay the high costs of medical education. The public and Congress now appreciate that medical education benefits society, not just the individual. The general support of medical education should be on the basis of the individual school, rather than permitting those institutions that have already acquired a high level of research competence from acquiring all future funds. The support for medical education must be constant, independent of economic and political vagaries. Medical education is a national resource to be nurtured like the federal highway system ,the navigable waterways, and the national forests.

Research in the health sciences will be supported because society places great value upon discoveries promoting human welfare. It will never be supported at the geometrically accelerating rate that has characterized it in the recent past, or within a few years medical research would consume the entire gross national product. Support of research may be expected to vary with the mood of the public, the economic status of the nation, and with the return on the investment of the research dollar. Research institutes should operate as part of university medical schools because of their synergistically beneficial effects.

The annual expenditure which society makes in medical education and research has established them as major economic resources. All other major systems in our society have profited by the application of motivational research and systems analysis to determine their cost/effectiveness. Medical education, patient care, and medical research are surrounded by an aura of mystery that has enabled us to refuse to admit that value judgments can be assigned to what we do and how we do it. It can be done and it should be done.

We would benefit from the type of systems analysis which has been applied to so many other segments of our society:

1. Definition of goals. What is the purpose of our medical plant? What fraction of it should be assigned to education? To research? To patient care?
2. Identification of yardsticks to measure our effectiveness in meeting these goals. The 18 variables measured in this study are an example. Does the outpatient department contribute to medical education? Does an elective curriculum produce a better doctor? Better investogator? Measured how?
3. The application of available techniques of motivational research and systems analysis to identify those factors that can be used to manipulate our ability to achieve the goals. The present study is an example of this approach.
4. The application of control systems to optimize the use of our resources in achieving the goals. The methods by which a faculty member is paid determine

how he spends his time, how hard we works, the example he sets to the students, and other important items in the operation of a medical school. Policies on academic promotion, ceilings on income, and hospital bed control are powerful tools in the hands of wise administrators.

Systems analysis does not provide answers, but only the information on the basis of which logical decisions can be made. Human beings must select goals and place value judgments on such things as teaching, patient care, and research. Systems analysis shows that how medical faculty perform is determined by how they are paid. How they *should* be paid is a human judgment determined by what one believes is the goal of a medical school.

SET OR GET?

This study has revealed serious defects in the strict full-time system. It is clear that academic physicians, unless economically motivated, will not assume the emotionally and physically exhausting role of providing personal medical care. I have no intention, however, of claiming superiority for one type of faculty remuneration over another. It must be recalled that the institutions involved in this study were a selected group of outstanding schools of medicine. It is quite possible that the evils of economic motivation in the country at large exceed those evils caused by lack of it. Many other schools, perhaps a majority, operate largely on the services of a volunteer or part-time faculty. Existing in a pre-Flexnerian condition, they would benefit greatly from the introduction of a full-time system of some type.

I make no apology for the intentional bias introduced in this investigation by selecting fine instituions. Only by studying the best can we identify those characteristics that generate excellence. Little would be gained by examining institutions still suffering from the defects revealed in the Flexner Report.

Some medical schools have attempted to achieve balance by appointing one or two full-time faculty in each department, balanced by a large clinical staff which uses the university's prestige, facilities, and support to their own ends. These instituions sell their souls cheaply. It is apparent in the data provided that an outstanding school requires a group of 50 to 150 clinicians who devote 35 hours a week to teaching, administration, and research apart from their clinical activities. If the university is not receiving this service in return for the use of its facilities, it is being deprived of its just due. Too often myopic administrators covet the practice income of their clinical staff without realizing that it would disappear under a strict full-time system. A high order of genius is required to design a viable equilibrium between the interests of the university and the faculty clinician. One can only sympathize with those universities that do not have a university hospital. They seek excellence but have nothing to barter for it.

The relative amounts of economic and intellectual motivation necessary to produce an optimum balance of faculty attitudes and performance will vary widely from school to school. This balance will depend upon local tradition, relation of the school to the community, availability of clinical material, finances, and the medical specialty involved. The balance between the two forces will continually change as our methods of delivery of health care change in the coming decades. We need more, not fewer, professors in the clinical departments whose investigative efforts are uninterrupted by clinical responsibilities. The leadership and image of a clinical department must, however, be established by the physician who, by both word and example, indicates that nothing is more noble than to give one's personal freedom and energies to the care of sickness in his fellow man.

The conflict between intellectual and economic motivation establishes the critical lines of tension in academic medicine. Both influences are inherently valuable. "This tension will never be resolved, and *never should* be resolved. Failure to accept this reality has led to a lot of nervous indigestion and unnecessary commotion."

REFERENCES

1. BMD–07D and BMD–07D, *in* Dixon, W. J., editor: BMD, Biomedical programs, Berkeley and Los Angeles, 1969, University of California Press.
2. Durant, T. M.: Motivation and medicine, The Pharos 31:101, 1968.
3. Evans, L. J.: The crisis in medical education, Ann Arbor, 1964, University of Michigan Press.

4. Flexner, A.: Medical education in the United States and Canada, Bulletin No. 4, Carnegie Foundation, 1910.
5. Flexner, A.: Medical education, a comparative study, New York, 1925, The Macmillan Company.
6. Gardner, J. W.: Excellence; can we be equal and excellent too? New York, 1961, Harper & Row.
7. Gardner, J. W.: The renewal of organizations, speech delivered at the XX Annual Board Meeting of the Trustees of the Midwest Research Institute, May 13, 1965, Kansas City, Mo., cited by Graham, A.: New Physician 17:35, 1968.
8. Goldberg, J. H.: How the academic physician spends his time, Hosp. Physician 5:61, 1969.
9. Goldberg, J. H.: Nonteaching duties add variety—and income, Hosp Physician 5:80, 1969.
10. John and Mary R. Markle Foundation, 522 Fifth Avenue, New York, N.Y., Confernece on Motivation in medicine, Williamsburg Inn, Williamsburg, Va., Oct. 1-3, 1969.
11. Kornberg, A.: Basic motives of a professional life, The Pharos 32:66, 1969.
12. Mellinkoff, S. M.: Personal communication.
13. Osler, W.: *in* Bates, D. G., and Bensley, E. H., editors: The inner history of Johns Hopkins Hospital, Johns Hopkins Med. J. 125:184, 1969.

Senator KENNEDY. Very well stated. Very helpful commentary. If you are not able to have such peer review in these smaller situations, would you agree with Dr. Bunker that larger group practice situations would be helpful?

Dr. STUBBS. No, I think Dr. Bunker touched on a very important point. I have had personal experience of this. I am in partnership with a general surgeon, and we are very forthright in criticizing one another's performance. We now share a more intimate collective responsibility for quality of service.

Senator KENNEDY. Do you feel that in terms of group practice, in the development of these health maintenance organizations or possibly foundations or larger kinds of units, that you can develop this kind of a situation?

Dr. STUBBS. In group practice great care must be taken to avoid the dangers of vague and divided responsibility. The patient must be given individual personal attention. However, I think in these circumstances quality of care is more effectively monitored internally, and also methods of payment bear on this as well. I think the prepayment programs generally encourage care of higher quality, there is no question about that.

Senator KENNEDY. You made some comments before about quality in the surgical area in England being somewhat more satisfactory than in this country. How do they provide this kind of quality control? How do you do it in Bermuda?

Dr. STUBBS. Well, we have very much the North American pattern of practice there. Because we are so small it is a lot easier to manage. In the United Kingdom there is much tighter control over the numbers that gain entry into surgical practice, so that the few who are surgeons are busier and have been more carefully selected.

However, having worked there for 4 years, I don't think we need to emulate them. They are less inclined than Americans are to the internal hospital peer review. For example, the United States has been a leader in developing group discussion of complications and deaths in hospitals. This is almost an anathema to an English consultant. They feel that this sort of thing produces too much invidious

comparison. In Bermuda we have had some difficulty with our doctors in introducing this sort of peer review, which is an American invention.

Also I think the geography and demography and medical history of the two countries are significantly different.

Senator KENNEDY. How many obsolete surgeons would there be if you had surgery by referral, do you think? Would this cut out a lot of the excess surgeons?

Dr. STUBBS. I am sure it would. But there are no numbers.

Senator KENNEDY. You mean it would be difficult to try and estimate?

Dr. STUBBS. Very difficult.

Senator KENNEDY. But it would have a significant impact, do you think, in terms of quality?

Dr. STUBBS. Very significant. And indeed logic dictates that the public deserves this sort of primary care contact. There are those who say let general practice die and replace these people with paramedical personnel, even aided by computer systems. I treat this with a great deal of skepticism. This would produce an enormous gulf. On one hand you would have well-to-do American suburbia turning to its internists and pediatricians for primary care and the rest having paramedics. And I think there is no rational support for such a scheme.

Senator KENNEDY. Yesterday we visited some of the facilities here in the Washington area. There is a group service out in Georgetown; they still have fee-for-service in group practice. And what is the incentive for some kind of reduced cost if you have a fee-for-service in group practice? Do you see any?

Dr. STUBBS. None that are obvious.

Senator KENNEDY. I want to thank you very much. This was an enormously valuable hearing this morning. There were very useful and constructive suggestions and recommendations made. I find myself in substantial agreement with practically all of them. From this we can hopefully devise some real quality controls regardless of what health legislation comes up before the subcommittee.

In terms of the total contribution to the subcommittee's understanding this really was one of the most rewarding and interesting days, and I want to thank all of the witnesses that took the time to testify.

At this point I order printed all statements of those who could not attend and other pertinent material submitted for the record.

(The material referred to follows:)

SPECIAL ARTICLE

EFFECTIVENESS OF PATIENT CARE IN AN EMERGENCY ROOM*

ROBERT H. BROOK, M.D., AND ROBERT L. STEVENSON, JR., B.S.

Abstract Management processes and outcomes for 141 emergency-room patients scheduled for upper gastrointestinal series, barium enemas or cholecystography were evaluated. Ninety-four out of 141 patients completed their diagnostic x-ray studies, and 77 (55 per cent) received an adequate work-up for the intern's diagnostic impression. Only 37 out of 98 patients having a diagnostic x-ray examination knew whether it was normal or abnormal, and just 14 out of the 38 patients with an abnormal x-ray result (37 per cent) appeared to have received adequate therapy. Thus, management of this cohort of 141 patients resulted in effective medical care for 38 patients (27 per cent), [redacted] and neither effective nor ineffective care for 19 patients (13 per cent).

STUDIES[1-5] have demonstrated that emergency rooms of inner-city hospitals are being used by both the poverty and working classes for treatment of nonemergency conditions. These studies describe how and why patients come to emergency rooms, but they fail to document the quality of care received there. Williamson's model[6] for relating the assessment of diagnostic and therapeutic outcomes and processes has proved successful with emergency-room patients.

The following investigation evaluated diagnostic processes and outcomes and therapeutic processes and outcomes, with the use of chart review and follow-up interviews, in a cohort of 141 patients. These patients were seen in the emergency room with nonemergency gastrointestinal symptoms and referred to the x-ray department for further gastrointestinal evaluation (that is, upper gastrointestinal examination, oral cholecystography or barium-enema study). This cohort, consisting of approximately 2 per cent of the patients with medical problems seen in the Baltimore City Emergency Room during the spring of 1969, was selected because it represented patients with ostensibly subacute or chronic conditions needing continuing medical assistance. Thus, the outcome of the care experienced by this cohort would, in part, reflect the ability of the emergency-room staff to handle nonemergency problems.

*From the Department of Medicine, Baltimore City Hospitals, and the Department of Medical Care and Hospitals, Johns Hopkins University School of Hygiene and Public Health (address reprint requests to Dr. Brook at the Johns Hopkins University School of Hygiene and Public Health, 615 N. Wolfe St., Baltimore, Md. 21205).

Supported by grants (8 R01 HS 00110 and 8 T01 HS 00012) from the National Center for Health Services Research and Development, by a grant (5 D04 AH 00076) from the National Institutes of Health, U. S. Department of Health, Education, and Welfare, and by Maryland State Department of Health, Community Medicine Work Training Program (Dr. Brook is a Carnegie-Commonwealth Clinical Scholar).

SETTING OF THE STUDY

The study was conducted in the Baltimore City Hospitals' Emergency Room during the spring of 1969, since the ability and efficiency of the house staff were expected to be optimal during that period. Ninety to 95 per cent of the medical resident staff, an integral part of Johns Hopkins University School of Medicine, are graduates of American medical schools. Nonsurgical emergency-room patients are initially seen by the medical interns, who may then consult with the medical resident on particularly difficult cases. The medical emergency service is staffed by five interns and two residents, each working 12-hour shifts, with the interns seeing an average of 15 patients per shift. (It should be pointed out that in terms of staffing ratios, quality of patient care and evaluation efforts, the Baltimore City Emergency Room is considered equal to any such facility in this city.)

METHODS

The X-ray Department lists by date and source of appointment all patients scheduled for special studies. From this list, all patients scheduled for upper gastrointestinal series, oral cholecystography and barium-enema examination from the emergency

Reprinted from the *New England Journal of Medicine*
283:904-907 (October 22), 1970

room were obtained for the months April, May and June, 1969. A retrospective review of each medical chart, including the history of the initial emergency-room visit, and a review of all x-ray reports obtained directly from the X-ray Department were undertaken. Finally, from the demographic information available in the medical record a patient interview, either by telephone or by personal contact, was arranged.

Results

Results are presented in four parts: the success of follow-up study; patient characteristics; diagnostic processes and outcomes; and therapeutic processes and outcomes.

By retrospective chart review, 132 out of 141 possible emergency-room history sheets were located. Next, all reports of completed x-ray studies (117) were located. Finally, a patient interview, an average of 3½ months after the initial emergency-room visit, was obtained from 131 (93 per cent) of the 141 patients.

In general, this cohort of 141 patients was distributed almost equally among the sexes and races. Typical jobs for the men consisted of employment by the adjacent heavy industries in skilled or semi-skilled positions, and for the women, employment as waitresses, hospital aides and secretaries. Only 23 per cent of these 141 patients were in the Medicaid Program, and 68 per cent paid for or had insurance to cover the emergency-room visit.

Diagnostic Process and Outcome

The diagnostic process for this cohort consisted of previous professional help before arrival at Baltimore City Hospitals, the emergency room visit and the scheduling and completion of gastrointestinal x-ray series. Of the 131 patients interviewed, 60 (46 per cent) stated that they had consulted a private physician or another hospital within three months for the same symptoms before coming to Baltimore City Hospitals.

By retrospective chart review, the intern's diagnostic impressions in the emergency room were possible peptic-ulcer disease or gastritis or hiatus hernia for all patients referred for an upper gastrointestinal series, for those sent for oral cholecystography the impression was cholecystitis or cholelithiasis, and for those referred for barium-enema examination, the suspected diagnoses were possible cancer of the colon and some form of functional impairment. The chart review showed that for only 82 out of the 132 patients was a rectal examination recorded, but all had a record of an abdominal examination. At this initial visit the intern completed, in the house staff's laboratory, hematocrit determinations on 37, white-cell counts on 13, stool guaiac tests on 58 and urinalysis on 23 patients.

Six out of the 32 patients scheduled for barium-enema study were sigmoidoscoped. A final assessment of the initial doctor-patient interaction, obtained at the time of follow-up interview, indicated that only 42 out of 131 patients could recall being told the reason why further x-ray examinations were necessary.

The results of the diagnostic x-ray studies are presented in Table 1. There were 173 x-ray procedures scheduled for these 141 patients (1.2 per patient). However, owing to cancellations without notification by patients, only 117 were completed (68 per cent). Of the 117 films, 38 were abnormal, each in a different patient, leaving 79 normal examinations. The most frequent abnormal x-ray findings were duodenal ulcer, hiatus hernia, old peptic-ulcer disease and nonvisualization of the gallbladder or cholelithiasis.

Table 1. Results of Individual X-Ray Investigations According to Diagnosis.

Procedure	X-Ray Examinations Completed		Patients Receiving Treatment for Diagnosed Condition	
	Number	Percentage	Number	Percentage
Upper gastrointestinal series:				
Normal findings	39	60	–	–
Abnormal findings	26	40	10	38
Gastric carcinoma	1	2	0	0
Gastric ulcer	2	3	1	50
Duodenal ulcer	9	14	1	11
Hiatus hernia	6	9	4	67
Old ulcer disease	5	8	3	60
Other	3	5	1	33
Oral cholecystography:				
Normal findings	27	77	–	–
Abnormal findings	8	23	4	50
Stones	4	11	2	50
Nonvisualization of gallbladder	4	11	2	50
Barium-enema studies:				
Normal findings	13	76	–	–
Abnormal findings	4	24	0	0
Diverticulosis	3	18	0	0
Diverticulitis	1	6	0	0
Total x-ray studies completed	117	100		
Normal findings	79	68	–	–
Abnormal findings	38	32	14	37

In general, the quality of the diagnostic x-ray studies was excellent for the upper gastrointestinal series and oral cholecystography. However, all 17 barium-enema examinations were unsatisfactory owing to the presence of feces in the colon.

To arrive at an evaluation of the diagnostic outcome in this cohort, criteria were established for an adequate work-up. Since all the original main diagnoses required x-ray evaluations for confirmation of the diagnosis, the minimal criteria selected were as follows: completion of x-ray studies by the patient, production of an x-ray film of adequate quality to eliminate treatable lesions; and sigmoidoscopy of all patients who received a barium-enema examination. (There was no requirement for a complete physical examination, for other laboratory tests or for follow-

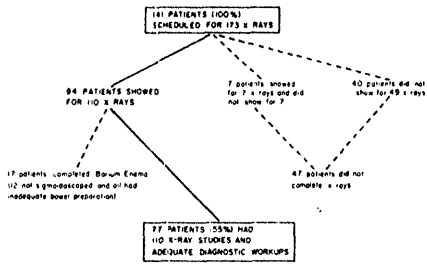


Figure 1. Evaluation of Diagnostic Outcomes.

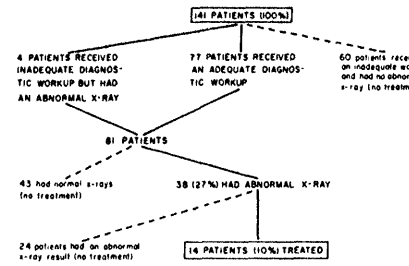


Figure 2. Evaluation of Therapeutic Processes.

up study of patients with tests that gave normal results to arrive at correct diagnosis.) By these criteria, only 77 out of the 141 patients (55 per cent) had an adequate work-up (Fig. 1).

Therapeutic Process and Outcome

In this study, the diagnostic and therapeutic phases of patient care are arbitrarily separated by completion of the diagnostic x-ray procedures. To receive treatment or further evaluation at Baltimore City Hospitals, the patient must have been given an appointment slip for a second visit. Combination of chart review and follow-up study disclosed that 30 out of 136 patients (22 per cent) for whom adequate data on this matter were available did not receive an appointment slip. For the remaining 106, only 51 per cent kept their appointments. This proportion varied from an averaged high of 66 per cent to surgical or emergency-room clinic (two-week appointment delay) to a low of 31 per cent to the Gastrointestinal Clinic (2½-month appointment delay) (p less than 0.01).

This difficulty in transition from diagnosis to therapy was reflected in the data obtained from patient interviews. Of the 131 patients interviewed, 40 (30 per cent) sought additional professional help from other sources of care. Furthermore, only 37 patients out of the 98 interviewed patients who had completed an x-ray examination (38 per cent) could recall being told the results or had any knowledge of the results.

The therapeutic process is shown in Figure 2, and the per cent treated in each type of disease in Table 1. The criteria for minimal treatment included, for peptic-ulcer disease and hiatus hernia, regular (three times daily) antacids or a follow-up examination indicating that such treatment was not appropriate. For gastric carcinoma surgery was essential. For gallstones or failure to visualize the gallbladder, surgery or a statement in the chart that surgery was not indicated was required. For diverticulosis or diverticulitis the criterion was a statement that the condition had been explained to the patient, or diet or stool softeners specified as necessary. With these criteria, only 37 per cent of patients with abnormal results appeared to be receiving appropriate therapy.

The outcome in terms of longevity, level of symptoms, loss of work, hospitalization or operation is summarized in Table 2, which indicates that substantial individual impairment existed at the follow-up interview. It is impossible through examination of the group data to determine how much of this impairment was preventable; however, examination of the cohort of patients with duodenal ulcers revealed that only one out of these nine patients received therapy; he missed less than one week of work and was asymptomatic at follow-up interview. Of the remaining eight, six missed more than one week of work, and all eight had retained the previous levels of symptoms at follow-up study.

Table 2. Evaluation of Outcome in 131 Cases

Outcome	Number	Percentage
Longevity:		
Alive	130	99
Dead	1	1
Level of symptoms:		
Asymptomatic	51	39
Better	40	31
No change	38	29
Worse	2	2
Loss of work:		
None	90	69
< 1 wk lost	7	5
> 1 wk lost	34	26
Hospitalization:		
Patients hospitalized	26	20
At Baltimore City Hospitals	17	13
At other hospitals	9	7
Patients not hospitalized	105	80
Hospitalization not necessary	103	79
Hospitalization necessary	2	2
Operations:		
None	121	92
None necessary	117	89
Operation necessary	4	3
Operations	10	8
Patient operated on at Baltimore City Hospitals	7	5
Patient operated on elsewhere	3	2
Possibly preventable operations	3	2

Finally, by combining the results of the diagnostic and therapeutic outcomes, we could demonstrate that for this cohort, effective care was apparently rendered for only 38 patients. The 84 patients who clearly received ineffective care included the 60 not given an adequate work-up and the 24 with abnormal findings who were not treated. The remaining 19 patients were those who appeared to have experienced no net positive or negative effect. Therefore, in this cohort of patients, the health system exerted a positive effective action in only 38 out of 141 patients (27 per cent).

Discussion

One of the major questions in health-care delivery concerns the role of the emergency room in delivery of primary medical care in the inner city. The emergency room, staffed by interns and residents working long hours and psychologically prepared to handle catastrophes, must also handle an increasing case load of nonemergency problems requiring integration of diagnostic and therapeutic services over a given period. The quality of care received by these patients is largely a matter of conjecture since no follow-up studies on nonemergency cases seen initially in the emergency room have been reported in the medical literature, in English.

By every criterion included in this study, the medical care was both inefficient and inadequate. The house staff performed incomplete physical examinations and too few routine laboratory tests for these patients. A rewarding physician-patient relation was lacking, as indicated by the few patients who knew why they were scheduled for diagnostic x-ray studies or who learned the results of such procedures. When responsibility shifted from the emergency-room appointment delays resulted in further inefficiency. It is indeed a paradox that the Gastrointestinal Clinic, the place where possibly the best care for this cohort was available, had the highest "no-show" rate, two thirds, which was probably due to the delay in getting appointments.

Certainly, a combination of these factors caused approximately one third of these patients to seek additional professional help, experiencing prolonged symptomatology and loss of work. Effective delivery of medical care was provided for in only ¼ of the patients. For this cohort of patients, it might be concluded that the health-care system was designed with the primary objective of processing of test results rather than provision of necessary services for these patients. It is suggested that further follow-up outcome studies on different cohorts of nonemergency cases are indicated to demonstrate whether the emergency room, as presently constituted, is a suitable source for primary care for inner-city residents.

References

1. Shortliffe EC, Hamilton TS, Naroian EH: The emergency room and the changing pattern of medical care. New Eng J Med 258:20-25, 1958
2. Skudder PA, McCarroll JR, Wade PA: Hospital emergency facilities and services, a survey. Bull Amer Coll Surg 46:44-50, 1961
3. Torrens PR, Yedvab DG: Variations among emergency room populations: a comparison of four hospitals in New York City. Med Care 8:60-75, 1970
4. Weinerman ER, Ratner RS, Robbins A, et al. Yale studies in ambulatory medical care. V. Determinants of use of hospital emergency services. Amer J Public Health 56:1037-1056, 1966
5. Webb ML: The Emergency Medical Care System in a Metropolitan Area. DPh thesis, Johns Hopkins University, 1970
6. Williamson J, Mitchell J, Kreider S, et al: Assessing end results for heart failure patients selected from a coronary care unit. Clin Res 16:367, 1968

Reprinted From The Journal of The American Medical Association
February 12, 1968, Vol. 203, pp. 492-494

Institutional Differences in Postoperative Death Rates

Commentary on Some of the Findings of the National Halothane Study

Lincoln E. Moses, PhD, and Frederick Mosteller, PhD

The National Halothane Study was designed to examine the possible association of halothane anesthesia and postoperative massive hepatic necrosis. It was a retrospective survey of the incidence of fatal massive hepatic necrosis and overall death rate following general anesthesia in 34 hospitals for the four-year period from 1959 through 1962. A summary of the observed incidences of liver necrosis and mortality following halothane anesthesia and following use of other general anesthetic agents has been published in THE JOURNAL.[1] One important by-product of the study was the finding of large differences in postoperative mortality occurring among the participating institutions. The following communication represents a summary of the statistical analysis of these institutional differences and a discussion of their possible significance.

Death rates for the six-week period following surgery varied widely among the 34 institutions cooperating in this study. These death rates ranged from 0.27% to 6.40%, a 24-fold ratio. In six institutions the death rate was below 1.0%; in ten it was above 3%. Such variation in so important an outcome of surgery compels attention.

It was clear from the beginning that some, possibly large, variation in institutional death rates would be a necessary consequence of the institutions' varied patient populations, surgical loads, etc. So the institutions' death rates were adjusted separately for each of the variables: sex, year, occurrence of a previous operation, physical status, age, and operation. The first three had no appreciable effect, but adjustment for each of the remaining variables substantially reduced the heterogeneity of institutional death rates. The original 24-fold variation came down to about tenfold with each of the last three. (The data appear in the full report.[2]) Going beyond adjustments for one variable at a time, simultaneous adjustment for the variables age, operation, and physical status reduced the extreme ratio to about three for the "middle death-rate" operations. (For purposes of this analysis a small number of "high death-rate" operations such as heart surgery with cardiopulmonary bypass and a small number of low death-rate procedures such as tonsillectomy or cystoscopy were excluded, as explained in detail in the full report.[2])

Thus, there is evidence that a large part of the variation in institutional death rates is attributable to differences in age distribution of patients, to differences in the frequency with which high-risk and difficult operations are undertaken, and to the balance between elective and emergency procedures. Moreover, we can be nearly sure that fully adequate allowance for these factors would reduce the apparent hospital variation further, but we cannot say how much.

There remain, after all the analyses we have seen fit to apply, substantial differences in adjusted institutional death rates. We must face several questions concerning them:

1. Are the differences large enough compared to sampling error so that they call for explanation as other than plausibly random irregularities? (We pose this question briefly as, "Are the differences real?")
2. If they do outweigh sampling error enough to be "real," what do they mean? Are they evidence of "excess" deaths—or not?
3. How important are the deaths quantitatively? Are thousands, hundreds, or dozens of deaths involved?
4. If the reality of the differences be accepted, their meaning be understood, and they be quantitatively large, what are the reasonable indications for further study or action? The answer to this difficult question must be well proportioned to administrative, legal (and emotional) realities, as well as to medical-scientific and statistical factors.

In order to get a more direct grasp on the ques-

From Stanford University, Palo Alto, Calif (Dr. Moses), and Harvard University, Cambridge, Mass (Dr. Mosteller).
Adapted by permission of the National Academy of Sciences-National Research Council from data in a chapter of the final report of the National Halothane Study schedule for early publication.
Reprint requests to Department of Statistics, Stanford University, Stanford, Calif 94305 (Dr. Moses).

tion of the reality of the differences, we chose six operations which generally defined particular procedures rather than collections of procedures. The chosen operation codes were as follows: 40, gallbladder; 45, gastric resection; 65, hysterectomy; 73, cystoscopy; 86, open reduction of the femur; 99, laminectomy, thoracic or lumbar. As a set, these operations involved 1,844 deaths (about 11% of the 16,840 deaths in the entire study) and 141,914 estimated exposed (about 16% of the 856,000 in the whole study). The Table shows the death rates in percents for the six operations and the 34 institutions. Two columns of the Table are labeled P and P*; the former is the crude death rate for the six operations; the latter is the death rate after standardization for frequency of the six operations in the entire study. This standardization evens out the effects on the death rates arising from the more serious operations being performed with different frequencies in individual institutions. The Table shows that the standardized death rate P* for these six operations has a large range of variation reaching below 0.7% in institutions 8, 14, 23, 27, and 28, and reaching above 5% in institution 25. Strikingly, the institutions with highest death rates (unadjusted) for these six chosen operations agreed well with the institutions which gave the strongest appearance of being "high" in the "middle death-rate" operations after multiple adjustments. The evidence for "real" institutional differences in these six operations is very strong. We conclude that there are real differences in institutional death rates for which neither the data taken in the study (age, sex, physical status, operation, etc) nor sampling error furnish an explanation.

Death Rates† in Percent for Six Selected Operations Displayed by Institution

Institution No.	Operation Code 40	65	72	99	45	86	P	P*	Estimated Exposed
1	0.526	0.139	0.340	0.654	4.397	2.068	0.840	0.936	6,257
2	5.461	0.439	3.846	3.750	14.506	10.274	6.585	4.714	1,447
3	0.351	0.107	0.524	0 000	3.664	2.583	0.867	0.835	3,657
4	1.188	0.307	1.724	0.838	5.567	4.505	1.729	1.802	3,354
5	4.106	0.366	1.135	5.556	9.779	12.656	3.161	3.566	5,391
6	2.128	0.208	0.385	0.831	6.402	4.167	0.921	1.528	5,597
7	4.507	0.959	0.733	5.952	11.438	10.672	4.598	3.757	1,909
8	0.462	0.231	0.113	0.252	2.470	2 865	0.570	0.666	16,559
9	0.814	0.304	0.176	0.175	3.337	2.018	0.775	0.774	8,320
10	2.013	0.256	1.289	1.084	5.140	8.955	2 590	2.023	2,971
11	0.000	0.452	0.527	1.255	2.479	0.000	0 841	0.737	3,184
12	1.014	0.129	0.718	2.158	3.967	1.678	0.938	1.205	4,332
13	1.010	0.000	0.463	1.394	2.432	2.273	1.783	0.856	1,432
14	1.370	0.258	0.083	1.170	1.258	1.370	0.202	0.620	7,429
15	0.933	0.295	0.463	0.638	6 518	6 452	1.593	1.609	6,179
16	0.866	0.435	0.695	0.922	4 018	2.410	1.190	1.175	1,993
17	0.000	0.520	0.276	0.817	3.268	2.941	0.773	0 923	2,183
18	0.896	0.599	1.724	0.000	6.000	4.575	1.991	1.809	1,378
19	0.346	0.353	0.746	0.180	3.005	4.348	0.788	1.040	2,770
20	0.712	0.188	0.489	1.538	3.785	5.422	1.028	1.284	9,052
21	0.925	0.135	0.109	0 580	3.186	2.608	0.796	0.789	12,335
22	0.450	0.213	0.484	0.456	5.957	2.010	0 897	1.149	6,294
23	0.543	0.000	0.000	2.381	1.012	0.000	0.551	0.466	1,264
24	2.759	2.128	5.521	0.783	10.979	3.750	3.744	4.214	2,031
25	6.731	0.000	3.802	6.250	14.286	10.682	8.318	5.010	1,532
26	1.449	0.111	0.230	0.344	6.842	4.455	0.718	1.398	8,016
27	0.000	0.180	0.000	0.687	3.467	1.852	0.922	0.672	2,579
28	0.000	0.331	0.192	0.000	1.835	3.571	0.466	0.617	1,069
29	0.000	0.000	1.361	0.000	3.030	1.835	1.205	0.900	574
30	0.000	3.659	2.609	2.857	0.000	5.556	2.996	2.585	259
31	0.909	0.000	1.078	0.000	7.027	6.122	1.890	1.669	1,194
32	0.957	0.000	0.481	0.452	3.836	1.805	1.196	0.872	1,982
33	1.923	0.454	0.410	3.514	9.571	4.624	1.370	2.322	5,185
34	0.000	0.857	0.000	0.296	8.333	3.041	1.912	1.472	2,206

†For technical reasons death rate was computed by dividing the number of deaths by the sum of the estimated exposed and the deaths.

Some of the institutions have surgical deaths far outnumbering the standard value ascribed to them by our statistical methods. In any such case, this may mean that the number of deaths is high—or it may mean that the standard value is low. The latter possibility could arise either because statistical adjustments have corrected inadequately for age, operation, etc, or because they have taken no account at all of other important institutional properties, or both. Sometimes statistical adjustments for interfering variables tend to undercorrect, and evidence presented in the full report[3] suggests a tendency of this kind in some of our data. Further, it is true that many variables relevant to surgical death rates have not been studied, and data have not been taken on them. Such variables include general nutritional and health level of the institutions' clienteles, willingness of the institutions' staffs to undertake risky cases, tendency of the institution to be sent (and to accept) a high fraction of problem cases. Further, we have not looked at medical deaths and do not know how to do so. It might be that, in some hospitals with surgical death rates which appear to be high in our data, there is a degree of surgical enterprise resulting not only in many more surgical deaths but also in an unseen substantial decrease in what would otherwise be recorded as mortality belonging to the medical wards. The fact is that we can point to unexplained differences, but we do not have the evidence to claim that, where one institution has a high death rate in our data and another a low one, the latter is "better." That, of course, is one possibility, but other possibilities are that these two institutions would be found to be equal, or even in reverse order, if comparisons on thoroughly equivalent surgical cases were to be made, or if net medical gain to the total population of patients—medical and surgical—were measured. The question is certain, however, even if the answer is not.

Gauging the quantitative importance of the institutional differences is partly a matter of observing that in several institutions actual deaths exceeded a calculated standard for the institution by more than 200. Indeed, the sum of all positive excesses was about 1,750 for the middle and high death-rate operations. At the same time, institutions with fa-

vorable experience had an aggregate sum of 1,750 fewer deaths in the middle and high death-rate operations than the calculated standards for those institutions. The total number of deaths in the study was about 17,000, so that positive and negative swings of 1,750 are not to be ignored. More important, the main portions of these sums come from a very few institutions, about half of the positive excesses coming from three institutions, and about half of the negative excesses from three. This tendency for the major part of the unexplained difference to be concentrated in a few places improves the prospects of being able to "do" something—such as understand what actualities underlie the observed action. In assessing the quantitative importance of the heterogeneity of adjusted death rates, it would be good to know not only that institutions x, y, and z had unexplainedly high death rates, but—far more important—to know whether these institutions were representative of 5%, 10%, 20%, or only 1% of hospital practice in the United States. The larger the group they "represent," the greater the quantitative importance attaching to the elucidation of their death-rate experience. Unfortunately, this question of representation is not one on which reliable information can be given.

We come to the last issue if we accept the unexplained differences as "real" and regard the magnitudes as definitely important. The last issue is "what to do?" The problem is difficult. First, it must be recognized that we do not know for sure which institutions (if any) are the right ones to study. It is true that our evidence for the existence of real unexplained differences in institutional death rates has been the occurrence of several death rates that look like "outliers" in our data, but *some* of these may be so extreme because of large random fluctuations, and similarly, some others actually deserving study may not have appeared in our sample as definitely high. Not only do we not know for sure which institutions should be studied, we do not have any clear idea from the current statistical study *what kinds of things* should be studied. Finally, there are many important and delicate questions which must be faced if a useful study of so challenging a question (as, "Are there many preventable deaths in this institution?") is to be possible.

Thus, although we are persuaded by the evidence that some institutions have higher death rates than others—even after adjustment for the variables on which we have data—we are not persuaded that "strenuous efforts to correct the situation" are necessarily called for. With ill-defined targets for study and so sensitive an issue to explore, it would be all too easy to set in motion what could, in fairness, only be called a circus.

At the same time, indications of such importance based on so much data should not be swept under the rug—and we do not suggest that they should. We feel that at a minimum "someone" should recognize that there may be a problem here and not a trivial one. Further, "someone" should try to ascertain which institutions, though inexplicable by our data, are readily understood as "naturally" having high death rates because of, say, poverty of their clientele or other compelling and well-understood reasons. Finally, we feel that "someone," after finding a remaining set of hospitals whose death-rate experience cannot be dismissed, should cause these to be thought about. Quiet, unofficial, cooperatively oriented inquiries into opportunities for studying the problems should be sought. Perhaps two hospitals, comparable except for death-rate experience, could exchange two or three well-chosen members of their staffs for a period of a year or so. Perhaps a cooperative, randomized trial of anesthetics on one or two frequently performed operations (in our set of six) would afford an opportunity for communication and exchange of experience which would lead to better understanding and perhaps to improved practice. The importance of corrective efforts arises not from their effects (if successful) in *these* hospitals, but from the benefits which may accrue to wider application of similar efforts later.

In summary, real and important differences in death rates do exist. They are not explainable statistically with the data from this study. Explanation will have to rest on medical-social-biological procedural information. Getting the relevant understanding will be difficult. The effects chosen for study will have to be large in magnitude or hope of useful results is slight.

The National Halothane Study was supported by the National Institute of General Medical Sciences, contract PH43-63-65. This report reflects the opinion of the authors and not necessarily that of the Public Health Service.

References

1. Summary of the National Halothane Study: Possible Association Between Halothane Anesthesia and Postoperative Hepatic Necrosis, Subcommittee on the National Halothane Study of the Committee on Anesthesia, National Academy of Sciences–National Research Council, *JAMA* 197:775-788 (Sept 5) 1966.

2. Bunker, J.P., et al (eds.): *The National Halothane Study: A Study of the Possible Association Between Halothane Anesthesia and Postoperative Hepatic Necrosis*, Report of the Subcommittee on the National Halothane Study of the Committee on Anesthesia, National Academy of Sciences–National Research Council, chapter IV-2, to be published.

3. Bunker et al,[2] appendix 2, chapter IV-6.

PETITION TO CONGRESS

Whereas, millions of American citizens are denied proper medical care when faced with illness and disease due to continuously soaring costs by health care providers and insurance carriers; and

Whereas, proper medical care for every man, women, and child in our land is a basic need, and national responsibility; and

Whereas, one of our greatest national achievements of the past was the enactment by Congres of "Unemployment Insurance" and "Social Security" legislation, which serves as a constructive example and guide for safeguarding the welfare of our citizens; Now, therefore, be it

Resolved, That we, the undersigned, pledge our full support to the Kennedy-Griffiths national "Health Security Act" and call upon Congress for the speedy passage of this legislation.

EMA JEAN CHAMBERLAIN,
(And 410 additional signatures).

BOSTON HERALD CORP.,
c/o Composing Room,
Boston, Mass., April 1971.

DEAR SENATOR KENNEDY: After reading a recent story from Philadelphia, we circulated the enclosed petitions. Our group has just undergone a staggering increase in our Blue Cross and Blue Shield payments. As of May 1, 1971 they will be over $67.00 a month, completely paid by employee.

In your most recent Boston speech, you again demonstrated your concern for a national health program. We hope now that some program will be enacted this year. In the meantime, the average, hard-working man is being driven off the Blue Cross and Blue Shield rolls, and quite possibly on to the Medicaid rolls.

Petitions, such as this one, create a good deal of "what good will this do," among fellow employees. Some feel petitions are a waste of time and nothing will be done. We do not agree. We feel health care and lower insurance premiums are the number one domestic issue of the time.

Sincerely,

DANIEL P. CARROLL, et al.

(Additional cosigners' signatures may be found in subcommitee files.)

[From Sunday Herald Traveler (Boston, Mass.), Mar. 28, 1971]

PENNSYLVANIA INSURANCE HEAD FAVORS CONSUMER—BLUE CROSS, HOSPITALS BLASTED

(By Donald Janson)

PHILADELPHIA.—Blue Cross executives and hospital officials here have been jolted by a rapid-fire succession of orders from a new, consumer-oriented state insurance commissioner.

The orders were issued by Herbert S. Denenberg during five days of crowded public hearings at city hall into a request by Blue Cross of Greater Philadelphia for a 50 percent increase in rates. The hearings, and Denenberg's actions, attracted nationwide attention.

Health insurance rates, including Blue Cross premiums, have been spiraling in all states in recent years. Blue Cross got an average 17.8 per cent rate increase in the New York area this year and a 43 per cent increase last year. In the fiscal year ended last June 30, the cost of hospital care rose 15 per cent nationally, more than any other health cost.

Across the country, the average room and board charge now is about $70 a day, exculsive of laboratory tests, medicine and other prescribed items. Reports from a number of states show that as hospital costs rise, Blue Cross, the major insurer for hospitalization, routinely seeks state approval for rate increases and most states almost routinely approve them.

The Blue Cross organization here got a 25 per cent increase last August, but says it will go bankrupt if it does not increase the current rates 50 per cent by next August. This would raise a typical family's monthly premium to $37.70 from the present $25.60. Blue Cross blames rising hospital costs and greater use of the insurance plan.

Denenberg, a native of Omaha, took a leave from his post as insurance professor at the University of Pennsylvania the first of the year to accept appointment to the cabinet of newly elected Gov. Milton J. Shapp.

The 41-year-old expert, a friend of the consumer advocate Ralph Nader, was given a mandate by the Democratic governor to "transform the insurance department of Pennsylvania into an insurance consumer protection agency."

Denenberg exploded when the latest request of the Philadelphia Blue Cross came in.

Since some 60 per cent of the population in the area has Blue Cross coverage, he contended, hospitals depend upon Blue Cross as a major source of revenue and Blue Cross should require them to meet reasonable standards of operating efficiency rather than simply accepting higher charges and passing the cost on to subscribers in higher rates.

"Bold steps are demanded and bold steps will be taken," he asserted, adding:

"While it may be unwarranted to blame Blue Cross entirely for increased hospital costs, it is clear that Blue Cross has not really tapped its potentia. for influencing hospitals to take a much harder look at the factors within their own operations which contribute to this intolerable escalation of health care costs. I intend to see that this potential is realized to the fullest extent possible.

"Too much emphasis has been given to the problems of physicians, hospitals and Blue Cross; too little attention has been given to the problems of the patient, the policyholder and the public."

Oral orders followed in staccato fashion during the most extensive hearings ever held in Pennsylvania on a rate increase request. This week, on the final day of hearings, Dr. Denenberg said in an interview that he had had calls from throughout the country expressing interest in his actions.

"It is a national issue," he said. "The financial problems of Blue Cross are real, and some great adjustment will be inevitable. But the problems of the consumer are also real, and it would be unfair to him to grant an increase without being sure that all reasonable steps are taken to control costs."

Among the shocks Denenberg administered to Blue Cross and hospital officials summoned to testify were the following:

He ordered Blue Cross to reorganize its board of directors within two weeks to provide greater representation for the consumers and employers who pay the premiums. He asked that hospital representatives and physicians be eliminated from the board. "The problems of medical care and hospital financing are too important to be left to the hospitals and doctors," he said.

He ordered Blue Cross to cancel its contracts with all 80 hospitals here at once and negotiate new ones requiring unaccumstomed economies. Under the new contracts hospitals would not be allowed to defray the costs of research, education and other hospital costs of no direct benefit to patients by charging a percentage to patient services.

He ordered Blue Cross to provide a list for distribution to the public of room and board costs at each hospital so consumers could do some comparative "shopping" in deciding where to seek hospitalization. Rates vary as much as $50 a day among hospitals here.

He suggested that doctors rather than hospitals pay the salaries of interns and residents, a major hospital cost now passed on to Blue Cross and patients as overhead. He noted that the work of student doctors was directed by physicians, not hospitals, and that the physicians benefitted by collecting fees.

He ordered Blue Cross to itemize the money it spends for advertising, public relations and membership dues in hospital and other organizations engaged in lobbying and publicity activities—all reflected in premium rates.

The aggressive approach of the commissioner produced strong statements of support from consumer witnesses.

As in most other states, however, his regulatory power is severely limited by lack of control over hospitals and doctors.

The new commissioner believes there are some things that can be accomplished by alerting the public to what he considers cozy relationships between Blue Cross and the hospitals and to the role of doctors in decisions that raise hospital costs.

"If there is to be progress, we have no alternative but to provide a steady stream of criticism," he said, "and that's what we intend to do.

"Blue Cross and insurance companies blame the hospitals, the hospitals blame the physicians, and the physicians blame the system. It's time to improve the system rather than to attempt to palm off blame on someone else.

"Too many of those involved are awaiting the grand federal solution of national health insurance rather than working toward improving the system here and now."

PETITION

Requesting signatures of the ITU membership of the Boston Herald Traveler Chapel to be sent to Governor Sargent and Senators Brooke and Kennedy to take action on the ridiculously high rates of Blue Cross and Blue Shield.

THOMAS M. MCDONOUGH,
(And 200 additional signatures).

Senator KENNEDY. The subcommittee will stand in recess until 9:30 tomorrow morning.

(Whereupon, at 3 p.m., the subcommittee recessed, to reconvene at 9:30 a.m. the following day.)

○