



HEALTH CARE AND HUMAN SERVICES POLICY, RESEARCH, AND CONSULTING—WITH REAL-WORLD PERSPECTIVE.

## Cost and Economic Impact Analysis of a Single-Payer Plan in Minnesota Final Report

Prepared for: Growth & Justice

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## Table of Contents

ABOUT THE LEWIN GROUP .....	II
EXECUTIVE SUMMARY .....	III
I. INTRODUCTION.....	1
II. SINGLE-PAYER PLAN SPECIFICATIONS FOR MINNESOTA.....	2
A. Eligibility .....	2
B. Covered Services .....	2
C. Cost Sharing .....	3
D. Reimbursement Rates for Physicians and Payment Methods.....	4
E. Global Budgeting for Hospitals .....	5
G. Program Financing.....	5
III. ESTIMATING THE IMPACT OF A SINGLE-PAYER PLAN .....	7
A. The Health Benefits Simulation Model (HBSM) for Minnesota .....	7
B. Data for Minnesota Households .....	8
C. Health Spending and Administrative Cost Data .....	8
D. Spending Projections through 2023 .....	9
IV. STATE-WIDE HEALTH SPENDING UNDER SINGLE-PAYER.....	10
V. FUNDING AND EXPENDITURES FOR SINGLE-PAYER PLAN .....	12
VI. STATE AND LOCAL GOVERNMENT IMPACTS.....	14
VII. IMPACT ON EMPLOYERS .....	15
VIII. IMPACT ON HOUSEHOLDS .....	21
IX. IMPACT ON EMPLOYMENT.....	25
X. SPENDING IN FUTURE YEARS.....	26
APPENDIX A: MODELING HEALTH SPENDING IN MINNESOTA UNDER THE AFFORDABLE CARE ACT .....	31
APPENDIX B: THE IMPACT OF A SINGLE-PAYER PLAN ON HEALTH CARE ADMINISTRATIVE COSTS IN MINNESOTA .....	40
APPENDIX C: ESTIMATION OF INCREASED TOBACCO AND ALCOHOL TAX REVENUES.....	55

## About The Lewin Group

The Lewin Group is a health care and human services policy research and management consulting firm. We have over 25 years of experience in estimating the impact of major health reform proposals. The Lewin Group is committed to providing independent, objective and non-partisan analyses of policy options. In keeping with our tradition of objectivity, The Lewin Group is not an advocate for or against any legislation. The Lewin Group is part of OptumInsight., which is a wholly owned subsidiary of the UnitedHealth Group. To assure the independence of its work, The Lewin Group has editorial control over all of its work products.

## Executive Summary

In this study, we estimate the cost and economic impact of covering all Minnesota residents under a single-payer health insurance plan. The proposal we analyze was drafted by Growth & Justice and included specifications relating to covered services, cost sharing, covered population, reimbursement rates, payment methods, and global budgeting for institutions. We compare implementation of a single-payer plan in 2014 against a baseline of a fully implemented Affordable Care Act (ACA).

The program would cover a broad range of health services for all Minnesota residents, including those now covered by federal and state programs and undocumented immigrants. Premium payments to insurers would be eliminated for employers and individuals, except for coverage of services not covered by the program. Instead, about half of the system's funding would come from current funding for government health programs, including ACA-provided funding. Additional funds would be provided via increases in state taxes for alcohol and tobacco products. The remaining funding would be provided through an employer payroll tax and a tax on families, either in the form of an additional payroll tax or an increase in the individual income tax.

Using health spending data provided by the Minnesota Department of Health (MDH), we estimate with our models that the single-payer plan would achieve universal coverage while reducing total health spending for Minnesota by about \$4.1 billion, or 8.8 percent, in 2014. This includes added costs due to reductions in utilization management and increased utilization costs resulting from reduced cost sharing. Additional costs and savings estimates under the single-payer plan in 2014 include:

- A total savings of \$35.7 million to state and local governments;
- An average savings of \$1,214 per worker, for employers offering health insurance coverage prior to the ACA;
- An average additional cost of \$1,963 per worker, for employers not offering health insurance coverage prior to the ACA;
- An average savings of \$1,362 for families, including wage effects;
- A reduction of 42,800 Minnesota jobs for those with insurance-related job functions; and
- A ten year total statewide savings of \$189.5 billion, from 2014-2023.

## I. Introduction

In this study, we estimate the cost and economic impact of covering all Minnesota residents under a single-payer plan. The proposal we analyze was drafted by Growth & Justice and included specifications relating to covered services, cost sharing, covered population, reimbursement rates, payment methods, and global budgeting for institutions. We compare implementation of a single-payer plan in 2014 against a baseline of a fully implemented Affordable Care Act (ACA).

The program would cover a broad range of health services for all Minnesota residents, including those now covered by federal and state programs and undocumented immigrants. Premium payments to insurers would be eliminated for employers and individuals, except for coverage of services not covered by the program. Instead, the system would be funded with current spending for government health programs, ACA-provided funding, and new dedicated taxes to replace the premiums eliminated under the program.

We estimate the amount of health spending in Minnesota under post-ACA law in 2014 for the various payers in Minnesota, including employers, households, the federal government, and state and local governments. We then estimate health expenditures for each of these payer groups assuming the single-payer program is implemented in 2014. The difference between estimated spending in 2014 under the single-payer plan and the estimated amounts spent in 2014 under the ACA provides estimates of the impact of the program on spending for each payer group. Estimates of the cost impacts of the single-payer plan are provided for: employers by firm size and industry; and households by age, income level, and other demographic characteristics.

These estimates are produced using the Health Benefits Simulation Model (HBSM) that has been calibrated to use Minnesota-specific data sources, most of which are available through the Minnesota Department of Health (MDH). Our analysis is presented in the following sections:

- Single-Payer Plan Specifications
- Estimating the Impact of the Single-Payer Plan
- Summary of Key Assumptions
- State-Wide Health Spending Under Single-Payer
- State and Local Government Spending
- Impact on Employers
- Impact on Households
- Spending in Future Years

## II. Single-Payer Plan Specifications for Minnesota

The proposal we analyzed creates a single source of insurance for nearly all health services provided to Minnesota residents, except long-term care. The major specifications outlined in the proposal include: eligibility; covered services; cost sharing; reimbursement rates for physicians and payment methods; global budgeting for institutions; and program financing.

Though not specified by the proposal, we assumed that an independent Board is established to implement and administer the single-payer plan and supporting state policy.

### A. Eligibility

All state residents (U.S. citizens and non-citizens) would be covered for a standard benefits package, including:

- Those currently covered by private insurance;
- Those now covered by federal and state programs;
- The uninsured; and
- Undocumented immigrants.

We assumed that the program would have a three-month residency requirement to avoid covering out-of-state residents with pre-existing conditions who might relocate to Minnesota solely to take advantage of the program. The three-month residency requirement is assumed to be waived for the following:

- People relocating to Minnesota to take a job (includes migrant workers); and
- People experiencing a change in family status due to divorce or death of a spouse.

### B. Covered Services

The plan would cover most health services. These include primarily the services listed in *Figure 1* below. Services not covered by the program include:

- Private hospital rooms; and
- Cosmetic surgery (non-reconstructive).

Figure 1. Covered Services under Single-Payer

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Covered Services
Inpatient/outpatient health facility or clinic services
Inpatient/outpatient professional provider services by licensed professionals
Ambulatory patient services
Emergency services, including emergency transportation
Hospitalizations
Maternity care and newborn care
Mental health and substance use disorder services (inpatient and outpatient)
Rehabilitation and habilitative services (inpatient, including rehabilitation in long-term care facilities, outpatient, and home-based) and devices
Diagnostic imaging, laboratory services, and other diagnostic and evaluative services
Preventive care services (Level A and B recommendations from the US preventive service task force, as specified for coverage under the ACA)
Case management, care coordination, and chronic disease management
Palliative and hospice care
Smoking cessation programs and smoking cessation pharmaceuticals
Dialysis
Blood and blood products
Long term for the Medicaid-eligibles only, as currently defined
Home care, as benefit coverage is currently defined by Medicare
Waivered services, as specified in MN statute
Durable medical equipment
Basic vision (including basic model of corrective lenses or contacts)
Hearing (including basic model of hearing aids)
Podiatric care
Physical therapy
Acute chiropractic care
Acupuncture
Dental (prevention and restoration, non-cosmetic)

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### C. Cost Sharing

The single-payer plan will eliminate the majority of cost sharing that occurs under the current system. Deductibles and co-insurance will be eliminated, while co-payments will be required in certain instances. Co-payments will be capped at five percent of income at an annual maximum of \$1,500 per individuals or \$3,000 per family. Co-payments will be capped at three percent for

families and individuals living below 200 percent of the federal poverty level (FPL). No co-payments will be required for the following:

- Office visits to primary care providers, including family practice, pediatrics, internal medicine, and prevention- and pregnancy-related OB/GYN;
- Psychiatry or counseling for persons with persistent mental illness;
- Children under age 21;
- Preventive dental;
- Prescriptions for management of chronic disease (though there will be a formulary based on effectiveness and cost-effectiveness); and
- For hospice and palliative care.

Required co-payments for services subject to cost sharing include the following:

- Specialist visit: \$20
- Inpatient hospitalization: \$20
- Outpatient surgery: \$20
- Emergency room visit: \$40 (waived if admitted)
- Urgent care (\$20)
- Labs, scans, outpatient hospital non-surgical, home health, dialysis: \$20 per episode (not per lab test)
- Prosthetics and durable medical equipment: \$20
- Prescriptions (not including those for chronic or psychiatric conditions): \$15 for brand name, \$4 for generic

#### **D. Reimbursement Rates for Physicians and Payment Methods**

Initially, physicians would be paid on a fee-for-service basis with uniform payment levels. We assume that these reimbursement rates would be equal to the average of payment levels currently in the system including private coverage, public programs and self-pay (including uncompensated care). These rates would be adjusted for the elimination of existing provider taxes and lower provider administration expenses under the single-payer plan. In the first year, net income to providers would be maintained at current levels.

While the program would begin using the FFS payment model, the authors of the single-payer model have long-term plans to implement new payment methodologies such as the patient centered medical home, where providers receive an extra per member per month payment for care coordination, pilot Accountable Care Organizations (ACOs)<sup>1</sup>, and payment reforms

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<sup>1</sup> As defined by CMS, ACOs are groups of doctors, hospitals, and other health care providers, who come together voluntarily to give coordinated high quality care to their Medicare patients. When an ACO succeeds both in

instituted by some of the major integrated delivery systems. However, our estimates here assume continued use of the FFS system.

## E. Global Budgeting for Hospitals

Hospitals and other institutions would receive both an annual operating budget and a separate capital budget. The operating budget would be set at the level required to provide all inpatient and outpatient care for patients over the year. This eliminates the need for filing claims to receive payment. The operating budget would be based on historical spending at each institution, which will be adjusted to reflect projections for administrative savings.

All institutions will also have a capital budget that covers investment in new medical equipment and new physical plant. This is designed to coordinate and control purchases of new capital in a way that meets community needs while minimizing costs. We also assume that the program requires approval from a review board for and capital expenditure in excess of \$500,000.

## F. Controlling the Growth in Spending

The program would establish an annual total spending budget for the state. Long-term spending, including reimbursements to physicians and institution budgets, will be adjusted such that health spending increases under single-payer will not exceed growth of the state GDP. Reimbursement rates and operating budgeting will be adjusted to reflect any increase in utilization rates that occur so that aggregate spending stays within the GDP growth limit.

## G. Program Financing

Funding sources used to finance the single-payer plan include the following:

- Recovered federal and state funds used for current federal and state health programs, such as Medicare, Medicaid, Workers Compensation, and TRICARE/VA;
- Funds provided through the Affordable Care Act (ACA), such as premium subsidies, cost sharing subsidies, and employer tax credits;
- Alcohol and tobacco taxes;
- Employer payroll taxes;
- Family tax payments that would be based upon either an employee payroll tax or an increase in the income tax.

The financing model recovers all of what would have been spent for health services provided to Minnesota residents. The program would receive additional revenues from increases in state taxes on tobacco products and alcoholic beverages. Spirits, wine, and beer would be taxed at an additional five cents per drink, cigarettes would be taxed at an additional \$1.00 per pack, and

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delivering high-quality care and spending health care dollars more wisely, it will share in the savings it achieves for the Medicare program.

other tobacco products would experience an 81.3 percent increase in tax (which mirrors the percent increase applied to cigarettes).

The remainder would be funded with a payroll tax on employers and an increase in the personal income tax for families. This amount would be split between employers and families in proportion to the average percentage of employer health premiums paid by employers in Minnesota (69.2 percent). The employer payroll tax would apply to worker wages in excess of \$12,000. In the primary funding scenario, the family share will be an increase in the family income tax that reflects the progressive rate structure in the federal tax code.

Under the primary funding scenario, the payroll tax for employers would be equal to 9.67 percent of wages in excess of \$12,000, which is an average overall effective rate of 7.2 percent (i.e., tax average across all wages). The income tax paid by families would on average be equal to 2.97 percent of family adjusted gross income (AGI).

We analyzed the impact of two alternative financing scenarios described in *Figure 2*.

**Figure 2. Comparison of Program Financing Scenarios**

	Employer Payroll Tax	Employee Payroll Tax	Individual Income Tax	Alcohol and Tobacco Tax
Primary Financing Scenario	✓		✓	✓
Alternative Financing Scenario 1	✓		✓	
Alternative Financing Scenario 2	✓	✓		

While all financing scenarios assume a \$12,000 exemption threshold, alternative thresholds are possible. The corresponding payroll tax rates for each alternative threshold are presented in *Figure 3*.

**Figure 3. Payroll Tax Rates at Selected Taxable wage Thresholds in 2014**

	Primary Financing Scenario 1		Alternative Financing Scenario 2		Alternative Financing Scenario 3	
	Employer Share	Employee Share <sup>a/</sup>	Employer Share	Employee Share	Employer Share	Employee <sup>b/</sup> Share
Income over \$15,000	11.33%	NA	11.71%	5.47%	11.71%	NA
Income over \$12,000	9.67%	NA	9.99%	4.67%	9.99%	NA
Income over \$10,000	9.25%	NA	9.56%	4.46%	9.56%	NA
Effective rate	7.20%	NA	7.44%	3.47%	7.44%	NA

a/ The primary financing scenario use an individual income tax averaging 2.97% of AGI.

b/ Alternative financing scenario 3 uses an individual income tax averaging 3.07% of AGI.

Source: Lewin Group estimates using the Health Benefits Simulation model (HBSM).

### III. Estimating the Impact of a Single-Payer Plan

We estimated the financial impact of the single-payer plan on major payers in Minnesota, including state and local governments, employers, households, and the federal government. We developed these estimates using the Lewin Group Health Benefits Simulation Model (HBSM), which is specifically designed to provide these detailed distributional impact analyses for state-level health reform initiatives.

Throughout this analysis we estimate the difference between what is expected to be spent on health care in Minnesota with the ACA implemented in 2014, and what we estimate would be spent on health care in the state that same year if the single-payer plan described above were implemented. We use this approach to estimate impacts for stakeholder groups. The data and methods we used to develop estimates of spending in Minnesota under the ACA are presented in *Appendix A*. The methods we used to estimate the impact of the single-payer plan on spending are presented in *Appendix B*. We present a brief summary below.

#### A. The Health Benefits Simulation Model (HBSM) for Minnesota<sup>2</sup>

HBSM is a “micro-simulation” model of the US health care system. The core of the model is a representative sample of households that have been controlled to replicate the distribution of Minnesota residents by coverage and health spending levels. For each household in the sample, these data provide information on health insurance coverage, health spending, income, employment and basic demographic characteristics. The model uses these data to show how expenditures for households will change as they become covered under a new health insurance system such as the single-payer system.

This micro-simulation approach allows us to estimate the impact of health reform at the individual and household level, while also estimating the program’s effects on statewide coverage and spending. Because the model is based upon a representative sample of the population, it produces estimates of the impact of policy proposals on the total number of people affected, aggregate health spending, and program costs. However, because the model develops these estimates on an individual-by-individual basis, the model also provides estimates of the impact of these policies across a wide range of socioeconomic groups.

The model estimates the increase in health services utilization that would occur as coverage is extended to previously uninsured people (which occurs primarily through the ACA and to a lesser extent through the single-payer plan). The model also includes inputted information regarding which of the health services for each individual are covered under the plan, and the reimbursement amount for these services under the plan’s reimbursement rules and patient cost-sharing (if any). It also estimates savings to the sources of payment for this care under current law including family out-of-pocket payments, employer premiums, savings in charity care, and reductions in provider uncompensated care.

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<sup>2</sup> Detailed documentation of the Health Benefit’s Simulation Model (HBSM) can be found in “The Health Benefits Simulation Model (HBSM): Methodology and Assumptions,” (March 31, 2009).

Using these data, HBSM produces estimates of program impacts by source of payment for employers, consumers, providers, state governments and the federal government.

## B. Data for Minnesota Households

Baseline insurance coverage data is provided by the Minnesota Health Access Survey, 2001-2009 and summary data provided in *Health Insurance Coverage in Minnesota, Updated Results from 2009*, prepared by the Minnesota Department of Health (MDH) in 2011. *Figure A-1 in Appendix A* illustrates these baseline coverage data.

We supplement these data with data from the Medical Expenditure Panel Survey (MEPS) for Minnesota on employer and employee premiums by firm size in the state. It also includes data on the percent of firms offering coverage to employees, average individual and family premiums, and average employee contribution.

## C. Health Spending and Administrative Cost Data

Health spending and administrative cost data used in this study are drawn primarily from data provided by the Minnesota Department of Health and other Minnesota data sources. To determine baseline spending by service type and payment source, we use data from the *Minnesota Health Care Spending and Projections 2009* report, published by the Minnesota Department of Health (MDH) in June 2011. This is the most recent state data available on health spending. As discussed above, the Medical Expenditure Panel Survey (MEPS) for Minnesota provides employer health insurance data by firm size, including data for percent of firms offering coverage to employees, average individual and family premiums, and average employee contribution.

Insurer administrative costs are estimated using data provided by the MDH's report: *Administrative Costs at Minnesota Health Plans in 2009*, published in 2011. The cost of administration for public programs was obtained from public sources.

Physician administrative costs are estimated using Casalino et al.'s "What Does It Cost Physician Practices to Interact with Health Insurance Plans," (*Health Affairs*, May 2009). This study uses three survey instruments to collect physician data and the sample of surveyed physicians is selected using the 2006 American Medical Association (AMA) Physician Masterfile and the Medical Group Management Association (MGMA) Universe national file. Estimates provided in the study are reweighted to reflect physician revenues in Minnesota.

Hospital administrative costs were estimated using data provided by the Minnesota Health Economics Program. The Minnesota Hospital Association, under agreement with the MDH, collects all Health Care Cost Information System (HCCIS) hospital-specific financial, utilization, staffing and services data. However, hospital administrative cost data are classified as "non-public" and therefore not available at the individual hospital level. Thus, the MDH Health Economics Program provided us with a summary analysis of data from annual hospital reports, which included administrative costs for community hospitals in 2009.

## D. Spending Projections through 2023

We estimate baseline health care spending for future years using data provided by the *Minnesota Health Care Spending and Projections, 2009 report*, published by the MDH. We provide alternative estimates using health care spending growth rates provided by the CMS Office of the Actuary's *National Health Expenditure Projections 2010-2020*.

When estimating health expenditures per capita from 2014 to 2023, we use population growth data provided by the Minnesota Department of Administration Office of Geographic and Demographic Analysis; this is used in conjunction with the health spending projections provided by the MDH.

When estimating health expenditures as a percent of GDP from 2014 to 2023, we use Minnesota's projected growth in GDP, as provided by the US Department of Commerce Bureau of Economic Analysis.

#### IV. State-Wide Health Spending under Single-Payer

We estimate that total health spending for Minnesota residents under the Affordable Care Act (ACA) system will be about \$46.4 billion in 2014. This is based upon the Minnesota Department of Health (MDH) projections of health spending, which we have revised to include the impact of the ACA. This includes spending for benefits and administration covered by all payers under the ACA including governments, employers, and families. We estimate that the single-payer plan would achieve universal coverage while reducing total health spending for Minnesota by about \$4.1 billion, or 8.8 percent (*Figure 6*).

Figure 6. Changes in State-Wide Health Spending in Minnesota under Single-Payer in 2014

	Amount (in millions)
Current Health Spending <sup>a/</sup>	\$46,417
<b>Changes in Utilization</b>	
Utilization for newly insured	\$304
Utilization from Reduced Cost-Sharing	\$357
Reduced utilization management	\$906
Reduced managed care coverage	\$179
Fraud reduction (Subpoena powers) <sup>b/</sup>	-\$203
Total changes in utilization	\$1,543
<b>Spending Offsets</b>	
Bulk Purchasing	-\$877
Prescription Drugs	-\$796
Durable Medical Equipment	-\$81
Administrative Costs	-\$4,728
Insurer Administration	-\$2,940
Hospital Administration	-\$302
Physician Administration	-\$1,486
Total Offsets	-
	\$5,606
<b>Net Change in Health Spending under Single Payer</b>	
Net Change(\$)	-\$4,062
Net Change (%)	-8.8%

a/ Excludes public health.

b/ Public programs have subpoena powers that private plans do not have, which increases the effectiveness of fraud detection.

Source: Lewin Group estimates using the Health Benefits Simulation Model (HBSM).

We estimate an increase in health services utilization of \$1.5 billion, which includes a \$304 million increase in utilization for newly and currently insured. Health service utilization would

increase by an additional \$357 million due to reductions in cost-sharing through the elimination of deductibles and limits on co-payments for services.<sup>3</sup> Reduced use of managed care would also increase utilization. Elimination of utilization management methods, such as precertification of services would increase spending by \$906 million. Spending would increase by another \$179 million due to the elimination of health maintenance organizations (HMOs). However, there would be additional savings of \$203 in reduced fraud because public programs have subpoena powers that private insurers do not have.

The total increase in health services utilization discussed above total about \$1.5 billion. We estimate that these new costs would be more than offset by the savings of \$4.7 billion through administrative simplification and discounts of \$0.9 billion due to bulk purchasing of prescription drugs and medical equipment. This results in a total of \$4.1 billion dollars in annual savings, or 8.8 percent of total health spending for Minnesota in 2014.

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<sup>3</sup> Due to data limitations, we do not estimate these employers and households in latter sections of this report.

## V. Funding and Expenditures for Single-Payer Plan

Program expenditures under the single-payer system would be about \$35.8 billion if fully implemented in 2014. This is substantially less than total spending for health care in the state because the single-payer program studied here would not cover long-term care, which is about \$10.0 billion in Minnesota. Our estimate of \$35.8 billion is net of any increases in utilization under the program less savings from provider payment reductions to account for provider administrative savings, and \$0.9 billion in bulk purchasing savings (*Figure 7*).

Figure 7. Sources and Uses of Funds in Minnesota under Single-Payer in 2014

		Amount (in millions)
<b>Use of Funds under Single-Payer</b>		
Total Funds		\$35,760
Benefits Payments at Current Rates	\$37,859	
Payment Reduction for Provider Admin. Costs	-\$1,789	
Bulk Purchasing Savings	-\$877	
Administration	\$567	
<b>Sources of Funds under Single-Payer</b>		
Federal Funding		\$15,978
Medicare (with admin)	\$7,627	
Medicaid (with admin)	\$3,442	
ACA Premium Subsidies (with admin)	\$1,361	
ACA Cost Sharing Subsidies	\$150	
ACA Employer Tax Credit	\$112	
Workers Comp Health	\$1,079	
TRICARE/VA	\$2,207	
State Funding		\$2,905
Medicaid (with admin)	\$2,905	
MinnesotaCare	n/a	
General Assistance Medical Care <sup>a/</sup>	n/a	
Financing		\$16,878
Tobacco Tax	\$405	
Alcohol Tax	\$144	
Employer Payroll Tax (9.67% marginal rate, 7.20% effective rate )	\$11,131	
Income tax (averages 2.97% of AGI)	\$5,197	
Total Sources of Funds		\$35,760

a/ The coverage expansions under the ACA makes these programs redundant. Thus, savings in these programs will already have been recognized under the ACA.

Source: Lewin Group estimates using the Health Benefits Simulation Model (HBSM)

Funding sources for the system would include funding for existing government health benefits programs, new funding for Minnesota under the Affordable Care Act (ACA), and new dedicated taxes under the program to replace the premiums used to finance health care in the current system. This amounts to about \$16.0 billion in federal funding, \$2.9 billion in state funding, and \$16.9 billion in new dedicated taxes. Funds collected through dedicated taxes include increased state alcohol and tobacco products (\$549 million). It also includes an

employer payroll tax of 9.67 percent on earnings over \$12,000 (7.20 percent effective rate) totaling \$11.1 billion; and an increase in family income tax payments of a \$5.2 billion, which averages about 3.0 percent of family AGI across all families.

Collectively, these federal, state, and dedicated tax funding sources total \$35.8 billion. This assumes that federal law is changed to transfer federal funds for Minnesota residents under these programs to the single-payer system, which would then be responsible for covering these beneficiaries.

## VI. State and Local Government Impacts

We summarize the impact on state and local government spending under the single-payer plan on sources and uses of funds in *Figure 8*, below. Spending for health benefits to state and local workers and retirees would be reduced by \$752.2 million, compared to what spending would be under the ACA. A total of \$2.9 billion in state Medicaid spending will be transferred to the fund. This includes \$2.8 billion in spending for pre-ACA Medicaid-eligible enrollees and \$0.6 billion in spending for newly eligible Medicaid adults. Thus, total uses of funds would be \$2.2 billion.

This spending is paid from state funds that would have been used to fund Medicaid. This amount is reduced to reflect our assumption that provider taxes dedicated to funding Medicaid would also be eliminated. These include \$269.0 million in Medicaid hospital surcharge revenues, \$52.5 million in Medicaid HMO surcharge revenues. We also assume that insurance premium taxes amounting to \$395.0 million are eliminated. When state spending and funding are summed, the state general fund will see a net savings of \$35.7 million in 2014.

**Figure 8. Sources and Uses of Funds for State and Local Governments in Minnesota under Single-payer in 2014 (in millions) <sup>a/,b/</sup>**

Uses of Funds		
Savings to State and Local Worker Benefits		-\$752.2
Worker Benefits	-\$1,937.0	
Retiree Benefits	-\$247.0	
Single-payer Payroll Tax	\$1,431.8	
Medicaid Spending Transferred to Fund		\$2,905.0
Eligible Pre-ACA	\$2,845.1	
ACA Covered Adults	\$60.0	
Total Uses of Funds		\$2,152.8
Sources of Funds		
State Medicaid Spending <sup>c/</sup>		\$2,583.5
Eligible Pre-ACA	\$2,845.1	
ACA Covered Adults	\$60.0	
Medicaid Hospital Surcharge Revenues	-\$269.0	
Medicaid HMO Surcharge Revenues	-\$52.5	
Insurance Premium Taxes	-\$395.0	
Total Sources of Funds		\$2,188.5
Net Cost (savings)		-\$35.7

a/ We assume that expenditures and funding for the MinnesotaCare program are eliminated as participants become eligible for the expanded Medicaid program or subsidized coverage in the exchange under the ACA. Thus, there are no MinnesotaCare revenues to transfer to the fund under a single-payer program.

b/ We assume that funding and expenditures for the Minnesota Comprehensive Health Association are eliminated under the ACA.

c/ We exclude Medicaid spending for long-term care including nursing home, home health and home and community based services.

Source: Lewin Group estimates using the Health Benefits Simulation Model (HBSM)

## VII. Impact on Employers

We estimate that under the ACA, employers in Minnesota that offered coverage will spend an average of about \$7,164 per worker on health benefits in 2014 (*Figure 9*). Spending currently varies by firm size and industry, with larger firms and government typically spending more per worker than smaller firms and with certain industries (e.g. Federal or Transportation) spending more than other industries (e.g. Construction and Wholesale Trade).

**Figure 9. Impact of the ACA and the Single-payer Plan on Employer Health Benefits Costs Per Worker in 2014: For Workers in Firms Offering Health Insurance Prior to the ACA (employer payroll tax of 9.67% over \$12,000; effective rate of 7.20%; with tobacco and alcohol tax)**

	Employers Offering Coverage Before the ACA				
	Before the ACA	Change under ACA	Total with ACA	Change From ACA under Single-Payer	Total Cost with Single-Payer
<b>Firm Size</b>					
Under 10	\$7,251	-\$1,426	\$5,825	-\$81	\$5,744
10-24	\$6,611	-\$1,176	\$5,435	\$295	\$5,730
25-99	\$6,050	-\$206	\$5,844	-\$406	\$5,438
100-499	\$6,427	-\$289	\$6,138	-\$156	\$5,982
500-999	\$7,843	-\$462	\$7,381	-\$658	\$6,723
1000-4999	\$6,217	-\$188	\$6,029	-\$319	\$5,710
5000 +	\$8,334	\$305	\$8,639	-\$2,307	\$6,332
Government	\$8,582	-\$2	\$8,580	-\$2,367	\$6,213
<b>Industry</b>					
Construction	\$6,281	-\$554	\$5,727	-\$807	\$4,920
Manufacturing	\$7,444	-\$236	\$7,208	-\$1,899	\$5,309
Transportation	\$10,434	-\$550	\$9,884	-\$2,498	\$7,386
Wholesale Trade	\$5,498	-\$75	\$5,423	-\$672	\$4,751
Retail Trade	\$6,228	-\$100	\$6,128	-\$1,144	\$4,984
Services	\$6,800	-\$245	\$6,555	-\$291	\$6,264
Finance	\$7,799	-\$285	\$7,514	-\$115	\$7,399
Other	\$8,198	-\$574	\$7,624	-\$218	\$7,406
State and Local	\$8,366	\$0	\$8,366	-\$2,308	\$6,058
Federal	\$10,363	-\$16	\$10,347	-\$2,850	\$7,497
<b>Total</b>	<b>\$7,381</b>	<b>-\$217</b>	<b>\$7,164</b>	<b>-\$1,214</b>	<b>\$5,950</b>

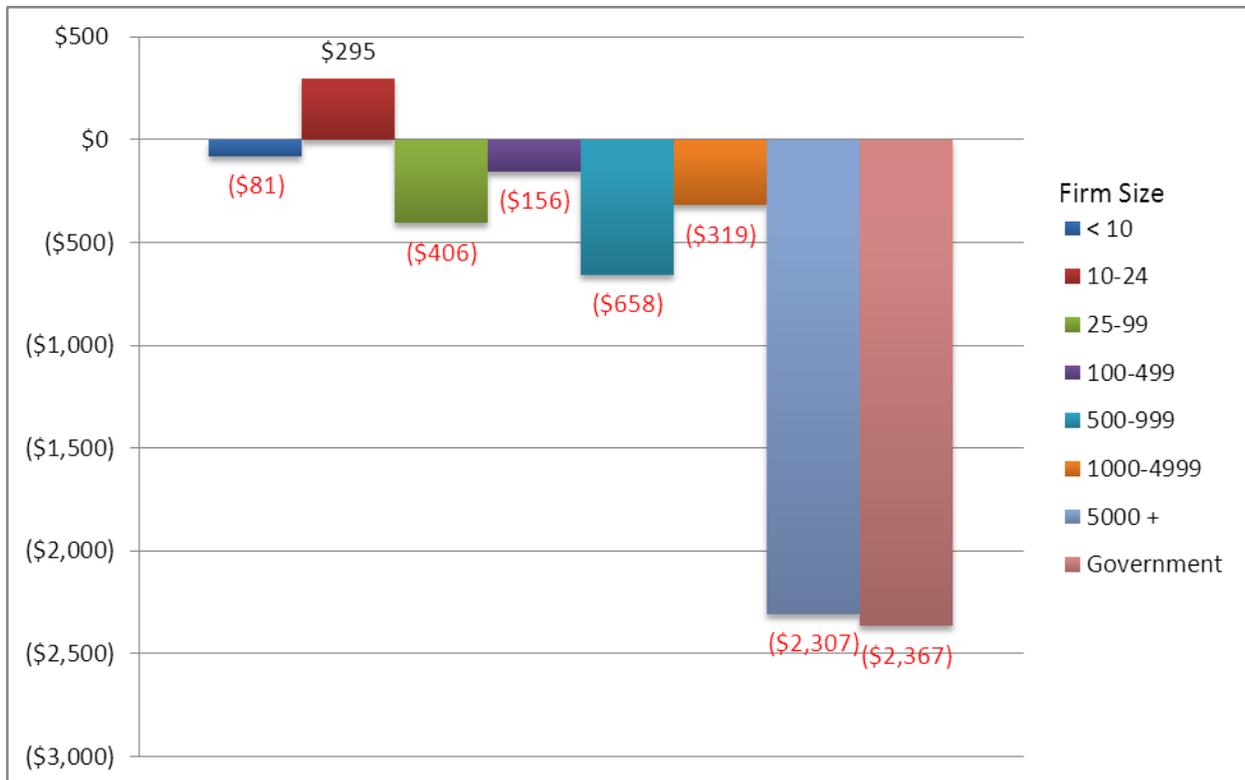
Source: The Lewin Group estimates using the Health Benefits Simulation Model (HBSM).

If the single-payer plan is adopted, spending for currently insuring employers would fall by about \$1,214 per worker. This estimate assumes our primary funding scenario in which employers must pay a payroll tax of 9.67 percent of earnings over \$12,000 for an effective rate of 7.20 percent.

Nearly all firm sizes, with the exception of those with 10-24 employees, will see savings under single-payer (*Figure 10*). This reflects that the payroll tax will apply to all employers under the

single-payer plan while under the ACA, small employers are exempt from the penalty for not offering insurance and some will actually receive tax credits for starting to offer coverage. On average, all industries will see savings as well. Savings will be greatest for government employers (\$2,367 per worker) and firms with over 5,000 employees (\$2,307 per worker). This reflects that these employers are more likely to have retiree benefits and tend to offer relatively comprehensive coverage, and benefit from the shift to the payroll tax.

**Figure 10. Change in Employer Costs Per Worker for Firms Offering Health Insurance Prior to the ACA by Firm Size under Single-Payer (employer payroll tax of 9.67% over \$12,000; effective rate of 7.20%; with tobacco and alcohol tax)**



Source: The Lewin Group estimates using the Health Benefits Simulation Model (HBSM).

*Figure 11* presents estimates of the change in health spending for insuring employers under the alternative financing scenarios, both of which have a higher tax rate (9.99 percent; 7.44 percent effective) than under the primary financing scenario modeled above (9.67 percent; 7.20 percent effective). These scenarios exclude the tobacco and alcohol taxes, requiring greater funding from employers and families. Consequently, the alternative financing scenarios result in lesser savings per worker, on average.

Figure 11. Comparison of Financing Scenarios in 2014 - Change in Employer Costs Per Worker under Single Payer for Firms Offering Health Insurance Prior to the ACA

	Change from ACA under Single-Payer	
	Primary Financing Scenario 1	Alternative Financing Scenario 2 & 3 <sup>a/</sup>
<b>Firm Size</b>		
Under 10	-\$81	-\$219
10-24	\$295	\$152
25-99	-\$406	-\$536
100-499	-\$156	-\$308
500-999	-\$658	-\$812
1000-4999	-\$319	-\$447
5000 +	-\$2,307	-\$2,472
Government	-\$2,367	-\$2,186
<b>Industry</b>		
Construction	-\$807	-\$949
Manufacturing	-\$1,899	-\$2,064
Transportation	-\$2,498	-\$2,645
Wholesale Trade	-\$672	-\$820
Retail Trade	-\$1,144	-\$1,243
Services	-\$291	-\$437
Finance	-\$115	-\$298
Other	-\$218	-\$381
State and Local	-\$2,308	-\$2,133
Federal	-\$2,850	-\$2,005
<b>Total</b>	<b>-\$1,214</b>	<b>-\$1,071</b>

a/ The alternative financing scenario represents an employer payroll tax of 9.99% over \$12,000; this is an effective rate of 7.44% and does not include an additional tobacco or alcohol tax. Both financing scenarios 2 & 3 have the same effect on employer costs per worker, as employer financing remains constant and only employee financing differs between the two alternative financing scenarios (employee payroll tax vs. individual income tax).

Source: Lewin Group Estimates using the Health Benefits Simulation Model (HBSM)

We also estimate the impact of the single-payer plan on Minnesota employers that do not now offer health insurance. Non-insuring employers would see an increase in spending for workers under the ACA of \$161 per worker (*Figure 12*). Under a single-payer plan, average costs would increase by \$1,963 per worker reflecting that the payroll tax would apply to employers of all sizes and apply to both part-time and full-time workers (the ACA employer coverage provisions do not apply to part-time workers). These estimates reflect the primary financing scenario (9.67 percent over \$12,000; effective tax rate of 7.20 percent).

The industries most impacted by this increase include manufacturing, wholesale trade, and finance industries, which experience the largest dollar increases in cost per worker under single-payer. Government, state, and federal employers show a zero dollar change because all government employers offered health insurance coverage to at least some of their workers prior

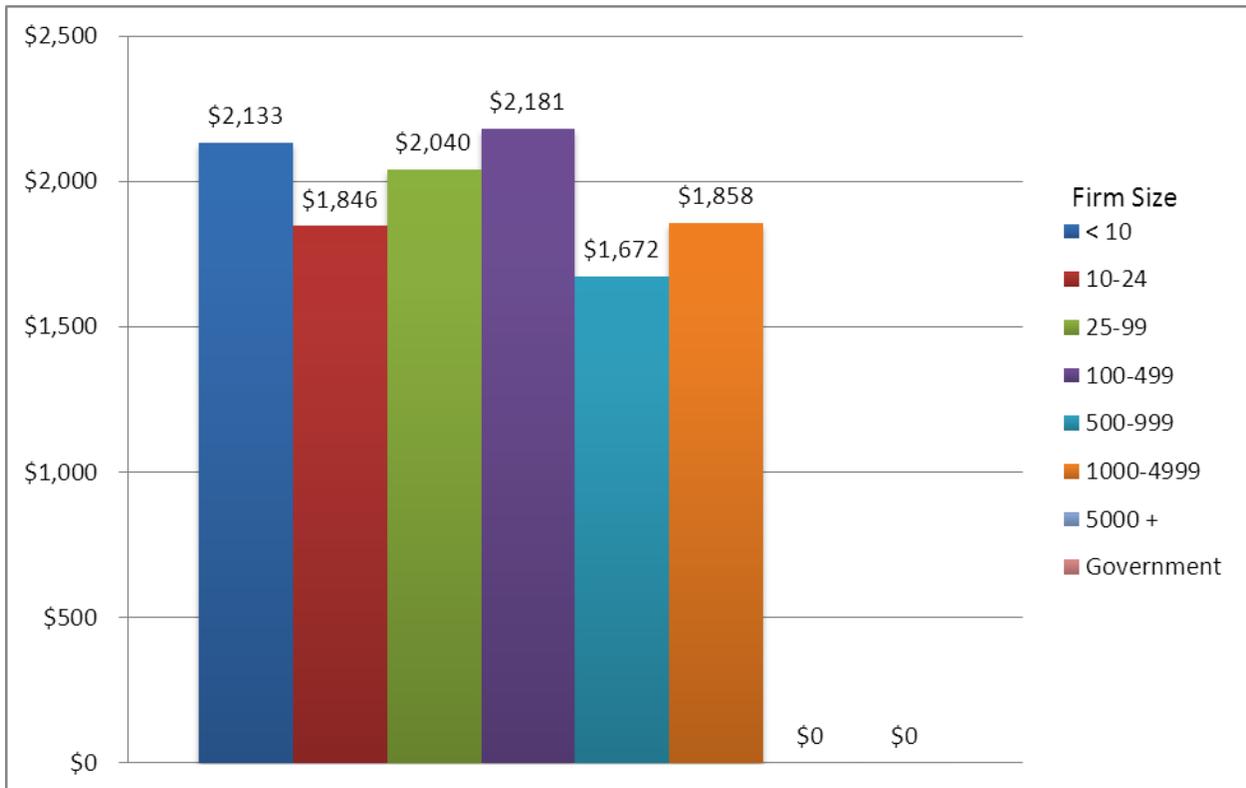
to the ACA. All firm sizes, with the exception of those with 5,000 or more employees and government, will experience a notable increase under single-payer (*Figure 13*). These increases are seen in all non-government industries as well.

**Figure 12. Impact of the ACA and the Single-payer Plan on Employer Health Benefits Costs Per Worker in 2014 For Workers in Firms that Did Not Offer Health Insurance Prior to the ACA under the Primary Financing Scenario**

	Employers Not Offering Coverage Before the ACA				
	Before the ACA	Change under ACA	Total with ACA	Change from ACA under Single-Payer	Total Cost with Single-Payer
<b>Firm Size</b>					
Under 10	\$0	\$93	\$93	\$2,133	\$2,226
10-24	\$0	\$80	\$80	\$1,846	\$1,926
25-99	\$0	\$96	\$96	\$2,040	\$2,136
100-499	\$0	\$356	\$356	\$2,181	\$2,537
500-999	\$0	\$398	\$398	\$1,672	\$2,070
1000-4999	\$0	\$305	\$305	\$1,858	\$2,163
5000 +	\$0	\$0	\$0	\$0	\$0
Government	\$0	\$0	\$0	\$0	\$0
<b>Industry</b>					
Construction	\$0	\$215	\$215	\$2,222	\$2,437
Manufacturing	\$0	\$333	\$333	\$2,869	\$3,202
Transportation	\$0	\$192	\$192	\$2,623	\$2,815
Wholesale Trade	\$0	\$66	\$66	\$2,953	\$3,019
Retail Trade	\$0	\$118	\$118	\$1,331	\$1,449
Services	\$0	\$134	\$134	\$1,851	\$1,985
Finance	\$0	\$166	\$166	\$3,555	\$3,721
Other	\$0	\$222	\$222	\$1,680	\$1,902
State and Local	\$0	\$0	\$0	\$0	\$0
Federal	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	\$0	\$161	\$161	\$1,963	\$2,124

Source: The Lewin Group estimates using the Health Benefits Simulation Model (HBSM).

Figure 13. Change in Employer Costs Per Worker for Firms Not Offering Health Insurance Prior to the ACA by Firm Size under Single-Payer (employer payroll tax of 9.67% over \$12,000; effective rate of 7.20%; with tobacco and alcohol tax)



Source: The Lewin Group estimates using the Health Benefits Simulation Model (HBSM).

The increase in spending will be higher under the alternative financing scenarios. As shown in *Figure 14*, average costs for non-insuring employers would increase from \$1,963 per worker to \$2,034 per worker under the alternative scenarios. This reflects that the payroll tax rate under these alternative scenarios (9.99 percent; 7.44 effective) is somewhat higher than under the primary financing scenario (9.67 percent; 7.20 effective) due to the exclusion of the alcohol and tobacco taxes.

Figure 14. Comparison of Financing Scenarios - Change in Employer Costs Per Worker under Single Payer for Firms Offering Health Insurance Prior to the ACA

	Change from ACA under Single-Payer	
	Primary Financing Scenario 1	Alternative Financing Scenario 2 & 3 <sup>a</sup>
<b>Firm Size</b>		
Under 10	\$2,133	\$2,207
10-24	\$1,846	\$1,910
25-99	\$2,040	\$2,111
100-499	\$2,181	\$2,264
500-999	\$1,672	\$1,741
1000-4999	\$1,858	\$1,930
5000 +	\$0	\$0
Government	\$0	\$0
<b>Industry</b>		
Construction	\$2,222	\$2,303
Manufacturing	\$2,869	\$2,975
Transportation	\$2,623	\$2,716
Wholesale Trade	\$2,953	\$3,052
Retail Trade	\$1,331	\$1,379
Services	\$1,851	\$1,917
Finance	\$3,555	\$3,678
Other	\$1,680	\$1,743
State and Local	\$0	\$0
Federal	\$0	\$0
<b>Total</b>	<b>\$1,963</b>	<b>\$2,034</b>

a/ The alternative financing scenario, which does not include the tobacco and alcohol taxes, has an employer payroll tax rate of 9.99% over \$12,000 (effective rate of 7.44 percent).  
Source: Lewin Group estimates using the Health Benefits Simulation Model (HBSM).

## VIII. Impact on Households

Under the ACA, as shown in *Figure 15*, Minnesota residents will have premium payments and out-of-pocket spending for health services averaging about \$4,382 per family in 2014. We estimate family spending would be reduced by \$1,362 per family in 2014. This reflects that the single payer requires substantially less co-payments than most plans today; and that premiums are eliminated (except for Medicare) and replaced with an income tax averaging about 2.97 percent of AGI. This is a net effect estimate reflecting that changes in employer health benefits costs are expected to be reflected as changes in wages.

Families with incomes of less than \$150,000 per year will on average see savings. People with incomes between \$150,000 and \$250,000 on average will see a small increase in health spending averaging \$240 per family. However, families with \$250,000 or more in income would see an increase in health-related spending of \$36,570. This reflects that the primary funding scenario assumes that the household share of tax revenues will be raised using an income tax that reflects the progressive nature of the federal income tax. That is, that the marginal tax rate increases as the dollar amount of income for a tax filer increases.

Savings are greatest among families headed by someone age 55 to 64. While the average savings per family are \$1,362, savings per family in the age 55 to age 64 group are \$2,423. Net changes with wage effects by family income are also illustrated in *Figure 16*, below.

Figure 15. Changes in Family Health Spending under the Single-payer Proposal by Family Income and Age of Family Health: 2014 (No worker payroll tax; Income tax (averages 2.97% of AGI); with tobacco and alcohol tax)

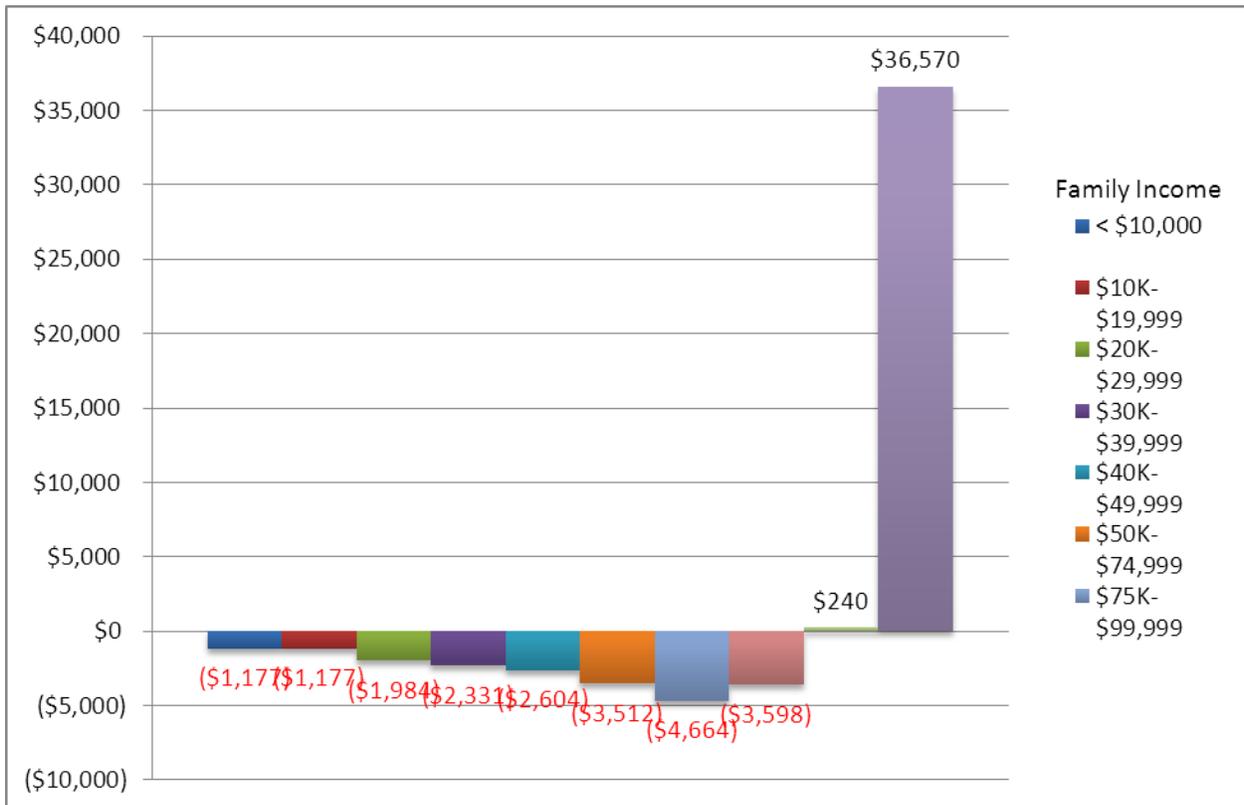
	Total Families	Under ACA			Under Single Payer							
		Average Premium Payments <sup>a/</sup>	Average Copays <sup>b/</sup>	Average Total Cost per Family	Average Premium Payments <sup>a/</sup>	Average Co-pays <sup>b/</sup>	Average Total Cost per Family	Change in Premium & out-of-pocket	Payroll Tax	Change with Payroll Tax	Average Wage-Effect	Net Change with Wage Effects
<b>Family Income</b>												
< \$10,000	164,877	\$385	\$609	\$994	\$58	\$46	\$105	-\$889	80	-\$809	\$368	-\$1,177
\$10K-\$19,999	229,152	\$903	\$686	\$1,589	\$271	\$189	\$460	-\$1,129	246	-\$883	\$294	-\$1,177
\$20K-\$29,999	265,964	\$1,716	\$1,015	\$2,731	\$541	\$295	\$836	-\$1,895	529	-\$1,366	\$618	-\$1,984
\$30K-\$39,999	246,973	\$2,035	\$1,264	\$3,299	\$554	\$369	\$923	-\$2,376	819	-\$1,557	\$774	-\$2,331
\$40K-\$49,999	208,321	\$2,439	\$1,427	\$3,867	\$507	\$415	\$922	-\$2,945	1,237	-\$1,708	\$896	-\$2,604
\$50K-\$74,999	397,887	\$3,108	\$1,782	\$4,890	\$533	\$497	\$1,031	-\$3,859	1,580	-\$2,279	\$1,233	-\$3,512
\$75K-\$99,999	321,776	\$3,800	\$1,882	\$5,682	\$430	\$512	\$942	-\$4,740	1,392	-\$3,348	\$1,316	-\$4,664
\$100K-\$149,9	357,069	\$4,089	\$2,047	\$6,136	\$309	\$530	\$839	-\$5,297	2,346	-\$2,951	\$647	-\$3,598
\$150k-\$249,9	212,660	\$4,557	\$2,267	\$6,824	\$371	\$555	\$926	-\$5,898	4,502	-\$1,396	-\$1,636	\$240
\$250,000+	73,043	\$5,096	\$2,649	\$7,745	\$741	\$508	\$1,249	-\$6,496	30,197	\$23,701	-\$12,869	\$36,570
<b>Age of Family Head</b>												
Under 25	292,122	\$1,058	\$776	\$1,834	\$55	\$130	\$184	-\$1,650	1,111	-\$539	\$517	-\$1,056
25 - 35	439,726	\$2,189	\$1,048	\$3,237	\$14	\$218	\$231	-\$3,006	2,205	-\$801	\$274	-\$1,075
35 - 44	436,970	\$2,756	\$1,516	\$4,272	\$42	\$305	\$347	-\$3,925	1,662	-\$2,263	\$116	-\$2,379
45 - 54	452,482	\$2,857	\$1,868	\$4,725	\$67	\$441	\$507	-\$4,218	3,177	-\$1,041	\$354	-\$1,395
55 - 64	386,662	\$3,448	\$2,173	\$5,622	\$201	\$601	\$801	-\$4,821	2,986	-\$1,835	\$588	-\$2,423
65 +	469,759	\$4,037	\$1,751	\$5,788	\$1,924	\$672	\$2,595	-\$3,193	2,418	-\$775	-\$389	-\$386
<b>All Families</b>												
All Families	2,477,721	\$2,825	\$1,557	\$4,382	\$424	\$409	\$834	-\$3,548	2,310	-\$1,238	\$124	-\$1,362

a/ Includes premium payments under Part B and Part D of Medicare. Medicare premiums are found in some families with a head under age 65 due to participation in Medicare disability or for family members age 65 and older living with adult children.

b/ Includes copayments, deductibles and out-of-pocket payments for non-covered services.

Source: Lewin Group estimates using the Health Benefits Simulation Model (HBSM)

Figure 16. Net Change in Family Health Spending (with Wage Effects) under the Single-Payer Proposal by Family Income, 2014 (No worker payroll tax; Income tax (averages 2.97% of AGI); with tobacco and alcohol tax)



Source: Lewin Group estimates using the Health Benefits Simulation Model (HBSM)

We estimated the impact of the single-payer plan on family health spending under the two alternative financing scenarios. Savings per family increase from \$1,326 under the primary financing scenario to \$1,412, reflecting that the alternative financing scenarios do not include the tax on alcohol and tobacco in the primary financing scenario that would be paid by consumers.

As shown in *Figure 17*, the first alternative scenario will result in a much smaller increase in health spending for families with incomes over \$250,000, compared to the other scenarios. The average increase in health spending for under the first alternative scenario would be \$23,054 compared to an average of \$36,570 under the primary funding scenario. This reflects that the first alternative scenario uses a payroll tax of 4.67 percent (effective rate of 3.36 percent) while the primary financing scenario uses an income tax. The increase for higher income people is lower under the payroll tax because the rate stays the same as income increases where the marginal tax rates under the income tax increase as income rises.

Figure 17. Comparison of Financing Scenarios - Net Change in Health Spending (with Wage Effects) for Families under Single-Payer, 2014

	Total Families	Net Change in Health Spending with Wage Effects under Single Payer		
		Primary Financing Scenario 1 <sup>/a</sup>	Alternative Financing Scenario 2 <sup>/b</sup>	Alternative Financing Scenario 3 <sup>/c</sup>
<b>Family Income</b>				
< \$10,000	164,877	-\$1,177	-\$1,253	-\$1,235
\$10K-\$19,999	229,152	-\$1,177	-\$1,369	-\$1,279
\$20K-\$29,999	265,964	-\$1,984	-\$2,255	-\$2,110
\$30K-\$39,999	246,973	-\$2,331	-\$2,572	-\$2,456
\$40K-\$49,999	208,321	-\$2,604	-\$2,945	-\$2,744
\$50K-\$74,999	397,887	-\$3,512	-\$3,670	-\$3,642
\$75K-\$99,999	321,776	-\$4,664	-\$3,698	-\$4,785
\$100K-\$149,9	357,069	-\$3,598	-\$2,190	-\$3,651
\$150k-\$249,9	212,660	\$240	\$1,830	\$298
\$250,000+	73,043	\$36,570	\$23,054	\$37,483
<b>Age of Family Head</b>				
Under 25	292,122	-\$1,056	-\$1,276	-\$1,167
25 - 35	439,726	-\$1,075	-\$952	-\$1,129
35 - 44	436,970	-\$2,379	-\$934	-\$2,357
45 - 54	452,482	-\$1,395	-\$1,027	-\$1,387
55 - 64	386,662	-\$2,423	-\$2,712	-\$2,540
65 +	469,759	-\$386	-\$2,161	-\$535
<b>All Families</b>	<b>2,477,721</b>	<b>-\$1,362</b>	<b>-\$1,412</b>	<b>-\$1,412</b>

a/ Primary financing scenario includes no worker payroll tax, an income tax averaging 2.97% of AGI, and added tobacco and alcohol taxes.

b/ Alternative financing scenario 1 includes a 4.67 % worker payroll tax over \$12,000 (effective rate of 3.36%), no new tax on income, and no added tobacco or alcohol taxes.

c / Alternative financing scenario 2 includes no worker payroll tax, an income tax averaging 3.07% of AGI, and no added tobacco or alcohol taxes.

Source: Lewin Group Estimates using the Health Benefits Simulation Model (HBSM)

## IX. Impact on Employment

The single-payer system simplifies administration which will lead to reductions in employment in the healthcare industry. Data from the Bureau of Labor Statistics for Minnesota indicate that there are 167,900 non-physician workers employed in insurance companies, physician practices and hospitals in Minnesota. If a single-payer is adopted, the number employed in this sector will fall by 42,800 workers. This is based upon the assumption that employment in these areas would be reduced in proportion to the total reduction in administrative costs under a single-payer (discussed above).

We assume no reduction in the number of practicing physician even though the data show physicians working an average of about 4 hours per week on insurance related functions. Much of the time saved by physicians under the single-payer plan would be taken-up meeting the increased demand for health services as all individuals in the state become covered.

About 20,000 workers in Minnesota are employed by health insurers. As shown in *Figure 18*, employment for health insurers would be reduced by 16,700 workers, which reflects our estimate that total administrative savings would fall by 84 percent under the single-payer plan. Employment in physician's offices would be 51,740 workers (non-physicians). Employment in this group would fall by 22,160 workers. The number of people employed by hospitals (excluding physicians) would be reduced by 3,911 people, which is about 4.0 percent of the 96,200 people now employed by hospitals.

**Figure 18. Impact of a Single-payer Plan on Minnesota Health Sector Employment in 2014**

	Number Employed Under ACA	Reduction in Employment Under Single-Payer
Insurance and Programs <sup>a/</sup>	19,949	16,724
Physician Practices <sup>b/</sup>	51,740	22,160
Hospitals <sup>c/</sup>	96,172	3,911
Total	167,861	42,795

a/ Bureau of Labor Statistics, National life and health insurance workers allocated to Minnesota. Employment is reduced in proportion to estimated administrative savings.

b/ BLS data for physician offices in Minnesota less the number of office-based physicians in the state reported by the American Medical Association (AMA). Employment is reduced in proportion to estimated administrative savings.

c/ BLS data for Minnesota. Employment reduced in proportion to estimated administrative savings.

Source: Lewin Group estimates.

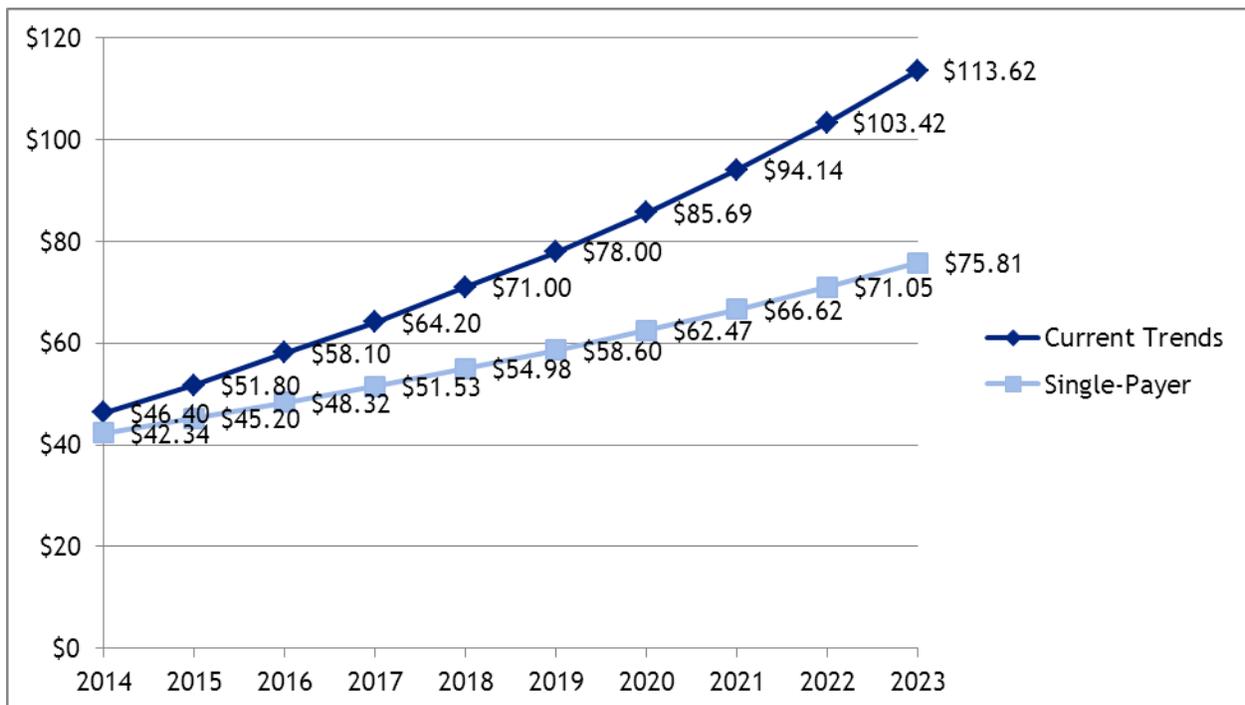
## X. Spending in Future Years

As discussed above, we assume that the single-payer plan would be required to limit the growth in spending for Minnesota to the rate of growth in state GDP. The GDP can be thought of as a measure of state-wide income. Thus, health spending in the state would not be permitted to grow any faster than income for Minnesotans. GDP is projected to grow by about 5.0 percent per year through 2023, compared with projected health spending growth of up to 10.0 percent per year over that period.

To achieve this, the single-payer program would set hospital budgets and physician payment amounts at the levels required to meet these targets. If necessary, annual increases in physician and non-physician payment rates would be reduced to reflect any increases in expected health services utilization levels anticipated during the year. Also, if the annual spending budget is exceeded in a year, it would be recovered in the following year as a reduction in payment rate increases.

The Minnesota Department of Health (MDH) projects that health spending in the state will grow by an average of 5.1 percent per year between 2009 and 2014, but that spending will grow an average of 10 percent per year through 2019. We assumed the growth rate to remain constant from 2019 to 2023, as Minnesota has not provided projections beyond 2019. We adjusted these estimates to reflect the impact of the ACA on state spending estimated with HBSM as discussed above. As shown in *Figure 19*, spending would grow from \$46.4 billion in 2014 to \$113.6 billion by 2023 under the state's projected growth in spending under current law.

**Figure 19. Projected Growth in Health Spending for MN using MDH Growth Projections under Current Trends and Single-Payer: 2014-2023 (in billions)**



Source: MDH health care expenditure projected growth rates.

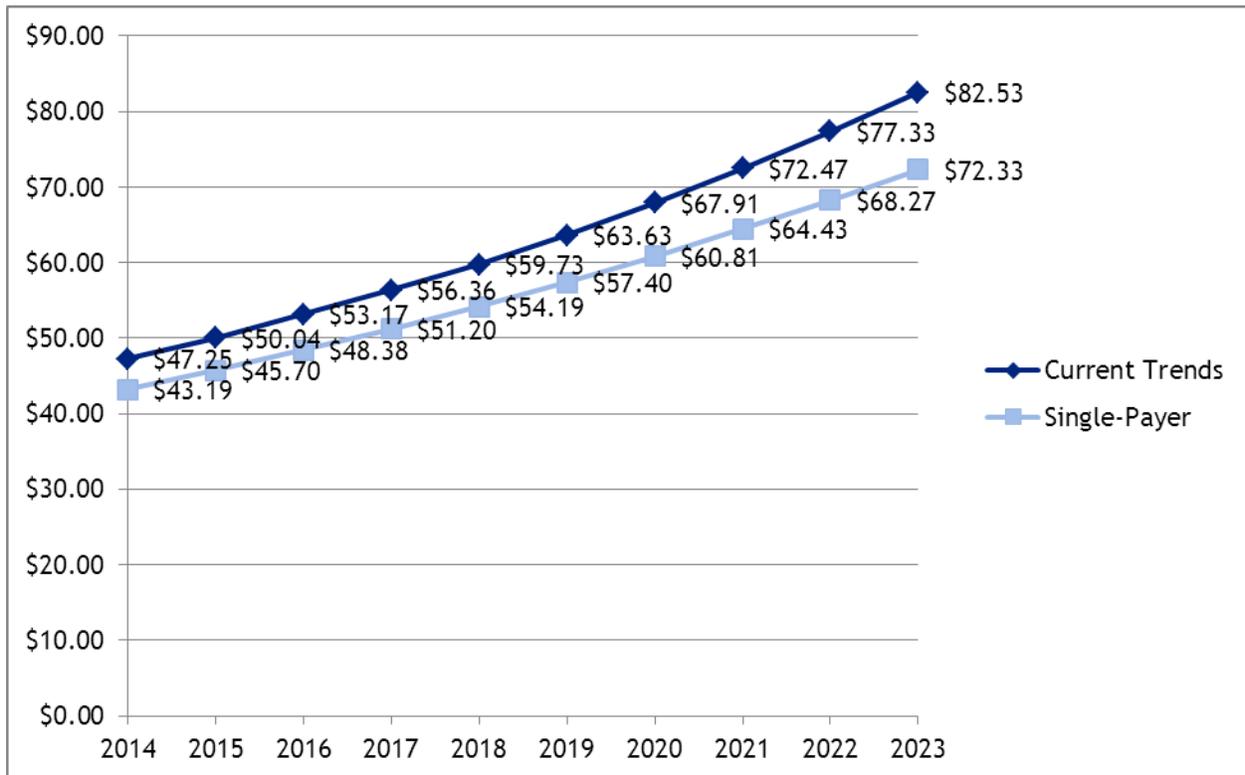
As discussed above, the single-payer plan would reduce statewide health spending in 2014 from \$46.4 billion under current law (with the ACA) to about \$42.3 billion under single-payer, which is a first-year savings of \$4.1 billion (presented above). By 2023, total spending under the MDH projections will be reduced from \$113.6 billion to \$75.3 billion, by restricting spending growth to the rate of growth in state GDP. Total savings over the 2014 through 2023 period would be \$189.5 billion.

It is important to recognize that the health spending budget applies to all health services except long-term care, which comprises roughly 20 percent of all health spending. Thus, spending for long-term care is assumed to continue at projected levels.

The growth in spending predicted by the MDH is higher than predicted elsewhere. For example, the Office of the Actuary of the Center for Medicare and Medicaid (CMS) Services projects that health spending will grow by 29.8 percent between 2009 and 2014, and would continue to increase at a rate of about 5.9 to 6.7 percent per year through 2020. This compares with the MDH projection of about 10 percent per year. We assumed the growth rate to remain constant from 2020 to 2023, as CMS has not provided projections beyond 2020.

Using the CMS projections, we estimate that total statewide health spending with the ACA would increase from \$47.3 billion in 2014 to \$82.5 billion in 2023 (*Figure 20*). Using these assumptions, single-payer would reduce statewide health spending from \$43.2 billion in 2014 to about \$72.3 billion in 2023. By 2023, the annual savings would reach about \$10.8 billion. Between 2014 and 2023, total savings would amount to \$64.5 billion.

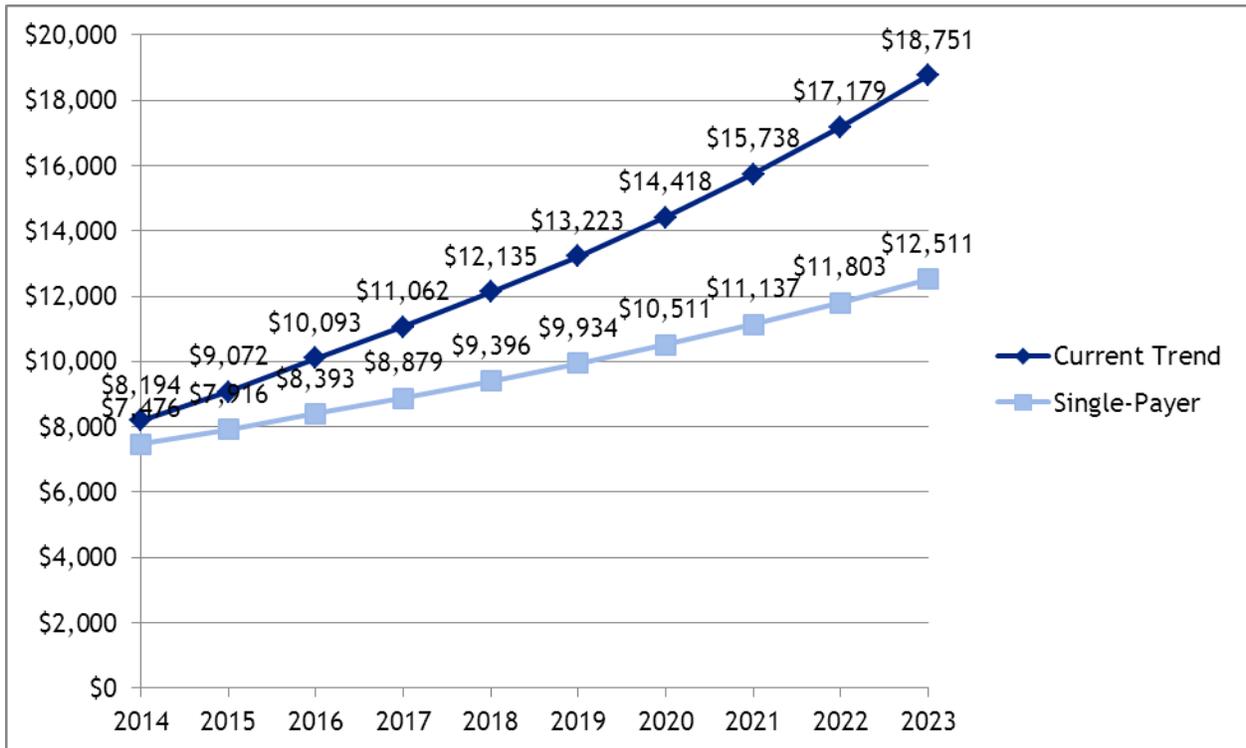
Figure 20. Projected Health Spending for MN using CMS Growth Projections under Current Trends and Single-Payer: 2014-2023 (in billions)



Source: CMS Office of the Actuary National Health Expenditure Projections 2009-2020; MDH current health spending; Lewin Health Benefit Simulation Model (HBSM)

Using the MDH health spending projections, we estimate health spending per capita would decrease from \$8,194 under current, post-ACA law to \$7,476 under single-payer, in 2014—a savings of \$717 per capita (*Figure 21*). By 2023, annual savings under single-payer would be \$6,240 per capita.

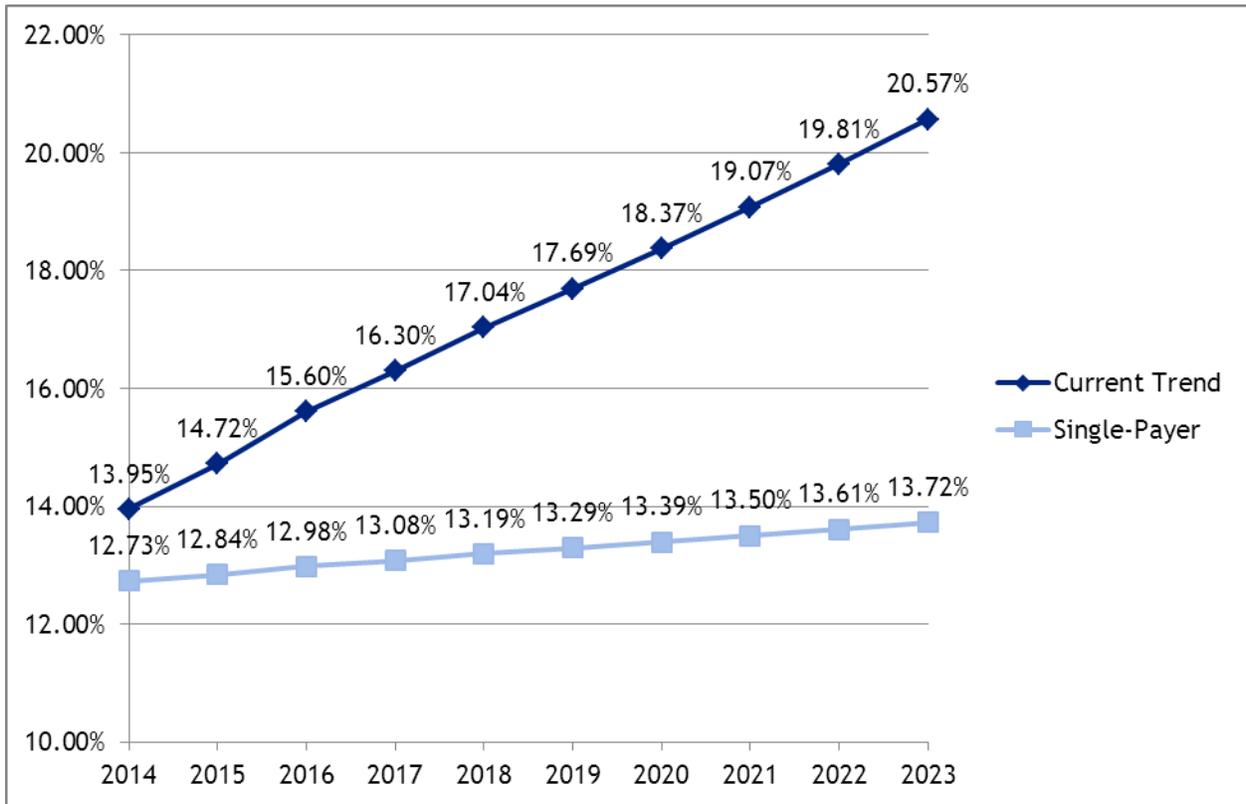
Figure 21. Projected Health Spending Per Capita in MN using MDH Health Spending and Population Growth Projections under Current Trends and Single-Payer: 2014-2023 (in billions)



Source: MDH projected health spending and data from the Minnesota Department of Administration Office of Geographic and Demographic Analysis

Lastly, using MDH health spending projections and Minnesota GDP projections provided by the US Department of Commerce Bureau of Economic Analysis, health spending as a percent of GDP is estimated under current ACA law and single-payer from 2014 to 2023 (*Figure 22*). In 2014, health spending as a percentage of GDP is estimated to be 13.95 percent under current trends and 12.73 percent under single-payer – a difference of 1.20 percentage points. Over time, current trends suggest that health spending as a percentage of GDP will increase from 13.95 percent in 2014 to 20.57 percent in 2023 – a 7.25 percentage point increase. Meanwhile, single-payer projections indicate a significantly lower rate of growth that is nearly linear – from 12.73 percent of GDP in 2014 to 13.72 percent of GDP in 2023, representing a one percentage point increase.

Figure 22. Projected Health Spending as a Percentage of GDP using MDH Health Spending and GDP Projections under Current Trends and Single-Payer: 2014-2023



Source: MDH health spending projections; Minnesota GDP projections provided by the US Department of Commerce Bureau of Economic Analysis; Lewin Health Benefits Simulation Model (HBSM)

## Appendix A: Modeling Health Spending in Minnesota under the Affordable Care Act

The first step in this study was to develop baseline data for the state on coverage and health spending under the Affordable Care Act (ACA), which represents our current law baseline. We did this using data supplied by the state on health spending by type of service and source of payment under prior law. However, because the state has not developed projections of spending and coverage under the ACA, we estimated these effects using the Lewin Group Health Benefits Simulation Model (HBSM).

In this section, we present the data and methods used to develop estimates of coverage and spending under the ACA for Minnesota for 2014. Our discussion is presented in the following sections:

- The Health Benefits Simulation Model;
- Sources of health insurance coverage;
- Health spending in Minnesota by type of service;
- Health spending by source of payment; and
- Health spending under the ACA.

### The Health Benefits Simulation Model (HBSM)

In this study, we estimated the distribution of health insurance coverage and spending for Minnesota in 2014 with and without implementation of the ACA. We developed these estimates for employers, consumers, providers and other key stakeholders using a micro-simulation model of the US health care system developed by The Lewin Group called the Health Benefits Simulation Model (HBSM). HBSM has been used to develop estimates of the cost and coverage impacts of major health reform initiatives such as the ACA on the nation, individual states and major population centers within states. We adapted HBSM for use in Minnesota by calibrating the model to use data developed by the Minnesota Department of Health (MDH) on population, sources of health insurance coverage and health spending.

The model is based upon the pooled Medical Expenditures Panel Survey (MEPS) data for 2002 through 2005. These data provide information on sources of coverage and health expenditures for a representative sample of the population. We then re-weighted the file to reflect estimates of the Minnesota population by sources of health insurance using the 2009 Minnesota Health Access Survey. These data were also adjusted to reflect the distribution of Minnesota residents by age, gender, income and other demographic characteristics. We then adjusted the health spending reported in the reweighted household data to replicate projections of health spending in Minnesota developed by the MDH.

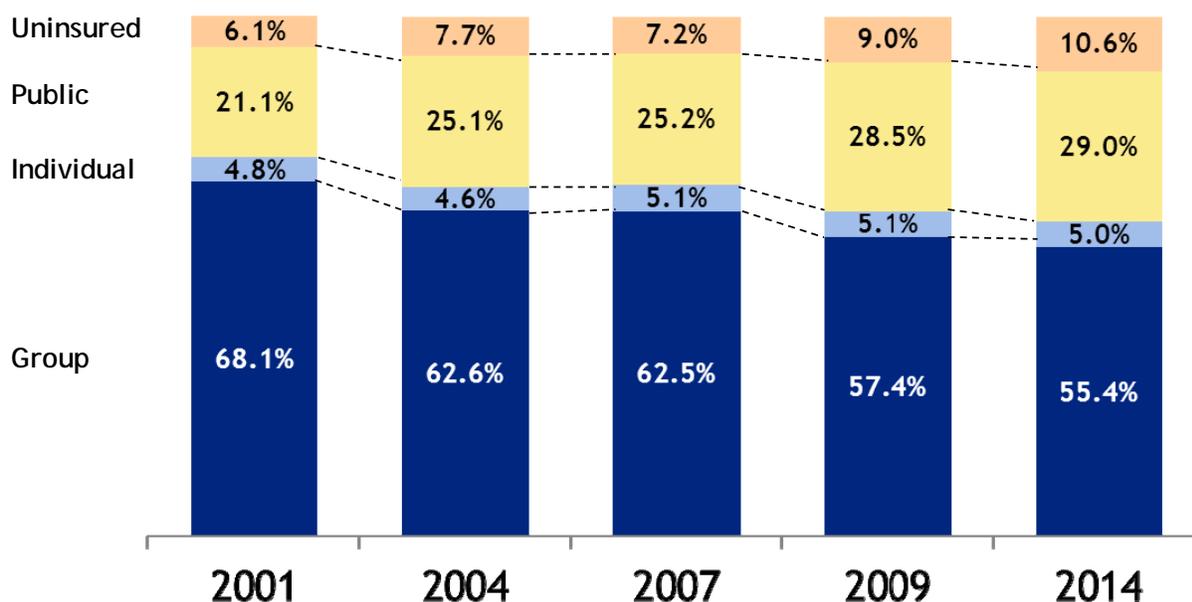
Once calibrated to Minnesota specific data, we used HBSM to simulate the impact of the ACA on the state of Minnesota in 2014. This then forms our baseline estimate, which is an estimate of insurance coverage health spending that will occur in Minnesota in 2014 assuming the ACA is fully implemented as required under the act. We then used the model to estimate health spending and coverage under the single-payer plan. The impact on each stakeholder group is

defined to be the difference between what would have been spent by members of each stakeholder group (i.e., employers, consumers, state government etc.) under the baseline (i.e., with the ACA) and what they would spend under the single-payer plan.

### Sources of Health Insurance Coverage

Our approach is to first calibrate the model to reflect the distribution of people by source of coverage in 2014 assuming the ACA is not implemented. This is based upon trends in the distribution of Minnesota residents by source of health insurance coverage as reported by the Minnesota Department of Health (MDH) in “Health Insurance Coverage in Minnesota, Updated Results from 2009.” We projected these coverage levels in 2014 based upon the trends in health insurance coverage prior to passage of the ACA. These data and projections are shown below, in *Figure A-1*.

Figure A-1. Sources of Insurance Coverage in Minnesota without the ACA: 2001 - 2014



Source: “Health Insurance Coverage in Minnesota, Updated Results From 2009”, Minnesota Department of Health (MDH) and The Lewin Group projections

Once calibrated to these coverage levels, we modeled the impact of the ACA on sources of coverage. We estimate that the number of uninsured in Minnesota would fall from 578,000 in 2014 without ACA to about 262,000 people under the ACA (*Figure A-2*). We assume that people covered under the MinnesotaCare program are transferred to the exchange and the program is cancelled along with dedicated funding sources.

Figure A-2: Number of Insured by Sources of Health Insurance Coverage in Minnesota for 2014 with and without Enactment of the ACA (thousands)

	Pre-ACA Law <sup>a/</sup>	With ACA
Employer <sup>b/</sup>	3,041	2,976
Non Group	276	119
Individual Exchange	-	477
Tricare/VA	66	66
Medicare	683	683
Dual Eligible	93	93
Medicaid <sup>c/</sup>	601	807
MinnesotaCare	145	-
Uninsured	578	262
<b>Total</b>	<b>5,483</b>	<b>5,483</b>

a/ Assumes that the ACA is not implemented.

b/ Includes employers in and out of the small employer exchange.

c/ Does not reflect the recent increase in Medicaid eligibility to 75 percent of the FPL which was made possible under the early implementation provisions of the ACA.

Source: Lewin Group Estimates using the Health benefits Simulation Model (HBSM)

### Health Spending Projections for Minnesota by Type of Service

Figure A-3 presents estimates of health spending for 2009 published by Minnesota Department of Health (MDH) in "Minnesota Health Care Spending and Projections, 2009." These include spending by hospital care, physician services, long-term care (including home care), prescription drugs, dental, other professional services, and other spending.

Figure A-3. Minnesota Health Spending in 2009 by Type of Service

	Total Spending	Percent of Total Spending
Hospital	\$11,976,283	32.9%
Physician Services	\$7,106,834	19.5%
Long-Term Care (inc. Home Care)	\$5,646,252	15.5%
Prescription Drugs	\$3,600,959	9.9%
Dental	\$1,285,912	3.5%
Other Professional Services <sup>a/</sup>	\$1,355,614	3.7%
Other Spending <sup>b/</sup>	\$5,433,057	14.9%
<b>Total Spending</b>	<b>\$36,404,911</b>	<b>100%</b>

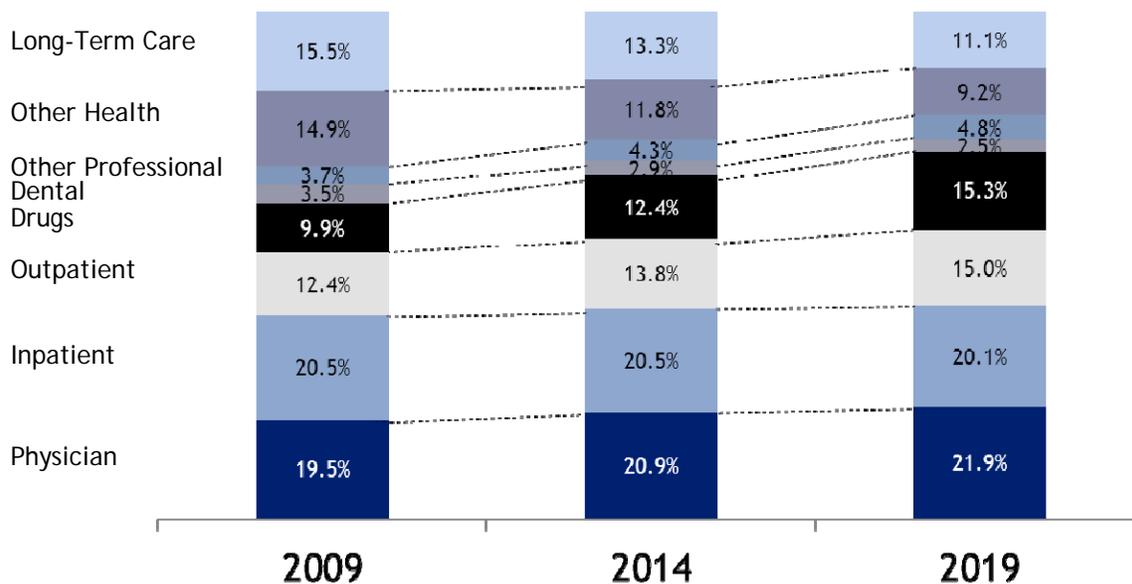
a/ "Other professional services" includes spending for services by private-duty nurses, chiropractors, podiatrists and other health practitioners who are not physicians or dentists.

b/ "Other spending" includes spending for durable medical goods, chemical and mental health, administration and the net cost of insurance.

Source: Minnesota Department of Health (MDH)

The MDH also developed projections of health spending by type of service through 2019. Using these data, we estimated the distribution of health care spending by type of service without the ACA in 2014 based upon the 10 year trend revealed in these estimates (*Figure A-4*).

**Figure A-4: Distribution of Health Care Spending in MN by Type of Service, 2009**



a/ The estimate for 2014 was interpolated from the MDH numbers for 2009 and 2019.

Source: "Minnesota Health Care Spending and Projections, 2009," Minnesota Department of Health, June 2011

### Current Health Spending and Projections in Minnesota by Source of Payment

The MDH also provides estimates of health spending for major public and private sources of payment for health services. Payment estimates are provided for Medicare, Medical Assistance, private health insurance, out-of-pocket, and other private and public spending. These data on spending by source of payment are provided in *Figure A-5*, below.

**Figure A-5. Minnesota Health Spending in 2009 by Source of Payment**

Medicare	\$5,788,064	15.9%
Medical Assistance	\$7,006,425	19.2%
Other Public <sup>a/</sup>	\$2,383,924	6.5%
Private Health Insurance	\$15,467,352	42.5%
Other Private	\$981,767	2.7%
Out-of-Pocket	\$4,777,379	13.1%
<b>All Sources of Funding</b>	<b>\$36,404,911</b>	<b>100%</b>

a/ Major sources of "other public" include the state public health programs (MinnesotaCare, and General Assistance Care) public workers compensation, public health spending, and the VA.

Source: Minnesota Department of Health (MDH)

We estimated 2014 spending amounts using health care spending projections provided by the Minnesota Department of Health as reported in the June 2011 report, “*Minnesota Health Care Spending and Projections, 2009*,” as shown in **Figure A-6**. These data include projections of spending growth separately for public and private sources.

**Figure A-6. Total Public and Private Health Care Spending in MN, 2000 to 2019 (billions of dollars)**

	Private	Public	Total
Actual	\$17.9	\$11.6	\$29.5
2005	\$19.0	\$12.1	\$31.3
2006	\$20.2	\$13.1	\$33.3
2007	\$20.9	\$14.1	\$35.1
2008	\$21.2	\$15.2	\$36.4
2009			
Projected	\$20.7	\$16.1	\$36.8
2010	\$20.8	\$17.4	\$38.2
2011	\$20.5	\$19.1	\$39.6
2012	\$21.4	\$20.7	\$42.1
2013	\$23.9	\$22.5	\$46.4
2014	\$27.7	\$24.2	\$51.8
2015	\$31.9	\$26.2	\$58.1
2016	\$35.8	\$28.5	\$64.2
2017	\$39.9	\$31.1	\$71.0
2018	\$44.1	\$33.9	\$78.0
2019			

Source: Minnesota Department of Health (June 2011), *Minnesota Health Care Spending and Projections, 2009*

We used the HBSM data adjusted to Minnesota coverage levels to provide a detailed distribution of health spending by type of service and source of payment. We then adjusted spending in these data to replicate the distribution to spending by type of service and source of payment estimated for 2014 by MDH. **Figure A-7** presents our final estimates of spending for Minnesota by type of service and source of payments in 2014, assuming the ACA is not implemented.

Figure A-7. Spending for Health Services in Minnesota without ACA in 2014: Excludes Insurer Administration (millions)

	Total - PHC	Hospital Care	Physician and Clinical Services	Dental Services	Other Professional Services	Home Health Care	Prescription Drugs	Durable Medical Products	Nursing Home Care	Other Personal Health Care
Out-of-Pocket	\$5,211	\$467	\$956	\$595	\$393	\$139	\$1,038	\$265	\$1,232	\$126
Employer Workers	\$13,354	\$5,325	\$4,782	\$678	\$504	\$0	\$2,018	\$47	\$0	\$0
Employer Retirees	\$1,272	\$509	\$388	\$32	\$48	\$0	\$291	\$6	\$0	\$0
Non-Group	\$1,161	\$479	\$452	\$25	\$75	\$0	\$124	\$5	\$0	\$0
Medicare	\$8,362	\$4,448	\$1,434	\$6	\$314	\$237	\$1,315	\$111	\$499	\$0
Medicaid	\$9,777	\$3,104	\$940	\$112	\$631	\$973	\$815	\$0	\$1,433	\$1,770
CHAMPUS/TriCare	\$2,092	\$1,363	\$370	\$0	\$0	\$0	\$359	\$0	\$0	\$0
Other Public	\$907	\$565	\$253	\$4	\$7	\$7	\$17	\$4	\$17	\$31
Workers Compensation	\$846	\$254	\$484	\$0	\$93	\$0	\$7	\$9	\$0	\$0
Other Private	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL</b>	<b>\$42,982</b>	<b>\$16,512</b>	<b>\$10,059</b>	<b>\$1,453</b>	<b>\$2,064</b>	<b>\$1,356</b>	<b>\$5,984</b>	<b>\$446</b>	<b>\$3,181</b>	<b>\$1,926</b>

Source: The Lewin Group's Health Benefits Simulation Model (HBSM)

## Health spending in Minnesota under the ACA in 2014

The ACA requires most Americans to have health insurance and imposes penalties on those who go without coverage. To assure access to affordable coverage, the ACA expands the Medicaid program to cover all low-income adults living below 133 percent of the federal poverty level (FPL). The ACA also provides a new premium subsidy program for people living below 400 percent of the FPL (\$89,000 for a family of four). The ACA also provides a small employer health insurance tax credit for employer's with low-wage workers for the first two years of providing coverage. The ACA also reforms insurance markets by assuring guaranteed issue of coverage, limiting premium variation by age and prohibiting premium variation by health status. The ACA is described in further detail in *Figure A-8*.

HBSM simulates the effects of the ACA based upon the data used as input and several studies of how changes in the price of insurance affect the decisions of employers and households to take insurance coverage. The premium tax credits for example, are assumed to be regarded as a reduction in the price of insurance, as are the tax credits for employers. We also used the model to simulate the expansions in eligibility under Medicaid using the actual income eligibility levels for the existing program and the premiums that can be charged under the new insurance rating rules under the ACA.

In a final step we estimate the premiums individuals would be required to pay, and the amount of spending reported for people in the MEPS that would be covered under the proposal. The result is estimates of the impact of the ACA on employers, individuals, providers, state governments and the federal government.

Our estimates of health spending by type of service and sources of payment under the ACA are presented in *Figures A-9* and *A-10*.

## Figure A-8: The Affordable Care Act (ACA)

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The ACA requires most Americans to have health insurance. To assure access to affordable coverage, the Act expands the Medicaid program to cover all low-income adults living below 133 percent of the federal poverty level (FPL). The Act also provides a new premium subsidy program for people living below 400 percent of the FPL (\$88,000 for a family of four). In addition, the Act reforms the insurance markets by requiring guaranteed issue of insurance without exclusions for pre-existing conditions, and prohibits carriers from denying coverage or increasing premiums on the basis of individual health status.

The Act also provides a small employer health insurance tax credit for the employer's first two years of providing coverage. The credit is available to firms with fewer than 25 workers with an average employee payroll of less than \$50,000. The Act also creates a temporary reinsurance program for employer sponsored retiree benefits, although the program includes only enough funding for two to three years of operation.

The centerpiece of the Act is a newly established "exchange" that presents consumers with a selection of health coverage alternatives. The exchange will be available to individuals and firms with fewer than 100 workers, although the state has the option to extend the exchange to larger firms beginning in 2017. Only people participating in the exchange who do not have access to qualifying employer coverage will be eligible for the premium subsidies.

The ACA creates penalties for both employers with uncovered workers and individuals who do not have coverage.

- Employer penalties: Non-insuring employers with more than 50 workers pay a penalty if one or more of their workers obtain premium subsidies in the exchange. The penalty amount is equal to the lesser of \$3,000 for each full-time worker receiving a premium credit, or \$2,000 for each full-time worker; and
- Individual penalties: The Act imposes a penalty on uninsured individuals equal to the greater of \$695 and 2.5 percent of income, not to exceed \$2,085.

The Act is funded with reductions in spending under Medicare and additional federal tax revenues. The Act creates a new excise tax on high cost health plans (premiums over \$10,200 for individuals and \$27,500 for families). It also includes a second excise tax on health insurance, and new excise taxes on branded prescription drugs and device manufacturers.

The federal government pays all of the cost of the expansion in Medicaid through 2016. A state matching requirement of 10 percent is phased-in by 2019. The Act increases the Federal Medical Assistance Percentage (FMAP) for the Children's Health Insurance Program (CHIP) by 23 percentage points, up to a maximum of 100 percent.

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Figure A-9. Estimated Health Spending by Type of Service with and without the ACA for 2014 (millions)

	Pre-ACA	With ACA
Hospital	\$16,512	\$17,056
Physician	\$10,059	\$10,391
Dental	\$1,453	\$1,456
Other Professional	\$2,064	\$2,124
Home Health	\$1,356	\$1,356
Prescription Drugs	\$5,984	\$6,120
Durable Med. Equipment	\$446	\$464
Nursing Home	\$3,181	\$3,181
Other Personal Care	\$1,926	\$1,926
TOTAL Health Services	\$42,982	\$44,075
Insurer/Program Administration	\$3,418	\$3,553
TOTAL with Administration	\$46,400	\$47,628

Source: The Lewin Group's Health Benefits Simulation Model (HBSM)

Figure A-10. Estimated Health Spending by Payer Source with and without the ACA for 2014 (millions)

	Pre-ACA	With ACA
Out-of-Pocket	\$5,211	\$5,335
Employer Workers	\$13,354	\$12,506
Employer Retirees	\$1,272	\$1,152
Non-Group	\$1,161	\$793
Medicare	\$8,362	\$8,344
Medicaid	\$9,777	\$10,326
TRICARE/VA	\$2,092	\$2,078
Other Public	\$907	\$628
Workers Compensation	\$846	\$846
Exchange coverage	\$0	\$2,067
TOTAL Health Services	\$42,982	\$44,075
Private Insurer Administration	\$2,055	\$2,121
Public Program administration	\$1,363	\$1,432
TOTAL with Administration	\$46,400	\$47,628

Source: The Lewin Group's Health Benefits Simulation Model (HBSM)

## Appendix B: The Impact of a Single-Payer Plan on Health Care Administrative Costs in Minnesota

In this analysis, we estimated the impact of covering all residents of Minnesota under a single insurance program. This program would substantially reduce the amount of resources required to administer the health care system due to the standardization of coverage and provider payment methods throughout the state. Physicians and hospitals would also devote less time and resources to obtain reimbursement for services provided.

Once we had completed modeling the impact of the ACA in Minnesota, we used the model to estimate spending for each stakeholder group using HBSM. Specifically, we estimated the distributional impact of the single-payer plan on various subgroups of payers. These payers include employers by firm size and industry, and families by family income and age of family head. These estimates were developed using HBSM, which is specifically designed to provide these detailed distributional impact analyses for state-level health reform initiatives.

The difference between estimated spending under the ACA and estimated spending for the single-payer program for a given stakeholder group serves as our estimate of the impact of the single payer program for that group. These estimates are developed separately for employers, consumers, providers and governments as presented above.

In this section, we explain how we estimated insurer, provider, and hospital administrative cost savings under a single-payer plan in Minnesota. All administrative costs are estimated using the Health Benefits Simulation Model (HBSM) based primarily upon MDH data on administration. Our analysis is presented in the following sections:

- HBSM simulation of single-payer plan;
- Administrative Spending in Minnesota;
- Insurer administrative expenses;
- Physician administrative costs; and
- Hospital administrative expenses.

### Changes in Utilization of Health Services under the Single-payer Plan

We estimated changes in utilization for newly covered people based upon the assumption that health spending for newly insured people will increase to the levels reported by insured people with similar demographic and health status characteristics. We also estimate a change in utilization for people who see a reduction in cost-sharing under the program. Using data from the National Health Insurance Experiment, researchers found that the price elasticity for health services was -0.2, which means that a 10 percent increase in out-of-pocket costs for health services results in a reduction in total spending of 2 percent.<sup>4</sup> Using these data, we estimated

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<sup>4</sup> Newhouse, J., et al., "Free for All? Lessons from the RAND Health insurance Experiment" Cambridge, MA: Harvard University Press, 1993.

the reduction in health spending for people moving to high-deductible plans using his estimate of a -0.2 price elasticity.

We assumed that eliminating managed care and various forms of utilization management programs now used in many private health plans would increase spending. Utilization management includes such things as pre-certification for hospitalizations and discharge planning. We estimated the increases in spending from eliminating these functions based upon research showing that private plans save four dollars for every dollar spent on utilization management. We use our HBSM ACA estimate of utilization management costs and assume that zero dollars will be spent on utilization management under single-payer. We use the managed care market analysis data to estimate that 13.50 percent of Minnesota residents are enrolled in full managed care (i.e. HMOs) before single-payer and assume that these HMOs – this savings is eliminated under single-payer.

We also estimate an increase in spending due to the elimination of Health Maintenance Organizations (HMOs), which comprise 13.5 percent of the state's population.<sup>5</sup> HMOs reduce utilization through co-ordination of care, disease management and negotiated discounts with providers. One study showed that health services utilization in IPA HMOs had been about four percent lower than in other types of health plans, and an additional 15 percent through selective contracting, which is not relevant to the single-payer payment system).<sup>6</sup> Based upon this research, we assumed that utilization and costs would increase by 4.0 percent for affected individuals.

Based upon a review of drug price discounts for HMOs and large purchasers of drugs, we assume that the state is able to negotiate savings of about eight percent.<sup>7</sup> We assume similar percentage savings for purchases of durable medical equipment.

When estimate an increase in fraud detection because unlike private insurers, public programs have the power to subpoena records, making it easier for the payer to detect fraud. Based upon the available research, we assume that about five percent of claims are inaccurate, and 20 percent of all inaccurate claims will be detected under single-payer.

## Administrative Spending in Minnesota

As discussed in *Appendix A*, we estimate that total health spending in Minnesota will be about \$47.63 billion in 2014 (including administration and excluding public health, research, and construction). Of this, we estimate that about \$3.55 billion (7.46 percent) will be attributed to private insurer administration and public health insurance program administration.

Total administrative costs include the cost of administering health insurance in addition to the costs incurred by hospitals and physicians for administration. Costs associated with insurer,

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<sup>5</sup> Health Leaders-Interstudy 2009

<sup>6</sup> The Lewin Group In., "New Evidence on Savings from Network Models of Managed Care," (a report to the Healthcare Leadership Council), Washington DC, May 1994.

<sup>7</sup> "Prescription Drug Coverage, Spending, Utilization and Prices: Report to the President," Department of Health and Human Services (HHS), April 2000.

hospital, and physician administration include the costs of administering payroll, quality control programs, claims submission, adjudication of claims, utilization review, and selection contracting negotiations with insurers.

We estimate that total insurer administrative costs in Minnesota will be about \$3.51 billion in 2014, post-ACA. This is based upon pre-ACA administrative costs in 2014, as provided by the HBSM, times a factor of 1.0252; administrative costs go up in the HBSM by this proportion (1.0252).

A Minnesota Department of Health (MDH) analysis of data from Minnesota annual hospital reports indicates that hospital administrative costs were equal to about \$1.82 billion (or 14.7 percent) of hospital net patient revenues in 2009. Based on a growth factor of 1.429 between 2009 and 2014, total administrative expenses equate to \$2.61 in 2014, using the HBSM to adjust for ACA-related changes.

Based upon administrative data provided by Casalino et al in "What Does It Cost Physician Practices to Interact With Health Insurance Plans" (*Health Affairs*, 2009), in conjunction with Minnesota physician revenue estimates, we estimate that physician administrative costs will be about \$2.26 billion in 2014, before the ACA. Using our HBSM to adjust for ACA changes, we estimate that physician administrative costs will be about \$2.28 billion in 2014, assuming full ACA implementation.

Total health care administrative costs for insurers, physicians, and hospitals will be about \$8.40 billion in 2014, post-ACA.

## Insurer Administrative Expenses

For purposes of this analysis, insurer administrative costs are defined to be the difference between insurer revenues and benefit payments. Total insurer administrative costs are comprised of two major components: (1) administrative expenses of government-financed health programs and (2) the net cost of private health insurance (including administrative fees for private self-insured plans).<sup>8</sup> Government programs and private insurers incur administrative costs from several activities including determining eligibility, processing claims, research, pre-service authorization and post-service utilization review such as reviewing claims for accuracy. Administrative overhead for private insurers also entails marketing costs, profit, taxes, and the accumulation of reserves less interest earned on reserve balances. As described above, we estimate that total insurer and program administrative costs in Minnesota will be about \$3.51 billion in 2014, post-ACA. Detailed administrative spending, by expense category, is shown below (*Figure B-1*).

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<sup>8</sup> Heffler S, et al. (2005, Feb. 23), "Trends: U.S. Health Spending Projections For 2004-2014: The Latest Outlook," *Health Affairs*, 5(1): w74-85

Figure B-1. Estimated Insurer Spending for Administration in Minnesota in 2014 (millions)

Expense Category	Amount pre ACA	Amount after ACA
Billing and Enrollment	\$212	\$218
Claim Processing	\$590	\$605
Fraud Detection	\$133	\$136
Customer Service	\$239	\$245
Product Management and Marketing	\$703	\$721
Underwriting	\$46	\$0
Regulatory Compliance	\$63	\$97
Lobbying	\$3	\$3
Provider Relations and Contracting	\$176	\$180
Quality Assurance and Ut Management	\$255	\$262
Wellness and Health Education	\$123	\$126
Research and Development	\$56	\$58
Charitable Contributions	\$36	\$37
General Administration	\$799	\$819
Total	\$3,436	\$3,507

Source: MDH, *Administrative Costs at Minnesota Health Plans in 2009* (2011); The Lewin Group Health Benefits Simulation Model (HBSM)

Adopting a single source of insurance would reduce insurer administrative costs by streamlining claims processing, standardizing coverage rules and eliminating costs associated with marketing and changes in sources of coverage. In this section, we estimate the changes in insurer administrative costs resulting from the Minnesota single-payer plan.

We estimated administrative costs under single-payer by extrapolating from administrative costs for the fee-for-service (FFS) component of the Medicare program. The Medicare experience was selected as the basis for our analysis because it is effectively a single source of insurance for aged and disabled people, which reflects the unique costs of health benefits administration in the US. The Medicare program is largely administered through contracts with private claims processing and utilization review firms so that overhead costs are reflected in the Medicare contract amounts.

CMS estimates that total program and insurer administrative costs for Medicare were \$31.0 billion in 2009. However, \$24.1 billion of this is attributed to the cost of administering commercial insurance for prescription drugs and coverage under private plans through the Medicaid Advantage program. Only \$6.9 billion is attributed to government administration – costs which are largely attributed to operation of FFS coverage under the program.

Using CMS' National Health Expenditure data (2009) for Medicare government administrative costs and dividing by total Medicare FFS enrollees (as provided by CMS), annual administrative costs in 2009 under the Medicare program were determined to be about \$203.49 per beneficiary

(*Figure B-2*). We calculate the distribution of Medicare FFS administrative costs by extrapolating from the distribution of administrative spending by MN health plans (2009) and including only those expenses applicable to Medicare administration—claims processing, utilization review, research/demonstrations, and general agency administration. Here, we calculate that 34.7 percent of these costs are attributed to claims processing, 15.0 percent of these costs are attributed to utilization review, 47.0 percent of these costs are attributed to general agency administration, and the remainder of costs are attributed to research and demonstrations.

To determine costs for enrollees under single payer, we assume that elimination of hospital claims will result in a \$14.12 per enrollee decrease (or 20 percent), as hospital claims comprise about 20 percent of all claims. Under the single-payer plan, hospitals are given an annual budget for program operations, which eliminates claims processing for hospitals. We reduce Medicare claims processing costs in proportion to the number of claims Medicare receives for hospital care.

After making this adjustment, annual administrative costs under the Medicare program were determined to be about \$189.33 per Medicare enrollee and \$81.02 per non-Medicare enrollee in 2009 (*Figure B-2*), under single-payer. The Medicare data overstate the likely cost of administering insurance for the non-Medicare population. This is because the level of health services utilization is typically lower for the general population than it is for aged and disabled people now covered under Medicare. Non-aged (people under age 65) spending is calculated to be 42.8 percent of aged (people age 65 and older) spending, based on health spending data provided by the Minnesota Department of Health. Based upon these data, we assumed that insurer administrative costs for the non-Medicare population would be about 42.8 percent lower than for Medicare recipients. This results in an estimated per-capita administrative cost for the non-Medicare population of about \$81.02 per person due to lower levels of provider utilization (i.e., claims filing) among this population.

Using Medicare spending growth projections, we estimate per-capita annual administrative costs in 2014 to be \$212.93 for Medicare enrollees and \$91.12 for non-Medicare enrollees, under single-payer. Multiplying by total population, this results in total Minnesota single-payer administrative costs in 2014 of \$142.2 million for Medicare enrollees and \$425.2 million for non-Medicare enrollees (*Figure B-2*).

Based on these figures, we estimate that insurer administrative cost under the single-payer plan would be \$567.4 million in 2014—about \$142.2 million for Medicare enrollees and \$425.2 million for non-Medicare enrollees.

Figure B-2. Derivation of Single-payer Administrative Costs Based upon Medicare Administrative Costs for the Medicare Fee-for-service Program

	Medicare FFS Costs per Enrollee <sup>c/</sup>	Elimination of Hospital Claims	Costs for Minnesota Medicare Enrollees under Single-payer	Costs for Non- Medicare Enrollees under Single-payer
<b>Administrative Costs in 2009</b>				
Claims Processing <sup>b/</sup>	\$70.61	-\$14.12	\$56.49	\$24.17
Utilization Review	\$30.52		\$30.52	\$13.06
Research/Demonstrations	\$6.72		\$6.72	\$2.87
General Agency Administration	\$95.60		\$95.60	\$40.91
Total <sup>a/</sup>	\$203.49		\$189.33	\$81.02
<b>Administrative Costs in 2014</b>				
Per-Capita Annual Administrative Costs in 2014			\$212.93	\$91.12
Minnesota Population			667,611	4,666,775
Total Minnesota Single-payer Administrative Costs in 2014 (in millions)			\$142.2	\$425.2

a/ Medicare FFS Costs per Enrollee were calculated using CMS' National Health Expediter data (2009) for Medicare government administrative costs divided by total Medicare FFS enrollees

b/ We reduce Medicare claims processing costs in proportion to the number of claims Medicare receives for hospital care (20 percent).

c/ We calculate the distribution of Medicare FFS administrative costs by extrapolating from the distribution of administrative spending by MN health plans (2009) and including only those expenses applicable to Medicare administration

## Physician Administrative Costs

We have defined physician administrative costs to include all physician overhead expenditures attributed to interacting with insurance companies. Administrative costs include expenditures for business office staff, medical receptionists, claims filing and collections, utilization review and quality assurance, marketing, office space for administrative personnel and other general administrative costs such as office managers, interest, and insurance costs. Administrative costs also include the value of physician time devoted to practice management and insurer related functions such as claims adjudication and selective contracting negotiations. Administrative costs do not include the cost of medical supplies, laboratory and radiological services, and facilities related to patient care (e.g., rent for examining rooms, etc.).

The single-payer plan would reduce physician administrative costs for those covered under the program. This would be done by providing reimbursement for this population through a single source using standardized payment levels and reimbursement rules without cost-sharing requirements, except co-payments for certain services listed in the Program Specifications (Section II) of this report. The program would also eliminate many of the utilization management programs used by insurers.

We estimate that physician administrative costs for care provided to the Minnesota population would be reduced by about 64.98 percent under the single-payer plan, for a savings of about \$1.36 billion in 2014.

In this section, we explain how we estimated the potential savings in physician administrative costs under the single-payer plan in Minnesota. We begin by explaining how we estimated physician administrative costs under the current system.

### *Physician Administrative Costs under Current Policy*

Comprehensive data on physician overhead and administrative costs in Minnesota are unavailable. Until 2010, reporting for physician clinic data was required only for clinics with revenue greater than one million; since, collection has been repealed in state law. Further, for data collected before 2011, since clinics are not licensed in the state of Minnesota and the state does not know the “universe,” it is difficult for the state to know what portion of clinics have report data. More so, the State expressed “grave concerns” over the validity of the previously collected data that derive from ambiguity in its collection. A final concern was that administrative costs as a percent of revenue range from zero percent to 98 percent. Thus, we were discouraged by the State from using the 2009 physician cost data that was provided to us.

**Figure B-3. Estimates of Administrative Expenses per Physician in 2014**

Administrative Function							
	Authorization	Formulary	Claims/Billing	Credentialing	Contracting	Quality Data	Total
<b>Hours per Physician Devoted to Insurer Administration</b>							
Physicians	1.0	1.3	0.6	0.06	0.05	0.04	3.05
Nursing Staff	13.1	3.6	2.3	0.02	0	0.01	19.03
Clerical Staff	6.3	0	28	2.03	0	0.14	36.47
Senior Admin	0	0	2.2	0.01	0.13	0.07	2.41
Legal/Accountant	0	0	0	0	0.15	0	0.15
<b>Percent of Hours by Task</b>							
Physicians	32.79%	42.62%	19.67%	1.97%	1.64%	1.31%	100.00%
Nursing Staff	68.84%	18.92%	12.09%	0.11%	0.00%	0.05%	100.00%
Clerical Staff	17.27%	0.00%	76.78%	5.57%	0.00%	0.38%	100.00%
Senior Admin	0.00%	0.00%	91.29%	0.41%	5.39%	2.90%	100.00%
Legal/Accountant	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%
<b>Costs by task</b>							
Physicians	\$5,170	\$6,720	\$3,102	\$310	\$258	\$207	\$15,767
Nursing Staff	\$15,004	\$4,123	\$2,634	\$23	\$0	\$11	\$21,796
Clerical Staff	\$4,326	\$0	\$19,225	\$1,394	\$0	\$96	\$25,040
Senior Admin	\$0	\$0	\$3,215	\$15	\$190	\$102	\$3,522
Legal/Accountant	\$0	\$0	\$0	\$0	\$2,149	\$0	\$2,149
Total	\$24,499	\$10,844	\$28,176	\$1,741	\$2,597	\$417	\$68,274

Consequently, estimates for physician administrative expenses were developed based upon Casalino et al's "What Does It Cost Physician Practices to Interact With Health Insurance Plans," (*Health Affairs*, May 2009). This study uses three survey instruments to collect physician data, with the sample of physicians selected using the 2006 American Medical Association (AMA) Physician Masterfile and the Medical Group Management Association (MGMA) Universe national file. Estimates provided in the study were reweighted to reflect physician revenues in Minnesota. These estimates, adjusted to 2014, are provided in *Figure B-3* above.

We estimate that total physician revenues in Minnesota would be about \$10.4 billion in 2014. For purposes of this analysis, we assume that physician revenues in Minnesota are distributed across administrative functions as reported in the *Health Affairs* data. These data indicate that about 16.62 percent of physician revenues are used for administration. The 2014 distribution of physician administrative costs in Minnesota as a percentage of revenue, by staff-type and task, is presented in (*Figure B-4*) based upon the *Health Affairs* data.

The key assumption in developing these estimates is that the groups surveyed are representative of medical practices throughout the state. While the authors surveyed physicians across different sized practices and in different specialty types, it is possible that the survey sample groups do not align with Minnesota's physician group makeup.

Also, the survey data are self-reported, meaning that the results reflect physician estimates and may not be exact. As explained by Casalino et al, "the surveys and cover letter repeatedly and explicitly asked respondents to report time spent interacting with health plans; however, we were concerned that they would not be able to separate time spent on billing/claims interactions with health plans from billing/claims interactions with Medicare and Medicaid."<sup>9</sup> However, to adjust for this possible reporting error, the authors were conservative and "reduced the claims/billing time estimates presented by 38.4 percent – the percentage of gross charges attributable to these payers – from the data reported."<sup>10</sup>

It should also be noted that the response rate of the survey, while not a factor of major concern, could have resulted in biased responses. The adjusted response rate was 57.5 percent; this rate was 60.1 percent for physicians, 51.5 percent for physician-administrators, and 56.6 percent for administrators. As discussed by the authors, "recent work suggests that significant nonresponse bias is unlikely in physician surveys with response rates in this range."<sup>11</sup> However, it is possible that those physicians and administrators most concerned with time spent interacting with health plans may have been more likely to respond than physicians who were less concerned.

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<sup>9</sup> Casalino et al (2009 May). What Does It Cost Physician Practices to Interact With Health Insurance Plans, *Health Affairs*, 28(4): w533-w543.

<sup>10</sup> *ibid*

<sup>11</sup> *ibid*

Figure B-4. Distribution of Physician Administrative Costs in MN as a Percentage of Revenue by Staff Type and Task, 2014

	Authorization	Formulary	Claims/Billing	Credentialing	Contracting	Quality Data	Total	Percent of Total Labor Costs
Physicians	\$5,170	\$6,720	\$3,102	\$310	\$258	\$207	\$15,767	3.84%
Nursing staff	\$15,004	\$4,123	\$2,634	\$23	\$0	\$11	\$21,796	5.30%
Clerical staff	\$4,326	\$0	\$19,225	\$1,394	\$0	\$96	\$25,040	6.09%
Senior admin	\$0	\$0	\$3,215	\$15	\$190	\$102	\$3,522	0.86%
Legal/accountant	\$0	\$0	\$0	\$0	\$2,149	\$0	\$2,149	0.52%
<b>Total</b>	<b>\$24,499</b>	<b>\$10,844</b>	<b>\$28,176</b>	<b>\$1,741</b>	<b>\$2,597</b>	<b>\$417</b>	<b>\$68,274</b>	<b>16.62%</b>
Percent of admin. costs	35.9%	15.9%	41.3%	2.6%	3.8%	0.6%	100.0%	
Percent of total revenue	6.0%	2.6%	6.9%	0.4%	0.6%	0.1%	16.6%	

Source: Projected spending in Minnesota for physician services and practice cost data estimated from MDH cost data estimated using: Casalino, I., et al., "What Does It Cost Physician Practices to Interact With Health Insurance Plans," Health Affairs, May 2009.

### Physician Administrative Costs under Single-Payer Plan

As shown in *Figure B-5* below, compared to the ACA baseline, the single-payer plan realizes physician administrative savings across the areas of authorization, formulary, claims/billing, credentialing, and contracting – for a total savings of \$1.49 billion in 2014 under single-payer.

**Figure B-5. Expenditures for Physician Administration under the Single-payer Proposal in Minnesota for 2014 (millions)<sup>a/, b/, c/</sup>**

	Costs Pre-ACA	Costs under ACA	Under Single-Payer
Authorization	\$809	\$819	\$266
Formulary	\$358	\$363	\$118
Claims/Billing	\$931	\$942	\$306
Credentialing	\$58	\$58	\$48
Contracting	\$86	\$87	\$43
Quality Data	\$14	\$14	\$14
Total Insurance-Related Costs	\$2,256	\$2,283	\$796

a/ Estimated for Minnesota using projected spending in Minnesota for physician services and practice cost data estimated from cost data estimated using: Casalino, I., et al., "What Does It Cost Physician Practices to Interact With Health Insurance Plans," Health Affairs, May 2009.

b/ We assume that physician spending for billing and collections would be reduced in proportion to the reduction in Insurer claims administrative spending.

c/ We assume that physician spending for quality assurance and utilization management would decline in proportion to the reduction in the amount spent on these functions for insurance administration under the single-payer plan.

First, authorization decreases by 67.5 percent. This is based on the assumption that changes to administrative spending on authorization will mirror changes to administrative spending on utilization review – under single-payer, it is assumed to equate to 32.7 percent of the cost incurred by health insurance plans under current law. Thus, current spending on authorization is then multiplied by 32.7 percent to determine single-payer spending on authorization. Changes in formulary spending are also assumed to mirror changes in spending on utilization review. Under the assumption that single-payer formulary costs are 32.7 of the costs under current ACA law, this equates to a savings of \$245 million, or 67.5 percent change in spending, compared to current ACA law.

Next, claims and billing administration sees \$636 million in savings under the single-payer plan – a 67.5 percent change in spending. Here, we assume that single-payer claims and billing costs are 32.7 percent of the costs under current ACA law, which is based on the same decrease calculated for health insurance industry spending on claims processing under single-payer.

We estimate that physician administrative costs associated with credentialing will be reduced by \$10 million under single-payer – a 17.2 percent change in spending. Lastly, we assume that contracting will be reduced by about half under the single-payer plan. This results in a savings of \$44 million, or 50.58 percent of post-ACA spending in 2014.

Sources of reduction in physician administrative costs are outlined in further detail below.

- **Single Source Reimbursement**
  - Uniform co-payment requirements and rules
  - Reduction in physician claims filing costs through standardization of reimbursement through the single insurer
  - Eliminated secondary filing for uncovered adults
  - Streamlining of paperwork through electronic claims transmittal
- **Standardization of Reimbursement Rules**
  - Standardization of rules concerning covered services, service bundling, documentation, and allowable reimbursement levels
  - Minimization of time devoted to appeals and adjudication of denied claims and reduced levels of reimbursement
  - Elimination of time devoted to establishing and negotiating selective contracting arrangement with insurers
  - Standardization of forms
- **Elimination of Utilization Management Programs**
  - Minimization of time devoted to pre-certification
  - Minimization of time devoted to second surgical opinion
  - Minimization of time devoted to concurrent utilization review
  - Minimization of time devoted to case management

## Hospital Administrative Expenses

In this analysis, we define hospital administrative costs to include all labor and overhead expenditures attributed to functions other than those directly related to patient care. Administrative costs include all fiscal services including general accounting, patient accounting, credit and collections, admitting and other fiscal services. Administration also includes general hospital administration, public relations, data processing, medical records functions, and rent and depreciation for facilities and equipment assigned to administration. For purposes of this discussion, we classify net-revenues (i.e., profits) as part of administrative overhead. Administrative costs do not include the cost of medical professional staff, medical supplies, laboratory and radiological services, and facilities and equipment directly related to direct patient care.

The Minnesota single-payer plan would eliminate all hospital administrative costs associated with filing claims. Hospitals are given an annual operating budget covering all services provided by the hospital. Each hospital is responsible for allocating resources so that total expenditures remain within these budget constraints. Claims are no longer submitted for reimbursement, reducing the need for record keeping and eliminating all hospital claims

processing costs for both the provider and the insurer. Costs associated with negotiating price discounts with insurance carriers are also eliminated.

In this section, we explain how we estimated the potential savings in hospital administrative costs under the single-payer plan. We begin by explaining how we estimated hospital administrative costs under current law.

### *Administrative Costs under Current Policy*

The Minnesota Hospital Association, under agreement with the Minnesota Department of Health (MDH), collects all Health Care Cost Information System (HCCIS) hospital-specific financial, utilization, staffing and services data. However, hospital administrative cost data are classified as “non-public” and therefore not available at the individual hospital level. Thus, the MDH provided us with a summary analysis of data from annual hospital reports, which included administrative costs for community hospitals in 2009. Detailed data are only available for hospitals with 50 or more beds, as hospitals with fewer than 50 beds are not required to report detailed information on administrative expenses.

As shown in *Figure B-6*, in 2009, total administrative expenses for hospitals with 50 or more beds totaled \$1.62 billion and total administrative expenses for hospitals with few than 50 beds totaled \$0.20 billion—for a total of \$1.82 billion out of \$12.43 billion in operating expenses, or 14.7 percent of operating costs. For hospitals with 50 beds or more, the majority of administrative costs were attributed to “other administrative expenses” (54.9 percent), taxes, fees, and assessments (16.1 percent), and admitting, patient billing, and collection expenses (13.8 percent). Other administrative costs include accounting and financial reporting expenses (4.4 percent), quality assurance and utilization management program activities (3.4 percent), community/wellness education expenses (1.4 percent), promotion and marketing expenses (3.6 percent), and malpractice expenses (2.4 percent).

We then adjusted these data to reflect the rate of growth in health spending that MDH projects for 2009 through 2014. Percent distributions of detailed administrative costs (i.e. Admitting, Patient Billing & Collection Expenses; Taxes, Fees, and Assessments; etc.) for all hospitals were based upon distributions for hospitals with 50 beds or more, as detailed data was only available for these larger hospitals. These 2014 post-ACA administrative costs for all hospitals are shown in *Figure B-7*, below.

Figure B-6. Administrative Cost for Community Hospitals in Minnesota, 2009

	Total Costs	Percent Distribution	Percent of Operating Expenses
<b>Hospitals with 50 Beds or More</b>			
Admitting, Patient Billing & Collection Expenses	\$223,800,862	13.8%	2.0%
Accounting and Financial Reporting Expenses	\$71,053,020	4.4%	0.6%
Quality Assurance and Utilization Management Program/Activity Expenses	\$54,794,136	3.4%	0.5%
Community/Wellness Educations Expenses	\$22,817,154	1.4%	0.2%
Promotion and Marketing Expenses	\$57,740,200	3.6%	0.5%
Taxes, Fees, and Assessments	\$260,659,003	16.1%	2.4%
Malpractice Expenses	\$39,232,364	2.4%	0.4%
Other Administrative Expenses	\$889,243,878	54.9%	8.1%
<b>Total Administrative Expenses</b>	<b>\$1,619,340,617</b>	<b>100.0%</b>	<b>14.7%</b>
Operating Expenses	\$11,036,233,641		
<b>Hospitals with Fewer than 50 Beds<sup>1/</sup></b>			
<b>Total Administrative Expenses</b>	<b>\$204,148,073</b>		<b>14.6%</b>
Operating Expenses	\$1,397,686,701		
<b>All Hospitals</b>			
<b>Total Administrative Expenses</b>	<b>\$1,823,488,690</b>		<b>14.7%</b>
Operating Expenses	\$12,433,920,342		

1/ Hospitals with fewer than 50 beds are not required to report detailed information on administrative expenses.

Source: MDH analysis of data from annual hospital reports.

Figure B-7. Administrative Costs for All Hospitals in Minnesota under ACA, 2014

	Total Costs
Admitting, Patient Billing & Collection Expenses	\$332,943,562
Accounting and Financial Reporting Expenses	\$105,703,997
Quality Assurance and UM Program Activities	\$81,516,017
Community/Wellness Educations Expenses	\$33,944,572
Promotion and Marketing Expenses	\$85,898,810
Taxes, Fees, and Assessments	\$387,776,598
Malpractice Expenses	\$58,365,115
Other Administrative Expenses	\$1,322,908,327
<b>Total Administrative Expenses</b>	<b>\$2,409,056,997</b>

Source: Lewin Health Benefits Simulation Model (HBSM)

### *Changes in Administration under the Single-Payer Plan*

As shown in *Figure B-8*, to estimate hospital administrative costs under the Minnesota single-payer plan, adjustments were made to certain administrative costs affected by the single-payer plan, while other administrative costs remained constant. First, admitting, patient billing, & collection expenses saw a \$243 million decrease in the single payer program, compared to current post-ACA law, in 2014. This was based on our estimate that under single-payer. Claims processing would cost 32.53 percent of the cost in current plans under current law, which is based upon the assumption that hospital spending for claims processing would decline in proportion to the reduction in the amount spent on this function for insurance administration under the single-payer plan. Thus, we calculated 32.52 percent of the cost under current ACA law to determine the cost under the single-payer plan.

Quality assurance and utilization management (UM) program activities also experienced a decrease in cost under single-payer – a change of about \$60 million. Given that the single-payer plan operates under a fee-for-service model, many of the UM activities previously taking place within the Managed Care Organizations (MCO) now cease to occur, as these MCOs are eliminated under the program. Thus, hospital costs associated with administering these programs decrease. Under single-payer, we estimate that utilization review would cost about 32.51 percent of current costs incurred by plans. This estimation is based upon the assumption that hospital spending for quality assurance and UM would decline in proportion to the reduction in the amount spent on this function for insurance administration under the single-payer plan.

A final administrative cost affected by the single-payer plan is costs association with taxes, fees, and assessments. Here, in 2014, the single-payer plan has administrative expenses associated with taxes, fees, and assessments that are \$269 million less than under current law.

In total, hospitals experience a savings of \$571 million under single-payer in 2014, compared to current ACA law. This reduction is based on the premise that the \$269 million Medicaid surcharge on all hospital non-Medicare services would disappear under the single-payer plan.<sup>12</sup>

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<sup>12</sup> \$269 million projection was provided by staff in the US Dept. of Health & Human Services, the Dept. of Revenue and the Office of Management and Budget

Figure B-8: Hospital Administrative Costs with and Without a Single-payer system in 2014  
(millions)<sup>a/</sup>

	Current Law with ACA	Single-payer Program	Change from ACA
Admitting, Patient Billing & Collection Expenses	\$360	\$117	-\$243
Accounting and Financial Reporting Expenses	\$114	\$114	\$0
Quality Assurance and Utilization Management Program/Activity Expenses	\$88	\$29	-\$60
Community/Wellness Educations Expenses	\$37	\$37	\$0
Promotion and Marketing Expenses	\$93	\$93	\$0
Malpractice Expenses	\$63	\$63	\$0
Other Administrative Expenses	\$1,431	\$1,431	\$0
<b>Total Administrative Expenses</b>	<b>\$2,186</b>	<b>\$1,884</b>	<b>-\$302</b>
Taxes, Fees, and Assessments	\$419	\$150	-\$269
<b>Total Administrative Expenses with Taxes, Fees, and Assessments</b>	<b>\$2,606</b>	<b>\$2,034</b>	<b>-\$571</b>

a/ Hospital administrative spending in Minnesota is based upon "Administrative Efficiency: Background Information Prepared for the Health Care Transformation Task Force," Minnesota Department of Health, November 13, 2007; and Communication from Stefan Gildemeister, Minnesota Department of Health.

b/ We assume that hospital spending for billing and collections would be reduced in proportion to the reduction in Insurer claims administrative spending.

c/ We assume that hospital spending for quality assurance and utilization management would decline in proportion to the reduction in the amount spent on these functions for insurance administration under the single-payer plan.

## Appendix C: Estimation of Increased Tobacco and Alcohol Tax Revenues

In this study, we estimated the effect of increasing state excise taxes on tobacco products and alcoholic beverages. The data and methods used to develop these estimates are presented below.

### Alcohol Taxes

Estimates of additional alcohol tax revenues are based on a five cent per drink tax on spirits, wine, and beer. We assume that a standard drink is equal to 1.5 ounces of spirits, 5.0 ounces of wine, and 12.0 ounces of beer. Currently, Minnesota alcohol tax rates are \$5.03/gallon for spirits, \$0.30/gallon for wine, and \$0.15/gallon for beer. Adding the five cent per drink tax to the existing tax would result in a new tax of \$9.29/gallon for spirits, \$1.58/gallon for wine, and \$0.68/gallon for beer – an increase of 84.7 percent, 426.7 percent, and 353.3 percent, respectively.

The Minnesota Department of Revenue reports 2009 tax revenues as \$54 million for spirits, \$5.5 million for wine, and \$16.6 million for beer. We used Congressional Budget Office (CBO) Consumer Price Index (CPI) projections to account for revenue increases between 2009 and 2014. Increased tax revenues, based on the five cent per drink specification, are shown in *Figure C-1* below. This amounts to \$51.48 million in additional tax revenue from spirits, \$26.42 million from wine, and \$66.02 million from beer – totaling \$143.92 million in additional alcohol tax revenue.

Figure C-1. Additional Alcohol Tax Revenues from Spirits, Wine, and Beer under Single-Payer (2014)

	Current Tax Rate	Tax Rate under Single-Payer Proposal	Current Tax Revenue	Tax Revenue under Single-Payer Proposal	Net Additional Revenue under Single-Payer Proposal
Spirits	\$5.03/gallon	\$9.29/gallon	\$60.79 million	\$112.27 million	\$51.48 million
Wine	\$0.30/gallon	\$1.58/gallon	\$6.19 million	\$32.61 million	\$26.42 million
Beer	\$0.15/gallon	\$0.68/gallon	\$18.69 million	\$84.71 million	\$66.02 million
<i>Total</i>					\$143.92 million

### Tobacco Taxes

Estimates of additional cigarette tax revenues are based on a new tax of \$1.00 per pack of cigarettes. We assume that the average price per cigarette pack is \$3.97 (without taxes and fees). Total taxes and fees per pack of cigarettes are currently \$1.23 in Minnesota. Thus an increase in the tobacco tax of one dollar equates to an 81.30 percent increase in taxes and fees and a 19.23 percent increase in total price per pack (including taxes and fees).

Chaloupka et al. (2000) has estimated that for every 10 percent increase in the cost of a pack of cigarettes, consumption declines by 4 percent. We use this assumption to adjust cigarette

demand at the higher price, which partially offsets the increase in revenues resulting from the increase in taxes.

The Minnesota Department of Revenue reports 2009 tax revenues as \$385 million for cigarettes and \$42.5 million for other tobacco products. We used CBO Consumer Price Index (CPI) projections to account for revenue increases between 2009 and 2014. We assume that the tax on other tobacco products in Minnesota is increased in proportion to the tax increase for cigarettes – an increase of 81.3 percent. We assume the same percentage reduction in consumer demand for these products as we assumed in estimating the impact of the cigarette tax increase.

Figure C-2 below shows the total additional revenue gained from applying a new \$1.00 per pack cigarette tax and a proportionate increase in taxes on other tobacco products (81.3 percent). Additional revenue from tobacco taxes would be \$405.02 million per year, including \$325.25 million for cigarettes and \$79.77 million for other tobacco products.

Figure C-2. Additional Tobacco Tax Revenues from Cigarettes and Other Tobacco Products under Single-Payer (2014)

	Current Tax Rate	Tax Rate under Single-Payer Proposal	Current Tax Revenue	Tax Revenue under Single-Payer Proposal	Net Additional Revenue under Single-Payer Proposal
Cigarettes	\$1.23/pack	\$2.23/pack	\$433.41 million	\$758.66 million	\$325.25 million
Other Tobacco Products	70% of wholesale price	126.9% of wholesale price	\$47.84 million	\$127.61 million	\$79.77 million
<i>Total</i>					\$405.02 million