SHARED RESPONSIBILITY

GOVERNMENT, BUSINESS, AND INDIVIDUALS: WHO PAYS WHAT FOR HEALTH REFORM?

Prepared by: Robert Seifert, M.P.A. and Paul Swoboda, M.S.
Center for Health Law and Economics,
University of Massachusetts Medical School

FOUNDATION
BLUE CROSS BLUE SHIELD OF MASSACHUSETTS
EXPANDING ACCESS TO HEALTH CARE

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FINDINGS

INTRODUCTION

In early 2006, the Massachusetts legislature passed, and the Governor signed, Chapter 58 of the Acts of 2006, "An Act Providing Access to Affordable, Quality, Accountable Health Care." The centerpiece of the law's ambitions was "near universal coverage"—dramatically reducing the number of people in Massachusetts who lacked health insurance. Since implementation, at least 442,000 previously uninsured people have enrolled in private or subsidized health insurance plans.[1] The state recently estimated that more than 97 percent of residents in Massachusetts now have insurance coverage.[2]

A crucial underpinning of the health insurance expansions in the 2006 health care reform law is the concept of "shared responsibility." Indeed, many agree that one of the keys to the passage of the legislation was the consensus among representatives of employers, individuals, and government that these constituencies should share responsibility for financing the expansion.[3] This differs from two prior attempts to expand insurance coverage to Massachusetts residents, which relied disproportionately on the financial contributions of one or another of these groups. The Dukakis era universal coverage law—Chapter 23 of the Acts of 1988—required employers either to offer coverage to their employees or to pay into a public fund that would provide coverage. This provision of the law never took effect and was repealed in 1996. Soon after, the Commonwealth enacted Chapter 203 of the Acts of 1996, which extended coverage mainly through the creation of MassHealth, an expansion of the State's Medicaid program. This expansion was primarily publicly supported, using state and federal funds. MassHealth continues, and has been further expanded since 1997, most recently in 2006.

The social benefits of expanded health care coverage justify an investment by individuals, employers, and government in concert to attain them. Though there is no explicit formula for how the financial responsibility for the 2006 reforms would be distributed, the legislation clearly requires something of everyone, and subsequent program design and policy decisions reflect an ongoing commitment to shared responsibility.

Since passage of the 2006 law, there has not been a full assessment of how the actual costs of insuring hundreds of thousands of additional people are being shared. This report presents an analysis of who pays for health insurance in Massachusetts and their relative share, comparing a period (calendar year 2005) just prior to the passage of Chapter 58 with a period (calendar year 2007)

1 Massachusetts Division of Health Care Finance and Policy, *Health Care in Massachusetts: Key Indicators,* November 2008

2 Massachusetts Division of Health Care Finance and Policy, *Health Insurance Coverage in Massachusetts: Estimates from the 2008 Massachusetts Health Insurance Survey,* December 2008.

3 Hager, Christie L. "Massachusetts Health Reform: A Model of Shared Responsibility."Journal of Legal Medicine,29:1 (2008),11–22

after implementation. We also consider the distribution of spending on care and on payments to providers for uninsured people and services, the levels of which are directly influenced by the extent of health insurance in the Massachusetts health care system.

Overall, we find that the shares of spending on coverage and uncovered services remained essentially the same between 2005 and 2007. Employers and union health plans cover slightly less than half of total spending, government spends roughly 30 percent, and individuals spend about a quarter.

In short, there has been "shared responsibility" to this point in health care reform, with all sectors spending more. Some of the increase in spending on coverage was offset by a decline in spending on uncovered services. Specifically:

- **Employers** contributed to expanded coverage in proportion to their contributions before reform.
- **Government** contributions for coverage have grown slightly faster that the other two groups, largely because of the introduction of a new public program. Government payments for uncovered services, however, declined sharply. The combined effect was that government's share of total payments was similar to its share prior to reform.
- **Individuals** contributed a proportional share to coverage expansion, largely through their taking up and contributing to employer-sponsored plans. Individuals were the only group that experienced an increase in payments for uncovered services.

It is still very early in the reform era. As enrollment in new programs stabilizes, as employer-based coverage waxes and wanes with economic conditions, and as health care costs continue to grow, potential future shifts bear monitoring.

OVERVIEW OF METHODOLOGY

Ideally, in order to answer the question of whether and how financial responsibility for health coverage has shifted, we would isolate and analyze the spending associated with the new coverage that resulted directly from the provisions of Chapter 58. It is difficult and somewhat arbitrary, however, to identify in actual spending data what is "health reform spending"; most of the vehicles for coverage—private insurance, Medicaid—predated reform and for the most part there is no clear distinction between pre- and post-reform coverage. The approach we use in this report, therefore, looks at the distribution of total spending on health insurance for people under age 65 in Massachusetts by employers and union funds, individuals and government in a period before Chapter 58, and examines whether and to what extent that distribution has changed in a period after the law's implementation.[4]

This approach captures all of the factors that have affected spending on health coverage during the period of the analysis, a major one of which is the expansion in coverage resulting from the health reform law. But it also includes the effects of general health care inflation and other economic trends, provider rate increases, and other factors that are not directly related to reform. This analysis does not attempt to separate these effects from one another because they are, in fact, real expenses that the three constituencies in our analysis share.

The focus of this analysis is spending on health coverage on behalf of Massachusetts residents under 65 years old, because the focus of the reform law was to increase coverage. This differs from estimates of total spending on health care goods and services, often referred to as national or state "health expenditure accounts" of the sort produced by the Centers for Medicare and Medicaid Services (CMS) and a number of states. Spending on coverage is primarily in the form of premiums and premium equivalents, which are calculated to pay for the health care goods and services that are covered by health insurance, plus administrative costs of insurers.

In addition to insurance premiums, the analysis considers out-of-pocket expenses such as deductibles and copayments, as well as direct spending and supplemental payments for health care not covered by insurance. The levels of these expenses are directly dependent on levels of insurance coverage and should therefore be considered part of this spending system. We do not consider Medicare, a purely federal program not affected by the Massachusetts reform law, in this analysis.

4 We acknowledge the argument made by many health policy analysts (recently by Emanuel and Fuchs in "Who Really Pays for Health Care? The Myth of 'Shared Responsibility'" *JAMA* 299:9 (2008)) that individuals in fact pay for all health care, through direct expenditures, suppressed wages, and taxes. While this is compelling theoretically, the political balance of Chapter 58 is built on the shared responsibility of directly paying for coverage, and is therefore the focus of this analysis.

In our complex, public/private health insurance system, all sectors play multiple roles as sponsors of the purchase of health insurance and purchasers of care for those without insurance. Figure I illustrates the various ways that each of the constituencies contributes to health coverage and to the provision of uncovered services. We describe each of these mechanisms in greater detail in the next section of this report.

FIGURE I

	Total Spending on Coverage	Total Spending on Uncovered Services
Employers and Union Benefit Plans	Share of group premium + Fair share contribution	(Included in premium analysis)
Individuals	Share of employer-based premium + Individual purchase premium + Public programs premiums + Cost sharing + Tax penalty	Out-of-pocket payments for health care services
Government (State & Federal)	MCO capitation payments + Other MassHealth payments + Individual subsidies to purchase private coverage	Funding of Uncompensated Care Pool/ Health Safety Net + Supplemental payments to health care providers
Providers	(Not applicable)	Net unreimbursed care + Dedicated free care funds

Spending data for each of these sources exist from a variety of data sets. We have identified for each component the best and most timely public data available to quantify spending in the pre- and post-reform time periods. In certain cases where direct spending data were not available, we have used the best available and most appropriate data to estimate spending levels. We present further details of the data sources, assumptions, and estimates in the discussion of results to follow and in the appendix to this report. A companion paper, focused solely on methodology, goes into much greater depth.

We do not attempt to attribute the observed changes to various causes. The effects of Chapter 58 are not unfolding independent of other developments such as changing economic conditions, introduction of new types of insurance products, and medical cost inflation. It would be difficult within this analytic framework to separate these effects. In any event, all of these influences affect the cost of coverage and are thus a very real part of the responsibility that employers, individuals, and government share.

The methodology and resulting analysis allow us to give a good sense of the changes between periods in the distribution of all spending on health insurance and uncovered services. Because we have conducted our analysis early in the implementation of Chapter 58, these findings provide a baseline for monitoring changes into the future.

RESULTS

Employers and unions, individuals, and the state and federal governments spent about $25.5 billion on health care coverage for Massachusetts residents under 65 years old in 2007. "Coverage" includes health insurance premiums, direct payment for services covered either by self-insured private plans or by public programs, and individual cost-sharing (coinsurance and deductibles). This total represents an increase of $4.7 billion—about 23 percent—over spending in 2005.

In the two years from 2005 to 2007, health insurance premiums rose by 16 percent in Massachusetts,[5] mainly reflecting increases in medical costs. Over the same period, largely because of Chapter 58, the number of people with health insurance grew by 8 percent, or about 374,000 people under age 65.[6] By comparison, premiums grew nationally by an average of 14 percent,[7] while the number of people with insurance grew just 2 percent.[8] For a sense of relative scale, from 2005 to 2007 the total population of Massachusetts grew by less than one percent, and the population of the United States grew 2 percent.[9]

We estimate that spending on coverage would have increased by about 60 percent of the $4.7 billion between 2005 and 2007 even if the number of people with insurance had not grown at all because of increases in premiums and per capita health care costs. Another one-third (31 percent) of the increase is due to more people enrolling in existing health insurance plans—private plans and MassHealth, the Massachusetts Medicaid program (including those made eligible by expansions in MassHealth). About 8 percent of the increase is from the introduction of Commonwealth Care, and the remainder is the new Fair Share assessment, levied on firms that employ 11 or more full-time equivalents and that do not make a "fair and reasonable" contribution toward the health costs of their workers, and the tax penalty for individuals who do not obtain health insurance if it is available and affordable. (See **Figure 2**.)

How the Spending is Shared

Total spending for coverage is distributed across employers, individuals, and government, as shown in **Figure 3** below. Employers and union benefit funds contributed about half (48%) of the spending on coverage in Massachusetts in 2007. Individuals contributed about a quarter (25%) of the total, and government—divided between the state and federal level—contributed a slightly larger share (27%).

5 Increase in premium revenues per member per month, calculated from Division of Insurance filings by Health Maintenance Organizations and Blue Cross Blue Shield of Massachusetts

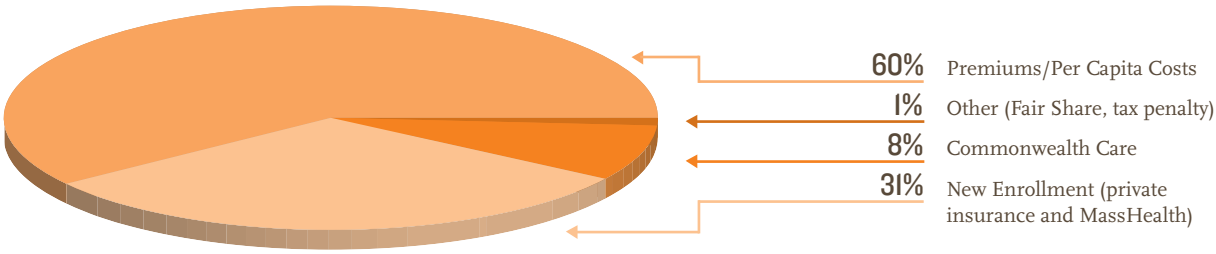
6 From June 2006 through December 2007. Division of Health Care Finance and Policy, *Health Care in Massachusetts: Key Indicators*. November 2008

7 Kaiser/HRET Employer Health Benefits Survey 2007. http://www.kff.org/insurance/7672/index.cfm, accessed November 24, 2008.

8 U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements.

9 Population Division, U.S. Census Bureau, Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2008 (NST-EST2008–01), December 22, 2008.

FIGURE 2 WHAT ARE THE SOURCES OF INCREASED COVERAGE SPENDING?



It appears that this distribution of spending hardly changed from 2005, the year before Chapter 58 passed, suggesting that the responsibility for financing the reform expansion is being shared proportionately, at least at this early stage. In 2005, employers and union plans accounted for half (49%) of the $20.8 billion in spending on coverage, and individuals and government divided the other half, with 25 and 27 percent respectively. Not all of the additional spending from 2005 to 2007 is because of health reform, of course, but we can say that no significant shift in the relative burden of health coverage costs has thus far been observed following implementation of Chapter 58. Government spending has increased somewhat more rapidly than the other sectors, mainly because of the introduction of a new program (Commonwealth Care) that is largely publicly funded, but not significantly enough to change the overall distribution. All stakeholders are making substantial contributions, however, as described in the rest of this analysis.

FIGURE 3 TOTAL SPENDING FOR COVERAGE

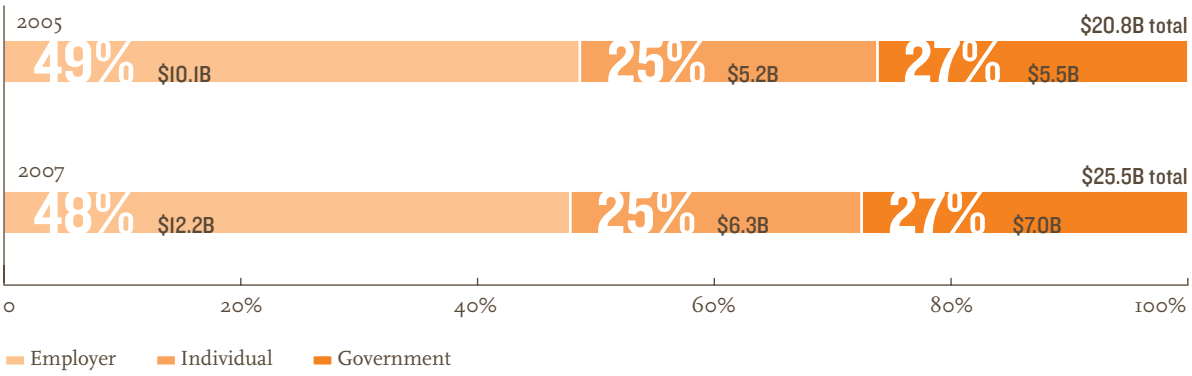


Table I below shows the components of spending for each of the three sectors in 2005 and 2007, and the share of the total increase attributable to each of the sectors. A detailed description follows.

Employers and Union Benefit Plans

Most people get their health insurance through an employer. In Massachusetts, nearly three-quarters of employers (73%) offered coverage to at least some of their employees in 2007.[10] With the requirement in Chapter 58 that all adults have coverage if an affordable plan is available, employees who previously hadn't taken their employers' coverage may now be doing so. We estimate that employer- and union-sponsored coverage increased by about 188,000 individuals from 2005 to 2007. Assuming employers pay, on average, 75 percent of the premium (based on a State survey of employers), employers' contributions to health coverage went from $10.1 billion to $12.2 billion, an increase of 21 percent.

Another small way that employers contribute is through the Fair Share assessment. This assessment was not in effect in 2005; in 2007, liability for the assessment totaled $7.7 million.

Individuals

Individuals contribute to insurance coverage in a number of ways. As employees, they pay a portion of the premium for an employer-sponsored plan. If they do not have access to employer coverage, they may purchase coverage for themselves and their families in the individual market. Some Commonwealth Care and MassHealth members at the higher end of the income eligibility range are required to pay a premium for their publicly-subsidized coverage. In addition to premiums, many people with insurance must also pay a deductible or make copayments when they use health care services. And those who remain uninsured but are not exempt from the individual mandate pay a tax penalty that is used to help fund Commonwealth Care.

We estimate that individuals' spending on coverage increased from $5.2 billion to $6.3 billion between 2005 and 2007.

Employer-based coverage. The largest share of individual spending on health coverage is the employee's contribution toward an employer-sponsored insurance premium. Workers paid $4.8 billion in premiums in 2007 (assuming a 25% share of premium), 20 percent more than the $4.0 billion total in 2005.

Individual purchase. The largest increase in spending by individuals was for private coverage purchased by people who did not have access to employer coverage and did not qualify for a public program. This sum rose 34 percent, from $251 million in 2005 to $337 million in 2007. Much of this increase was very likely due to the

10 Jon R. Gabel et al., "Report from Massachusetts: Employers Largely Support Health Care Reform, And Few Signs of Crowd-Out Appear." Health Affairs 27:1 (2008).

introduction of Commonwealth Choice, the less costly individual products available through the Connector or the general health insurance market, along with the coverage imperative of the individual mandate. Still, this total represents only about 5 percent of coverage-related spending by individuals.

Public programs. Commonwealth Care requires that members with incomes above 150 percent of the federal poverty level (about $33,000 for a family of 4 in 2009) contribute to their premium. As of the end of 2007, about 15,000 members were paying premiums totalling $11.3 million during 2007. Similarly, some MassHealth members[11] above certain income levels must pay premiums as well. In both 2005 and 2007, those premium contributions amounted to about $12.6 million.

Cost sharing. The level of cost sharing—payments that patients make to health care providers at the point of service—has been increasing gradually over time. In Massachusetts, we estimate that individuals paid $1.2 billion in deductibles, coinsurance, and copayments in 2005, and $1.5 billion in 2007, an increase of 22 percent.

Tax penalty. Those who choose not to secure health insurance also make a contribution to coverage, though not to their own coverage. (They may pay out-of-pocket for health care, however.) In 2007, about 118,000 Massachusetts residents did not claim on their state income tax return that they were insured as of December 31, 2007, and were not determined to be exempt from the individual mandate. Some 57 percent of those were subject to loss of their personal tax exemption. The State thus garnered $16 million from taxpayers who did not comply with the mandate. These funds were applied to the Commonwealth Care Trust Fund, which funds the subsidies extended to Commonwealth Care members.

11 MassHealth Family Assistance (100.1% to 300.0% FPL, including Family Assistance HIV), MassHealth Standard (above 133% FPL), MassHealth Disabled (above 114% FPL), and the MassHealth Breast and Cervical Cancer Treatment Program. This total also includes premiums paid in the Children's Medical Security Plan.

TABLE 1 CHANGES IN SPENDING ON HEALTH COVERAGE, 2005–2007 ($ MILLIONS)

	2005 Spending	2007 Spending	Increase 2005–2007	Increase in Component	Share of Total Increase
Employers and Union Plans	**$10,098**	**$12,215**	**$2,117**	**21%**	**45%**
Sponsors of coverage	$10,098	$12,207	$2,109		
Fair Share assessment	$—	$8	$8		
Individuals	**$5,172**	**$6,289**	**$1,117**	**22%**	**24%**
Enrollees in employer coverage	$3,715	$4,459	$744		
Individual purchase	$251	$337	$86		
Commonwealth Care MCO premiums	$—	$11	$11		
MassHealth premiums	$13	$13	$(0)		
Cost sharing	$1,193	$1,453	$259		
Tax penalty	$—	$16	$16		
Government	**$5,525**	**$6,992**	**$1,468**	**27%**	**31%**
Capitation payments to MCOs	$1,456	$2,373	$917		
Other MassHealth	$3,021	$3,193	$172		
Section 125 subsidy	$1,047	$1,426	$379		
State	**$2,351**	**$2,941**	**$590**	**25%**	**13%**
Capitation payments to MCOs	$721	$1,177	$456		
Other MassHealth	$1,496	$1,581	$85		
Section 125 subsidy	$135	$184	$49		
Federal	**$3,173**	**$4,051**	**$878**	**28%**	**19%**
Capitation payments to MCOs	$735	$1,197	$461		
Other MassHealth	$1,526	$1,613	$87		
Section 125 subsidy	$912	$1,242	$330		
TOTAL	**$20,794**	**$25,496**	**$4,702**	**23%**	**100%**

Government

Public dollars fund most of the coverage for the 1.2 million low-income people enrolled in MassHealth (the Massachusetts Medicaid program) and Commonwealth Care. Both of these programs are financed mainly through the Commonwealth's Medicaid Demonstration Waiver, an agreement with the federal government that allows the State to innovate and extend eligibility beyond what would be allowed in a traditional Medicaid program. The funds are divided roughly evenly between the state and federal governments.[12] Government also contributes to coverage by forgoing tax revenues when employees pay premiums with pre-tax dollars in a Section 125 benefits plan, which allows employees to make their health insurance contributions with pre-tax dollars.

Capitation payments to managed care organizations. Many non-elderly MassHealth members, and all Commonwealth Care members, are enrolled in managed care organizations (MCO). The State makes monthly payments, analogous to employers

12 The federal share is slightly higher than 50% for MassHealth because it incorporates the higher matching rate for the State Children's Health Insurance Program (SCHIP), which constitutes less than 10 percent of the MassHealth caseload, and an even smaller percentage of MassHealth spending.

paying premiums, to the MCOs on behalf of each enrolled member, and is later partially reimbursed by the federal government. Commonwealth Care members above a certain income level contribute a portion of the payment; MassHealth MCO members do not pay premiums. In 2007, state and federal governments paid nearly $2.4 billion to MCOs, an increase of 63 percent over the $1.5 billion in 2005.[13] About one-third (32%) of this $917 million increase was in the growth of per member costs for MassHealth MCO members. One quarter (25%) was due to MassHealth MCO enrollment, which grew 19 percent from 2005 to 2007, and 38 percent was due to the introduction of Commonwealth Care. The remaining 6 percent is attributable to increased capitation payments to the Massachusetts Behavioral Health Partnership (MBHP), the behavioral health provider for MassHealth members enrolled in the Primary Care Clinician Plan (PCCP), a non-MCO managed care option operated by the Medicaid Office itself.

Other MassHealth payments. MassHealth also pays providers directly for care for members in PCCP, CommonHealth and fee-for-service Medicaid. These payments are analogous to those made by self-insured employers. The level of these payments is higher than those made to MCOs, but the growth was much more modest: from $3 billion in 2005 to $3.2 billion in 2007, a 6 percent increase.[14] Enrollment in the PCCP also grew more slowly than enrollment in MCOs—only 3 percent from December 2005 to December 2007.

Subsidies to individuals to purchase private coverage. Chapter 58 requires that all employers with 11 or more full-time-equivalent employees offer a Section 125 benefits plan. This effectively reduces the cost of insurance to employees by reducing their state and federal taxable income by the amount they contribute to their premiums. Employees may benefit from a Section 125 plan even if their employer does not contribute to the premium.

The Section 125 use of pre-tax dollars is a valuable benefit to individuals faced with a new obligation to have health insurance: the Massachusetts Department of Revenue estimates that "on average, Section 125 plans reduce the cost of health insurance to employees in Massachusetts by 41 percent."[15] The Section 125 requirement is part of Chapter 58 for the express reason of making insurance more affordable and represents a conscious policy choice by State legislators. We therefore treat the implicit public subsidy to employees (in the form of forgone tax revenue) as akin to the more explicit subsidies of a public coverage program such as Commonwealth Care.[16]

13 Payment to MCOs include the Massachusetts Behavioral Health Partnership (MBHP), the behavioral health vendor for MassHealth members in the Primary Care Clinician Program (PCCP).

14 This increase incorporates the MassHealth rate increases to hospitals and physicians that were mandated by Chapter 58.

15 Mass. Dept. of Revenue, "Health Care Information for Employers." www.mass.gov/dor, accessed 11/25/08

16 It might be argued that the forgone federal tax part of this subsidy was *not* a conscious choice of federal policy makers, and therefore should be excluded from this analysis as simply one incidental effect among countless others. For those with that point of view, the itemized data in Table 1 allow for adjustments to the analysis presented here.

There are two pieces of the Section 125 estimate. By far the largest is the subsidy to employees who take advantage of their employers' offer of group coverage. About 82 percent of employees of firms offering coverage in 2007 (and 73 percent in 2005) had access to Section 125 plans in this way.[17] The second are employees who are not eligible for their employer's coverage (or who work for an employer that does not offer coverage) but who may now take advantage of the Section 125 plan and enroll in individual coverage through the Connector. Very few workers (641 in December 2007) used this option to obtain health insurance.[18]

We estimate that the State portion of Section 125 subsidies amounted to $184 million in 2007, and that the Federal portion was $1.2 billion. These amounts are an increase of 36 percent over 2005.

SPENDING ON UNCOVERED SERVICES

This analysis also examines changes in spending for uncovered services in Massachusetts from 2005 to 2007. As more people become insured, we should see less being spent on health care services for people without insurance to partly offset the new spending on coverage. The quality of coverage should also improve somewhat because of the reform law's requirement that health insurance meet minimal benefit standards, which will reduce the spending on uncovered services associated with underinsurance. Though the purpose of health care reform very clearly is to expand coverage, shifting resources from uncovered services to coverage was an explicit part of its design, and the level of spending for uncovered services is so directly dependent on the level of coverage that we consider it part of the same system of expenditures.

One of the more prominent sources of spending for uncovered services is the Health Safety Net, formerly called the Uncompensated Care Pool, which is funded by a $160 million hospital assessment, a surcharge on private payers' hospital and ambulatory surgery center bills totaling $160 million, and, if these are not sufficient, additional funds from the State. We do not consider the hospital assessment to be spending for uncovered services for this analysis, however, because the assessment is simply redistributed among hospitals[19] and does not represent net new spending on uncovered services.[20] Similarly, we assume that the payer surcharge that helps fund the Health Safety Net is recouped by insurers through premium revenues and is therefore not a net expenditure for uncovered services either. The main sources of spending are uninsured individuals, the State and Federal governments, and providers. Table 2 summarizes their respective contributions.

17 Authors' calculations based on data from DHCFP Massachusetts Employers' Health Insurance Survey, 2005 and 2007.

18 Individuals in this situation also have the option to enroll directly with an insurer and not through the Connector. Data on this group are not publicly available, and we assume the number to be small.

19 A small portion of these funds go to community health centers.

20 Providers do deliver care that is not directly reimbursed from any source, which is described below.

TABLE 2 CHANGES IN SPENDING ON UNCOVERED HEALTH CARE SERVICES, 2005–2007 ($ MILLIONS)

	2005 Spending	2007 Spending	Increase (Decrease) 2005–2007	Change in Component	Share of Decrease
Individuals	**$161**	**$179**	**$18**	**11%**	**-2%**
Out-of-pocket payments	$161	$179	$18		
Government	**$1,532**	**$852**	**$(681)**	**-44%**	**94%**
Uncompensated Care Pool/HSN	$345	$230	$(115)		
Supplemental payment to providers	$1,188	$622	$(566)		
State	**$766**	**$426**	**$(340)**	**-44%**	**47%**
Federal	**$766**	**$426**	**$(340)**	**-44%**	**47%**
Providers	**$143**	**$80**	**$(63)**	**-44%**	**9%**
Net unreimbursed care (hospital)	$138	$77	$(61)		
Dedicated free care funds	$5	$3	$(2)		
TOTAL	$1,837	$1,111	$(726)	-40%	100%

Individuals who are uninsured still use health care services, though not as often as those with insurance. If the service is not eligible for payment from the Health Safety Net, uninsured individuals pay for the care out of their own funds. If they are unable to pay the full amount, these expenses accumulate as medical debt to the individual and as unreimbursed care for providers. We estimate that uninsured individuals paid about $161 million on their own behalf in 2005, and $179 million in 2007.[21]

Government finances care for uncovered services in Massachusetts in two ways. First, to the extent that funds in the Health Safety Net (or its predecessor, the Uncompensated Care Pool) are insufficient to reimburse eligible care, the Commonwealth has made up some of the difference (and claimed matching federal funds) through General Fund appropriations or transfers from other State trust funds. The State government contributed $345 million in this way in 2005, and $230 million in 2007.

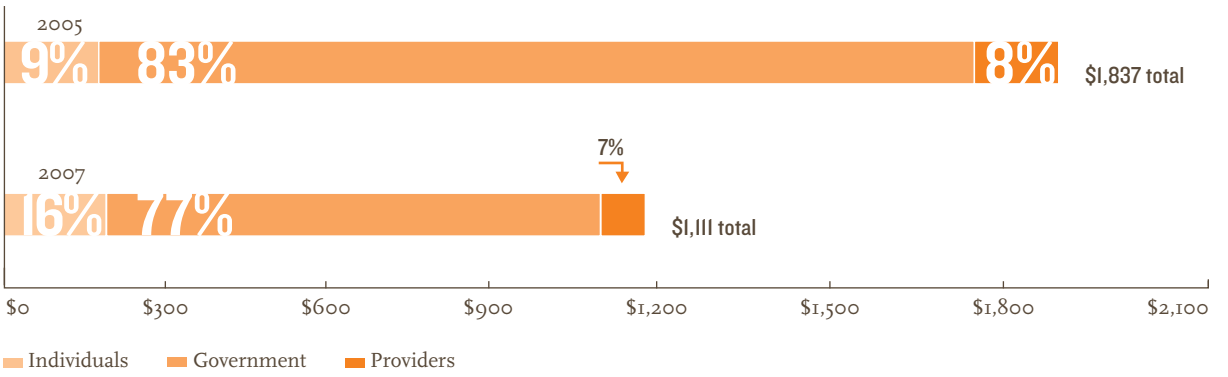
In addition, the Commonwealth makes a number of annual supplemental payments to the State's main safety net institutions – Boston Medical Center and Cambridge Health Alliance – as well as to UMass Memorial Health Care, and smaller supplemental payments to other hospitals. These funds are not disbursed as claims payments for specific services; rather, they are intended to support providers whose high level of uninsured and publicly insured patients means that regular payments may not adequately cover their costs. These supplemental payments fell substantially between 2005 and 2007, from $1.2 billion to $622 million.

21 These figures are based on hospital cost reports and national health expenditure data and are for payments for hospital care, physicians, and prescription drugs, which we assume to represent the majority of payments uninsured individuals make on their own behalf.

Providers finance care for uncovered services by delivering it without any reimbursement, or with reimbursement from a provider's dedicated charity care fund. The value of this care is the net contribution of the provider, after accounting for any payments from uninsured individuals, the Health Safety Net, and miscellaneous other sources. We estimate that providers contributed $143 million in care for uncovered services in 2005, and $80 million in 2007.[22]

In total, Figure 4 shows that direct spending on care for uncovered services fell substantially, from about $1.8 billion in 2005 to $1.1 billion in 2007, a decline of 40 percent. The distribution of this spending changed, with the government accounting for nearly 77 cents of every dollar in 2007, down from 83 percent in 2005. Individuals' share—the only group whose spending for uncovered care did not fall in dollar terms—grew from 9 percent to 16 percent.

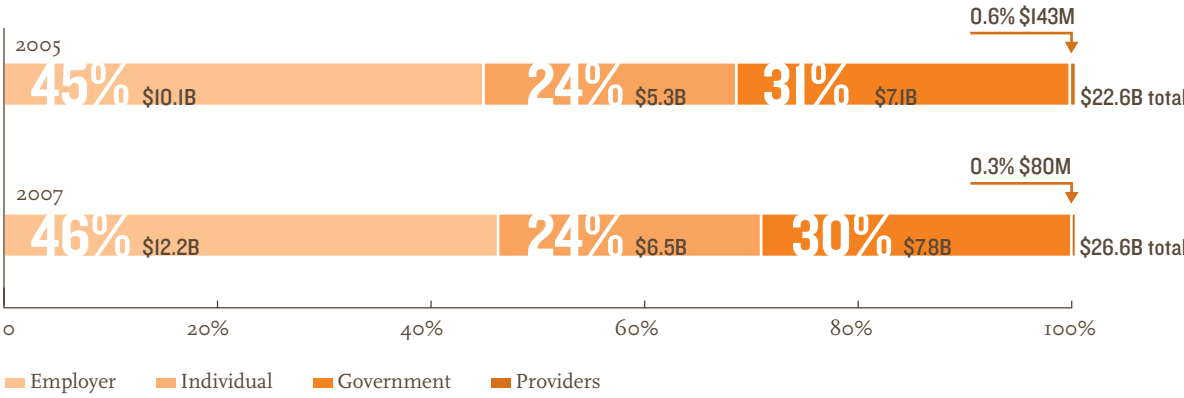
FIGURE 4 SPENDING FOR UNCOVERED SERVICES



It is notable that government entities, which saw the most rapid increase in spending on coverage between 2005 and 2007, also had a dramatic decline in their outlays for uncovered services. This reflects the intent of State policy, as does the general decline in spending for uncovered services, to shift resources that had been going to pay for care to the uninsured and underinsured to supporting the goal of near-universal coverage. This offsetting relationship between the two types of spending means that government spending was the most dynamic element in the early stage of financing health reform. While the government's share of spending for coverage grew, its share of spending for uncovered services fell, with the result that while its combined share grew, the rate of increase was about half that for both employers and individuals. Figure 5 illustrates the change in the distribution of overall spending.

22 Estimates based on hospital data; we assume other provider amounts to be much smaller.

FIGURE 5 COMBINED SPENDING FOR COVERAGE AND UNCOVERED SERVICES



CONCLUSION

It is well known that Massachusetts has seen rapid growth in the number of people with health insurance since its health reform law was enacted in 2006. What is less well understood is how the financial responsibility of that expansion has been shared among the three key stakeholder groups of employers, individuals, and government. This analysis has shed some light on that dynamic. We have found that the spending for expansion has been shared more or less in proportion to how the spending for coverage was distributed prior to reform. The government's share of total spending for coverage grew slightly faster, reflecting the added costs of a popular new program that is largely publicly funded. Some of the spending for increased coverage was offset by a significant drop—about 40 percent—in spending on uncovered services, much of this also in the government's part of the ledger. This shift reflects a deliberate financing strategy for health care reform. Overall, we conclude that there is shared responsibility for the net spending for coverage that is proportional to how spending was distributed one year before reform: with employers and unions covering nearly half of the spending, government about 30 percent, and individuals about one-quarter.

This analysis of the first year of reform should be considered a baseline. The overall picture of shared responsibility bears monitoring as reform continues to unfold, and as policy makers focus on sustaining and expanding on the initial coverage gains the law has realized, while taking on the challenge of controlling the increasing cost of that coverage.

APPENDIX

Data Sources, Basic Methodology & Sensitivity Analysis

I. Employers and Union Health Plans

- Total costs of coverage for employers and union health plans calculated by adding total cost of coverage for insured enrollees and for self-insured enrollees.
- Total cost of coverage for insured enrollees obtained from Massachusetts Division of Insurance (DOI) data.
- Total cost of coverage for self-insured enrollees calculated by i) estimating the **number of total enrollees** (insured plus self-insured), subtracting the number of insured enrollees and multiplying the resulting number of self-insured enrollees by the **self-insured premium equivalent**. Self-insured premium equivalent derived from the average premium for insured enrollees.
    - **Total number of enrollees** derived by dividing the total amount of payment by insurers, third party administrators and direct-pay employers for **acute hospital and ambulatory surgery services** by the annual per person payments ("pure premium") for these services.
    - Total spending for **acute care hospital and ambulatory surgical centers** calculated from the amount of "surcharge payments" made by health insurers, third-party administrators and direct-pay employers for the Uncompensated Care Pool Trust Fund and its successor, the Health Safety Net. Surcharge payment data obtained from Massachusetts Division of Health Care Finance & Policy (DHCFP).
        - Pure premium for acute hospital and ambulatory surgery service data from "Trends in Health Claims for Fully-Insured, Health Maintenance Organizations in Massachusetts, 2002–2006," September 2008, prepared by Oliver Wyman for the Massachusetts Division of Insurance. CY 2007 pure premium calculated by applying prior year rate of increase to CY 2006 pure premium data.
        - Average premiums for insured enrollees from DOI data.
        - Self-insured premium equivalent derived from average premium for insured enrollees and estimated average percentage difference between average premiums and premium equivalents.
- Assumptions of above calculation of cost of coverage for self-insured enrollees include:
    - The per member per month cost of acute care hospital and ambulatory surgery services for self-insured enrollees is the same as per member per month cost of these services for members of fully insured HMO enrollees.
    - Surcharge payments for acute hospital and ambulatory services for non-Massachusetts residents are offset by the amount of surcharge payments that would

have been received for Massachusetts residents if Massachusetts residents that received services out-of-state had received services in Massachusetts.

- The difference in the amount of time between date of service for acute hospital and ambulatory services and the date of payment for those services is the same for all surcharge payers.
- The average percentage difference in Massachusetts between premiums for insured individuals and premium equivalents for self-insured individuals is 10 percent.

2. Individuals

- Assumes employees contribute 25 percent of premium in employer-sponsored plan, derived as described in "Employers" above. Twenty-five percent figure based on survey data from the Massachusetts Division of Health Care Finance and Policy.
- Individual purchase figures derived from Massachusetts Division of Insurance non-group reports and annual reports. Commonwealth Choice data from the Connector.
- Commonwealth Care premium data from the Connector.
- MassHealth premium revenue data from MassHealth.
- Cost sharing estimate derived as a percentage of total premium. Source: "Trends in Health Claims for Fully-Insured, Health Maintenance Organizations in Massachusetts, 2002–2006," September 2008, prepared by Oliver Wyman for the Massachusetts Division of Insurance.
- Tax penalty data from Massachusetts Department of Revenue.

3. Government

- Assumes a federal share for public insurance programs of 50 percent for Commonwealth Care and 50.5 percent for MassHealth (based on blending higher match rate for SCHIP).
- MassHealth and Commonwealth Care MCO data from MassHealth.
- MBHP and other MassHealth expenditure data from MassHealth.
- Section 125 subsidy estimate derived as follows:
  - Total employee contributions to employer premiums in section 125 plans are 73 percent of employees and dependents covered by employer plan in 2005, and 82 percent in 2007 (Source: DHCFP employer survey) TIMES employees' share of annual premium (authors' calculations).
  - Individuals purchasing coverage through a s. 125 plan are total member months of individuals purchasing Commonwealth Choice through an employer's s. 125 plan (Source: Carey & Morse report for the Connector) TIMES the average CommChoice premium PMPM (Source: CommChoice premium and enrollment data from the Connector).

- Value of state subsidy is the sum of the above times 5.3 percent (the Massachusetts marginal personal income tax rate).
- Value of federal subsidy is 41 percent (Source: Mass. Dept. of Revenue, "Health Care Information for Employers." www.mass.gov/dor, accessed 11/25/08) MINUS 5.3% = 35.7%.

4. Spending on Uncovered Services

- Payments amounts from uninsured for hospital services from DHCFP-403 hospital cost reports. Additional payment amounts for prescription drugs and physician office visits derived from the hospital spending figure by applying a ratio of hospital to other out-of-pocket spending by uninsured obtained from national data in the Medical Expenditure Panel Survey (2006).
- Government funding of the Uncompensated Care Pool from the Massachusetts Division of Health Care Finance and Policy, Uncompensated Care Pool annual reports.
- Government supplemental payments to safety net providers from MassHealth.
- Payment from hospital provider dedicated charity funds and net unreimbursed care from DHCFP-403 cost reports.

5. Sensitivity Analysis

We performed sensitivity analysis on our data to evaluate how sensitive our conclusions are to variations in calculations that rely on estimates or assumptions. We selected three components of the methodology for analysis:

- The impact of the estimated number of privately insured enrollees in 2005 and 2007 on the calculation of the contribution to the cost of coverage by employers.
- The impact of the estimated number of privately insured enrollees in 2005 and 2007 on the Section 125 tax subsidy component of the calculation of the government's contribution to the cost of coverage.
- The impact of the average percentage difference in Massachusetts between premiums for insured individuals and premium equivalents for self-insured individuals on the calculation of the employer contribution to the cost of coverage.

We chose these three components for sensitivity analysis based on two criteria:

- The degree to which the calculations were reliant on our assumptions.
- The potential magnitude of the effect that the calculations had on the shared responsibility findings.

For the estimated number of privately insured enrollees, we calculated the effects that a change of 5 percent in the estimated number of enrollees would have. We used this percentage variance for both the impact on cost of coverage of employers and on the Section 125 impact on the cost of coverage by government.

For the impact of the average percentage difference between insured premiums and self-insured premium equivalents, which we assume to be 10 percent in our analysis, we assessed the effects of percentage differences of 20 percent, 15 percent, 5 percent, and 0 percent (insured premiums = self-insured premium-equivalents) on the contribution to the cost to coverage by employers.

In our assessment, none of the three factors analyzed would have a material impact on the study's findings.

SHARED RESPONSIBILITY

GOVERNMENT, BUSINESS, AND INDIVIDUALS:
WHO PAYS WHAT FOR HEALTH REFORM?

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METHODOLOGY

I. INTRODUCTION

In this paper, we detail the methodologies used to develop the analysis presented in *Sharing the Cost of Health Care Reform: Findings*. As we discuss in that paper, the general approach was to assemble data to examine the change in the distribution of *total* spending on health insurance for people under age 65 in Massachusetts by employers and union funds, individuals and government, from a period before the health care reform law passed to a period after the law's implementation.

In addition to insurance premiums, the analysis considers out-of-pocket expenses such as deductibles and copayments, as well as direct spending and supplemental payments for health care not covered by insurance. We do not consider Medicare, a purely federal program not affected by the Massachusetts reform law.

The methodological challenge was to identify and integrate data from a variety of sources that reflect the diverse ways that employers, individuals and governments act as sponsors of the purchase of health insurance and purchasers of care for those without insurance. Figure I illustrates the various ways that each of the constituencies contributes to health coverage and to the provision of uncovered services.

FIGURE I CATEGORIES OF SPENDING ANALYZED BY SECTOR

	Total Spending on Coverage	Total Spending on Uncovered Services
Employers and Union Benefit Plans	Share of group premium + Fair Share contribution	(Included in premium analysis)
Individuals	Share of employer-based premium + Individual purchase premium + Public programs premiums + Cost sharing + Tax penalty	Out-of-pocket payments for health care services
Government (State & Federal)	MCO capitation payments + Other MassHealth payments + Individual subsidies to purchase private coverage	Funding of Uncompensated Care Pool/ Health Safety Net + Supplemental payments to health care providers
Providers	(Not applicable)	Net unreimbursed care + Dedicated free care funds

Wherever possible, the analysis used the best and most timely public data available to quantify spending in the pre- and post-reform time periods. Where empirical data were not available, we used the best available and most appropriate data to develop estimates of the spending components. What follows in this methodology report are the details of the data sources, estimation methods and assumptions we employed.

II. COST OF COVERAGE OF EMPLOYERS AND UNION BENEFIT PLANS[1]

Overview of Methodology

To determine the cost of coverage incurred by employers, we calculate the sum of the three components of employer spending for coverage shown in Figure I above:

- The employers' share of the total group premiums for employers with health insurance plans ("insured employers"),
- The employers' share of total premium-equivalents for employers with self-insured plans ("self-insured employers"),and
- The "fair share" contributions to the Health Safety Net trust fund by employers who do not offer health care coverage.

We have broken out the employer cost of coverage into insured and self-insured components due to the significant differences in the availability of data of these two types of coverage. The disparity in data availability is due to ERISA, the Employee Retirement Income Security Act of 1974. As ERISA plans are exempt from state insurance regulations, the data available regarding health insurance cost and coverage from the Massachusetts Division of Insurance (DOI) and other public sources of coverage simply do not exist at the state level and there are no parallel reporting requirements at the federal level.

FORMULA II-1 COST OF COVERAGE INCURRED BY EMPLOYERS (SUMMARY VERSION)

Total Employer Cost of Coverage	=	Employer Share of Cost of Insured Employers	+	Employer Share of Cost of Self-Insured Employers	+	Employer Fair Share Contributions

The differences in available data sources also result in the need to do an additional break out in the calculation of the employer share of self-insured employers by separately calculating the number of enrollees and the average cost of enrollees.

Taking this additional break out of self-insured employers into account, our formula for calculating the cost of coverage for employers follows:

FORMULA II-2 COST OF COVERAGE INCURRED BY EMPLOYERS—(DETAILED VERSION)

Total Employer Cost of Coverage	=	Employer share [1] × Total Annual Premium For Enrollees Of Insured Employers [2]	+	Employer Share [1] × Total Number Of Enrollees For Self-Insured Employers [3] × Average Annual Premium-Equivalent For Enrollees Of Self-Insured Employers [4]	+	Employer Fair Share Contributions [5]

1 To facilitate our description of the methodology, in the balance of the report we will use the term "employer" to apply to both employers and to union benefit plans.

Note

A number in brackets at the end of a component of a formula indicates the number of the section in the text provides details on the data sources and assumptions. A number in parentheses at the end of a formula component indicates the number of the data source for that section when there are multiple data sources.

Calculation of Total Employer Cost of Coverage

1. Employer Share of Insured Group Premiums and Self-Insured Group Premium-Equivalents

Massachusetts-specific data regarding the employer share of total group premiums and premium-equivalents are available from reports published by the Massachusetts Division of Health Care Finance & Policy (DHCFP).

DHCFP conducts a biennial survey of the state's employers on health coverage topics such as employer health coverage offer rates, employee take-up rates, employer contribution rates, employee cost sharing, etc. The surveys are conducted using stratified sampling techniques and findings are presented using weights to reflect the Massachusetts employer population.

Data Source

- *Massachusetts Employer Survey 2007*, Massachusetts Division of Health Care Finance and Policy, p.22.

Assumption

- The employer share of insured employers is the same as the employer share of self-insured employers.

2. Total Annual Premium For Enrollees Of Insured Employers

For insured employers, the total annual premium for enrollee of insured employers can be ascertained from reports that the Massachusetts Division of Insurance (DOI) requires from insurers that DOI has approved to offer insurance in the state. There are different reporting requirements, however, among the health insurers as reporting requirements vary by licensure categories that are established by state law. These licensure categories, for example, include Blue Cross Blue Shield of Massachusetts (BCSMA), HMOs, preferred provider plans and non-group plans.

The vast majority of private group health coverage in Massachusetts is provided either by an HMO, including BCBSMA's HMO, or BCBSMA non-HMO products. A number of other carriers provide a small amount of coverage, however, either as the out-of-network insurer for an HMO's PPO and POS products, or with a stand-alone product. These carriers are characterized by the Division of Insurance as either "Accident and Health" or simply "Health". We aggregate the premium revenues for the accredited Accident and Health carriers and the non-HMO Health carriers to add to the private group coverage totals.

Individuals are permitted to purchase group coverage as a "group of 1" under certain circumstances. We assume that premiums for groups of 1 are paid entirely by an individual, and therefore exclude any portion of these premiums from the employers' share. We instead apply these amounts to the individual category of cost of coverage.

FORMULA II-3 TOTAL ANNUAL GROUP PREMIUMS FOR ENROLLEES OF INSURED EMPLOYERS

Total Annual Group Premiums For Enrollees Of Insured Employers	=	Total Annual Group Premiums For Group HMO Enrollees (1)	+	Total Annual Group Premiums For Group BCBSMA Non-HMO Enrollees (1)	+	Total Annual Group Premiums For Group "Accident Or Health" Carrier Enrollees (2)	+	Total Annual Group Premiums For Group "Health" Carrier Enrollees (2)	−	Total Annual Group Premiums For "Group Of 1" Enrollees (3)

Data Sources

1) 2005 & 2007 NAIC (National Association of Insurance Commissioners) Annual Statements, also known as "Orange Blanks"

2) 2005 & 2007 Annual Reports, Division of Insurance, Commonwealth of Massachusetts, Boston, MA.

3) *Impact of Merging the Massachusetts Non-Group and Small Group Health Insurance Markets, Prepared for the Massachusetts Division of Insurance and the Market Merger Study Commission*, Gorman Actuarial, LLC, et. al., Marlborough, MA, December, 2006.

Data Notes

- The data for the group of one adjustment was not available for 2007 from the data source Gorman Actuarial LLC report. We therefore impute the member months and premium PMPM for 2007 by applying the 2005 ratio of groups of 1 member months to total member months, and groups of 1 premium PMPM to overall premium PMPM.
- The data for group coverage for some carriers may include negligible non-group enrollees.

3. Total number of enrollees of self-insured employers

Due to ERISA, it is not possible to determine the number of enrollees of self-insured employers directly from public available data. To overcome this data limitation, we used a two step process.

1. Determine the total number of individuals in Massachusetts with health coverage ("covered individuals").
2. Calculate the number of enrollees of self insured employers by subtracting i) the total number of enrollees of insured employers, and ii) the total number of non-group individuals.

FORMULA II-4 TOTAL NUMBER OF ENROLLEES OF SELF-INSURED EMPLOYERS

Total Number of Enrollees of Self-Insured Employers [3.0]	=	Total Number of Covered Individuals [3.1]	−	Total Number of Enrollees of Insured Employers [3.2]	−	Total Number of Non-group individual [3.3]

3.1 Total number of covered individuals

We calculate the total number of covered individuals by using data about hospital and ambulatory surgery services from two distinct sources, viz., i) data from DHCFP regarding the administration of the Uncompensated Care Pool and Health Safety Net, and ii) data from a study regarding claims trends that was commissioned by DOI. As described in more detail below, the DHCFP data provides the total payments by private sector parties for these two services, and the DOI data provides the average cost per enrollee for these services from claims data.

FORMULA II-5 TOTAL NUMBER OF COVERED INDIVIDUALS

Total Number of Covered Individuals [3.1]	=	Total Private Sector Payments to Acute Hospital & Ambulatory Surgery Centers For All Covered Individuals [3.1.1]	÷	Average Payment for Acute Hospitals & Ambulatory Surgery Centers per Covered Individual [3.1.2]

3.1.1 Total Private Sector Payments to Acute Hospital & Ambulatory Surgery Centers For All Covered Individuals

The state's Uncompensated Pool (UCP) was funded in part from an surcharge assessment on the actual payments that all private sector payers of health care made to acute care hospitals and to ambulatory surgery centers (ASCs).[2] Private sector payers are required to make the surcharges payments to DHCFP on a monthly basis. [3]

The amount of the surcharge payment made by an individual private sector payer to DHCFP is equal to the amount of payment that the payer made to all acute hospitals and ASCs in Massachusetts times a "surcharge percentage", that is calculated yearly by DHCFP.

FORMULA II-6 TOTAL SURCHARGE PAYMENTS

Total Surcharge Payments (1)	=	Total Private Sector Payments To Acute Hospitals & ASCs	X	UCP/HSN Surcharge Percentage (2,3)

2 Chapter 58 continues the surcharge payment system for partial financing of the Health Safety Net.

3 Please see DHCFP regulations 114.6 CMR 11.00 and 114.6 CMR 14.00 for further details on the administration of the surcharge payment system for the Uncompensated Care Pool and Health Safety Net, respectively.

As the amount of total surcharge payments and the surcharge percentage are publicly available, we determine the total private sector payments to acute hospitals and ambulatory surgery centers by restating the formula above as follows:

FORMULA II-7 TOTAL PRIVATE SECTOR PAYMENTS TO ACUTE HOSPITALS & ASCs

Total Private Sector Payments to Acute Hospitals & ASCs	=	Total Surcharge Payments [1]	÷	UCP/HSN Surcharge Percentage [2,3]

Data Sources

1) DHCFP Uncompensated Care Pool monthly payment files
2) DHCFP Uncompensated Care Pool Annual Report for Fiscal Years 2005, 2006 & 2007.
3) DHCFP Fiscal Year 2008 Health Safety Net Annual Report, December, 2008

Data Notes

- Depending of the actual date of receipt and processing of surcharge payments by DHCFP, the monthly payment files sometimes had surcharge payments for a month recorded as received in a subsequent month. We adjusted the monthly payment files so to offset the differences in month for which the surcharge payment was made and month in which it was received and/or recorded.
- Depending on claims payment and claims processing time line, the payments made by surcharge payers to hospitals and ASCs during a calendar month would be for services provided members of the payers for more than one month. Payments could therefore be made in one fiscal year for services in a prior fiscal year. The claims data, however, is for services received in a particular fiscal year. To make the dates of services in the surcharge payment data consistent with the claims data, we distributed the payments in a particular month across multiple months using data regarding the distribution of dates of service and dates of payment for Blue Cross Blue Shield of Massachusetts.

Assumptions

- The distribution of the difference between the date of service and date of payments is the same for all surcharge payers.
- The amount of payments for patients who i) are treated in Massachusetts acute care hospitals and ambulatory surgery centers, but who ii) are non-Massachusetts residents is offset by the amount of payments for patients who i) are treated in non-Massachusetts acute care hospitals and who ii) are Massachusetts residents .

3.1.2 Average Payment for Acute Hospitals & Ambulatory Surgery Centers per Covered Individual

In September, 2008, the Massachusetts Division of Insurance released the results of a study it had commissioned regarding the trends in health claims of fully insured health maintenance organizations for calendar years 2002 through 2006. Using paid claims data from ten HMOs, the study determined the payments to all providers per insured HMO enrollee for over two million Massachusetts residents each year. This report was the source of the average payment for acute hospitals and ambulatory surgery centers .

Data Sources

- Trends in Health Claims for Fully-Insured, Health Maintenance Organizations in Massachusetts, 2002–2006, Oliver Wyman, September, 2008.

Data Note

- We calculated the estimated 2007 Payment for Acute Hospitals & Ambulatory Surgery Centers by applying the 2005 to 2006 PMPM rates of increase to the 2006 PMPM rates.

Assumptions

- The PMPM amount for all covered individuals for acute hospital and ASC services is equal to the PMPM amount for fully insured HMO members for these services.

By i) using the total payments for acute hospitals and ambulatory surgery services for all covered individuals from the Uncompensated Care Pool data, and ii) using the pure premium for these services per insured HMO enrollee as a proxy for the average payment for these surchargeable services per covered individuals, the total number of covered individuals can be calculated. The formula for this calculation, Formula II-5, was displayed in Section 3.1 on page 26 and is repeated below:

FORMULA II-5 TOTAL NUMBER OF COVERED INDIVIDUALS

Total Number of Covered Individuals [3.1]	=	Total Private Sector Payments To Acute Hospitals & ASCs	÷	Average Payment for Acute Hospitals & Ambulatory Surgery Centers per Covered Individual [3.1.2]

The calculation of the number of covered individuals completes the data that is needed to determine the total number of enrollees of self-insured employers. The formula for the calculation, Formula II-4, was listed in Section 3 on page 26 and is repeated here:

FORMULA II-4 TOTAL NUMBER OF ENROLLEES OF SELF-INSURED EMPLOYERS

Total Number of Enrollees of Self-Insured Employers [3]	=	Total Number of Covered Individuals [3.1]	−	Total Number of Enrollees of Insured Employers [3.2]	−	Total Number of Non-group individual [2]

4. Average annual premium-equivalent for enrollees of self-insured employers

Our method for determining the average cost of coverage for self-insured enrollees uses i) the average cost of coverage for insured enrollees from Section 4.1, and ii) an estimate of the average percentage difference between insured premiums and self-insured premium equivalents.

4.1 Average cost of coverage for insured enrollees

See Section 3.1 above for details on the derivation of the average cost of coverage for insured enrollees.

4.2 Average percentage difference between average premiums for insured enrollees and the average premium-equivalents for self-insured enrollees and self-insured accounts.

To complete the calculation of the cost of coverage of self-insured employers, our methodology requires estimating the average percentage difference between i) the average premium of insured employers, and ii) the average premium-equivalent of self-insured. A more common description of this percentage difference is the percentage savings that employers realize by self-insuring.

Several factors contribute to the percentage savings of self-insurance, some of which would vary by relatively small magnitudes across employers, but others of which may vary substantially across employers. An example of the latter is this demographics of enrollees, which directly affects the expected claims expenses. The net effect of the differences among employers is a substantial degree of variability in the percentage savings across employers that complicates the derivation of the average percentage savings required by the methodology.

As with virtually everything else associated with self-insurance, the lack of publicly available data precludes calculations that are possible to do with data from insured enrollees. To address the lack of data, we spoke with individuals who are very familiar with the dynamics of the Massachusetts health care coverage marketplace. We then selected a percentage savings that was in the middle range of the estimates received, i.e., 10 percent.

Data Sources

- Personal communication individuals who are very familiar with the dynamics of the Massachusetts health care coverage marketplace

Assumption

- The estimate of the percentage savings of self-insurance of 10 percent we derived from this process is a reasonable estimate of the average percentage savings of self-insurance across employers.

5. Employer Fair Share Contribution

Chapter 58's "Fair Share Contribution" is an assessment paid by that firms that i) employ 11 or more full-time equivalents and ii) do not meet the standard of making a "fair and reasonable" contribution toward the health costs of their workers. The amount of the assessment is $295 per year per FTE. As this provision of Chapter 58 was effective on October 1, 2006, it is only a component of the methodology for 2007.

Data Source

- *Fair Share Contribution, 2007 Results to Date*, Massachusetts Division of Health Care Finance and Policy, October, 2008.

Assumption

- The calendar year 2007 Fair Share Contribution amount is equal to the fiscal year 2007 Fair Share Contribution.

III. COST OF COVERAGE OF INDIVIDUALS

Overview of Methodology

Individuals contribute to coverage in several ways: they pay premiums for coverage through employer and union groups, individual (non-group) policies, and public programs; they pay deductibles and copayments for covered services, and some who are without coverage pay a penalty through the State income tax that helps to fund coverage for others. Different data are available for each of these modes, so different methodologies are required.

Calculation of Cost of Coverage of Individuals

1. Group premiums

Individuals' share of group premiums is the complement of the employers' share, described in Section I (Employers and Union plans) above. Where we assumed employers pay 75 percent of the premium, individuals pay the remaining 25 percent in groups larger than one. Premium payments for groups of one, which are removed from the employer share of premiums, are added here. We attribute to individuals 100 percent of the premiums for groups of one.

Data Sources

- 2005 & 2007 NAIC (National Association of Insurance Commissioners) Annual Statements, also known as "Orange Blanks"
- 2005 & 2007Annual Reports, Division of Insurance, Commonwealth of Massachusetts, Boston, MA.
- *Impact of Merging the Massachusetts Non-Group and Small Group Health Insurance Markets, Prepared for the Massachusetts Division of Insurance and the Market Merger Study Commission*, Gorman Actuarial, LLC, et. al., Marlborough, MA, December, 2006.

2. Individual premiums

Premiums paid for individual (non-group) purchase come from a number of different sources:

- The Massachusetts HMOs and Blue Cross Blue Shield report premium revenue for individual products on their annual submissions to the Division of Insurance.
- Comprehensive data of the sort that is available for HMOs and Blue Cross are not available for other carriers. The Division of Insurance reports on the number of subscribers to individual plans in three categories: guaranteed issue, guaranteed issue conversion, and closed membership. This figure is multiplied by an average number of member months per subscriber, obtained from a consultant's report on the merger of the non-group and small group insurance markets that was mandated by Chapter 58. Finally, this product is multiplied by the average per member per month premium derived from the HMO and Blue Cross Blue Shield filings to

yield an estimate of premium revenue for non-HMO, non-Blue Cross carriers. These premiums represented 3 percent of individual premium revenue in 2005 and 2 percent in 2007.

- HMO premium revenues for Commonwealth Care are reported in another section of the analysis, so to avoid double counting we remove the individuals' share of Commonwealth Care premiums (for 2007) from the data in part [1] of the formula. (Premiums for the other two plans offering Commonwealth Care—Network Health and Boston Medical Center HealthNet Plan—are not licensed as HMOs and do not file reports with DOI so their revenues are not included in [1].)

FORMULA III-1 TOTAL INDIVIDUAL PREMIUMS

Total Individual Premiums	=	Premiums for HMOs & BCBSMA (1)	+	Premiums for Other Non-group Carriers (2)	−	Members' Share of CommCare Premiums to NHP & FHCP (3)

Data sources

1) 2005 & 2007 NAIC (National Association of Insurance Commissioners) Annual Statements, also known as "Orange Blanks"

2) 2005 & 2007 Division of Insurance non-group membership reports

2) Gorman Actuarial, LLC, *"Impact of Merging the Massachusetts Non-Group and Small Group Health Insurance Markets."*, Report to the Massachusetts Division of Insurance, 12/26/2006

2) PMPM premium derived from DOI "orange blanks"

3) Connector Authority

3. Public Programs

Data on premiums paid by some individuals enrolled in Commonwealth Care and in MassHealth come directly from the programs' administering agencies

Data sources

- MassHealth
- Connector Authority

4. Cost sharing

We derive the amount that insured individuals contribute to their care in the form of deductibles, copayments and coinsurance as a percentage of total medical costs.

FORMULA III-2 TOTAL COST SHARING COSTS

Cost Sharing Costs	=	Total Premiums (1)	X	Average Medical Loss Ratio (2)	X	Cost Sharing Percentage of Medical Costs (3)

Data sources

1) Sum of all premiums derived for this analysis
2) Oliver Wyman Consulting, *Analysis of Administrative Expenses for Health Insurance Companies in Massachusetts*. Report to the Massachusetts Division of Insurance, 9/19/2008
3) Oliver Wyman Consulting, *Trends in Health Claims for Fully-Insured, Health Maintenance Organizations in Massachusetts, 2002–2006*. Report to the Massachusetts Division of Insurance, 9/19/2008

Assumptions

- Cost sharing percentages in 2007 is similar to the percentages in 2002–2006, which were all around 9 percent except for one year (2002) when it was 8 percent.
- Cost sharing percentages for self-insured plans are similar to fully-insured plans.
- Medical loss ratios are similar for fully-insured and self-insured plans.

5. Tax penalty

The Massachusetts Department of Revenue reported in October 2008 on State income tax filers' reported health insurance status in 2007 and the tax penalties that had been assessed and deposited in the Commonwealth Care Trust Fund.

Data Source

- Massachusetts Department of Revenue, "Data on the Individual Mandate and Uninsured Tax Filers, Tax Year 2007." October, 2008

IV. COST OF COVERAGE OF GOVERNMENT

Overview of Methodology

Government contributions to coverage are a combination of direct expenditures and forgone tax revenue, and are shared between state and federal governments. Direct expenditure data come from reports from the relevant state agencies, as detailed below. State and federal shares are allocated according to official federal matching percentages.

Forgone tax revenue is an imputed value. It is a function of the total employee contributions to private health insurance, the proportion of those contributions eligible for the tax subsidy, and marginal state income and federal income and payroll tax rates.

Calculation of Cost of Coverage of Government

1. Direct Expenditures

1.1 Managed care capitation payments

The Commonwealth files quarterly reports with the federal Centers for Medicare and Medicaid Services (CMS) on the expenses and revenues of managed care organizations (MCO) that enroll MassHealth and Commonwealth Care members. These "4B Reports," as they are known, contain premium revenue and member month data, by health plan and program. Quarterly data were aggregated to arrive at a total for calendar years 2005 and 2007.

MCO premium revenue for Commonwealth Care in 2007 is reduced by the amount of premium contributions from Commonwealth Care members, using figures obtained from the Connector Authority.

MassHealth payments to the Massachusetts Behavioral Health Partnership (MBHP), the behavioral health plan for MassHealth members in the Primary Care Clinician Plan, are also included in this subtotal. Payments to MBHP come directly from MassHealth expenditure data, with expenditures for the elderly (age 65 and over) removed.

State and federal shares of the totals are calculated by applying a federal matching percentage. For Commonwealth Care, it is 50 percent. For MassHealth, it is 50.5 percent, a composite of the proportional contributions to total MassHealth spending of the Medicaid matching rate (50%) and the SCHIP matching rate (65%). State shares are derived by subtracting the federal share from the total.

1.2 Other MassHealth expenditures

The non-managed care portion of MassHealth expenditures come directly from MassHealth expenditure reports and excludes payments to MCOs, MBHP, PACE and SCO, as well as payments for members age 65 and over. State and federal shares are computed as described above.

Data Sources

- EOHHS, MCO revenue and expense ("4B") reports, MassHealth expenditure reports
- Connector Authority, report on Commonwealth Care member premium contributions

Assumption

- Federal share is 50 percent of Commonwealth Care spending, 50.5 percent of MassHealth spending

2. Imputing forgone tax revenue: Section 125 subsidies

The value of state and federal governments' subsidies to employees' health insurance contributions via Section 125 (s. 125) arrangements is the tax revenue forgone as a result of the arrangements. There are three sets of formulas that comprise the estimate:

FORMULA IV-1 EMPLOYEE PREMIUM CONTRIBUTION TO S. 125 EMPLOYER-SPONSORED COVERAGE

Premium Contribution	=	Number of Employees With Employer-sponsored Coverage (1)	X	Percentage of Covered Employees With Access to S. 125 Plan (2)	X	Annual Average Employee Premium Contribution (3)

Data sources

1) Authors' estimate, as described in Section II, "Employers and Union Health Plans," of this paper
2) Calculations based on data from the Division of Health Care Finance and Policy's Massachusetts Employers' Health Insurance Survey, 2005 and 2007
3 Calculations based on annual filings with the Division of Insurance of Massachusetts HMOs and Blue Cross Blue Shield of Massachusetts

Assumption

- Employee contribution is 25 percent of total premium

FORMULA IV-2 EMPLOYEE PREMIUM FOR NON-GROUP COVERAGE PURCHASED THROUGH A S.125 PLAN)

Premium contribution	=	Member Months of Individuals Purchasing CommChoice "Voluntary Plans" (1)	X	Average CommChoice Premium PMPM (2)

Data sources

1) Connector Authority, Commonwealth Choice progress reports
2) Connector Authority, Commonwealth Choice premium data and enrollment data from Commonwealth Choice progress report

FORMULA IV-3 STATE SHARE OF S.125 TAX SUBSIDY

State Share	=	Employee premium contribution to S. 125 employer-sponsored coverage	+	Employee premium for non-group coverage purchased through a S. 125 plan	x	State Tax Rate

FORMULA III-6 FEDERAL SHARE OF S.125 TAX SUBSIDY

Federal Share	=	Employee premium contribution to S. 125 employer-sponsored coverage	+	Employee premium for non-group coverage purchased through a S. 125 plan	x	Federal Marginal Tax Rate

Total marginal tax rate = 41 percent

Data source: Massachusetts Department of Revenue, *Health Care Information for Employers*

- State marginal rate = 5.3 percent (Massachusetts personal income tax rate)
- Federal marginal rate = Total – State = 35.7 percent

V. FUNDING OF UNCOVERED SERVICES

In addition to determining the distribution of the funding of the cost of coverage we also examined changes in spending for uncovered services in Massachusetts from 2005 to 2007. Though the purpose of health care reform very clearly is to expand coverage, the level of spending for uncovered services is so directly dependent on the level of coverage that it should be considered part of the same system of expenditures.

One of the more prominent sources of spending for uncovered services in Massachusetts is the Health Safety Net, formerly called the Uncompensated Care Pool, which is funded by a $160 million hospital assessment, a surcharge on private payers' hospital and ambulatory surgery center bills totaling $160 million, and, if these are not sufficient, additional funds from the State. We do not consider the hospital assessment to be spending for uncovered services for this analysis, however, because the assessment is simply redistributed among hospitals and does not represent net new spending on uncovered services.

Similarly, we assume that the payer surcharge that helps fund the Health Safety Net is recouped by insurers through premium revenues and therefore has already been taken into account in the spending for coverage by employers in Section 1.

The main sources of spending for uncovered services are uninsured individuals, the State and Federal governments, and providers.

1. Employers

Assumption

The partial funding of the Uncompensated Care Pool and the Health Safety Net from the surcharge payments made by insurers, TPAs and other private sector payers of acute hospital are i) passed through to employers in the form of premiums and premium-equivalents, and therefore should not be considered in the uncovered services analysis as these amounts are already reflected in the spending by employers for coverage in Section 1 of the report.

2. Individuals

For individuals, spending for uncovered services is entirely out-of-pocket. In estimating the amount of this spending, we used the total "self pay" payments by individuals for inpatient, outpatient and emergency room services at acute care hospitals. In addition, we derive out-of-pocket spending for prescription drugs and physician office visits by applying a ratio of these spending categories to hospital spending from a national health expenditure survey.

Data Sources

- *DHCFP-403, Hospital Statement of Costs, Revenues and Statistics*, Massachusetts Division of Health Care Finance & Policy, Boston, MA.
- Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2006.

Assumption

- The relationship of hospital spending to prescription drug and physician visit spending by uninsured people is similar in Massachusetts to the nation as a whole.

3. Government

Government finances care for uncovered services in Massachusetts in two ways. First, to the extent that funds in the Health Safety Net (or its predecessor, the Uncompensated Care Pool) are insufficient to reimburse eligible care, the Commonwealth has made up some of the difference (and claimed matching federal funds) through General Fund appropriations or transfers from other State trust funds. The State government contributed $345 million in this way in 2005, and $230 million in 2007.

In addition, the Commonwealth makes a number of annual supplemental payments to the State's main safety net institutions—Boston Medical Center and Cambridge Health Alliance—as well as to UMass Memorial Health Care, and smaller supplemental payments to other hospitals. These funds are not disbursed as claims payments for specific services; rather, they are intended to support providers whose high level of uninsured and publicly insured patients means that regular payments may not adequately cover their costs. These supplemental payments fell substantially between 2005 and 2007, from $1.2 billion to $622 million.

For government, the funding of a portion of the Uncompensated Care Pool and the Health Safety Net is just one of the mechanisms for paying for uncompensated services. The majority of funding of uncompensated services by government have collectively come from "supplemental payment" provisions of the MassHealth waivers. The time period of our analyses spans the time period of two MassHealth waivers. Each of the waivers had different forms of supplemental payments that effectively paid for uncovered services either by direct payments to specified hospitals or by funding of Medicaid managed care organizations.

We have included all of the MassHealth waiver supplemental payments in calculating the government funding of uncovered services. The specific supplemental payments are as follows:

- Disproportionate Share Hospital (DSH)
- Medical Assistance Trust Fund
- "Section 122" (of Chapter 58)
- Managed Care Organization (MCO)

Data Sources

- Massachusetts Division of Health Care Finance and Policy, Uncompensated Care Pool Annual Reports
- Supplemental payment data from MassHealth

4. Providers

In contrast to the cost of coverage, the providers of services are a source of funding of uncovered services. Providers finance care for uncovered services by delivering it without any reimbursement, or with reimbursement from a provider's dedicated charity care fund. The value of this care is the net contribution of the provider, after accounting for any payments from uninsured individuals, the Uncompensated Care Pool or Health Safety Net and miscellaneous other sources.

Data Sources:

DHCFP-403, Hospital Statement of Costs, Revenues and Statistics, Massachusetts Division of Health Care Finance & Policy, Boston, MA.

Assumptions

The partial funding of the Uncompensated Care Pools and the Health Safety Net by the hospital assessment should not be considered spending for uncovered services because the assessment is simply redistributed among hospitals and does not represent net new spending on uncovered services.

Acute hospital financing of uncovered services represents the vast majority of such funding by providers and therefore is a reasonable proxy for provider funding for uncovered services.

VI. SENSITIVITY ANALYSIS

We performed sensitivity analysis on our data to evaluate how sensitive our conclusions are to variations in calculations that rely on estimates or assumptions. We selected three components of the methodology for analysis:

- The impact of the estimated number of privately insured enrollees in 2005 and 2007 on the calculation of the contribution to the cost of coverage by employers.
- The impact of the estimated number of privately insured enrollees in 2005 and 2007 on the Section 125 tax subsidy component of the calculation of the government's contribution to the cost of coverage.
- The impact of the average percentage difference in Massachusetts between premiums for insured individuals and premium equivalents for self-insured individuals on the calculation of the employer contribution to the cost of coverage.

We chose these three components for sensitivity analysis based on two criteria:

- The degree to which the calculations were reliant on our assumptions, and
- The potential magnitude of the effect that the calculations had on the shared responsibility findings.

For the estimated number of privately insured enrollees, we calculated the effects that a change of 5 percent in the estimated number of enrollees would have. We used this percentage variance for both the impact on cost of coverage of employers and on the Section 125 impact on the cost of coverage by government.

For the impact of the average percentage difference between insured premiums and self-insured premium equivalents, which we assume to be 10 percent in our analysis, we assessed the effects of percentage differences of 20 percent, 15 percent, 5 percent and 0 percent (insured premiums = self-insured premium-equivalents) on the contribution to the cost to coverage by employers.

In our assessment, none of the three factors analyzed would have a material impact on the study's findings.