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Setting a Standard of Affordability for Health Insurance Coverage in Massachusetts

by **John Holahan**
Jack Hadley
Linda Blumberg
The Urban Institute

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Executive Summary

Massachusetts is the first state to adopt an individual mandate for health coverage, and many are watching its implementation closely. The mandate represents a significant shift in state policy; it makes the purchase of health coverage an individual responsibility and obligation for those who can afford to purchase coverage, within a framework that also expands Medicaid and provides government subsidies to help low- and moderate-income individuals purchase coverage and comply with the mandate.

The law stipulates that the individual mandate will apply only if affordable coverage is available. To implement the individual mandate, the newly created Commonwealth Health Insurance Connector ("Connector") must set a percentage of income that will serve as the maximum amount individuals and families will be expected to pay, with amounts above that deemed unaffordable. The Connector will also be responsible for implementing a new subsidized insurance program, for persons with incomes at or below 300% of the federal poverty level ("FPL") called the Commonwealth Care Health Insurance Program ("Commonwealth Care") and determining the level of premiums that Commonwealth Care enrollees must pay. While the Commonwealth Care subsidy schedule is not required to be linked to the affordability standard for the individual mandate, the two standards are interrelated and must work together to create an equitable and effective structure for expanding coverage.

The decisions that are made about the standard of affordability for these programs will have major policy and practical consequences for the success of the law and its ability to expand coverage. From a policy perspective, constructing an affordability standard is a delicate and tricky balancing act. For example, if a low standard for affordability is established, that is, expecting individuals to pay only a low percentage of income towards health insurance, the Commonwealth Care subsidy costs could exceed the program budget, requiring a cap on enrollment. On the other hand, a high standard, that is, expecting people to spend a substantial portion of income on health insurance, could put a significant financial burden on individuals and families, raising equity issues for those without access to employer-sponsored or subsidized insurance. If the standards for affordability set by the Connector are regarded by the public as overly stringent, public and legislative support for the mandate could erode, jeopardizing the viability of the mandate and the goal of achieving near universal coverage.

A variety of different approaches could be used to define affordability, such as using benchmarks developed for other public programs; using household budgeting as a means to determine the income available for health insurance; and examining current spending on private health insurance coverage as an indicator of the amount that individuals and families are willing and able to pay.

Our paper uses this third approach to defining affordability: identifying the amount of money that people are actually spending on health care. Using national data, we examine the share of family income that is spent on health insurance premiums and out-of-pocket expenses at various income

levels. This approach has the strength of showing the current reality of what people actually spend for health coverage and health care, and so reflects the purchasing decisions that individuals are willing and able to make, albeit in the context of a voluntary health insurance system.

Table 1 below presents the results of our analysis of national data on current spending as a proportion of income for insurance premiums, out-of-pocket costs, and total health care expenditures for three types of coverage:

- **Nongroup:** the spending of people who purchase health insurance directly rather than through an employer, union, or other group;
- **Employee Share of Employer-Sponsored Insurance:** the spending of those who have employer-sponsored plans; and,
- **Full Cost of Employer-Sponsored Insurance:** an estimate of spending by those who have employer-sponsored plans, assuming that the employee actually bears the entire cost of health insurance through an implicit reduction in wages.

Table 1:
Medical Spending as a Percentage of Income (Medians) for Individuals and Families with Incomes Above 300% of the Federal Poverty Level, by Coverage Type

	Nongroup	Employee Share of Employer-Sponsored Insurance (ESI)	Full Cost of ESI [a]
Individuals			
Premium	6.4%	1.5%	10.4%
Out-of-pocket	1.2%	0.6%	0.6%
Total spending [b]	8.2%	2.3%	11.0%
Families [c]			
Premium	6.0%	3.0%	14.1%
Out-of-pocket	2.2%	1.2%	1.2%
Total spending	8.5%	4.6%	15.3%

Source: Analysis of 2001-2003 MEPS-HC data linked to MEPS-IC premium data. All costs are inflated to 2005 dollars.

Notes: Health insurance coverage is defined as 12 months of the same coverage.

a. The "full cost of employer-sponsored insurance" is an estimate that assumes that employees actually pay the full cost of the premium through an implicit reduction in wages. This estimate is calculated by adding the employer share of premiums to both the individual/family health care spending and income.

b. The percentages are median (50th percentile) values for each health expenditure type (i.e., premium, out-of-pocket and total) rather than the same individual or family. This explains why premium plus out-of -pocket spending does not necessarily equal total spending.

c. Families include couples, adult-plus-one, and other family units.

We draw several conclusions from our analysis of current medical spending:

The spending of people above 300% FPL should be the starting point for development of an affordability standard. Through its expansion of Medicaid for children and creation of the Commonwealth Care program, the reform law establishes a clear state policy that people at or below 300% FPL cannot afford health coverage without assistance. Our analysis shows that people with incomes at or below 300% of FPL spend a much higher proportion of income on health coverage and out-of-pocket medical expenses than do people with higher incomes.

Once a benchmark has been established for those with incomes above 300% FPL, the affordability standard could then be phased down as income falls from 300% of FPL to 100% of FPL for enrollees covered under the Commonwealth Care program. For those with incomes below 100% FPL, Commonwealth Care subsidies would fully finance premiums.

Median spending levels are the most appropriate benchmark to use for the affordability standard. The extreme variations in current spending, as well as the increasing evidence of medical debt issues facing households, argues for using median spending levels as the benchmark for affordability since the mean and high percentiles (e.g., 95th percentile) would include the outliers associated with extreme circumstances. In addition, if it is agreed that the standard for affordability in a community should not reflect extremes in people's preferences or circumstances, then identifying the mid-level range (median/50th percentile) of the distribution of expenditures relative to income would be informative for setting the standard for affordability.

If Massachusetts decides to base affordability on existing spending patterns, it could consider several alternatives for establishing the standard that vary considerably in their results. Because it is likely that many of the uninsured people who will now be subject to the individual mandate will purchase coverage either directly from insurers or through the Connector, national data on spending by people in the nongroup market could serve as a benchmark. This would establish a maximum payment for premiums at roughly 6% of income, based on median spending for those with incomes above 300% FPL.

Alternatively, the state could base the affordability standard on the employee share of employer-sponsored insurance. For those above 300% FPL, the median contribution towards premiums represents 1.5% of income for single coverage and 3.0% of income for family coverage.

Using the employee share as the benchmark ignores the fact that employers shift much or all of the cost of premiums to workers by reducing wages by an amount equal to the employer share of the premium. Adjusting for this cost shifting produces much higher amounts: 10.4% for single coverage and 14.1% for family coverage for those with incomes 300% FPL and above. This approach assumes that all additional wages would have to be allocated to health care, which may not be a financially or politically feasible expectation.

Using the employee share of employer-sponsored insurance as a benchmark for developing the affordability standard has considerable appeal but also some potential shortcomings. This approach has intuitive appeal for many reasons: It bases the standard on what most insured people are currently paying directly for health coverage, and it is easy to understand. But this approach probably understates the amounts that workers are actually paying for coverage, given implicit wage reductions. Because it results in a fairly low percentage of income, it could increase government subsidy costs considerably or reduce the percentage of the population that is subject to the mandate if the state chooses not to fund subsidies sufficient for all to meet the standard and/or if affordable products are not available for people who do not qualify for subsidies.

It is also possible that linking maximum premium payments to what employees currently spend for employer-sponsored insurance could make it easier for employers to drop coverage, knowing that the maximum that the workers would have to pay for health coverage, through the Connector or elsewhere, would be limited to fairly low percentages of income. This assumes that the plans available through the Connector would be affordable and the benefits comparable to the products previously offered by the employer.

Any affordability standard should include a mechanism to limit out-of-pocket spending as a percent of income. Our analysis shows that out-of-pocket expenses can be very high as a percentage of income, particularly for those with incomes below 300% FPL. As shown in Table 2 below, at the upper end of the percentage distribution (i.e., the 95th percentile), individuals and families with employer-sponsored insurance with incomes below 300% FPL are paying between 11.9% and 26.6% of income on out-of-pocket health expenditures alone. Thus, any standard for affordability needs to consider out-of-pocket costs as well as premiums.

Table 2:
Out-of-Pocket Spending as a Percentage of Income for Individuals and Families with Employer-Sponsored Insurance by Income

	Single with Employer-Sponsored Insurance	Family with Employer-Sponsored Insurance
Income 100-199% FPL		
50th percentile	2.2%	3.2%
75th percentile	6.7%	9.0%
95th percentile	20.4%	26.6%
Income 200-299% FPL		
50th percentile	1.1%	2.2%
75th percentile	3.6%	4.9%
95th percentile	11.9%	12.3%

Source: Analysis of 2001-2003 MEPS-HC data linked to MEPS-IC premium data. All costs are inflated to 2005 dollars.

It is critical for the Commonwealth Care products to limit out-of-pockets expenses, since they will be available only to those with incomes below 300% FPL. But it is also an important consideration for the enforcement of the individual mandate. If the market in Massachusetts changes in ways that encourage health policies with even higher deductibles than are reflected in our data (which seems quite likely to happen), then the range of the distribution of out-of-pocket costs is likely to increase. If these high deductible policies are available within the Connector, then a policy that limits out-of-pocket costs as a percentage of income for those at the high end of the spending distribution needs to be considered (e.g., requiring health plans that are offered in the Connector to have a stop loss provision that limits out-of-pocket spending as a percentage of income).

I. Introduction

Setting a standard for health insurance affordability in Massachusetts is a major challenge in the implementation of the new Massachusetts health care reform law (Chapter 58 of the Acts of 2006). Affordability is a significant issue in the new law in two ways. First, a new program of subsidized health insurance, called the Commonwealth Care Health Insurance Program ("Commonwealth Care"), is established for low- and moderate-income individuals. A new state authority, the Commonwealth Health Insurance Connector ("the Connector") must develop a sliding scale subsidy schedule, based on family income, for this program. Second, the law includes a mandate for adults to obtain coverage if "affordable" insurance is available or else face tax penalties. The Connector must set a percentage of income that will serve as the maximum amount individuals and families will be expected to pay, with amounts above that deemed unaffordable. While the Commonwealth Care subsidy schedule is not required to be linked to the affordability standard for the individual mandate, the two standards are interrelated and must work together to create an equitable and effective structure for expanding coverage across income groups.

The decisions that are made about the standard of affordability for these programs will have major policy and practical consequences for the success of the law and its ability to expand coverage. From a policy perspective, constructing an affordability standard is a delicate and tricky balancing act. For example, if a low standard for affordability is established, that is, expecting individuals to pay only a low percentage of income towards health insurance, the Commonwealth Care subsidy costs could exceed the program budget, requiring a cap on enrollment. On the other hand, a high standard, that is, expecting people to spend a substantial portion of income on health insurance, could put a significant financial burden on individuals and families, raising equity issues for those without access to employer-sponsored or subsidized insurance. Uninsured residents may opt to face the tax penalty — equal to half of the cost of the lowest premium available — rather than pay what could be viewed as an excessive or unrealistic percentage of their income towards health insurance. This would undermine the goal of expanded coverage.

From a political perspective, Massachusetts is the first state to adopt an individual mandate for health coverage, and many are watching the implementation of the new law closely. The mandate represents a significant shift in state policy; it makes the purchase of health coverage an individual responsibility and obligation for those who can afford to purchase coverage, within a framework that also expands Medicaid and provides government subsidies to help low and moderate income individuals purchase coverage and comply with the mandate. State policymakers have embraced the individual mandate as a necessary component of the state's overall plan to achieve near universal coverage. However, it is not yet clear if the mandate will be accepted by the public at large. If the standards for affordability set by the Connector are regarded by the public as overly stringent, public and legislative support for the mandate could erode, jeopardizing the viability of the mandate and the goal of achieving near universal coverage.

The purpose of this analysis is to develop benchmarks that policymakers could use to determine the ***maximum*** amounts individuals and families should be required to pay for insurance premiums and overall health spending under the new Massachusetts law. This benchmark could then be used as a starting point for determining what lesser percentage of income persons eligible for Commonwealth Care should be required to pay. After a brief discussion of different conceptual approaches to determining affordability, we focus on one specific approach: developing benchmarks based on estimates of the range of the financial burdens actually borne by Americans at various income levels relative to poverty who are covered for the full year by either employer-sponsored insurance (ESI) or nongroup health insurance.

II. Approaches to Defining Affordability

"Affordability" of health insurance coverage is a subjective concept: It requires making a judgment about the appropriate share of income that an individual or family should be expected to pay in order to have health insurance. A variety of different approaches could be used to define affordability such as using benchmarks developed for other public programs; using household budgeting as a means to determine the income available for health insurance; and examining current spending on private health insurance coverage as an indicator of the amount that individuals and families are willing and able to pay.

a. Using Subsidy Schedules for Public Programs

A variety of existing public programs have established benchmarks for affordability, most often through the development of subsidy schedules, which generally vary by level of income (i.e., persons with higher incomes are expected to contribute a greater percentage of income). Some examples include:

- **the Massachusetts CommonHealth program,** which provides coverage to persons of all incomes with disabilities in exchange for monthly premiums, has a sliding scale premium ranging from 1.6% of income for those with incomes 100% of the federal poverty level, to 5.4% of income for those with 400% of the federal poverty level, to as high as 8% of income for those with incomes over 700% of the federal poverty level.[1]
- **the Massachusetts Insurance Partnership (IP),** which seeks to make health coverage more affordable by providing subsidies to certain small employers and their low-wage workers. In the IP, eligible people make a monthly contribution that varies by family size and composition.[2] When translated into percent of income, the contribution ranges from less than 1%, to about 5%.[3]
- **the federal State Children's Health Insurance Program,** which sets a maximum level for premiums and other cost sharing at 5% of family income.[4]

Other public programs have set ***implicit*** affordability standards by specifying income levels below which no premium or contribution is required. For example, Medicaid and S-CHIP programs generally do not charge premiums to those adults with children who have incomes below 150% of the federal poverty level.[5] The Massachusetts Uncompensated Care Pool provides free full care, with no patient contribution, to individuals with incomes below 200% of the federal poverty level.[6]

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[1] See MassHealth regulations 130 CMR 506.11(I).

[2] See Insurance Partnership regulations 130 CMR 650.

[3] The maximum premium paid by any eligible family configuration is a two-person couple with no children at 200% FPL ($26,400), who would pay $54 per month ($648/26,400) = 5%.

[4] See Title XXI Subtitle J Section 2103.

[5] See MassHealth regulations 130 CMR 506.012(E).

[6] See Uncompensated Care Pool eligibility regulations 114.6 CMR 10.00.

b. Using a Household Budget Approach

Another approach to defining affordability is to examine household budgets at different income levels. Individuals at each income level expend resources on housing, clothing, food, transportation to and from work, and other essentials. One could calculate these expenses and compare them to income and assume that the amount left is available for health care. In Massachusetts, the Health Economic Sufficiency Standard is one such approach, developed by the Women's Educational and Industrial Union.[7]

The household budget approach is appealing because it is sensitive to the unique circumstances of individuals and families, for example with respect to geographic variation in housing costs. It also acknowledges that the share of income available for health insurance is undoubtedly considerably lower at very low-income levels because there is a certain minimum cost associated with housing, food, and other basic necessities. However, one shortcoming of this approach is that it is prescriptive, particularly in terms of categorizing spending as "essential" and "non-essential." Another problem is that it leaves health care as a residual. In reality health care can and does affect other priorities. In the face of health care needs, individuals and families can and do make tradeoffs in other areas of the household budget. This approach also does not provide guidance about how much of any residual income it is reasonable to expect individuals to spend on health.

c. Using Actual Household Spending on Health Insurance and Medical Care

The approach to defining affordability explored in this paper is to identify what people are actually spending on health care. Specifically, we examine the share of family income that is spent on health insurance premiums and out-of-pocket expenses at various income levels. This approach has the strength of showing the current reality of what people actually spend for health coverage and health care, and so reflects the purchasing decisions that individuals are willing and able to make, albeit in the context of a voluntary health insurance system.

[7] See www.weiu.org/index.php?page=56

III. Methodology

This section provides a brief overview of our methodology. The Appendix provides a more detailed description.

a. Data

We used national data from three components of the Medical Expenditure Panel Survey (MEPS) for our analysis. The MEPS Household Component survey is a large nationally representative sample of households that collects detailed information on individuals' insurance coverage, out-of-pocket spending for medical care, family structure, income, and employment status. It enables the identification of homogeneous health insurance units ("HIUs") in which all people have the same type of private health insurance coverage for the full year. Limiting the analysis to these HIUs increases the precision of estimates of the premiums and out-of-pocket medical care costs associated with each type of coverage. The MEPS Insurance Component survey of employers was used for data on total premiums and employee contributions for employer-sponsored insurance. The premiums for nongroup coverage were developed from information available from a third MEPS database, the Person-Round-Plan (PRPL) file, which contains information on people's actual out-of-pocket premiums. Data from the PRPL was used to adjust premium information from the MEPS-IC. The combination of these three MEPS surveys provides the most reliable and most detailed data available for estimating the range of household spending for medical care and insurance premiums.

We pooled data from the three most recent MEPS surveys (for 2001, 2002, and 2003). Income, out-of-pocket medical spending, and premiums are inflated to 2005 values using a combination of trending factors. We used data for the entire U.S. in order to obtain large enough samples to examine the distribution of spending within income groups. National data may somewhat understate Massachusetts spending as a percent of income since Massachusetts' health care costs are generally higher than elsewhere in the U.S. However, this may in part be balanced by the higher than average incomes of Massachusetts residents.

We excluded families with incomes below poverty because the Massachusetts law calls for insurance costs for this group to be fully subsidized. The remaining families were grouped into five categories of income relative to the federal poverty level (100-199% of the FPL, 200-299% of the FPL, 300-399% of the FPL, 400% or more of the FPL, and 300% or more of the FPL) by type of health coverage (nongroup or employer-sponsored) and by family type (single adults or families).

Because we are interested in the maximum amount that should be paid, our analysis focused on the median and the 75th percentile of the spending distribution.

b. Analytical Approach

Type of coverage

We analyzed spending for people with nongroup coverage and employer-sponsored insurance (ESI).

Nongroup: It is likely that many of the uninsured people who will now be subject to the individual mandate will purchase coverage either directly from insurers or through the Connector. The Commonwealth Care plan will also be sold directly to individuals through the Connector. Thus, one possible approach would be to link the affordability standards to current spending on nongroup coverage as a percentage of income. In general, nongroup policies are more expensive in Massachusetts than elsewhere because of the nature of insurance regulation, such as guaranteed issue, modified community rating, and the standardized and quite comprehensive benefit package. In most of the country, nongroup insurance premiums are generally lower as a percentage of income because only relatively healthy people are able to purchase coverage. That fact is borne out by the data presented in this analysis, which found that nongroup premiums were 60% of the cost of employer-sponsored insurance premiums. Thus, using national data as a benchmark enables us to assess what relatively healthy people who purchase nongroup coverage are spending as a percent of income. Using such a standard implies that the less healthy should spend no more than this relatively healthy group.

Using nongroup premiums as a benchmark would have significant shortcomings. The nongroup market is very small — covering only 5% of the U.S. population[8] — and therefore is not representative of the experience of most U.S. residents with health coverage. The nongroup market is also widely regarded as dysfunctional market in the sense that individual purchasers have little bargaining power, and pay much higher administrative costs and contributions to reserves/profits than group purchasers. However, the experience of those Americans who do purchase coverage through the nongroup market does offer useful information on the amounts that are spent by relatively healthy people who purchase coverage directly as many will do through the Connector.

Employer-Sponsored Insurance (ESI): For those with ESI, we analyzed the percent of income spent on health coverage in two ways:

- based on the ***employee*** share of premiums: This approach would tie the affordability standard to what most insured people are currently paying for coverage since nearly 70% of the population has employer-sponsored coverage[9], and does not penalize those whose employers do not offer insurance.
- based on the ***combined employee and employer premium***. The rationale for this analysis is that there is considerable evidence in the economics literature that individuals actually bear most or all of the

[8] Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Census Bureau's March 2004 and 2005 Current Population Survey (CPS: Annual Social and Economic Supplements).

[9] Cook, A., "Health Insurance Coverage and the Uninsured in Massachusetts," published as part of the Roadmap to Coverage, June 2005.

cost of the employer contribution.[10] That is, they accept lower wages in return for their employers paying the bulk of their premiums. Thus, this approach corrects the likely understatement of spending that arises if the affordability standard is based on the employee share of ESI.

To develop our estimates for this approach, we added the employer premium costs to both the numerator and the denominator when calculating the percent of income spent on health care, thereby increasing both the income as well as health care expenses.

Premiums and total health care spending

An affordability standard could be set based on affordable premiums or affordable health care expenditures. Since the goal in Massachusetts seems to be to set a standard for affordability of premiums, we first look at expenditures on premiums. However, we believe it also important to look at out-of-pocket costs. Within each income level, the variation in premium and medical care expenditures as a percentage of income can be very large. This extreme variation reflects a variety of factors: choosing to buy either a barebones policy with very limited benefits or a very comprehensive benefit package; being in very good health or in very poor health; having a job where the employer pays all of the cost of insurance or pays none of the cost; experiencing transitory changes in income relative to existing insurance coverage; or having access to savings or other financial resources outside the family to help pay insurance premiums and medical expenses. The variation in out-of-pocket spending is much greater than that for premiums. At the high end of the spending distribution, affordability can become a serious issue. As we will discuss below, our analysis of out-of-pocket costs for medical care highlights the importance of including caps on out-of-pocket costs within the discussion of affordability.

[10] Gruber, J., *The Incidence of Mandated Maternity Benefits,* American Economic Review, 84(3):622-641 (1994); Sheiner, L., *Health Care Costs, Wages, and Aging,* Federal Reserve Board of Governors. Paper #99-19. Washington, D.C. (1999); Baicker, K., & Chandra, A., The Labor Market Effects of Rising Health Insurance Premiums, National Bureau of Economic Research, NBER Working Paper: 11160 (2005); Olson, C. A. *Do Workers Accept Lower Wages in Exchange for Health Benefits?* Journal of Labor Economics, 20(2, pt.2):S91-S114 (2002); Pauly, M., & Herring, B., *Cutting Taxes for Insurance: Options and Effects of Tax Credits for Health Insurance.* Presented at the Council on the Economic Impact of Health System Change Conference (December 1999).

IV. Results

Tables 3-5 at the end of this report present detailed results on spending and the distribution of spending at different levels of income, by type of coverage. The data present many different options for setting an affordability standard. In our discussion we focus on the median (50th percentile) values, as one reasonable measure of "typical" spending. One could also argue for using the 75th percentile since it represents the percentage of income that a significant portion of the population (25%) has chosen to spend. However, in developing affordability standards to be imposed upon all residents, the median represents a more fair approach.

We also highlight results for the "all income" and 300%+ FPL group. In creating the Commonwealth Care program, the state recognized that large numbers of people below 300% FPL do not have coverage, suggesting that available premiums combined with out-of-pocket medical care expenses are too high for many people in these income ranges. The data we present bear this out. Relatively small proportions of people at low-income levels relative to the FPL have private insurance coverage, and many of those that do have private coverage appear to spend very high shares of their incomes on premiums and out-of-pocket medical expenses. We suspect that the data for many of these people with private coverage at low income levels reflect exceptional circumstances. Thus, we assume that the spending experience of people at higher income levels is a more reasonable benchmark to use in setting a maximum affordability standard. The analysis below presents data for all those people with above 300% FPL combined. However, if one was concerned that these values were deflated due to the inclusion of some individuals with very high incomes who spend a very small percentage of their income on health care, one could look at the percentages for subsets of the population.

The maximum affordability thresholds (required health care spending relative to income) would apply to those above 300% FPL, subsidies would fully finance premiums for those with incomes below 100% FPL, and affordability thresholds would increase on a sliding scale between 100 and 300% FPL. The percentage of income deemed affordable for those with incomes above 300% FPL could also continue to increase on a scaled basis or all persons with incomes above 300% FPL could face the same percentage of income.

a. Premium Payments as a Percentage of Income

Table 3 provides data on premiums payments as a percentage of income. Data is shown for single and family coverage, for nongroup and employer-sponsored insurance, and for different income groups. The table provides information on current premium spending for those at the 50th (median) and 75th percentiles of the spending distribution.

- **Nongroup Coverage:** There is considerable variation in median premium payments across income groups, ranging from about 6% for the 300%+ FPL income category to 21% for people in the lowest income group. Across all income groups, median premium are 12% of income for single coverage and 10% for family coverage. Regardless of income level, premium payments for nongroup coverage are at least 3 to 4 times as high in terms of percentage of income as those for people who have employer-sponsored coverage.
- **Employee Spending for Employer-Sponsored Insurance:** Median payments by employees for employer-sponsored coverage are 2.0 to 3.6% of income across all income groups, and 1.5% to 3.0% of income for those above 300% FPL. Considerable variation in premium payments as a percentage of income exists for individuals with employer coverage, but at much lower percentages of income compared to those with nongroup coverage.
- **Total Spending for Employer-Sponsored Insurance:** The last two columns of Table 3 show the results from assuming that employer premium payments are added to worker spending as well as to worker income. Because the amount in percentage terms that is added to the numerator is greater than the amount added to the denominator, the percentage of income that people are actually spending for health insurance premiums increases considerably. The median percent of income spent on employer-sponsored insurance across all income groups is 13.1% for single coverage and 16.5% for family coverage. The medians for those with incomes 300%+ of the federal poverty level are 10.4% and 14.1% for single and family coverage respectively.[11]

[11] Below 300% FPL, the percent of income spent on premiums is considerably higher than for those with higher incomes. There is some question as to whether employers are able to fully shift the cost of employer premiums to employees at the lowest income levels, so these numbers may considerably overstate the amount that is shifted to lower income workers.

Table 3:
Premium Payments as a Percentage of Income[a], by Income, Coverage Type, and Medical Cost to Income Ratio Percentile

	Single Nongroup Coverage	Family[b] Nongroup Coverage	Single Employer-Sponsored Insurance	Family[b] Employer-Sponsored Insurance	Full Cost[c] of Single Employer-Sponsored Insurance[c]	Full Cost[c] of Family[b] Employer-Sponsored Insurance
50th Percentile						
All Income Groups	11.5%	9.6%	2.0%	3.6%	13.1%	16.5%
100-199% FPL	20.9%	21.8%	5.2%	10.4%	29.7%	40.3%
200-299% FPL	12.1%	13.8%	3.2%	6.5%	19.6%	27.7%
300-399% FPL	8.9%	9.9%	2.4%	4.7%	14.5%	21.0%
400%+ FPL	5.3%	5.4%	1.3%	2.6%	9.0%	12.5%
300%+ FPL	***6.4%***	***6.0%***	***1.5%***	***3.0%***	***10.4%***	***14.1%***
75th Percentile						
All Income Groups	19.0%	15.4%	3.1%	5.4%	19.1%	23.7%
100-199% FPL	25.3%	26.3%	6.2%	12.6%	32.9%	46.0%
200-299% FPL	13.6%	15.1%	3.7%	7.6%	20.3%	30.3%
300-399% FPL	9.6%	10.8%	2.6%	5.6%	15.0%	22.6%
400%+ FPL	6.6%	6.7%	1.7%	3.4%	10.5%	15.5%
300%+ FPL	***8.2%***	***7.6%***	***2.1%***	***4.1%***	***12.8%***	***18.0%***

Source: Analysis of 2001-2003 MEPS-HC data linked to MEPS-IC premium data. All costs are inflated to 2005 dollars.

Notes: Health insurance coverage is defined as 12 months of the same coverage for all family unit members.

a. Calculated separately for each family unit and set to 100% if costs are greater than or equal to health insurance unit income.

b. Includes families, couples, and adult-plus-one family units

c. Assuming employees pay full cost of the premium by accepting lower income.

Calculated as:
(employee premium payment + employer premium payment)
÷ (family income + employer premium payment)

Set to 100% if costs (numerator) are greater than or equal to income (denominator).

b. Out-of-Pocket Medical Care Costs

In addition to paying for insurance premiums, individuals and families spend a considerable amount of money on out-of-pocket medical costs. This includes deductibles, co-insurance, and uncovered services. Table 4 provides data on out-of-pocket spending for medical care by income. We show the median as well as higher points on the spending distribution to demonstrate the wide range in out-of-pocket spending experience at all income levels.

- **Nongroup Coverage:** The results show that out-of-pocket medical costs as a percentage of income are particularly high for those with nongroup coverage and vary inversely with income. The median out-of-pocket spending as a percent of income for those with nongroup coverage is 2.9% and 4.3% for single and family coverage respectively. Spending as a percentage of income increases to 8.7% and 9.6% for single and family coverage respectively at the 75th percentile. At the higher end of spending distribution e.g., the 95th percentile, expenditures are over 25% of income.

  For those with incomes above 300% FPL, median spending is quite low. However, spending is still above 10% of income at the upper end of the spending distribution.

- **Employer-Sponsored Insurance:** For those with employer-sponsored insurance, out-of-pocket costs are considerably lower, presumably because benefit packages are richer. The average across all income levels is 0.8% for individuals and 1.4% for families. Even at the 95th percentile, expenditures are only 9.4% and 9.8% of income for single and families respectively. Median out-of-pocket spending is about 1% of income for those above 300% FPL, with expenditures at the high end of the spending distribution rising to over 5%.

Table 4:
Out-of-Pocket Medical Care Costs as a Percentage of Income [a], by Income Group and Coverage

	Single Nongroup Coverage	Family [b] Nongroup Coverage	Single Employer-Sponsored Insurance	Family [b] Employer-Sponsored Insurance
All Income Groups				
50th percentile	2.9%	4.3%	0.8%	1.4%
75th percentile	8.7%	9.6%	2.4%	3.1%
95th percentile	27.8%	29.4%	9.4%	9.8%
Income 100-199% FPL				
50th percentile	7.1%	10.9%	2.2%	3.2%
75th percentile	17.7%	23.9%	6.7%	9.0%
95th percentile	38.3%	41.2%	20.4%	26.6%
Income 200-299% FPL				
50th percentile	3.8%	6.7%	1.1%	2.2%
75th percentile	7.4%	12.6%	3.6%	4.9%
95th percentile	18.4%	25.3%	11.9%	12.3%
Income 300-399% FPL				
50th percentile	2.9%	4.5%	0.8%	1.8%
75th percentile	6.0%	7.4%	2.2%	3.9%
95th percentile	20.6%	12.6%	7.4%	11.7%
Income GT 400% FPL				
50th percentile	0.9%	1.7%	0.6%	1.1%
75th percentile	2.4%	4.2%	1.5%	2.3%
95th percentile	9.6%	9.6%	4.8%	6.0%
Income 300%+ FPL				
50th percentile	***1.2%***	***2.2%***	***0.6%***	***1.2%***
75th percentile	***3.6%***	***5.0%***	***1.7%***	***2.6%***
95th percentile	***11.1%***	***10.3%***	***5.6%***	***7.0%***

Source: Analysis of 2001-2003 MEPS-HC data linked to MEPS-IC premium data. All costs are inflated to 2005 dollars

Notes: Health insurance coverage is defined as 12 months of the same coverage for all family unit members.

a. Calculated separately for each family unit and set to 100% if costs are greater than or equal to health insurance unit income.

b. Includes families, couples, and adult-plus-one family units

c. Total Medical Costs

The results discussed above show that out-of-pocket costs are relatively low on average, particularly for those with employer-sponsored insurance or those with incomes above 300% of poverty. But when added to the premium cost, they can result in fairly high expenditures relative to incomes.

Table 5 presents results for total medical costs (i.e., premiums and out-of-pocket costs) as a percentage of income for people with different kinds of coverage.

- **Nongroup:** Table 5 shows that individuals and families with nongroup coverage across all incomes spend 16.9 and 14.7% of income, respectively, on health insurance and out-of-pocket costs, while those with incomes 300% of the federal poverty level and above spend 8.2 and 8.5% of income, respectively.
- **Employee Spending for Employer-Sponsored Insurance:** The median spending for individuals and families across all income groups is 3.1% and 5.5%. For those with incomes above 300% of the federal poverty level these figures fall to 2.3% and 4.6% respectively.
- **Total Spending for Employer-Sponsored Insurance:** If it assumed that workers ultimately bear even the cost of the employer contribution, then spending levels increase considerably and above those of people covered by nongroup policies. On average, spending is 13.8% and 17.8% for individual and family coverage, respectively. For those with incomes above 300% of the federal poverty level these figures fall to 11.0% and 15.3% respectively.

Table 5:
Total Medical Costs as a Percentage of Income[a]

	Single Nongroup Coverage	Family[b] Nongroup Coverage	Single Employer-Sponsored Insurance	Family[b] Employer-Sponsored Insurance	Full Cost[c] of Single Employer-Sponsored Insurance	Full Cost[c] of Family[b] Employer-Sponsored Insurance
50th Percentile						
All Income Groups	16.9%	14.7%	3.1%	5.5%	13.8%	17.8%
100-199% FPL	29.4%	35.0%	7.9%	14.7%	31.2%	42.7%
200-299% FPL	16.2%	21.0%	4.5%	9.2%	20.6%	29.6%
300-399% FPL	11.5%	13.5%	3.2%	6.9%	15.2%	22.6%
400%+ FPL	6.6%	7.3%	2.0%	4.0%	9.5%	13.6%
300%+ FPL	***8.2%***	***8.5%***	***2.3%***	***4.6%***	***11.0%***	***15.3%***
75th Percentile						
All Income Groups	27.0%	25.0%	5.3%	8.5%	20.3%	25.4%
100-199% FPL	41.1%	47.3%	12.5%	20.5%	37.1%	50.2%
200-299% FPL	20.0%	26.5%	6.8%	12.2%	23.0%	33.2%
300-399% FPL	14.9%	17.6%	4.6%	9.0%	16.8%	25.1%
400%+ FPL	8.7%	10.7%	3.0%	5.6%	11.6%	17.0%
300%+ FPL	***11.4%***	***12.0%***	***3.5%***	***6.5%***	***14.0%***	***19.6%***

Source: Analysis of 2001-2003 MEPS-HC data linked to MEPS-IC premium data. All costs are inflated to 2005 dollars.

Notes: Health insurance coverage is defined as 12 months of the same coverage for all family unit members.

a. Calculated separately for each family unit and set to 100% if costs are greater than or equal to health insurance unit income.

b. Includes families, couples, and adult-plus-one family units

c. Assuming employees pay full cost of the premium by accepting lower income.

Calculated as:

(OOP medical costs + employee premium payment + employer premium payment)
÷ (family income + employer premium payment)

Set to 100% if costs (numerator) are greater than or equal to income (denominator).

V. Summary and Policy Implications

We believe that basing the benchmark standard for affordability on the percent of income now devoted to health spending by privately insured individuals is a sound approach because it reflects actual experience. We draw several conclusions from our analysis of current medical spending:

The spending of people above 300% FPL should be the starting point for development of an affordability standard. Through its expansion of Medicaid for children and creation of the Commonwealth Care program, the reform law establishes a clear state policy that people at or below 300% FPL cannot afford health coverage without assistance. Our analysis shows that people with incomes at or below 300% of FPL spend a much higher proportion of income on health coverage and out-of-pocket medical expenses than do people with higher incomes.

Once a benchmark has been established for those with incomes above 300% FPL, the affordability standard could then be phased down as income falls from 300% of FPL to 100% of FPL for enrollees covered under the Commonwealth Care program. For those with incomes below 100% FPL, Commonwealth Care subsidies would fully finance premiums.

Median spending levels are the most appropriate benchmark to use for the affordability standard. The extreme variations in current spending as well as the increasing evidence of medical debt issues facing households[12], argues for using median spending levels as the benchmark for affordability since the mean and high percentiles (e.g., 95th percentile) would include the outliers associated with extreme circumstances. In addition, if it is agreed that the standard for affordability in a community should not reflect extremes in people's preferences or circumstances, then identifying the mid-level range (median/50th percentile) of the distribution of expenditures relative to income would be informative for setting the standard for affordability.

If Massachusetts decides to base affordability on existing spending patterns, it could consider several alternatives for establishing the standard, which vary considerably in their results. If the state chooses to base the standard on what all people who now have nongroup coverage throughout the U.S. spend on premium payments as percentage of income, it would establish a maximum payment in the neighborhood of 10% of income based on median spending. If it was based on average spending on nongroup premiums for those above 300% FPL the maximum payments would be in the 6% range for median spending.

The state could instead base the affordability standard on the employee share of employer-sponsored insurance and the amounts that people would be expected to pay would be considerably lower. On an

[12] The most recent Commonwealth Fund biennial health insurance survey found that 28% of respondents who were insured all year reported one or more problems with access to necessary care due to costs (i.e., did not fill a prescription; did not see a specialist when needed; skipped recommended medical test, treatment or follow-up; or had a medical problem but did not visit doctor or clinic). In addition, 26% of insured respondents reported one or more problems with medical bills or outstanding medical debt (i.e., not able to pay medical bills, contacted by collection agency, had to change way of life to pay medical bills, or had medical bills/debt being paid off over time. (Collins SR et al., "Gaps in Health Insurance: An All American Problem," April 2006.)

average, employee contributions are 2.0% for single coverage and 3.6% for family coverage. For those above 300% FPL, the medians are 1.5% and 3.0% respectively.

We pointed out above that setting the maximum at the employee share ignores the fact that employers shift much or all of the cost of premiums to workers. Adjusting for this cost shifting produces much higher amounts: 13.1% for single coverage and 16.5% for family coverage for those at all income levels. The median percent of income for single and family premiums are for those above 300% FPL are 10.4% and 14.1% respectively. This approach assumes that all additional wages would have to be allocated to health care, something which may not be a financially or politically feasible expectation.

Using the employee share of employer-sponsored insurance as a benchmark for developing the affordability standard has considerable appeal but also some potential shortcomings. As noted above, this approach would result in the lowest standard of affordability of the three approaches we analyzed. It has intuitive appeal for many reasons: It bases the standard on what most insured people are currently paying directly for health coverage, and it is easy to understand. But, as we discussed, this approach probably understates the amounts that workers are actually paying for coverage, given implicit wage reductions. Because it results in a fairly low percentage of income, it could increase government subsidy costs considerably or reduce the percentage of the population that is subject to the mandate if the state chooses not to fund subsidies sufficient for all to meet the standard and/or if affordable products are not available for people who do not qualify for subsidies.

It is also possible that linking maximum premium payments to what employees currently spend for employer-sponsored insurance could make it easier for employers to drop coverage, knowing that the maximum that workers would have to pay for health coverage, through the Connector or elsewhere, would be limited to fairly low percentages of income. This assumes that the plans available through the Connector would be affordable and the benefits comparable to the products previously offered by the employer.

Any affordability standard should include a mechanism to limit out-of-pocket spending as a percent of income. Our analysis shows that total medical spending, including premium payments and out-of-pocket expenses can be very high as a percentage of income, particularly for those with incomes below 300% FPL. Thus, any standard for affordability needs to consider out-of-pocket costs as well as premiums. This is critical for the Commonwealth Care products, which will be available only to those with incomes below 300% FPL. It is also an important consideration for the enforcement of the individual mandate. If the market in Massachusetts changes in ways that encourage health policies with even higher deductibles than are reflected in our data (which seems quite likely to happen), then the range of the distribution of out-of-pocket costs is likely to increase. If these high deductible policies are available within the Connector, then a policy that limits out-of-pocket costs as a percentage of income for those at the high end of the spending distribution needs to be considered (e.g., requiring health plans that are offered in the Connector to have a stop loss provision that limits out-of-pocket spending as a percentage of income).

Appendix

Detailed Data Methods

We used national data from the Medical Expenditure Panel Survey (MEPS), Household Component (HC), and Insurance Component (IC) to construct these estimates. The MEPS-HC collects detailed information on individuals' insurance coverage, out-of-pocket spending for medical care, family structure, income, and employment status. The MEPS-IC surveys employers and provides data on total premiums and employee contributions (out-of-pocket) for employer-sponsored insurance. The MEPS-HC is a large nationally representative household survey that enables the identification of homogenous health insurance units (HIUs), their key characteristics, and their out-of-pocket spending. A health insurance unit consists of a single adult or two married adults plus their dependent children up to age 18, or to age 21 if the child is a full-time student. Families may include multiple HIUs if adult children and their parents live in the same household. The MEPS-IC is the best source of information on ESI premiums paid by employees and employers. The combination of information from these two MEPS surveys provides the most reliable and most detailed data available for estimating the range of HIUs' spending for medical care and insurance premiums.

The MEPS-HC collects information using in-person interviews with approximately 40,000 people per year. Health insurance coverage information is collected on a monthly basis, which allows us to identify HIUs in which all people have the same type of private insurance coverage, either ESI or nongroup, for the full year. Limiting the analysis to these HIUs increases the precision of estimates of the premiums and out-of-pocket medical care costs associated with each type of coverage.

We pool data from the three most recent MEPS surveys (for 2001, 2002, and 2003) in order to have adequate sample sizes of HIUs stratified by type of coverage (ESI, nongroup, or uninsured), family structure (individuals and families) and income relative to the federal poverty level (FPL). The final sample size after pooling the three years of data is 23,235 HIUs. As noted, we use data for the U.S. to obtain large enough samples to examine the distribution of spending within income groups; we are thus providing national data on spending relative to income and may be somewhat understating Massachusetts spending as a percent of income.

The MEPS-IC is an establishment survey that collected data from approximately 44,000 establishments in 2003 with a response rate of about 78%. Information on total premiums and employees' contributions is published by firm size and region for three types of ESI policies: individual coverage, single-plus-one coverage, and family coverage. This data is linked to the MEPS-HC for HIUs with ESI coverage using the MEPS-HC information on region and the firm size of employed adults within the HIU. (If two adults work, we use the larger firm size for making the link with the MEPS-IC premium data.)

Income and out-of-pocket medical spending are inflated to 2005 values using the Consumer Price Index (all goods and services for income, and medical care goods and services for out-of-pocket medical spending). Insurance premiums are inflated to 2005 using the annual change in ESI premiums reported by the KFF-HRET annual national survey of employers' health insurance plans. Income and out-of-pocket medical spending is collected from each individual in the HIU and then summed to create a total for the HIU. ESI premiums are assigned to the entire HIU.

The premiums for nongroup coverage are developed from information available from a third MEPS database, the Person-Round-Plan (PRPL) file, which contains information on people's actual out-of-pocket premiums. We linked MEPS-IC premium data for ESI coverage to this file for people with nongroup coverage. Comparing the MEPS-IC total premium to the nongroup premium reported on the PRPL file showed that nongroup premiums for individuals are roughly 60% as large as the total ESI premium for individuals, and that nongroup family premiums are about 50% as large as the total ESI premium. Again, the data are national data. In Massachusetts, nongroup premiums are generally higher than ESI premiums. The differences in the national nongroup vs. ESI premiums presumably reflect the facts that nongroup policies have less generous benefit packages than ESI policies and that people who actually buy nongroup policies tend to be in better health than people with ESI coverage. Since PRPL data are not available for all years, we used these adjustment factors to estimate nongroup premiums for individual and family HIUs in the MEPS-HC with nongroup coverage.

We excluded HIUs in families with incomes below poverty since Massachusetts law calls for insurance costs for this group to be fully subsidized. The remaining HIUs were grouped into five categories of income relative to the FPL (100-199% of the FPL, 200-299% of the FPL, 300-399% of the FPL, 400% or more of the FPL, and 300% or more of the FPL) by type of coverage (ESI, nongroup, or uninsured) and family type (single adults or families). Within each of these cells we calculated mean, median, the 25th, the 75th, and 95th percentile values of out-of-pocket medical costs, out-of-pocket premiums, total out-of-pocket costs for premiums and medical care, and each of these measures as a percentage of family income. For HIUs with ESI coverage, we also developed an estimate of the total cost of insurance on the assumption that employees generally pay for the employers' share of the insurance premium by accepting lower cash wages by an amount consistent with the employers' share of the insurance premium. In making this calculation, we increase family income by the difference between the employees' out-of-pocket ESI premium and the total premium imputed from the MEPS-IC.