Universal Comprehensive Coverage:

A Report to the Massachusetts Medical Society

Prepared by Solutions for Progress, Inc., and
the Access and Affordability Monitoring Project of
the Boston University School of Public Health

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The findings and conclusions presented in this report do not represent in any way the policy of the Massachusetts Medical Society. The report is provided for informational purposes only.

Universal Comprehensive Coverage: Modeling the Cost of Health Care Reform in Massachusetts

Prepared by

Solutions for Progress, Inc.

1800 JFK Boulevard, 5th Floor
Philadelphia, PA 19103
(215) 972-5558

Robert Brand, President
(rbrand@solfopro.com)
David Ford, Senior Policy Analyst
(dford@solfopro.com)

The Access and Affordability Monitoring Project

Boston University School of Public Health
715 Albany Street
Boston, MA 02118
(617) 638-5042

Alan Sager, Ph.D. *(asager@bu.edu)*
Deborah Socolar, M.P.H.
(dsocolar@bu.edu)

Contributors and Acknowledgments

Robert Brand, Alan Sager, David Ford, Deborah Socolar, Laryssa Mykyta, and Jasprit Deol all contributed to this report.

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Part 1: Summary

- Compared with the current Massachusetts health care system, universal, comprehensive health care coverage with simplified administration would provide people with more health care services at a lower total cost.

- The least expensive way to offer universal coverage is through a system that includes simplified administration and no cost-sharing. Universal coverage is costliest if achieved simply by extending today's HMO, PPO or POS coverage to all, without other reforms.

  - Projected total health spending for Massachusetts residents with no reform ("baseline 1") is estimate at $35.382 billion in 1999.
  - Projected total health spending for Massachusetts residents and out-of-state residents employed in Massachusetts (Massachusetts beneficiaries) with no reform is estimated at $36.139 billion in 1999.
  - Universal, comprehensive coverage with financing reform, budgets and no cost-sharing will reduce the cost of health care for Massachusetts beneficiaries to $34.476 billion.
  - Universal, comprehensive coverage with financing reform and budgets which includes cost-sharing would be costlier, at $35.792 billion.
  - Universal, comprehensive coverage though HMOs, PPOs and POS plans in Massachusetts without administrative simplification or other reforms would increase total health spending to $39.178 billion.

- Universal, comprehensive coverage with simplified administration and no cost-sharing offers the most care and also the highest level of savings for Massachusetts compared to all other reform options.

  - Total health spending is reduced by $1.663 billion (-4.6%).
  - Spending for actual medical services increases by $2.545 billion.
  - Out-of-pocket health spending is eliminated.
  - Administrative costs are reduced by $3.502 billion, a 42% reduction.

- Universal, comprehensive coverage with simplified administration and cost-sharing offers the second highest level of savings to Massachusetts residents and out-of-state residents employed in Massachusetts.

  - Total health spending is reduced by $347 million (-1.0%).
  - Spending for actual medical services increases by $1.342 billion.
  - Out-of-pocket health spending is reduced by $2.856 billion to $3.822 billion.

- Administrative costs are reduced by $983 million, a 12% reduction.

- Universal, comprehensive coverage under a HMO, PPO or POS option is the only reform that significantly increases health care costs for Massachusetts residents and out-of-state residents employed in Massachusetts.

  - Total health spending is increased by $3.039 billion (8.4%).
  - Spending for actual medical services increases by $3.175 billion.
  - Out-of-pocket health spending is reduced to $6.231 billion, a reduction of only $447 million.
  - Administrative costs increase to $8.993 billion, a 7% increase.

Part 2: Introduction

Scope of the project

The Massachusetts Medical Society commissioned Solutions for Progress, Inc. (SFP) together with the Access and Affordability Monitoring Project of the Boston University School of Public Health (AAMP) to conduct a study of the cost of universal coverage for health care in Massachusetts. Specifically, The Massachusetts Medical Society asked:

- How much would it cost for Massachusetts to have universal coverage?
- What is the cost of Massachusetts' current pluralistic financing system compared to a single-payer system for Massachusetts?
- To what extent would patient cost-sharing reduce overall health care expenditures?
- What would it cost for a preferred provider organization (PPO) or point-of-service (POS) option to be offered to all Massachusetts residents?

SFP/AAMP created a model of health spending in Massachusetts to provide answers to these questions. The baseline for comparison of the reform options is our projection of 1999 health spending in Massachusetts without any reforms or coverage expansions beyond those now legislated. We use the 1999 data to project the utilization and cost changes of alternative models of health care reform. The model produces results for each reform alternative showing the total amount of health spending and spending by area of expenditure. The factors affecting the changes in health spending resulting from the reform alternatives are described in this paper. An appendix to this document describes these factors in greater detail.

Massachusetts beneficiaries

We assume that all universal coverage reforms provide a full range of health services. These health services include long term care and all other health services currently counted as part of health spending in the Health Care Financing Administration's National Health Accounts. We

assumed that this set of benefits would be covered for all Massachusetts residents and all individuals working in Massachusetts who live outside the state (and their dependents). We refer to this set of people as Massachusetts beneficiaries, or beneficiaries of the Massachusetts plan.

We assume that reforms will include coverage for Massachusetts workers who live out-of-state for several reasons. Today, like other workers, most of the them already have coverage largely paid for by Massachusetts employers. Second, excluding them would create administrative complexity for employers who would have to still purchase separate health insurance for out-of-state employees. Third, excluding them would result in inequitable benefits for out-of-state employees compared to their coworkers. Finally, many of them probably use Massachusetts caregivers who will be substantially paid through the new health financing system.

Although cost estimates for the reform options are presented for Massachusetts beneficiaries, we show costs estimates for 1999 without reform for both Massachusetts residents and the larger population of Massachusetts beneficiaries.

Description of reform options

This report presents the projected results of four different scenarios for health spending in 1999. Cost figures presented for the scenarios described below are estimates built on assumptions that are detailed in the health reform model.

Baseline: The current health care system continued with no additional changes

Projected spending with no reform provides the baseline for comparison of the alternative reforms. Projected spending is shown both for Massachusetts residents, and for Massachusetts beneficiaries, so that appropriate comparisons can be made.

Reform A: Universal, comprehensive coverage, simplified administration, with no cost-sharing.

Reform 1 assumes that health insurance will be provided to all Massachusetts beneficiaries through a single insurer. The health insurance will cover all the health care needs of Massachusetts beneficiaries through one program, eliminating the need for separate health insurance under workers compensation or automobile insurance policies. There will be no cost-sharing for covered benefits under this option.[a]

The health insurance system in Massachusetts will be managed by an administration that may be publicly or privately managed, and that has the following responsibilities:

- establishing a global budget for health spending.
- negotiating with caregivers to provide the health services needed by Massachusetts beneficiaries within that budget.
- establishing budgets for capital spending, and approving or rejecting proposed capital spending projects submitted by caregivers.
- monitoring and assuring patient and provider satisfaction.
- establishing a mechanism to negotiate bulk purchasing arrangements for prescription drugs and durable medical equipment, and any other medical supplies needed by Massachusetts beneficiaries, where bulk purchasing arrangements could result in significant savings.
- implementing health promotion programs designed to improve access to health care and improve the health of all Massachusetts beneficiaries.

[a] Cost-sharing includes copayments (patient out-of-pocket payments for each visit to a caregiver), coinsurance, deductibles, and coverage limits.

Reform B: the cost of universal, comprehensive coverage, simplified administration, with cost-sharing.

This option uses a single insurer, but adds patient cost-sharing in the form of copayments and deductibles for covered health benefits. For purposes of modeling the effect of cost-sharing, we assume that the effects resemble (in their impact on patient health and spending) those caused by cost-sharing under current health insurance programs.

Reform C: Achieving universal, comprehensive coverage, using Health Maintenance Organization (HMO), Preferred Provider Organization (PPO) or Point of Service (POS) plans.

Universal coverage would be provided to Massachusetts beneficiaries under the current private insurance system. No other reforms will be implemented. Every Massachusetts beneficiary would belong to an approved HMO, PPO or POS health organization with HMOs share of total assumed to remain roughly constant.[b] The health benefits package would be expanded to be equivalent to the comprehensive benefits modeled in reforms A and B. We assume that the HMO, PPO or POS plan includes cost-sharing similar to that of current health insurance plans.

[b] It should be noted that under current Federal law, ERISA probably makes it extremely unlikely that Massachusetts can mandate private insurance coverage for all Massachusetts beneficiaries.

Advantages of universal, comprehensive coverage for Massachusetts beneficiaries

Universal coverage for a comprehensive set of health benefits is important for several reasons. First, health insurance is an extremely important factor in determining who has access to health services. If everyone is fully insured for the same set of benefits, then everyone will have financial access to the full range of health services. Universal coverage is an essential step to achieving equitable access to health services for all Massachusetts beneficiaries by eliminating insurance status and ability to pay as factors that affect access to care. Universal access can help diminish the differences in morbidity and mortality rates which vary inversely in proportion to annual income.[1]

Second, universal coverage can help reduce health spending. This report shows that universal health coverage provides more health services, yet costs less than is currently spent for health care for Massachusetts beneficiaries. Universal, comprehensive health coverage allows for system-wide efficiencies in health delivery and health care administration that create significant cost savings.

Third, universal health insurance enables physicians and other caregivers to practice to the highest professional standards. Concerns about insurance status and ability to pay are eliminated. Caregivers no longer have to check with a patient's insurer to see if a procedure or test is a covered benefit. The system presumes eligibility for all necessary health services. With universal access, caregivers do not jeopardize their financial security if they serve patients who lack financial resources.

Finally, universal health coverage can help preserve or repair trust relationships essential to an effective health care system. Traditionally, Americans relied upon trust relationships — the charitable nature of our hospital system, the cross-subsidies that support necessary services which cannot support themselves, and the doctor-patient relationship. Fee-for-service and cost

reimbursement, while creating financial incentives to over-provide care, also allowed some measure of cross-subsidization of uncompensated care, preventing many people who badly needed care from being turned away if they could not pay. These cost-shifts have historically been givens of the American experience in health care. Now, the basic vital links of trust between patient and physician, between physician and administrator, and even between the public and the medical profession are being strained to the breaking point. The loss of trust and the need to reinvigorate the relationships that create a trustworthy health care system are emerging as fundamental issues for health care delivery and financing — issues that universal health insurance can help address.

Part 3: Source of health spending after reform

Universal coverage is costliest under HMO/PPO/POS reform, and least expensive under simplified administration with no cost-sharing

Universal, comprehensive coverage can be accomplished in Massachusetts in a number of ways. The most expensive way to offer universal coverage is by covering all Massachusetts beneficiaries under a HMO, PPO or POS reform. The least expensive way to offer universal coverage is through a system that includes simplified administration and other reforms. A tabular comparison of the projected total health spending resulting from the different reforms is shown in Table 1.

- Health spending in 1999 is projected to reach $35.382 billion for Massachusetts residents if there are no significant policy changes.
- Health spending for Massachusetts beneficiaries (including health insurance costs for out-of-state residents employed by Massachusetts employers) is projected to reach $36.139 billion in 1999.
- Universal, comprehensive coverage with financing reform, budgets, and other system-wide efficiencies and with no cost-sharing will reduce the cost to $34.488 billion in 1999,

a savings of $894 million or 2.5% over Massachusetts resident health spending and a savings of $1.651 billion or 4.6% over Massachusetts beneficiary health spending.

- Universal, comprehensive coverage with financing reform, budgets, and other system-wide efficiencies that includes cost-sharing does not reduce health spending as much as when cost-sharing is eliminated entirely. It will increase total health spending to $35.798 billion in 1999, an increase of $417 million or 1.2% over Massachusetts resident health spending and a decrease of $341 million or 0.9% over Massachusetts beneficiary health spending.
- Universal, comprehensive coverage under a HMO, PPO or POS reform in Massachusetts without administrative simplification is the most expensive form of universal coverage. It will increase total health spending to $37.469 billion in 1999, an increase of $2.088 billion or 5.9% over Massachusetts resident health spending and an increase of $1.330 billion or 3.7% over Massachusetts beneficiary health spending.

Table 1: Comparison of health care costs under different reform scenarios in Massachusetts, 1999

Health system	**Total Costs ($ Billions)**	**Change from Baseline 1**	**Change from Baseline 2**
Baseline 1: Projected spending for Massachusetts residents with no reform	$35.382	NA	NA
Baseline 2: Projected spending for Massachusetts beneficiaries with no reform	$36.139	2.1%	NA
Reform A: Universal, comprehensive coverage with simplified administration and **no** cost-sharing	$34.488	-2.5%	-4.6%
Reform B: Universal, comprehensive coverage with simplified administration and cost-sharing	$35.798	1.2%	-0.9%
Reform C: Universal, comprehensive coverage under HMO, PPO or POS option	$37.469	5.9%	3.7%

Source: SFP/AAMP health care reform model

Universal, comprehensive coverage with simplified administration creates economic benefits for the people of Massachusetts.

As seen in Table 2, universal, comprehensive coverage with simplified administration and no cost-sharing results in savings for Massachusetts residents totaling $1.929 billion compared to baseline 1. This represents a cut of 5.5% in health spending by Massachusetts residents, compared to projected 1999 health spending with no reform. The savings rise to $2.686 billion or 7.4% when compared to Massachusetts beneficiary health spending (baseline 2). Universal, comprehensive coverage with simplified administration and no cost-sharing (Reform A) adds to the savings resulting from reform because it also generates increased funding from Federal sources. Specifically, the Federal Government is estimated to increase its share of Massachusetts health funding by $602 million because its contributions through Medicare and Medicaid will increase as utilization under those programs increases. In addition, both the universal, comprehensive coverage with simplified administration reforms (Reforms A and B) are likely to generate additional funds from outside the state. We estimate that employers of residents who work out-of-state will contribute $428 million.[c] The total additional health funding generated from out-of-state sources is projected at $1.031 billion.

We assume that out-of-state employers of Massachusetts residents would contribute to the Massachusetts plan because it would be less costly that purchasing private coverage.

Table 2: Net reduction in Massachusetts resident health care spending under Reform A, 1999		
($ Billions)	Baseline 1	Baseline 2
Baseline Total Cost	$35.382	$36.139
Total Cost of Reform A: Universal, comprehensive coverage with simplified administration and no cost-sharing	$34.488	$34.488
Additional health funding from out-of-state sources generated by Reform A	$1.031	$1.031
Net cost of Reform A to Massachusetts Residents	$33.453	$33.453
Savings compared to baseline	$1.929	$2.686
Percent savings compared to baseline	5.5%	7.4%
Source: SFP/AAMP health care reform model		

By comparison, universal, comprehensive coverage under a HMO, PPO or POS (Reform C) does not generate increased health funding from out-of-state sources. The 5.9% increase in health spending incurred by Reform C (as seen in Table 1) would place a significant additional economic burden on Massachusetts beneficiaries.

Cost-sharing reduces the need for new sources of health care funding, but leaves high out-of-pocket spending and reduces overall savings

We compared two different versions of universal, comprehensive coverage with simplified administration: one version that had no patient cost-sharing, and one version that included cost-sharing. Our model indicates that universal, comprehensive coverage with simplified administration and no cost-sharing is less expensive overall than the same reform that includes cost-sharing. This reflects very substantial administrative savings for both insurers and caregivers, and additional savings as patients receive more timely care, preventing costlier illnesses.

However, a reform that includes cost-sharing will require less from new sources of health funding, but it will place a higher burden on patients. Table 3 compares projected private

insurance expenditures to the health funding that will come from sources that are alternatives to private insurance under each reform. Table 3 also shows out-of-pocket health spending for each reform

.

Table 3: 1999 health care cost for comprehensive benefits to Massachusetts excluding existing public spending

Health system	**Health spending excluding existing public spending**	**Out-of-pocket ($ Billions)**	**Remaining Spending***
Baseline 1: Projected spending for Massachusetts residents with no reform	$18.487	$6.418	$12.068
Baseline 2: Projected Massachusetts beneficiary spending with no reform	$19.244	$6.678	$12.566
Reform A: Universal, comprehensive coverage with simplified administration and **no** cost-sharing	$16.946	$0	$16.946
Reform B: Universal, comprehensive coverage with simplified administration and cost-sharing	$18.863	$3.822	$15.040
Reform C: Universal, comprehensive coverage under HMO, PPO or POS option	$20.962	$6.231	$14.731

Source: SFP/AAMP Massachusetts health care reform model

* The remaining spending can be financed in a variety of ways, either entirely from public sources (tax-financed reform), or entirely through private sources (for Reform C) or with a combination of the two.

Funding sources for universal, comprehensive coverage with simplified administration and no cost-sharing (Reform A)

Under universal, comprehensive coverage with simplified administration and **no** cost-sharing, the net cost of health care for Massachusetts residents and non-residents working in Massachusetts is $33.453 billion, a savings of $2.686 billion over current spending for Massachusetts beneficiaries, or a 7.4% reduction (see Table 2).

- As shown in Table 3, if this amount is to be financed publicly, Massachusetts will need to raise $16.946 billion in new sources of funding for health care. These new funds would be substituted for most current private sources of health care spending.
- Existing sources of public funding for health care will contribute a projected $16.507 billion in 1999.
- An additional $1.035 billion will be generated from out-of-state sources.
- ***Out-of-pocket costs are eliminated entirely,*** which means no beneficiary will be denied care because they can't afford care, and they will be less likely to delay seeking care, knowing they can afford it. This will reduce preventable hospitalizations and other costlier care, helping to reduce (or delay) costs.

Funding sources for universal, comprehensive coverage with simplified administration and cost-sharing

As shown in Table 4, when cost-sharing is included, the net cost of universal, comprehensive coverage is projected to be $35.370 billion, a decrease of $769 million or 2.1% compared to spending for Massachusetts beneficiaries with no reform.

- As seen in Table 3, if this amount is to be fully financed publicly, Massachusetts will need to raise $15.040 billion from new sources.

- Existing sources of public funding for health will contribute a projected $16.507 billion in 1999.
- Only $428 million is generated from out-of-state sources.
- Out-of-pocket spending is reduced from $6.418 billion to $3.822 billion. Even with a 40% reduction, out-of-pocket spending is still a significant barrier to care that can have an adverse affect on health status depending on income. People with lower incomes will probably continue to experience increased rates of morbidity and mortality compared to those in higher income brackets.

Table 7: Net reduction in Massachusetts resident health care spending under Reform B, 1999		
($ Billions)	Baseline 1	Baseline 2
Baseline Total Cost	$35.382	$36.139
Total Cost of Reform B: Universal, comprehensive coverage with simplified administration and cost-sharing	$35.798	$35.798
Additional health funding from out-of-state sources generated by Reform B	$428	$428
Net cost of Reform B to Massachusetts Residents	$35.370	$35.370
Savings compared to baseline	$12	$769
Percent savings compared to baseline	0.0%	2.1%
Source: SFP/AAMP health care reform model		

Universal, comprehensive coverage with simplified administration and no cost-sharing entirely eliminates out-of-pocket spending

As shown in Table 4, when compared to Baseline 2, out-of-pocket costs for Massachusetts beneficiaries are eliminated by universal, comprehensive coverage with simplified administration and no cost-sharing (Reform A), but out-of-pocket spending still creates barriers to access under other reform alternatives. Simplified administration with cost-sharing (Reform B) reduces out-of-pocket spending by 42.8% compared to Massachusetts beneficiary out-of-pocket spending. The HMO/PPO/POS reform (Reform C) only cuts out-of-pocket spending by 6.7%.

- Out-of-pocket health spending for Massachusetts beneficiaries in 1999 is projected at $6.678 billion with no reform.
- Out-of-pocket health spending **is entirely eliminated** under universal, comprehensive coverage with simplified administration and no cost-sharing. Massachusetts beneficiaries see their out-of-pocket health spending cut by $6.678 billion compared to Baseline 2.
- Under universal, comprehensive coverage with simplified administration and cost-sharing, Massachusetts beneficiary out-of-pocket spending is reduced to $3.822 billion, a reduction of $2.856 billion compared to Baseline 2.
- Massachusetts beneficiary out-of-pocket payments for universal, comprehensive coverage through a HMO, PPO or POS option remain high, at $6.231 billion, a reduction of only $447 million compared to Baseline 2.

Table 5: Comparison of out-of-pocket spending under reform alternatives

Health system	**Out-of-pocket spending**	**Change from Baseline 2**	**Percent change from Baseline 2**
Baseline 2: Projected spending for Massachusetts beneficiaries with no reform	$6,678		
Reform A: Universal, comprehensive coverage with simplified administration and **no** cost-sharing	$0	$6,678	-100.0%
Reform B: Universal, comprehensive coverage with simplified administration and cost-sharing	$3,822	$2,856	-42.8%
Reform C: Universal, comprehensive coverage under HMO, PPO or POS option	$6,231	$447	-6.7%

Source: SFP/AAMP health care reform model

Part 4: Changes in area of expenditure after reform

This section discusses changes in spending by health sector or area of expenditure resulting from the reform options. We present changes in total spending in each personal health sector and for administrative spending. We separate health sector spending into two categories: the caregiver's administrative component (referred to as "caregiver administration") and the actual medical care provided. We refer to the medical care component as "actual care."Universal, comprehensive coverage with simplified administration and no cost-sharing (Reform A) reduces total health spending, but increases spending on care

As shown in Table 5, universal, comprehensive coverage with simplified administration and no cost-sharing (Reform A) reduces total personal health spending by $746 million to $30.939 billion but actually *increases* spending for care by $2.008 billion to $27.111 billion.

By comparison universal, comprehensive coverage with simplified administration and cost-sharing (Reform B) reduces total personal health spending by $3187 million to $31.498 billion. The savings on administration actually permit spending on care to increase by $797 million to $25.899 billion.

Universal, comprehensive coverage under the HMO, PPO or POS option yields the biggest rise in both total personal health spending and the care component. Even so, the care component increases less than under Reform A, rising $1.282 billion to $26.384 billion. But this reform is the only reform analyzed that also increases administrative costs. Spending on caregiver administration increases by $36 million to $6.618 billion. As a result, total personal health spending is increased $1.317 billion to $33.002 billion.

Table 6: Spending on actual care, caregiver administration, and total personal health care under reform alternatives, 1999

Health System	**Actual Care**	**Caregiver**	**Total Personal**

($ Billions)		Administration	Health Spending
Baseline 2: Projected Massachusetts beneficiary spending with no reform	$25.102	$6.582	$31.684
Reform A: Universal, comprehensive coverage with simplified administration and no cost-sharing	$27.111	$3.828	$30.939
Reform B: Universal, comprehensive coverage with simplified administration and cost-sharing	$25.899	$5.598	$31.498
Reform C: Universal, comprehensive coverage under HMO, PPO or POS option	$26.384	$6.618	$33.002
Change from Baseline 2			
Reform A: Universal, comprehensive coverage with simplified administration and no cost-sharing	$2.008	($2.754)	($0.746)
Reform B: Universal, comprehensive coverage with simplified administration and cost-sharing	$0.797	($0.984)	($0.187)
Reform C: Universal, comprehensive coverage under HMO, PPO or POS option	$1.282	$0.036	$1.317
Source: SFP/AAMP Massachusetts health care reform model			

Comparison of total personal health spending by type of service under reforms

Table 6 is a summary table that shows the changes in personal health spending (which excludes insurer administration, government public health spending, research and construction) by major type of service. Each type of service is discussed in greater detail below. This table provides a side-by-side comparison for those interested in seeing the changes by service in one table. It also serves as a comparison for the next two tables, which show the actual care and administrative components of personal health spending in Massachusetts under the different reforms.

Personal health spending declines overall under the reform options that include simplified administration (Reform A and B). This decline is largely a result of a reduction in hospital spending for both simplified administration reforms. An increase in health spending is seen in all the other cells in this table.

Table 7: Massachusetts Personal Health Spending by Type of Service Under Reform Options

in 1999					
($ Billions)	Total Personal Health Care	Type of Service			
		Hospitals	Physician Services	Nursing Homes	All other personal health care
Baseline 2: Projected Massachusetts beneficiary spending with no reform	$31.684	$12.143	$5.526	$4.343	$9.673
Reform A: Universal comprehensive coverage with simplified administration and no cost-sharing	$30.939	$10.163	$5.815	$4.753	$10.207
Reform B: Universal comprehensive coverage with simplified administration and cost-sharing	$31.498	$11.453	$5.496	$4.816	$9.732
Reform C: Universal comprehensive coverage under HMO, PPO or POS Reform	$33.002	$12.488	$5.662	$4.844	$10.007
Source: SFP/AAMP Massachusetts health care reform model					

Actual care increases in all reforms

Despite the reductions in total personal spending described above, this does not necessarily translate into reductions in actual care provided. As seen in Table 7, spending on actual care increases under all reform options.

Table 8: Massachusetts Spending on Actual Care by Major Types of Service Under Different Reforms in 1999					
($ Billions)	Total Personal Health Care	Type of Service			
		Hospitals	Physician Services	Nursing Homes	All other personal health care
Baseline 2: Projected Massachusetts beneficiary spending with no reform	$25.102	$8.525	$4.136	$3.735	$8.705
Reform A: Universal comprehensive coverage with simplified administration and no cost-sharing	$27.111	$8.460	$5.014	$4.246	$9.391
Reform B: Universal comprehensive coverage with simplified administration and cost-sharing	$25.899	$8.444	$4.304	$4.246	$8.905
Reform C: Universal comprehensive coverage under HMO, PPO or POS Reform	$26.384	$8.908	$4.289	$4.180	$9.007
Source: SFP/AAMP Massachusetts health care reform model					

Simplified administration reforms create significant savings in caregiver administration

Table 8 shows the changes in caregiver administration that result from each reform. It is because of the caregiver administrative savings allowed by the reforms with simplified administration (Reforms A and B) that spending for actual care can increase while total spending for each type of service can be reduced. Since universal, comprehensive coverage under the HMO/PPO/POS reform does not provide administrative savings, either to caregivers or to insurers, both actual care and administrative costs rise, causing universal coverage to cost more under that reform than any other reform (see Reform C in Table 7, Table 8, and Table 9).

Table 9: Massachusetts Spending on Caregiver Administration by Type of Service Under Different Reforms in 1999

($ Billions)	Total Personal Health Care	Type of Service			
		Hospitals	Physician Services	Nursing Homes	All other personal health care
Baseline 2: Projected Massachusetts beneficiary spending with no reform	$6.582	$3.618	$1.390	$0.607	$0.967
Reform A: Universal, comprehensive coverage with simplified administration and no cost-sharing	$3.828	$1.703	$0.801	$0.507	$0.817
Reform B: Universal, comprehensive coverage with simplified administration and cost-sharing	$5.598	$3.009	$1.192	$0.570	$0.827
Reform C: Universal, comprehensive coverage under HMO, PPO or POS option	$6.618	$3.579	$1.374	$0.664	$1.001

Source: SFP/AAMP Massachusetts health care reform model

Overall hospital spending decreases, yet hospitals provide more care with simplified administration

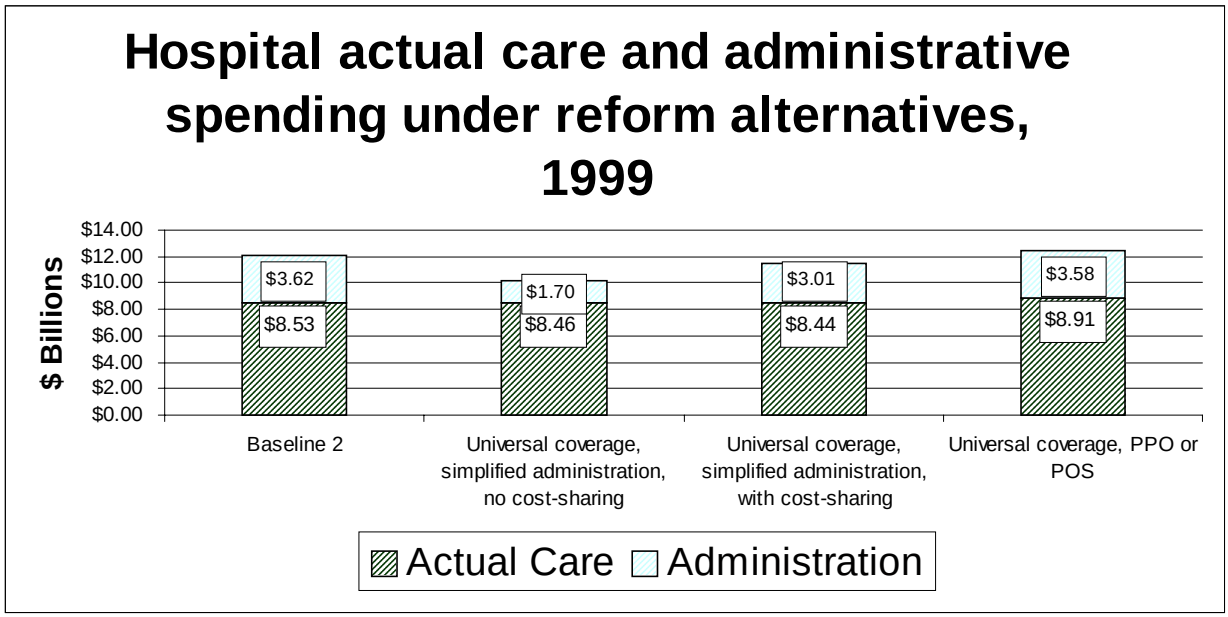
As seen in Table 10 and Figure 1, both types of universal, comprehensive coverage with simplified administration reforms decrease total hospital spending and increase hospital care spending. For both Reforms A and B, administrative savings allow more to be spent for actual care without increasing total hospital spending. In contrast, hospital spending under the HMO/PPO/POS option increases both for actual care and for administration.

Table 10: Hospital actual care and administrative spending under reform alternatives, 1999

Health System ($ Billions)	**Actual Care**	**Caregiver Administration**	**Total Personal Health Spending**
Baseline 2: Projected Massachusetts beneficiary spending with no reform	$8.525	$3.618	$12.143
Reform A: Universal comprehensive coverage with simplified administration and no cost-sharing	$8.460	$1.703	$10.163
Reform B: Universal comprehensive coverage with simplified administration and cost-sharing	$8.444	$3.009	$11.453
Reform C: Universal comprehensive coverage under HMO, PPO or POS Reform	$8.908	$3.579	$12.488
Change compared to Baseline 2			
Reform A: Universal comprehensive coverage with simplified administration and no cost-sharing	($0.065)	($1.914)	($1.980)
Reform B: Universal comprehensive coverage with simplified administration and cost-sharing	($0.081)	($0.608)	($0.690)
Reform C: Universal comprehensive coverage under HMO, PPO or POS Reform	$0.383	($0.038)	$0.345
Source: SFP/AAMP Massachusetts health care reform model			

- Hospital spending for Massachusetts beneficiaries in 1999 without reform is projected to be $12.143 billion.
- Hospital spending under universal coverage with simplified administration and *no* cost-sharing *is reduced* by $1.980 billion to $10.163 billion. Hospital administration is reduced by $1.914 billion. Hospital spending for actual care decreases by only $65 million.

- Hospital spending under universal coverage with simplified administration and cost-sharing *is reduced* by $690 million to $11.453 billion. Hospital administration is reduced by $608 million. Hospital care decreases by $81 million.
- Hospital spending under universal coverage HMO, PPO or POS option (without financing reform) is $12.488 billion, *an increase of* $345 million. Hospital



administration decreases by $38 million. Hospital care increases by $383 million.

Physician services spending increases while administrative costs decrease under simplified administration reforms

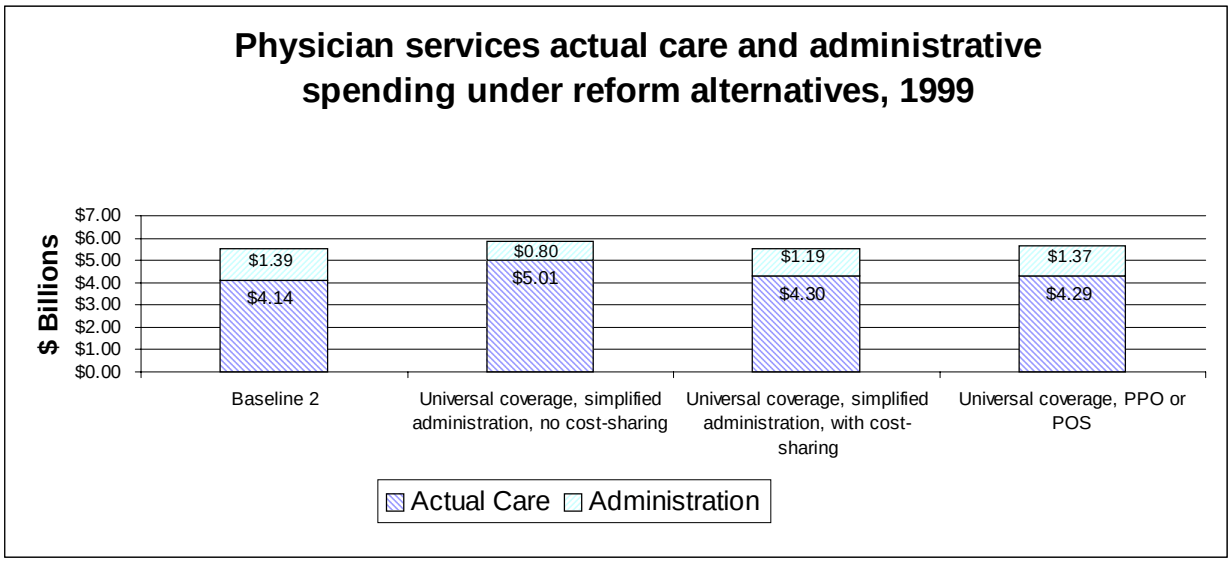
As shown in Table 11 and Figure 1, all the reforms increase spending on the physician services sector. Owing to the administrative savings that it permits, universal, comprehensive coverage with simplified administration and no cost-sharing (Reform A) allows spending on actual care to rise to a higher level than under other reforms.

Table 11: Physician services actual care and administrative spending under reform alternatives, 1999

Health System ($ Billions)	Actual Care	Caregiver Administration	Total Personal Health Spending
Baseline 2: Projected Massachusetts beneficiary spending with no reform	$4.136	$1.390	$5.526
Reform A: Universal comprehensive coverage with simplified administration and no cost-sharing	$5.014	$0.801	$5.815
Reform B: Universal comprehensive coverage with simplified administration and cost-sharing	$4.304	$1.192	$5.496
Reform C: Universal comprehensive coverage under HMO, PPO or POS Reform	$4.289	$1.374	$5.662
Change compared to Baseline 2			
Reform A: Universal comprehensive coverage with simplified administration and no cost-sharing	$0.878	($0.589)	$0.289
Reform B: Universal comprehensive coverage with simplified administration and cost-sharing	$0.168	($0.198)	($0.030)
Reform C: Universal comprehensive coverage under HMO, PPO or POS Reform	$0.152	($0.016)	$0.136
Source: SFP/AAMP Massachusetts health care reform model			

- Spending on the physician services sector in 1999 prior to reform is projected to be $5.526 billion.
- Spending on the physician services sector under universal coverage with simplified administration and no cost-sharing (Reform A) is increased by $289 million to $5.815 billion. Administrative costs for the physician services sector decline by $589 million to $801 million. But spending devoted to actual physician care rises by $878 million to $5.014 billion. This is the largest increase among the reform alternatives analyzed, providing the greatest benefit to Massachusetts residents.
- For the physician services sector under universal coverage with simplified administration and cost-sharing, spending is decreased by $30 million to $5.496 billion. Physician services administration is reduced by $198 million to $1.192 billion. Spending on actual physician care increases by $168 million to $4.304 billion.
- Under universal coverage HMO, PPO or POS option (without financing reform), spending on the physician services sector is $5.662 billion, an increase of $136 million.

Administration decreases by $16 million to $1.374 billion. Spending on actual physician



care rises by $152 million to $4.289 billion.

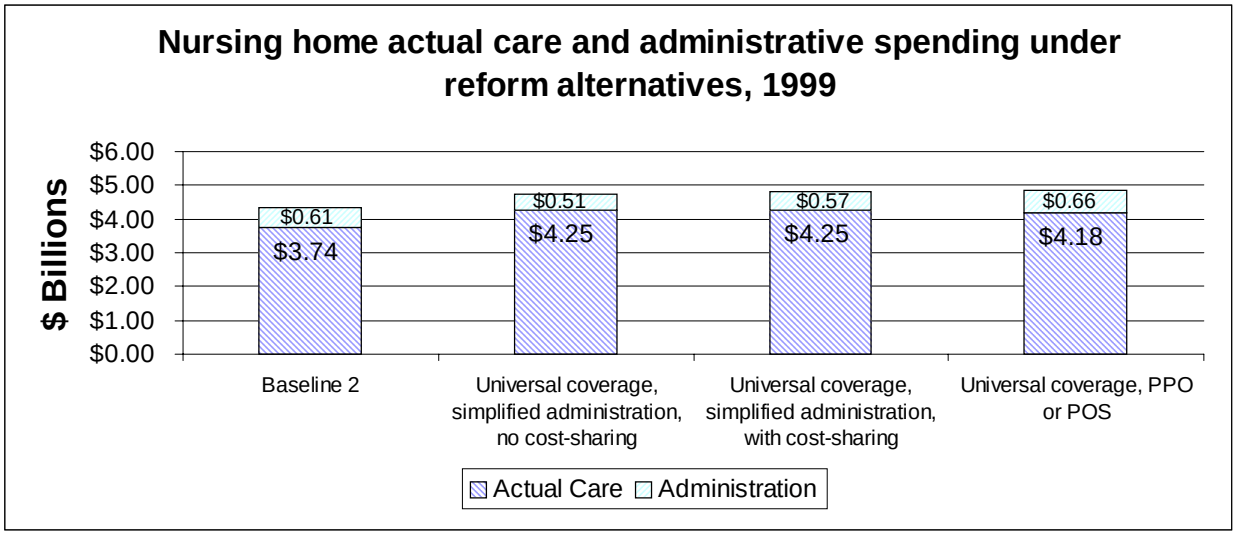
Nursing home spending increases to provide all service needed

Each reform increases the care component of nursing home spending by at least $500 million (see Table 12 and Figure 1). Both reforms with administrative simplification increase the care component of nursing home spending by $578 million, while under the HMO/PPO/POS option, the care component increases by $513 million. Administrative simplification with no cost-sharing increases the nursing home actual care component to a higher level than any other reform, while saving $90 million in administrative costs. The administrative savings total only $27 million when cost-sharing is retained, and there is an increase of $67 million in administrative costs under the HMO/PPO/POS option.

Table 12: Nursing **home actual care and administrative spending under reform alternatives, 1999**			
Health System ($ Billions)	**Actual Care**	**Caregiver Administration**	**Total Personal Health Spending**
Baseline 2: Projected Massachusetts beneficiary spending with no reform	$3.735	$0.607	$4.343
Reform A: Universal comprehensive coverage with simplified administration and no cost-sharing	$4.246	$0.507	$4.753
Reform B: Universal comprehensive coverage with simplified administration and cost-sharing	$4.246	$0.570	$4.816
Reform C: Universal comprehensive coverage under HMO, PPO or POS Reform	$4.180	$0.664	$4.844
Change compared to Baseline 2			
Reform A: Universal comprehensive coverage with simplified administration and no cost-sharing	$0.511	($0.100)	$0.410
Reform B: Universal comprehensive coverage with simplified administration and cost-sharing	$0.511	($0.037)	$0.473
Reform C: Universal comprehensive coverage under HMO, PPO or POS Reform	$0.445	$0.057	$0.501
Source: SFP/AAMP Massachusetts health care reform model			

- Nursing home spending in 1999 prior to reform is projected to be $4.383 billion.
- Nursing home spending under universal coverage with simplified administration is increased by $410 million to $4.753 billion. Nursing home administration is reduced by $100 million to $507 million. The nursing home care component increases by $511 million to $4.246 billion.
- Nursing home spending under universal coverage with simplified administration and cost-sharing is increased by $573 million to $4.816 billion. Nursing home administration is reduced by $37 million to $570 million. The nursing home care component increases by $511 million to $4.246 billion.
- Nursing home spending under universal coverage HMO, PPO or POS option (without financing reform) is $4.844 billion, an increase of $501 million. Nursing home

administration is increased by $57 million to $664 million. Nursing home services increase by $445 million to $4.180 billion.



Home health care spending increases by one-third under administrative simplification with no cost-sharing, more than any other reform

Home health spending will increase under all reform alternatives. Under administrative simplification with no cost-sharing, however, it will increase almost $200 million more than under the HMO/PPO/POS reform. Administrative simplification with cost-sharing results in the smallest increase — an increase that may not meet the medical needs of Massachusetts beneficiaries.

- Home health care spending in 1999 prior to reform is projected to be $1.704 billion.
- Home health care spending under universal coverage with simplified administration and no cost-sharing is increased by $680 million to $2.384 billion.
- Home health care spending under universal coverage with simplified administration and cost-sharing is increased by $377 million to $2.080 billion.

- Home health care spending under universal coverage HMO, PPO or POS option (without financing reform) is $1.894 billion, an increase of $190 million.

Drugs and other medical non-durable spending decreases but more is spent on actual drug dispensing under administrative simplification with no cost-sharing

Both reforms involving administrative simplification will purchase all prescription drugs needed by Massachusetts beneficiaries through bulk purchasing arrangements that will achieve significant discounts. As a result, although patients will use more prescription drugs, less money will be spent. By comparison, under the HMO/PPO/POS option, prescription drug spending will be $130 million higher than projected under no reform.

- Drug and other medical non-durable spending in 1999 prior to reform is projected to be $2.535 billion.
- Drug and other medical non-durable spending under universal coverage with simplified administration is reduced by $159 million to $2.376 billion, while the non-discounted cost of prescription drugs used increases by $226 million.
- Drug and other medical non-durable spending under universal coverage with simplified administration and cost-sharing is reduced by $330 million to $2.205 billion.
- Drug and other medical non-durable spending under universal coverage HMO, PPO or POS option (without financing reform) is $2.664 billion, an increase of $130 million.

Dental, vision products and other medical durables, and other personal care spending remains increase very slightly under all reforms.

The increases in dental services, vision products and other medical durables, and other personal care are the result of adding the care for out-of-state residents working for Massachusetts employers. We did not model any increases in utilization of these services as a result of coverage. While we believe there may be some increases, at this point, we have not developed a method for estimating these changes. We believe, however, that the effect of increases and savings for these health services will not have a significant impact on the overall cost of reform.

- Prior to reform, the cost of dental services for Massachusetts residents will rise to $1.227 billion in 1999. Under all proposed reforms, dental service spending increases by $62 million to $1.290 billion as the result of including the cost of care for out-of-state residents who are employed in the state.
- Prior to reform, the cost of vision products and other medical durables for Massachusetts residents will rise to $323 million in 1999. Under all proposed reforms, vision products and other medical durables spending increases by $17 million to $340 million as the result of including the cost of care for out-of-state residents who are employed in the state.
- Prior to reform, the cost of other personal care services for Massachusetts residents will rise to $1.011 billion in 1999. Under all proposed reforms, other personal care services spending increases by $52 million to $1.063 billion as the result of including the cost of care for out-of-state residents who are employed in the state.

Insurer administrative costs[2] drop dramatically with administrative simplification and no cost-sharing

The following data is based on Table 13.

- In 1999, insurer administrative costs are projected to be $1.97 billion with no reform.

- Insurer administrative costs under universal, comprehensive coverage with simplified administration and **no** cost-sharing will be reduced to $1.094 billion. This represents a savings of $876 million or 44%.
- Insurer administrative costs under universal, comprehensive coverage with simplified administration and cost-sharing will be reduced to $1.845 billion. This represents a savings of $125 million or 6%.
- Insurer administrative costs under universal, comprehensive coverage HMO, PPO or POS option (without financing reform) will increase to $2.012 billion, an increase of 2%.

Table 13: 1999 Insurer Administration

Health system	**Total Spending ($ Billions)**
Baseline 2: Projected Massachusetts beneficiary spending with no reform	$1.970
Reform A: Universal, comprehensive coverage with simplified administration and **no** cost-sharing	$1.094
Reform B: Universal, comprehensive coverage with simplified administration and cost-sharing	$1.845
Reform C: Universal, comprehensive coverage under HMO, PPO or POS option	$2.012

Combined administrative costs cut nearly in half under universal coverage with simplified administration and no cost-sharing.

A comparison of combined insurer and caregiver administrative costs under the different reforms can be seen in Table 14 and Figure 1. Insurer and caregiver combined administrative savings generated by simplified administration more than offset the increased health services spending

incurred under universal, comprehensive coverage. Requiring patient cost-sharing is not cost effective because it limits administrative savings to much less than the rise in spending that stems from expansion of coverage. The lack of insurer administrative savings in the HMO/PPO/POS option makes that reform the most expensive.

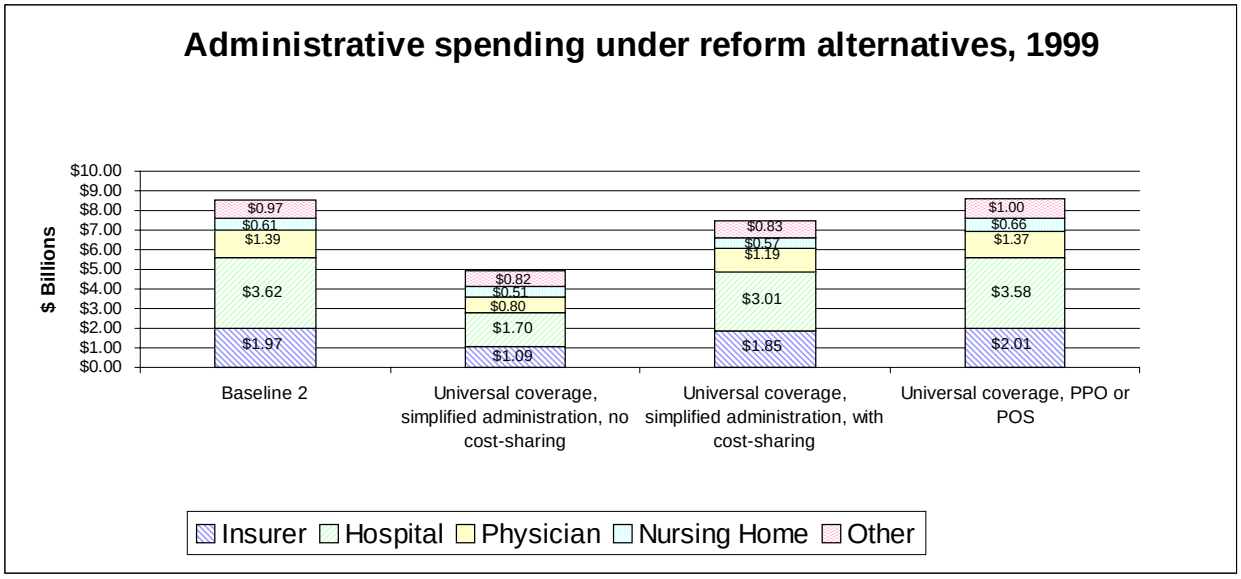
Table 14: Caregiver administration under reform alternatives, 1999

($ Billions)	Total	Hospital	Physician	Nursing Home	Other	Insurer
Baseline 2: Projected Massachusetts beneficiary spending with no reform	$8.552	$3.618	$1.390	$0.607	$0.967	$1.970
Reform A: Universal comprehensive coverage with simplified administration and no cost-sharing	$4.922	$1.703	$0.801	$0.507	$0.817	$1.094
Reform B: Universal comprehensive coverage with simplified administration and cost-sharing	$7.443	$3.009	$1.192	$0.570	$0.827	$1.845
Reform C: Universal comprehensive coverage under HMO, PPO or POS Reform	$8.630	$3.579	$1.374	$0.664	$1.001	$2.012
Change compared to Baseline 2						
Reform A: Universal comprehensive coverage with simplified administration and no cost-sharing	($3.630)	($1.914)	($0.589)	($0.100)	($0.151)	($0.876)
Reform B: Universal comprehensive coverage with simplified administration and cost-sharing	($1.108)	($0.608)	($0.198)	($0.037)	($0.140)	($0.125)
Reform C: Universal comprehensive coverage under HMO, PPO or POS Reform	$0.078	($0.038)	($0.016)	$0.057	$0.033	$0.042

Source: SFP/AAMP Massachusetts health care reform model

- In 1999, combined insurer and caregiver administrative costs are projected to be $8.552 billion.
- Combined insurer and caregiver administrative costs under universal, comprehensive coverage with simplified administration and no cost-sharing will be reduced to $4.922 billion. This represents a savings of $3.630 billion or 42%.

- Combined insurer and caregiver administrative costs under universal, comprehensive coverage with simplified administration and cost-sharing will be reduced to $7.443 billion. This represents a savings of $1.108 billion or 13%.
- Combined insurer and caregiver administrative costs under universal, comprehensive coverage HMO, PPO or POS option (without financing reform) will increase to $8.630 billion, an increase of 1%.



Part 5: Modeling the impact of universal coverage reforms

This section describes the model used to estimate the impact of universal coverage reforms. We first describe the factors used to estimate increased health spending resulting from universal coverage, and then we describe the methods used to estimate savings associated with the reform.

Increased health spending associated with universal coverage

Cost of increased utilization by formerly uninsured

Increased utilization for the formerly uninsured is calculated assuming that the currently uninsured will increase their use of health services to the rate of those who are currently privately insured. We assume that the demographic characteristics of the uninsured are most like those who are privately insured, since the elderly and many of the poor are insured under public programs. This methodology is the same as the U.S. General Accounting Office used for their 1991 study of single-payer reform in the United States.[3] The GAO study noted that the uninsured spent about 40% less than those insured for hospital and physician services at the time of that study. We estimate increased use by sector (type of care) for the uninsured.

It should be noted that current use rates by the privately insured reflect requirements for cost-sharing. Therefore, we assume that this is the rate of utilization that the uninsured will rise to if cost-sharing persists. Additional utilization resulting from the elimination of cost-sharing is calculated for the formerly uninsured along with the insured.

Cost of increased utilization resulting from reduction or elimination of cost-sharing

Increased utilization resulting from reduction or elimination of cost-sharing is calculated separately for hospital care, physician services, prescription drugs, nursing home care, and home health care.

- **Hospital care.** Under a comprehensive benefit package, individuals would not be required to pay up-front deductibles or co-insurance. As a result, hospital utilization would increase. The GAO estimated that, based on the Rand Health Insurance Experiment, hospital utilization would increase an additional 10%.[4] Increased hospital utilization is calculated at a marginal cost rate[5] rather than at the average rate, because there is currently substantial unused hospital capacity. The marginal cost of the increased hospital use was assumed to be 40% of the average cost of current use.[6]

- **Physician services.** Under a comprehensive benefit package, individuals would not be required to pay up-front deductibles or co-payments. As a result, physician services would increase. The Canadian experience suggests an additional increase of 3% of total expenditures. The Rand Health Insurance Experiment, conducted in the United States, showed an increase of 31%. The GAO recommends the mid-point of 17%, and that is the estimate we use. The marginal cost of the increased utilization was estimated at 75% of the average cost of current use because we assume a sufficient supply of physicians' time is available to meet some of the increased demand for services without incurring additional capital and overhead costs.

- **Prescription drugs.** Our estimate of increased use of prescription drugs with the elimination of cost-sharing is built on a previous AAMP estimate of 1995 need for assistance in paying for prescription medications for people in Massachusetts with incomes below 200% of poverty.[7] From that estimate, we use several elements here, including estimates of prescription drug need for people (both for seniors and for those under age 65) who are insured but lack coverage for prescription drugs. These involved estimating both how many people are in need,[8] and needed prescription drug use per person.[9] We also draw on the AAMP estimate of the need for aid to people with coverage who could not actually afford the premiums and out-of-pocket payments and so went without needed drugs or other necessities;[10] here, we assume half that need is for

prescriptions now unfilled or unwritten, and thus a need for new drug spending. Finally, we add estimates of the increased use by people above 200% of poverty and by the formerly uninsured if they face no cost-sharing requirements. In sum, this resulted in an 12% increase in prescription drug spending.

- **Nursing home care.** Researchers in long term care suggest that an increase of 20% in nursing home utilization would result nationally from full coverage of long term care.[11] However, since Massachusetts has a higher rate of nursing home use than the national average, it was assumed that the increase in nursing home use in Massachusetts would only be equal to the difference between current use and a 20% increase above average use in the United States. Our estimate of the increased use of nursing homes in Massachusetts is based on data regarding the over-85 population.[12] The figure based on this data was cut in half to estimate the use of the entire Massachusetts nursing home population.

- **Home health care.** Ten years ago, according to the research cited in the nursing home section, it appeared that a 50 to 100% increase in home care utilization would result if the unmet need was provided for. Since then, home care use has soared, in part to help keep patients out of nursing homes. However, need for home care has also risen because of shorter hospital stays. We present cost estimates here that assume a 75% increase in home care is currently needed nationally. This seems a reasonable figure to reflect substantial human need. The need for home care, however, may be seen as potentially limitless within the relevant range. It may be subject to the softest estimates of any health care sector, in part because home health care is hard to distinguish from homemaker services, personal care, and social services, which all may serve to maintain health as well as quality of life. As with increased nursing home use, we adjust our estimate of increased home health care use to account for the substantially higher use of home health services consumed in Massachusetts compared to the national average. Massachusetts

Medicare patients receiving home care received 31% more visits per patient than the national average in the mid-1990s.[13] We assume that the same relationship between Massachusetts and the national average holds for all home care utilization. Massachusetts has higher than average incomes, higher rates of private insurance coverage, and also a substantial state program to support home care services. All these factors would tend to raise use of home care services in Massachusetts significantly above national levels. Thus, we believe, Massachusetts has already progressed towards the assumed optimal home health care use rate, and — as compared with the U.S. average — requires a smaller increase to reach that optimal rate. If Massachusetts home care use overall is 31% above the U.S. average, a 25% additional increase would be needed to reach an optimal level.

Cost of increased use of assistive technology, rehabilitation services and attendant care

Under a universal, comprehensive coverage system, cost will no longer be a barrier to access for services that enable independent living. Where Massachusetts-specific data was unavailable, the increased utilization is estimated assuming that the Massachusetts experience will be similar to national experience in terms of current utilization and the amount of unmet needs for these services. This figure is reduced to account for decreased nursing home expenses resulting from a portion of the under-65 nursing home population that we assumed would choose to leave institutional care sites as a result of increased access to attendant care services and assistive technology.

Administrative costs under reform: coordination, increased health data collection, and analysis services

A reform involving simplified administration would require the development of more rigorous health data collection and analysis in order to enable effective cost containment measures. New data collection costs are estimated based on conservative estimates of the cost of keeping records on each expected contact with a provider. This figure also includes an estimate of the cost of establishing a new state administrative structure to run the system. It should be noted that this cost will depend on how Massachusetts will manage the payment system after reform. For example, if Massachusetts contracts with an existing private health insurer operating in the state to administer the system, much of the administrative structure needed will already be in existence.

Reduced health spending resulting from universal coverage, health system reform and simplified administration.

Workers compensation

Under the single payer financing, workers comp medical charges would be paid at the same rate as all other services. Massachusetts already uses a fee schedule to determine workers compensation payments. This fee schedule is not mandatory, but it does reduce payments below charges. We believe an additional 5% savings by folding workers comp medical into single payer coverage because, although Massachusetts workers compensation fee schedule was the second lowest of all states in 1995,[14] it is not clear that, in the absence of effective utilization management, the fee schedule is as effective as it could be in containing costs in Massachusetts.

Reduced hospitalizations for ambulatory care sensitive conditions

The savings associated with early treatment of ambulatory sensitive diagnoses were estimated using data on current hospital expenditures for the treatment of these conditions found in the Massachusetts Hospital Discharge Abstracts. These are conditions where hospitalizations can be avoided if treatment by a physician is received soon enough. According to Codman Research,[15] hospitalization rates for these diagnoses for the entire population can be reduced to 9 per thousand with universal access to primary care. This would result in an estimated reduction of 49% of hospitalizations for these conditions for Massachusetts beneficiaries.

System-wide cost controls

We conservatively estimate the reduction in clinical waste at five percent of hospital spending. This estimate reflects two important considerations. First, a considerable number of studies estimate savings at levels between 12 and 20 percent.[16] Second, these studies seem to ignore the average cost/marginal cost issue considered throughout this report. We therefore assume that 10 percent of the volume of current care could be eliminated without imposing clinical harm on patients. Our five percent net savings estimate values the 10 percent volume drop at one-half, reflecting a marginal cost to average cost ratio of 50 percent.

Most of the estimates of 12-20 percent savings were done before the insinuation of managed care and capitation techniques into health care. Still, we build on their foundation because we do not find credible evidence that managed care and capitation have reduced hospital spending substantially. Some cuts would have been won without managed care and capitation because they rest on cost-reducing technologies like less-invasive surgery and body scanning. Many of the techniques lauded loudly today do not really save money, we argue. These include ambulatory surgery, cuts in hospital length-of-stay, closing of hospitals, and increased substitution of sub-acute, home health, and observation days for in-hospital days. Most of these changes signal increased payments through unbundling, ducking of hospital fixed costs, and one-time savings that will probably cause higher spending in the future.

Control of capital costs

Under strict capital planning made possible by universal, comprehensive coverage with simplified administration, the state-wide health authority will establish a budget for capital spending. All proposed capital spending projects over a certain size will have to be reviewed and approved by the state-wide health authority before construction can begin. We assume this budget reduces annual capital spending by 10% compared to current spending. Additional savings might arise from obtaining the lower interest rates available to a public sector authority.

Bulk purchasing

The savings here assume that the universal health care authority in Massachusetts purchases all the prescription drugs and durable medical equipment used by Massachusetts beneficiaries through a central purchasing agent. Bulk purchasing for the entire state will give the purchasing agent the power to negotiate significant discounts from suppliers. Our estimates for savings resulting from bulk purchasing of prescription drugs are based on a GAO study that found that manufacturers charged 32% more in the U.S. than in Canada for the 121 most used drugs that they sold in the same form in both countries.[17] Prices were even lower in Sweden, U.K. and other developed countries. Assuming that bulk purchasing for prescription drugs is implemented in Massachusetts but that the bulk purchasing agent negotiates prices only as low as those in Canada, the 32% premium can be eliminated, resulting in a 24% savings in Massachusetts. Potential savings for durable medical equipment are not included in these estimates, so the total savings from reform may be higher than presented in our estimates.

Administrative savings

Universal, comprehensive coverage with simplified administration and no cost-sharing would standardize billing procedures. It would remove the need for providers to collect co-payments from patients and to verify each patient's eligibility for specific benefits. Accordingly,

administrative savings would result from the reduction in private insurance overhead, and from caregivers administrative savings.

Private insurance overhead costs would be reduced dramatically, as the complex system of multiple private insurers is replaced by a single health insurance plan that covers all Massachusetts beneficiaries. The United States General Accounting Office estimated that 79% of insurance overhead costs would be eliminated in a system with simplified administration similar to the one in Canada.[18]

Hospital administrative costs can be reduced from the current level to that of comparable hospital administrative costs under a simplified administration system such as in Canada. Hospital administrative costs for Massachusetts hospitals were based on an analysis of Massachusetts hospital Medicare Cost Reports using Woolhandler and Himmelstein's methodology for calculating administrative costs.[19]

Administrative costs for physicians would fall to a level comparable to that of physicians who operate in a single insurer system. The GAO compares physicians' administrative costs in the United States and in Ontario, Canada, and concludes that under a Canadian style system, physicians' administrative costs could be reduced by 10.3% of total physician service expenditures.[20]

Nursing home administrative costs also decline to a level comparable to that of nursing homes in a single insurer environment. Woolhandler and Himmelstein compare nursing home administrative costs in California and Canada, and conclude that if nursing home administrative costs were brought down to the level of Canadian nursing home administrative costs, a savings of 2.1% of total nursing home expenditures would be achieved.[21]

One concern that some may raise is that Massachusetts caregivers will continue to serve patients who are not Massachusetts beneficiaries, primarily patients coming from out-of-state. If caregivers need to retain the administrative apparatus for billing these patients, this may reduce the administrative savings of reform. Since hospitals will be paid through a global budget which will include these patients in the budget negotiations, the Massachusetts health administrative agency could take on the responsibility for collecting payments for these patients. For other caregivers who serve substantial numbers of non-Massachusetts beneficiaries, the system will have to make sure that any additional administrative burden incurred in providing this care is adequately compensated.

Part 6: Global budgeting mechanisms

Controlling costs with budgets.

Because budgets require a balance in expenditures and revenues, budgets provide a way to contain costs. Planners are required to identify assumptions concerning the costs of care, to set a spending ceiling reflecting these costs, and to allocate revenues to meet those costs. Practical payment methods are designed to ensure that the ceilings are not exceeded. As a result, budgets enable us to identify savings on health care and to allocate these savings to other sectors, such as education.

Budgets make us aware of scarcity of resources. Introducing a health care budget orients all parties to the inevitable scarcity of money and the choices (some hard) that have to be made for the most efficient, effective allocation of health care resources. By appreciating that the money available during this fiscal year must be stretched as far as possible to take care of everyone, it will it be possible to achieve affordable health care for all.

Examples of hospital budgeting

An overall budget for health care should include budgets for hospitals. Hospitals in Maryland, Canada and Rochester, New York provide case studies useful in designing a sensible program of hospital spending.

Maryland

Since the early 1970s, Maryland has experimented with policies to control hospital spending. Cooperation between hospitals and the state legislature resulted in a system of flexible budgets, taking into account differential patient volume and case mix. Flexibility reduces the financial incentive to admit patients unnecessarily and/or to admit only healthier patients (which would reduce costs while preserving revenue under a fixed budget). In addition, payers in Maryland are required to pay hospitals according to a fixed set of rules. Although hospital budgeting in Maryland resulted in a reduction in average hospital cost per admission to a level well below the U.S. average by the mid-1980s, hospital costs have risen in recent years. This increase may be explained by a reduction in resolve after more than a decade of successful cost control, by an excessively cozy relationship between hospitals and state government or by a desire to increase spending during a period of strong economic growth.

Canada

In addition to setting province-wide health care budgets, provincial governments in Canada control hospital spending by setting an annual budget for each hospital. These budgets assume a specified volume of care and are adjusted the following year if volumes are lower (or higher) than assumed. Thus, there is a financial incentive for hospitals to pad admissions to increase the size of their budgets. Similarly, the budgets are not adjusted for case mix. Hospitals may try to stay under budgeted limits by admitting healthier patients while avoiding more complicated and costly cases.

Rochester, NY

In Rochester, hospitals cooperate by determining which hospitals will provide specific costly services and by refraining from unnecessary capital spending. In addition, major employers remain committed to community rating. As a result, Rochester is characterized by very low hospital spending, overall health spending, and insurance rates compared to the New York State average and even to the nation as a whole. Low costs are not won by denying coverage or by compromising quality but instead are accompanied by very high rates of insurance coverage.

Proposed structure for hospital budgets in Massachusetts

Hospital budgeting in Massachusetts should include spending limits with case-mix/volume adjustment and should encourage community cooperation. In designing a budget for hospitals, it would be useful to combine Canadian provinces' ceiling on overall health care spending with elements of Maryland's flexible budgeting and with Rochester's spirit of cooperation. A combination of these policies would contain costs while compensating hospitals that gain patients fairly and avoiding wasteful, duplicative hospital spending. A greater number of patients could be served more effectively even with reduced spending.

Physician payment under global budgeting

Under the current United States system, physicians are losing both the financial and clinical autonomy they have traditionally sought. In the past, physicians supported free market arguments and endorsed policies to keep government controls out of health care. Today, unhappily, private sector controls are restricting many physicians' incomes and clinical autonomy. Physicians are being betrayed by the anti-government policies they have long embraced. In contrast, physicians in almost all other nations have long accepted the need to choose between financial and clinical autonomy. They recognize the equivalent of a national budget to finance payments to physicians, and the need to design fair mechanisms for channeling those inevitably limited dollars to physicians.

Payment options for physicians under a health care budget

Payment options for physicians under a health care budget mirror some of the options for payment in the current system. Under a budget, physicians may be remunerated through fee-for-service payments, salary or fee-for-time.

Fee-for-service payment

Fee-for service payment provides one mechanism of paying physicians under a health care budget. These payments are made in accord with a simple national or state-wide fee schedule, usually negotiated within the medical profession or between the profession and a coalition of public and private payers. There is a tendency to cut fees if volumes of payments threaten to exceed the budgeted revenue. Some payment specialists contend that the process of setting fees is inherently political, and urge Americans to abandon their desire to use objective research to find the magic formula-like RBRVS to resolve conflict.

Salaries

Physicians may also be paid as salaried professionals under a health care budget. Salaries are most often used as a method for remunerating in-hospital specialists.

Fee-for-time, and other physician payment mechanisms

Wachtel and Stein have outlined a financially neutral method of paying doctors which they call "fee-for-time."[22] The essence is that physicians would be paid for the time they devote to their patients. More time would yield higher income. Several variations are possible. For example, all physician' time might be given the same value, or physicians who achieve better outcomes might be paid more for their time. Similarly, each type of care might be assigned an expected duration of time, or physicians could be paid by the hour. One important result could be financial neutrality between, for example, diagnosing problems and performing procedures.

Budgeting preserves physicians' autonomy in caring for their patients

Budgeting and simplified administration that results from budgeting do not necessarily alter the method of paying physicians. However, because there is one fee schedule governing all payments, rather than multiple fee schedules from multiple payers, the time spent by physicians doing paperwork and billing is significantly reduced. Moreover, under a budget, physicians retain responsibility for clinical decision making. Budgeting preserves physicians' autonomy in determining the best course of care for their patients, given available health care dollars.

Budgeting, Other Services

Other services should be budgeted with an eye to each sector's circumstances. For example, to finance nursing home and home care, a long-term care trust fund could be established by pooling public Medicaid and Medicare dollars, and then adding such other revenue as became available, even including time banked by volunteers. One result would be substantial change from today's approach of entitling some insured individuals to some benefits under some circumstances. Instead, case managers would make trade-offs and seek to target available resources flexibly, to do as much good as possible. Case managers could even negotiate with families to leverage a fair share of private effort in order to obtain public resources. In one area, dental services, budgeting to win universal coverage could be undermined by the apparent lack of sufficient numbers of dentists, in many areas, to delivery dental care for all. When budgeting for prescription drugs, a state- or national-level payor would negotiate with manufacturers to win the sorts of price concessions granted to foreign governments. But in the future — as more states and eventually the nation act to win lower prices from drug makers — it would be essential to ensure adequate financing of pharmaceutical research by negotiating an international treaty allocating responsibility for research funding, probably in proportion to nations' per capita incomes.

Part 7: The impact of patient cost-sharing

Cost-sharing[d] is a widely endorsed strategy for controlling health care costs. Nearly all individuals covered under the current health insurance system are expected to share some of the costs of their care — for examply, by paying decuctibles or making copayments for services used, by paying a share of premium costs or by investing in medical savings accounts. Even individuals covered under publicly funded programs, such as Medicaid and Medicare, pay an increasing portion of their health care costs out-of-pocket.

Proponents of cost-sharing believe that high rates of utilization are a primary determinant of high levels of health care spending. It is assumed that if individuals are required to pay part of the price of the medical services they use, they will use less care. According to this view, as utilization declines, spending on health care services is reduced.

Effect of cost-sharing on health spending and health status

Copayments, coinsurance and other forms of cost-sharing increase costs and are ineffective as a cost control strategy.[23]

As demonstrated by our model, a system which includes patient cost-sharing costs more than one that does not. Extending universal, comprehensive coverage with simplified administration and no cost-sharing decreases projected health care spending by $1.651 billion, a reduction of 4.6% compared to the projected spending for Massachusetts beneficiaries (baseline 2). If cost-sharing is introduced, projected health care spending would increase by $341 million, a decrease of 0.9%. Extending universal, comprehensive coverage with no financing reform under a HMO, PPO or POS option increases projected health care spending by $1.330 billion, an increase of 3.7%.

Cost-sharing may reduce insurers' health spending on benefits by transferring costs to individuals, but in the process of shifting costs, it raises overall health spending. Several examples are summarized here.

[d] As the Massachusetts Medical Society requested, our discussion here will focus specifically on copayments, but the effects of other forms of cost-sharing are similar.

Cost-sharing deters patients from seeking necessary care as well as unnecessary care[24] and results in costlier care

Offering universal, comprehensive coverage to all Massachusetts residents will greatly increase access to health care. Individuals will be more likely to visit their physicians for preventive as well as acute care. Enhanced primary care will ensure more appropriate treatment of ambulatory sensitive diagnoses (ASDs)[e], reducing the number of hospitalizations. If cost-sharing is required, patients may forgo care rather than incur out-of-pocket costs. Cost-sharing rules force patients to second-guess their physicians' decisions. As individuals forgo necessary care, their health worsens and the eventual costs of their care are higher. As a result, even though cost-sharing reduces utilization in the short term, costs of physician services, hospital care, prescription drugs, long term care and other care ultimately rise.

Cost-sharing reduces the savings generated by early treatment for ambulatory sensitive diagnoses as well as the savings associated with utilization management[f] under universal coverage. Our model estimates savings of $774 million are associated with more appropriate treatment for ASDs and utilization management under a system of universal, comprehensive coverage with simplified administration and no copayments. When cost-sharing is retained, the savings generated by more appropriate treatment for ASDs and utilization management drop to $304 million. Extending universal, comprehensive coverage with no financing reform would generate savings of only $56 million by treating ASDs more appropriately and managing utilization.

[e] ASDs are conditions where hospitalizations can be avoided if treatment by a physician is received soon enough.

[f] Utilization management may include peer review, mandated second surgical opinions, practice pattern analysis, alternatives to hospital care and case management of complex treatments.

Cost-sharing deters patients from filling needed prescriptions[25] and results in costlier care.[26]

Under a system of universal, comprehensive coverage with simplified administration and no copayments, bulk purchasing of prescription drugs generates savings of $514 million. If copayments are introduced, some individuals may forgo medication necessary to treat their conditions. Their health will worsen and many of these individuals are likely to require costly emergency, inpatient, or nursing home care. Thus, the savings associated with bulk purchasing of prescription drugs under a system of universal, comprehensive coverage with simplified administration and with copayments is $459 million. Because there is no reform in drug purchasing practices, no savings are generated in this category under a system of universal, comprehensive coverage without financing reform.

The administrative costs of imposing cost-sharing are substantial.[27]

Copayments, coinsurance and other forms of patient cost-sharing requirements force caregivers to have billing mechanisms and collection procedures which are otherwise unnecessary under a system with simplified administration. These processes impose huge additional costs on the health care system. If patient cost-sharing persists, only a small share of the potential administrative savings of universal coverage and financing reform are realized.[28] Our model demonstrates that administrative savings of $3.630 billion are generated under a system of universal, comprehensive coverage with simplified administration and no copayments. If patient cost-sharing rules are retained, administrative savings are reduced to $1.119 billion. No administrative savings are generated under a system of universal, comprehensive coverage with no financing reform.

Cost-sharing rules have other unintended effects on health care costs and delivery.

Cost-sharing requirements hurt caregivers and creates incentives for a two-tiered health system

Requiring patients to share the costs of the health services they use also harms caregivers. Costs are shifted to caregivers who must absorb unpaid copayments and deductibles, and incur additional administrative costs.[29] This is particularly onerous for caregivers committed to serving underserved populations or for caregivers with a large proportion of lower-income or less healthy patients. Costs are also shifted to caregivers who must incur additional administrative costs for billing, collection and record-keeping. Again, these costs would not exist under a system with simplified administration.

With cost-sharing, caregivers lose any sums or copayments they cannot collect. Caregivers serving lower-income communities and/or less healthy populations may be vulnerable. To stay open, caregivers may increase the volume of services and costs for those less affected by cost-sharing.[30] Cost-sharing requirements may make caregivers less willing or able to serve sicker or poorer patients if they cannot pay.

Cost-sharing disproportionately burdens less healthy[31] and low-income[32] populations.

Copayments are a regressive tax on the poor and the sick. It is harder for poor people to make copayments. Even copayments of $5 to $15 loom large to many individuals with low incomes who must struggle to budget for other needs such as food and housing.[33] Copayments also place special burdens on persons with disabilities, chronic illnesses and other less healthy patients who use the most services. Copayments and other forms of cost-sharing effectively restrict access to health care for less healthy and lower income populations.[34] Individuals for whom cost-sharing is particularly onerous, such as those who can least afford it and those who need care the most (low-income and less healthy), are especially likely to forgo care.

Part 8: Conclusion

Our financial model has shown that universal coverage without reform in financing is expensive. Universal, comprehensive coverage without reform increases projected health care spending from $36.139 billion to $37.469 billion, an increase of 3.7% in health spending for Massachusetts beneficiaries. The magnitude of this increase risks crowding out other productive investment and hindering economic growth. But universal, comprehensive coverage for all Massachusetts residents with financing reform (simplified administration and global budgets) can result in lower overall health care costs. The rewards of reduced health expenditures are clear — lower taxes, reduced insurance premiums and fewer out of pocket costs. These can accompany the many benefits of expanded access to care.

Simplified administration with no cost-sharing is the least expensive way to achieve universal coverage

Universal, comprehensive coverage with simplified administration and no cost-sharing is the least costly reform available, costing $1.3 billion less than the same reform with cost-sharing — and even costs less than the projected cost of care without any reforms or coverage expansions. The addition of patient cost-sharing removes $1.9 billion from the funding burden of a reformed system, but out-of-pocket health spending remains high (at $3.8 billion)when cost-sharing is included.

Universal, comprehensive coverage under the HMO/PPO/POS option is the most expensive way to achieve universal coverage. This reform costs nearly $1.7 billion more than simplified administration with cost-sharing and almost $3 billion more than simplified administration with no cost-sharing. The HMO/PPO/POS option also increases the private health insurance burden by $2.7 billion compared to projected private insurance spending with no reform. Out-of-pocket spending remains nearly the same under the HMO/PPO/POS option as it is projected to be without reform.

Universal coverage with simplified administration provides more care, and reduces wasteful administrative spending

All the universal coverage reforms analyzed would provide more medical care than people receive today. However, simplified administration reduces administrative costs, and makes universal coverage more affordable. Simplified administration without cost-sharing reduces administrative costs the most, and increases actual care by $1.2 billion more than simplified administration with cost-sharing. Managed care organizations argue that money spent on administration is the most efficient way to cut health spending. This analysis clearly shows that a cost-control strategy of spending more on administration in order to reduce medical care costs not only is ineffective, but denies access to necessary care.

Cost-sharing restricts access to health care, even under a system of universal coverage

Cost-sharing restricts access to health care, even under a system of universal, comprehensive coverage, deterring necessary as well as unnecessary care and deterring care especially for the sick and the poor.

Cost-sharing is not an effective cost control strategy.

In addition to being bad medicine, requiring patient cost-sharing also fails as a cost control strategy.

- Cost-sharing fails to target the cause of high health spending.[35]
- Cost-sharing shifts costs to caregivers.
- As our model clearly demonstrates, cost-sharing substantially raises overall costs and the potential savings of a system of universal, comprehensive coverage with simplified administration cannot be realized.
- The burden of cost-sharing also causes some people to delay seeking care until they are sicker, thus raising the ultimate cost of their care.

- Combined insurer and caregiver administrative costs rise by $2 billion when cost-sharing is included in the simplified administration reform. Cost-sharing simply shifts costs to individuals, and in doing so, increases total health spending but decreases actual care received by beneficiaries.

Notes

1. Pamuk E, Makuc D, Heck K, Reuben C, Lochner K. *Socioeconomic Status and Health Chartbook. Health, United States, 1998.* Hyattsville, Maryland: National Center for Health Statistics. 1998.

2. We use insurer administration to refer to the category that the Health Care Financing Administration refers to as "program administration and net cost of private insurance" in the National Health Accounts.

3. *Canadian Health Insurance: Lessons for the United States,* GAO/HRD-91-90, p. 67.

4. *Canadian Health Insurance: Lessons for the United States,* GAO/HRD-91-90, p. 67.

5. The marginal cost rate is the lower rate that sellers of goods can charge for goods sold "at the margin," that is: additional units sold after overhead costs are already paid for when a smaller number of units are sold. Since overhead costs are already paid off, sellers can sell additional units at a lower cost and still make a profit.

6. Jack Cook, "Basic Ideas of Hospital Rate Setting," 1983, unpublished. Estimating marginal cost for hospital care at 40% puts our estimate in the middle of the range of other estimates. Maryland used 50-70 percent, New Jersey used 72 percent, New York used 20 percent, and Rochester used 0% for first 2% rise in volume, and 40 percent for increases in use thereafter.

7. Access and Affordability Monitoring Project, "Why Should Americans Pay More? Cutting Prescription Drug Prices to Foreign Levels Will Save Lives and Money," Boston University School of Public Health, Feb 1996 (Draft), Appendix I: Estimating the Need for Help in Paying for Vital Prescription Medications, as modified for this analysis by AAMP in April 1998.

8. These relied in part on Health Insurance Association of America estimates that seven percent of insured private sector workers had no prescription drug coverage in 1993. (Personal communication, Al Minor, HIAA Research Department, 18 September 1995.) AAMP also employed the commonly-used estimate of 250,000 Massachusetts elders without prescription drug coverage, even though we suspected that the actual number may be considerably higher. (See, for example, Benjamin Lipson, "Weld shouldn't place desires of Kraft over needs of elderly," *Boston Globe,* 16 February 1995.)

9. Some of the bases of these estimates are noted here; more detail is available on request.

AAMP started with these estimates: Moeller and Mathiowetz reported that 58 percent of Americans actually used prescription drugs in 1987. The rate for those aged 65 and above was 81.9 percent. (Moeller, J. and N. Mathiowetz, *Prescribed Medicines: A Summary of Use and Expenditures by Medicare Beneficiaries* (DHHS Publication No. (PHS) 89-3448), National Medical Expenditure Survey Research Findings, No. 3, Rockville, Maryland: National Center for Health Services Research and Health Care Technology Assessment, Public Health Service, September 1989.) In 1987, people under age 65 who had any private insurance who bought prescription drugs reported a mean expenditure per person of $126, which AAMP took as the foundation for calculating standard need for the average person under age 65 in 1995. (See Moeller, J. and H. Levy, *Prescribed Medicines in Ambulatory Care Settings: A Comparison of Use, Expenditures, and Sources of Payment* (AHCPR Pub. No. 95-0062), National Medical Expenditure Survey Research Findings, No. 24, Rockville, Maryland: Agency for Health Care Policy and Research, Public Health Service, June 1995, Table 3.) But the $126 figure reflected substantial under-reporting, estimated at fully 34 percent by Berk and his colleagues. (Berk, Mark L., Claudia L. Schur, and Penny Mohr, "Using Survey Data to Estimate Prescription Drug Costs," *Health Affairs*, Vol. 9, No. 4, fall 1990, pp. 146-156.) This was interpreted to mean that a reported drug use per person in 1987 of $126 means an actual drug use per person in 1987 of $191. (Taking 66 percent of $191-- 100 percent total actual drug use minus 34 percent for under-reporting-- equals $126.) After factoring in inflation, the $191 of spending in 1987 became $317.28 in 1995. Then, using the same sources, AAMP calculated that a person over age 65 would need to buy prescription drugs costing $820.90 in 1995.

10. AAMP estimated that 10 percent of insured people under age 65 could not afford the associated premiums and out-of-pocket payments, and estimated the comparable figure for people over age 65 at 25 percent. The average amount of help needed per person annually was estimated at $100 and $250 for people under and over age 65, respectively.

11. Charlene Harrington, and Christine Cassel, et. al., “A National Long-term Care program for the United States,” *JAMA* 266:No. 21 p. 3025. They suggest that “[l]ong-term care insurance could legitimately result in a 20% increase in nursing home utilization...” Their source is the Pepper Commission report and Rivlin and Weiner, “Caring for the Disabled Elderly: Who will Pay?” Washington, DC: Brookings Institution, 1988.

12. National Center for Health Statistics, Health, United States, 1996-97 edition, Hyattsville, Maryland: 1997, Table 115. http://www.cdc.gov/nchswww/data/hus96_97.pdf). Compared to the US average, Massachusetts had about 16% more nursing home residents per 1000 persons aged 85+, the age group most likely to use nursing homes (473 in MA vs. US 408).

13. See 1993 Medicare data in U.S. General Accounting Office, GAO-HEHS-96-16, Medicare: Home Health Utilization, Appendix II, page 36, Figure II.2. See also 1995 HCFA data shown in Carol Gentry, "Region's Home-Care Firms Face Being Punished for Their Efficiency," Wall Street Journal, January 7, 1998.

14. Workers Compensation Research Institute, *WCRI Research Brief,* "Benchmarks for Designing Workers Compensation Medical Fee Scheules, 1995-96," Cambridge, Mass., V. 12, No. 4, April 1996.

15. Codman Research Group, Andover, Mass. 978-688-9300.

16. "A Literature Review of studies demonstrating savings from early detection, preventive services and practice pattern review utilization changes," unpublished paper by Solutions for Progress, Inc. Spring 1993, updated in Fall, 1997). These savings are based on studies estimating the potential expenditure reductions that retrospective, concurrent and prospective review, mandated second surgical opinions, reduction in unnecessary surgery, practice pattern analysis, alternatives to hospital care and case management of complex and expensive treatments have the potential to realize.

17. "Prescription Drugs: Companies Typically Charge More in the United States Than in Canada," GAO/HRD-92-110, and Access and Affordability Monitoring Project, "Why Should Americans Pay More? Cutting Prescription Drug Prices to Foreign Levels Will Save Lives and Money," Boston University School of Public Health, February, 1996 (draft).

18. "Canadian Health Insurance: Lessons for the United States," GAO/HRD-91-90, p. 65; and "Canadian Health Insurance: Estimating Costs and Savings for the United States," GAO/HRD-92-83, p. 8)

19. Woolhandler S, Himmelstein DU, "Deteriorating administrative efficiency of the U.S. health care system," *New England Journal of Medicine*, 1991; 324 (18):1253 - Special Articles. As corrected in a letter to the *New England Journal of Medicine*, dated June 8, 1994, published Aug. 4, 1994.

20. "Canadian Health Insurance: Estimating Costs and Savings for the United States," GAO/HRD-92-83, p. 12.

21. Woolhandler S, Himmelstein DU, "Deteriorating administrative efficiency of the U.S. health care system," *New England Journal of Medicine*, 1991;324 (18):1253 - Special Articles. As corrected in a letter to the *New England Journal of Medicine*, dated June 8, 1994, published Aug. 4, 1994.

22. Tom J. Wachtel and Michael D. Stein, "Fee-for-time System: A Conceptual Framework for an Incentive-neutral Method of Physician Payment," *Journal of the American Medical Association,* Vol. 270, No. 10 (8 September 1993), pp. 1226-1229.

23. See M. Edith Rasell, "Cost-sharing in Health Insurance -- A Reexamination," New England Journal of Medicine*, Vol. 332, No. 17 (27 April 1995) for a discussion of the problems associated with cost-sharing.*

24. See, for example, Kathleen Lohr, et al., "Use of medical care in the Rand Health Insurance Experiment: diagnosis and service-specific analyses in a randomized controlled trial," Medical Care *(September 1986), Supplement, pp. S74-75, S78-79; Gregory E. Simon, et al. "Impact of Visit Copayments on Outpatient Mental Health Utilization by Members of a Health Maintenance Organization,"* American Journal of Psychiatry*, Vol. 153, No. 3 (March 1996), pp. 331-338; Joe V. Selby, et al., "Effect of a Copayment on Use of the Emergency Department in a Health Maintenance Organization,"* New England Journal of Medicine*, Vol. 334, No. 10 (7 March 1996), pp. 615-641.*

25. See, for example, C.E. Reeder and Arthur A. Nelson, "The Differential Impact of Copayment on Drug Use in a Medicaid Population," Inquiry*, Vol. 22 (Winter 1985), pp. 396-403; Brian L. Harris, et al. "The Effect of Drug Co-payments on Utilization and Cost of Pharmaceuticals in a Health Maintenance Organization,"* Medical Care*, Vol. 28, No. 10 (October 1990), pp. 907-917. In that study, a $3 co-payment was associated with a 13 percent reduction in prescriptions filled for essential drugs, and 19 percent for discretionary prescriptions.*

26. When New Hampshire Medicaid limited patients to three prescriptions per month, hospital and nursing home use rose, as did costs -- far above the savings on drugs. Soaring use of emergency mental health services for schizophrenic patients, for example, meant new costs more than 17 times the savings from the cap on drug coverage. See Stephen B. Soumerai, et al. "Effects of Medicaid Drug Payment Limits on Admission to Hospitals and Nursing Homes," New England Journal of Medicine*, Vol. 325 (1991), pp. 1072-1077; Stephen B. Soumerai, et al., "Effects of Limiting Medicaid Drug-Reimbursement Benefits on the Use of Psychotropic Agents and Acute Mental Health Services by Patients with Schizophrenia,"* New England Journal of Medicine*, Vol. 331 (1994), pp. 650-655.*

27. Some states have recognized this inefficiency when serving low-incom people in their Medicaid programs and have eliminated cost-sharing requirements. Geraldine Dallek, A Guide to Cost-Sharing and Low-Income People*, Washington: Families USA Foundation, October 1997, p.18.*

28. For a detailed breakdown of administrative savings by category (e.g. private insurance overhead, hospitals, physicians, nursing homes), see notes 14 -17 of the spreadsheet.

29. See, for example, Larry Williams and Christopher Keating, "Co-Pay for Drugs Halted; Pharmacists Insist Medicaid Cut Would Put Cost on Them," *Hartford Courant*, 3 January 1996; and A. Giroganni, "Co-Pays for Aid Recipients May Cost Pharmacists Instead," *Hartford*

Courant, 17 December 1995, as cited in Geraldine Dallek, *A Guide to Cost-Sharing and Low-Income People*, Washington: Families USA Foundation, October 1997, p. 19. An AAMP study of six cities in Massachusetts found a high rate of pharmacy closings already, and especially in predominantly African-American and Hispanic communities. Access and Affordability Monitoring Project, *Pharmacy Closings in Massachusetts, 1980-1995*, Boston: The Project, 15 May 1997.

30. M.C. Fahs, "Physician Response to the United Mineworkers' cost-sharing program: the other side of the coin," *Health Services Research*, Vol. 27, No. 1 (April 1992) pp. 25-45.

31. Robert H. Brook, et al. "Does Free Care Improve Adults' Health? Results from a Randomized Controlled Trial," New England Journal of Medicine*, Vol. 309, No. 23 (8 December 1983), pp. 1426-1434. For the least healthy 25 percent of adults studied, their estimated likelihood of death (on an index of risk factors) was 10% lower in free care plans than in plans with cost-sharing. This difference was mainly due to better control of blood pressure. (Note that adults over 65 were excluded, and people spent 3-5 years in one or the other type of plan).*

32. Kathleen Lohr, et al., "Use of medical care in the Rand Health Insurance Experiment: diagnosis and service-specific analyses in a randomized controlled trial," Medical Care *(September 1986), Supplement, pp. S74-75, S78.*

33. A survey of lower-income enrollees in a Tennessee program demonstrated that, even among people above poverty, over one-fifth of those who faced prescription copayments – presumably nominal at $2 to $5 – had been unable to pay them. Gordon Bonnyman, "Access to Care – September 1996," Nashville, TN: Tennessee Justice Center, http://www.chcs.org/gb_sept.htm, as cited in Leighton Ku and Teresa A. Coughlin, *The Use of Sliding Scale Premiums in Subsidized Insurance Programs*, Washington, DC: The Urban Institute, March 1997, http://www.urban.org/entitlements/premiums.htm.

34. Copayment exemptions for these populations would create new administrative costs and other difficulties in determining eligibility. Any patient cost-sharing would entail collection and record keeping costs that would sharply cut the administrative savings attainable under universal coverage.

35. Use rates for basic medical services are not the source of Massachusetts high health care costs. Utilization of physician services is relatively low compared to other wealthy industrialized countries. M. Edith Rasell, "Cost-sharing in Health Insurance -- A Reexamination," *New England Journal of Medicine*, Vol. 332, No. 17 (27 April 1995).