To: Mass Care

From: Gerald Friedman[1]

Re.: Cost and funding of proposed Medicare for All in Massachusetts Bill

Summary:

This policy memo explores some of possible economic implications of the proposed "Act for Improved Medicare for All in Massachusetts: Providing Guaranteed, Affordable Health Care." In it, I am assuming that the proposed Massachusetts Health Care Trust would replace all private health care spending but that other public programs, including Medicare and MassHealth (Medicaid), would remain in place. Because most residents of Massachusetts are already covered by some health insurance plan, I assume that the MHCT would have only a small increase in health care utilization. It would, however, produce substantial savings on administrative costs both in the insurance system and in physician and clinical offices. Because of these savings and because the MHCT would replace the regressive financing of existing health insurance with a progressive or proportional contribution scheme, the proposed MHCT would dramatically increase the real post-fisc income of most Massachusetts residents without imposing extra burdens on Massachusetts businesses.

Health Care spending in Massachusetts:

1. I estimated the revenues needed for a Massachusetts Health Care Trust on the assumption that the goal would be to replace *all* health care spending other than that funded by the Federal government through Medicare and Medicaid (MassHealth).

    a. Total health expenditures by residence location and as personal health expenditures by the Center for Medicaid and Medicare Services (CMS), which exclude expenditures on administration, public health, and construction.[2]

        i. CMS data extend only through 2004. Expenditures for 2010 are estimated by assuming the same rate of growth 2004-10 as for 1991-2004.

Table 1. Health expenditures, Massachusetts residents, 1991-2010

Year	Expenditures (millions of dollars)	Population (thousands)	Per capita expenditures
1991	$ 19,554	6018	$ 3,249
2000	$ 31,947	6363	$ 5,021
2004	$ 43,009	6436	$ 6,683
2010	$ 61,881	6532	$ 9,473

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[1] I am indebted to my colleague Professor Michael Ash for comments. Mistakes remain my own.

[2] US Government, CMS, "US State Estimates by State of Residence -- Health Expenditures," 2007, https://www.cms.gov/NationalHealthExpendData/downloads/res-us.pdf.

Health care financing in Massachusetts

2. Health care is paid from a variety of sources, some of whom would not be affected by a change in the system of funding in Massachusetts.

| Source of Funding	Expenditures (millions)
Medicare	$ 11,554
Other state health	$ 2,402
Medicaid (MassHealth)	$ 12,386
Employer provided	$ 14,577
Employee premium	$ 7,670
Other and out-of-pocket	$ 13,292

Table 2. Sources of Massachusetts health spending, 2010.

a. The Federal government pays for Medicare for the elderly and some disabled and Medicaid (MassHealth) for the poor (including some elderly and disabled).

b. The Commonwealth contributes to Medicaid (MassHealth) and subsidizes health insurance for others. In addition, employers and employees pay for private health insurance; and there are out-of-pocket expenditures for copayments and for services not covered by insurance.

c. I have calculated other state health expenditures as the residual after subtracting Medicaid (MassHealth) from the Mass Budget and Policy Center line item for health care expenditures. I have converted fiscal years to calendar years by taking the average of the two fiscal years.[3]

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[3] Massachusetts Budget and Policy Center, *Budget Browser* (Massachusetts Budget and Policy Center, September 21, 2010), http://browser.massbudget.org/SelectCriteriaTime.aspx.

d. I have calculated private health insurance expenditures from Medical Expenditure Panel Survey at the Department of Health and Human Services.[4]

e. I have calculated "Other and out-of-pocket" expenditures as the residual between the total and the expenditures for the five items listed above.[5]

Figure 1. Distribution of health care expenditures, Massachusetts 2008.
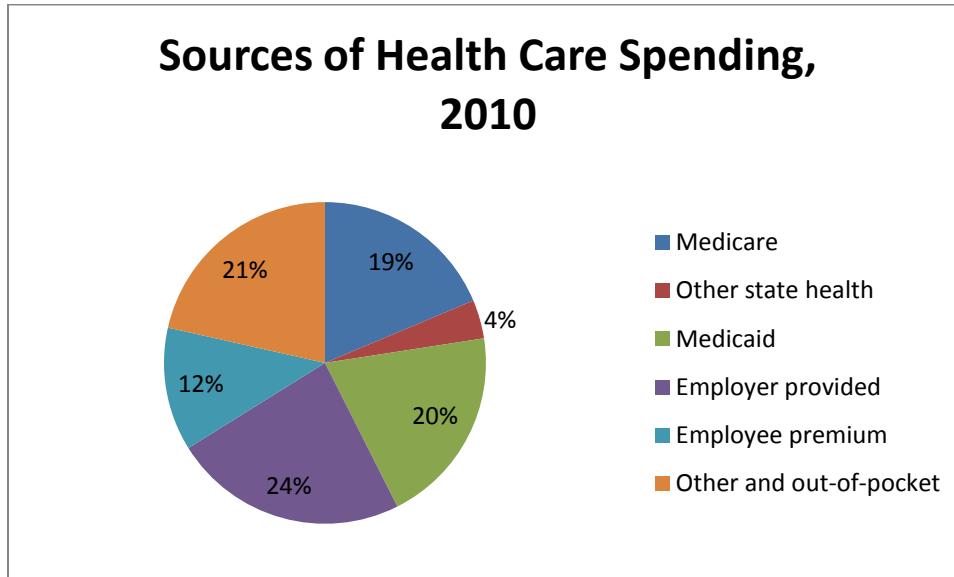
3. I estimate that health expenditures are 16% of state income of $379 b. in 2010, 18% of personal income, and 32% of wage and salary income. Some of these expenditures would not be replaced by a single state payer. If we assume that expenditures remain the same and Medicare, Medicaid (MassHealth), and other state programs remain in place, then the single payer would be replacing 57% of medical expenditures, 9% of state product, 10% of personal income, and 19% of wage and salary income (see Table 3).

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[4] Agency for Healthcare Research and Quality, *Medical Expenditure Panel Survey*, 2009, http://www.meps.ahrq.gov/mepsweb/data_stats/state_tables.jsp?regionid=18&year=-1.

[5] Note that this procedure puts any error in the estimate of total health expenditure into the "Other and out-of-pocket" category.

Table 3. Expenditures on health care as share of alternative measures of income.

	Total Expenditures	Expenditures replaced	Expenditures replaced with savings of 15.75%
Gross State Product	16.3%	9.4%	7.9%
Personal income (income received by Massachusetts residents)	18.0%	10.3%	8.7%
Wage and salary income (personal income minus interest, dividends, and profits)	32.3%	18.6%	15.6%
Personal income with $10,000 personal deduction	22.2%	12.7%	10.7%

Note: This table gives alternative measures of Massachusetts health expenditures as shares of four measures of income. The expenditures are "Total" (including those already government funded), "Expenditures replaced" (expenditures other than Medicare, Medicaid (MassHealth), and other Massachusetts state programs), and "with savings" (expenditures replaced minus 15.75% assumed savings). The last row is the share of personal income *after* a $10,000 personal deduction is removed for each person. The numbers in italics are used in the calculations that follow.

Effect of MHCT/single-payer health insurance on health care costs:

It is possible, even likely, that the establishment of a single-payer health insurance program would change medical costs and expenditures. [6] I revised the estimates in Table 3 to incorporate savings that would reduce expenditures by 17.1%:

    a. Six of ten private health insurance plans in Massachusetts have medical expense ratios below 94%. Lowering the administrative costs on these plans to 6% would reduce overall administrative expense by over three percentage points, saving $766 m., or 2% of total costs.

    b. Simplifying the reimbursement process would allow providers to reduce their administrative costs. I assume that this would allow an overall reduction in health-care costs of 10.1%. [7]

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[6] Note that the "Other and out-of-pocket" category includes other federal spending, including the Veterans Administration, which I have not (yet) been able to itemize.

[7] Woolhandler et al. have found that provider's administrative costs are much lower in Canada than in the United States with the difference in 1999 amounting to $491 per capita. Adjusting for inflation (the CPI), and assuming that the national average applies in Massachusetts, I estimate that the administrative savings from providers would be $633 in 2010, or 6.7% of private medical costs to be subsumed within a single-payer system. This is a conservative estimate because administrative cost inflation has exceeded the CPI, Massachusetts costs are greater than the national average, and the administrative cost burden is higher in the private insurance market. Assuming that administrative costs for practitioners are 3 times as high in the private market than for medicare, the administrative savings come to 10.1% of private market costs. See Steffie Woolhandler, Terry Campbell, and David Himmelstein, "Cost of Health Care Administration in the United States and Canada," *New England Journal of Medicine*, no. 349 (2003): 768-75.

c. The Massachusetts Attorney General found that "price increases, not increases in utilization, caused most of the increases in health care costs during the past few years in Massachusetts." She found that prices are not related to costs, to quality of care, the degree of illness, or even whether the facility is a teaching hospital. Instead, prices depend on market leverage.[8] A single payer plan would shift the market leverage, allowing a 5% reduction in prices.

In other ways, the movement to single payer would raise expenses that would raise costs by 1.35%, leaving a net savings of 15.75%.

a. I assume that expenditures rise by 1.35% because of the expansion of coverage to previously uninsured people. [9]

b. Expenditures may also increase if eliminating copayments and restrictive insurance policies leads to more utilization among the already insured population. The most famous experimental study, the RAND Health Insurance Experiment in the 1970s, found utilization increases with reductions in copayments, and its authors argued that there was no significant change in health outcomes for the average individual in the study. The study did find substantial effects on health for poor people and for the unhealthy, especially those with common medical conditions, such as hypertension, respiratory problems, tooth decay, and myopia. The RAND study estimated that among the poor with hypertension, the mortality rate would increase by 14% with the addition of copayments. Eliminating copayments would also lead to improved health, with lower morbidity as well as mortality, for those with respiratory distress, and those with vision and dental problems. Other studies have confirmed the RAND finding that adding copayments may impair the health of the poor and the unhealthy. Eliminating copayments has been shown to lead to better monitoring of chronic health conditions and use of prescribed medications.[10] Any increases

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[8] Office of Massachusetts Attorney General Martha Coakley, "Investigation of Health Care Cost Trends and Cost Drivers," January 29, 2010, 3, http://www.mass.gov/Cago/docs/healthcare/Investigation_HCCT&CD.pdf.

[9] Note that 2.7% of the Massachusetts population is uninsured http://www.mass.gov/Eeohhs2/docs/dhcfp/r/pubs/10/mes_aib_2009.pdf. I assume that the extension of coverage will not raise costs equivalently because these people already use health services through expensive venues and underutilize cost-saving preventive care.

[10] William Manning et al., "Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment," *American Economic Review* 77, no. 3 (June 1987): 265; Robert Brook et al., "The Effect of Coinsurance on the Health of Adults: Results from the RAND Health Insurance Experiment" (Rand, 1984), http://www.rand.org/pubs/reports/R3055/; B. Harris, A. Stergachis, and L. Ried, "The Effect of Drug Co-Payments on Utilization and Cost of Pharmaceuticals in a Health Maintenance Organization," *Medical Care* 28, no. 10 (1990): 907-17; D. Cherkin, L. Grothaus, and E. Wagner, "The Effect of Ofice Visit Copayments on Utilization in a Health Maintenance Organization," *Medical Care* 27, no. 7 (1989): 669-79; Leighton Ku, Elaine Deschamps, and Judi Hilman, "The Effects of Copayments on the Use of Medical Services and Prescription Drugs in Utah's Medicaid Program" (Center on Budget and Policy Priorities, November 2, 2004), http://www.cbpp.org/cms/index.cfm?fa=view&id=1398; Jonathan Gruber, "The Role of Consumer Copayments for

in utilization expenditures would be balanced, therefore, by savings from better provision of care. On sum, it is unclear what number to put on this effect or even whether it is positive or negative.

Table 4. Changes in health care expenditures from shift to single-payer (MHCT).

Change in health-care expenditures	Size of change as share of total health-care expenditures
Savings from single-payer system	
Administration costs within health insurance system	-2.0%
Administrative costs within providers' offices	-10.1%
Reduction in provider prices through reducing market leverage for privileged providers	-5.0%
Savings:	**-17.1%**
Increased costs from single-payer	
Expansion in coverage to the uninsured	+1.35%
Increased utilization because of elimination of copayments, balanced by improvements in preventive care	+/- 0.0%
Total increased costs:	**+1.35%**
Net change in health-care expenditures:	**-15.75%**

Effect of MHCT/single-payer health insurance on income:

The proposed program would *replace* existing spending by businesses and individuals. Its distributional effects, therefore, depend on how the financing is allocated compared with the current distribution of expenditures. For illustration, I have calculated the net effect of a variety of funding mechanisms for five sets of Massachusetts households arranged by income (See household breakdown in Table 5) under two funding systems, one with contributions based on income and the other with contributions based on wages and salaries. For each, I have made estimates based on replacing all of current expenditures and an alternative where expenditures fall by 15.75% because of the economies discussed above. For each case, I have allocated health expenditures on the assumption that they have an income elasticity of 1.2 (based on a WHO study of 191 countries). [11]

Health Care: Lessons from the RAND Health Insurance Experiment and Beyond" (Kaiser Family Foundation, October 2006), 6, http://www.kff.org/insurance/upload/7566.pdf.

[11] I have also made the assumption that Medicaid covered 60% of healthcare expenditures for the bottom quintile, 30% for the second, and 10% for the middle quintile. To balance the total out-of-pocket expenditures, I allocated an equal spending to the top two quintiles.

Table 5. Massachusetts income and health expenditures by income quintile, 2010

Massachusetts family income quintile, 2006	Median household income in quintile	Estimated spending on health care as share of household income: out of pocket and private insurance
1	$ 19,964	22%
2	$ 47,599	19%
3	$ 74,043	18%
4	$ 105,935	19%
5	$ 175,722	15%

I have calculated four contribution rates based on two sources, total personal income or payrolls, and two estimates of the cost of the program, replacing all current out-of-pocket expenditures and replacing 84.25% on the assumption that costs would fall by 15.75%. In calculating contributions out of personal income, I exempted the first $10,000 of income per person. The contribution rates used are in Table 6 below.

Table 6. Alternative contribution rates to fund single-payer program

Alternative funding programs	Health trust funding with no savings	Health trust funding with 15.75% savings
Trust funding from single source		
Trust funding as share of payrolls	18.6%	15.6%
Trust funding as share of personal income with $10,000 personal exemption	12.7%	10.7%
Trust funding from dual source: payrolls and surcharge on unearned income		
Payrolls	10.0%	10.0%
Unearned income surcharge	18.7%	12.5%

Under all circumstances, the single-payer program would favor lower income households more than those with higher incomes. The effect on incomes at different levels is dramatically different, however, according to how the program is funded, whether out of personal income, out of wage and salary income, or out of some combination. Since virtually all of the nonwage non-transfer income goes to the wealthiest quintile, exempting this, including dividends, profits, and capital gains, must increase the burden on payroll contributions, placing the burden of funding health care on lower-income households.

In Figure 2, I present the net impact of contributions and health-cost savings on household income by quintile. I estimate the net impact as the current cost of health care minus the costs for contributions under different funding arrangements under the assumption that the new funding arrangement will produce net savings of 15.75% on health care costs. I have made these estimates for two alternative funding schemes. In the first, there is a 10.7% levy on personal income above $10,000 per person; in the second, there is a levy of 10% on payrolls and a 12.5% levy on unearned income. Compared with

current expenditures, both funding arrangements involve a substantial savings for households in the bottom four quintiles balanced by a relatively small increase in the burden on the top quintile.

Figure 2. Impact on income by Quintile of single payer health plan with alternative funding programs.
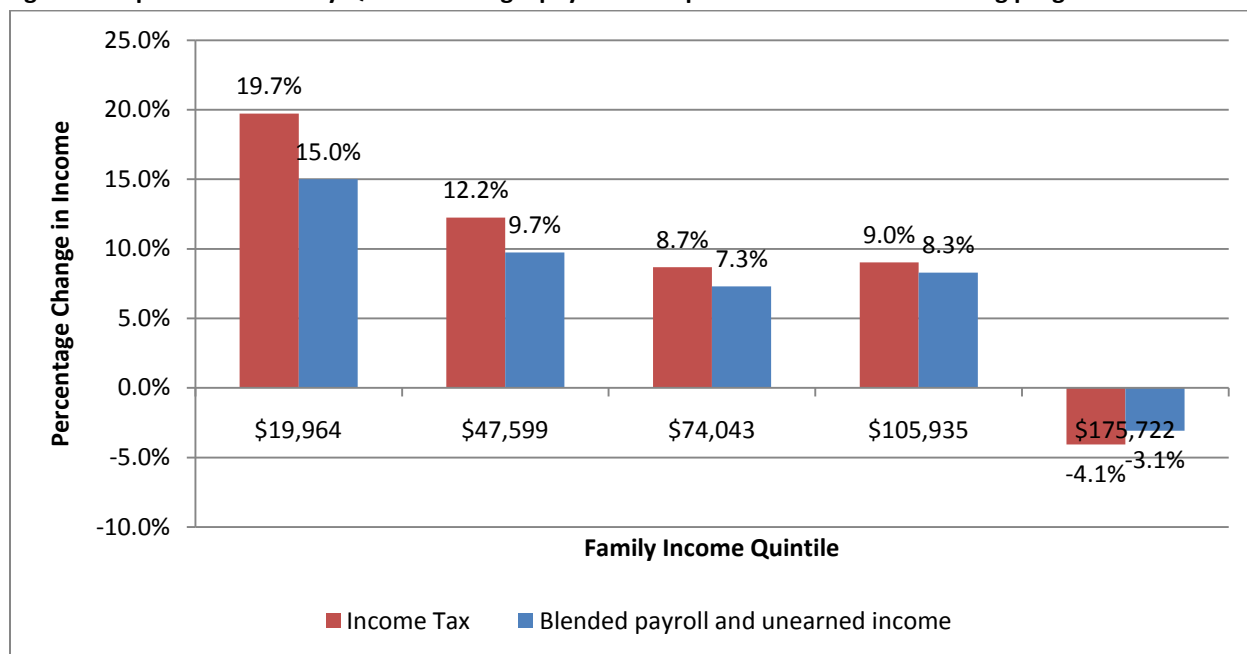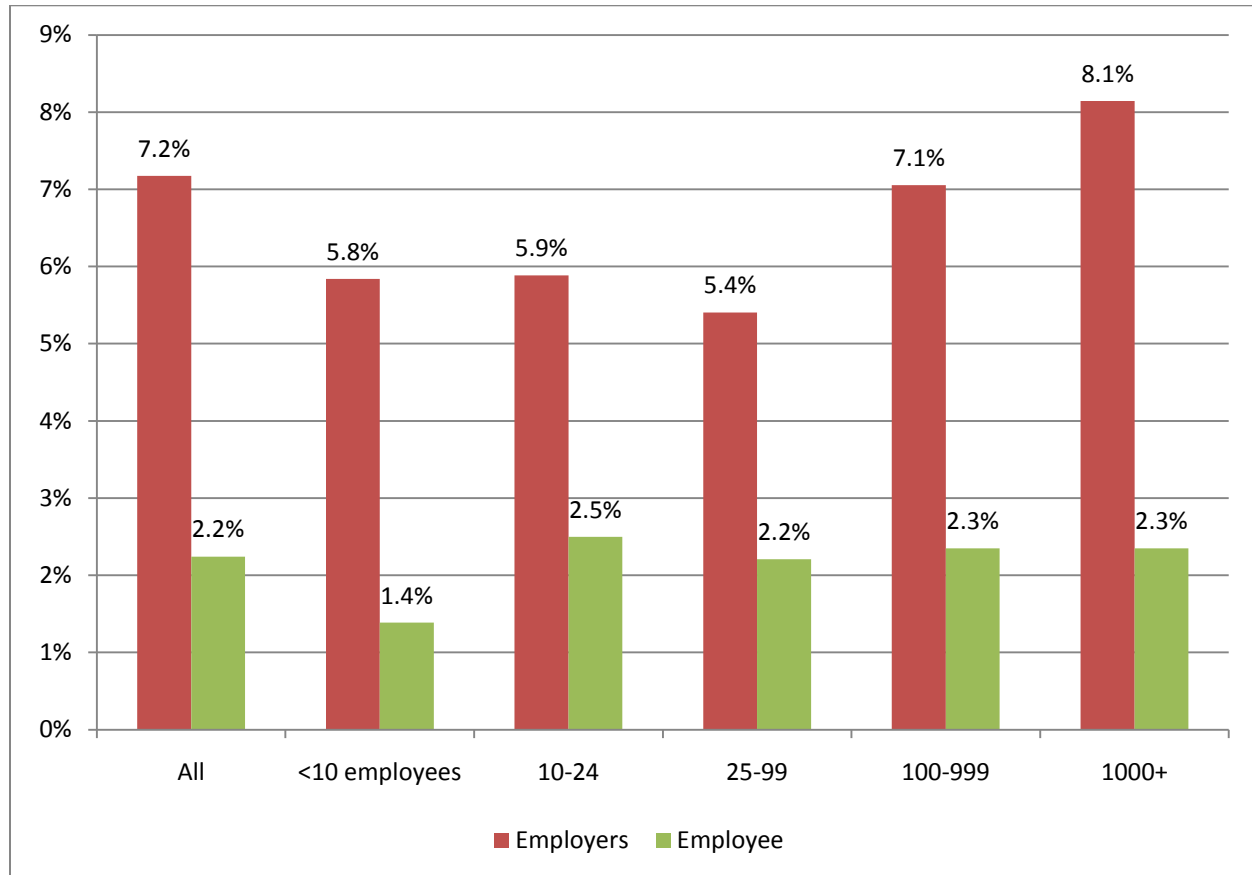

Effect of MHCT/single-payer health insurance on employer payroll costs:

It is also possible to compare the funding burden for different employers depending on the size of their operations.[12] For this analysis, I have assumed that the program would be funded with a payroll levy of 10.0%. Currently, almost 70% of Massachusetts employers, with nearly 95% of employees, offer health insurance. For all employers, premiums (split between employers and employees) come to about 10% of payroll almost the same as the proposed single-payer charge (see Figure 3). Premium payments are less for the smallest employers because relatively more of these currently offer no health insurance to their employees. Even among these small employers, however, those who currently offer insurance would benefit because their current premiums come to over 10% of payroll.

Even though the single-payer program would absorb the individual costs of copayments, deductibles, and other out-of-pocket costs, the adoption of a single-payer program would still yield significant benefits for employers through administrative cost savings, the inclusion of all employers and all payrolls in the program, and the partial financing from the restoration of the tax on unearned income.

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[12] Data for insurance coverage and cost by size of establishment is drawn from Agency for Healthcare Research and Quality, *Medical Expenditure Panel Survey*.

Figure 3. Health insurance premium cost of payroll for employers and employees, by establishment size, all employers.

Adopting a single payer plan financed by a blend of payroll charges and a tax on unearned income would have little effect on payroll costs for most Massachusetts employers. The relative cost of current health insurance premiums compared with the costs of a single payer plan have been calculated for different size employers on the assumption that a 10% payroll charge is levied on all payrolls above $30,000 per establishment divided between 7.5% paid by employers and 2.5% paid by workers.[13] Among the majority of employers who currently offer health insurance coverage to their workers, the adoption of such a plan would lower costs. (As mentioned before, savings would be even greater because of administrative savings for employers not included in our calculations.) Savings would be especially large for small employers who currently offer coverage because they would especially benefit from the cost savings of a single-payer plan. Employers who currently do not offer coverage would pay more, as would some mid-sized employers who appear to have especially low insurance rates. Overall, however, there would be a minimal change in payroll costs, a drop of 0.3% for employers currently providing coverage and an increase of the same amount for all employers.

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[13] This exemption would apply to the first $30,000 of payroll in an establishment; it would have a relatively large savings for small employers but relatively little effect on larger employers with millions of dollars in payroll. The cost of the exemption in lost revenue is balanced by a surcharge of 0.44% on payrolls in establishments with 100 or more employees.

Figure 4. Change in employer cost with single payer payroll charge of 10% split 75:25 with employees and $30,000 payroll exemption.
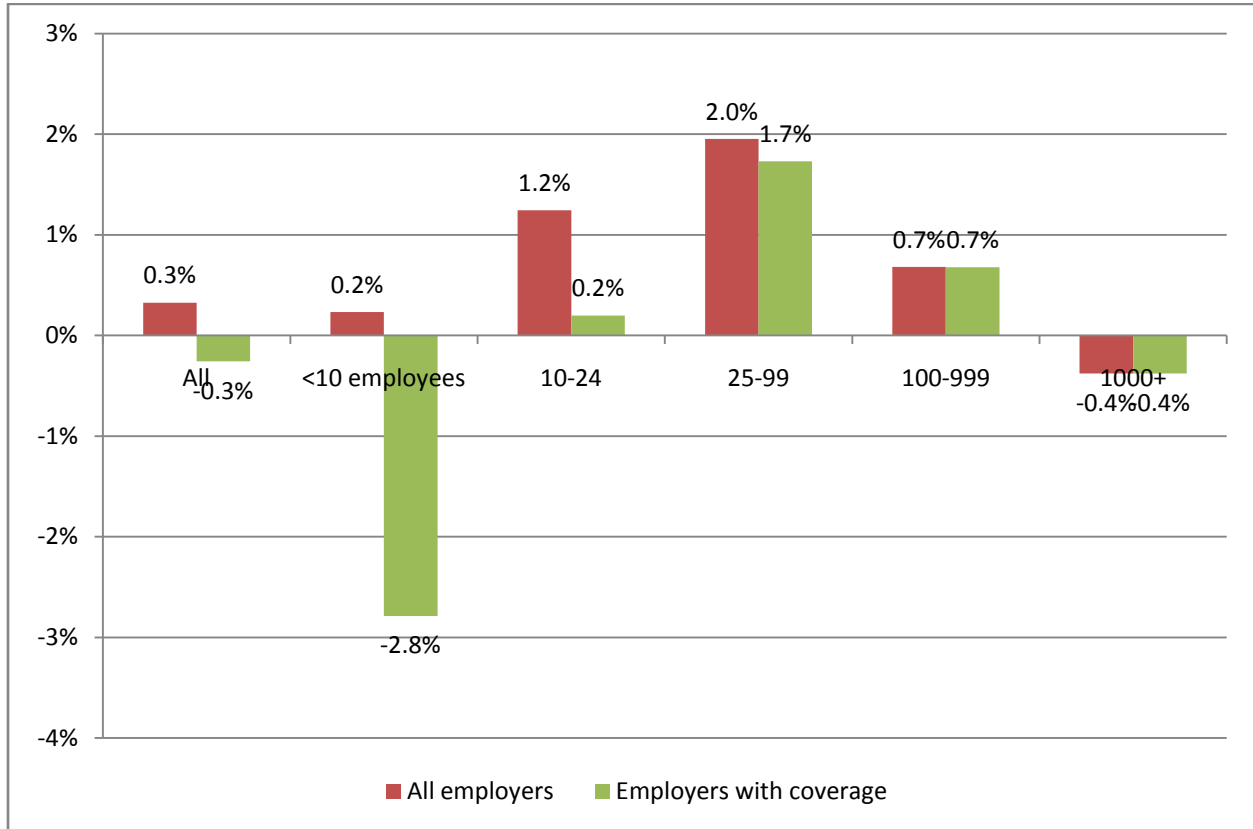
Conclusion:

This policy memo shows how a proposed Massachusetts Health Care Trust (MHCT) could be financed. The contributions needed to replace current health care spending could be collected from payrolls and other income sources at rates that are less than payments now being made for private insurance coverage because the MHCT would lead to savings in administrative costs that would dwarf any increased costs due to utilization. The MHCT would replace the current regressive financing of existing health insurance with a progressive or proportional contribution scheme that would disproportionately favor poorer and middle-income Massachusetts residents.

Sources:

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