

The study that we are submitting will update the findings from earlier work examining the impacts of health reform in Massachusetts based on a new round of the Massachusetts Health Reform Survey that is currently in the field. A copy of that earlier paper is included here. The study will address the issues included in this paper, as well as new measures related to issues likely to be of particular concern under national health reform. These include new questions related to access to health care, provider capacity, and affordability of care.

**Sustaining Health Reform in a Recession:
An Update on Massachusetts as of Fall 2009**

Abstract

With the passage of national health reform legislation modeled on Massachusetts' 2006 reform initiative, the Bay State continues to provide important lessons for the nation. Most recently, Massachusetts has shown that, while difficult, sustaining the gains of health reform in a severe recession is possible. Uninsurance, at 4.8 percent for non-elderly adults, remained at a record low in fall 2009, with access to health care improved and the burden of high health care costs on individuals reduced. However, challenges remain, as some barriers to care persist and escalating health care costs continue to be an issue in the state.

The 2010 national health reform legislation--*the Patient Protection and Affordable Care Act*--is modeled on Massachusetts' 2006 landmark reform effort. As in Massachusetts, national reform includes expansions of public programs, the creation of health insurance exchanges, subsidies for low- and moderate-income individuals, an individual mandate, and requirements for employers, among other provisions.¹ Given the strong parallels between Massachusetts' health reform initiative and national health reform, it is important to continue learning from the experiences under health reform in the Bay State.

Within two years of passing health reform, Massachusetts had achieved near-universal insurance coverage, along with significant improvements in access to health care and reductions in the financial burden of high health care costs for individuals.^{2,3} However, the gains under health reform are threatened by the current recession--the most serious since the Great Depression--along with the continued rapid rise in health care costs. Health care costs in Massachusetts, as in the nation as a whole, continue to grow much faster than wages and inflation.⁴

The challenges faced by Massachusetts as it attempts to sustain health reform in these difficult times provide important lessons for implementing health reform in the rest of the

country. This paper provides an update as of fall 2009 on health reform in Massachusetts for working-age adults—the primary target population of many elements of the state’s reform initiative and a group severely affected by the economic downturn. We examine the impact of health reform on insurance coverage, on access to and use of health care services, and on health care costs and the affordability of care since 2006. We also examine changes in those measures over the last year, when the effects of the recession have been most severe.

An Overview of the Impact of the Recession in Massachusetts

Unemployment among working-age adults in Massachusetts rose from 4.4% in December 2006 to 9.1% in December 2009.⁵ As newly unemployed workers lost employer-sponsored insurance coverage, demand for public programs grew, although new federal subsidies for COBRA coverage likely lessened this effect to some extent.⁶ Enrollment in MassHealth (Massachusetts’ Medicaid program) grew by 4.0% in fiscal year 2008 and 4.6% in fiscal year 2009 and is projected to increase by 3.6% in fiscal year 2010.^{7,8,9} At the same time, state revenues fell by \$2.6 billion between fiscal year 2008 and fiscal year 2009, with little growth projected in either fiscal year 2010 or fiscal year 2011. As a result, the state once again faces a structural deficit in the fiscal year 2011 budget.¹⁰ Similar patterns of rising unemployment, expanded

public enrollment and rapidly dropping state revenues are pervasive across the states as a result of the recession.

Mitigating the effects of state revenue shortfalls, emergency funding from the federal government through the American Recovery and Reinvestment Act of 2009 (ARRA) provided additional Medicaid funds as well as support for spending on other services.¹¹ In addition, Massachusetts has been able to draw on its "Rainy Day" Stabilization Fund to address revenue shortfalls. Nonetheless, Massachusetts, like virtually every other state, has scaled back spending and raised taxes to address serious budget gaps. To date, Massachusetts' cut-backs for health care programs have been relatively modest. In the budgets for fiscal years 2009 and 2010 those changes included some limited increases in copayments, reduced coverage for some legal immigrants, reductions in some provider reimbursement rates, and cuts to some public health programs and mental health services.^{12,13,14} Additional changes proposed in the governor's fiscal year 2011 budget include cuts to some adult dental services and copayment increases for prescription drugs, although more cuts may be needed if the federal fiscal relief anticipated by the governor is not provided. Importantly, under the maintenance of effort requirements in the ARRA states cannot make changes to their Medicaid programs that make it more difficult for individuals to get or keep coverage. Thus,

Massachusetts has preserved eligibility levels for MassHealth and Commonwealth Care (the new program under health reform that provides subsidized coverage for lower-income individuals).¹⁵

Finally, while not tied to the current recession, funding for health reform in Massachusetts has also relied heavily on federal support through an on-going Section 1115 waiver.¹⁶ Begun in 1997 to support an expansion in coverage under Medicaid, the extension of the state's waiver to include the current reform initiative was critical both to the passage of the initial legislation and to the state's ability to sustain health reform over time.

Study Data and Methods

Data. The study uses data from four rounds of interviews with adults aged 18 to 64 years old, conducted in fall 2006 (N=3,007), just prior to the implementation of many of the key elements of reform, and fall 2007 (N=2,937), fall 2008 (N=4,041) and fall 2009 (N=3,165). The surveys, which are described elsewhere,¹⁷ collected information on insurance status, access to care, out-of-pocket health care costs, medical debt, and more general financial problems, as well as demographic and socioeconomic characteristics and support for health reform.

Methods. The study compares outcomes for cross-sectional samples of adults in periods following the implementation of

health reform (fall 2007, 2008 and 2009) to outcomes for a similar cross-sectional sample in fall 2006.¹⁸ Differences in outcomes between the pre- and post-implementation periods provide estimates of the impacts of health reform. However, pre-post comparisons will also capture other changes over the same time period, including rising health care costs and the economic downturn. Research using data from other states to separate the effects of health reform in Massachusetts from other factors for the 2006-2008 period found that pre-post estimates of the impacts of health reform on insurance coverage were not substantially affected by such confounding factors.¹⁹ However, with the most severe impacts of the recession felt after 2008, we would expect changes between fall 2008 and fall 2009 to reflect the effects of the recession. Thus, differences between fall 2006 and fall 2009 will likely capture both the effects of health reform and the recession (and changes associated with the recession, such as the fiscal relief provided under ARRA). The recession would be expected to lead to a drop in health insurance coverage (as unemployment increased and individuals lost employer-sponsored insurance coverage)²⁰ and, as a result, poorer access to health care and more difficulties with health care costs, all else equal. Accordingly, we would expect to see a loss of ground in Massachusetts over time due to the economic downturn.

In this study, we report on changes between the pre-reform period (fall 2006) and fall 2009, as well as changes between fall 2008 and fall 2009, when the impact of the recession was strongest. We report estimates based on multivariate regression models that control for characteristics of the individual and his or her family, along with region fixed effects. For the most part, the characteristics of the survey samples have remained stable from year to year, however, there was a significant drop in the share of sample members who were working in fall 2009 (down to 69.5 percent in fall 2009 from about 75 percent over the 2006-2008 period) (Appendix Exhibit 1).

For ease of comparison across models, we estimate linear probability models, controlling for the complex design of the sample using the "survey estimation procedure" (svy) in Stata 11.²¹ We estimate models pooling all four years of data (2006-2009), testing for differences in the outcomes in fall 2009 versus fall 2008 (i.e., changes over the last year as the recession has worsened) and in fall 2009 versus fall 2006 (i.e., changes since health reform was implemented). Regression-adjusted estimates for each year are obtained using the parameter estimates from the regression models to predict the outcomes that the individuals in the 2009 sample would have had if they had been observed in each of the preceding study years. The simple (unadjusted) differences and regression-adjusted

differences are generally quite similar. Estimates of simple (unadjusted) differences over time are provided in appendix exhibits, as is an example of output from a typical regression model.

Study Findings

Insurance coverage. In fall 2009, 95.2 percent of non-elderly adults in Massachusetts were insured (Exhibit 1; detailed results in Appendix Exhibit 2).²² This is above the 87.5 percent insured in fall 2006--just prior to health reform, and not significantly different (p=.10 level) from the 96.0 percent insured in fall 2008. It is also similar to the estimate of 96.5 percent of nonelderly adults insured in early 2009 from the Massachusetts Health Insurance Survey, an annual survey sponsored by the state's Division of Health Care Finance and Policy.²³

While there was not a significant change in insurance coverage between fall 2008 and fall 2009, there does appear to have been a shift in coverage type, with employer-sponsored insurance coverage down 2.1 percentage points (from 70.4 percent to 68.3 percent) and public and other coverage up 1.4 percentage points (from 25.5 percent to 26.9 percent), although the latter difference is not significant (at the .10 level).

Estimates by Holahan and Garrett²⁴ of the impact of a recession on insurance coverage based on national data suggest that the 3 percentage point increase in the unemployment rate in Massachusetts between fall 2008 and fall 2009 should have resulted in a drop in employer-sponsored insurance coverage of 2.8 percentage points and an increase in public and other coverage of 1.0 percentage points, for a net increase in uninsurance of 1.8 percentage points. Relative to national patterns, the drop in employer-sponsored insurance coverage was smaller and the gain in public and other coverage was greater in Massachusetts. As a result, there was little change in the uninsurance rate in the state over this period. The strong system of employer-sponsored insurance and public insurance in place in Massachusetts appears to have provided more of a safety net to newly-uninsured adults than is available in the nation as a whole.

Overall, the share of adults who were uninsured at the time of the survey and the share who were ever uninsured over the prior year changed by only negligible amounts between fall 2008 and fall 2009 (Appendix Exhibit 2). There was, however, a small increase in the share of adults uninsured over the *entire* prior year (up 0.8 percentage points). Despite these changes between fall 2008 and fall 2009, the levels for all three measures of uninsurance remained lower and the share of adults with

employer-sponsored insurance coverage remained higher in fall 2009 than prior to health reform. To date, the recession has done little to eliminate the overall gains in coverage the state has achieved, as Massachusetts continued to report record low levels of uninsurance in fall 2009.

Access to and use of health care. Coincident with maintaining gains in health insurance coverage, Massachusetts has maintained the gains in access to and use of health care that were achieved under health reform (Exhibit 2; detailed results in Appendix Exhibit 2). Further, the increases in unmet need that were reported between fall 2007 and fall 2008² were reversed between fall 2008 and fall 2009, with unmet need for specialist care down 2.5 percentage points and unmet need for medical tests, treatment and follow-up care down 1.9 percentage points. Unmet need for dental care was also lower in fall 2009—down 2.2 percentage points. The earlier increases in unmet need between fall 2007 and fall 2008 were hypothesized to reflect, in part, increased demand for follow-up care as individuals obtained insurance coverage or gained access to newly covered benefits in the early transition period under health reform. The decline in these measures between fall 2008 and fall 2009 is consistent with more reliable access to care for individuals who have more stable insurance coverage under health reform.

Beyond those reductions in unmet need for care, we find no changes in access to and use of care between fall 2008 and fall 2009, with the exception of a drop in the share of adults reporting that they had a usual source of health care (down from 92.1% to 89.9%). This decline, which is similar in magnitude to the decline in employer-sponsored insurance coverage, may reflect a need to change providers as individuals lose coverage or change coverage type. Notwithstanding that change, access to and use of health care, which tended to be better in Massachusetts than the rest of the nation prior to health reform, improved under health reform.

Despite the gains in access to health care under health reform, there is evidence of some persistent access problems in Massachusetts. The fall 2008 survey began tracking the share of individuals who reported difficulties obtaining care because a provider was not accepting patients (either not accepting new patients or not accepting patients with the respondent's type of insurance coverage). The data for fall 2009 suggests that those barriers to care persist, with similar shares of adults reporting problems in fall 2009 as in fall 2008 (20.8 percent versus 20.9 percent; data not shown). Consistent with these barriers, we see no change in the share of adults reporting emergency department visits for non-emergency conditions (defined as a condition that the respondent thought could have

been treated by a regular doctor if one had been available). Such emergency care use remained high in Massachusetts in fall 2009, with no change from pre-reform levels.

Health care costs and the affordability of health care.

Prior work showed gains in the affordability of health care for non-elderly adults in the first year under health reform, with out-of-pocket spending on health care, problems paying medical bills, medical debt and unmet need for care because of costs all lower in fall 2007 than fall 2006.²⁵ However some of those gains had eroded by fall 2008 as health care costs in the state continued to increase.² By fall 2009, there continued to be some gains in the affordability of care relative to the pre-reform period, with lower levels of out-of-pocket health care spending relative to income and lower levels of unmet because of costs (Exhibit 3; detailed results in Appendix Exhibit 2). However, the reductions in the shares of adults reporting problems paying medical bills and with medical debt that were seen in fall 2007 were no longer present in fall 2009. In fall 2009, as in fall 2006, roughly one in five adults in Massachusetts reported problems paying medical bills over the past year, and one in five reported medical debt that they were paying off over time. While we do not have comparable data for the nation as a whole, a recent study of the share of Americans facing financial burden from high health care costs found steady increases over time--a

trend that health reform in Massachusetts appears to have stopped.²⁶

The remaining uninsured. As is true of the uninsured in the nation as a whole²⁷ and was true for the uninsured in Massachusetts prior to health reform,²⁸ the adults in Massachusetts who remained uninsured in fall 2009 were more likely to be young (less than 35 years), male, single and/or healthy-population groups that can be difficult to convince of the need for insurance coverage (data not shown; Appendix Exhibit 4). Despite the consistency in the characteristics of those without insurance coverage over time, there has been a significant change in the duration of uninsurance under health reform. Of those ever uninsured over the past 12 months, 72.7 percent had had health insurance coverage at some time in the past 12 months in fall 2009, as compared to 55.2 percent in fall 2006 (data not shown; Appendix Exhibit 5). It is likely that the increased coverage, even if only temporary, is responsible for improved access to care among the uninsured under health reform. Adults who were ever uninsured in the past 12 months reported significantly better access to care, more use of care and improved affordability of care in fall 2009 than did similar adults in fall 2006. Thus, there appear to have been significant gains under health reform even among those for whom health reform has not provided full-year insurance coverage.²⁹

Support for health reform. Massachusetts' health reform initiative has relied on broad support from employers, providers, insurers and citizens, both to pass the original legislation and to sustain the initiative as it has evolved over time. Support for health reform among non-elderly adults in the state was quite high when reform began in fall 2006 (68.5 percent), and has remained high over time, with 67.0 percent of those adults supporting health reform in fall 2009 (data not shown; Appendix Exhibit 6). This support continues despite the economic downturn and the pressures that expanded coverage under MassHealth and Commonwealth Care have placed on the state budget. Perhaps reflecting those issues, support in fall 2009 was not quite as high as it had been in fall 2008, when support for reform peaked at 71.8 percent of nonelderly adults in the state.

Similar patterns of support are reported for lower-income (those with family income below 300 percent of poverty) and higher-income adults (data not shown). Thus, support remains high among those most likely to gain from the coverage expansions under reform (lower-income adults) and those likely to bear a disproportionate share of the costs of those expansions (higher-income adults).

Discussion

Massachusetts, with three years of record high levels of insurance coverage, continues to provide important lessons to national reform efforts and reform efforts in other states. In 2006, Massachusetts demonstrated that Republican and Democratic policymakers and disparate stakeholders—employers, insurers, providers and consumers--could come together to support a comprehensive reform initiative. Over the next two years, Massachusetts showed that a complex health reform initiative could be implemented quickly and effectively,³⁰ that health reform is a dynamic process requiring stakeholders to remain committed as adjustments are made over time and, most importantly, that near-universal health insurance coverage is indeed an achievable goal. Massachusetts also demonstrated the importance of strong federal support for health reform efforts, with federal funding through a Section 1115 waiver a key element in both the initial design and the on-going operation of the state's reform initiative.

More recently, Massachusetts has shown that, while difficult, sustaining the gains of health reform in a severe recession is possible. Over the past year, Massachusetts has made only relatively modest changes in its public programs and has maintained strong support for health reform among its citizens. Again, federal support played a vital role, with

Massachusetts' Section 1115 waiver and state fiscal relief under ARRA critical to the state's ability to continue supporting health reform during the recession. As a result, there has been less of a drop in coverage in Massachusetts than predicted by national trends, as Massachusetts' reform efforts provided a backstop for many of the workers who lost their jobs and employment-related health insurance in the recession. In fall 2009, coverage in the state remained higher, and access to health care and affordability of care better, than prior to health reform. With the expanded federal funding to be provided to states under national health reform, federal support will continue to provide the foundation for Massachusetts' reform initiative, as it will in other states as they begin implementing health reform.

Still, health reform has not eliminated all of the barriers to obtaining health care in Massachusetts. Although there have been significant gains in access to care and the affordability of care for individuals under health reform, a few persistent access and affordability problems remain. In fall 2009, one in five adults in Massachusetts reported that they did not receive needed health care and one in seven reported an emergency department visit for a non-emergency condition, suggesting problems with access to care in the community. Similarly, despite improvements in the affordability of health care, about

one in five adults in fall 2009 reported problems paying medical bills. Massachusetts' reform effort has demonstrated that universal coverage does not guarantee universal access to health care nor does it slow the growth of health care costs.

While Massachusetts has initiated a number of strategies to improve access to care in the state,³¹ it deferred addressing health care costs in the 2006 legislation so as not to hold up the expansion in coverage. Currently, there is broad consensus in the state about the need to control health care costs, but little consensus about how best to move forward on cost containment. Last year, the state's Special Commission on the Health Care Payment System proposed substantial changes in the state's health care delivery and payment systems and, more recently, several state agencies have commissioned investigations into the factors driving high health care costs. With escalating health care costs a serious problem in every state, there is a clear need for strong federal leadership to address the systematic problems with the health care payment system across the nation.

Endnotes

¹ Henry J. Kaiser Family Foundation. Focus on Health Reform: Summary of New Health Reform Law [Internet]. Menlo Park (CA): The Foundation; 2010 [updated 2010 Mar 26; cited 2010 Apr 6]. Publication No.: 8061. Available from: www.kff.org

² Long SK, Masi PB. Access and Affordability: An Update on Health Reform in Massachusetts, Fall 2008. Health Aff (Millwood). 2009;28(4):w578-87.

³ Long SK, Stockley K. Health Reform in Massachusetts: An Update on Insurance Coverage and Support for Reform as of Fall 2008 [Internet]. Washington, DC: Urban Institute; 2009 [cited 2010 Apr 6]. Available from: <http://www.urban.org/url.cfm?ID=411958>

⁴ Chollet D, Liu S, Barrett A, Stewart K, Bell T. Massachusetts Health Care Cost Trends Part III: Health Spending Trends for Privately Insured 2006-2008, Technical Report [Internet]. Boston, MA: Massachusetts Division of Health Care Finance and Policy; 2010 [cited 2010 Apr 6]. Available from: <http://www.mass.gov/dhcfp>

⁵ Labor Force and Unemployment Data [Internet]. Boston: Massachusetts Executive Office of Labor and Workforce Development; 2010 [cited 2010 Apr 6]. Available from: http://lmi2.detma.org/Lmi/lmi_lur_a.asp

⁶ The Consolidated Budget Reconciliation Act of 1986 (COBRA) allows for the temporary extension of employer-sponsored health insurance for workers who have been terminated, with the former worker required to pay the full premium. As part of the American Recovery and Reinvestment Act of 2009, workers receive a subsidy for COBRA premiums.

⁷ Massachusetts Executive Office for Administration and Finance. FY2010 House 1 Budget Recommendation: Policy Brief [Internet]. Boston: The Office; 2009 [cited 2010 Apr 6]. Available from: <http://www.mass.gov/bb/h1/fy10h1/exec10/hbudbrief20.htm>

⁸ Massachusetts Executive Office of Health and Human Services. MassHealth FY2011 H.2: Budget Summary [Internet]. Boston: The Office; 2010 [cited 2010 Apr 6]. Available from: <http://www.mass.gov/Eeohhs2/docs/masshealth/research/fy11h2-masshealth-summary.pdf>

⁹ Enrollment in Commonwealth Care fell between 2008 and 2009, as some legal immigrants lost eligibility.

¹⁰ Massachusetts Taxpayers Foundation. MTF Forecast: Limited Revenue Growth in Fiscal 2011; Large Structural Deficit Remains [Internet]. Boston: The Foundation; 2009 [cited 2010 Apr 6]. Available from <http://www.masstaxpayers.org/files/Revenue%20Forecast.pdf>

¹¹ Enhanced Medicaid matching rate is scheduled to end December 31, 2010.

¹² Smith VK, Gifford K, Ellis E, Rudowitz R, Watts MO, Marks C. The Crunch Continues: Medicaid Spending, Coverage and Policy in the Midst of a Recession [Internet]. Menlo Park (CA): Kaiser Commission on Medicaid and the Uninsured; 2009 [cited 2010 Apr 6]. Publication No.: 7985. Available from: www.kff.org

¹³ Massachusetts Budget and Policy Center. Budget Monitor: The Legislature's Fiscal Year 2010 Budget and the Governor's Vetoes and Amendments [Internet]. Boston: The Center; 2009 [cited 2010 Apr 6]. Available from:
http://www.massbudget.org/documentsearch/findDocument?doc_id=681

¹⁴ Massachusetts Budget and Policy Center. Budget Brief: The Governor's Plan to Close the Fiscal Year 2010 Budget Gap [Internet]. Boston: The Center; 2009 [cited 2010 Apr 6]. Available from:
http://www.massbudget.org/documentsearch/findDocument?doc_id=703

¹⁵ Massachusetts Office of the Governor. Governor Deval Patrick's Budget Recommendation - House 2 Fiscal Year 2011: Issues in Brief: Health Care Reform [Internet]. Boston: The Office; 2010 [cited 2010 Apr 6]. Available from:
http://www.mass.gov/bb/h1/fy11h1/exec_11/hbudbrief17.htm

¹⁶ Section 1115 of the Social Security Act gives states the flexibility to test different approaches for structuring their Medicaid programs while still receiving federal matching funds.

¹⁷ Long SK. The Massachusetts Health Reform Survey [Internet]. Washington, DC: Urban Institute; 2009 [cited 2010 Apr 6]. Available from: <http://www.urban.org/url.cfm?ID=411649>

¹⁸ The fall 2006 survey was fielded as Commonwealth Care was beginning; however, enrollment started slowly.

¹⁹ Long SK, Yemane A, Stockley K. Disentangling the Effects of Health Reform in Massachusetts: How Important Are the Special Provisions for Young Adults? American Economic Review: Papers & Proceedings; Forthcoming 2010.

²⁰ Although some who lost employer-sponsored insurance would obtain other coverage (e.g., through a spouse or public program), others would become uninsured.

²¹ StataCorp. Stata Statistical Software: Release 11. College Station, TX: StataCorp LP; 2009.

²² Appendix Exhibit 2 provides simple differences and regression-adjusted differences for the outcomes. An example of the regression output is provided in Appendix Exhibit 3.

²³ Long SK, Phadera L, Stockley K. Health Insurance Coverage in Massachusetts: Results from the 2008 and 2009 Massachusetts Health Insurance Surveys [Internet]. Boston: Division of Health

Care Finance and Policy; 2009 October [cited 2010 Apr 6].

Available from: <http://www.mass.gov/dhcfp>

²⁴ Holahan J, Garrett AB. Rising Unemployment, Medicaid and the Uninsured [Internet]. Menlo Park (CA): Kaiser Family Foundation; 2009 [cited 2010 Apr 6]. Publication No.: 7850. Available from: www.kff.org

²⁵ Long SK. On the Road to Universal Coverage: Impacts of Reform in Massachusetts at One Year. Health Aff (Millwood). 2008;27(4):w270-84.

²⁶ Cunningham PJ. The Growing Financial Burden of Health Care: National and State Trends, 2001-2006. Health Aff (Millwood). 2010 May; 29(5). Epub 2010 Mar 26.

²⁷ Long SK, Cohen M. Getting Ready for Reform: Insurance Coverage and Access to Care in Massachusetts in Fall 2006 [Internet]. Washington, DC: Urban Institute; 2007 [cited 2010 Apr 6]. Available from: <http://www.urban.org/url.cfm?ID=411531>

²⁸ Fronstin P. Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the March 2009 Current Population Survey [Internet]. Washington, DC: Employee Benefit Research Institute; 2009 [cited 2010 Apr 6]. Available from: http://www.ebri.org/publications/ib/index.cfm?fa=ibDisp&content_id=4366

²⁹ Although the regression analysis controls for observable characteristics, there may be unobserved differences in uninsured adults across time. To the extent those unobserved differences are correlated with the outcomes, changes in the outcomes may also reflect changes in the characteristics of the uninsured population as well as health reform.

³⁰ Raymond A. The 2006 Massachusetts Health Care Reform Law: Progress and Challenges After One Year of Implementation [Internet]. Boston: The Blue Cross Blue Shield of Massachusetts Foundation; 2007 [cited 2010 Apr 6]. Available from: <http://bluecrossfoundation.org>

³¹ These include provisions introduced under the state's 2008 cost-containment legislation (MA S 2863), primary care physician recruitment programs through the state's Primary Care Office, and a public-private program to repay loans for providers at community health centers.

EXHIBIT LIST

EXHIBIT 1 (figure)

Exhibit 1: Trends in Health Insurance Coverage for Adults 18 to 64 in Massachusetts, Fall 2006 to Fall 2009

Source: 2006-2009 Massachusetts Health Reform Survey (N=13,150). Detailed results available in Appendix Exhibit 2.

Notes: The regression-adjusted estimates are derived from models that control for age, gender, race/ethnicity, citizenship, marital status, parent status, education, employment, firm size, health status, disability status, whether the individual has chronic conditions or is pregnant, family income, and region-level fixed effects. Regression-adjusted estimates are predicted values calculated using the parameter estimates from the regression models to predict the outcomes that the individuals in the 2009 sample would have had if they had been observed in each of the preceding study years.

* (**) (***) Significantly different from fall 2006 at the .10 (.05) (.01) level, two-tailed test.

+ (++) (+++) Significantly different from the prior year at the .10 (.05) (.01) level, two-tailed test.

EXHIBIT 2 (table)

Exhibit 2: Regression-adjusted Estimates of Changes in Selected Measures of Health Care Access and Use in Massachusetts for Adults 18 to 64, Fall 2006 to Fall 2009

Source: 2006-2009 Massachusetts Health Reform Surveys (N=13,150). Detailed results available in Appendix Exhibit 2.

Notes: The regression-adjusted estimates are derived from models that control for age, gender, race/ethnicity, citizenship, marital status, parent status, education, employment, firm size, health status, disability status, whether the individual has chronic conditions or is pregnant, family income, and region fixed effects. Regression-adjusted estimates are predicted values calculated using the parameter estimates from the regression models to predict the outcomes that the individuals in the 2009 sample would have had if they had been observed in each of the preceding study years. ED is emergency department.

* (**) (***) Difference between years is significantly different from zero at the .10 (.05) (.01) level, two-tailed test.

^a A condition that the respondent thought could have been treated by a regular doctor if one had been available.

EXHIBIT 3 (table)

Exhibit 3: Regression-adjusted Estimates of Changes in Selected Measures of Health Care Costs and Affordability in Massachusetts for Adults 18 to 64, Fall 2006 to Fall 2009

Source: 2006-2009 Massachusetts Health Reform Surveys (N=13,150). Detailed results available in Appendix Exhibit 2.

Notes: The regression-adjusted estimates are derived from models that control for age, gender, race/ethnicity, citizenship, marital status, parent status, education, employment, firm size, health status, disability status, whether the individual has chronic conditions or is pregnant, family income, and region fixed effects. Regression-adjusted estimates are predicted values calculated using the parameter estimates from the regression models to predict the outcomes that the individuals in the 2009 sample would have had if they had been observed in each of the preceding study years.

* (**) (***) Difference between years is significantly different from zero at the .10 (.05) (.01) level, two-tailed test.

^a Because of the way the income information is collected in the survey, the measure of out-of-pocket health costs relative to family income cannot be constructed for adults with family income above 500% of poverty.

EXHIBIT 4 (table)

Exhibit 4: Regression-adjusted Estimates of Changes in Selected Measures of Health Care Access and Use and Health Care Costs and Affordability in Massachusetts for Uninsured Adults 18 to 64, Fall 2006 to Fall 2009

Source: 2006-2009 Massachusetts Health Reform Surveys (N=13,150). Detailed results available in Appendix Exhibit 2.

Notes: The regression-adjusted estimates are derived from models that control for age, gender, race/ethnicity, citizenship, marital status, parent status, education, employment, firm size, health status, disability status, whether the individual has chronic conditions or is pregnant, family income, and region fixed effects. Regression-adjusted estimates are predicted values calculated using the parameter estimates from the regression models to predict the outcomes that the individuals in the 2009 sample would have had if they had been observed in each of the preceding study years. ED is emergency department.

* (**) (***) Difference between years is significantly different from zero at the .10 (.05) (.01) level, two-tailed test.

^a A condition that the respondent thought could have been treated by a regular doctor if one had been available.

^b Because of the way the income information is collected in the survey, the measure of out-of-pocket health costs relative to family income cannot be constructed for adults with family income above 500% of poverty.

Exhibit 2: Regression-adjusted Estimates of Changes in Selected Measures of Health Care Access and Use in Massachusetts for Adults 18 to 64, Fall 2006 to Fall 2009

	Change Since 2006		Change Over the Last Year	
	Fall 2006	Fall 2009	Fall 2008	Fall 2009
Has a usual source of care (excluding the ED)	87.0	89.9 **	92.1	89.9 **
Any general doctor visit in past 12 months	80.5	86.2 ***	84.7	86.2
Visit for preventive care	70.9	77.7 ***	77.0	77.7
Multiple doctor visits	65.9	71.0 ***	69.6	71.0
Any specialist visit in past 12 months	50.9	53.0	53.4	53.0
Any dental care visit in past 12 months	68.8	74.6 ***	76.2	74.6
Any hospital stay in the past 12 months (excluding to have a baby)	11.3	10.0	11.0	10.0
Took any prescription drugs in past 12 months	55.5	58.2 *	59.6	58.2
Did not get needed care for any reason in past 12 months	24.9	19.5 ***	21.9	19.5
Doctor care	7.7	5.3 **	6.5	5.3
Specialist care	6.8	4.9 **	7.4	4.9 ***
Medical tests, treatment or follow-up care	9.1	5.7 ***	7.7	5.7 **
Preventive care screening	6.8	4.9 **	5.6	4.9
Prescription drugs	7.9	5.7 **	6.4	5.7
Dental care	12.1	9.2 ***	11.4	9.2 **
Any ED visits in past 12 months	34.0	33.8	33.5	33.8
Most recent ED visit was for non-emergency condition ^a	15.8	14.7	14.6	14.7

Source: 2006-2009 Massachusetts Health Reform Surveys (N=13,150); Detailed results available in Appendix Exhibit 2.

Notes: The regression-adjusted estimates are derived from models that control for age, gender, race/ethnicity, citizenship, marital status, parent status, education, employment, firm size, health status, disability status, whether the individual has chronic conditions or is pregnant, family income, and region fixed effects. Regression-adjusted estimates are predicted values calculated using the parameter estimates from the regression models to predict the outcomes that the individuals in the 2009 sample would have had if they had been observed in each of the preceding study years. ED is emergency department.

* (**) (***) Difference between years is significantly different from zero at the .10 (.05) (.01) level, two-tailed test.

^a A condition that the respondent thought could have been treated by a regular doctor if one had been available.

Exhibit 3: Regression-adjusted Estimates of Changes in Selected Measures of Health Care Costs and Affordability in Massachusetts for Adults 18 to 64, Fall 2006 to Fall 2009

	Change Since 2006			Change Over the Last Year	
	Fall 2006	Fall 2009		Fall 2008	Fall 2009
Out-of-pocket health care costs over the past 12 months					
At 5% or more of family income for those less than 500% of poverty ^a	21.8	14.6	***	18.4	14.6 **
At 10% or more of family income for those less than 500% of poverty ^a	9.5	4.4	***	7.4	4.4 ***
Had problems paying medical bills in past 12 months	19.1	19.1		17.5	19.1
Have medical bills that are paying off over time	19.5	20.3		19.9	20.3
Had problems paying other bills in past 12 months	23.7	25.5		23.9	25.5
Did not get needed care because of costs in the past 12 months	16.3	11.7	***	11.6	11.7
Doctor care	5.5	2.7	***	2.5	2.7
Specialist care	4.7	2.5	***	3.4	2.5
Medical tests, treatment or follow-up care	6.0	2.7	***	3.5	2.7
Preventive care screening	3.3	2.3	**	2.2	2.3
Prescription drugs	5.3	3.6	***	3.7	3.6
Dental care	9.7	6.9	***	7.7	6.9

Source: 2006-2009 Massachusetts Health Reform Surveys (N=13,150); Detailed results available in Appendix Exhibit 2.

Notes: The regression-adjusted estimates are derived from models that control for age, gender, race/ethnicity, citizenship, marital status, parent status, education, employment, firm size, health status, disability status, whether the individual has chronic conditions or is pregnant, family income, and region fixed effects. Regression-adjusted estimates are predicted values calculated using the parameter estimates from the regression models to predict the outcomes that the individuals in the 2009 sample would have had if they had been observed in each of the preceding study years.

* (**) (***) Difference between years is significantly different from zero at the .10 (.05) (.01) level, two-tailed test.

^a Because of the way the income information is collected in the survey, the measure of out-of-pocket health care costs relative to family income cannot be constructed for adults with family income above 500% of poverty.

Exhibit 4: Regression-adjusted Estimates of Changes in Selected Measures of Health Care Access and Use and Health Care Costs and Affordability in Massachusetts for Uninsured Adults 18 to 64, Fall 2006 to Fall 2009

	Uninsured at the Time of the Survey		Ever Uninsured in Past 12 Months		
	Fall 2006	Fall 2009	Fall 2006	Fall 2009	
Health care access and use					
Has a usual source of care (excluding the ED)	51.6	56.9	61.1	67.0	
Any general doctor visit in past 12 months	49.0	52.3	54.6	61.9	*
Visit for preventive care	36.9	43.4	41.9	50.4	*
Multiple doctor visits	33.1	37.3	37.1	48.0	***
Any specialist visit in past 12 months	25.4	22.4	29.8	33.6	
Any dental care visit in past 12 months	36.7	45.6	40.4	48.6	*
Took any prescription drugs in past 12 months	33.6	27.7	35.1	38.8	
Did not get needed care for any reason in past 12 months					*
Any ED visits in past 12 months	38.7	37.6	40.1	34.4	
Most recent ED visit was for non-emergency condition ^a	22.7	16.2	21.8	12.4	***
Health care costs and affordability					
Out-of-pocket health care costs over the past 12 months					
At 5% or more of family income for those less than 500% of poverty ^b	28.2	18.8	24.0	15.2	***
At 10% or more of family income for those less than 500% of poverty ^b	15.1	8.3	13.3	5.3	***
Had problems paying medical bills in past 12 months	45.9	37.0	41.8	35.7	*
Have medical bills that are paying off over time	34.8	28.0	33.8	22.4	***
Had problems paying other bills in past 12 months	40.7	42.2	42.8	42.4	
Did not get needed care because of costs in the past 12 months	49.8	38.8	42.4	32.1	**

Source: 2006-2009 Massachusetts Health Reform Surveys (N=1,923 for uninsured at the time of the survey and N=2,610 for ever uninsured in the past 12 months). Detailed results available in Appendix Exhibit 5.

Notes: The regression-adjusted estimates are derived from models that control for age, gender, race/ethnicity, citizenship, marital status, parent status, education, employment, firm size, health status, disability status, whether the individual has chronic conditions or is pregnant, family income, and region fixed effects. Regression-adjusted estimates are predicted values calculated using the parameter estimates from the regression models to predict the outcomes that the individuals in the 2009 sample would have had if they had been observed in each of the preceding study years. ED is emergency department.

* (**) (***) Difference between years is significantly different from zero at the .10 (.05) (.01) level, two-tailed test.

^a A condition that the respondent thought could have been treated by a regular doctor if one had been available.

^b Because of the way the income information is collected in the survey, the measure of out-of-pocket health care costs relative to family income cannot be constructed for adults with family income above 500% of poverty.