

# MERCER

Health & Benefits

A special analysis of

**Mercer's National Survey of Employer-Sponsored Health Plans  
for the Massachusetts Division of Insurance**

**June 27, 2008**

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## Introduction and survey description

This report looks at changes over time in health coverage offered by Massachusetts employers participating in Mercer's National Survey of Employer-Sponsored Health Plans. It also includes an analysis of various factors influencing health plan cost, based on regression analysis of the survey data.

### Survey description

Mercer Health and Benefits L.L.C. conducts an annual employer survey to collect information on employer-sponsored health plans. The survey has been conducted every year since 1986; a national probability sample has been used since 1993. The survey sampling and weighting methodologies were designed by Research Triangle Institute.

The *National Survey of Employer-Sponsored Health Plans* collects comprehensive data on employer health plans, costs, plan provisions, strategic planning, and scope and limitations of coverage. Plan design information is collected separately for indemnity, PPOs, point-of-service plans, HMOs, and consumer-directed health plans. If an employer offers more than one plan of the same type, we collect plan design information on the plan with the highest enrollment.

A random sample of U.S. employers with 10 or more employees (including local and state governments) is screened to determine whether health benefits are offered; employers that provide a plan are invited to complete the full survey. In 2007, 2,945 employers participated. The sample is stratified by eight employer size categories and by the four Census regions. The national results, and results for each of these strata, are weighted and may be projected to all employer health plan sponsors (nationally and within each strata) with an error range of +/- 3%.

Results for individual states are not weighted and represent only those employers participating in the survey that are headquartered in the state. Although state-level data

are not as robust as the regional or national data (from 2000-2007, the number of Massachusetts employers with 50 or more employees participating each year ranges from 59 to 83), in working with state-level results we have found clear and explainable differences between states that persist over time. Still, caution must be used in comparing unweighted data from year to year; variations in results for small populations likely reflect variations in the respondent mix as well as true change.

To help validate or supplement results for Massachusetts employers, we have provided results (also unweighted) for a larger group of New England employers in the data tables in Appendix A. The number of respondents in the New England group ranges from 127 to 156 over the eight survey years considered. The New England group includes:

- Connecticut
- Maine
- Massachusetts
- New Hampshire
- Rhode Island
- Vermont

Appendix A also includes results for a still larger group, the Northeast Census region, which was one of the strata in the sample design and thus provides more reliable results than the New England group. The Northeast employer group is the primary comparison group used in this report. (The results for New England are not discussed in the summary; they are provided for your information only.) In addition to the New England states above, the Northeast employer group includes:

- New Jersey
- New York
- Pennsylvania

Figure 1 shows the breakdown of Massachusetts employers by size and industry over the eight survey years; the proportions have remained relatively stable. In 2000, the Massachusetts respondents employed a total of 284,937 employees.

**Figure 1**  
Massachusetts employer participation by size and industry 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007
50-199 employees	5	5	9	5	8	6	7	10
200-499	9	9	15	13	12	8	5	5
500-999	14	13	8	12	15	13	11	15
1,000-4,999	23	18	35	20	20	26	26	19
5,000-9,999	7	10	9	8	12	5	3	3
10,000-19,999	3	5	5	5	5	2	1	4
20,000 or more	2	3	2	4	6	5	6	4
<b>Large Group Total</b>	63	63	83	67	78	65	59	60
	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Manufacturing	15	12	18	16	18	12	12	14
Wholesale/Retail	8	3	6	6	4	4	6	5
Services	20	27	26	18	18	16	18	17
TCU	2	1	3	3	3	3	3	1
Health Care	9	9	16	8	19	15	7	9
Financial Svcs.	6	7	10	7	9	8	5	7
Government	3	4	3	6	1	4	4	2
Other	0	0	1	3	6	3	4	5
<b>Total</b>	63	63	83	67	78	65	59	60

## **Changes in health coverage offered by Massachusetts employers, 2000-2007**

We created a subset of survey questions that have remained consistent across the eight survey years. We calculated the results for these questions for:

- Massachusetts employers with 50+ employees
- New England employers with 50+ employees
- Northeast employers with 50+ employees

We created one set of tables for each survey year comparing the unweighted results for these groups alongside the weighted national results for all employers (with 10 or more employees) and large employers (500 or more employees). These are the tables in Appendix A. (Of the two national employer groups, the Massachusetts results are best compared with the national large-employer results.)

A separate set of tables, Appendix B, presents the annual results for just the Massachusetts and Northeast groups side by side for easier comparison. Using this data, we analyzed changes over time in health coverage offered by Massachusetts respondents with 50 or more employees; specifically, type of plan offered, enrollment by plan type, cost, employee contributions, and benefit design. We compared the results for Massachusetts group to the larger Northeast group both to validate general trends seen in the Massachusetts results and to note where Massachusetts appears to vary from regional norms.

### **Prevalence of employer-sponsored coverage**

While the overall percentage of employers offering coverage has fallen nationwide, the drop-off has been driven largely by small employers. Mercer's survey tracks employers with 10 or more employees. Nationally, among employers with 10-49 employees, the percentage providing coverage has fallen from 62 percent in 2002 to 57 percent in 2007. Over that same period, there has been little change in prevalence among employers with 50 or more employees: 87 percent offered a health plan in 2002, and 86 percent offered

one in 2007. In the Northeast, coverage levels are generally higher but have also declined: From 2002 to 2007, among employers with 10-49 employees, the percentage providing coverage fell from 69 percent to 63 percent, while among employers with 50 or more employees, it fell from 88 percent to 87 percent (after reaching a peak of 91 percent in 2004).

In 2007, Mercer tracked coverage prevalence by state for the first time. Coverage appears to be more common in Massachusetts than in the Northeast as a whole or nationally. This is true for both small employers (74 percent of Massachusetts employers with 10-49 employees offer coverage, compared to 69 percent in the Northeast and 57 percent nationally) and larger employees (among employers with 50-199 employees, 89 percent of Massachusetts respondents provide coverage, compared to 84 percent and 83 percent, respectively, in the Northeast and nationally). While the Massachusetts data are not weighted by employer size and thus cannot be combined across size strata, within each size strata they are reasonably comparable with the weighted national and Northeast results.

Among employers with 500 or more employees, coverage offerings are nearly universal.

**Figure 2**  
Prevalence of health benefits

	Northeast				National				Massachusetts
	2007	2006	2004	2002	2007	2006	2004	2002	2007
10—49	63%	63%	67%	69%	57%	59%	61%	62%	74%
50-199	84%	88%	89%	86%	83%	85%	85%	85%	89%
200-499	96%	97%	97%	95%	95%	95%	95%	92%	100%
500 or more	99%	99%	100%	99%	100%	98%	100%	98%	100%

## Eligibility provisions

Among the Massachusetts employers responding to the survey, eligibility provisions are more liberal than in the Northeast or the nation as a whole. They are more likely to offer coverage to part-time employees (86 percent, compared to 70 percent for the Northeast). They are more likely to extend coverage to same-sex domestic partners (65 percent, compared to 55 percent for the Northeast) and less likely to impose special provisions concerning spouses with other coverage available (2 percent, compared to 5 percent for the Northeast).

## Type of medical plan offered and enrollment

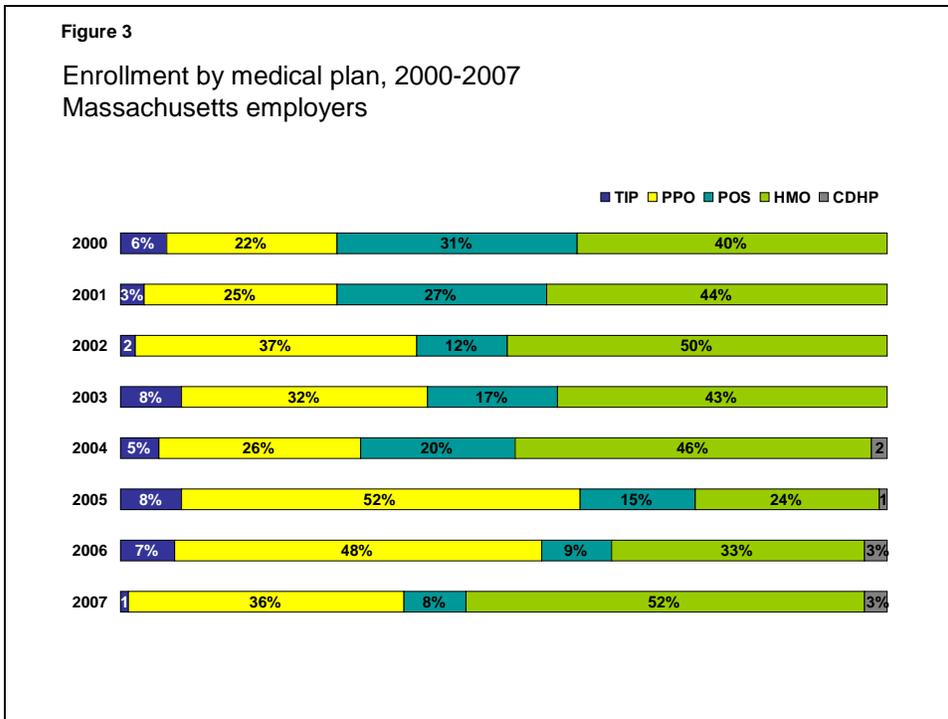
The survey asked employers how many different medical plan choices are available to employees at their largest worksite. In Massachusetts and the Northeast as a whole, large employers offer employees a choice of three plans, on average. This has not changed over the study period. The national average for large employers, which held at two plans from 2000 through 2005, has risen to three. This may be due to the introduction of

consumer-directed health plans, which are almost always offered alongside other medical plan choices in large-employer health programs.

Overall, employer offerings of HMOs have been declining for the past five years. However, Massachusetts survey respondents have been slower to drop HMOs than respondents from the Northeast and the US as a whole. More than three-fourths (77 percent) of Massachusetts respondents offered HMOs in 2007, compared to 86 percent in 2001, the year HMO offerings peaked. By contrast, just 52 percent of Northeast respondents offered HMOs in 2007, down from 66 percent in 2001. However, point-of-service plan prevalence has fallen as sharply in Massachusetts (from 48 percent in 2001 to 30 percent in 2007) as in the Northeast as a whole.

While employers have been dropping POS plans and HMOs, they have been adding PPOs and, more recently, consumer-directed health plans. PPOs were offered by 75 percent of Massachusetts respondents in 2007, compared to 70 percent in 2001. Account-based consumer-directed health plans -- either a health reimbursement arrangement (HRA) or health savings account (HSA) -- were offered by 13 percent of respondents in 2007, up from 5 percent of respondents in 2004, the first year these plans were tracked in the Mercer survey. This is in line with CDHP prevalence in the Northeast as a whole (16 percent).

Enrollment trends have mirrored prevalence trends. In Massachusetts as elsewhere in the country, PPOs gained enrollment from 2000 to 2007, while HMOs and point-of-service plans lost enrollment. Among the Massachusetts employers responding to the survey in 2007, well over half of all covered employees (59 percent) are enrolled in PPOs, compared to 22 percent among the respondents to the 2000 survey. Only 4 percent of employees were enrolled in POS plans in 2007, compared to 31 percent in 2000. HMO enrollment, while also declining, remains higher in Massachusetts than in the Northeast as a whole at 33 percent (down from 40 percent in 2000). Enrollment in account-based CDHP reached 4 percent of covered employees in 2007, similar to the average regional and national levels.

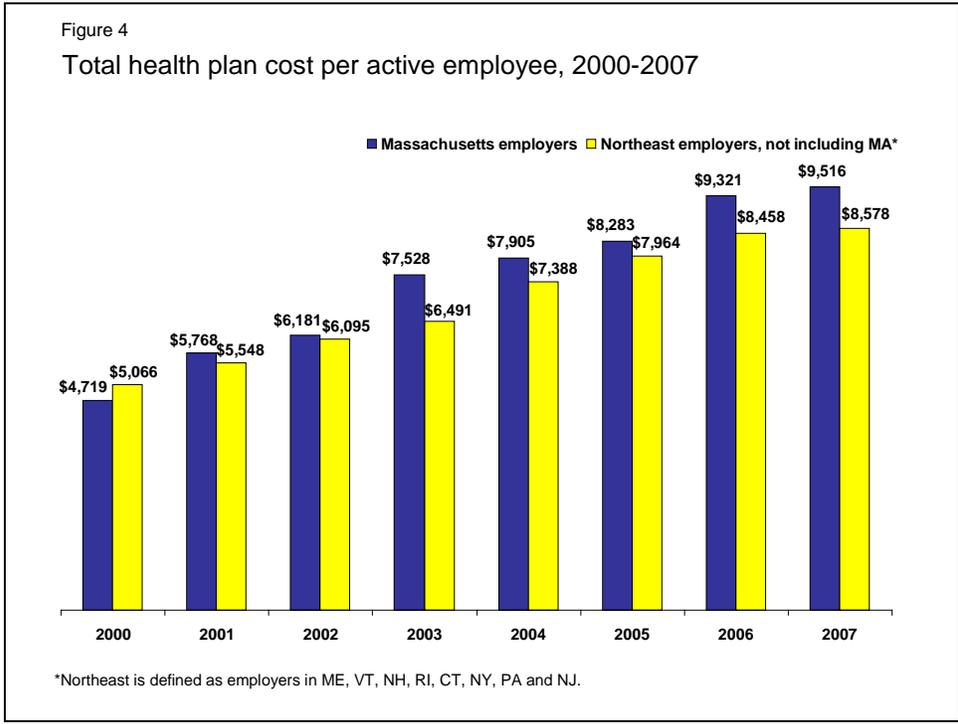


## Health plan cost

In 2000, Massachusetts survey respondents reported average total health plan cost of \$4,719 per employee. In 2007, the average cost was double that amount, at \$9,516. From 2001 on, average health plan cost among Massachusetts survey respondents has been higher than the national average and the average cost for all other states in the Northeast, as seen in Figure 4 (note that in Figure 4 the Northeast group excludes Massachusetts; elsewhere, Massachusetts respondents are included in the Northeast). Massachusetts has been one of the top ten states in terms of total health cost per employee (for employers with 10 or more employees) from 2000 to 2007; in 2007, it was second highest. (Note that Figure 5 shows cost for employers with 10 or more employees; Figure 4 and all other figures show results for employers with 50 or more employees.)

It is interesting to note that Massachusetts respondents report a much higher average PPO cost (\$10,061 per employee) than HMO cost (\$8,643). This is a much greater differential than in either the Northeast (\$8,222 and \$7,865, respectively) or among all large

employers nationally, where PPO and HMO cost is virtually the same (\$7,429 and \$7,486, respectively). While HMO cost is about 10 percent higher among Massachusetts survey respondents than among Northeast employers as a whole, PPO cost is 22 percent higher.



**Figure 5**

Top 20 states for 2007 health care cost, all employers

	Number of respondents	Total health plan cost per employee		2006/2007 trend
		2006	2007	
ALASKA	12	\$11,060	\$11,674	5.5%
MASSACHUSETTS	40	\$8,806	\$9,325	5.9%
WISCONSIN	50	\$8,851	\$9,219	4.2%
UTAH	18	\$8,511	\$9,030	6.1%
MICHIGAN	62	\$8,514	\$8,896	4.5%
NEW JERSEY	51	\$8,368	\$8,806	5.2%
MARYLAND	31	\$8,299	\$8,711	5.0%
MINNESOTA	63	\$8,121	\$8,621	6.2%
ILLINOIS	91	\$8,207	\$8,621	5.0%
CONNECTICUT	27	\$8,116	\$8,606	6.0%
NEW YORK	104	\$8,046	\$8,553	6.3%
INDIANA	45	\$8,189	\$8,521	4.1%
OREGON	35	\$7,980	\$8,517	6.7%
OHIO	97	\$7,957	\$8,402	5.6%
CALIFORNIA	129	\$7,646	\$8,290	8.4%
PENNSYLVANIA	97	\$7,891	\$8,264	4.7%
NEBRASKA	23	\$7,826	\$8,245	5.3%
WASHINGTON	51	\$7,800	\$8,219	5.4%
MAINE	13	\$7,603	\$7,957	4.7%
TENNESSEE	35	\$7,448	\$7,920	6.3%

## Employee contributions

In 2000, contributions for employee-only coverage were required by 95 percent of Massachusetts PPO sponsors and 93 percent of HMO sponsors; by 2007, virtually all respondents require contributions for both employee-only and family coverage. The average contribution for employee-only coverage (when required) as a percent of premium has remained relatively stable over that time period; the average contribution requirements in 2007 were 24 percent for PPOs and 27 for HMOs, compared to 27 percent and 26 percent, respectively, in 2000. Family contribution requirements may have actually decreased slightly over that time period, from 30 percent to 27 percent for PPO coverage, and from 34 percent to 31 percent for HMO coverage, although the trend has not been steady.

**Figure 6**

Employee contribution requirements as a % of premium for employee-only and family coverage among Massachusetts employers, 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007
<b>Individual coverage</b>								
<b>PPO</b>	27%	28%	30%	27%	27%	29%	27%	24%
<b>HMO</b>	26%	23%	27%	25%	26%	27%	26%	27%
<b>Family coverage</b>								
<b>PPO</b>	30%	29%	31%	27%	30%	31%	27%	27%
<b>HMO</b>	34%	25%	30%	26%	29%	29%	27%	31%

With little change in the required employee contribution percentage, the change in the actual monthly dollar amount of the contribution has mirrored the change in overall cost by essentially doubling from 2000 to 2007.

### Use of self-funding

Both in Massachusetts and the Northeast as a whole, about three-fifths of PPO sponsors are self-funded and two-fifths are insured, with the majority of the insured sponsors using experience-rating. PPO funding methods have not changed significantly over the study period. However, there has been a marked increase in the percentage of HMO sponsors reporting that they self-fund their HMOs. In Massachusetts, 27 percent of HMO sponsors were self-funded in 2007, compared to just 4 percent in 2000. Self-funding allows employers to reduce cost by eliminating large rate margins; employers are pursuing this strategy in response to a perception that HMOs are setting their rates too conservatively. In the Northeast as a whole, 24 percent of HMO sponsors were self-funded in 2007.

## Cost-sharing requirements for PPOs

Because PPOs are the type of medical plan with the highest enrollment, changes in PPO plan design have a considerable affect on the covered employee population.

**In-network deductible** Employers in the Northeast and survey respondents in Massachusetts are less likely to require an in-network PPO deductible than employers nationally: 50 percent and 48 percent in the Northeast and Massachusetts, compared to 77 percent of large employers nationally. In Massachusetts, the relatively low prevalence of in-network PPO deductibles may be related to the need to compete for enrollment with HMOs, which are stronger in Massachusetts than in most parts of the country.

While fewer employers are willing to provide first-dollar PPO coverage, the median deductible amount (among those requiring a deductible) has barely risen since 2000, when it was \$215 among Northeast employers and \$225 among Massachusetts respondents; in 2007, it was \$250 for both groups. The median family deductible rose from \$500 to \$600 among both Massachusetts and all Northeast respondents.

The use of deductibles varies by size of employer. Smaller employers are less likely to require an in-network deductible, but when they do, the deductible amount is higher (Figure 7).

**Out-of-network deductibles** The use of deductibles for out-of-network services has been common practice throughout the period under consideration and in 2007 is nearly universal: 95 percent of Northeast respondents required an individual deductible for out-of-network services in 2007 (compared to 87 percent in 2000). The median individual deductible amounts have risen from \$250 to \$500 over this time period; the median family deductible amounts have risen from \$600 to \$1,000. Among Massachusetts respondents, the median out-of-network deductible amounts are somewhat lower, at \$400 for an individual and \$875 for a family.

**Figure 7**

Employer PPO deductible requirements – Massachusetts and Northeast employers, 2007

	Massachusetts 50+ employees				Northeast 50+ employees			
	Require deductible for		When required, average amount for		Require deductible for		When required, average amount for	
	Ind	Family	Ind	Family	Ind	Family	Ind	Family
50-499	11%	11%	ID	ID	37%	37%	\$498	\$1,213
500-999	33%	33%	ID	ID	37%	37%	\$346	\$768
1,000-4,999	75%	75%	ID	ID	49%	48%	\$308	\$655
5,000+	60%	60%	ID	ID	64%	63%	\$347	\$802

**Physician office visits** Most PPO sponsors require a copay for in-network office visits and coinsurance for out-of-network visits. In 2007, the median copayment amount was \$20 among the Massachusetts respondents (compared to \$10 in 2000). The median coinsurance amount for out-of-network charges was 20 percent of eligible charges; it was also 20 percent in the 2000 survey.

**Out-of-pocket maximums for individuals** The median PPO out-of-pocket limit for individuals has moved slowly upward from 2000 to 2007. Among Massachusetts respondents in 2000, the median OOP maximum amounts were \$1,000 for in-network services and \$1,550 for out-of-network services. In 2007, the median amounts were \$1,500 and \$2,000, respectively.

**Figure 8**

PPO cost-sharing requirements among Massachusetts respondents in 2007

**COST-SHARING FOR IN-NETWORK PHYSICIAN VISIT**

Copayment required (% of employers)	95%
Coinsurance required (% of employers)	5%
No cost-sharing for in-network services (% of employers)	0%
Median copayment amount	\$20

**COST-SHARING FOR OUT-OF-NETWORK PHYSICIAN VISIT**

Copayment required (% of employers)	10%
Coinsurance required (% of employers)	95%
No cost-sharing for out-of-network services (% of employers)	0%
Median coinsurance amount (% of eligible expenses)	20%

**OUT-OF-POCKET LIMIT FOR INDIVIDUALS**

Median for in-network services	\$1,500
Median for out-of-network services	\$2,000

## Cost-sharing requirements for HMOs

**Physician office visit** Virtually all HMO sponsors require a physician office copay. The median copay among the Massachusetts respondents was \$15 in 2007, compared to \$8 in 2000.

**Emergency room visits** The median copay for a visit to the ER, which held at \$50 from 2002 to 2005, was \$63 in 2006 and \$75 in 2007. Among the Northeast respondents, it remains \$50.

**Deductibles for hospital stays** The most significant change in HMO plan design over the past few years has been the growth in the use of hospital deductibles. Among the Massachusetts respondents, the percentage requiring a deductible in 2007 was more than twice that in 2000 – 57 percent compared to 25 percent. The median deductible amount was \$250 per stay.

**Figure 9**

HMO cost-sharing requirements among Massachusetts respondents in 2007

**COPAY FOR PHYSICIAN VISIT**

Copay required (% of employers)	98%
Median copay amount	\$15

**COPAY FOR EMERGENCY ROOM VISITS**

Copay required (% of employers)	98%
Median copay amount	\$75

**DEDUCTIBLE FOR HOSPITAL STAY**

Hospital deductible required (% of employers)	57%
Median deductible amount	\$250

## Consumer-directed health plans

While there are still too few survey respondents in Massachusetts that offer consumer-directed health plans (CDHPs) to permit us to provide state results, we can provide results for the Northeast region. Of the two types of account-based CDHPs, the more popular is the Health Savings Account, or HSA, which was offered by 11 percent of Northeast employers in 2007. Plans based on Health Reimbursement Accounts, or HRAs, were offered by 7 percent.

**HSA-based CDHPs** Among employers offering an HSA-based CDHP alongside another medical plan option, on average 8 percent of eligible employees chose to enroll in 2007. Three-fifths of employers (61 percent) make voluntary contributions to employees' accounts; the median contributions (not including zeros) were \$500 for an employee and \$1,000 for a family (employee, spouse and two children). The median deductibles for the underlying insurance were \$1,500 and \$3,000 for individuals and families, respectively, while the employee out-of-pocket maximums were \$3,000 and \$6,000. In most plans (78 percent), preventive coverage is covered at 100% for a defined set of services; in 16 percent, preventive prescription drugs are covered at a separate, higher benefit level.

**HRA-based CDHPs** Among the 7 percent of Northeast employers offering a CDHP based on a health reimbursement arrangement (or HRA) alongside another medical plan option, on average 17 percent of eligible employees chose to enroll in 2007. The median employer account contributions were \$500 for an employee and \$1,100 for a family (employee, spouse and two children). The median deductibles for the underlying insurance were \$1,350 and \$3,000 for individuals and families, respectively, while the employee out-of-pocket maximums were \$2,500 and \$5,275. Only about a fifth (21 percent) place a limit on the amount of funds that may be accumulated in the account. In most plans (75 percent), preventive coverage is covered at 100% for a defined set of services; in about half (52 percent), prescription drug coverage has been carved out of the CDHP.

### Prescription drug benefits

The majority of Massachusetts respondents offer both mail-order and retail card prescription drug plans, and in 2007 a three-tiered copayment design was by far the most common. The average copays for mail-order drugs were \$16 for generics, \$44 for brand-name drugs on the plan's formulary and \$74 for nonformulary brand-name drugs. For card plans, the average copays were \$11, \$27 and \$44, respectively.

### Dental coverage

Dental coverage has been nearly universal among Massachusetts respondents since 2001. The majority requires a deductible (92 percent in 2007) and limits the annual amount payable (95 percent). The median deductible was \$50 and the median annual maximum benefit was \$1,500. The average per-employee cost of dental coverage was \$747. Massachusetts employers have reported higher average cost than Northeast employers as a whole in each of the seven survey years studied; in 2007, the average cost among the Northeast group was \$689.

## Retiree health coverage

Nationally, the percentage of employers providing retiree medical coverage on an ongoing basis (meaning that new hires are eligible) has been falling steadily. Among the Massachusetts respondents, the prevalence of retiree medical plans peaked in 2001 with 38 percent providing coverage to pre-Medicare-eligible retirees and 30 percent providing coverage to Medicare-eligible retirees. In 2007, these figures were 28 and 22 percent, respectively; however, the downward trend is not smooth. Retiree medical has been somewhat more prevalent in the Northeast as a whole than in Massachusetts throughout the study period.

## **Factors affecting the cost of employer-sponsored health plans**

A regression analysis was performed to explore medical plan cost per employee as a function of organization and employee demographics such as average wage and degree of unionization, and of plan design features such as deductible and copayment requirements. Separate analyses of PPO, HMO, POS plan and CDHP costs were performed. Only attributes collected through the survey could be tested for their impact on cost; these were shown to account for about 35 percent of the variation in per-employee cost among employers.

The quantified relationships between cost and attributes resulting from this analysis were then used to create a model that combined the results of the different medical plan analyses and adjusts national average cost on the basis of the attributes of a specific employer or group of employers. The aggregated survey results for the Massachusetts employers were input into the model to adjust the national cost average to show what a hypothetical employer in the 2007 survey database, with the attributes of the Massachusetts respondents, could have expected to pay for health coverage.

The employer, employee and plan attributes found to have the biggest impact on cost – positive and negative – are described below. For simplicity's sake, if an attribute tested significant for more than one medical plan, we will show the results produced in the PPO model, because PPOs have the highest enrollment and thus the biggest impact on cost of the four medical plan types tested in this analysis.

### **Results**

The most important demographic influences on total health plan cost are average wage and the degree of unionization. Variables that were not shown to be significant are not included in the discussion. In some cases, this is the result of correlation with another variable or variables. For example, while average health benefit cost does vary by

industry, industry and wage are strongly correlated, as are industry and plan design (in particular, deductibles and other cost-sharing requirements); and wage and plan design are the more significant factors.

**Average wage** Employers in organizations with higher average salaries typically report higher average health benefit costs. For every \$100 increase in the average wage of an organization, the annual per-employee cost of PPO coverage increases by about \$2.00. For example, comparing organizations with average wages of \$40,000 and \$60,000, a difference of 20,000, per-employee cost can be predicted to be \$400 more in the organization with the higher average wage ( $\$20,000/\$100 \times \$2$ ).

**Collective bargaining agreements** The degree of unionization also affects cost. In an organization with no employees in unions, PPO cost is predicted to be just over \$1,000 lower than in an organization with all employees in unions. Cost increases \$10.18 for every additional percentage point of employees covered by collective bargaining agreements.

**Deductibles** The model shows that average PPO cost per employee decreases by about \$42 per employee as the in-network deductible increases by \$100.

**Dependent coverage** The effect of dependent coverage on cost is due in part to the methodology used to calculate per-employee cost: total cost of employees and dependents is divided by the number of employees only. Thus, employers whose health plan participants include a high percentage of dependents will exhibit higher cost per employee than employer with a lower percentage of covered dependents. The model predicts that cost increases by about \$16 per employee for each additional percentage of employees electing dependent coverage.

## Factors affecting Massachusetts survey respondents

To see how much of the difference between the national average cost per employee and the relatively high cost for the Massachusetts survey respondents could be explained by the employer, employee and plan attributes described above (and some others), we input the average values for these attributes for the subset of Massachusetts respondents that had provided complete cost data for 2007 (42 out of the 60 that participated). The values for this group did not vary significantly from the values for the larger group, although they were not identical.

The principle factors driving cost up for the Massachusetts respondents were:

- High salaries (\$60,385, compared to \$43,225 nationally)
- High dependent coverage election in PPOs (60%, compared to 55% nationally)
- Older workforce (average age 43 years, compared to 41 years nationally in PPOs)
- High monthly employee contributions for employee-only PPO coverage (\$120, compared to \$60)
- Low in-network PPO deductibles (median \$250, compared to \$300)
- Low out-of-pocket PPO maximums (median \$1,500, compared to \$1,800)

Taken altogether, when input into the model, the attributes for the Massachusetts respondents raise the national average per employee health benefit cost by roughly \$500 from \$7,823 to \$8,306. However, the actual average cost for the Massachusetts respondents is \$9,516, which leaves a difference of about \$1,200 unaccounted for. Again, the analysis only takes into account the attributes for which data was collected through the survey. Unique characteristics of the health insurance marketplace, provider practices and utilization patterns will all affect health benefit cost as well. In addition, it is critical to keep in mind that this analysis applies to only the Massachusetts employers responding to the survey; it is not representative of all employers in the state. For this group, a high-paid, somewhat older workforce, combined with generous benefit plan design, the model predicts that per-employee cost will be about \$500 higher than average.

Because their actual costs are so much higher still, it is clear that other factors are driving up cost as well. However, these other factors are beyond the scope of this analysis.