

ACCESS *to and* AFFORDABILITY of CARE  
*in* MASSACHUSETTS *as of* FALL 2008:

GEOGRAPHIC  
AND RACIAL/ETHNIC  
DIFFERENCES

*Massachusetts Health Reform Survey*

*Policy Brief*

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## {ERRATUM}

Because of an error in constructing survey weights, some of the estimates reported in the earlier version of this policy brief were incorrect. Correcting the error does not change the basic findings and conclusions in the policy brief with respect to geographic differences; however, it does lead to some evidence of racial/ethnic differences in the affordability of health care in Massachusetts. The text and exhibits have been corrected in the attached version of the policy brief. The authors regret any confusion these errors might have caused.

ACCESS *to and* AFFORDABILITY *of* CARE  
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Massachusetts continues to move forward on comprehensive health reform, with uninsurance at historically low levels.<sup>1</sup> Building on that coverage expansion, there have been improvements in access to care and the affordability of care in the state, as reported in a recent *Health Affairs* article.<sup>2</sup> Notwithstanding these successes, some of the early gains under health reform in reducing barriers to care and improving the affordability of care had eroded by Fall 2008, reflecting trends that pre-date health reform—constraints on provider capacity and increasing health care costs. This policy brief provides a supplement to the recent *Health Affairs* article, examining geographic and racial/ethnic differences in access to care and affordability of care across Massachusetts in Fall 2008.

#### {DATA AND METHODS}

This brief uses data from a survey of adults aged 18 to 64 years old in Massachusetts that was conducted in Fall 2008 (N=4,041). The survey, which is part of an on-going effort to track the effects of health reform in the state, is described elsewhere.<sup>3</sup> Of relevance here, the Fall 2008 survey included oversamples across six regions of the state and among non-Hispanic black and Hispanic adults in the state. As shown in Exhibit 1, the six regions of the state are:

- (1) Boston—Suffolk county (N=613)
- (2) MetroWest—Middlesex and Norfolk counties (N=800)
- (3) Northeast—Essex county (N=414)
- (4) Central—Worcester county (N=640)
- (5) Western—Berkshire, Franklin, Hampden, and Hampshire counties (N=820)
- (6) Southeast—Barnstable, Bristol, Dukes, Nantucket and Plymouth counties (N=754)

In testing for differences across the regions, we use the MetroWest region as the comparison since we find that adults in that region tend to have better access to care and fewer issues with the affordability of health care than adults in other regions of the state. We also rank the regions from 1 (better access or affordability) to 6 (worse access or affordability) on each of the measures to facilitate the comparison of the regions across the full set of access to care and affordability of care measures.

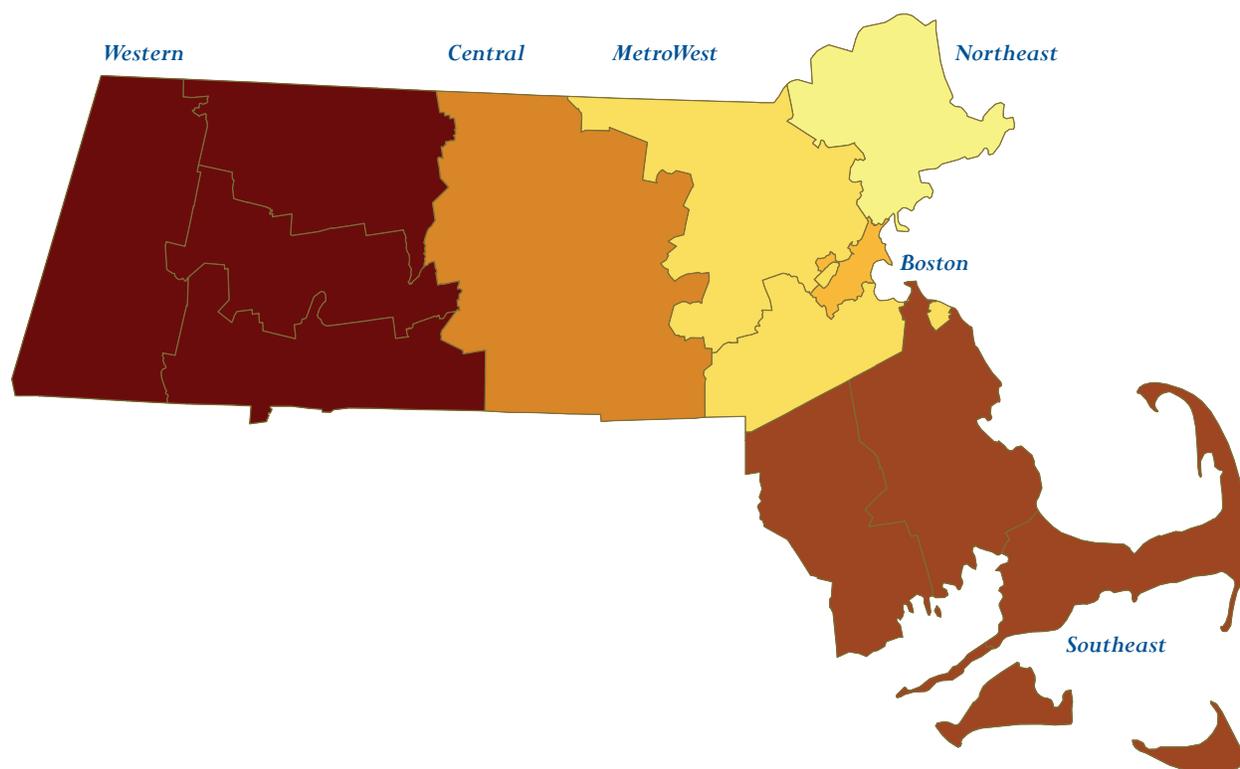
<sup>1</sup>Massachusetts Division of Health Care Finance and Policy, "Health Care in Massachusetts: Key Indicators," February 2009. Available at [www.mass.gov/dhcfp](http://www.mass.gov/dhcfp) (accessed 3 March 2009).

<sup>2</sup>S.K. Long and P.B. Masi, "Assess and Affordability of Care: An Update on Health Reform in Massachusetts as of Fall 2008," *Health Affairs* 28, no. 4 (2009): w578–w588 (published online 28 May 2009; 10.1377/hlthaff.28.4.w578).

<sup>3</sup>See [www.urban.org/UploadedPDF/411649\\_mass\\_reform\\_survey.pdf](http://www.urban.org/UploadedPDF/411649_mass_reform_survey.pdf).

{EXHIBIT 1} *Massachusetts Regions Used in the Study*

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In testing for differences across racial/ethnic groups, we compare non-Hispanic black adults (N=580) and Hispanic adults (N=576) to white, non-Hispanic adults (N=2,668). We do not have a sufficient sample size to include other, non-Hispanic adults in this part of the analysis.

We control for differences in health care needs in making the comparisons reported here to focus on differences in access to and affordability of care for adults in Massachusetts with similar health care needs.<sup>4</sup> Specifically, we control for age, gender, health status, disability status, presence of chronic conditions, and, for women, whether they were pregnant in the last 12 months. Thus, the differences across regions or across race/ethnicity groups reported here reflect the effects of factors beyond these measures of health care needs, including differences in socioeconomic status, in the local health care system, or other factors.

{FINDINGS}

**Geographic Differences.** There were similar patterns of access to care across the six regions of the state in Fall 2008 (Exhibit 2). Most (89.5% to 93.0%) working-age adults 18 to 64 (hereafter adults) in each of the regions of the state reported that they had a usual place to go when sick or in need of advice about their health, a measure of continuity of health care. Most (80.2% to 87.0%) also reported having had a doctor visit in the last 12 months, with many reporting preventive care visits (72.6% to 79.6%) and specialist visits (49.9% to 55.8%). Dental care visits over the past year were also fairly common for adults across the regions, ranging from 71.9% to 81.3% of the adults.

Two regions of the state—the Western and the Southeast regions—tended to do less well on these health care access and use measures. Adults in both regions were less likely to have had doctor visits (including doctor visits for preventive care) and dental care visits than adults in the MetroWest region, while those in the Southeast region were also less likely to have a usual source of health care.

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<sup>4</sup>Institute of Medicine. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, DC: National Academies Press, 2002.

{EXHIBIT 2} Access to Health Care for Adults 18 to 64 in Massachusetts (Controlling for Age, Gender and Health and Disability Status), by Region

	<i>MetroWest</i>	<i>Boston</i>	<i>Central</i>	<i>Northeast</i>	<i>Southeast</i>	<i>Western</i>
<i>Has a usual source of care (excluding the ED) (%)</i>	93.0	91.5	92.6	94.1	89.5*	90.8
<i>Any doctor visit in last 12 months (%)</i>	87.0	84.6	86.6	80.2**	82.3**	82.0*
<i>Visit for preventive care</i>	79.2	76.8	79.6	74.3	74.4**	72.6**
<i>Any visit to a specialist in last 12 months (%)</i>	55.8	52.6	52.4	49.9	54.2	50.3
<i>Any dental care visit in last 12 months (%)</i>	78.0	76.6	77.5	81.3	72.0**	71.9**
<i>Did not get needed care for any reason in last 12 months (%)<sup>a</sup></i>	20.2	18.9	20.5	21.3	23.7	24.9
<i>Doctor care</i>	4.8	5.0	5.8	8.6	8.9**	6.2
<i>Specialist care</i>	4.2	8.2	6.1	8.6*	9.9***	8.4**
<i>Medical tests, treatment or follow-up care</i>	6.3	4.3	6.7	8.3	8.7	11.8**
<i>Preventive care screening</i>	4.7	5.0	4.6	6.3	7.1	5.9
<i>Prescription drugs</i>	4.6	6.2	6.2	6.3	7.3	8.6***
<i>Dental care</i>	9.7	8.0	10.6	10.1	13.5*	14.4*
<i>Had difficulty obtaining care because told by provider not accepting insurance type and/or new patients in last 12 months (%)</i>	18.6	19.1	20.6	17.2	22.2	27.3***
<i>Told by provider not accepting insurance type</i>	8.4	12.2	11.5	8.4	15.3***	17.6***
<i>Told by provider not accepting new patients</i>	14.9	13.3	17.7	13.0	17.3	18.6
<i>Did not get needed care because of trouble finding a doctor or other health provider who would see them or trouble getting an appointment in last 12 months (%)<sup>a</sup></i>	4.2	8.4	4.2	5.7	6.7	4.6
<i>Most recent ED visit was for non-emergency condition<sup>b</sup></i>	14.4	13.3	10.5	15.8	19.0	13.1
<i>Most recent ED visit for non-emergency condition<sup>b</sup> was due (in part) to inability to get appointment at doctor's office or clinic</i>	6.4	8.2	6.9	8.2	10.4**	9.0
<i>Sample size</i>	800	613	640	414	754	820

Source: 2008 Massachusetts Health Reform Survey

Note: Comparisons control for differences in age, gender, and health and disability status across the regions. ED is emergency department.

\* (\*\*) (\*\*\*) Significantly different from MetroWest region at the .10 (.05) (.01) level, two-tailed test.

<sup>a</sup> This is care that the individual thought he or she needed. It might or might not be medically necessary care.

<sup>b</sup> This is a condition that the respondent thought could have been treated by a regular doctor if one had been available.

Consistent with the lower levels of health care use reported by adults in the Southeast and Western regions in Fall 2008, unmet need for health care was also more common in those areas as compared to the MetroWest region. Adults in both regions were more likely to report unmet need for dental care and specialist care than were adults in the MetroWest region. In addition, adults in the Southeast region were more likely to report unmet need for doctor care, while those in the Western region were more likely to report unmet need for prescription drugs and medical tests, treatment and follow-up care.

When asked about difficulties obtaining care in the past year, adults in the Southeast and Western regions of the state were more likely to report that they had been told by a doctor's office or clinic that the provider was not accepting patients with their type of insurance coverage or that the provider was not accepting any new patients than were their counterparts in the MetroWest region. In particular, the share of adults reporting that they had been told that the provider was not accepting their type of insurance was almost twice as high in both the Western (17.6%) and Southeast (15.3%) regions as in the MetroWest region (8.4%). Despite reporting more difficulties obtaining care over the past year, adults in the Southeast and Western regions of the state were no more likely to report unmet need for care because of difficulties finding a provider or trouble getting an appointment.

Another measure of potential barriers to obtaining care in the community is emergency department (ED) use for non-emergency conditions (that is, conditions that the respondent felt could have been treated in the community if a provider had been available). Non-emergency ED use because of an inability to get an appointment at a doctor's office or clinic was more common in the Southeast region than in the MetroWest region. In the Southeast, as in the other regions, more than half of non-emergency ED visits were attributed to an inability to get an appointment at a doctor's office or clinic.

In general agreement with the data in Exhibit 2, when we look at the relative rankings of the six regions across the different access to care measures, we find that the Southeast and Western regions are often ranked fifth and sixth among the regions, indicating worse access to care (Exhibit 3). Altogether, the Southeast region is ranked fifth or sixth on 14 of the 18 access to care measures and the Western region on 13 of the measures. In contrast, the Boston region is ranked lowest among the regions on just one measure, the Central region on just one measure, and MetroWest is never ranked at the bottom on any measures. The Northeast region falls in the middle of the regions on the access to care measures, with rankings of fifth or sixth among the regions on seven of the access to care measures.

In addition to reporting greater difficulties obtaining care, adults in the Southeast and Western region were more likely to report problems with access to care because of health care costs (Exhibit 4). In particular, although still relatively low overall, higher levels of unmet need for care because of costs were reported for specialist care in the Southeast region relative to the MetroWest region. In the Western region, higher unmet need was reported for all types of care examined except doctor care, specialist care and preventive care screening.

Despite the lower levels of health care use and higher levels of unmet need in the Southeast and Western regions of the state, there was little difference in the financial burden of health care costs across the state. We find the shares of adults reporting high out-of-pocket health care costs,<sup>5</sup> problems paying medical bills and medical debt are similar across the regions. However, when we look at the relative ranking of the six regions across the different affordability measures, we find that the Northeast, Southeast and Western regions are most often ranked fifth or sixth among the regions on the measures of affordability of care (Exhibit 5).

**Racial/Ethnic Differences.** Overall, the survey showed that non-Hispanic black adults (hereafter black adults) and Hispanic adults tended to have somewhat poorer access to care than non-Hispanic white adults (hereafter white adults) in Massachusetts (Exhibit 6). Hispanic adults were significantly less likely to have had a doctor visit in the last year (78.6% versus 85.7%) than white adults. They were also more likely to report unmet need for doctor care, specialist care, medical tests, treatment or follow-up care, preventive care screening, and prescription drugs.

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<sup>5</sup>High out-of-pocket health care expenses relative to family income are defined as 5% or more of family income for adults with family income less than 200% FPL and 10% or more of family income for higher-income adults. Having out-of-pocket costs of 5% or more of family income for low-income families is a threshold for financial risk that is consistent with cost-sharing provisions in the Children's Health Insurance Program (formerly the State Children's Health Insurance Program).

**{EXHIBIT 3}** *Relative Ranking of Regions in Massachusetts on Access to Health Care for Adults 18 to 64  
(Controlling for Age, Gender and Health and Disability Status)*

	<i>Relative Ranking of the Regions from Better Access (1) to Worse Access (6)</i>					
	<i>Metro West</i>	<i>Boston</i>	<i>Central</i>	<i>Northeast</i>	<i>Southeast</i>	<i>Western</i>
<i>Has a usual source of care (excluding the ED) (%)</i>	2	4	3	1	6	5
<i>Any doctor visit in last 12 months (%)</i>	1	3	2	6	4	5
<i>Visit for preventive care</i>	2	3	1	5	4	6
<i>Any visit to a specialist in last 12 months (%)</i>	1	3	4	6	2	5
<i>Any dental care visit in last 12 months (%)</i>	2	4	3	1	5	6
<i>Did not get needed care for any reason in last 12 months (%)<sup>a</sup></i>	2	1	3	4	5	6
<i>Doctor care</i>	1	2	3	5	6	4
<i>Specialist care</i>	1	3	2	5	6	4
<i>Medical tests, treatment or follow-up care</i>	2	1	3	4	5	6
<i>Preventive care screening</i>	2	3	1	5	6	4
<i>Prescription drugs</i>	1	2	3	4	5	6
<i>Dental care</i>	2	1	4	3	5	6
<i>Had difficulty obtaining care because told by provider not accepting insurance type and/or new patients in last 12 months (%)</i>	2	3	4	1	5	6
<i>Told by provider not accepting insurance type</i>	2	4	3	1	5	6
<i>Told by provider not accepting new patients</i>	3	2	5	1	4	6
<i>Did not get needed care because of trouble finding a doctor or other health provider who would see them or trouble getting an appointment in last 12 months (%)<sup>a</sup></i>	1	6	2	4	5	3
<i>Most recent ED visit was for non-emergency condition<sup>b</sup></i>	4	3	1	5	6	2
<i>Most recent ED visit for non-emergency condition<sup>b</sup> was due (in part) to inability to get appointment at doctor's office or clinic</i>	1	3	2	4	6	5

Source: 2008 Massachusetts Health Reform Survey

Note: Comparisons control for differences in age, gender, and health and disability status across the regions. ED is emergency department.

<sup>a</sup> This is care that the individual thought he or she needed. It might or might not be medically necessary care.

<sup>b</sup> This is a condition that the respondent thought could have been treated by a regular doctor if one had been available.

{EXHIBIT 4} *Affordability of Health Care for Adults 18 to 64 in Massachusetts (Controlling for Age, Gender and Health and Disability Status), by Region*

	<i>MetroWest</i>	<i>Boston</i>	<i>Central</i>	<i>Northeast</i>	<i>Southeast</i>	<i>Western</i>
<i>High out-of-pocket health care costs relative to family income in last 12 months for those with income less than 500% FPL (%)<sup>a</sup></i>	11.5	8.8	10.8	15.5	13.8	9.7
<i>Had problems paying medical bills in last 12 months (%)</i>	17.5	16.5	16.4	18.2	18.0	17.6
<i>Have medical bills that are paying off over time (%)</i>	17.9	18.2	19.8	21.3	22.3	21.0
<i>Did not get needed care because of costs in last 12 months (%)<sup>b</sup></i>	9.6	7.7	11.7	11.9	11.9	<b>16.5***</b>
<i>Doctor care</i>	2.0	1.3	2.4	2.1	3.5	3.3
<i>Specialist care</i>	2.3	2.3	1.3	2.8	<b>5.8**</b>	4.7
<i>Medical tests, treatment or follow-up care</i>	2.4	1.8	3.0	4.5	3.3	<b>6.7**</b>
<i>Preventive care screening</i>	2.1	1.4	2.0	1.5	2.4	3.1
<i>Prescription drugs</i>	3.0	3.1	2.7	2.4	4.5	<b>5.4**</b>
<i>Dental care</i>	6.2	4.6	8.3	8.4	7.3	<b>11.8**</b>
<i>Sample size</i>	800	613	640	414	754	820

Source: 2008 Massachusetts Health Reform Survey

Note: Comparisons control for differences in age, gender, and health and disability status across the regions.

\* (\*\*) (\*\*\*) Significantly different from MetroWest region at the .10 (.05) (.01) level, two-tailed test.

<sup>a</sup> High out-of-pocket health care expenses relative to family income are defined as 5% or more of family income for adults with family income less than 200% FPL and 10% or more of family income for higher-income adults. Because of the way data on family income is collected in the survey, the measure of out-of-pocket health care spending relative to family income cannot be constructed for adults with family incomes of 500% of poverty or more.

<sup>b</sup> This is care that the individual thought he or she needed. It might or might not be medically necessary care.

{EXHIBIT 5} *Relative Ranking of Regions in Massachusetts on Affordability of Health Care for Adults 18 to 64  
(Controlling for Age, Gender and Health and Disability Status)*

	<i>Relative Ranking of the Regions from Better Affordability (1) to Worse Affordability (6)</i>					
	<i>Metro West</i>	<i>Boston</i>	<i>Central</i>	<i>Northeast</i>	<i>Southeast</i>	<i>Western</i>
<i>High out-of-pocket health care costs relative to family income in last 12 months for those with income less than 500% FPL (%)<sup>a</sup></i>	4	1	3	6	5	2
<i>Had problems paying medical bills in last 12 months (%)</i>	3	2	1	6	5	4
<i>Have medical bills that are paying off over time (%)</i>	1	2	3	5	6	4
<i>Did not get needed care because of costs in last 12 months (%)<sup>b</sup></i>	2	1	3	4	5	6
<i>  Doctor care</i>	2	1	4	3	6	5
<i>  Specialist care</i>	2	3	1	4	6	5
<i>  Medical tests, treatment or follow-up care</i>	2	1	3	5	4	6
<i>  Preventive care screening</i>	4	1	3	2	5	6
<i>  Prescription drugs</i>	3	4	2	1	5	6
<i>  Dental care</i>	2	1	4	5	3	6

Source: 2008 Massachusetts Health Reform Survey

Note: Comparisons control for differences in age, gender, and health and disability status across the regions.

<sup>a</sup> High out-of-pocket health care expenses relative to family income are defined as 5% or more of family income for adults with family income less than 200% FPL and 10% or more of family income for higher-income adults. Because of the way data on family income is collected in the survey, the measure of out-of-pocket health care spending relative to family income cannot be constructed for adults with family incomes of 500% of poverty or more.

<sup>b</sup> This is a condition that the respondent thought could have been treated by a regular doctor if one had been available.

{EXHIBIT 6} Access to Health Care for Adults 18 to 64 in Massachusetts (Controlling for Age, Gender and Health and Disability Status), by Race/Ethnicity

	<i>White, non-Hispanic</i>	<i>Black, non-Hispanic</i>	<i>Hispanic</i>
<i>Has a usual source of care (excluding the ED) (%)</i>	92.8	89.9	90.0
<i>Any doctor visit in last 12 months (%)</i>	85.7	<b>78.9*</b>	<b>78.6*</b>
<i>Visit for preventive care</i>	77.5	72.5	76.9
<i>Any visit to a specialist in last 12 months (%)</i>	54.8	<b>43.7***</b>	49.2
<i>Any dental care visit in last 12 months (%)</i>	77.8	<b>67.3***</b>	73.0
<i>Did not get needed care for any reason in last 12 months (%)<sup>a</sup></i>	20.5	24.8	24.2
<i>Doctor care</i>	5.7	5.2	<b>11.6*</b>
<i>Specialist care</i>	6.3	6.2	<b>12.3**</b>
<i>Medical tests, treatment or follow-up care</i>	6.8	6.8	<b>12.5*</b>
<i>Preventive care screening</i>	4.6	7.1	<b>13.0***</b>
<i>Prescription drugs</i>	5.8	<b>9.7*</b>	<b>10.5*</b>
<i>Dental care</i>	10.1	14.6	15.1
<i>Had difficulty obtaining care because told by provider not accepting insurance type and/or new patients in last 12 months (%)</i>	20.3	18.7	20.0
<i>Told by provider not accepting insurance type</i>	10.9	14.1	12.2
<i>Told by provider not accepting new patients</i>	15.9	<b>11.6*</b>	13.8
<i>Did not get needed care because of trouble finding a doctor or other health provider who would see them or trouble getting an appointment in last 12 months (%)<sup>a</sup></i>	4.5	6.3	6.0
<i>Most recent ED visit was for non-emergency condition<sup>b</sup></i>	12.3	<b>21.7***</b>	<b>26.1***</b>
<i>Most recent ED visit for non-emergency condition<sup>b</sup> was due (in part) to inability to get appointment at doctor's office or clinic</i>	6.0	<b>15.5***</b>	<b>17.1***</b>
<i>Sample size</i>	2668	580	576

Source: 2008 Massachusetts Health Reform Survey

Note: Comparisons control for differences in age, gender, and health and disability status across the race/ethnicity groups. ED is emergency department.

\* (\*\*) (\*\*\*) Significantly different from white, non-Hispanic adults at the .10 (.05) (.01) level, two-tailed test.

<sup>a</sup> This is care that the individual thought he or she needed. It might or might not be medically necessary care.

<sup>b</sup> This is a condition that the respondent thought could have been treated by a regular doctor if one had been available.

Like Hispanic adults, black adults were also significantly less likely than white adults to have had a doctor care visit in the last 12 months (78.9% versus 85.7%). They were also less likely to have had a visit to a specialist (43.7% versus 54.8%) or dental care visit (67.3% versus 77.8%). Among black adults, however, unmet need for care tended to be quite similar to that of white adults. The exception was unmet need for prescription drugs, which, at 9.7%, was significantly higher than the 5.8% reported by white adults.

In contrast to the racial/ethnic differences in health care use, we find only one difference across the three race/ethnicity groups in the shares of adults who reported difficulties obtaining care because they were told that a provider was not accepting new patients or was not accepting their type of insurance. Black adults were less likely than white adults to report difficulty obtaining care because a provider was not taking new patients. Furthermore, we find no differences across the three race/ethnicity groups in unmet need because of difficulties finding a provider who would see them or in getting an appointment for care. Hispanic and black adults, however, were substantially more likely to report an ED visit for a non-emergency condition (26.1% and 21.7% respectively, as compared to 12.3% for white adults), and non-emergency ED use because of an inability to get an appointment at a doctor's office or clinic (17.1% and 15.5%, respectively, as compared to 6.0% for white adults).

Finally, when we look at the financial burden of health care costs in Fall 2008, we find limited evidence that health care costs are more of a burden for black or Hispanic adults in the state, as compared to white adults (Exhibit 7). There were no differences in the share of adults across the three race/ethnicity groups with high out-of-pocket health care costs and few differences in unmet need for care because of costs. However, black adults were more likely than white adults to report problems paying medical bills in the last 12 months.

## {DISCUSSION}

Access to health care was generally good in Massachusetts in Fall 2008, with most adults reporting having a usual source of care and health care visits over the past year.<sup>6</sup> Nonetheless, about 1 in every 5 adults in the state reported unmet need for health care and difficulty obtaining care because of problems finding a provider. About the same share (roughly 1 in 5 adults) reported problems paying medical bills or medical debt over the past year.

While access to health care is quite similar across the regions in Massachusetts on many of the measures we examined, we do find evidence that some of the problems with access to care are more concentrated in the Southeast and Western regions of the state. Adults in both of these areas reported lower levels of use and higher levels of unmet need for some types of health care compared to their counterparts in the MetroWest region. They also reported more difficulties obtaining health care because of problems finding a provider. Furthermore, while we see little difference across the regions of the state in reported problems with medical bills or high out-of-pocket health care costs, unmet need for care because of costs was higher for some types of care in the Southeast and Western areas of the state relative to MetroWest. Consistent with these findings, when the regions are ranked across the affordability measures examined in this study, the Southeast and Western regions are frequently ranked at the bottom. We also find that the Northeast region is often ranked comparatively low, particularly on the affordability measures that are examined.

When we look at racial/ethnic differences in access to care in Massachusetts we find broad similarities in access across the racial and ethnic groups on many measures. Still, there is evidence that problems with access to care are somewhat more concentrated among minority populations in the state, particularly among Hispanic adults. Both Hispanic and black adults reported lower levels of health care use and higher levels of unmet need for some types of health care. Further, although there were few differences in the shares of adults reporting difficulties obtaining care because of problems finding a provider across the racial and ethnic groups, Hispanic and black adults were more likely to report ED visits for non-emergency conditions and to report non-emergency ED use because of an inability to get an appointment at a doctor's office or clinic. There was also some suggestion that minority adults were more likely to face greater financial burdens from health care costs than white adults on a few measures.

This study has identified some regional and racial/ethnic differences in access to care across adults with similar health care needs in Massachusetts in Fall 2008. Additional research is needed to identify the role of other characteristics of the individuals (e.g., socioeconomic status), the local health care market (e.g., supply of providers, health care costs) and other factors in explaining those differences.

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<sup>6</sup>S.K. Long and P.B. Masi, "Assess and Affordability of Care: An Update on Health Reform in Massachusetts as of Fall 2008," *Health Affairs* 28, no. 4 (2009): w578–w588 (published online 28 May 2009; 10.1377/hlthaff.28.4.w578).

{EXHIBIT 7} *Affordability of Health Care for Adults 18 to 64 in Massachusetts (Controlling for Age, Gender and Health and Disability Status), by Race/Ethnicity*

	<i>White, non-Hispanic</i>	<i>Black, non-Hispanic</i>	<i>Hispanic</i>
<i>High out-of-pocket health care costs relative to family income in last 12 months for those with income less than 500% FPL (%)<sup>a</sup></i>	13.6	9.9	10.8
<i>Had problems paying medical bills in last 12 months (%)</i>	17.2	21.7**	18.6
<i>Have medical bills that are paying off over time (%)</i>	20.0	23.5	17.0
<i>Did not get needed care because of costs in last 12 months (%)<sup>b</sup></i>	11.3	9.8	14.3
<i>  Doctor care</i>	2.3	1.8	3.6
<i>  Specialist care</i>	3.3	1.7**	4.3
<i>  Medical tests, treatment or follow-up care</i>	3.1	4.0	6.3
<i>  Preventive care screening</i>	1.9	1.9	4.3**
<i>  Prescription drugs</i>	3.5	6.1	3.2
<i>  Dental care</i>	7.4	5.4	9.6
<i>Sample size</i>	2668	580	576

Source: 2008 Massachusetts Health Reform Survey

Note: Comparisons control for differences in age, gender, and health and disability status across the race/ethnicity groups.

\* (\*\*) (\*\*\*) Significantly different from white, non-Hispanic adults at the .10 (.05) (.01) level, two-tailed test.

<sup>a</sup> High out-of-pocket health care expenses relative to family income are defined as 5% or more of family income for adults with family income less than 200% FPL and 10% or more of family income for higher-income adults. Because of the way data on family income is collected in the survey, the measure of out-of-pocket health care spending relative to family income cannot be constructed for adults with family incomes of 500% of poverty or more.

<sup>b</sup> This is care that the individual thought he or she needed. It might or might not be medically necessary care.