

Note from Bob Lowe:

If you don't have time to read this entire document, the introduction on pages 2-3 and the discussion on page 14 will give you the key points.

EMERGENCY DEPARTMENT VISITS  
*in* MASSACHUSETTS:

WHO USES  
EMERGENCY CARE  
*and* WHY?

*Massachusetts Health Reform Survey*

*Policy Brief*

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EMERGENCY DEPARTMENT VISITS  
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## WHO USES EMERGENCY CARE and WHY?

*Massachusetts residents are frequent users of emergency department (ED) care, with high levels of use continuing despite significant improvements in access to care as a result of the state's 2006 health reform initiative. In an effort to better understand ED use in Massachusetts, this policy brief looks at ED use among working-age adults, focusing on reported reasons for using the ED and barriers to obtaining needed health care among ED users. Findings show adult ED users in Massachusetts are a sicker, more disabled, and more chronically ill population and report more difficulties obtaining care in the community and more unmet need for care than other adults in the state. Potential strategies for addressing preventable ED use include efforts targeted to specific care settings and particular population groups.*

Massachusetts' 2006 health reform legislation sought to move the state to near universal health insurance coverage and to improve access to high quality care. The available research evidence shows that the state has achieved near universal health insurance coverage and has made significant gains in access to care.<sup>1</sup> As of fall 2008, nearly all (92%) working-age adults in the state had a usual source of care for when they were sick or needed advice about their health and most (85%) had had at least one doctor visit in the past 12 months. Despite significant gains in access to care under health reform, high levels of emergency department (ED) use have persisted in Massachusetts.<sup>2</sup> Specifically, ED use was high in Massachusetts prior to health reform and has stayed high under health reform.

National data show that Massachusetts residents rely heavily on emergency care, with 491 ED visits for each 1000 residents in 2007, as compared to 401 ED visits for the United States as a whole.<sup>3</sup> ED visits occur for serious illnesses and injuries, as well as for minor acute problems. Using data from emergency departments in the state for fiscal year 2005, the Massachusetts Division of Health Care Finance and Policy estimated that about 41% of outpatient ED visits were for non-emergent conditions (conditions for which immediate care is not required) or emergent conditions that could be treated in a primary care setting

<sup>1</sup> See Long SK and PB Masi. "Access and Affordability: An Update on Health Reform in Massachusetts, Fall 2008," *Health Affairs*, web exclusive, 28 May 2009; and Long SK and K Stockley. "Health Reform in Massachusetts: An Update on Insurance Coverage and Support for Reform as of Fall 2008," *Massachusetts Health Reform Survey Policy Brief*, September 2009.

<sup>2</sup> The increase in insurance coverage in Massachusetts is not expected to have a significant impact on overall ED use since prior research has shown that nearly all of those who use the ED have insurance coverage. For a recent review of the literature on ED use, see DeLia D and Cantor J. "Emergency Department Utilization and Capacity," *Research Synthesis Report No. 17, The Synthesis Project*, Robert Wood Johnson Foundation, 2009.

<sup>3</sup> Tabulations from American Hospital Association data. <http://www.statehealthfacts.org/profileind.jsp?ind=388&cat=8&rgn=23>.

(conditions for which care is needed within 12 hours).<sup>4</sup> Another 6% of visits were for emergency care that could potentially have been prevented with timely and effective primary care. A reliance on the ED for non-urgent care and for urgent care that could have been avoided with effective ambulatory care raises concerns both about the costs of care, since ED visits are generally more expensive than care in the community, and quality of care, since care in the ED is not designed to coordinate with on-going care in the community. Furthermore, unnecessary use of the ED may exacerbate on-going problems with ED overcrowding, potentially slowing care for those who need to be seen immediately.

In an effort to better understand ED use in Massachusetts, this policy brief looks at ED use among working-age adults in Massachusetts, focusing on reported reasons for using the ED and reported barriers to obtaining needed health care among ED users.

**Summary of key findings.** Adult ED users in Massachusetts are a sicker, more disabled, and more chronically ill population and report more difficulties obtaining care and more unmet need for care than other adults in the state. While most ED users reported a doctor's office or private clinic as their usual source of care, ED users were more likely to rely on hospital outpatient departments, community health centers, and other public clinics than were non-ED users. Barriers to care in the community and unmet need were more common among those reporting that their most recent ED visit was for a non-emergency condition and those reporting multiple ED visits over the year. These findings, which held for adults regardless of their insurance coverage, suggest that access problems in the community may play a significant role in ED use in Massachusetts. Potential strategies for addressing preventable ED use include efforts targeted to specific care settings as well as efforts targeted to particular population groups.

## {DATA AND METHODS}

We use data from a survey of adults age 18 to 64 years old in Massachusetts that was conducted in fall 2008 ( $N=4,041$ ).<sup>5</sup> The survey, which is part of an on-going effort to track the effects of health reform in the state, is described elsewhere.<sup>6</sup> The survey included questions on the number of ED visits over the past 12 months and ED use 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), and reasons for ED use for non-emergency conditions. We are not able to identify ED use for ambulatory-care sensitive conditions in this survey.

We begin by comparing non-elderly adults (hereafter adults) who reported one or more visits to the ED in the past year to those who did not report an ED visit. We focus on the demographic and socioeconomic characteristics of the adults, as well as their experiences obtaining health care over the last 12 months.<sup>7</sup> Within the group of ED users, we then compare those who reported that their most recent visit was for a non-emergency condition to those who visited the ED for emergency care. We also compare frequent ED users to those with one or two ED visits as another perspective on ED use since frequent ED users may be relying on the ED for on-going care.

This policy brief provides a descriptive overview of ED use in Massachusetts, focusing on those who visit the ED for non-emergency conditions and frequent ED users. As part of the analysis, we report on ED use by individuals who relied on different care settings as their usual source of care at the time of the survey. Since this analysis cannot separate the effects of who chooses a particular care setting from the effects of the care setting itself, the findings should not be interpreted as ED use *caused* by a particular care setting. Additional research using multivariate methods is needed to more fully understand the association between individual characteristics and ED use, including the link between an individual's health care experiences and subsequent ED use.

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<sup>4</sup> Massachusetts Division of Health Care Finance and Policy, "Non-Emergent and Preventable ED Visits, FY05," *Analysis in Brief*, No. 11, February 2007.

<sup>5</sup> This brief focuses on ED use by working-age adults who reside in the community in Massachusetts since that is the population included in the survey. We are not able to examine ED use by children and the elderly, by institutionalized individuals (e.g., nursing home residents, prison inmates) or by individuals who are not residents of Massachusetts.

<sup>6</sup> The Urban Institute. "The Massachusetts Health Reform Survey." Washington, DC: The Urban Institute, 2009. <http://www.urban.org/url.cfm?ID=411649>.

<sup>7</sup> Note that we are reporting on all care received in the last 12 months and not necessarily care that is related to ED visits.

## {FINDINGS}

In fall 2008, a third of working-age adults in Massachusetts reported having had at least one ED visit in the last 12 months (Exhibit 1). Almost half of those adults (44%) reported that their most recent visit was for a condition that they thought could have been treated by a doctor if one had been available. Many of those non-emergency ED visits (56%) were attributed, at least in part, to an inability to get an appointment with a provider as soon as one was needed, with most (76%) occurring after normal business hours at the doctor's office or clinic. Of the ED visits for non-emergency care after normal hours, about 60% were also attributed to an inability to get an appointment with a provider.<sup>8</sup>

Among those seeking ED care for non-emergency conditions, 39% reported that they had called their doctor's office or clinic and had been told to go to the ED. Most of those ED visits (80%) were after normal business hours; however, one in five were during regular office hours (data not shown). The majority of ED visits that followed a call to the doctor's office or clinic (60%) were attributed, in part, to difficulty getting an appointment with the provider (data not shown). Finally, about one-fourth of adults with an ED visit reported having had three or more ED visits over the past 12 months.

**Who Uses the ED?** Not surprisingly, the adults who reported ED visits over the last 12 months were much more likely to have a health issue than those without an ED visit (Exhibit 2). ED users were more likely to report that they were in fair or poor health (24 versus 7%), had a health problem that limited their activities (32 versus 10%), or had a chronic health condition (63 versus 43%). ED users were also more likely to have had a hospital stay over the prior year (26 versus 3%) (data not shown). While we cannot tell from the survey data the timing of the hospital stay relative to the ED visit, the greater hospital use among ED users is further evidence of the poorer overall health status of ED users relative to adults without an ED visit.

## {EXHIBIT 1} Emergency Department Visits by Adults 18 to 64 in Massachusetts, Fall 2008

	<i>Percent</i>
<i>Any ED visit in last 12 months</i>	33.2
<i>For those with an ED visit in the last 12 months:</i>	
<i>Had three or more ED visits</i>	24.1
<i>Most recent ED visit was for a non-emergency condition<sup>a</sup></i>	44.2
<i>For those with the most recent ED visit for a non-emergency condition,<sup>a</sup> reason for that visit</i>	
<i>Unable to get appointment as soon as needed AND needed care after normal operating hours</i>	45.0
<i>Unable to get appointment as soon as needed</i>	55.8
<i>Needed care after normal operating hours</i>	75.7
<i>More convenient to go to ED</i>	53.5
<i>For those with the most recent ED visit for a non-emergency condition,<sup>a</sup> share reporting visit was after a call to the doctor's office or clinic in which told to go to the ED</i>	38.7
<i>Sample size</i>	4,041

Source: 2008 Massachusetts Health Reform Survey

Note: ED is emergency department

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

<sup>8</sup> Calculated from the information in Exhibit 1 in 45.0% divided by 75.7%.

{EXHIBIT 2} Characteristics of Adults 18 to 64 in Massachusetts with Emergency Department Visits, Fall 2008

	No ED visits in past 12 months	Any ED visits in past 12 months	Difference
Any indication of a health problem (%)	45.8	68.7	22.9***
Health status is fair or poor	7.2	23.5	16.2***
Activities are limited by health problem	9.9	32.4	22.5***
Has a chronic condition	42.7	63.3	20.6***
Age (years) (%)			
18 to 25	11.8	18.0	6.3***
26 to 34	16.3	20.3	3.9*
35 to 49	39.2	35.1	-4.0*
50 to 64	32.7	26.6	-6.2***
Race/ethnicity (%)			
White, non-Hispanic	83.1	73.0	-10.2***
Black, non-Hispanic	4.8	8.6	3.8***
Other, non-Hispanic	6.3	6.7	0.4
Hispanic	5.8	11.7	5.9***
Female (%)	51.7	50.5	-1.2
U.S. citizen (%)	93.4	95.8	2.4**
Education (%)			
Less than high school	3.9	12.0	8.1***
High school graduate	42.2	60.5	18.4***
College graduate or higher	54.0	27.5	-26.5***
Work status (%)			
Full-time	57.0	40.3	-16.7***
Part-time	22.3	19.6	-2.7
Not working	20.7	40.1	19.4***
Family income relative to the Federal Poverty Level (FPL) (%)			
Less than 150% FPL	16.7	35.2	18.5***
150 to 299% FPL	16.5	22.7	6.3***
300 to 499% FPL	23.3	16.3	-7.0***
500% FPL or more	43.6	25.8	-17.8***
Ever ESI in past 12 months (%)	81.4	60.5	-20.9***
Ever public or other coverage in past 12 months (%)	19.9	42.9	22.9***
Ever uninsured in past 12 months (%)	9.2	12.0	2.8**
Region (%)			
Boston	10.2	13.8	3.6**
Metro West	35.2	28.6	-6.6***
Northeast	11.5	10.6	-0.9
Central	13.5	10.7	-2.8**
West	11.6	14.0	2.4
Southeast	18.0	22.2	4.3**
Sample size	2,524	1,507	

Source: 2008 Massachusetts Health Reform Survey

Note: ED is emergency department; ESI is employer-sponsored insurance

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

Beyond health issues, ED users were more likely to be younger, non-white or Hispanic, and US citizens than those without an ED visit. They were also more likely to not be working and to have lower family income.

Consistent with national data, nearly all ED users in Massachusetts had insurance coverage (88%).<sup>9</sup> However, ED users were less likely to have had employer-sponsored insurance coverage over the prior year than were non-ED users (61 versus 81%) and were more likely to have had public or other coverage (43 versus 20%). Note that low-income adults who are eligible for the SSI program<sup>10</sup> because of a severe disability are automatically eligible for MassHealth, while severely disabled adults at higher-income levels are eligible for the CommonHealth program. Thus, part of the higher level of ED use among those with public and other coverage reflects the use by disabled beneficiaries on public programs. While we are not able to identify individuals enrolled in CommonHealth in the survey, SSI beneficiaries are more likely to use the ED than are other adults (60 versus 31%) (data not shown). Although not quite as high, among the remaining adults with public or other coverage ED use was also higher than for other adults, at 49% (data not shown).

Finally, there was some variation in ED use across the regions of the state, with ED users less likely to reside in the MetroWest and Central regions and more likely to reside in Boston and the Southeast regions. Appendix Exhibit 1 provides some additional information on the variation in ED use across the regions.

***Do ED Users Face Greater Barriers to Care in the Community?*** ED users may rely on the ED as a substitute for ambulatory care in the community because of difficulties obtaining care. As shown in Exhibit 3, we find that ED users in Massachusetts were somewhat less likely than those without an ED visit to report having a place that they usually go to when they are sick or need advice about their health (excluding the ED), a measure of continuity of care (90 versus 93%). Further, ED users were somewhat less likely to have had their usual source of care for at least a year (91 versus 94%). We find greater differences in the site of the usual source of care, with ED users less likely to report a doctor's office or private clinic as their usual source of care (63 versus 77%) and more likely to rely on hospital outpatient departments, community health centers, or other public clinics.

In keeping with their somewhat weaker connection with the health care system in the community, ED users were much more likely than other adults to report high levels of unmet need for health care overall over the last year (32 versus 17%) and unmet need for each of the specific types of health care examined, including unmet need for doctor care and specialist care. They were also more likely to report that they did not get or postponed getting needed care because of difficulties getting to see a provider, difficulties getting to the provider's office or clinic, and inconvenient office hours at the provider's office or clinic. ED users were also much more likely to report difficulties obtaining care because they were told that a provider was not accepting their type of insurance or not accepting new patients (28 versus 17%).

These patterns of higher levels of unmet need and greater difficulties obtaining care among ED users persist across different subgroups of adults, including adults with health problems and those without; adults with employer-sponsored insurance (ESI) coverage, those with public and other coverage, and the uninsured; and lower-income and higher-income adults (data not shown). Within each of the population subgroups examined, ED users are much more likely than those without an ED visit to report significant barriers to care and unmet need for care.

As noted above, adults who rely on hospital outpatient departments, community health centers, or other public clinics as their usual source of care are more likely to have ED visits. Exhibit 4 examines ED use and barriers to care for adults by their usual source of care. As shown, adults relying on outpatient departments, community health centers, or other public clinics are both more likely to report ED use and more likely to report more unmet need for care and difficulties obtaining care than those who rely on a doctor or private clinic. This was particularly true for adults reporting a community health center or other public clinic as their usual source of care. Those adults were much more likely to have made a non-emergency ED visit compared to those using a doctor's office or private clinic (26 versus 12%; data not shown). As noted earlier, these patterns may reflect differences in the characteristics of those who choose different care settings as well as the care available in those settings. Additional research is needed to better understand the role of the usual source of care in ED use.

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<sup>9</sup> DeLia D and Cantor J. "Emergency Department Utilization and Capacity," Research Synthesis Report No. 17, The Synthesis Project, Robert Wood Johnson Foundation, 2009.

<sup>10</sup> SSI, or Supplemental Security Income, provides cash assistance to low-income aged or disabled individuals.

{EXHIBIT 3} Barriers to Obtaining Health Care among Adults 18 to 64 in Massachusetts with Emergency Department Visits, Fall 2008

	No ED visit in past 12 months	Any ED visits in past 12 months	Difference
<b>Continuity of care (%)</b>			
Has a usual source of care (excluding ED)	92.8	90.4	-2.3*
Had usual source of care for 1 year or more	94.1	91.1	-3.0*
Site of usual source of care			
Doctor's office or private clinic	77.2	63.1	-14.1***
Outpatient department	5.4	9.5	4.1**
Community health center or other public clinic	7.5	14.6	7.0***
Other site	2.0	3.0	1.0
<b>Barriers to obtaining health care in past 12 months (%)<sup>a</sup></b>			
Any unmet need	17.2	31.7	14.5***
Doctor or specialist care			
Doctor care	6.8	16.2	9.4***
Specialist care	4.6	10.2	5.7***
Specialist care	4.9	11.8	6.9***
Medical tests, treatment or follow-up care	5.0	12.6	7.6***
Preventive care screening	4.2	8.2	3.9**
Prescription drugs	3.9	11.8	7.8***
Dental care	8.5	16.4	7.9***
Did not get or postponed getting needed care because of:			
Difficulty getting to see a provider	4.1	8.0	3.9***
Difficulty getting to the provider's location	1.9	5.0	3.1***
Hours of care at provider not convenient	3.4	6.0	2.6**
Had difficulty obtaining care because told by provider not accepting insurance type and/or new patients	16.6	28.3	11.7***
Told provider not accepting type of insurance	8.6	18.4	9.7***
Told provider not accepting new patients	12.9	21.2	8.3***
Sample size	2,524	1,507	

Source: 2008 Massachusetts Health Reform Survey

Note: ED is emergency department

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

<sup>a</sup> These tabulations refer to all care in the past 12 months and not necessarily ED care.

{EXHIBIT 4} Emergency Department Visits and Barriers to Obtaining Health Care among Adults 18 to 64 in Massachusetts by Site of Usual Source of Care, Fall 2008

	Usual Source of Care			No usual source of care <sup>a</sup>
	Doctor's office or private clinic	Outpatient department	Community health center or other public clinic	
<b>ED visits in past 12 months (%)</b>				
Any ED visit in last 12 months	28.9	46.5***	49.0***	39.7**
For those with an ED visit in the last 12 months:				
Had three or more ED visits	20.4	30.9*	29.5	34.5*
Most recent ED visit was for a non-emergency condition <sup>b</sup>	42.6	36.3	53.7*	46.7
<b>Continuity of care (%)</b>				
Had usual source of care for 1 year or more	93.5	87.8	86.2**	--
<b>Barriers to obtaining health care in past 12 months (%)<sup>c</sup></b>				
Any unmet need	18.6	28.0	28.7***	35.6***
Doctor or specialist care	7.0	15.4**	18.5***	19.3***
Doctor care	3.5	10.2**	15.5***	17.1***
Specialist care	5.4	11.8*	12.8***	12.2**
Medical tests, treatment or follow-up care	5.8	8.0	11.8**	17.6***
Preventive care screening	3.4	7.5	12.4***	12.9***
Prescription drugs	5.4	7.3	12.1**	8.7
Dental care	8.7	13.4	14.7**	23.6***
Did not get or postponed getting needed care because of				
Difficulty getting to see a provider	4.5	6.3	10.2***	7.0
Difficulty getting to the provider's location	1.9	5.1	5.5***	6.6*
Hours of care at provider not convenient	3.7	1.8**	8.0**	6.7
Had difficulty obtaining care because told by provider not accepting insurance type and/or new patients				
Told provider not accepting type of insurance	9.7	13.0	16.9**	25.2***
Told provider not accepting new patients	14.1	17.8	17.2	27.0***
Sample size	2,574	304	570	449

Source: 2008 Massachusetts Health Reform Survey

Note: ED is emergency department

\* (\*\*) (\*\*\*) Significantly different from value for those reporting a doctor's office or private clinic as their usual source of care at the .10 (.05) (.01) level, two-tailed test. These are simple differences; they are not adjusted for differences in individual characteristics between the groups.

<sup>a</sup> Includes individuals citing the ED as their usual source of care.

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

<sup>c</sup> These tabulations refer to all care in the past 12 months and not necessarily ED care.

**ED Use for Non-emergency Care.** Adults who reported using the ED for non-emergency care and other ED users were equally likely to report fair or poor health, activity limitations, and chronic conditions (Exhibit 5). However, relative to other ED users, those who reported using the ED for non-emergency care tended to be younger, non-white or Hispanic, and with lower family income. They were also less likely to have had ESI coverage over the prior year.

While unmet need and barriers to obtaining care were more common among ED users overall relative to those without an ED visit, barriers to care were particularly prevalent among ED users who reported their most recent ED visit was for a non-emergency condition (Exhibit 6). Relative to those using the ED for emergency care, non-emergency ED users reported higher levels of unmet need (38 versus 27%), including unmet need for doctor care; medical tests, treatment, or follow-up care; and dental care. They were also more likely to report not getting or postponing needed care because of difficulties getting to see a provider, difficulties getting to the provider's office or clinic, and inconvenient office hours at the provider's office or clinic, as well as greater difficulties obtaining care because of providers not accepting their type of insurance (24 versus 14%). Finally, adults with non-emergency ED visits were more likely to report a community health center or other public clinic as their usual source of care (18 versus 12%).

**Frequent ED Users.** Frequent users are a small subset of the population, making up only 8 percent of the Massachusetts non-elderly adult population and 24 percent of the ED users (data not shown). As Exhibit 7 shows, we find differences between frequent ED users (defined as three or more visits in a year) and other users.<sup>11</sup> Most notably, frequent users were much more likely to report a health problem than other ED users (88 versus 63%). They were also more likely to be non-white or Hispanic, with lower levels of education, and lower income. Frequent ED users were much less likely to have ESI coverage, with 61% covered by public or other coverage (including 19% with SSI coverage) and 17% uninsured at some point in the past year.

When we compare health care access for frequent ED users to other ED users, we find no difference in the share reporting that their most recent visit was for non-emergency care (Exhibit 8). Frequent ED users, however, were less likely to have a doctor's office or private clinic as the site of their usual source of care. Furthermore, those users were more likely to report difficulties obtaining care because they were told that a provider was not accepting their insurance type and/or accepting new patients. Finally, significantly more of the frequent ED users reported unmet need for certain types of health care relative to other ED users.

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<sup>11</sup> Sample size constraints prevent our examining narrower definitions of frequent ED users, such as the five or more ED visits used in an earlier study in Massachusetts based on administrative data. See Fuda KK and Immekus R. "Frequent Users of Massachusetts Emergency Departments: A Statewide Analysis," *Annals of Emergency Medicine*, Vol. 48, No. 1, July 2006. That study, which was based on data for fiscal year 2003, reported that the 1% of ED users who were frequent users (defined as five or more ED visits) were responsible for 18% of all ED visits.

{EXHIBIT 5} Characteristics of Adults 18 to 64 in Massachusetts with Emergency Department Visits,  
by Type of Visit, Fall 2008

	<i>Most recent ED visit was for an emergency condition</i>	<i>Most recent ED visit was for a non-emergency condition<sup>a</sup></i>	<i>Difference</i>
<i>Any indication of a health problem (%)</i>	68.3	68.9	0.7
<i>Health status is fair or poor</i>	23.5	22.7	-0.8
<i>Activities are limited by health problem</i>	32.9	30.9	-2.0
<i>Has a chronic condition</i>	63.1	63.5	0.5
<i>Age (years) (%)</i>			
<i>18 to 25</i>	14.9	22.3	7.4*
<i>26 to 34</i>	17.1	24.7	7.6*
<i>35 to 49</i>	38.8	31.3	-7.5**
<i>50 to 64</i>	29.2	21.8	-7.5*
<i>Race/ethnicity (%)</i>			
<i>White, non-Hispanic</i>	79.8	64.3	-15.5***
<i>Black, non-Hispanic</i>	6.6	11.1	4.5***
<i>Other, non-Hispanic</i>	5.3	8.5	3.2
<i>Hispanic</i>	8.2	16.0	7.8***
<i>Female (%)</i>	50.0	51.6	1.6
<i>U.S. citizen (%)</i>	97.3	93.9	-3.4*
<i>Education (%)</i>			
<i>Less than high school</i>	10.5	14.3	3.7
<i>High school graduate</i>	61.0	59.5	-1.4
<i>College graduate or higher</i>	28.5	26.2	-2.3
<i>Work status (%)</i>			
<i>Full-time</i>	43.0	37.2	-5.7
<i>Part-time</i>	18.2	21.4	3.2
<i>Not working</i>	38.9	41.4	2.5
<i>Family income relative to the Federal Poverty Level (FPL) (%)</i>			
<i>Less than 150% FPL</i>	29.9	42.6	12.7***
<i>150 to 299% FPL</i>	24.7	20.2	-4.5
<i>300 to 499% FPL</i>	16.6	14.7	-2.0
<i>500% FPL or more</i>	28.7	22.5	-6.2
<i>Ever ESI in past 12 months (%)</i>	64.1	55.0	-9.1**
<i>Ever public or other coverage in past 12 months (%)</i>	40.3	46.8	6.5
<i>Ever uninsured in past 12 months (%)</i>	12.0	12.2	0.3
<i>Region (%)</i>			
<i>Boston</i>	15.5	11.6	-3.8*
<i>MetroWest</i>	28.1	29.3	1.2
<i>Northeast</i>	9.9	11.3	1.5
<i>Central</i>	12.1	9.2	-2.8
<i>West</i>	15.1	13.0	-2.1
<i>Southeast</i>	19.4	25.4	6.1
<i>Sample size</i>	801	667	

Source: 2008 Massachusetts Health Reform Survey

Note: ED is emergency department; ESI is employer-sponsored insurance

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

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

{EXHIBIT 6} *Barriers to Obtaining Health Care among Adults 18 to 64 in Massachusetts with Emergency Department Visits, by Type of Visit, Fall 2008*

	<i>Most recent ED visit was for an emergency condition</i>	<i>Most recent ED visit was for a non-emergency condition<sup>a</sup></i>	<i>Difference</i>
<b>Continuity of care (%)</b>			
<i>Has a usual source of care (excluding ED)</i>	90.7	90.0	-0.7
<i>Had usual source of care for 1 year or more</i>	92.1	89.6	-2.5
<i>Site of usual source of care</i>			
<i>  Doctor's office or private clinic</i>	65.4	59.9	-5.5
<i>  Outpatient department</i>	11.0	7.8	-3.3
<i>  Community health center or other public clinic</i>	12.2	17.5	5.3*
<i>  Other site</i>	2.1	4.3	2.2
<b>Barriers to obtaining health care in past 12 months (%)<sup>b</sup></b>			
<i>Any unmet need</i>	27.0	38.4	11.4**
<i>  Doctor or specialist care</i>			
<i>    Doctor care</i>	7.1	14.4	7.4***
<i>    Specialist care</i>	10.2	14.3	4.1
<i>  Medical tests, treatment or follow-up care</i>	9.3	17.0	7.6**
<i>  Preventive care screening</i>	6.8	10.2	3.5
<i>  Prescription drugs</i>	10.3	14.0	3.7
<i>  Dental care</i>	13.7	20.3	6.6*
<i>Did not get or postponed getting needed care because of</i>			
<i>  Difficulty getting to see a provider</i>	5.9	10.9	5.0**
<i>  Difficulty getting to the provider's location</i>	3.0	7.6	4.7**
<i>  Hours of care at provider not convenient</i>	3.7	9.0	5.3**
<i>Had difficulty obtaining care because told by provider not accepting insurance type and/or new patients</i>	26.2	31.3	5.1*
<i>  Told provider not accepting type of insurance</i>			
<i>    Told provider not accepting new patients</i>	14.4	23.5	9.1***
<i>    Told provider not accepting new patients</i>	20.1	23.1	3.0
<i>Sample size</i>	801	667	

Source: 2008 Massachusetts Health Reform Survey

Note: ED is emergency department

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

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

<sup>b</sup> These tabulations refer to all care in the past 12 months and not necessarily ED care.

{EXHIBIT 7} Characteristics of Adults 18 to 64 in Massachusetts with Emergency Department Visits,  
by Number of Visits, Fall 2008

	One or Two ED visits	Three or more ED visits	Difference
Any indication of a health problem (%)	62.6	87.9	25.3***
Health status is fair or poor	18.9	37.9	19.0***
Activities are limited by health problem	24.0	58.6	34.6***
Has a chronic condition	58.2	79.3	21.1***
Age (years) (%)			
18 to 25	16.5	22.8	6.3
26 to 34	20.3	20.2	-0.1
35 to 49	35.2	34.9	-0.3
50 to 64	28.0	22.1	-5.9
Race/ethnicity (%)			
White, non-Hispanic	75.3	65.5	-9.8**
Black, non-Hispanic	7.7	11.3	3.6*
Other, non-Hispanic	6.7	6.7	-0.1
Hispanic	10.2	16.5	6.2**
Female (%)	49.7	52.9	3.2
U.S. citizen (%)	95.5	96.6	1.1
Education (%)			
Less than high school	9.4	20.2	10.8***
High school graduate	57.6	69.6	11.9***
College graduate or higher	33.0	10.2	-22.8***
Work status (%)			
Full-time	46.7	20.4	-26.3***
Part-time	21.3	14.3	-7.1**
Not working	32.0	65.4	33.4***
Family income relative to the Federal Poverty Level (FPL) (%)			
Less than 150% FPL	30.4	50.2	19.8***
150 to 299% FPL	20.9	28.6	7.7
300 to 499% FPL	18.9	8.1	-10.7***
500% FPL or more	29.8	13.1	-16.8***
Ever ESI in past 12 months (%)	66.6	41.3	-25.2***
Ever public or other coverage in past 12 months (%)	37.1	61.0	23.9***
Ever uninsured in past 12 months (%)	10.3	17.3	7.0*
Region (%)			
Boston	12.5	18.2	5.7
MetroWest	30.1	24.0	-6.1
Northeast	10.0	12.6	2.6
Central	10.6	11.0	0.4
West	14.3	13.0	-1.3
Southeast	22.5	21.3	-1.3
Sample size	1,091	416	

Source: 2008 Massachusetts Health Reform Survey

Note: ED is emergency department; ESI is employer-sponsored insurance

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

{EXHIBIT 8} *Barriers to Obtaining Health Care among Adults 18 to 64 in Massachusetts with Emergency Department Visits, by Number of Visits, Fall 2008*

	<i>One or Two ED visits</i>	<i>Three or more ED visits</i>	<i>Difference</i>
<b>Reason for ED visit (%)</b>			
<i>Most recent ED visit was for a non-emergency condition<sup>a</sup></i>	43.6	48.6	5.0
<i>Unable to get appointment as soon as needed</i>	52.8	64.1	11.2
<i>Needed care after normal operating hours</i>	73.3	82.4	9.0
<i>More convenient to go to ED</i>	52.7	55.8	3.1
<b>Continuity of care (%)</b>			
<i>Has a usual source of care (excluding ED)</i>	91.7	86.2	-5.5
<i>Had usual source of care for 1 year or more</i>	91.5	89.8	-1.7
<i>Site of usual source of care</i>			
<i>Doctor's office or private clinic</i>	66.1	53.6	-12.5**
<i>Outpatient department</i>	8.6	12.2	3.6
<i>Community health center or other public clinic</i>	13.5	17.9	4.4
<i>Other site</i>	3.3	2.1	-1.2
<b>Barriers to obtaining health care in past 12 months (%)<sup>b</sup></b>			
<i>Any unmet need</i>	30.5	35.3	4.8
<i>Doctor or specialist care</i>	14.6	21.5	7.0
<i>Doctor care</i>	9.2	13.7	4.6
<i>Specialist care</i>	9.7	18.3	8.6**
<i>Medical tests, treatment or follow-up care</i>	11.6	15.8	4.1
<i>Preventive care screening</i>	6.4	13.6	7.1**
<i>Prescription drugs</i>	11.5	12.8	1.4
<i>Dental care</i>	14.9	21.2	6.3*
<i>Did not get or postponed getting needed care because of</i>			
<i>Difficulty getting to see a provider</i>	8.0	8.0	0.0
<i>Difficulty getting to the provider's location</i>	4.2	7.4	3.1
<i>Hours of care at provider not convenient</i>	5.9	6.3	0.4
<i>Had difficulty obtaining care because told by provider</i>			
<i>not accepting insurance type and/or new patients</i>	23.3	43.7	20.4***
<i>Told provider not accepting type of insurance</i>	14.0	31.9	17.9***
<i>Told provider not accepting new patients</i>	17.6	32.4	14.8***
<i>Sample size</i>	1,091	416	

Source: 2008 Massachusetts Health Reform Survey

Note: ED is emergency department

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

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

<sup>b</sup> These tabulations refer to all care in the past 12 months and not necessarily ED care.

## {DISCUSSION}

Adult ED users in Massachusetts are a sicker, more disabled, and more chronically ill population and report more difficulties obtaining care in the community and more unmet need for care than other adults in the state. Barriers to care in the community and unmet need were more common among those reporting that their most recent ED visit was for a non-emergency condition and those reporting multiple ED visits over the year. These findings suggest that access problems in the community may be significant contributors to unnecessary and preventable ED use in Massachusetts.

Addressing those access problems could involve efforts that are targeted to particular care settings as well as efforts targeted to particular populations. While most ED users, like most other adults, have a doctor's office or private clinic as their usual source of care, ED users were more likely to rely on hospital outpatient departments, community health centers, or other public clinics as their usual source of care. Adults relying on those providers were more likely to report unmet need for care and barriers to obtaining care than were adults relying on a doctor's office or private clinic. Addressing access problems for patients relying on outpatient departments, community health centers, and other public clinics may be one strategy for reducing preventable ED use.

Across all usual source of care settings, a need for care outside of normal business hours was a common reason for making an ED visit for non-emergency care. While many of those after-hours visits were also attributed to difficulty getting an appointment to see a provider, a substantial share (30%) were not reported to be related to difficulties getting care. This suggests the potential for preventing some unnecessary ED visits by expanding after hours care in the community, especially in outpatient departments, community health centers and public clinics, where frequent ED users and non-emergency ED users are more likely to go for care.

As others have reported for the nation as a whole, ED use in Massachusetts is not due to a lack of health insurance coverage.<sup>12</sup> As in the rest of the country, most ED users in Massachusetts have insurance coverage, most often ESI. However, residents with public coverage were disproportionately more likely to use the ED than residents with ESI. Part of that ED use among those on public coverage reflects their poorer health status, as severely disabled adults are often eligible for public coverage in Massachusetts. However, even among healthy adults, ED use was higher for those with public or other coverage, perhaps because many of those adults do not face any cost-sharing when they use the ED. Addressing the problems with access to care in the community among those relying on public insurance programs looks to be another strategy for reducing preventable ED use.

Finally, the majority of ED users, ED users for non-emergency care, and frequent ED users report health problems, including fair or poor health, activity limitations because of health problems, and chronic conditions. Among ED users with health problems, about half reported one or more barriers to obtaining health care in the community. Reducing barriers to care for those with chronic conditions and other health problems to ensure more timely and coordinated ambulatory care, perhaps in conjunction with efforts targeted at particular care settings and types of insurance coverage, appears particularly promising as another strategy for reducing preventable ED visits.

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<sup>12</sup> DeLia D and Cantor J. "Emergency Department Utilization and Capacity," Research Synthesis Report No. 17, The Synthesis Project, Robert Wood Johnson Foundation, 2009.

{APPENDIX EXHIBIT 1} Emergency Department Visits by Adults 18 to 64 in Massachusetts, Fall 2008

	<b>MetroWest</b>	<b>Boston</b>	<b>Northeast</b>	<b>Central</b>	<b>Western</b>	<b>Southeast</b>
Any ED visit in past 12 months (%)	28.8	40.3**	31.5	28.3	37.5**	38.1***
For those with an ED visit in the past 12 months (%):						
Had three or more ED visits	20.2	31.6*	28.6	24.7	22.4	23.0
Most recent ED visit was for a non-emergency condition <sup>a</sup>	45.8	37.9	48.2	38.3	41.2	51.6
For those with the most recent ED visit for a non-emergency condition, <sup>a</sup> reason for that visit (%)						
Unable to get appointment as soon as needed AND needed care after operating hours	40.4	52.9	37.2	48.2	53.0	44.8
Unable to get appointment as soon as needed	45.3	62.8*	50.7	67.2***	69.0***	55.9
Needed care after normal operating hours	74.6	76.4	77.7	69.2	75.9	78.0
More convenient to go to ED	54.1	61.5	51.2	61.5	54.9	46.4
For those with the most recent ED visit for a non-emergency condition, <sup>a</sup> share reporting visit was after a call to the doctor's office or clinic in which told to go to the ED (%)	36.6	50.1	49.7	35.6	34.6	34.3
Sample size	800	613	414	640	820	754

Source: 2008 Massachusetts Health Reform Survey

Note: ED is emergency department

\* (\*\*) (\*\*\*) Value is significantly different from that for MetroWest at the .10 (.05) (.01) level, two-tailed test. These are simple differences; they are not adjusted for differences in individual characteristics across areas.

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