

A Profile of Health Among Massachusetts Adults In Selected Cities, 2008

Results from the Behavioral Risk Factor Surveillance
System

HEALTH SURVEY PROGRAM
DIVISION OF RESEARCH AND EPIDEMIOLOGY
BUREAU FOR HEALTH INFORMATION,
STATISTICS, RESEARCH, AND EVALUATION
MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH



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Health Survey Program

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TABLE OF CONTENTS

INTRODUCTION	4
About This Report	4
Terms, Definitions, and Statistical Methodology Used in This Report	6
Demographic Profile of BRFSS Population in Selected Cities	8
SUMMARY OF RESULTS	10
STATEWIDE TRENDS	18
RESULTS- DETAILED TABLES, CHARTS, AND MAPS	19
1. Overall Health Measures	20
Section 1.1: General Health Status	21
2. Health Care Access and Utilization	25
Section 2.1: Health Insurance Status	26
Section 2.2: Health Care Access	30
Section 2.3: Dental Health Care	40
3. Risk Factors and Preventive Behaviors	47
Section 3.1: Tobacco Use	48
Section 3.2: Environmental Tobacco Smoke	52
Section 3.3: Binge Drinking	56
Section 3.4: Overweight and Obesity Status	60
Section 3.5: Physical Activity	67
Section 3.6: Flu and Pneumonia Vaccination	71
4. Chronic Health Conditions	78
Section 4.1: Diabetes	79
Section 4.2: Asthma	83
5. Cancer Screening	90
Section 5.1: Colorectal Cancer Screening	91
Section 5.2: Breast Cancer Screening	95
Section 5.3: Cervical Cancer Screening	99
6. Additional Indicators of Health	103
Section 6.1: HIV Testing	104
Section 6.2: Unintentional Falls	108
APPENDIX	112
Estimates for Asian Respondents in Lowell, 2003-2008	113
Limitations	114
References	115

INTRODUCTION

The Behavioral Risk Factor Surveillance System (BRFSS) is a continuous, random-digit-dial, landline-only telephone survey of adults ages 18 and older and is conducted in all states as a collaboration between the federal Centers for Disease Control and Prevention (CDC) and state departments of health. The survey has been conducted in Massachusetts since 1986. The BRFSS collects data on a variety of health risk factors, preventive behaviors, chronic conditions, and emerging public health issues. The information obtained in this survey assists in identifying the need for health interventions, monitoring the effectiveness of existing interventions and prevention programs, developing health policy and legislation, and measuring progress toward attaining state and national health objectives.

Each year, the BRFSS includes a core set of questions developed by the CDC. In 2008, these questions addressed health status, health care access and utilization, overweight and obesity status, asthma, diabetes, immunizations, tobacco use, alcohol consumption, HIV/AIDS testing, and other selected public health topics.

In addition to the core CDC questions, the Massachusetts Health Survey Program, in collaboration with Massachusetts Department of Public Health programs, added a number of topics to the surveillance instrument including environmental tobacco exposure, disability and quality of life, cancer survivorship, sexual violence, and other selected topics.

Interviews were administered in the respondents' preferred language, with a choice of English, Spanish, or Portuguese. In 2008, 20,559 interviews were conducted among Massachusetts adults. To increase the number of respondents who belong to racial and/or ethnic minority groups, the cities of Boston, Worcester, Springfield, Lawrence, Lowell, Fall River, and New Bedford were oversampled, as in previous years.

ABOUT THIS REPORT

This report is the first MA BRFSS publication that summarizes health survey results for selected cities. It not only provides a profile of adult health in those cities, but also analyzes health trends in those cities. This report is supplementary to the statewide annual BRFSS report and aims to provide health behavior data at the sub-state level, targeting specific population groups. It allows policymakers to assess whether there are specific groups of adults who are at risk for chronic conditions or who are more likely to participate in healthy behaviors. The data can be used by local communities for the purpose of planning possible program interventions and informing health policies.

A standard statewide survey makes it difficult to obtain data robust enough to report at the sub-state level. In addition, Massachusetts boasts a diverse population, but the distribution of racial and ethnic groups is not constant across the state. To counter these problems and collect enough data to report at both the sub-state and subgroup levels, the Massachusetts BRFSS oversamples seven Massachusetts cities. These cities were chosen based on their diverse racial and ethnic populations and geographic range. These cities are: Boston, Fall River, Lawrence, Lowell, New Bedford, Springfield and Worcester. These 7 communities comprised 20% of the Massachusetts population; 53%

of the Black, non-Hispanic population; 51% of the Hispanic population; and 30% of the Asian population in 2005 [1].

The Boston Public Health Commission conducts its own biennial BRFSS survey. Due to differences in sample selection, sample size and weighting, results from the Massachusetts BRFSS and Boston BRFSS may differ slightly. For additional information on the Boston BRFSS, please contact the Boston Public Health Commission at 617-534-5395.

In this report, selected indicators are examined for each city in order to ascertain how each city compares to the state of Massachusetts as a whole. Indicators were selected based on their relevance as well as availability of data. Data for each city and the state are presented in map, chart and trend formats, in order to provide a complete picture of how each city fares in selected areas.

It is important to note that these data are not adjusted for age or other socio-demographic population differences. For example, Hispanic populations are younger than their White counterparts and may have lower educational attainment and income status, and thus be more likely to report fair or poor health. Therefore, some of the differences in reported health status are due to differences in the socio-demographic structure of the population. The results for each city are compared to state data for the year 2008 and for the time period from 2000 to 2008.

This report begins with a table summarizing the demographic characteristics (gender, age, race-ethnicity, disability status, education, annual household income) of respondents across the state and in each selected city. Following this table is the Summary of Results, which describes prevalence data for each city for selected health topics and indicators. Only statistically significant differences in prevalence between city and state or statistically significant time trends are discussed (see **Terms etc.** starting on p.6).

The remaining sections of the report focus on selected major health indicators including overall health measures, health care access and utilization, risk factors and preventive behaviors, chronic health conditions, cancer screening, and additional indicators of health. Each section includes a description of the question(s) used to assess the indicator, a map illustrating results for the state and each selected city, state and city tables containing all relevant data for that indicator, and a time trend chart whenever possible.

Maps: Maps were created using ArcMap 9.2 GIS software (Environmental Systems Research Institute, 1999-2006). The maps illustrate how the prevalence of each selected indicator in each oversampled city compares to the statewide prevalence of the indicator. Patterning is used to indicate whether cities are performing statistically “better” (diagonal lines), statistically “worse” (crosshatched lines), or statistically the same as “state average” (stippled dots) for each indicator. The state as a whole has no pattern and serves as the reference for comparison. Readers should be aware that for some indicators, “better” represents a prevalence that is lower than that of the state (for example, binge drinking) whereas for other indicators, “better” represents a prevalence that is higher than that of the state (for example, leisure time physical activity). The terms “better” and “worse” refer to statistically significant differences, while “state average” refers to point estimates which are not statistically different from the state overall

average. Statistical significance is determined as non-overlapping of corresponding 95% confidence intervals (see **Terms etc.** starting on p.6).

Tables: Each section contains two tables containing the prevalence of health indicators grouped by socio- and demographic- characteristics. The table displayed on the same page as the map reports the statewide prevalence data of the indicator in question. The table on the following page reports the prevalence data of the indicator in question for each selected city. The maps and tables are intended to be viewed together, and have been placed on facing pages for greater ease in reading.

Time Trends: Time trends for selected health indicators are presented as both charts and arrow pointers. Charts were created using two-year moving averages, in order to smooth the presented trend lines. For some cities, data are insufficient to calculate trend; as a result the trend line for that city and indicator is not presented. Trend data are also presented using arrows. For each city, arrows indicate whether the 2008 prevalence of the selected indicator is “better” or “worse” than the state (paralleling the maps) as well as whether the 2000-2008 trend for the indicator has increased, decreased or shown no trend. Not all data were available every year for every indicator. For these indicators, time trends could not be calculated and only data for the year 2008 is presented. Note, that the terms “better” and “worse” bear the same statistically significant meaning.

Due to a limited number of respondents, certain demographic characteristics required consolidation of strata or groups in order to provide more accurate estimates and reduce variability. For example, the report’s tables present three age groups instead of seven as in the statewide annual report, three education level categories instead of five as in the statewide annual report, and so on. Additionally, for certain variables, age groupings were consolidated to reflect the current screening recommendations, e.g. colorectal cancer screening is recommended for people ages 50 and over.

TERMS, DEFINITIONS, AND STATISTICAL METHODOLOGY USED IN THIS REPORT

The BRFSS data are **weighted** to take into account differences in probabilities of selection due to the telephone number, the number of telephones in a household, and the number of adults in a household. Adjustments are also made to account for non-response and non-coverage of households without telephones. All the weighting factors are multiplied together to get the final weight for each respondent so that the weighted BRFSS data represents the adult population of Massachusetts. This final, overall weight is appropriate to use for analysis of the questions asked on all three versions of the questionnaire.

The data presented here are crude, univariate, descriptive percentages. No multivariate analysis was performed on this data, and thus this report contains no inferences about causality.

The **crude percentage** is the weighted proportion of respondents in a particular category. When percentages are reported in the text of this report, they are referring to crude percentages. The crude percentage of respondents used in this report reflects the burden of a certain health status indicator in a specific group of the population e.g. age group, gender etc.

The **overall sample size** for 2008 was 20,559. The underlying sample size for each city is presented in the Demographics table starting on p.8.

The **underlying sample size (N)** in each cell of the presented tables is the number of people who answered “yes” or “no” to the corresponding question. The crude percentage is a weighted ratio of those who answered “yes” to the corresponding question versus all who responded to the question.

The **95% confidence interval (95% CI)** is a range of values determined by the degree of variability of the data within which the true value is likely to lie. The confidence interval indicates the precision of a calculation; the wider the interval the less precision in the estimate. The 95% confidence intervals used in this report for crude percentages are the indicators of reliability (or stability) of the estimate. Smaller population subgroups or smaller numbers of respondents yield less precise estimates.

Suppression of the presented estimates:

- a) Estimates and their 95% confidence intervals are not presented in the tables if the underlying sample size is less than 50 respondents.
- b) Following recommendations of the National Center for Health Statistics, data are not presented in the tables (with one exception for no health insurance) if a ratio of standard error to the point estimate exceeds 30% (relative standard error of greater than 30%). Standard error of the estimate is a measure of its variability. Bigger standard errors yield wider confidence intervals and less reliable estimates [2].

Only when there is **statistical significance** (at the 95% probability level) will we use the terms “better,” “worse,” “more likely,” “less likely,” “state average,” “increase” or “decrease.” Differences between percentages for respective subgroups are presented when a difference is statistically significant.

We consider the difference between two percentages to be statistically significant (with 95% probability) if the 95% confidence intervals surrounding the two percentages do not overlap, which is a conservative statistical test for determining statistical significance [3]. We use the terms “**more likely**” or “**less likely**” when comparing percentages that met the criteria for statistical significance.

Time trends are determined using linear regression approximation [2], because many health indicators have low prevalence for certain population groups and fluctuate from year to year. Time trends for each city and for the state overall are shown in the charts in the form of two-year moving averages. Only statistically significant changes in prevalence obtained by analyzing the slope of linear regression are discussed in the summary of results.

Disability is defined as having one or more of the following conditions for at least one year: (1) impairment or health problem that limited activities or caused cognitive difficulties; (2) used special equipment or required help from others to get around; or (3) reported a disability of any kind.

Race-ethnicity categories in this report include White, Black, and Hispanic. Asian respondents are not included due to insufficient sample size. When referring to White or Black, these categories include only non-Hispanic respondents. All respondents reporting Hispanic ethnicity are included in the Hispanic category regardless of race.

DEMOGRAPHIC PROFILE OF BRFSS POPULATION IN SELECTED CITIES, 2008

	STATE TOTAL		BOSTON		SPRINGFIELD		WORCESTER	
	SAMPLE SIZE	WEIGHTED PERCENT						
	N	% [†]						
OVERALL	20559	100.0	2064	100.0	1207	100.0	1247	100.0
GENDER								
MALE	7527	47.7	748	46.9	403	45.1	480	49.3
FEMALE	13032	52.3	1316	53.1	804	54.9	767	50.7
AGE GROUP								
18-34	2741	29.2	335	40.2	220	37.4	196	35.3
35-64	11917	53.2	1193	46.1	653	46.2	701	49.4
65+	5649	17.6	501	13.8	319	16.5	336	15.3
RACE-ETHNICITY*								
WHITE	16645	83.6	1216	52.3	694	50.3	970	72.8
BLACK	1088	4.9	448	24.4	197	19.0	82	8.1
HISPANIC	1952	8.4	279	19.6	270	29.9	137	15.6
DISABILITY								
DISABILITY	4824	21.5	459	20.3	349	26.1	330	23.7
NO DISABILITY	13428	78.5	1380	79.7	720	73.9	774	76.3
EDUCATION								
< HIGH SCHOOL	2235	7.5	236	11.8	197	17.0	141	11.0
HIGH SCHOOL OR SOME COLLEGE	10407	49.6	916	45.8	720	60.3	644	53.1
4+ YRS COLLEGE	7794	42.9	907	42.5	283	22.7	453	35.9
HOUSEHOLD INCOME								
<\$25,000	5247	20.4	593	30.8	465	41.8	365	29.6
\$25,000–74,999	6919	37.4	653	38.3	423	39.1	432	38.4
\$75,000+	5723	42.2	576	31.0	151	19.1	312	32.0

DEMOGRAPHIC PROFILE OF BRFSS POPULATION IN SELECTED CITIES, 2008 (CONTINUED)

	LAWRENCE		LOWELL		FALL RIVER		NEW BEDFORD	
	SAMPLE SIZE	WEIGHTED PERCENT						
	N	% [†]						
OVERALL	763	100.0	1151	100.0	1039	100.0	990	100.0
GENDER								
MALE	232	45.1	440	52.7	339	44.0	340	49.3
FEMALE	531	54.9	711	47.3	700	56.0	650	50.7
AGE GROUP								
18-34	168	43.9	198	40.4	145	34.1	147	38.1
35-64	430	44.4	635	45.2	585	49.3	564	46.3
65+	158	11.7	302	14.4	294	16.7	269	15.6
RACE-ETHNICITY*								
WHITE	291	26.5	870	70.2	937	89.5	745	70.7
BLACK	20	2.5	44	4.8	17	1.9	62	7.2
HISPANIC	440	69.7	170	19.4	62	8.4	114	21.1
DISABILITY								
DISABILITY	185	20.2	295	22.8	281	24.9	296	26.7
NO DISABILITY	491	79.8	719	77.2	635	75.1	603	73.3
EDUCATION								
< HIGH SCHOOL	256	33.3	164	12.0	271	21.8	226	25.3
HIGH SCHOOL OR SOME COLLEGE	369	50.3	629	56.2	602	63.6	580	57.2
4+ YRS COLLEGE	136	16.4	354	31.8	160	14.7	182	17.5
HOUSEHOLD INCOME								
<\$25,000	367	55.1	363	31.0	405	39.3	384	38.9
\$25,000–74,999	212	34.1	419	42.0	353	42.9	343	43.2
\$75,000+	71	10.7	226	27.1	119	17.8	108	17.9

*White, Black, and Asian race categories refer to non-Hispanic; † Insufficient data

SUMMARY OF RESULTS

BOSTON

Boston is one of the oldest cities in the United States and is the largest city by population in Massachusetts. First incorporated as a town in 1630, it is the capital of the state and contains approximately 590,000 residents [1, 4]. Boston is also home to one of the most diverse populations in Massachusetts: in 2008, 52% of BRFSS respondents aged 18 and over were White non-Hispanic, 24% were Black non-Hispanic, and 20% were of Hispanic ethnicity. Below is a summary of results from the 2008 Massachusetts BRFSS for the City of Boston.

Overall health measures

- Adults in Boston (16%) were more likely to report fair or poor health than adults living in Massachusetts overall (12%).

Health care access and utilization

- Adults in Boston were more likely to report that they did not have a personal health care provider (16%) than adults in Massachusetts overall (11%).

Risk factors and preventive behaviors

- Adults in Boston were more likely to report exposure to environmental tobacco smoke (43%) than were adults living in Massachusetts overall (37%).
- Adults age 65 and older who were living in Boston (59%) were less likely to report that they had ever had a pneumonia vaccination than adults living in Massachusetts overall (67%).

Additional indicators of health

- Boston adults ages 18-64 were more likely to report that they had ever had an HIV test (53%) than were adults living in Massachusetts overall (41%).

Time trend between 2000 and 2008

Among adults living in Boston, the rates for the following indicators decreased from 2000 to 2008:

- Exposure to environmental tobacco smoke
- Binge drinking

Among adults living in Boston the rates for the following indicators increased from 2000 to 2008:

- Overweight (including obesity)
- Obesity
- Ever diagnosed with diabetes
- Ever diagnosed with asthma
- Having had sigmoidoscopy or colonoscopy in the past 5 years, among adults ages 50 and older

SPRINGFIELD

Springfield is the third-largest city by population in Massachusetts and is the largest city in Western Massachusetts. It was incorporated as a town in 1641 and as a city in 1852 [5]. In 2005, the population of Springfield was 156,358 [1]. In 2008, 50% of BRFSS respondents aged 18 and over living in Springfield indicated that they were non-Hispanic White, 19% were non-Hispanic Black, and 30% were Hispanic. Below is a summary of results from the 2008 Massachusetts BRFSS for the City of Springfield.

Overall health measures

- Adults in Springfield (22%) were more likely to report fair or poor health than adults living in Massachusetts overall (12%).

Health care access and utilization

- Adults in Springfield were more likely to report that they could not see a doctor due to cost during the past 12 months (11%) than adults in Massachusetts overall (6%).
- Adults living in Springfield were more likely to report that they had six or more teeth missing (21%) than were adults living in Massachusetts overall (14%).

Risk factors and preventive behaviors

- Adults in Springfield were more likely to report that they currently smoke (24%) than were adults living in Massachusetts overall (16%).
- Adults in Springfield were more likely to report exposure to environmental tobacco smoke (45%) than were adults living in Massachusetts overall (37%).
- Adults living in Springfield were more likely to report that they were overweight or obese (65%) than were adults living in Massachusetts overall (58%).
- Adults living in Springfield were more likely to report that they were obese (28%) than were adults living in Massachusetts overall (22%).
- Adults living in Springfield were less likely to report engaging in any leisure time physical activity (67%) than were adults living in Massachusetts overall (78%).

Chronic health conditions

- Adults living in Springfield were more likely to report that they had ever been diagnosed with diabetes (12%) than were adults living in Massachusetts overall (7%).

Cancer screening

- Adults ages 50 and older living in Springfield were less likely to report that they had had a colonoscopy or sigmoidoscopy in the past five years (56%) than were adults living in Massachusetts overall (64%).

Additional indicators of health

- Adults ages 18-64 living in Springfield were more likely to report that they had ever had an HIV test (51%) than were adults living in Massachusetts overall (41%).

Time trend between 2000 and 2008

Among adults living in Springfield, the rates for the following indicators decreased from 2000 to 2008:

- Exposure to environmental tobacco smoke
- Ever tested for HIV, among adults ages 18-64

Among adults living in Springfield the rates for the following indicators increased from 2000 to 2008:

- Obesity
- Any leisure time physical activity
- Ever diagnosed with diabetes
- Ever diagnosed with asthma
- Having had sigmoidoscopy or colonoscopy in the past 5 years among adults ages 50 and older

WORCESTER

Worcester, which was incorporated as a town in 1722 and as a city in 1848, is the second most populous city in Massachusetts. It is approximately 40 miles from Boston and is located in Central Massachusetts. Its place on the Blackstone River cemented it as an important city to the American Industrial Revolution [10]. As of 2005, its population was 179,839 [1]. Approximately 73% of adult respondents to the 2008 MA BRFSS from Worcester reported that they were non-Hispanic White, 8% non-Hispanic Black, and 16% Hispanic. Below is a summary of results from the 2008 Massachusetts BRFSS for the City of Worcester.

Risk factors and preventive behaviors

- Adults living in Worcester were more likely to report that they currently smoke (24%) than were adults living in Massachusetts overall (16%).
- Adults living in Worcester were less likely to report engaging in any leisure time physical activity (72%) than were adults living in Massachusetts overall (78%).

Time trend between 2000 and 2008

Among adults living in Worcester, the rates for the following indicators decreased from 2000 to 2008:

- Current smoking
- Exposure to environmental tobacco smoke

Among adults living in Worcester, the rates for the following indicators increased from 2000 to 2008:

- Overweight (including obese)
- Obesity
- Ever diagnosed with asthma
- Having current asthma
- Having had sigmoidoscopy or colonoscopy in the past 5 years, among those ages 50 years and older

LAWRENCE

Lawrence is located approximately 25 miles north of Boston and was founded in the 1840's as an industrial center for textile mills. Manufacturing still plays a large part in the city's economy [6]. As of 2005, the population in Lawrence was 81,591 [1]. For the 2008 BRFSS, Lawrence had the highest proportion of Hispanic respondents of any selected city: 70% of adult respondents were Hispanic, 3% of respondents were non-Hispanic Black, and 27% of respondents were non-Hispanic White. Below is a summary of results from the 2008 Massachusetts BRFSS for the City of Lawrence.

Overall health measures

- Adults in Lawrence (30%) were more likely to report fair or poor health than adults living in Massachusetts overall (12%).

Health care access and utilization

- Adults ages 18-64 living in Lawrence were four times as likely to report that they did not have health insurance (12%) as were adults living in Massachusetts overall (3%).
- Adults in Lawrence were more likely to report that they did not have a personal health care provider (19%) than were adults living in Massachusetts overall (11%).
- Adults in Lawrence were more likely to report that they could not see a doctor due to cost during the past 12 months (16%) than adults in Massachusetts overall (6%).
- Adults living in Lawrence (72%) were less likely to report a dental visit in the past 12 months than were adults living in Massachusetts overall (78%).
- Adults living in Lawrence were more likely to report that they had six or more teeth missing (19%) than were adults living in Massachusetts overall (14%).

Risk factors and preventive behaviors

- Adults living in Lawrence were more likely to report that they were obese (29%) than were adults living in Massachusetts overall (22%).
- Adults living in Lawrence were less likely to report engaging in any leisure time physical activity (61%) than were adults living in Massachusetts overall (78%).
- Adults in Lawrence ages 65 and older were less likely to report that they had ever had a pneumonia vaccine (48%) than were adults living in Massachusetts overall (67%).

Chronic health conditions

- Adults living in Lawrence were more likely to report that they had ever been diagnosed with diabetes (11%) than were adults living in Massachusetts overall (7%).

Cancer screening

- Adults ages 50 and older living in Lawrence were less likely to report that they had had a colonoscopy or sigmoidoscopy in the past five years (54%) than were adults living in Massachusetts overall (64%).

Additional indicators of health

- Adults ages 18-64 living in Lawrence were more likely to report that they had ever had an HIV test (53%) than were adults living in Massachusetts overall (41%).

Time trend between 2000 and 2008

Among adults living in Lawrence, the rates for the following indicators decreased from 2000 to 2008:

- Exposure to environmental tobacco smoke

Among adults living in Lawrence, the rates for the following indicators increased from 2000 to 2008:

- Ever diagnosed with asthma
- Having current asthma
- Having had sigmoidoscopy or colonoscopy in the past 5 years among those ages 50 years and older

LOWELL

Lowell is a city northwest of Boston that was founded in the 1820s as a planned industrial community focused upon textile production [7]. The 2005 population of Lowell was 105,749 [1]. About 70% of respondents aged 18 and older from Lowell reported that they were non-Hispanic White, 5% were non-Hispanic Black, and 19% were Hispanic. Although Lowell is known to have a large Asian population, specifically those from southeast Asia, the small number of Asian respondents in 2008 prevented calculation of stable estimates for this group for any oversampled city, including Lowell. For more information, see Appendix, starting on p.113.

Below is a summary of results from the 2008 Massachusetts BRFSS for the City of Lowell.

Overall health measures

- Adults in Lowell (17%) were more likely to report fair or poor health than adults living in Massachusetts overall (12%).

Health care access and utilization

- Adults ages 18-64 living in Lowell were more than twice as likely to report that they did not have health insurance (8%) as were adults living in Massachusetts overall (3%).
- Adults in Lowell were more likely to report that they did not have a personal health care provider (16%) than were adults living in Massachusetts overall (11%).
- Adults in Lowell were more likely to report that they could not see a doctor due to cost during the past 12 months (10%) than adults in Massachusetts overall (6%).
- Adults living in Lowell (69%) were less likely to report a dental visit in the past 12 months than were adults living in Massachusetts overall (78%).

Risk factors and preventive behaviors

- Adults living in Lowell were more likely to report that they currently smoke (24%) than were adults living in Massachusetts overall (16%).
- Adults living in Lowell were more likely to report that they were exposed to environmental tobacco smoke (47%) than were adults living in Massachusetts overall (37%).
- Adults living in Lowell were less likely to report engaging in any leisure time physical activity (73%) than were adults living in Massachusetts overall (78%).
- Adults in Lowell ages 65 and older were less likely to report that they had ever had a pneumonia vaccine (56%) than were adults living in Massachusetts overall (67%).

Cancer screening

- Adults ages 50 and older living in Lowell were less likely to report that they had had a colonoscopy or sigmoidoscopy in the past five years (51%) than were adults living in Massachusetts overall (64%).

Time trend between 2000 and 2008

Among adults living in Lowell, the rates for the following indicators decreased from 2000 to 2008:

- Do not have a personal health care provider
- Exposure to environmental tobacco smoke
- Ever had a pneumonia vaccine, among those ages 65 and older

Among adults living in Lowell, the rates for the following indicators increased from 2000 to 2008:

- Overweight (including obesity)
- Obesity
- Having had sigmoidoscopy or colonoscopy in the past 5 years, among those ages 50 years and older

FALL RIVER

Fall River is located on the southeastern coast of Massachusetts. Incorporated as a town in 1803 and as a city in 1854, it is approximately 50 miles from Boston and approximately 20 miles from Providence, Rhode Island. As with some of the other Massachusetts BRFSS oversampled cities, Fall River was also a major center for textile manufacturing in the early 20th century [8]. The population of Fall River in 2005 was 92,117 [1]. Approximately 34% of people who responded to the survey in Portuguese reported that they lived in Fall River. Approximately 90% of adult respondents to the 2008 MA BRFSS from Fall River were White non-Hispanic, 2% were Black non-Hispanic, and 8% were Hispanic. Below is a summary of results from the 2008 Massachusetts BRFSS for the City of Fall River.

Overall health measures

- Adults in Fall River (23%) were more likely to report fair or poor health than adults living in Massachusetts overall (12%).

Health care access and utilization

- Adults in Fall River were more likely to report that they could not see a doctor due to cost during the past 12 months (10%) than adults in Massachusetts overall (6%).
- Adults living in Fall River (66%) were less likely to report a dental visit in the past 12 months than were adults living in Massachusetts overall (78%).
- Adults living in Fall River were more likely to report that they had six or more teeth missing (22%) than were adults living in Massachusetts overall (14%).

Risk factors and preventive behaviors

- Adults living in Fall River were more likely to report that they currently smoke (28%) than were adults living in Massachusetts overall (16%).
- Adults in Fall River were more likely to report that they were exposed to environmental tobacco smoke (47%) than were adults living in Massachusetts overall (37%).
- Adults living in Fall River were more likely to report being overweight or obese (66%) than were adults living in Massachusetts overall (58%).
- Adults living in Fall River were more likely to report that they were obese (32%) than were adults living in Massachusetts overall (22%).
- Adults living in Fall River were less likely to report engaging in any leisure time physical activity (65%) than were adults living in Massachusetts overall (78%).
- Adults living in Fall River ages 65 and older were less likely to report that they had received a flu vaccination in the past year (61%) than were adults living in Massachusetts overall (72%).

Chronic health conditions

- Adults living in Fall River were more likely to report that they had ever been diagnosed with diabetes (11%) than were adults living in Massachusetts overall (7%).

Cancer screening

- Adults ages 50 and older living in Fall River were less likely to report that they had had a colonoscopy or sigmoidoscopy in the past five years (53%) than were adults living in Massachusetts overall (64%).

Time trend between 2000 and 2008

Among adults living in Fall River, the rates for the following indicators decreased from 2000 to 2008:

- Exposure to environmental tobacco smoke
- Ever tested for HIV, among those ages 18-64

Among adults living in Fall River, the rates for the following indicators increased from 2000 to 2008:

- Overweight (including obese)
- Obesity
- Ever had a pneumonia vaccine, among those ages 65 and older
- Having had sigmoidoscopy or colonoscopy in the past 5 years, among those ages 50 years and older

NEW BEDFORD

New Bedford, a city on the south coast of the state that is widely known for its historical role in the whaling industry, was incorporated as a town in 1787 and became a city in 1847 [9]. It is located approximately 60 miles south of Boston and 30 miles southeast of Providence, Rhode Island. In 2005, its population was 94,502 [1]. The city has a large Portuguese-speaking community, and approximately 33% of the overall number of BRFSS respondents who took the survey in Portuguese reported that they live in New Bedford. In 2008, 71% of adult respondents to the MA BRFSS were non-Hispanic White, 7% were non-Hispanic Black, and 21% were of Hispanic ethnicity. Below is a summary of results from the 2008 Massachusetts BRFSS for the City of New Bedford.

Overall health measures

- Adults in New Bedford (26%) were more likely to report fair or poor health than adults living in Massachusetts overall (12%).

Health care access and utilization

- Adults living in New Bedford were more likely to report not having health insurance (11%) than were adults living in Massachusetts overall (3%).
- Adults living in New Bedford (23%) were more likely than adults in Massachusetts overall (11%) to report that they did not have a personal health care provider.
- Adults in New Bedford (13%) were more likely to report that they could not see a doctor due to cost during the past 12 months than adults in Massachusetts overall (6%).
- Adults living in New Bedford (67%) were less likely to report a dental visit in the past 12 months than were adults living in Massachusetts overall (78%).
- Adults living in New Bedford were more likely to report that they had six or more teeth missing (25%) than were adults living in Massachusetts overall (14%).

Risk factors and preventive behaviors

- Adults living in New Bedford were more likely to report that they currently smoke (29%) than were adults living in Massachusetts overall (16%).
- Adults in New Bedford were more likely to report that they were exposed to environmental tobacco smoke (45%) than were adults living in Massachusetts overall (37%).
- Adults living in New Bedford were more likely to report that they were obese (29%) than were adults living in Massachusetts overall (22%).
- Adults living in New Bedford were less likely to report engaging in any leisure time physical activity (65%) than were adults living in Massachusetts overall (78%).
- Adults living in New Bedford ages 65 and older were less likely to report that they had received a flu vaccination in the past year (59%) than were adults living in Massachusetts overall (72%).

Cancer screening

- Adults ages 50 and older living in New Bedford were less likely to report that they had had a colonoscopy or sigmoidoscopy in the past five years (55%) than were adults living in Massachusetts overall (64%).

- Women living in New Bedford were less likely to report that they had had a Pap test in the past three years (77%) than were women in Massachusetts overall (84%).

Time trend between 2000 and 2008

Among adults living in New Bedford, the rates for the following indicators increased from 2000 to 2008:

- Having had sigmoidoscopy or colonoscopy in the past 5 years, among those ages 50 years and older

STATEWIDE TRENDS

Among adults living in Massachusetts, the rates for the following indicators decreased from 2000 to 2008:

- Did not have a personal health care provider
- Current smoking
- Exposure to environmental tobacco smoke
- Having had Pap smear in the past three years
- Ever tested for HIV, among those ages 18-64
- Six or more teeth missing

Among adults living in Massachusetts, the rates for the following indicators increased from 2000 to 2008:

- Overweight (including obese)
- Obesity
- Ever had a pneumonia vaccine, among those ages 65 and older
- Ever diagnosed with diabetes
- Ever diagnosed with asthma
- Having current asthma
- Having had sigmoidoscopy or colonoscopy in the past 5 years, among those ages 50 years and older

RESULTS: DETAILED TABLES, CHARTS, AND GRAPHS

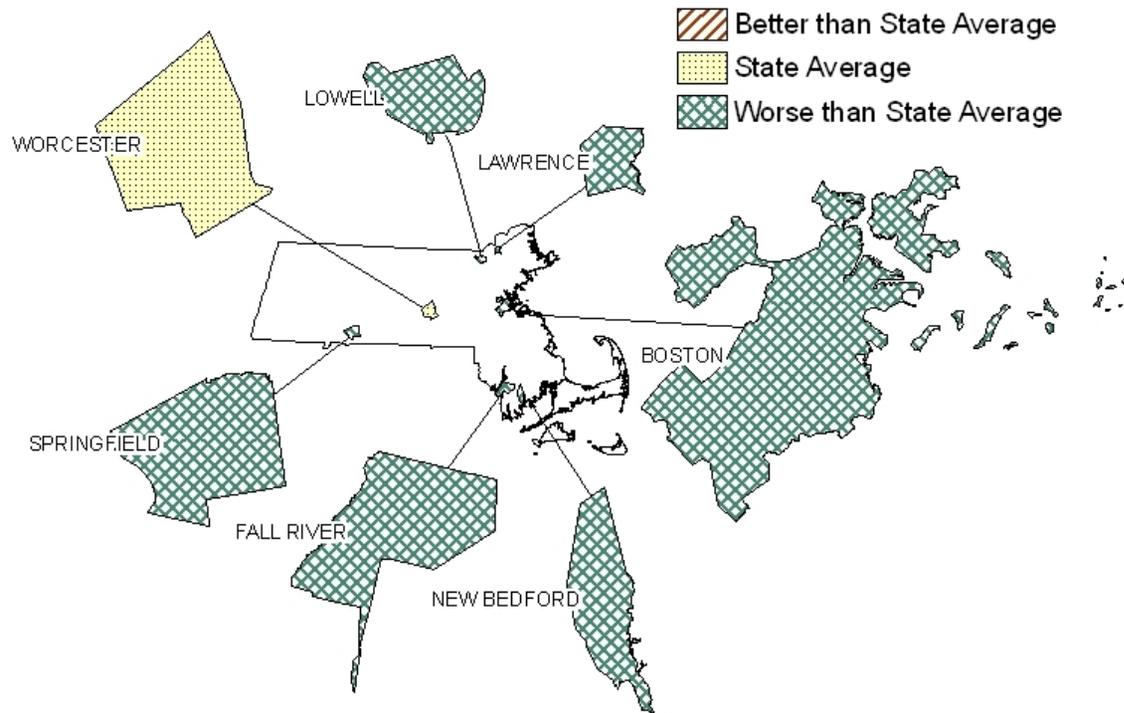
OVERALL HEALTH MEASURES

Section 1.1: General Health Status

General health status is a self-rated assessment of one's perceived health, which may be influenced by all aspects of life, including behaviors, the physical environment, and social factors. Self-assessed health status is a predictor of mortality and morbidity. General health status is useful in determining unmet health needs, identifying disparities among subpopulations, and characterizing the burden of chronic diseases within a population [11].

Respondents were asked to describe their overall health as excellent, very good, good, fair, or poor. Presented here are the percentages of adults who reported that their overall health was fair or poor.

PERCENTAGE OF ADULTS WHO REPORTED FAIR OR POOR HEALTH, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE		
	%	95% CI	
	N=20501		
OVERALL	12.3	11.6	- 13.0
GENDER			
MALE	12.0	10.9	- 13.0
FEMALE	12.6	11.7	- 13.5
AGE GROUP			
18-34	6.9	5.4	- 8.4
35-64	11.5	10.7	- 12.3
65+	23.7	22.2	- 25.3
RACE-ETHNICITY*			
WHITE	10.7	10.1	- 11.4
BLACK	18.3	14.4	- 22.2
HISPANIC	25.7	22.4	- 29.1
DISABILITY			
DISABILITY	34.1	31.9	- 36.2
NO DISABILITY	6.1	5.4	- 6.7
EDUCATION			
< HIGH SCHOOL	35.4	31.1	- 39.7
HIGH SCHOOL OR SOME COLLEGE	14.3	13.3	- 15.2
4+ YRS COLLEGE	6.0	5.2	- 6.7
HOUSEHOLD INCOME			
<\$25,000	29.2	27.1	- 31.2
\$25,000-74,999	11.2	10.0	- 12.3
\$75,000+	3.7	3.1	- 4.3

*White and Black race categories refer to non-Hispanic

†Insufficient data

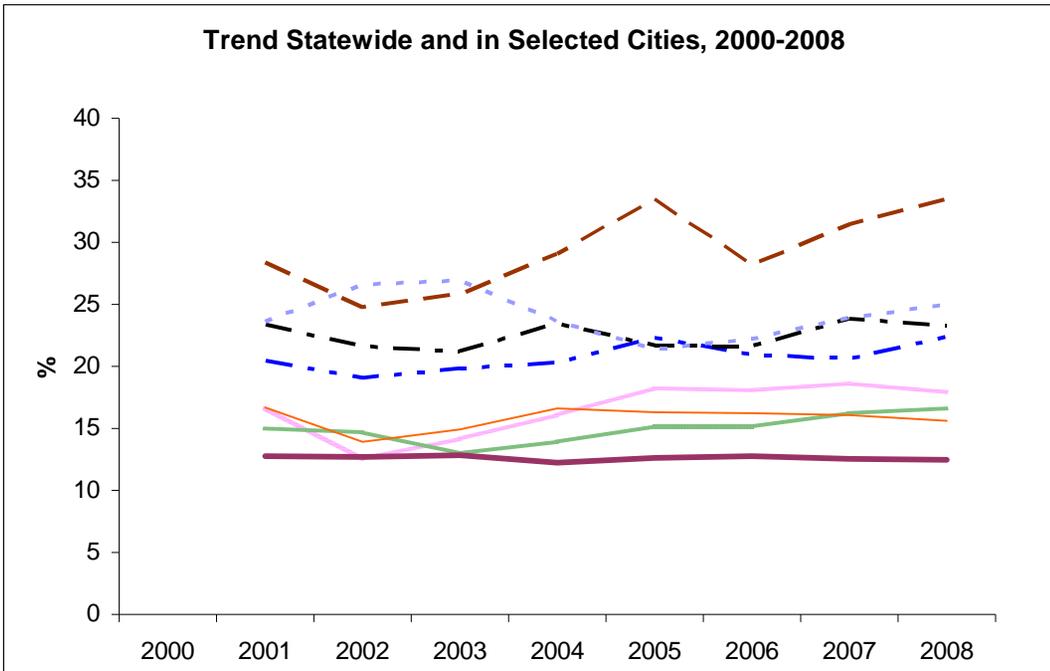
PERCENTAGE OF ADULTS WHO REPORTED FAIR OR POOR HEALTH, 2008

	BOSTON			SPRINGFIELD			WORCESTER			LAWRENCE			LOWELL			FALL RIVER			NEW BEDFORD		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
TOTAL SAMPLE (N)	N=2057			N=1205			N=1244			N=762			N=1150			N=1035			N=983		
OVERALL	16.3	14.0	- 18.5	22.2	19.2	- 25.2	15.4	12.9	- 17.9	30.4	26.3	- 34.5	17.2	14.1	- 20.2	23.2	20.1	- 26.3	26.4	22.6	- 30.3
GENDER																					
MALE	15.0	11.6	- 18.5	19.1	13.8	- 24.4	16.5	12.2	- 20.7	30.8	23.7	- 37.9	15.3	10.7	- 19.9	21.2	16.0	- 26.4	23.6	17.3	- 29.9
FEMALE	17.3	14.4	- 20.3	24.8	21.4	- 28.2	14.4	11.6	- 17.1	30.1	25.3	- 34.9	19.3	15.3	- 23.2	24.8	21.0	- 28.6	29.2	24.9	- 33.6
AGE GROUP																					
18-34	9.2	5.3	- 13.0	13.7	7.9	- 19.6	10.3	5.3	- 15.3	11.2	5.9	- 16.4	10.5	5.0	- 16.0	11.6	6.2	- 17.0	18.1	10.2	- 26.1
35-64	17.9	14.8	- 20.9	22.5	18.8	- 26.2	14.3	11.4	- 17.1	43.9	37.9	- 49.9	17.5	13.6	- 21.5	25.4	21.3	- 29.5	28.4	24.0	- 32.8
65+	31.4	26.5	- 36.3	41.5	35.2	- 47.8	31.1	24.6	- 37.5	51.9	43.0	- 60.8	34.5	27.7	- 41.3	40.1	33.1	- 47.1	41.2	34.4	- 48.1
RACE-ETHNICITY*																					
WHITE	10.2	7.9	- 12.5	13.9	11.2	- 16.7	11.7	9.3	- 14.1	25.4	19.2	- 31.7	13.0	10.5	- 15.5	21.6	18.5	- 24.8	23.7	19.9	- 27.5
BLACK	22.4	16.9	- 27.9	26.0	19.2	- 32.8	17.6	8.1	- 27.0	†			†			†			37.9	21.6	- 54.2
HISPANIC	26.8	19.6	- 34.1	35.5	27.7	- 43.3	28.7	19.4	- 38.0	34.1	28.6	- 39.7	34.1	24.3	- 43.8	38.1	22.9	- 53.4	33.5	21.3	- 45.7
DISABILITY																					
DISABILITY	44.2	37.6	- 50.8	52.7	45.4	- 60.0	39.3	31.8	- 46.8	63.8	53.9	- 73.6	34.7	27.9	- 41.4	52.3	44.2	- 60.3	55.1	46.6	- 63.6
NO DISABILITY	8.5	6.6	- 10.4	11.3	8.1	- 14.4	8.2	5.8	- 10.5	21.8	17.3	- 26.3	11.6	8.1	- 15.1	12.5	9.6	- 15.4	16.7	12.4	- 20.9
EDUCATION																					
< HIGH SCHOOL	36.6	27.0	- 46.3	44.5	35.2	- 53.7	33.7	23.1	- 44.2	50.3	41.9	- 58.8	40.0	30.6	- 49.4	44.0	36.3	- 51.7	40.5	30.9	- 50.2
HIGH SCHOOL OR SOME COLLEGE	18.7	15.5	- 21.9	20.7	16.8	- 24.6	19.2	15.3	- 23.2	21.1	15.9	- 26.3	16.6	12.4	- 20.7	18.2	14.5	- 21.9	23.4	19.0	- 27.8
4+ YRS COLLEGE	7.9	5.0	- 10.9	9.4	6.0	- 12.8	4.2	2.1	- 6.3	18.4	10.8	- 26.0	10.2	5.2	- 15.3	14.3	6.9	- 21.6	16.2	8.9	- 23.5
HOUSEHOLD INCOME																					
<\$25,000	31.6	26.2	- 36.9	39.1	32.9	- 45.3	31.5	25.1	- 38.0	38.2	31.6	- 44.8	31.1	24.0	- 38.1	37.1	30.9	- 43.4	42.3	35.0	- 49.5
\$25,000-74,999	12.1	8.3	- 15.9	11.9	8.6	- 15.2	11.7	7.8	- 15.5	18.5	12.5	- 24.5	14.3	9.8	- 18.9	13.7	9.6	- 17.7	15.5	10.0	- 20.9
\$75,000+	6.0	2.7	- 9.2	†			†			†			†			†			†		

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORTED FAIR OR POOR HEALTH



Data source: MA BRFSS
Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↓	→
SPRINGFIELD	↓	→
WORCESTER	↔	→
LAWRENCE	↓	→
LOWELL	↓	→
FALL RIVER	↓	→
NEW BEDFORD	↓	→
STATEWIDE	---	→

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
→	No trend
↘	Downward trend

*based on 95% statistical significance

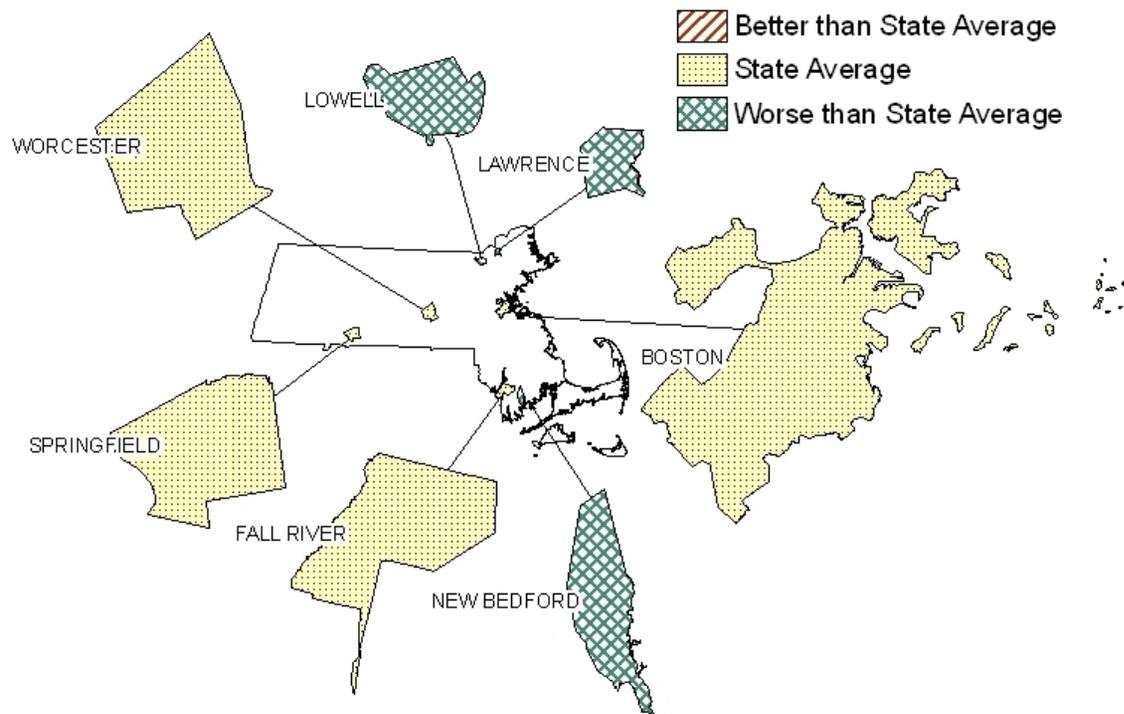
HEALTH CARE ACCESS AND UTILIZATION

Section 2.1: Health Insurance Status

Health insurance status is a key factor affecting access to health care. Adults who do not have health insurance are more likely to have poor health and are at greater risk for chronic diseases than those with health insurance. Those without health insurance are less likely to access health care services, including preventative care, primary care, and tertiary care, and more likely to delay getting needed medical attention [12, 13].

All respondents were asked if they had any type of health care coverage at the time of the interview. Those who indicated that they had no coverage were asked a follow-up question to be certain that they had considered all types of health care coverage. This included health care coverage from their employer or someone else's employer, a plan that they had bought on their own, Medicare, MassHealth, and coverage through the military, or the Indian Health Service. CDC estimates of uninsured adults, based solely upon the CDC core health insurance question, may differ from estimates derived from the Massachusetts BRFSS estimates, which were based on the CDC core health insurance question and the Massachusetts follow-up question.

PERCENTAGE OF ADULTS AGE 18-64 WHO REPORTED THAT THEY DO NOT HAVE HEALTH INSURANCE, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE	
	%	95% CI
	N=14630	
OVERALL	3.3	2.8 - 3.9
GENDER		
MALE	4.8	3.7 - 5.8
FEMALE	1.9	1.5 - 2.4
AGE GROUP		
18-34	5.3	3.9 - 6.6
35-64	2.3	1.8 - 2.7
RACE-ETHNICITY*		
WHITE	2.2	1.7 - 2.7
BLACK	7.5	3.5 - 11.4
HISPANIC	11.0	7.5 - 14.5
DISABILITY		
DISABILITY	2.5	1.6 - 3.5
NO DISABILITY	3.2	2.5 - 3.8
EDUCATION		
< HIGH SCHOOL	9.4	5.6 - 13.2
HIGH SCHOOL OR SOME COLLEGE	4.6	3.7 - 5.5
4+ YRS COLLEGE	1.1	0.5 - 1.7
HOUSEHOLD INCOME		
<\$25,000	9.4	7.4 - 11.4
\$25,000-74,999	3.5	2.4 - 4.5
\$75,000+ ¹	0.4	0.1 - 0.6

¹Due to low prevalence, these data have a relative standard error > 30% and should be interpreted with caution.

*White and Black race categories refer to non-Hispanic

†Insufficient data

PERCENTAGE OF ADULTS AGE 18-64 WHO REPORTED THAT THEY DO NOT HAVE HEALTH INSURANCE, 2008¹

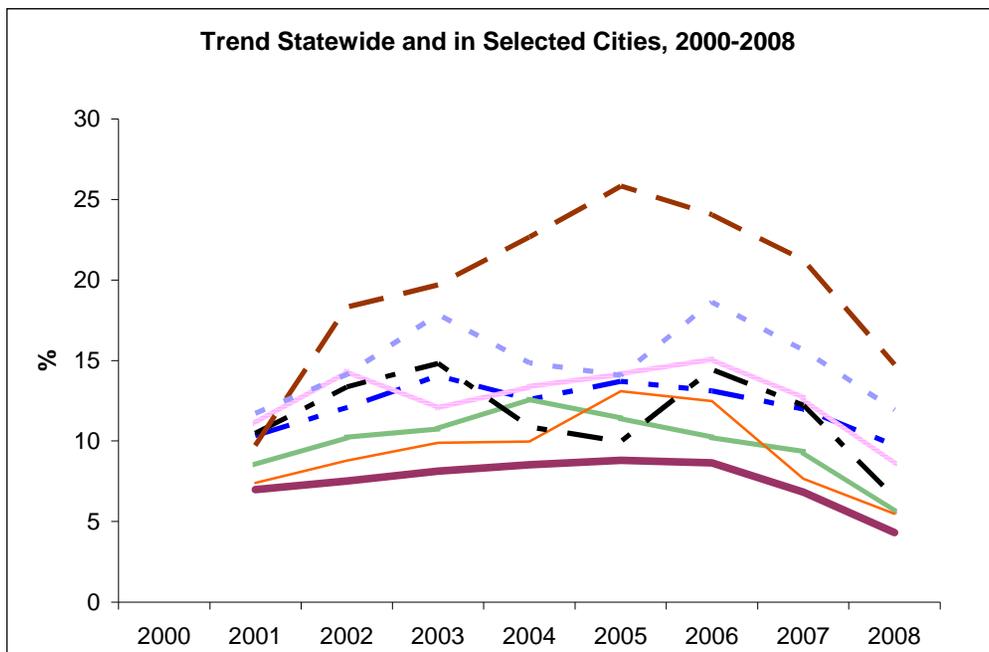
	BOSTON		SPRINGFIELD		WORCESTER		LAWRENCE		LOWELL		FALL RIVER		NEW BEDFORD	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL SAMPLE (N)	N=1524		N=872		N=892		N=598		N=832		N=729		N=710	
OVERALL	3.2	2.0 - 4.5	6.3	3.4 - 9.3	4.5	2.4 - 6.6	11.6	7.8 - 15.4	8.1	4.5 - 11.7	3.4	1.6 - 5.3	11.3	7.0 - 15.5
GENDER														
MALE	4.7	2.4 - 7.0	11.0	5.0 - 17.0	4.6	1.5 - 7.8	17.2	10.4 - 24.0	10.3	4.6 - 16.0	4.8	1.4 - 8.2	17.7	10.2 - 25.1
FEMALE	1.9	0.8 - 2.9	2.3	0.9 - 3.6	4.3	1.5 - 7.1	6.9	3.1 - 10.7	5.4	1.5 - 9.3	2.3	0.6 - 4.0	4.3	1.3 - 7.2
AGE GROUP														
18-34	3.6	1.2 - 6.0	10.4	4.2 - 16.6	8.0	3.2 - 12.8	11.1	5.4 - 16.8	12.8	5.7 - 20.0	5.0	1.0 - 9.0	19.0	10.3 - 27.6
35-64	2.9	1.9 - 4.0	3.1	1.4 - 4.8	2.1	0.8 - 3.3	12.1	7.1 - 17.0	3.9	1.8 - 6.0	2.4	1.0 - 3.7	4.9	2.5 - 7.3
RACE-ETHNICITY*														
WHITE	2.0	0.6 - 3.4	5.0	1.9 - 8.1	2.3	0.6 - 4.0	5.4	0.6 - 10.2	6.4	2.2 - 10.6	2.4	0.8 - 3.9	4.6	2.4 - 6.9
BLACK	2.9	0.8 - 4.9	2.5	0.2 - 4.7	9.0	0.5 - 17.6	†		†		†		†	
HISPANIC	6.8	2.5 - 11.1	11.5	3.6 - 19.4	11.9	2.4 - 21.5	12.9	8.2 - 17.6	11.6	3.5 - 19.7	16.1	2.5 - 29.6	30.7	16.4 - 45.1
DISABILITY														
DISABILITY	5.2	1.3 - 9.1	1.9	0.0 - 4.6	2.7	0.0 - 5.6	7.3	0.9 - 13.7	3.8	0.0 - 7.7	2.2	0.0 - 4.8	2.3	0.0 - 5.1
NO DISABILITY	2.4	1.2 - 3.6	8.5	4.3 - 12.6	5.6	2.7 - 8.6	12.6	8.0 - 17.3	8.7	3.9 - 13.6	4.2	1.6 - 6.7	14.0	8.5 - 19.5
EDUCATION														
< HIGH SCHOOL	12.2	3.5 - 20.9	9.4	2.5 - 16.3	6.9	0.0 - 15.7	24.5	15.4 - 33.7	9.0	2.0 - 16.0	9.7	1.6 - 17.7	19.0	7.3 - 30.6
HIGH SCHOOL OR SOME COLLEGE	2.7	1.2 - 4.3	7.6	3.2 - 12.1	6.4	2.9 - 9.9	6.7	2.9 - 10.5	11.4	5.4 - 17.3	2.4	0.8 - 4.0	9.3	4.6 - 14.0
4+ YRS COLLEGE	1.7	0.7 - 2.7	1.1	0.0 - 3.2	1.2	0.0 - 2.6	3.0	0.0 - 7.9	2.8	0.0 - 5.6	0.5	0.0 - 1.6	7.2	0.0 - 15.3
HOUSEHOLD INCOME														
<\$25,000	7.8	3.8 - 11.8	11.9	4.8 - 18.9	10.5	3.9 - 17.1	17.8	11.1 - 24.4	18.7	7.5 - 29.8	7.6	2.6 - 12.7	5.7	1.2 - 10.2
\$25,000-74,999	2.0	0.6 - 3.4	3.6	0.2 - 7.1	3.6	0.4 - 6.8	5.3	1.0 - 9.5	7.1	2.3 - 12.0	2.0	0.1 - 3.8	12.0	4.9 - 19.0
\$75,000+	0.5	0.0 - 1.3	0		0		2.9	0.0 - 8.6	0.5	0.0 - 1.4	0.3	0.0 - 0.8	11.2	0.1 - 22.3

¹In order to provide adequate data on this topic, data are included for values with a denominator of at least 50 respondents and a relative standard error > 30% in some cases. This data should be interpreted with caution.

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS AGE 18-64 WHO REPORTED THAT THEY DO NOT HAVE HEALTH INSURANCE



Data source: MA BRFSS
 Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	➔
SPRINGFIELD	↔	➔
WORCESTER	↔	➔
LAWRENCE	↓	➔
LOWELL	↓	➔
FALL RIVER	↔	➔
NEW BEDFORD	↓	➔
STATE-WIDE	---	↘

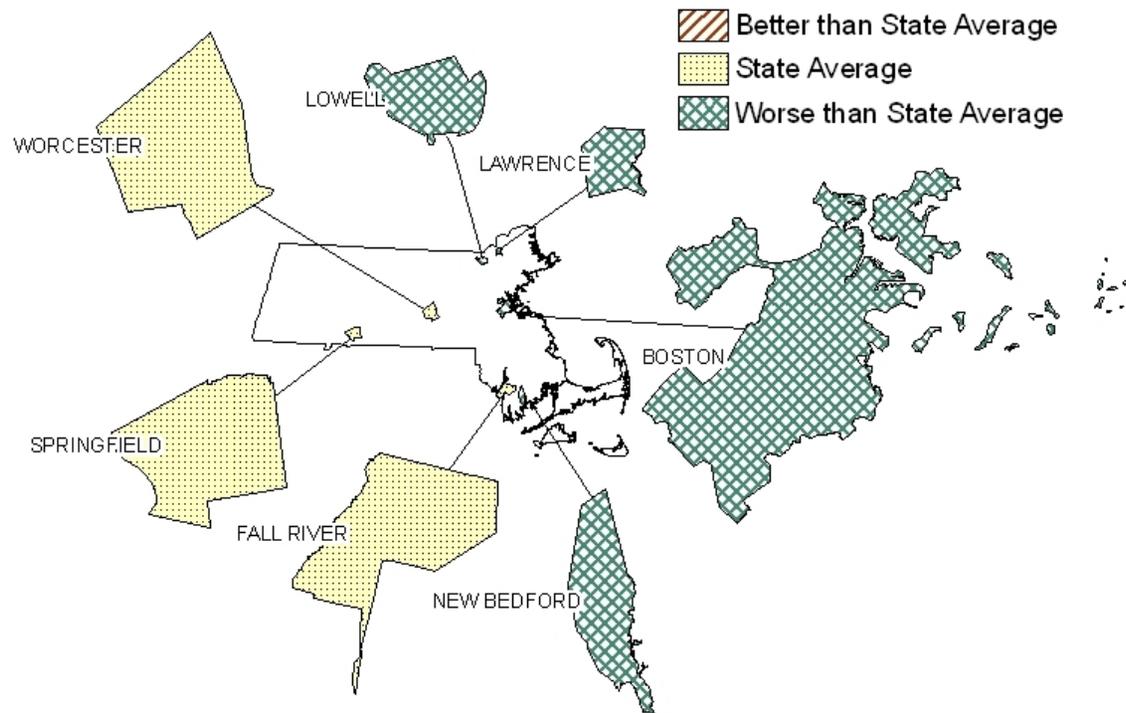
↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
➔	No trend
↘	Downward trend

*based on 95% statistical significance

Section 2.2: Health Care Access

All respondents were asked if they had a person that they thought of as their personal doctor or health care provider. All respondents were also asked whether they were unable to see a doctor in the past year due to cost and whether they had visited a medical provider for a checkup in the past year. Presented here are the percentages of respondents who reported that they did not have a personal health care provider, the percentages of respondents who reported that cost had prevented them from seeing a doctor at some point in the past year, and the percentages of respondents who had visited a medical provider for a checkup in the past year.

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY DID NOT HAVE A PERSONAL CARE PROVIDER, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE		
	%	95% CI	
	N=20515		
OVERALL	10.9	10.0	- 11.8
GENDER			
MALE	14.2	12.7	- 15.7
FEMALE	7.9	7.0	- 8.8
AGE GROUP			
18-34	21.2	18.6	- 23.7
35-64	7.5	6.7	- 8.2
65+	4.3	3.5	- 5.0
RACE-ETHNICITY*			
WHITE	9.0	8.1	- 9.9
BLACK	18.6	13.3	- 23.9
HISPANIC	22.8	19.2	- 26.4
DISABILITY			
DISABILITY	7.7	6.2	- 9.3
NO DISABILITY	11.5	10.5	- 12.5
EDUCATION			
< HIGH SCHOOL	19.9	15.8	- 24.0
HIGH SCHOOL OR SOME COLLEGE	12.5	11.1	- 13.9
4+ YRS COLLEGE	7.5	6.5	- 8.4
HOUSEHOLD INCOME			
<\$25,000	16.9	14.6	- 19.2
\$25,000-74,999	10.5	9.0	- 12.0
\$75,000+	7.2	6.1	- 8.4

*White and Black race categories refer to non-Hispanic
 †Insufficient data

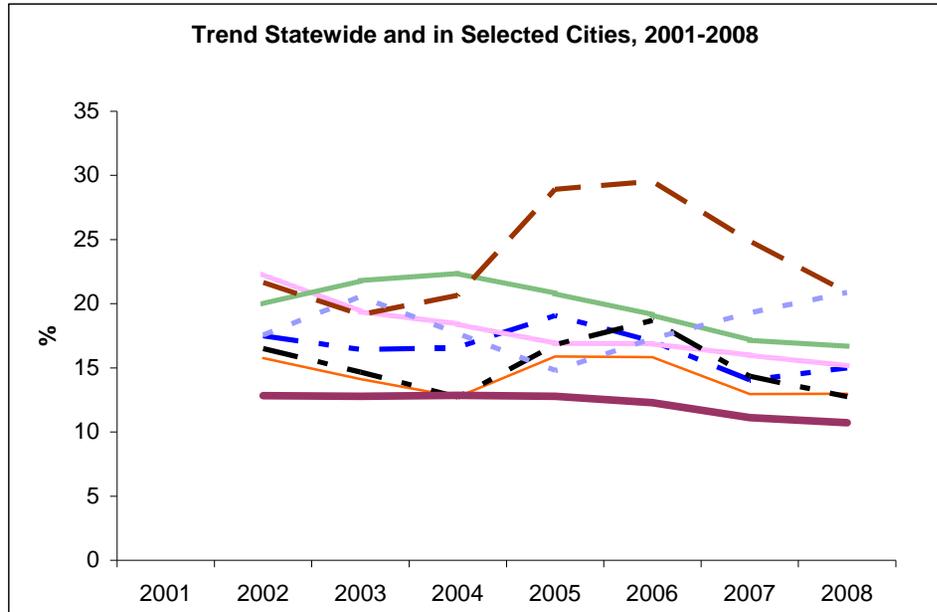
PERCENTAGE OF ADULTS WHO REPORTED THAT THEY DID NOT HAVE A PERSONAL CARE PROVIDER, 2008

	BOSTON			SPRINGFIELD			WORCESTER			LAWRENCE			LOWELL			FALL RIVER			NEW BEDFORD		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
TOTAL SAMPLE (N)	N=2055			N=1203			N=1242			N=762			N=1150			N=1034			N=988		
OVERALL	16.0	13.1	- 19.0	14.6	11.2	- 18.0	13.2	10.0	- 16.3	19.1	14.8	- 23.4	15.9	12.1	- 19.7	13.8	10.4	- 17.2	22.6	17.9	- 27.3
GENDER																					
MALE	22.8	17.6	- 27.9	20.5	14.2	- 26.8	17.5	12.0	- 22.9	26.6	19.0	- 34.1	20.1	13.6	- 26.5	22.0	15.4	- 28.7	31.5	23.6	- 39.4
FEMALE	10.1	7.2	- 13.1	9.8	6.7	- 12.8	9.0	6.1	- 11.9	12.9	8.3	- 17.6	11.2	7.6	- 14.9	7.3	4.7	- 10.0	13.9	9.5	- 18.2
AGE GROUP																					
18-34	26.5	19.8	- 33.2	25.3	17.4	- 33.2	25.5	18.0	- 33.1	23.8	15.8	- 31.8	23.7	15.5	- 31.9	22.2	13.9	- 30.5	40.1	30.1	- 50.1
35-64	10.2	8.0	- 12.5	9.5	6.7	- 12.2	7.4	4.5	- 10.2	17.0	11.7	- 22.3	11.4	7.7	- 15.1	10.7	7.4	- 14.0	14.0	9.8	- 18.2
65+	5.7	2.5	- 9.0	†			†			†			7.9	3.4	- 12.4	†			6.2	3.4	- 9.0
RACE-ETHNICITY*																					
WHITE	11.5	8.3	- 14.7	11.1	7.0	- 15.2	10.8	7.3	- 14.3	11.6	5.4	- 17.9	13.0	8.7	- 17.3	12.5	9.0	- 15.9	15.8	11.2	- 20.4
BLACK	16.3	9.2	- 23.3	12.8	6.5	- 19.1	20.7	8.7	- 32.6	†			†			†			†		
HISPANIC	26.9	18.5	- 35.2	23.3	15.2	- 31.4	18.0	9.1	- 27.0	22.0	16.4	- 27.6	20.4	11.4	- 29.4	28.2	12.9	- 43.6	52.1	39.4	- 64.7
DISABILITY																					
DISABILITY	9.0	5.0	- 12.9	6.2	2.8	- 9.6	†			†			12.3	6.3	- 18.3	†			†		
NO DISABILITY	18.0	14.2	- 21.8	17.0	12.4	- 21.5	15.2	11.2	- 19.3	20.6	15.2	- 26.0	16.2	11.5	- 21.0	16.1	11.6	- 20.5	26.3	20.3	- 32.2
EDUCATION																					
< HIGH SCHOOL	22.8	13.3	- 32.4	24.4	15.3	- 33.5	†			27.0	19.1	- 34.9	16.4	8.5	- 24.2	16.2	8.2	- 24.1	33.4	22.7	- 44.1
HIGH SCHOOL OR SOME COLLEGE	19.3	14.3	- 24.2	13.2	8.7	- 17.8	14.5	9.9	- 19.2	16.6	10.3	- 22.8	18.9	13.0	- 24.7	13.4	9.2	- 17.6	20.0	14.3	- 25.7
4+ YRS COLLEGE	10.7	7.5	- 14.0	10.7	5.5	- 15.9	10.3	5.8	- 14.9	†			11.0	6.6	- 15.5	†			†		
HOUSEHOLD INCOME																					
<\$25,000	18.2	12.9	- 23.6	19.2	12.8	- 25.7	17.2	10.7	- 23.7	22.9	16.1	- 29.6	22.4	13.6	- 31.2	17.1	10.6	- 23.7	23.1	15.7	- 30.4
\$25,000-74,999	15.4	9.8	- 20.9	9.7	5.3	- 14.1	10.7	5.7	- 15.6	16.0	8.9	- 23.0	16.0	10.2	- 21.9	12.5	7.6	- 17.5	21.7	13.9	- 29.5
\$75,000+	10.2	6.5	- 13.9	†			9.9	4.4	- 15.5	†			†			†			22.7	9.9	- 35.6

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY DID NOT HAVE A PERSONAL CARE PROVIDER



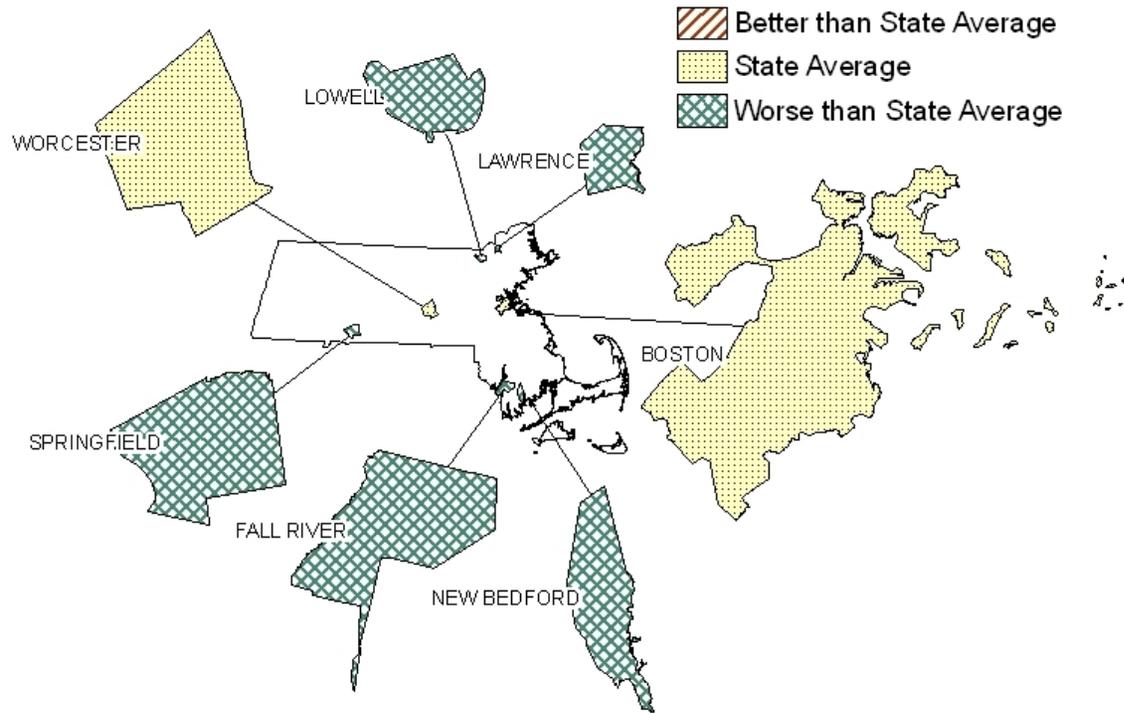
Data source: MA BRFSS
Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2001-2008*
BOSTON	↓	→
SPRINGFIELD	↔	→
WORCESTER	↔	→
LAWRENCE	↓	→
LOWELL	↓	↘
FALL RIVER	↔	→
NEW BEDFORD	↓	→
STATE-WIDE	---	↘

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
→	No trend
↘	Downward trend

*based on 95% statistical significance

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY WERE UNABLE TO SEE A DOCTOR DUE TO COST IN PAST 12 MONTHS, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE		
	%	95% CI	
	N=20504		
OVERALL	6.3	5.7	- 6.9
GENDER			
MALE	6.0	5.1	- 6.8
FEMALE	6.6	5.9	- 7.4
AGE GROUP			
18-34	8.3	6.8	- 9.9
35-64	6.2	5.6	- 6.8
65+	3.3	2.6	- 4.0
RACE-ETHNICITY*			
WHITE	5.0	4.5	- 5.6
BLACK	11.5	8.0	- 15.0
HISPANIC	16.3	13.3	- 19.4
DISABILITY			
DISABILITY	10.6	9.1	- 12.0
NO DISABILITY	5.0	4.3	- 5.6
EDUCATION			
< HIGH SCHOOL	13.7	10.0	- 17.4
HIGH SCHOOL OR SOME COLLEGE	7.8	7.0	- 8.7
4+ YRS COLLEGE	3.3	2.8	- 3.9
HOUSEHOLD INCOME			
<\$25,000	13.3	11.6	- 15.0
\$25,000-74,999	7.3	6.3	- 8.3
\$75,000+	1.7	1.3	- 2.1

*White and Black race categories refer to non-Hispanic

†Insufficient data

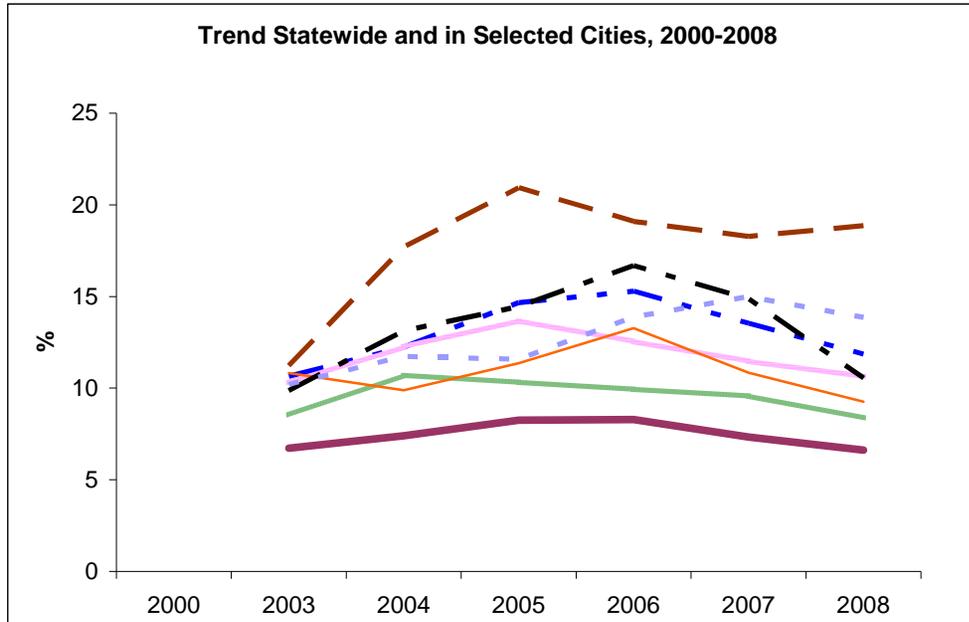
PERCENTAGE OF ADULTS WHO REPORTED THAT THEY HAD BEEN UNABLE TO SEE A DOCTOR DUE TO COST IN PAST 12 MONTHS, 2008

	BOSTON		SPRINGFIELD		WORCESTER		LAWRENCE		LOWELL		FALL RIVER		NEW BEDFORD	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL SAMPLE (N)	N=2056		N=1204		N=1242		N=760		N=1144		N=1036		N=988	
OVERALL	8.4	6.6 - 10.2	11.0	8.3 - 13.7	8.2	5.8 - 10.5	15.9	12.4 - 19.5	10.4	7.7 - 13.1	9.9	7.6 - 12.3	12.5	9.0 - 15.9
GENDER														
MALE	10.1	6.8 - 13.4	12.8	7.8 - 17.8	10.3	6.2 - 14.5	13.7	8.1 - 19.4	9.5	5.4 - 13.5	6.2	3.4 - 9.1	13.6	7.6 - 19.6
FEMALE	6.9	5.2 - 8.6	9.5	7.0 - 12.1	6.1	3.9 - 8.2	17.7	13.3 - 22.2	11.5	8.1 - 14.9	12.8	9.3 - 16.3	11.3	8.0 - 14.7
AGE GROUP														
18-34	8.7	5.2 - 12.1	13.7	7.7 - 19.7	10.2	5.1 - 15.3	15.8	9.3 - 22.2	11.9	6.5 - 17.3	11.1	6.0 - 16.2	19.1	10.9 - 27.2
35-64	9.4	6.9 - 11.8	10.3	7.5 - 13.2	7.6	4.7 - 10.6	18.1	13.5 - 22.7	11.4	8.0 - 14.8	10.5	7.4 - 13.6	10.3	7.5 - 13.1
65+	5.0	2.5 - 7.5	6.8	3.1 - 10.5	†		†		†		4.8	2.2 - 7.3	†	
RACE-ETHNICITY*														
WHITE	5.5	3.7 - 7.4	6.6	3.7 - 9.4	5.7	3.3 - 8.2	8.1	3.8 - 12.3	9.4	6.2 - 12.7	8.5	6.2 - 10.9	9.4	6.4 - 12.4
BLACK	10.6	6.1 - 15.0	12.6	6.5 - 18.7	†		†		†		†		†	
HISPANIC	16.3	10.2 - 22.3	18.0	11.4 - 24.7	13.5	6.4 - 20.7	18.9	14.2 - 23.6	12.6	6.2 - 19.0	†		†	
DISABILITY														
DISABILITY	16.9	11.0 - 22.9	10.7	6.9 - 14.5	16.4	9.0 - 23.8	18.9	11.7 - 26.1	15.6	8.1 - 23.1	17.5	11.1 - 23.9	13.3	7.0 - 19.6
NO DISABILITY	5.6	4.0 - 7.3	11.8	8.1 - 15.5	5.3	3.0 - 7.7	14.5	10.4 - 18.6	8.5	5.7 - 11.4	7.2	4.6 - 9.7	10.8	6.8 - 14.7
EDUCATION														
< HIGH SCHOOL	12.5	6.7 - 18.2	19.9	12.1 - 27.7	†		22.0	15.2 - 28.9	13.6	6.5 - 20.8	14.0	8.5 - 19.5	15.2	6.6 - 23.9
HIGH SCHOOL OR SOME COLLEGE	9.6	6.9 - 12.4	10.8	7.2 - 14.4	10.7	6.8 - 14.6	14.9	9.8 - 20.1	11.9	7.9 - 15.8	9.8	6.7 - 12.8	12.2	8.0 - 16.5
4+ YRS COLLEGE	5.9	3.4 - 8.5	†		3.2	1.3 - 5.1	6.7	2.9 - 10.6	7.0	2.9 - 11.0	†		9.3	4.0 - 14.6
HOUSEHOLD INCOME														
<\$25,000	15.8	11.1 - 20.5	16.1	11.0 - 21.3	12.6	7.2 - 18.1	19.8	14.1 - 25.6	13.6	8.3 - 18.8	15.6	10.6 - 20.6	12.1	7.5 - 16.8
\$25,000-74,999	6.7	4.0 - 9.4	8.6	4.6 - 12.7	9.2	4.8 - 13.6	13.8	7.6 - 19.9	13.3	8.2 - 18.3	7.5	4.2 - 10.8	14.4	8.5 - 20.4
\$75,000+	†		†		†		†		†		†		†	

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY HAD BEEN UNABLE TO SEE A DOCTOR DUE TO COST IN PAST 12 MONTHS



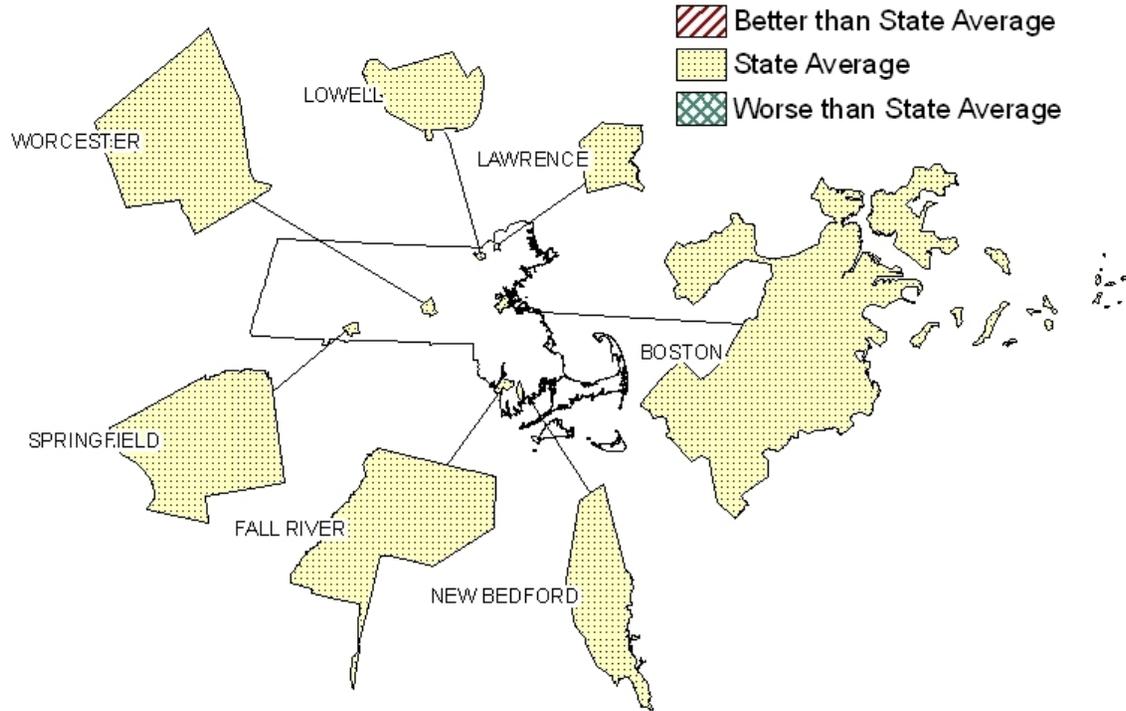
Data source: MA BRFSS
 Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008**
BOSTON	↔	➔
SPRINGFIELD	↓	➔
WORCESTER	↔	➔
LAWRENCE	↓	➔
LOWELL	↓	➔
FALL RIVER	↓	➔
NEW BEDFORD	↓	➔
STATE-WIDE	---	➔

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
➔	No trend
↘	Downward trend

*based on 95% statistical significance

PERCENTAGE OF ADULTS WHO REPORTED HAVING A CHECKUP IN THE PAST YEAR, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE	
	%	95% CI
	N=20402	
OVERALL	79.0	78.0 - 80.0
GENDER		
MALE	75.4	73.7 - 77.0
FEMALE	82.3	81.1 - 83.5
AGE GROUP		
18-34	72.7	70.0 - 75.4
35-64	78.3	77.2 - 79.4
65+	91.6	90.6 - 92.6
RACE-ETHNICITY*		
WHITE	78.8	77.8 - 79.9
BLACK	79.9	75.0 - 84.8
HISPANIC	83.3	80.2 - 86.3
DISABILITY		
DISABILITY	83.9	82.0 - 85.8
NO DISABILITY	76.9	75.7 - 78.2
EDUCATION		
< HIGH SCHOOL	80.9	76.7 - 85.2
HIGH SCHOOL OR SOME COLLEGE	79.8	78.3 - 81.3
4+ YRS COLLEGE	77.8	76.4 - 79.3
HOUSEHOLD INCOME		
<\$25,000	80.8	78.7 - 82.9
\$25,000-74,999	80.0	78.4 - 81.7
\$75,000+	77.2	75.5 - 78.8

*White and Black race categories refer to non-Hispanic
 †Insufficient data

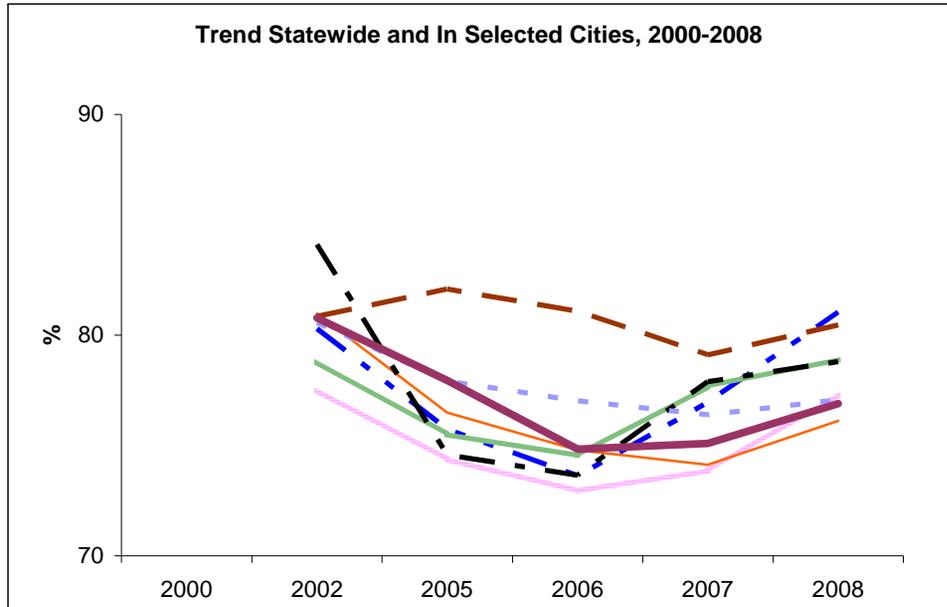
PERCENTAGE OF ADULTS WHO REPORTED HAVING A CHECKUP IN THE PAST YEAR, 2008

	BOSTON			SPRINGFIELD			WORCESTER			LAWRENCE			LOWELL			FALL RIVER			NEW BEDFORD		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
TOTAL SAMPLE (N)	N=2046			N=1195			N=1239			N=757			N=1134			N=1027			N=983		
OVERALL	79.6	76.7	- 82.4	82.9	79.6	- 86.1	78.1	74.5	- 81.7	82.5	78.4	- 86.6	78.1	74.2	- 82.0	80.3	76.4	- 84.2	78.2	73.9	- 82.4
GENDER																					
MALE	72.7	67.9	- 77.5	77.0	71.0	- 83.0	74.3	68.7	- 79.9	79.6	72.7	- 86.5	72.0	65.4	- 78.7	74.2	67.3	- 81.1	71.9	64.5	- 79.3
FEMALE	85.6	82.4	- 88.8	87.8	84.6	- 90.9	81.8	77.1	- 86.5	84.8	80.0	- 89.6	84.9	81.1	- 88.7	85.1	80.9	- 89.3	84.2	80.1	- 88.3
AGE GROUP																					
18-34	73.1	66.7	- 79.6	74.2	66.6	- 81.7	69.6	61.9	- 77.2	78.4	70.5	- 86.4	74.9	66.8	- 83.0	70.8	61.4	- 80.2	67.0	57.5	- 76.4
35-64	81.0	78.2	- 83.7	86.0	82.9	- 89.0	79.1	74.0	- 84.2	83.7	79.0	- 88.5	76.9	72.4	- 81.4	82.5	78.8	- 86.3	81.9	77.7	- 86.0
65+	92.4	89.5	- 95.4	93.5	89.9	- 97.0	95.3	92.7	- 98.0	92.7	88.4	- 97.1	90.5	86.8	- 94.3	92.6	86.7	- 98.5	94.9	92.2	- 97.6
RACE-ETHNICITY*																					
WHITE	73.0	69.0	- 77.0	81.8	77.7	- 86.0	78.3	74.2	- 82.4	76.8	69.8	- 83.7	77.9	73.5	- 82.3	81.2	77.1	- 85.3	82.5	78.5	- 86.5
BLACK	85.6	79.0	- 92.3	86.4	80.4	- 92.5	77.5	65.3	- 89.8	†			†			†			†		
HISPANIC	90.4	85.9	- 94.8	82.6	74.9	- 90.4	84.5	76.2	- 92.8	84.4	79.1	- 89.6	81.6	72.4	- 90.8	72.2	56.5	- 88.0	64.6	51.4	- 77.8
DISABILITY																					
DISABILITY	85.1	80.6	- 89.7	89.6	83.8	- 95.3	90.3	84.6	- 95.9	88.9	80.9	- 96.9	82.2	75.6	- 88.8	81.5	73.4	- 89.7	82.2	75.2	- 89.2
NO DISABILITY	77.0	73.3	- 80.6	80.4	76.2	- 84.7	74.1	69.6	- 78.7	81.6	76.7	- 86.5	76.0	71.2	- 80.8	78.5	73.4	- 83.5	77.6	72.3	- 83.0
EDUCATION																					
< HIGH SCHOOL	94.1	90.9	- 97.2	83.9	75.0	- 92.9	83.0	73.1	- 93.0	88.9	82.9	- 94.8	85.0	77.9	- 92.2	81.0	73.1	- 89.0	74.4	64.4	- 84.3
HIGH SCHOOL OR SOME COLLEGE	79.6	74.8	- 84.4	83.6	79.4	- 87.8	77.8	72.2	- 83.5	79.8	73.5	- 86.1	76.1	70.5	- 81.8	80.5	75.4	- 85.6	79.0	73.6	- 84.3
4+ YRS COLLEGE	75.5	71.4	- 79.6	80.4	74.1	- 86.7	77.4	72.0	- 82.8	77.5	67.7	- 87.3	78.5	72.4	- 84.5	78.3	69.2	- 87.4	81.0	72.6	- 89.5
HOUSEHOLD INCOME																					
<\$25,000	85.4	80.9	- 89.9	85.4	79.3	- 91.4	79.6	73.3	- 85.9	84.1	78.3	- 89.8	79.4	71.2	- 87.5	82.7	76.8	- 88.6	80.4	73.7	- 87.2
\$25,000-74,999	82.8	77.6	- 87.9	80.0	74.8	- 85.1	79.8	74.3	- 85.2	79.5	71.4	- 87.5	73.5	67.3	- 79.7	80.9	75.4	- 86.3	77.5	70.5	- 84.5
\$75,000+	72.3	67.7	- 77.0	84.9	78.8	- 91.0	73.4	66.4	- 80.5	72.5	58.8	- 86.1	80.7	72.6	- 88.8	71.7	57.9	- 85.6	73.9	62.3	- 85.5

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORTED HAVING A CHECKUP IN THE PAST YEAR



Data source: MA BRFSS
Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	➔
SPRINGFIELD	↔	➔
WORCESTER	↔	➔
LAWRENCE	↔	➔
LOWELL	↔	➔
FALL RIVER	↔	➔
NEW BEDFORD	↔	➔
STATE-WIDE	---	➔

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
➔	No trend
↘	Downward trend

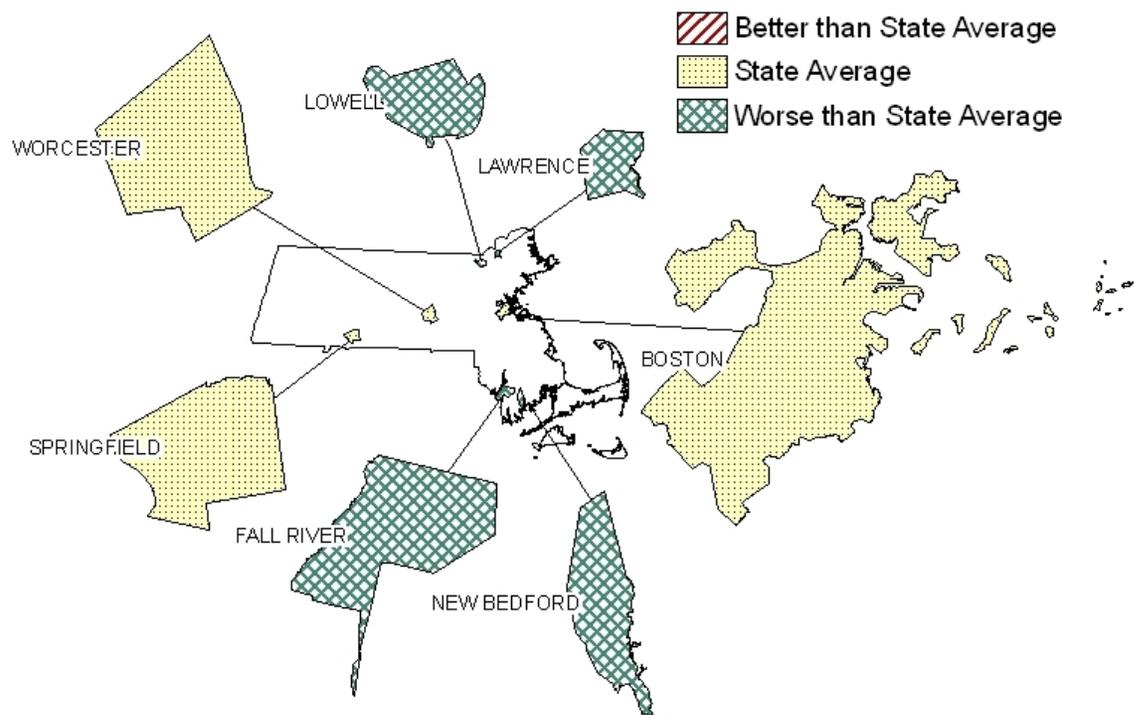
*based on 95% statistical significance

Section 2.3: Dental Health Care

Oral health is an important component of one's general health and well being. Preventive dental services such as teeth cleaning, early diagnosis and treatment of tooth decay and periodontal diseases occur during regular visits to a dental provider. In the United States, one-fourth of adults over age 60 years have lost all of their teeth. The primary cause of tooth loss is tooth decay, affecting more than 90 percent of adults over age 20 years, and advanced gum disease, which affects between 4 to 12 percent of adults [14].

All respondents were asked how long it had been since they had last visited a dentist or a dental clinic. Presented here is the percentage reporting that they had been to a dentist or a dental clinic within the past year. The wording of the question did not differentiate between a routine cleaning and other types of dental work. All respondents were also asked how many of their teeth were missing due to decay or gum disease only. The number of teeth missing due to injury or orthodontic purposes is not included.

PERCENTAGE OF ADULTS WHO REPORTED A DENTAL VISIT IN THE PAST YEAR, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE		
	%	95% CI	
	N=20400		
OVERALL	77.8	76.9	- 78.8
GENDER			
MALE	76.5	75.0	- 78.1
FEMALE	79.0	77.8	- 80.2
AGE GROUP			
18-34	75.4	72.8	- 77.9
35-64	81.2	80.1	- 82.2
65+	71.6	70.0	- 73.3
RACE-ETHNICITY*			
WHITE	79.2	78.1	- 80.2
BLACK	70.5	65.7	- 75.3
HISPANIC	71.6	67.9	- 75.4
DISABILITY			
DISABILITY	70.6	68.5	- 72.8
NO DISABILITY	80.3	79.2	- 81.4
EDUCATION			
< HIGH SCHOOL	55.8	51.2	- 60.4
HIGH SCHOOL OR SOME COLLEGE	74.7	73.2	- 76.1
4+ YRS COLLEGE	85.3	84.0	- 86.6
HOUSEHOLD INCOME			
<\$25,000	60.8	58.3	- 63.2
\$25,000-74,999	76.1	74.4	- 77.9
\$75,000+	87.7	86.2	- 89.1

*White and Black race categories refer to non-Hispanic

†Insufficient data

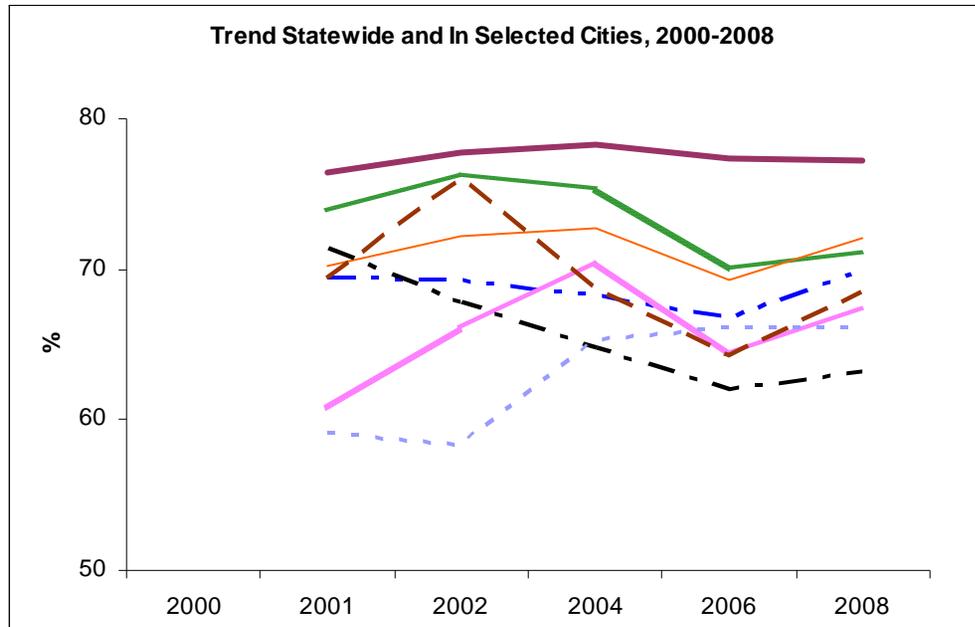
PERCENTAGE OF ADULTS WHO REPORTED A DENTAL VISIT IN THE PAST YEAR, 2008

	BOSTON			SPRINGFIELD			WORCESTER			LAWRENCE			LOWELL			FALL RIVER			NEW BEDFORD		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
TOTAL SAMPLE (N)	N=2051			N=1194			N=1230			N=754			N=1138			N=1030			N=974		
OVERALL	74.9	71.8	- 78.0	73.7	70.2	- 77.1	74.8	71.5	- 78.1	72.3	68.0	- 76.7	69.4	65.3	- 73.5	66.4	62.6	- 70.3	67.0	62.8	- 71.2
GENDER																					
MALE	72.9	67.9	- 77.8	70.6	64.5	- 76.6	72.2	66.7	- 77.6	71.7	64.5	- 79.0	64.0	57.3	- 70.7	67.4	61.1	- 73.6	65.9	58.7	- 73.1
FEMALE	76.7	72.9	- 80.5	76.3	72.5	- 80.0	77.4	73.5	- 81.2	72.8	67.6	- 78.0	75.3	70.9	- 79.7	65.7	60.9	- 70.5	68.1	63.5	- 72.6
AGE GROUP																					
18-34	75.2	68.6	- 81.9	73.4	66.0	- 80.8	73.9	66.7	- 81.2	77.6	69.9	- 85.3	73.1	64.9	- 81.4	75.3	67.0	- 83.6	70.5	61.3	- 79.8
35-64	77.6	74.5	- 80.8	77.5	73.5	- 81.5	77.9	73.8	- 82.0	71.1	65.6	- 76.6	71.8	67.6	- 76.1	64.9	60.3	- 69.5	68.6	63.9	- 73.3
65+	64.5	59.5	- 69.5	63.3	57.0	- 69.6	65.7	59.7	- 71.6	58.4	49.4	- 67.4	51.5	43.8	- 59.1	52.7	45.7	- 59.7	53.4	46.5	- 60.3
RACE-ETHNICITY*																					
WHITE	79.3	75.3	- 83.2	77.0	72.8	- 81.1	77.1	73.4	- 80.9	72.9	66.6	- 79.2	69.2	64.4	- 73.9	66.6	62.5	- 70.7	69.9	65.7	- 74.2
BLACK	69.7	62.7	- 76.8	68.6	60.6	- 76.6	58.9	45.2	- 72.6	†			†			†			67.2	48.2	- 86.2
HISPANIC	71.0	63.3	- 78.6	70.0	61.9	- 78.1	72.1	62.3	- 82.0	72.7	67.1	- 78.4	74.3	65.0	- 83.6	61.9	46.4	- 77.5	60.2	47.3	- 73.2
DISABILITY																					
DISABILITY	69.5	63.8	- 75.2	64.7	57.8	- 71.5	68.8	61.7	- 75.9	69.0	60.3	- 77.8	60.0	51.9	- 68.1	58.4	50.5	- 66.2	60.0	52.1	- 67.9
NO DISABILITY	77.6	73.9	- 81.3	77.4	73.0	- 81.7	75.2	71.0	- 79.4	72.4	67.0	- 77.8	71.4	66.2	- 76.6	69.6	64.8	- 74.5	70.0	64.6	- 75.4
EDUCATION																					
< HIGH SCHOOL	67.1	58.2	- 76.0	50.4	40.8	- 60.0	61.9	50.5	- 73.2	66.9	59.3	- 74.5	52.0	42.0	- 62.1	46.2	38.2	- 54.3	57.6	48.0	- 67.1
HIGH SCHOOL OR SOME COLLEGE	70.2	65.3	- 75.0	75.6	71.4	- 79.9	74.3	69.5	- 79.0	72.5	66.1	- 79.0	65.0	59.2	- 70.8	70.1	65.2	- 75.1	67.2	61.8	- 72.7
4+ YRS COLLEGE	82.1	77.7	- 86.6	85.2	79.4	- 91.0	79.3	74.0	- 84.6	82.6	74.1	- 91.2	84.0	79.0	- 88.9	80.8	72.2	- 89.5	79.4	71.3	- 87.4
HOUSEHOLD INCOME																					
<\$25,000	65.3	59.8	- 70.9	62.7	56.2	- 69.2	64.5	57.9	- 71.1	69.8	63.3	- 76.3	57.8	49.4	- 66.2	57.9	51.4	- 64.5	57.3	50.0	- 64.6
\$25,000-74,999	75.7	69.7	- 81.8	80.5	75.8	- 85.2	75.7	69.8	- 81.7	72.5	64.6	- 80.3	68.3	62.0	- 74.6	68.9	62.7	- 75.1	69.6	62.6	- 76.7
\$75,000+	86.9	82.6	- 91.2	86.8	79.6	- 94.1	82.3	76.5	- 88.2	85.5	75.7	- 95.3	84.7	78.6	- 90.9	82.8	71.0	- 94.7	84.1	74.7	- 93.5

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORTED A DENTAL VISIT IN THE PAST YEAR



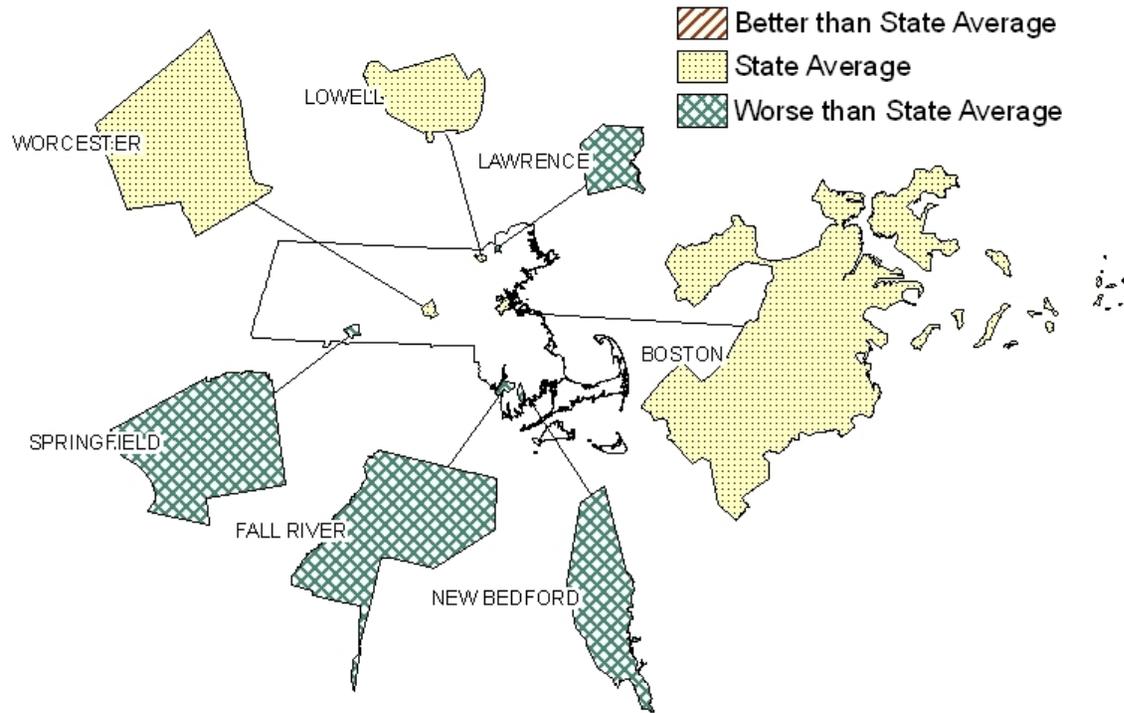
Data source: MA BRFSS
Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	➔
SPRINGFIELD	↔	➔
WORCESTER	↔	➔
LAWRENCE	↓	➔
LOWELL	↓	➔
FALL RIVER	↓	➔
NEW BEDFORD	↓	➔
STATE-WIDE	---	➔

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
➔	No trend
↘	Downward trend

*based on 95% statistical significance

PERCENTAGE OF ADULTS WHO REPORT THAT THEY HAVE SIX OR MORE TEETH MISSING, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATE-WIDE	
	%	95% CI
TOTAL N	N=20049	
OVERALL	14.4	13.7 - 15.0
GENDER		
MALE	13.6	12.6 - 14.6
FEMALE	15.1	14.3 - 15.9
AGE GROUP		
18-34	2.1	1.4 - 2.8
35-64	11.8	11.0 - 12.6
65+	43.9	42.0 - 45.8
RACE-ETHNICITY*		
WHITE	14.7	14.0 - 15.4
BLACK	18.8	15.1 - 22.4
HISPANIC	12.1	10.2 - 14.1
DISABILITY		
DISABILITY	28.0	26.0 - 29.9
NO DISABILITY	10.3	9.6 - 10.9
EDUCATION		
< HIGH SCHOOL	33.1	29.4 - 36.8
HIGH SCHOOL OR SOME COLLEGE	18.4	17.3 - 19.4
4+ YRS COLLEGE	6.5	5.8 - 7.2
HOUSEHOLD INCOME		
<\$25,000	31.0	28.9 - 33.1
\$25,000-74,999	16.0	14.8 - 17.2
\$75,000+	5.0	4.3 - 5.7

*White and Black race categories refer to non-Hispanic

†Insufficient data

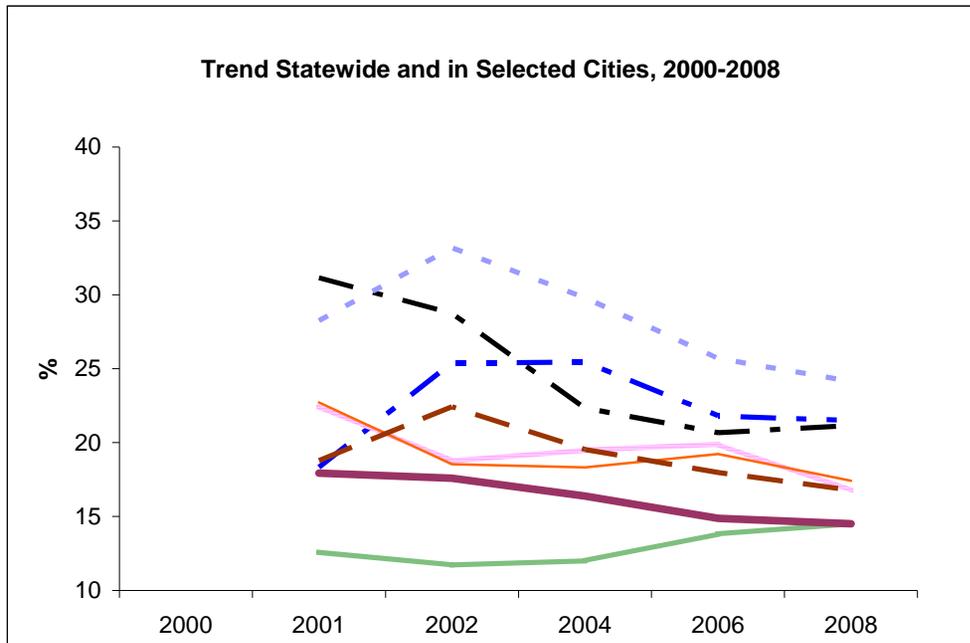
PERCENTAGE OF ADULTS WHO REPORT THAT THEY HAVE SIX OR MORE TEETH MISSING, 2008

	BOSTON			SPRINGFIELD			WORCESTER			LAWRENCE			LOWELL			FALL RIVER			NEW BEDFORD		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
TOTAL SAMPLE (N)	N=2007			N=1181			N=1205			N=743			N=1116			N=1012			N=966		
OVERALL	14.3	12.6	- 16.0	21.0	18.3	- 23.8	16.7	14.3	- 19.1	18.5	15.4	- 21.7	16.4	14.0	- 18.8	21.5	18.7	- 24.3	25.0	21.5	- 28.4
GENDER																					
MALE	12.3	9.9	- 14.7	17.4	13.0	- 21.8	14.5	10.8	- 18.1	18.4	12.9	- 23.8	13.8	10.2	- 17.4	17.3	12.9	- 21.6	20.7	15.0	- 26.3
FEMALE	16.0	13.7	- 18.4	24.0	20.5	- 27.4	18.9	15.8	- 21.9	18.7	15.1	- 22.3	19.2	16.1	- 22.3	24.9	21.2	- 28.6	29.1	25.0	- 33.2
AGE GROUP																					
18-34	†			†			†			†			†			†			†		
35-64	15.3	12.9	- 17.8	22.3	18.4	- 26.3	17.0	13.5	- 20.5	22.1	17.2	- 27.1	19.0	15.4	- 22.6	22.9	19.2	- 26.7	27.2	22.7	- 31.7
65+	53.3	47.9	- 58.7	57.1	50.7	- 63.5	49.8	43.1	- 56.4	60.8	52.1	- 69.5	50.6	42.7	- 58.5	53.3	46.3	- 60.4	62.0	55.4	- 68.6
RACE-ETHNICITY*																					
WHITE	12.9	10.8	- 14.9	22.5	18.5	- 26.5	16.0	13.5	- 18.4	32.4	25.9	- 38.9	18.7	15.7	- 21.7	20.8	18.0	- 23.6	26.6	22.6	- 30.6
BLACK	21.3	16.9	- 25.6	24.0	17.4	- 30.6	21.5	9.5	- 33.5	†			†			†			28.4	14.7	- 42.1
HISPANIC	11.1	7.3	- 14.9	17.8	12.9	- 22.7	20.7	12.3	- 29.0	14.0	10.4	- 17.7	16.4	9.6	- 23.2	†			17.8	8.4	- 27.3
DISABILITY																					
DISABILITY	28.7	23.6	- 33.7	35.5	29.1	- 42.0	31.3	24.4	- 38.2	39.2	29.9	- 48.5	31.2	24.4	- 37.9	38.7	31.3	- 46.1	37.7	29.9	- 45.5
NO DISABILITY	10.2	8.6	- 11.9	14.9	11.8	- 18.0	12.7	10.2	- 15.2	13.9	10.5	- 17.3	13.0	10.3	- 15.7	15.7	12.7	- 18.7	20.0	15.9	- 24.0
EDUCATION																					
< HIGH SCHOOL	29.6	21.6	- 37.6	30.4	23.0	- 37.9	30.7	20.6	- 40.7	26.5	19.9	- 33.1	31.6	23.2	- 40.1	42.1	34.6	- 49.6	34.6	25.8	- 43.3
HIGH SCHOOL OR SOME COLLEGE	17.9	15.1	- 20.6	21.4	17.7	- 25.1	20.6	16.9	- 24.4	16.3	12.2	- 20.4	17.8	14.5	- 21.1	15.6	12.6	- 18.7	24.1	19.6	- 28.5
4+ YRS COLLEGE	6.1	4.5	- 7.8	12.2	8.0	- 16.4	6.8	4.6	- 9.0	8.9	3.8	- 14.0	7.5	4.6	- 10.5	16.2	8.5	- 23.9	14.3	8.6	- 20.0
HOUSEHOLD INCOME																					
<\$25,000	23.9	19.7	- 28.1	28.0	23.1	- 33.0	29.1	23.3	- 34.9	20.9	16.0	- 25.7	27.3	21.2	- 33.4	33.5	27.8	- 39.1	32.2	26.1	- 38.3
\$25,000-74,999	13.5	10.5	- 16.6	17.4	12.8	- 21.9	16.6	12.2	- 21.1	17.8	12.3	- 23.4	14.8	11.3	- 18.3	13.7	9.9	- 17.5	23.4	17.3	- 29.6
\$75,000+	4.8	3.1	- 6.4	12.1	5.7	- 18.5	5.4	3.1	- 7.7	†			5.3	2.7	- 7.9	†			†		

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORT THAT THEY HAVE SIX OR MORE TEETH MISSING



Data source: MA BRFSS
 Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	➔
SPRINGFIELD	↓	➔
WORCESTER	↔	➔
LAWRENCE	↓	➔
LOWELL	↔	➔
FALL RIVER	↓	➔
NEW BEDFORD	↓	➔
STATE-WIDE	---	↘

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
➔	No trend
↘	Downward trend

*based on 95% statistical significance

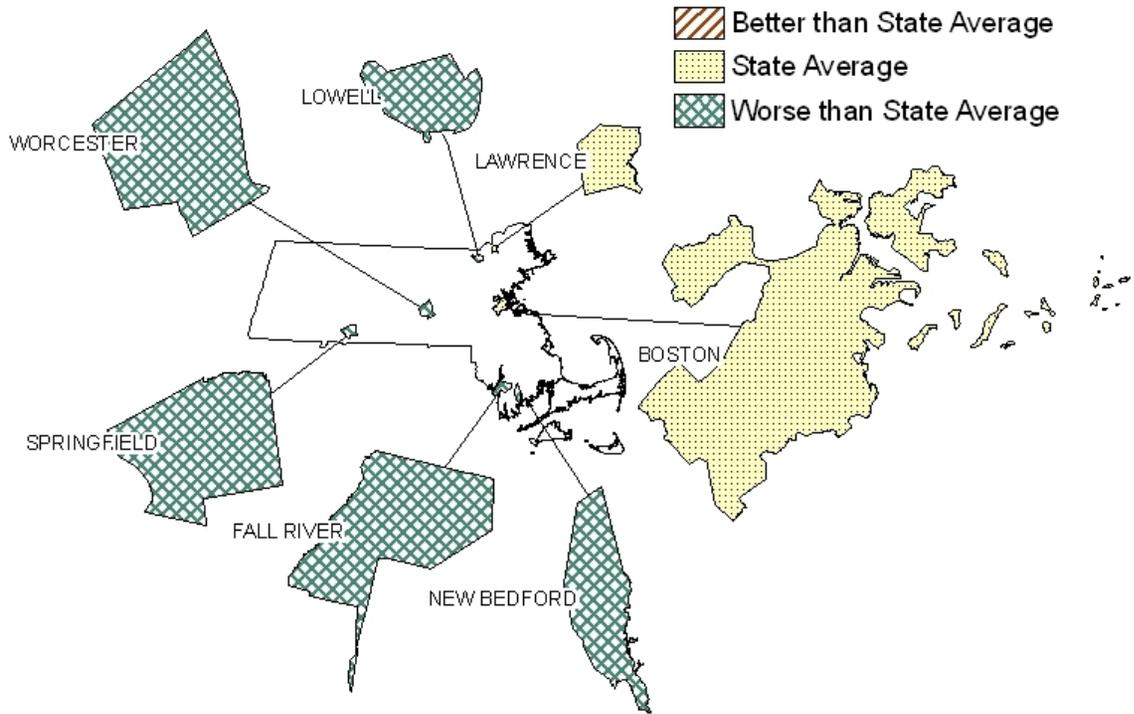
RISK FACTORS AND PREVENTIVE BEHAVIORS

Section 3.1: Tobacco Use

Tobacco use is the leading preventable cause of death in the United States, resulting in approximately 440,000 deaths each year. More than 8.6 million people in the United States have at least one serious illness caused by smoking. It is a major risk factor for cancer, heart, and lung diseases [15]. In Massachusetts, more than 9,000 residents die each year from the effects of tobacco. The health and economic burden of tobacco use has resulted in more than 3.9 billion dollars per year in health care costs in Massachusetts. The Massachusetts Tobacco Control Program was established in 1993 to control tobacco use and since the implementation of the program, the number of adults who smoke in Massachusetts has declined [16].

A current smoker was defined as someone who has smoked at least 100 cigarettes in their lifetime and who currently smokes either some days or everyday. Presented here is the percentage of adults who reported being current smokers.

PERCENTAGE OF ADULTS WHO REPORT THAT THEY CURRENTLY SMOKE, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE		
	%	95% CI	
	N=20436		
OVERALL	16.1	15.2	- 17.0
GENDER			
MALE	16.9	15.4	- 18.4
FEMALE	15.4	14.3	- 16.5
AGE GROUP			
18-34	19.9	17.4	- 22.4
35-64	16.7	15.7	- 17.7
65+	8.2	7.1	- 9.2
RACE-ETHNICITY*			
WHITE	16.2	15.2	- 17.2
BLACK	18.7	14.3	- 23.2
HISPANIC	14.9	11.9	- 17.9
DISABILITY			
DISABILITY	23.0	20.8	- 25.3
NO DISABILITY	13.6	12.6	- 14.6
EDUCATION			
< HIGH SCHOOL	29.5	24.8	- 34.1
HIGH SCHOOL OR SOME COLLEGE	21.3	19.9	- 22.8
4+ YRS COLLEGE	7.7	6.8	- 8.7
HOUSEHOLD INCOME			
<\$25,000	24.9	22.6	- 27.2
\$25,000-74,999	17.5	16.0	- 19.0
\$75,000+	11.4	10.0	- 12.8

*White and Black race categories refer to non-Hispanic

†Insufficient data

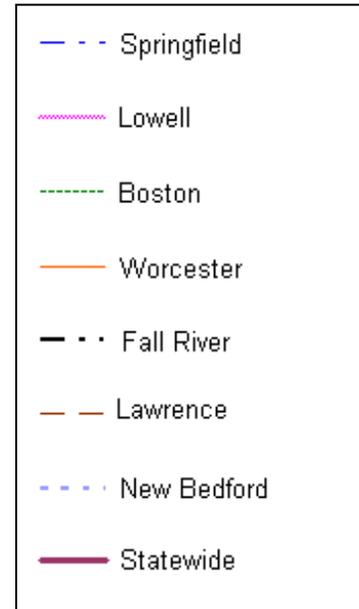
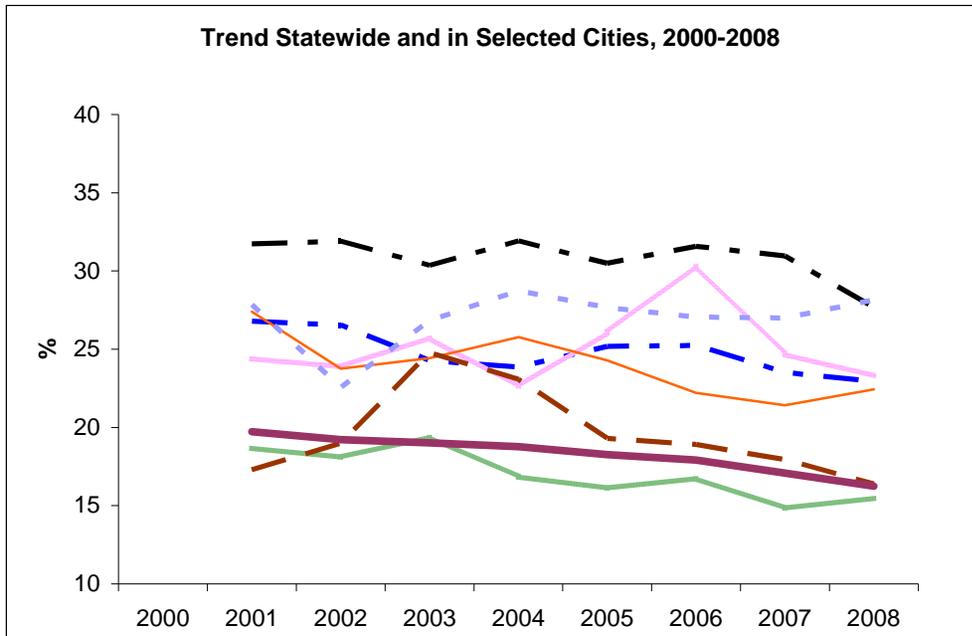
PERCENTAGE OF ADULTS WHO REPORT THAT THEY CURRENTLY SMOKE, 2008

	BOSTON			SPRINGFIELD			WORCESTER			LAWRENCE			LOWELL			FALL RIVER			NEW BEDFORD		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
TOTAL SAMPLE (N)	N=2053			N=1201			N=1238			N=761			N=1144			N=1036			N=986		
OVERALL	16.8	13.8	- 19.9	23.8	20.2	- 27.4	23.7	20.1	- 27.4	15.6	12.1	- 19.0	24.2	20.1	- 28.4	28.2	24.4	- 32.0	28.7	24.6	- 32.8
GENDER																					
MALE	16.3	11.7	- 20.9	30.0	23.5	- 36.5	24.6	19.0	- 30.1	17.8	11.9	- 23.6	28.6	21.8	- 35.4	30.3	23.9	- 36.7	30.4	23.5	- 37.3
FEMALE	17.3	13.2	- 21.5	18.7	15.2	- 22.2	22.9	18.0	- 27.8	13.8	9.7	- 17.9	19.4	15.2	- 23.5	26.5	22.0	- 31.0	26.9	22.5	- 31.4
AGE GROUP																					
18-34	16.0	9.2	- 22.8	31.7	23.7	- 39.6	29.1	21.4	- 36.9	15.5	9.0	- 22.1	30.6	21.6	- 39.5	31.3	22.8	- 39.8	33.6	24.4	- 42.7
35-64	19.4	16.4	- 22.4	22.8	19.0	- 26.7	25.1	20.2	- 30.0	17.0	12.8	- 21.2	23.9	19.7	- 28.2	31.2	26.7	- 35.8	30.7	26.1	- 35.3
65+	10.9	7.7	- 14.1	10.0	6.0	- 14.0	8.2	5.2	- 11.2	9.7	6.0	- 13.5	8.7	5.0	- 12.5	13.4	6.9	- 20.0	11.8	7.5	- 16.1
RACE-ETHNICITY*																					
WHITE	16.6	12.8	- 20.3	25.1	20.3	- 30.0	25.4	21.3	- 29.6	21.7	15.9	- 27.5	23.2	18.6	- 27.8	27.1	23.1	- 31.0	31.3	26.5	- 36.1
BLACK	16.8	11.8	- 21.9	18.0	12.2	- 23.8	21.2	11.0	- 31.4	†			†			†			18.8	8.3	- 29.3
HISPANIC	18.3	7.6	- 29.0	27.4	19.2	- 35.6	14.5	7.2	- 21.7	12.2	8.1	- 16.3	21.3	12.6	- 30.1	31.3	16.6	- 46.0	22.0	11.0	- 33.0
DISABILITY																					
DISABILITY	28.1	21.7	- 34.4	30.2	22.4	- 38.0	30.3	23.1	- 37.5	18.7	11.5	- 25.8	28.0	20.8	- 35.2	39.2	31.2	- 47.3	41.6	33.1	- 50.1
NO DISABILITY	11.5	9.0	- 14.0	19.9	15.7	- 24.0	19.6	15.6	- 23.6	11.9	8.5	- 15.2	21.4	16.2	- 26.6	24.1	19.7	- 28.6	24.2	19.4	- 29.1
EDUCATION																					
< HIGH SCHOOL	22.2	11.1	- 33.2	36.9	27.0	- 46.7	36.3	24.4	- 48.1	15.1	8.5	- 21.6	29.4	19.4	- 39.4	31.9	24.5	- 39.3	28.8	20.2	- 37.4
HIGH SCHOOL OR SOME COLLEGE	20.2	16.4	- 24.0	24.7	20.0	- 29.5	30.2	24.6	- 35.7	15.5	10.8	- 20.2	31.9	25.8	- 37.9	30.4	25.3	- 35.4	31.5	26.1	- 37.0
4+ YRS COLLEGE	11.7	6.5	- 17.0	11.8	6.8	- 16.8	10.7	6.4	- 15.0	16.9	9.1	- 24.6	9.7	5.3	- 14.2	13.5	6.2	- 20.8	19.1	10.3	- 28.0
HOUSEHOLD INCOME																					
<\$25,000	23.2	17.4	- 29.1	28.8	22.7	- 35.0	32.9	26.0	- 39.8	13.9	9.3	- 18.6	37.7	28.8	- 46.5	35.5	29.0	- 42.0	36.7	29.5	- 43.9
\$25,000-74,999	17.9	11.4	- 24.4	25.3	19.0	- 31.6	22.7	17.0	- 28.3	17.9	10.7	- 25.1	25.4	19.3	- 31.6	32.4	25.9	- 38.9	30.5	24.1	- 36.9
\$75,000+	9.1	6.1	- 12.2	15.4	8.8	- 22.0	18.2	12.1	- 24.2	†			11.2	6.0	- 16.5	17.6	8.9	- 26.3	19.0	8.3	- 29.8

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORT THAT THEY CURRENTLY SMOKE



Data source: MA BRFSS
 Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	→
SPRINGFIELD	↓	→
WORCESTER	↓	↘
LAWRENCE	↔	→
LOWELL	↓	→
FALL RIVER	↓	→
NEW BEDFORD	↓	→
STATE-WIDE	---	↘

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
→	No trend
↘	Downward trend

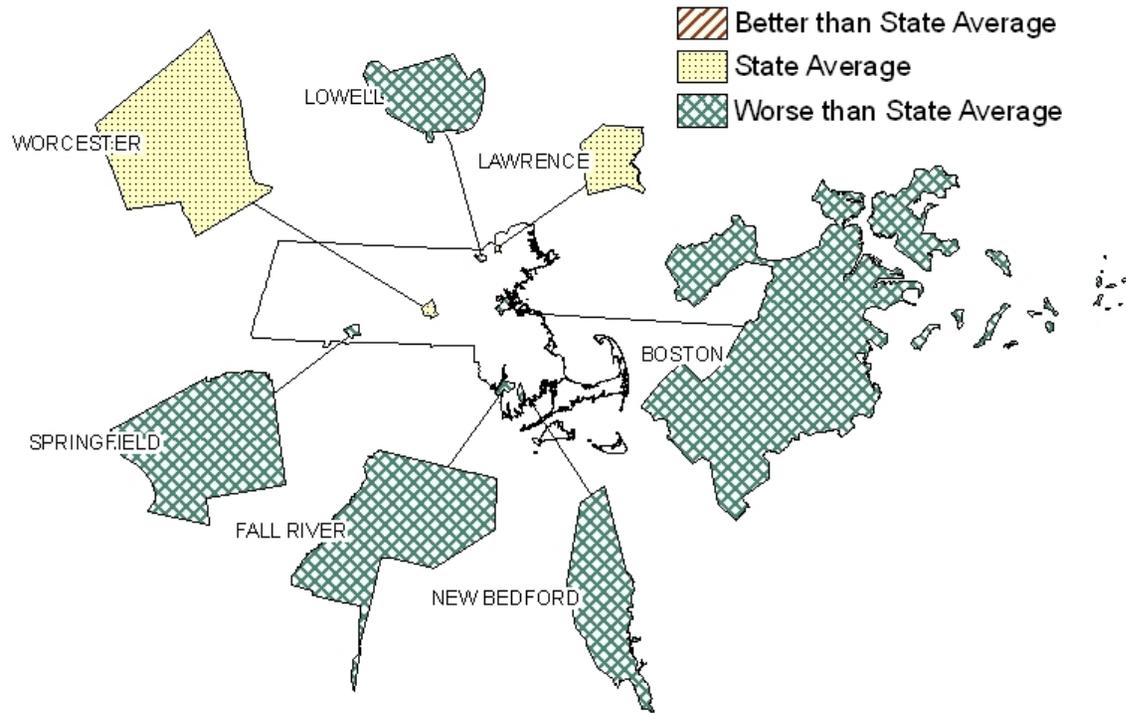
*based on 95% statistical significance

Section 3.2: Environmental Tobacco Smoke

Environmental tobacco smoke (ETS) is also referred to as secondhand smoke. Secondhand smoke includes both the smoke given off the burning end of tobacco products and the smoke exhaled by the smoker. Secondhand smoke has been linked to lung cancer deaths, heart disease, and respiratory illnesses, such as asthma and bronchitis in non-smoking adults. Nonsmokers exposed to secondhand smoke at home or work increase their risk of developing heart disease by 25 to 30 percent and lung cancer by 20 to 30 percent compared to those not exposed to secondhand smoke [17].

Respondents were asked about exposure to environmental tobacco smoke at their home, work, or other places. ETS exposure was defined in one of two ways depending on whether respondents reported working outside the home or not on an earlier employment status question. Among the employed (including the self-employed), ETS exposure was defined as any report of exposure to ETS at work, at home, or in other places in the past 7 days. Among those not employed outside the home, ETS exposure was defined as any exposure to ETS at home or in other places in the past 7 days. Presented here is the percentage of respondents who reported that they were exposed to ETS.

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY WERE EXPOSED TO ENVIRONMENTAL TOBACCO SMOKE, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE	
	%	95% CI
	N=18548	
OVERALL	36.7	35.4 - 37.9
GENDER		
MALE	39.0	37.1 - 40.9
FEMALE	34.6	33.0 - 36.1
AGE GROUP		
18-34	51.7	48.6 - 54.9
35-64	33.5	32.2 - 34.8
65+	21.7	20.1 - 23.3
RACE-ETHNICITY*		
WHITE	35.6	34.2 - 36.9
BLACK	44.0	38.3 - 49.7
HISPANIC	43.0	38.6 - 47.5
DISABILITY		
DISABILITY	43.0	40.5 - 45.6
NO DISABILITY	35.0	33.6 - 36.4
EDUCATION		
< HIGH SCHOOL	44.2	39.0 - 49.4
HIGH SCHOOL OR SOME COLLEGE	42.2	40.3 - 44.0
4+ YRS COLLEGE	29.3	27.6 - 30.9
HOUSEHOLD INCOME		
<\$25,000	43.4	40.6 - 46.2
\$25,000-74,999	39.8	37.7 - 41.9
\$75,000+	31.0	29.1 - 32.9

*White and Black race categories refer to non-Hispanic
 † Insufficient data

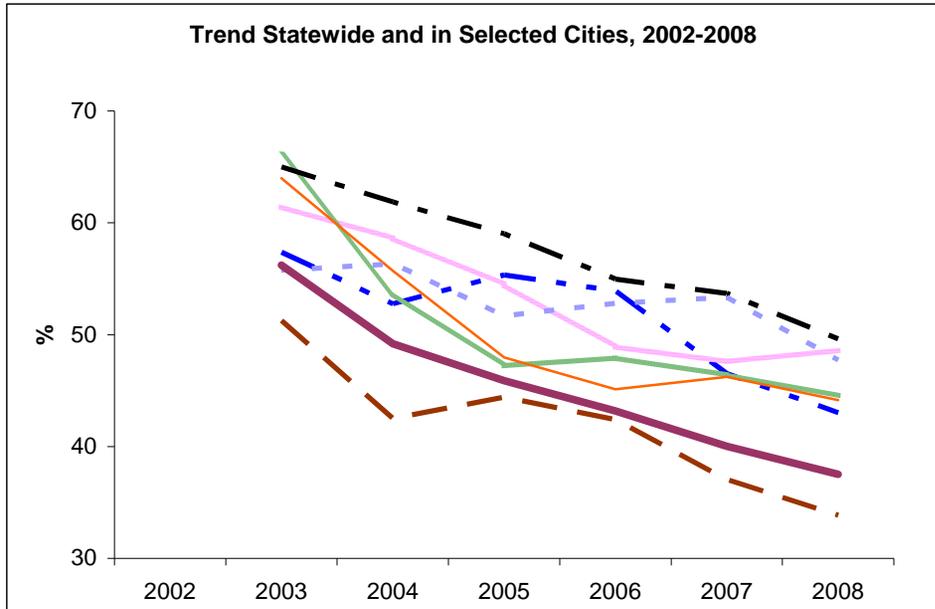
PERCENTAGE OF ADULTS WHO REPORTED THAT THEY HAD BEEN EXPOSED TO ENVIRONMENTAL TOBACCO SMOKE, 2008

	BOSTON			SPRINGFIELD			WORCESTER			LAWRENCE			LOWELL			FALL RIVER			NEW BEDFORD		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
TOTAL SAMPLE (N)	N=1840			N=1094			N=1119			N=692			N=1042			N=928			N=905		
OVERALL	43.1	39.4	- 46.9	44.6	40.5	- 48.7	41.4	37.3	- 45.5	35.6	30.5	- 40.7	47.1	41.9	- 52.3	46.5	42.0	- 51.0	44.8	40.1	- 49.5
GENDER																					
MALE	46.4	40.8	- 52.0	47.5	40.5	- 54.5	46.3	39.9	- 52.7	34.6	26.1	- 43.1	55.2	47.6	- 62.9	52.5	45.1	- 59.9	48.0	40.1	- 56.0
FEMALE	40.4	35.3	- 45.4	42.3	37.5	- 47.1	36.8	31.8	- 41.7	36.4	30.3	- 42.5	37.6	32.6	- 42.5	41.8	36.4	- 47.3	41.6	36.3	- 46.9
AGE GROUP																					
18-34	56.1	48.6	- 63.5	55.3	46.9	- 63.6	51.7	42.8	- 60.7	45.0	35.2	- 54.8	61.2	51.9	- 70.6	61.3	51.4	- 71.3	55.5	45.3	- 65.6
35-64	38.7	34.9	- 42.6	42.9	38.0	- 47.7	38.8	33.8	- 43.7	31.7	25.8	- 37.6	42.4	37.5	- 47.4	44.3	39.2	- 49.4	42.3	37.1	- 47.5
65+	21.4	17.0	- 25.8	26.1	20.0	- 32.2	27.8	21.6	- 34.1	18.5	11.9	- 25.1	22.8	16.5	- 29.2	24.4	17.1	- 31.7	24.1	17.6	- 30.6
RACE-ETHNICITY*																					
WHITE	40.0	34.9	- 45.1	44.5	39.1	- 50.0	42.4	37.8	- 47.1	38.5	30.7	- 46.4	48.7	42.3	- 55.1	46.3	41.6	- 51.1	43.4	38.1	- 48.6
BLACK	50.2	42.5	- 57.9	46.2	36.7	- 55.7	47.4	32.4	- 62.5	†			†			†			52.4	33.8	- 71.1
HISPANIC	44.7	36.0	- 53.4	45.8	37.2	- 54.4	35.0	23.5	- 46.4	35.0	28.5	- 41.5	37.8	27.3	- 48.4	49.4	32.7	- 66.0	45.1	31.7	- 58.6
DISABILITY																					
DISABILITY	48.8	41.9	- 55.7	47.6	40.1	- 55.1	53.9	45.8	- 61.9	35.5	25.3	- 45.8	44.8	36.4	- 53.2	52.4	44.3	- 60.6	51.8	43.3	- 60.3
NO DISABILITY	42.2	37.7	- 46.6	42.9	37.9	- 48.0	36.5	31.8	- 41.2	32.8	27.1	- 38.5	47.7	41.2	- 54.3	45.3	39.8	- 50.8	43.2	37.4	- 49.0
EDUCATION																					
< HIGH SCHOOL	44.7	33.7	- 55.6	45.9	35.8	- 56.1	43.6	30.6	- 56.6	26.7	18.5	- 34.9	40.2	29.5	- 50.9	36.4	27.7	- 45.1	40.6	30.3	- 50.8
HIGH SCHOOL OR SOME COLLEGE	50.0	44.6	- 55.3	46.0	40.6	- 51.4	47.6	41.8	- 53.5	40.2	32.6	- 47.8	53.8	47.6	- 60.0	53.7	48.0	- 59.5	47.8	41.7	- 54.0
4+ YRS COLLEGE	35.5	29.7	- 41.3	40.4	32.6	- 48.2	32.3	26.1	- 38.5	40.7	29.2	- 52.2	40.5	29.0	- 52.0	31.1	21.3	- 40.9	41.2	31.1	- 51.4
HOUSEHOLD INCOME																					
<\$25,000	46.0	39.4	- 52.6	44.5	37.9	- 51.1	45.4	37.1	- 53.7	33.1	25.9	- 40.4	51.7	42.8	- 60.5	46.8	39.3	- 54.3	49.9	42.2	- 57.7
\$25,000-74,999	46.7	39.5	- 53.9	46.5	39.8	- 53.3	43.9	37.2	- 50.6	37.9	28.7	- 47.2	51.3	44.4	- 58.2	51.2	44.4	- 58.1	42.8	35.4	- 50.3
\$75,000+	32.2	26.9	- 37.4	46.0	35.8	- 56.2	35.5	28.0	- 43.0	38.0	21.9	- 54.1	45.5	32.2	- 58.9	45.7	32.2	- 59.1	47.4	34.9	- 59.8

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY WERE EXPOSED TO ENVIRONMENTAL TOBACCO SMOKE



Data source: MA BRFSS
Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↓	↘
SPRINGFIELD	↓	↘
WORCESTER	↔	↘
LAWRENCE	↔	↘
LOWELL	↓	↘
FALL RIVER	↓	↘
NEW BEDFORD	↓	→
STATE-WIDE	---	↘

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
→	No trend
↘	Downward trend

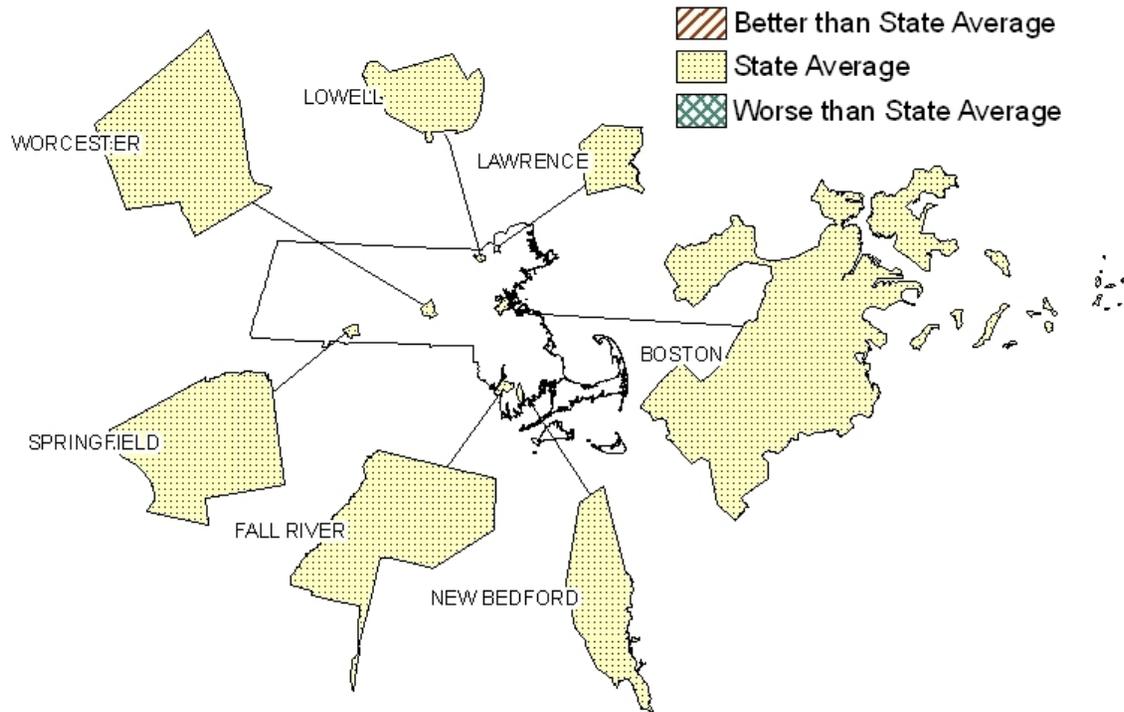
*based on 95% statistical significance

Section 3.3: Alcohol Use

Excessive alcohol consumption is the third leading preventable cause of death in the United States [18]. Excessive drinking, including binge and heavy drinking, has numerous chronic effects including cirrhosis of the liver, pancreatitis, high blood pressure, stroke, and various cancers. Alcohol abuse can cause unintentional injuries, motor vehicle accidents, alcohol poisonings, and contributes to violence, and suicides [19]. In 2005, driving while under the influence of alcohol accounted for 146 alcohol-related fatalities in Massachusetts – 35% of the total traffic fatalities for the year [20].

All respondents were asked about their consumption of alcohol in the past month. A drink of alcohol was defined as one can or bottle of beer, one glass of wine, one can or bottle of wine cooler, one cocktail, or one shot of liquor. Binge drinking was defined as consumption of five or more drinks for men or four or more drinks for women, on any one occasion in the past month. Presented here is the percentage of adults who reported binge drinking.

PERCENTAGE OF ADULTS WHO REPORTED BINGE DRINKING, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE	
	%	95% CI
	N=19614	
OVERALL	17.7	16.7 - 18.7
GENDER		
MALE	23.0	21.3 - 24.7
FEMALE	12.9	11.8 - 14.1
AGE GROUP		
18-34	28.8	26.0 - 31.7
35-64	16.5	15.5 - 17.5
65+	3.4	2.7 - 4.0
RACE-ETHNICITY*		
WHITE	18.6	17.4 - 19.7
BLACK	11.2	8.1 - 14.3
HISPANIC	15.6	11.8 - 19.4
DISABILITY		
DISABILITY	14.1	12.2 - 16.0
NO DISABILITY	18.4	17.2 - 19.6
EDUCATION		
< HIGH SCHOOL	10.9	7.9 - 13.9
HIGH SCHOOL OR SOME COLLEGE	18.5	16.9 - 20.0
4+ YRS COLLEGE	17.9	16.4 - 19.4
HOUSEHOLD INCOME		
<\$25,000	11.0	9.2 - 12.8
\$25,000-74,999	18.8	17.0 - 20.6
\$75,000+	22.5	20.7 - 24.4

*White and Black race categories refer to non-Hispanic
 †Insufficient data

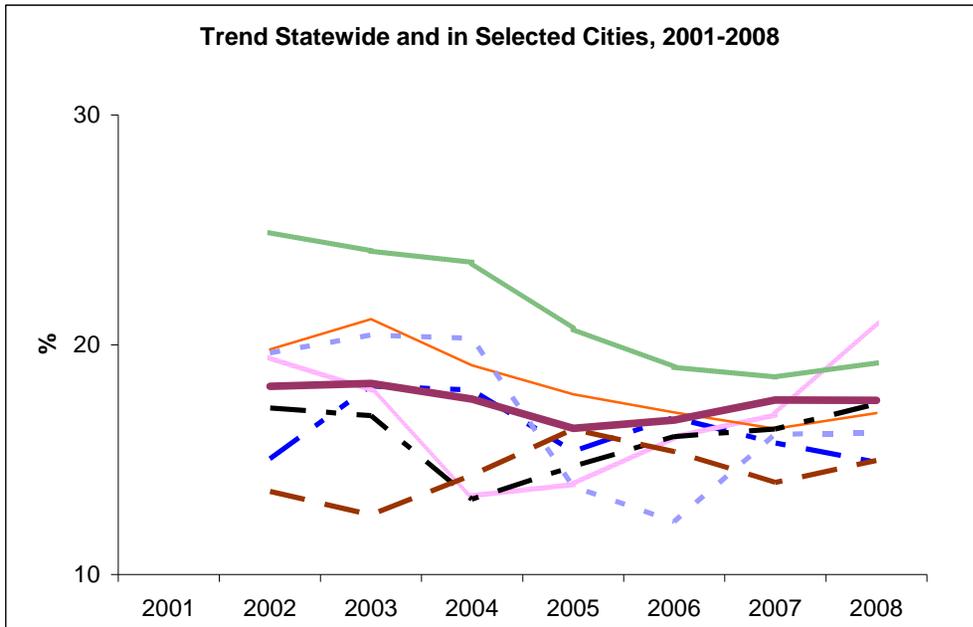
PERCENTAGE OF ADULTS WHO REPORTED BINGE DRINKING, 2008

	BOSTON		SPRINGFIELD		WORCESTER		LAWRENCE		LOWELL		FALL RIVER		NEW BEDFORD	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL SAMPLE (N)	N=1979		N=1171		N=1189		N=739		N=1114		N=993		N=961	
OVERALL	20.8	17.0 - 24.5	15.7	12.7 - 18.8	17.4	14.0 - 20.9	16.4	12.1 - 20.6	22.7	17.3 - 28.2	16.9	13.4 - 20.4	15.1	11.8 - 18.5
GENDER														
MALE	27.1	21.6 - 32.6	21.8	16.2 - 27.4	20.9	15.3 - 26.5	22.1	14.7 - 29.6	32.5	23.7 - 41.3	27.9	21.1 - 34.6	20.3	14.4 - 26.1
FEMALE	15.2	10.1 - 20.4	10.8	7.7 - 13.9	14.1	10.1 - 18.1	11.6	7.0 - 16.2	11.9	8.3 - 15.4	8.3	5.5 - 11.2	10.1	6.6 - 13.5
AGE GROUP														
18-34	32.7	24.6 - 40.8	24.6	17.5 - 31.6	25.3	17.6 - 32.9	26.5	18.0 - 35.0	35.7	24.7 - 46.7	25.4	17.1 - 33.7	21.2	13.6 - 28.7
35-64	15.5	12.8 - 18.1	12.6	9.5 - 15.7	16.9	12.6 - 21.1	10.6	6.9 - 14.3	16.4	12.7 - 20.2	14.6	11.0 - 18.2	14.4	10.8 - 18.1
65+	3.8	2.1 - 5.5		†	†		†		†		†		†	
RACE-ETHNICITY*														
WHITE	25.8	20.6 - 31.0	17.9	13.4 - 22.4	21.0	16.6 - 25.4	16.0	9.2 - 22.9	23.7	16.6 - 30.8	17.2	13.5 - 20.8	17.2	12.8 - 21.5
BLACK	9.5	5.3 - 13.8	13.8	7.7 - 20.0	†		†		†		†		†	
HISPANIC	23.4	12.1 - 34.6	14.2	8.3 - 20.1	†		16.5	11.1 - 21.9	20.3	10.7 - 29.8	†		†	
DISABILITY														
DISABILITY	12.9	8.4 - 17.3	12.0	7.0 - 16.9	16.6	8.6 - 24.6	†		15.2	8.5 - 22.0	12.5	6.6 - 18.4	15.1	9.2 - 20.9
NO DISABILITY	20.9	16.7 - 25.1	16.3	12.5 - 20.1	17.9	14.0 - 21.9	17.2	12.2 - 22.3	23.0	15.8 - 30.3	18.6	14.1 - 23.1	16.0	11.6 - 20.3
EDUCATION														
< HIGH SCHOOL	†		17.3	9.2 - 25.4	†		†		18.1	9.0 - 27.2	15.4	7.3 - 23.4	9.0	4.0 - 13.9
HIGH SCHOOL OR SOME COLLEGE	18.4	13.9 - 22.9	14.9	11.0 - 18.9	17.6	12.6 - 22.6	20.3	13.7 - 26.9	22.6	16.4 - 28.8	17.5	13.2 - 21.7	17.0	12.4 - 21.5
4+ YRS COLLEGE	25.3	18.7 - 31.8	16.7	10.7 - 22.7	20.6	14.8 - 26.4	19.2	8.6 - 29.7	25.6	12.9 - 38.2	16.8	7.0 - 26.6	18.2	8.8 - 27.6
HOUSEHOLD INCOME														
<\$25,000	17.9	11.3 - 24.6	14.2	9.3 - 19.0	11.8	5.6 - 18.0	12.3	6.6 - 18.0	22.9	13.8 - 32.0	14.4	9.1 - 19.7	15.9	10.0 - 21.7
\$25,000-74,999	22.3	14.2 - 30.5	17.4	12.1 - 22.8	17.1	11.3 - 22.8	24.3	15.2 - 33.3	19.0	13.2 - 24.8	21.1	15.2 - 27.1	14.4	9.4 - 19.4
\$75,000+	26.5	21.3 - 31.7	17.0	9.5 - 24.5	27.0	19.6 - 34.4	†		30.8	15.8 - 45.9	19.0	8.7 - 29.3	21.8	10.5 - 33.0

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORTED BINGE DRINKING



Data source: MA BRFSS
Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2001-2008*
BOSTON	↔	↘
SPRINGFIELD	↔	→
WORCESTER	↔	→
LAWRENCE	↔	→
LOWELL	↔	→
FALL RIVER	↔	→
NEW BEDFORD	↔	→
STATE-WIDE	---	→

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
→	No trend
↘	Downward trend

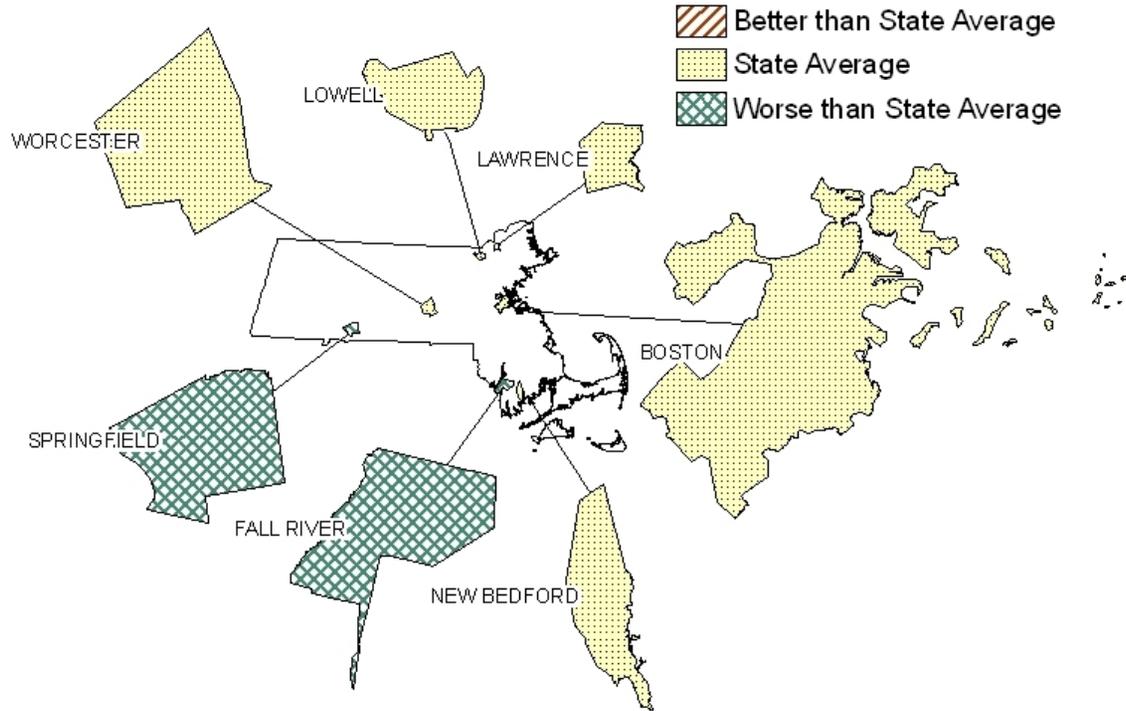
*based on 95% statistical significance

Section 3.4: Overweight and Obesity Status

Obese and/or overweight adults are at increased risk of developing serious health conditions such as hypertension, dyslipidemia (a disorder of lipoprotein metabolism, which may include overproduction of blood cholesterol), type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea, respiratory problems, and certain cancers, including endometrial, breast, and colon cancer. An estimated 1.82 billion dollars in medical expenses are attributable to adult obesity in Massachusetts [21].

All respondents were asked to report their height and weight. Respondents' overweight status and obesity status were categorized based on their Body Mass Index (BMI), which equals weight in kilograms divided by height in meters squared. Using the Healthy People 2010 standards (HP2010), all adults with a BMI between 25.0 and 29.9 were classified as being overweight and adults with a BMI greater than or equal to 30.0 were classified as being obese. For example, a person who is 5'6" would be considered overweight at 155 pounds (BMI = 25) and obese at 186 pounds (BMI = 30). Presented here are the percentages of respondents who were determined to be overweight and obese. Please note that the overweight category includes all adults with a BMI of greater than 25.0. This includes obese respondents.

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY WERE OVERWEIGHT (INCLUDES OBESE), 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE	
	%	95% CI
	N=19366	
OVERALL	58.1	56.9 - 59.3
GENDER		
MALE	68.0	66.1 - 69.8
FEMALE	48.6	47.1 - 50.1
AGE GROUP		
18-34	49.8	46.7 - 52.9
35-64	62.0	60.7 - 63.3
65+	60.2	58.3 - 62.0
RACE-ETHNICITY*		
WHITE	57.5	56.2 - 58.8
BLACK	66.4	60.8 - 72.0
HISPANIC	66.0	61.9 - 70.2
DISABILITY		
DISABILITY	65.1	62.6 - 67.7
NO DISABILITY	56.5	55.1 - 58.0
EDUCATION		
< HIGH SCHOOL	62.0	57.0 - 67.1
HIGH SCHOOL OR SOME COLLEGE	61.0	59.2 - 62.8
4+ YRS COLLEGE	54.0	52.3 - 55.7
HOUSEHOLD INCOME		
<\$25,000	59.6	56.9 - 62.2
\$25,000-74,999	60.5	58.4 - 62.6
\$75,000+	57.0	55.0 - 58.9

*White and Black race categories refer to non-Hispanic
 †Insufficient data

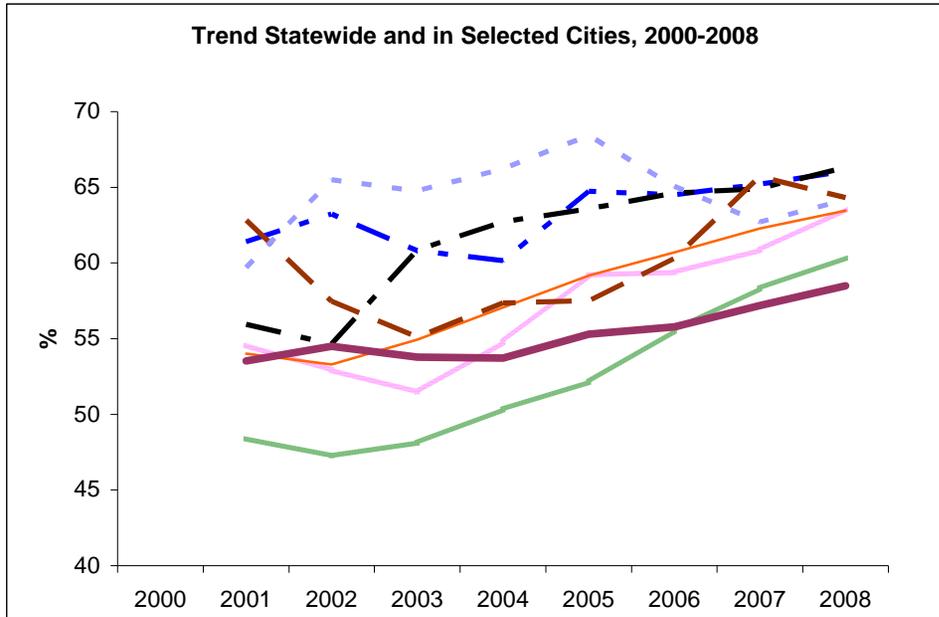
PERCENTAGE OF ADULTS WHO REPORTED THAT THEY WERE OVERWEIGHT (INCLUDES OBESE), 2008

	BOSTON		SPRINGFIELD		WORCESTER		LAWRENCE		LOWELL		FALL RIVER		NEW BEDFORD	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL SAMPLE (N)	N=1967		N=1135		N=1187		N=712		N=1095		N=978		N=927	
OVERALL	61.7	58.1 - 65.3	65.2	61.3 - 69.1	63.1	59.1 - 67.0	62.7	57.5 - 67.8	63.0	58.5 - 67.5	66.3	62.1 - 70.4	63.4	58.7 - 68.0
GENDER														
MALE	68.9	63.8 - 74.0	68.4	62.1 - 74.7	71.0	65.5 - 76.4	65.4	56.9 - 74.0	71.7	65.6 - 77.9	72.0	65.5 - 78.6	64.5	56.8 - 72.2
FEMALE	55.1	50.2 - 60.0	62.6	57.8 - 67.3	55.2	49.8 - 60.6	60.3	54.2 - 66.5	52.7	47.4 - 57.9	61.4	56.2 - 66.7	62.2	57.1 - 67.4
AGE GROUP														
18-34	55.7	48.0 - 63.3	58.8	50.4 - 67.1	52.0	43.2 - 60.7	49.8	40.3 - 59.2	62.2	53.1 - 71.3	58.3	48.5 - 68.1	51.4	41.3 - 61.6
35-64	66.8	63.3 - 70.2	68.6	64.1 - 73.1	71.4	67.0 - 75.9	73.6	68.2 - 79.0	65.1	60.3 - 69.9	70.5	66.1 - 74.8	72.6	68.1 - 77.0
65+	62.7	57.7 - 67.6	70.6	64.8 - 76.3	62.0	55.8 - 68.2	68.8	60.1 - 77.6	58.5	50.3 - 66.6	69.6	63.1 - 76.1	65.1	58.1 - 72.0
RACE-ETHNICITY*														
WHITE	56.3	51.5 - 61.1	62.7	57.4 - 67.9	61.2	56.8 - 65.7	70.0	63.3 - 76.6	67.0	61.9 - 72.2	65.3	60.9 - 69.8	64.9	59.9 - 70.0
BLACK	71.2	63.9 - 78.4	73.7	64.7 - 82.8	77.8	66.2 - 89.3	†		†		†		68.9	49.2 - 88.7
HISPANIC	70.7	61.8 - 79.6	64.7	56.8 - 72.6	61.5	49.0 - 74.0	61.0	54.3 - 67.7	60.7	50.4 - 71.0	71.1	56.4 - 85.8	59.3	45.4 - 73.2
DISABILITY														
DISABILITY	72.3	66.5 - 78.1	72.4	65.8 - 79.0	73.7	66.2 - 81.1	79.6	71.6 - 87.7	68.8	61.3 - 76.2	72.6	65.2 - 80.1	70.7	62.2 - 79.2
NO DISABILITY	58.9	54.6 - 63.3	61.4	56.3 - 66.5	58.4	53.4 - 63.3	59.2	53.0 - 65.4	61.5	55.6 - 67.4	65.0	59.6 - 70.4	61.7	55.8 - 67.6
EDUCATION														
< HIGH SCHOOL	68.2	56.1 - 80.4	67.6	58.3 - 76.9	70.0	58.3 - 81.7	68.3	59.6 - 76.9	63.9	53.5 - 74.2	67.4	59.2 - 75.5	58.2	47.6 - 68.9
HIGH SCHOOL OR SOME COLLEGE	65.4	60.5 - 70.3	66.5	61.4 - 71.6	65.4	59.9 - 70.8	57.3	49.8 - 64.9	61.9	55.9 - 67.8	65.6	60.0 - 71.2	65.7	59.9 - 71.6
4+ YRS COLLEGE	56.1	50.3 - 61.9	60.5	52.7 - 68.4	57.8	51.2 - 64.3	68.2	57.4 - 79.0	64.9	56.5 - 73.3	68.5	60.0 - 76.9	62.2	51.8 - 72.5
HOUSEHOLD INCOME														
<\$25,000	66.9	60.4 - 73.5	64.0	57.8 - 70.3	65.7	58.5 - 73.0	60.9	53.4 - 68.5	59.6	51.3 - 67.8	64.5	57.5 - 71.4	61.2	53.5 - 69.0
\$25,000-74,999	63.8	56.4 - 71.2	71.6	66.1 - 77.2	64.0	57.7 - 70.2	64.7	55.1 - 74.4	65.9	59.4 - 72.4	66.8	60.5 - 73.2	66.7	59.5 - 73.9
\$75,000+	56.0	50.5 - 61.4	58.2	47.5 - 69.0	61.1	53.3 - 69.0	67.9	53.7 - 82.0	65.8	56.4 - 75.1	72.1	59.7 - 84.4	60.9	48.4 - 73.4

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY WERE OVERWEIGHT (INCLUDES OBESE)



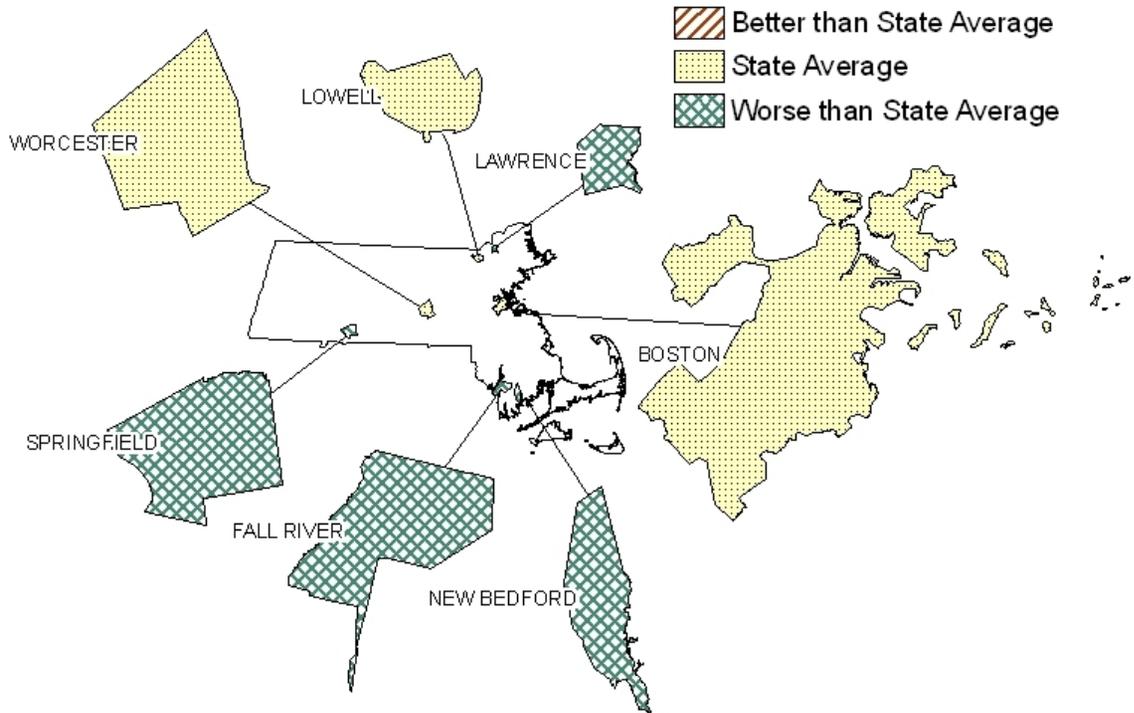
Data source: MA BRFSS
Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	↗
SPRINGFIELD	↓	→
WORCESTER	↔	↗
LAWRENCE	↔	→
LOWELL	↔	↗
FALL RIVER	↓	↗
NEW BEDFORD	↔	→
STATE-WIDE	---	↗

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
→	No trend
↘	Downward trend

*based on 95% statistical significance

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY WERE OBESE, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE		
	%	95% CI	
	N=19366		
OVERALL	21.5	20.5	- 22.4
GENDER			
MALE	23.1	21.6	- 24.6
FEMALE	19.9	18.7	- 21.0
AGE GROUP			
18-34	17.9	15.7	- 20.2
35-64	24.1	23.0	- 25.3
65+	19.7	18.2	- 21.1
RACE-ETHNICITY*			
WHITE	21.1	20.1	- 22.2
BLACK	27.9	23.4	- 32.4
HISPANIC	27.3	23.3	- 31.4
DISABILITY			
DISABILITY	31.0	28.8	- 33.3
NO DISABILITY	18.9	17.8	- 20.0
EDUCATION			
< HIGH SCHOOL	23.5	20.3	- 26.8
HIGH SCHOOL OR SOME COLLEGE	24.2	22.7	- 25.6
4+ YRS COLLEGE	18.0	16.6	- 19.3
HOUSEHOLD INCOME			
<\$25,000	25.7	23.6	- 27.8
\$25,000-74,999	22.8	21.2	- 24.4
\$75,000+	19.5	17.9	- 21.1

*White and Black race categories refer to non-Hispanic

† Insufficient data

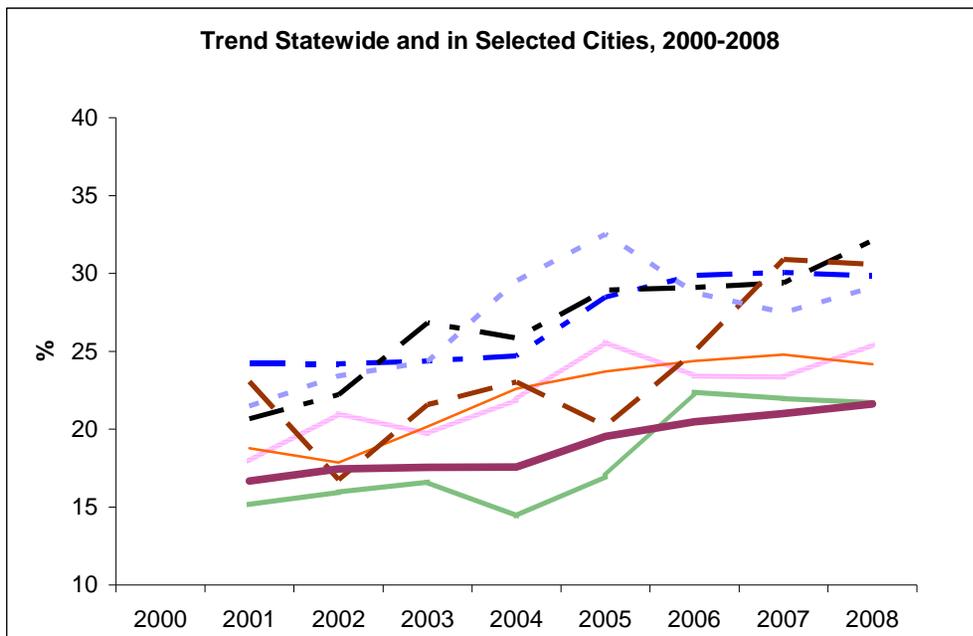
PERCENTAGE OF ADULTS WHO REPORTED THAT THEY WERE OBESE, 2008

	BOSTON		SPRINGFIELD		WORCESTER		LAWRENCE		LOWELL		FALL RIVER		NEW BEDFORD	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL SAMPLE (N)	N=1967		N=1135		N=1187		N=712		N=1095		N=978		N=927	
OVERALL	21.7	18.8 - 24.5	28.2	24.8 - 31.6	22.9	19.4 - 26.4	28.6	24.2 - 33.0	25.7	21.8 - 29.5	31.9	28.0 - 35.9	28.8	24.6 - 32.9
GENDER														
MALE	18.9	14.2 - 23.7	24.8	19.2 - 30.3	21.4	16.4 - 26.4	26.5	19.6 - 33.5	27.5	21.2 - 33.8	34.7	28.1 - 41.4	27.1	20.3 - 33.9
FEMALE	24.2	20.8 - 27.6	31.1	26.9 - 35.3	24.4	19.5 - 29.4	30.4	24.9 - 35.9	23.5	19.4 - 27.6	29.6	25.0 - 34.1	30.4	25.7 - 35.1
AGE GROUP														
18-34	18.1	12.2 - 24.0	20.8	14.3 - 27.4	18.6	11.7 - 25.5	22.5	15.1 - 29.9	22.6	14.6 - 30.7	28.6	20.0 - 37.3	25.2	16.2 - 34.2
35-64	25.6	22.4 - 28.7	32.9	28.4 - 37.5	26.6	21.7 - 31.6	33.4	27.5 - 39.3	27.6	23.3 - 31.9	33.5	28.9 - 38.1	32.7	28.0 - 37.4
65+	18.8	14.8 - 22.8	31.1	24.9 - 37.3	21.5	16.3 - 26.7	33.7	24.7 - 42.6	26.4	20.1 - 32.7	33.3	26.0 - 40.6	25.6	19.5 - 31.6
RACE-ETHNICITY*														
WHITE	14.8	12.1 - 17.5	26.1	21.8 - 30.5	21.3	17.8 - 24.7	33.3	25.7 - 41.0	26.9	22.3 - 31.4	31.6	27.4 - 35.7	28.8	23.9 - 33.7
BLACK	30.4	24.5 - 36.4	33.6	25.6 - 41.6	28.3	15.5 - 41.0	†		†		†		31.9	15.6 - 48.2
HISPANIC	31.7	21.9 - 41.6	27.6	20.4 - 34.8	25.4	14.8 - 35.9	27.9	22.4 - 33.4	29.4	19.7 - 39.2	27.4	12.5 - 42.3	28.2	16.8 - 39.6
DISABILITY														
DISABILITY	30.3	24.6 - 35.9	39.3	32.1 - 46.5	30.2	23.4 - 36.9	48.5	38.2 - 58.8	38.9	30.7 - 47.1	49.1	41.0 - 57.3	40.7	32.2 - 49.2
NO DISABILITY	17.9	15.1 - 20.6	23.4	19.2 - 27.6	19.3	15.5 - 23.0	24.5	19.3 - 29.6	21.3	16.9 - 25.6	26.7	22.0 - 31.5	24.4	19.3 - 29.5
EDUCATION														
< HIGH SCHOOL	27.6	19.0 - 36.3	30.8	21.8 - 39.8	31.0	18.8 - 43.2	32.2	24.1 - 40.2	33.6	24.4 - 42.7	37.3	29.3 - 45.2	27.7	18.5 - 37.0
HIGH SCHOOL OR SOME COLLEGE	25.4	21.5 - 29.4	30.3	25.8 - 34.9	25.8	20.5 - 31.1	26.6	20.5 - 32.7	28.4	22.7 - 34.2	29.2	24.3 - 34.2	30.3	24.8 - 35.9
4+ YRS COLLEGE	16.1	11.3 - 20.9	20.9	15.0 - 26.8	16.4	12.3 - 20.5	27.8	17.6 - 38.0	18.1	12.8 - 23.4	36.4	25.8 - 47.1	24.9	17.2 - 32.5
HOUSEHOLD INCOME														
<\$25,000	30.5	25.0 - 36.0	33.2	27.3 - 39.0	31.1	24.0 - 38.3	31.1	24.5 - 37.8	27.0	19.3 - 34.6	32.2	25.8 - 38.5	31.8	25.1 - 38.6
\$25,000-74,999	25.9	19.6 - 32.1	30.1	24.3 - 35.9	21.1	16.1 - 26.0	31.7	23.2 - 40.2	32.6	26.3 - 38.9	30.8	24.4 - 37.1	26.2	19.5 - 32.8
\$75,000+	13.4	9.8 - 17.0	19.3	11.3 - 27.2	19.2	14.0 - 24.4	20.3	8.4 - 32.1	15.9	10.0 - 21.8	30.7	19.3 - 42.2	26.5	16.1 - 36.8

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY WERE OBESE



Data source: MA BRFSS
 Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	↗
SPRINGFIELD	↓	↗
WORCESTER	↔	↗
LAWRENCE	↓	→
LOWELL	↔	↗
FALL RIVER	↓	↗
NEW BEDFORD	↓	→
STATE-WIDE	---	↗

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
→	No trend
↘	Downward trend

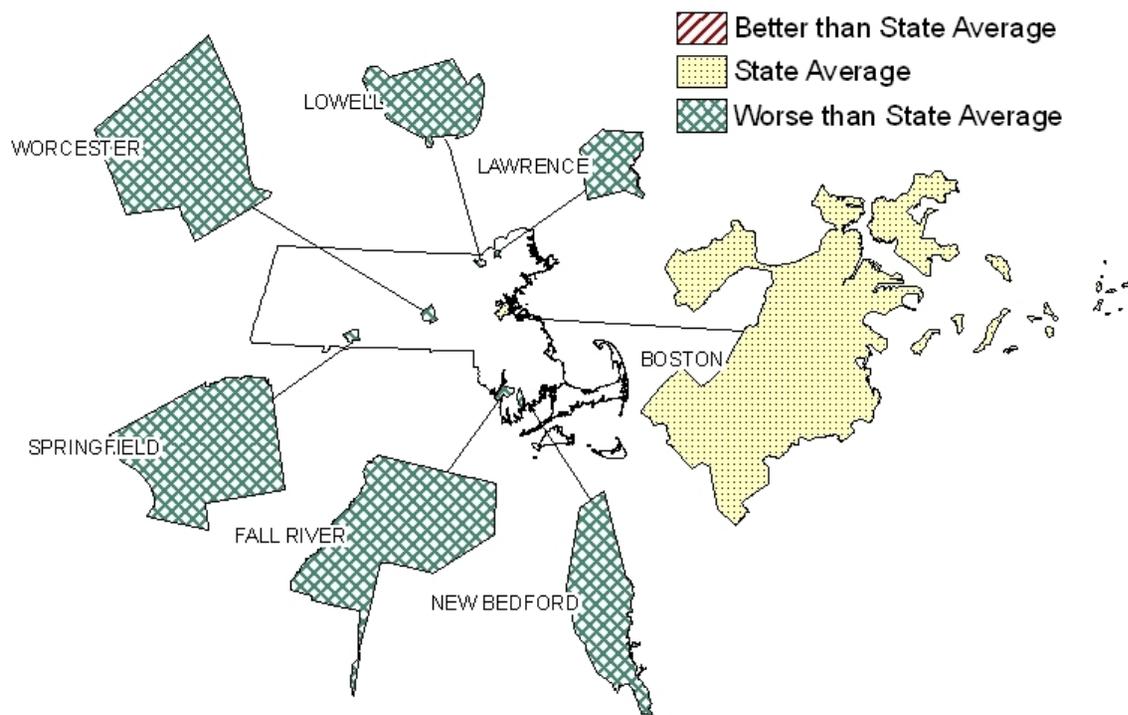
*based on 95% statistical significance

Section 3.5: Physical Activity

Regular physical activity reduces a person's risk for heart attack, colon cancer, diabetes, and high blood pressure, and helps to reduce the risk of stroke. Additionally, it helps to control weight, contributes to healthy bones, muscles, and joints, reduces falls among older adults, helps to relieve the pain of arthritis, reduces symptoms of anxiety and depression, and is associated with fewer hospitalizations, physician visits, and medications [22].

All respondents were asked if they had participated in any physical activity, other than their regular job, in the past month. Presented here is the percentage of respondents who reported any leisure time physical activity. It is important to note that the following statistics do not specify the length of time respondents were active per bout of physical activity, the number of days per week they were active, nor how intense the activity was.

PERCENTAGE OF ADULTS WHO REPORTED ANY LEISURE TIME PHYSICAL ACTIVITY, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE	
	%	95% CI
	N=20547	
OVERALL	77.9	77.0 - 78.9
GENDER		
MALE	80.0	78.7 - 81.4
FEMALE	76.1	74.9 - 77.2
AGE GROUP		
18-34	82.5	80.3 - 84.7
35-64	78.9	77.8 - 79.9
65+	67.4	65.7 - 69.1
RACE-ETHNICITY*		
WHITE	79.7	78.7 - 80.6
BLACK	73.7	69.4 - 78.0
HISPANIC	62.7	58.7 - 66.7
DISABILITY		
DISABILITY	65.3	63.1 - 67.4
NO DISABILITY	81.9	80.9 - 83.0
EDUCATION		
< HIGH SCHOOL	54.5	50.0 - 59.0
HIGH SCHOOL OR SOME COLLEGE	73.2	71.8 - 74.6
4+ YRS COLLEGE	87.7	86.6 - 88.7
HOUSEHOLD INCOME		
<\$25,000	62.9	60.6 - 65.3
\$25,000-74,999	76.7	75.1 - 78.3
\$75,000+	87.6	86.4 - 88.8

*White and Black race categories refer to non-Hispanic
 †Insufficient data

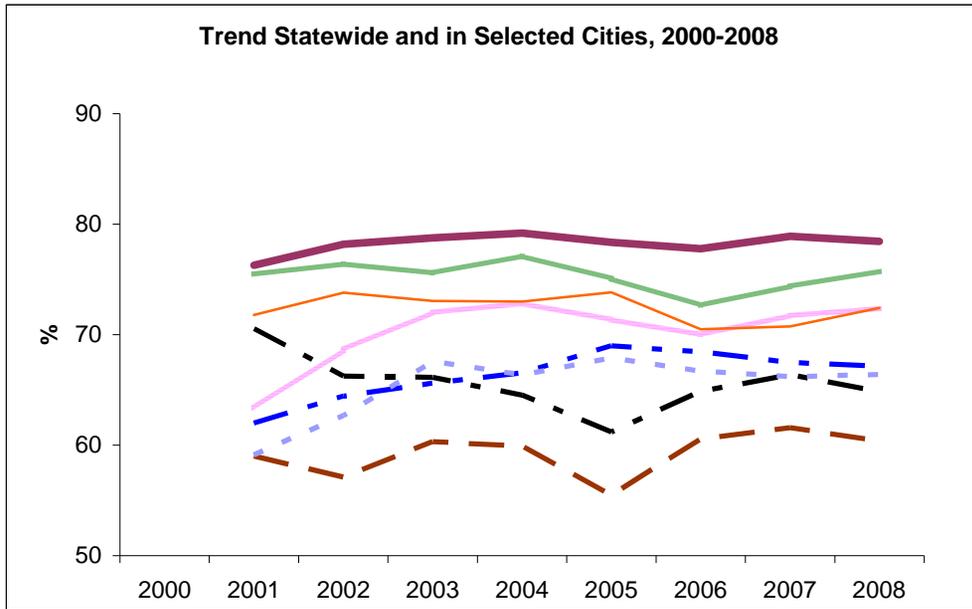
PERCENTAGE OF ADULTS WHO REPORTED ANY LEISURE TIME PHYSICAL ACTIVITY, 2008

	BOSTON			SPRINGFIELD			WORCESTER			LAWRENCE			LOWELL			FALL RIVER			NEW BEDFORD		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
TOTAL SAMPLE (N)	N=2063			N=1206			N=1246			N=762			N=1150			N=1036			N=990		
OVERALL	76.0	73.2	- 78.8	67.1	63.6	- 70.7	72.2	68.7	- 75.6	60.9	56.2	- 65.6	73.4	69.7	- 77.0	64.8	61.0	- 68.7	65.1	60.8	- 69.4
GENDER																					
MALE	78.7	74.4	- 83.0	71.2	65.1	- 77.3	73.2	67.8	- 78.6	66.3	58.6	- 74.0	74.0	68.1	- 79.9	68.8	62.4	- 75.3	68.2	61.0	- 75.4
FEMALE	73.6	69.9	- 77.3	63.7	59.6	- 67.9	71.2	67.0	- 75.3	56.5	50.8	- 62.2	72.7	68.4	- 76.9	61.7	57.0	- 66.3	62.0	57.3	- 66.8
AGE GROUP																					
18-34	81.2	75.8	- 86.6	71.5	64.1	- 78.9	75.9	68.9	- 82.9	65.4	56.8	- 73.9	80.8	73.7	- 87.9	70.4	61.8	- 78.9	69.5	60.3	- 78.8
35-64	73.5	70.0	- 77.0	68.3	64.0	- 72.6	71.5	67.0	- 76.0	57.3	51.4	- 63.3	72.2	67.9	- 76.5	63.0	58.4	- 67.6	65.2	60.3	- 70.0
65+	69.6	65.0	- 74.2	54.3	47.9	- 60.7	65.5	59.5	- 71.4	58.0	49.2	- 66.8	56.8	49.4	- 64.2	58.4	51.8	- 65.0	54.3	47.5	- 61.0
RACE-ETHNICITY*																					
WHITE	84.3	81.6	- 86.9	72.6	68.2	- 77.0	74.2	70.3	- 78.0	67.7	61.0	- 74.3	77.3	73.6	- 81.0	64.6	60.5	- 68.7	69.5	65.1	- 73.8
BLACK	69.1	62.5	- 75.7	70.1	62.6	- 77.5	62.1	48.8	- 75.3	†			†			†			73.2	60.7	- 85.7
HISPANIC	66.0	58.0	- 74.1	56.0	47.8	- 64.2	66.7	56.2	- 77.1	57.1	51.0	- 63.3	62.9	53.5	- 72.3	65.7	51.5	- 79.9	44.9	32.3	- 57.5
DISABILITY																					
DISABILITY	67.6	61.4	- 73.8	56.9	49.9	- 63.8	61.9	54.1	- 69.6	54.7	45.1	- 64.3	64.3	57.1	- 71.5	50.6	42.6	- 58.6	55.8	47.5	- 64.2
NO DISABILITY	78.4	75.1	- 81.8	70.9	66.3	- 75.5	74.8	70.6	- 79.0	64.7	59.1	- 70.2	77.2	72.9	- 81.5	69.6	64.8	- 74.3	70.2	65.1	- 75.3
EDUCATION																					
< HIGH SCHOOL	60.9	51.1	- 70.7	57.4	48.3	- 66.5	62.7	51.6	- 73.8	47.4	39.0	- 55.8	47.3	37.2	- 57.4	49.4	41.4	- 57.3	47.0	37.2	- 56.8
HIGH SCHOOL OR SOME COLLEGE	71.0	66.6	- 75.3	64.5	59.7	- 69.4	64.9	59.5	- 70.2	65.8	59.2	- 72.5	71.4	66.1	- 76.7	68.7	63.8	- 73.6	69.1	63.9	- 74.3
4+ YRS COLLEGE	85.6	81.8	- 89.4	81.1	75.9	- 86.4	85.6	81.5	- 89.7	73.6	64.6	- 82.7	86.8	82.4	- 91.1	70.7	61.2	- 80.2	78.0	70.8	- 85.3
HOUSEHOLD INCOME																					
<\$25,000	65.9	60.2	- 71.7	60.8	54.5	- 67.0	63.7	56.8	- 70.6	55.3	48.1	- 62.4	57.1	48.8	- 65.4	59.4	52.9	- 66.0	57.2	49.9	- 64.4
\$25,000-74,999	74.7	69.4	- 80.0	68.4	62.7	- 74.1	68.0	61.6	- 74.4	62.4	53.7	- 71.1	76.0	70.7	- 81.2	67.6	61.4	- 73.8	72.3	65.7	- 78.9
\$75,000+	87.9	83.5	- 92.3	84.1	77.3	- 90.8	85.9	81.5	- 90.4	81.6	70.5	- 92.6	87.7	82.8	- 92.7	77.3	67.4	- 87.1	70.1	58.7	- 81.6

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORTED ANY LEISURE TIME PHYSICAL ACTIVITY



Data source: MA BRFSS
Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	➔
SPRINGFIELD	↓	↗
WORCESTER	↓	➔
LAWRENCE	↓	➔
LOWELL	↓	➔
FALL RIVER	↓	➔
NEW BEDFORD	↓	➔
STATE-WIDE	---	➔

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
➔	No trend
↘	Downward trend

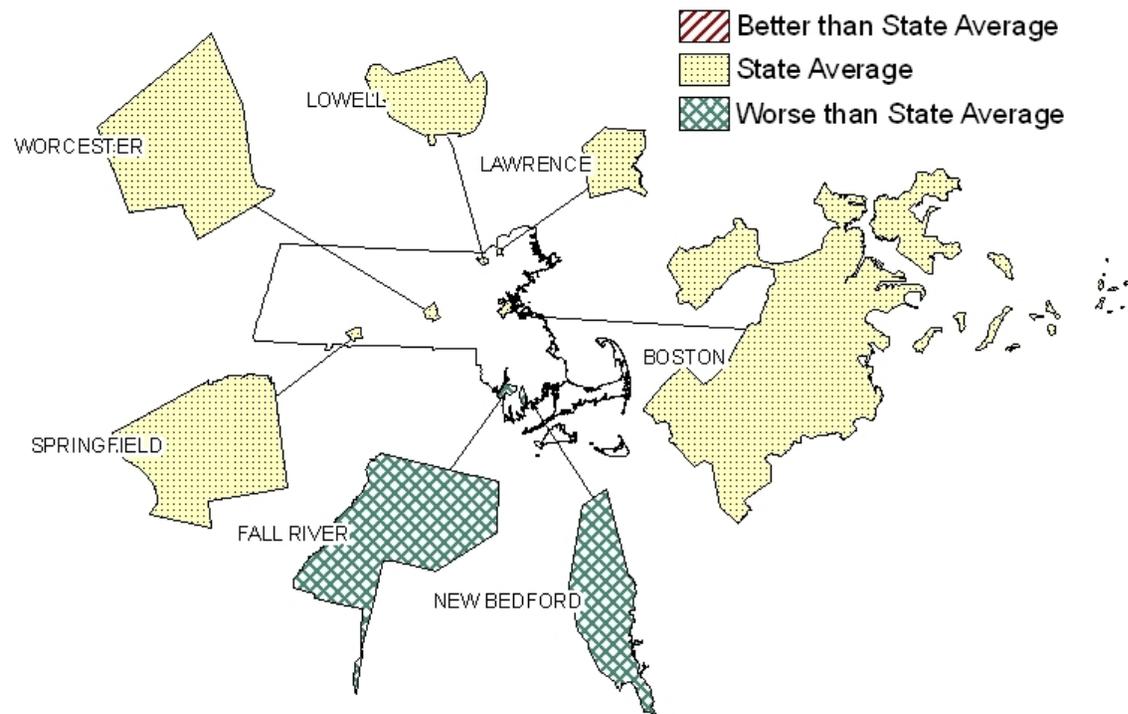
*based on 95% statistical significance

Section 3.6: Flu and Pneumonia Vaccination

Influenza, or the flu, is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness and can even lead to death. Every year in the United States, on average, between 5 and 20 percent of the population acquires the flu; more than 200,000 people are hospitalized from flu complications, and about 36,000 people die from the flu [23]. Adults 65 years or older, children younger than 2 years old, and individuals with chronic medical conditions are at increased risk for pneumococcal infection. In Massachusetts, flu and pneumonia were the seventh leading causes of death in 2007 among adults 65 and older [24].

All respondents were asked if they had received an influenza vaccine (flu shot) or nasal flu spray (flu mist) within the past 12 months. In addition, all respondents were asked if they had ever received a pneumonia vaccine. Presented here are the percentages of adults age 65 and older who received a flu vaccine or spray in the past year, and the percentage of adults, ages 65 and older, who reported that they had ever had a pneumonia vaccination

PERCENTAGE OF ADULTS AGE 65+ WHO REPORTED THAT THEY HAVE HAD A FLU VACCINE IN THE PAST 12 MONTHS, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE		
	%	95% CI	
	N=5444		
OVERALL	72.4	70.7	- 74.0
GENDER			
MALE	73.6	70.8	- 76.4
FEMALE	71.5	69.4	- 73.5
RACE-ETHNICITY*			
WHITE	73.2	71.5	- 74.9
BLACK	58.1	46.6	- 69.7
HISPANIC	61.0	51.0	- 70.9
DISABILITY			
DISABILITY	75.8	73.0	- 78.6
NO DISABILITY	70.6	68.4	- 72.8
EDUCATION			
< HIGH SCHOOL	60.7	55.8	- 65.6
HIGH SCHOOL OR SOME COLLEGE	72.3	70.1	- 74.6
4+ YRS COLLEGE	76.7	73.9	- 79.5
HOUSEHOLD INCOME			
<\$25,000	69.9	66.9	- 72.8
\$25,000-74,999	72.7	69.9	- 75.5
\$75,000+	76.3	71.9	- 80.7

*White and Black race categories refer to non-Hispanic
 †Insufficient data

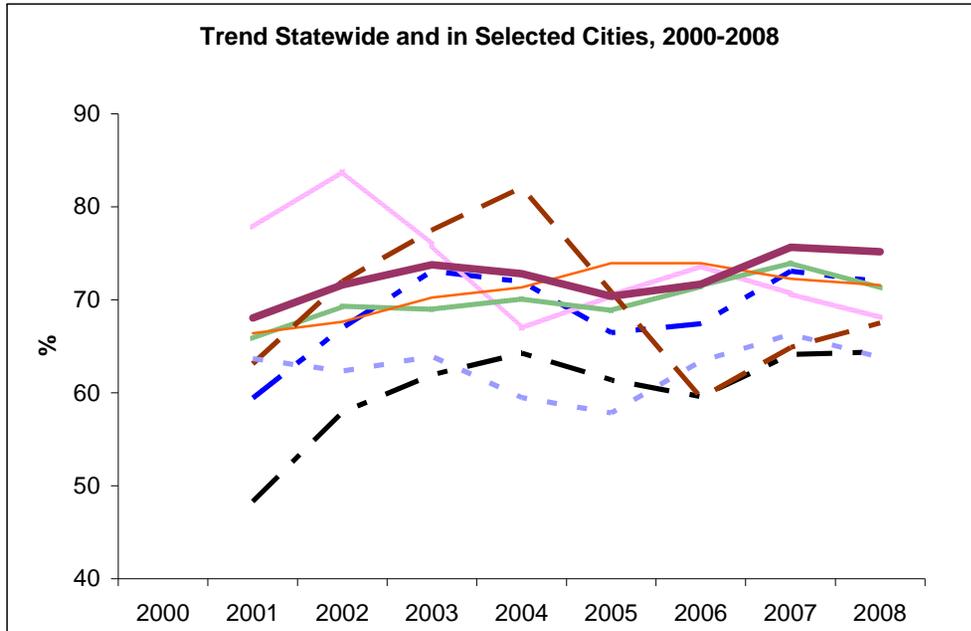
PERCENTAGE OF ADULTS AGE 65+ WHO REPORTED THAT THEY HAD RECEIVED A FLU VACCINATION IN THE PAST 12 MONTHS, 2008

	BOSTON		SPRINGFIELD		WORCESTER		LAWRENCE		LOWELL		FALL RIVER		NEW BEDFORD	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL SAMPLE (N)	N=485		N=315		N=329		N=156		N=295		N=281		N=263	
OVERALL	68.8	63.6 - 74.0	68.5	62.5 - 74.6	71.6	66.0 - 77.1	62.7	53.9 - 71.5	65.8	59.8 - 71.8	61.2	54.1 - 68.4	59.4	52.7 - 66.2
GENDER														
MALE	75.6	67.5 - 83.8	65.8	54.8 - 76.7	78.6	70.3 - 86.9	†		72.4	61.6 - 83.3	58.1	43.2 - 73.1	64.7	53.1 - 76.4
FEMALE	64.6	58.0 - 71.1	70.2	63.0 - 77.4	67.0	59.9 - 74.0	60.0	48.9 - 71.2	61.7	54.6 - 68.9	62.8	55.3 - 70.2	56.8	48.6 - 65.0
RACE-ETHNICITY*														
WHITE	69.6	63.2 - 76.0	73.2	66.4 - 80.0	72.8	67.2 - 78.3	58.6	47.8 - 69.4	63.6	57.4 - 69.7	63.0	56.5 - 69.6	61.6	54.3 - 68.8
BLACK	65.6	55.2 - 76.1	†		†		†		†		†		†	
HISPANIC	†		†		†		68.0	53.9 - 82.1	†		†		†	
DISABILITY														
DISABILITY	68.4	59.5 - 77.3	74.2	65.1 - 83.2	77.5	68.6 - 86.4	58.4	46.4 - 70.4	68.5	58.7 - 78.3	59.7	43.0 - 76.3	62.3	51.2 - 73.4
NO DISABILITY	67.2	60.0 - 74.4	68.1	59.3 - 77.0	67.5	60.0 - 75.1	†		60.4	52.3 - 68.5	61.8	53.6 - 69.9	55.2	45.9 - 64.4
EDUCATION														
< HIGH SCHOOL	60.7	49.0 - 72.5	69.9	57.5 - 82.3	70.5	55.9 - 85.2	63.3	50.4 - 76.3	68.1	55.0 - 81.2	60.7	50.6 - 70.8	56.6	44.2 - 69.0
HIGH SCHOOL OR SOME COLLEGE	69.5	62.7 - 76.4	70.4	62.7 - 78.2	70.1	62.6 - 77.5	63.8	50.1 - 77.6	66.8	59.0 - 74.5	63.3	53.8 - 72.7	56.7	47.8 - 65.6
4+ YRS COLLEGE	73.3	62.7 - 83.9	64.3	49.1 - 79.5	74.2	63.8 - 84.7	†		†		†		†	
HOUSEHOLD INCOME														
<\$25,000	67.9	59.5 - 76.3	69.5	60.6 - 78.4	77.3	69.9 - 84.7	72.6	61.1 - 84.1	72.6	63.3 - 81.8	64.1	54.6 - 73.5	54.1	44.1 - 64.1
\$25,000–74,999	64.0	54.7 - 73.3	65.8	53.9 - 77.6	66.2	55.7 - 76.6	†		66.2	55.3 - 77.2	59.6	46.7 - 72.4	61.9	48.7 - 75.1
\$75,000+	79.1	68.7 - 89.5	†		†		†		†		†		†	

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS AGE 65+ WHO REPORTED THAT THEY HAVE HAD A FLU VACCINE IN THE PAST 12 MONTHS



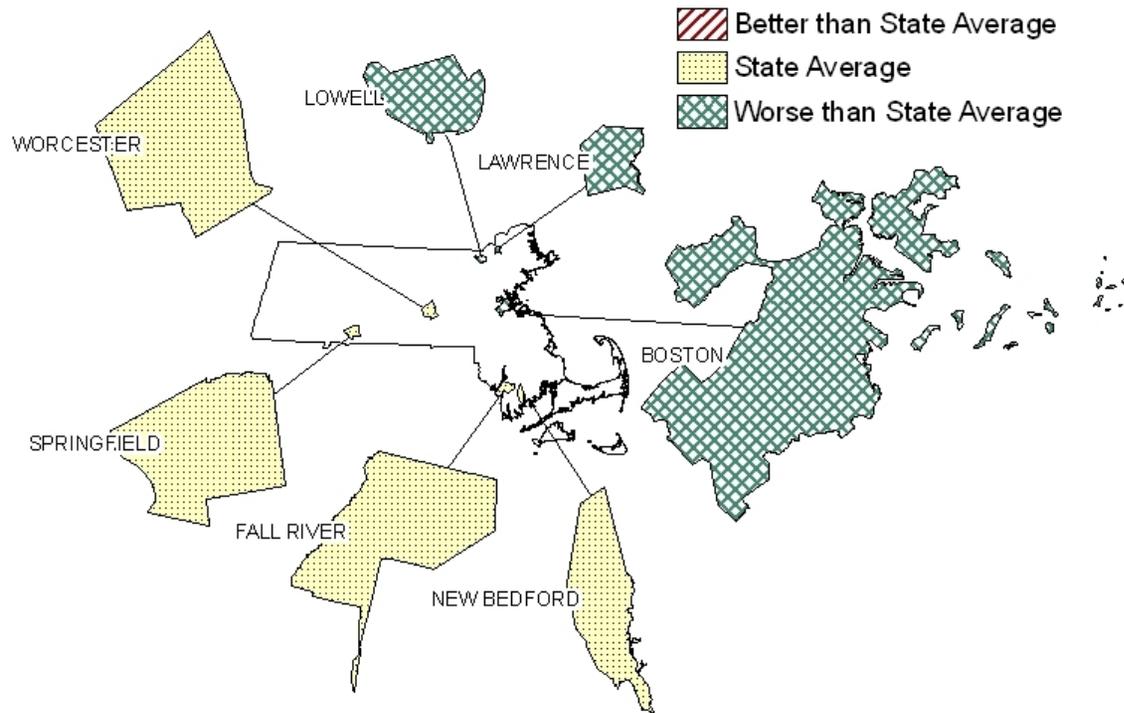
Data source: MA BRFSS
Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	➔
SPRINGFIELD	↔	➔
WORCESTER	↔	➔
LAWRENCE	↔	➔
LOWELL	↔	➔
FALL RIVER	↓	➔
NEW BEDFORD	↓	➔
STATE-WIDE	---	➔

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
➔	No trend
↘	Downward trend

*based on 95% statistical significance

PERCENTAGE OF ADULTS AGE 65+ WHO REPORTED THAT THEY HAVE EVER HAD A PNEUMONIA VACCINE, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE		
	%	95% CI	
	N=5215		
OVERALL	66.9	65.1	- 68.7
GENDER			
MALE	63.2	60.1	- 66.4
FEMALE	69.4	67.3	- 71.5
RACE-ETHNICITY*			
WHITE	69.3	67.5	- 71.1
BLACK	49.8	38.2	- 61.5
HISPANIC	33.8	24.2	- 43.4
DISABILITY			
DISABILITY	74.0	71.0	- 77.0
NO DISABILITY	63.6	61.2	- 66.0
EDUCATION			
< HIGH SCHOOL	56.2	51.2	- 61.3
HIGH SCHOOL OR SOME COLLEGE	70.2	67.9	- 72.5
4+ YRS COLLEGE	64.9	61.6	- 68.2
HOUSEHOLD INCOME			
<\$25,000	66.9	63.8	- 70.0
\$25,000-74,999	70.6	67.7	- 73.5
\$75,000+	61.2	55.9	- 66.4

*White and Black race categories refer to non-Hispanic
 †Insufficient data

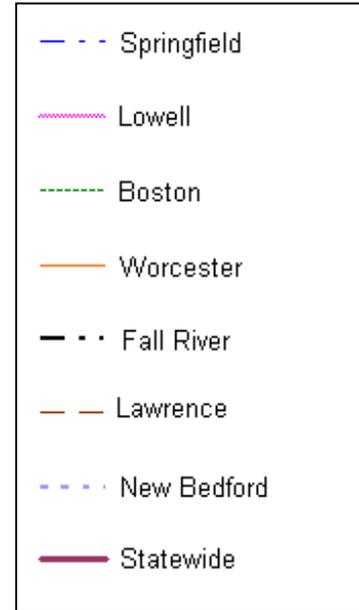
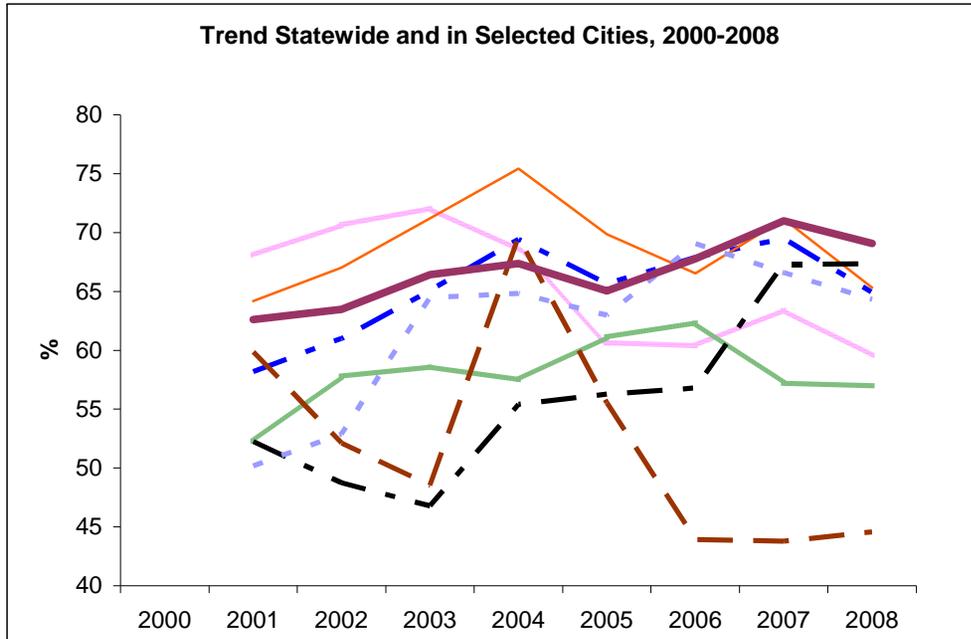
PERCENTAGE OF ADULTS AGE 65+ WHO REPORTED THAT THEY HAD EVER RECEIVED A PNEUMONIA VACCINE, 2008

	BOSTON			SPRINGFIELD			WORCESTER			LAWRENCE			LOWELL			FALL RIVER			NEW BEDFORD		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
TOTAL SAMPLE (N)	N=457			N=300			N=310			N=147			N=278			N=281			N=253		
OVERALL	58.7	53.1	- 64.2	62.7	56.3	- 69.2	59.4	52.4	- 66.5	48.3	39.1	- 57.6	55.5	48.8	- 62.2	63.6	56.3	- 71.0	64.9	58.2	- 71.6
GENDER																					
MALE	48.1	38.7	- 57.4	53.9	42.4	- 65.5	61.3	49.3	- 73.4	†			59.8	47.2	- 72.3	63.2	47.7	- 78.8	74.3	63.7	- 84.9
FEMALE	65.2	58.7	- 71.6	68.0	60.3	- 75.7	58.2	49.6	- 66.8	55.0	43.6	- 66.5	53.0	45.1	- 60.8	63.9	56.2	- 71.6	60.4	52.1	- 68.6
RACE-ETHNICITY*																					
WHITE	63.8	57.5	- 70.1	72.8	65.9	- 79.7	65.9	59.0	- 72.7	52.3	41.3	- 63.3	59.3	52.8	- 65.9	64.9	58.2	- 71.6	64.0	56.6	- 71.4
BLACK	50.8	39.1	- 62.5	†			†			†			†			†			†		
HISPANIC																					
DISABILITY																					
DISABILITY	62.6	53.2	- 72.0	71.7	62.3	- 81.1	60.4	47.9	- 73.0	†			74.8	65.3	- 84.3	62.3	45.0	- 79.7	74.8	64.9	- 84.7
NO DISABILITY	57.3	49.9	- 64.7	58.8	49.1	- 68.6	60.2	50.9	- 69.5	44.8	32.5	- 57.0	47.6	39.2	- 56.1	62.6	54.2	- 71.1	58.9	49.5	- 68.2
EDUCATION																					
< HIGH SCHOOL	53.6	41.2	- 65.9	54.2	40.4	- 68.1	30.0	15.9	- 44.1	40.6	27.1	- 54.0	48.3	33.5	- 63.2	64.3	54.1	- 74.4	59.1	46.5	- 71.7
HIGH SCHOOL OR SOME COLLEGE	65.5	58.6	- 72.5	67.7	59.4	- 76.0	64.4	56.3	- 72.6	58.2	43.9	- 72.5	61.5	53.2	- 69.8	61.4	51.4	- 71.3	65.2	56.4	- 73.9
4+ YRS COLLEGE	50.3	40.0	- 60.7	63.5	48.0	- 79.1	69.9	58.4	- 81.4	†			†			†			†		
HOUSEHOLD INCOME																					
<\$25,000	60.8	52.0	- 69.6	63.5	54.1	- 72.9	57.1	46.4	- 67.9	54.0	40.3	- 67.7	59.7	48.8	- 70.7	63.2	53.2	- 73.1	61.4	51.4	- 71.4
\$25,000–74,999	56.1	46.6	- 65.6	60.3	47.3	- 73.3	63.8	53.2	- 74.5	†			51.8	39.4	- 64.1	65.6	52.9	- 78.4	69.1	56.7	- 81.5
\$75,000+	56.3	42.8	- 69.8	†			†			†			†			†			†		

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS AGE 65+ WHO REPORTED THAT THEY HAVE EVER HAD A PNEUMONIA VACCINE



Data source: MA BRFSS
 Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↓	→
SPRINGFIELD	↔	→
WORCESTER	↔	→
LAWRENCE	↓	→
LOWELL	↓	↘
FALL RIVER	↔	↗
NEW BEDFORD	↔	→
STATE-WIDE	---	↗

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
→	No trend
↘	Downward trend

*based on 95% statistical significance

CHRONIC HEALTH CONDITIONS

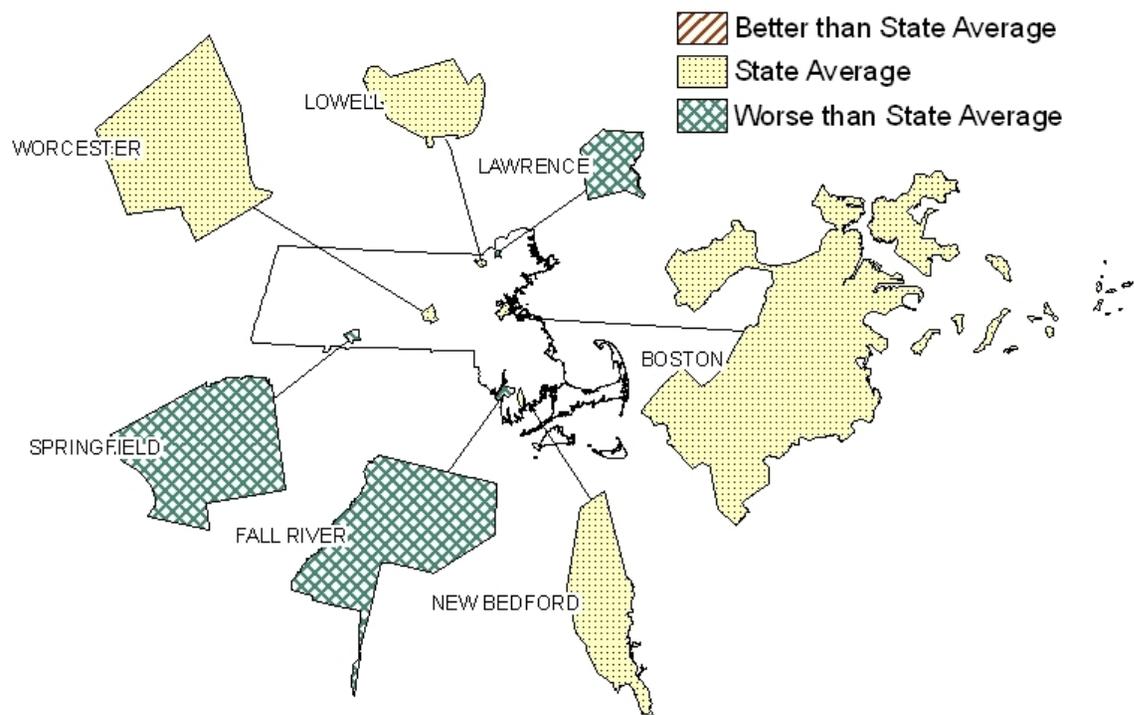
Section 4.1: Diabetes

Diabetes is a disease in which the body does not produce or properly use insulin. Insulin is a hormone which is used to convert sugar, starches, and other food into the energy needed for everyday life [25]. There are two types of diabetes: type 1 and type 2. In type 1 diabetes, the body is unable to produce insulin. In type 2 diabetes, the body is able to produce insulin, but is unable to utilize it efficiently.

Obesity, poor diet, and physical inactivity are risk factors associated with the increase in the prevalence of type 2 diabetes. In 2007, diabetes was the ninth leading cause of death in Massachusetts [24]. Overall, the risk for death among people with diabetes is about twice that of people without diabetes of a similar age [26]. In Massachusetts, 9.9 percent of the Commonwealth's medical care costs are attributable to diabetes [27].

All respondents were asked if a doctor had ever told them that they had diabetes or pre-diabetes (defined as a blood glucose level that is higher than normal but not yet diabetic). Women who reported that they had diabetes only during pregnancy (gestational diabetes) were categorized as not having diabetes. Presented here is the percentage of respondents who reported that a doctor had ever told them that they had diabetes.

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY HAVE BEEN DIAGNOSED WITH DIABETES, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE	
	%	95% CI
	N=20531	
OVERALL	7.2	6.7 - 7.6
GENDER		
MALE	7.9	7.1 - 8.7
FEMALE	6.5	5.9 - 7.0
AGE GROUP		
18-34	1.7	1.0 - 2.3
35-64	6.7	6.0 - 7.3
65+	17.6	16.2 - 19.1
RACE-ETHNICITY*		
WHITE	6.7	6.2 - 7.2
BLACK	11.1	8.6 - 13.6
HISPANIC	8.6	6.9 - 10.3
DISABILITY		
DISABILITY	14.4	13.0 - 15.7
NO DISABILITY	5.1	4.6 - 5.6
EDUCATION		
< HIGH SCHOOL	12.4	10.4 - 14.4
HIGH SCHOOL OR SOME COLLEGE	8.4	7.7 - 9.1
4+ YRS COLLEGE	4.8	4.2 - 5.4
HOUSEHOLD INCOME		
<\$25,000	12.6	11.3 - 13.9
\$25,000-74,999	7.5	6.6 - 8.4
\$75,000+	4.2	3.6 - 4.9

*White and Black race categories refer to non-Hispanic
 †Insufficient data

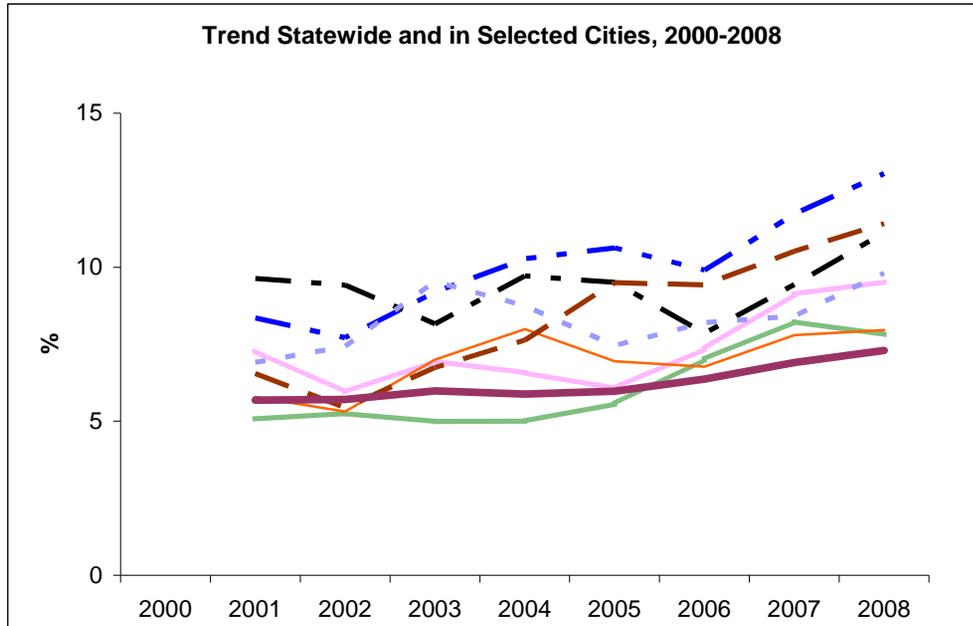
PERCENTAGE OF ADULTS WHO REPORTED THAT THEY HAD BEEN DIAGNOSED WITH DIABETES, 2008

	BOSTON		SPRINGFIELD		WORCESTER		LAWRENCE		LOWELL		FALL RIVER		NEW BEDFORD	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL SAMPLE (N)	N=2061		N=1206		N=1243		N=762		N=1151		N=1036		N=989	
OVERALL	7.2	6.0 - 8.5	12.1	10.1 - 14.0	8.2	6.5 - 9.9	10.9	8.4 - 13.3	8.7	6.9 - 10.4	11.1	9.0 - 13.3	9.3	7.4 - 11.3
GENDER														
MALE	7.2	5.2 - 9.3	11.8	8.4 - 15.1	8.1	5.4 - 10.9	11.1	6.8 - 15.3	8.9	6.2 - 11.6	10.3	6.9 - 13.7	8.1	5.0 - 11.2
FEMALE	7.3	5.7 - 8.8	12.3	9.9 - 14.6	8.3	6.4 - 10.2	10.7	7.9 - 13.6	8.3	6.3 - 10.4	11.8	9.0 - 14.6	10.5	8.1 - 13.0
AGE GROUP														
18-34	†		†		†		†		†		†		†	
35-64	9.7	7.5 - 11.9	13.8	10.6 - 17.0	9.2	6.5 - 11.8	15.1	10.8 - 19.5	9.9	7.1 - 12.7	12.0	8.9 - 15.1	10.5	7.8 - 13.2
65+	16.5	12.8 - 20.2	31.0	25.0 - 36.9	21.7	16.5 - 27.0	30.9	22.8 - 39.0	23.0	17.5 - 28.6	22.9	17.5 - 28.3	24.2	18.1 - 30.3
RACE-ETHNICITY*														
WHITE	4.1	2.8 - 5.3	10.4	8.0 - 12.8	6.8	5.3 - 8.4	12.3	8.6 - 16.0	9.0	7.0 - 11.0	11.2	8.9 - 13.5	9.4	7.4 - 11.5
BLACK	12.9	9.5 - 16.4	16.6	10.9 - 22.3	19.2	8.0 - 30.3	†		†		†		†	
HISPANIC	7.9	4.5 - 11.3	12.5	8.3 - 16.6	9.9	5.0 - 14.7	11.0	7.7 - 14.3	10.8	5.9 - 15.6	†		†	
DISABILITY														
DISABILITY	13.1	9.7 - 16.5	26.4	20.7 - 32.2	18.2	12.6 - 23.8	28.3	19.6 - 37.0	18.4	13.2 - 23.7	21.4	15.2 - 27.5	16.4	11.6 - 21.2
NO DISABILITY	5.6	4.2 - 7.0	7.4	5.4 - 9.4	5.1	3.5 - 6.6	6.9	4.6 - 9.2	6.4	4.5 - 8.3	7.0	5.0 - 9.0	6.8	4.5 - 9.0
EDUCATION														
< HIGH SCHOOL	11.9	7.3 - 16.4	21.1	14.8 - 27.3	15.3	9.2 - 21.4	15.2	10.1 - 20.2	19.1	12.4 - 25.8	19.3	13.8 - 24.8	10.3	5.5 - 15.1
HIGH SCHOOL OR SOME COLLEGE	9.3	7.2 - 11.5	11.3	8.7 - 13.8	8.8	6.2 - 11.4	7.0	4.4 - 9.6	7.2	5.2 - 9.1	8.2	5.7 - 10.7	8.4	6.2 - 10.5
4+ YRS COLLEGE	3.6	2.2 - 5.1	7.6	4.3 - 10.8	5.2	3.2 - 7.2	13.7	6.5 - 20.9	6.8	4.0 - 9.7	11.5	5.8 - 17.2	11.2	5.6 - 16.8
HOUSEHOLD INCOME														
<\$25,000	11.0	8.3 - 13.8	16.3	12.5 - 20.2	13.2	9.5 - 16.8	12.9	9.0 - 16.8	14.7	10.5 - 18.9	14.6	10.5 - 18.7	12.0	8.7 - 15.4
\$25,000-74,999	8.3	5.5 - 11.1	9.0	6.1 - 11.9	8.2	4.8 - 11.5	9.0	4.5 - 13.5	7.1	4.4 - 9.9	7.7	4.8 - 10.7	6.4	3.9 - 9.0
\$75,000+	2.9	1.7 - 4.2	†		3.8	1.9 - 5.6	†		4.4	1.9 - 6.9	†		†	

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY HAVE BEEN DIAGNOSED WITH DIABETES



Data source: MA BRFSS
Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	↗
SPRINGFIELD	↓	↗
WORCESTER	↔	→
LAWRENCE	↓	→
LOWELL	↔	→
FALL RIVER	↓	→
NEW BEDFORD	↔	→
STATE-WIDE	---	↗

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
→	No trend
↘	Downward trend

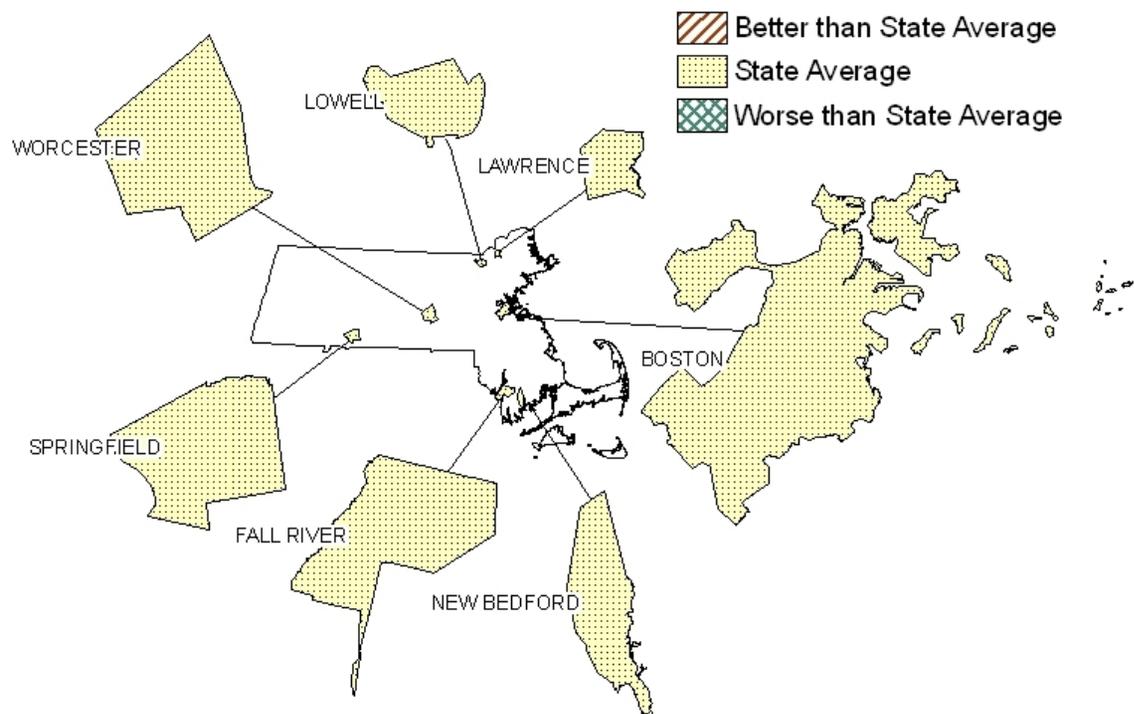
*based on 95% statistical significance

Section 4.2: Asthma

Asthma is a chronic inflammatory disorder that affects the lungs, causing repeated episodes of wheezing, breathlessness, coughing, and chest tightness [28]. Asthma attacks can be triggered by a variety of causes, such as second hand smoke, outdoor air pollution, allergens, irritants, and respiratory viral infections. These environmental irritants are also potential risk factors associated with the development of asthma [29]. The prevalence of asthma in the state of Massachusetts is one of the highest in the nation, and the costs are increasing each year: the total charges for hospitalization due to asthma in Massachusetts increased 77.7% from \$50 million in 2000 to \$89 million in 2006. [30].

All respondents were asked if a doctor, nurse, or other health care professional had ever told them that they had asthma. Those who reported ever having asthma were then asked if they currently have asthma. Reported here are the percentages of adult respondents who reported ever having asthma and those who reported currently having asthma.

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY HAD EVER BEEN DIAGNOSED WITH ASTHMA, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE		
	%	95% CI	
	N=20498		
OVERALL	14.8	14.0	15.6
GENDER			
MALE	12.6	11.3	13.9
FEMALE	16.8	15.8	17.9
AGE GROUP			
18-34	18.3	16.1	20.6
35-64	13.9	13.0	14.7
65+	12.0	10.8	13.2
RACE-ETHNICITY*			
WHITE	14.6	13.7	15.5
BLACK	15.3	11.3	19.4
HISPANIC	17.9	14.9	21.0
DISABILITY			
DISABILITY	23.2	21.1	25.2
NO DISABILITY	12.8	11.8	13.8
EDUCATION			
< HIGH SCHOOL	18.3	14.7	22.0
HIGH SCHOOL OR SOME COLLEGE	15.2	14.0	16.4
4+ YRS COLLEGE	13.7	12.6	14.9
HOUSEHOLD INCOME			
<\$25,000	17.9	16.0	19.7
\$25,000–74,999	14.2	12.9	15.6
\$75,000+	13.9	12.5	15.2

*White and Black race categories refer to non-Hispanic

†Insufficient data

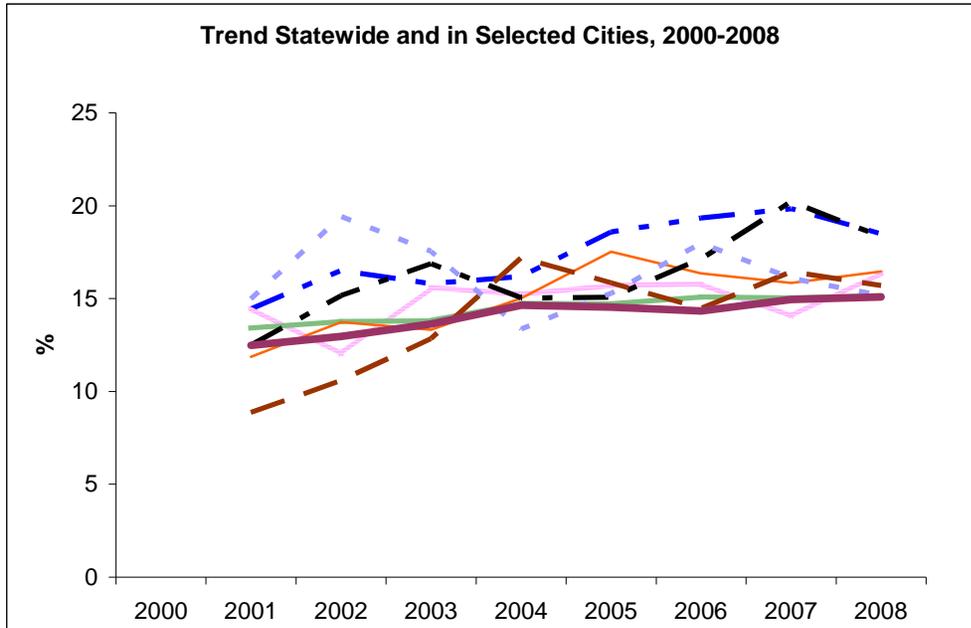
PERCENTAGE OF ADULTS WHO REPORTED THAT THEY HAD EVER BEEN DIAGNOSED WITH ASTHMA, 2008

	BOSTON		SPRINGFIELD		WORCESTER		LAWRENCE		LOWELL		FALL RIVER		NEW BEDFORD	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL SAMPLE (N)	N=2060		N=1203		N=1243		N=761		N=1144		N=1031		N=985	
OVERALL	15.6	13.2 - 18.0	17.1	14.5 - 19.8	16.7	13.8 - 19.5	15.2	11.9 - 18.6	17.8	14.3 - 21.3	16.4	13.2 - 19.5	15.9	12.7 - 19.1
GENDER														
MALE	13.7	9.9 - 17.6	12.4	8.1 - 16.6	15.2	11.0 - 19.5	10.9	5.8 - 16.1	14.1	9.2 - 19.0	12.4	8.0 - 16.9	12.7	7.6 - 17.9
FEMALE	17.2	14.3 - 20.2	21.1	17.7 - 24.4	18.1	14.2 - 21.9	18.8	14.5 - 23.1	22.0	17.3 - 26.6	19.5	15.1 - 23.9	19.0	15.1 - 22.8
AGE GROUP														
18-34	15.7	11.0 - 20.5	17.3	11.7 - 22.8	21.5	14.8 - 28.2	16.3	10.0 - 22.6	20.8	13.8 - 27.8	20.7	12.8 - 28.5	19.0	11.7 - 26.3
35-64	15.2	12.5 - 18.0	17.1	13.7 - 20.5	14.4	11.3 - 17.5	14.8	11.0 - 18.5	16.4	12.3 - 20.5	15.4	12.2 - 18.5	16.2	12.8 - 19.5
65+	16.0	11.7 - 20.3	17.8	13.0 - 22.5	13.9	9.8 - 18.0	12.4	5.7 - 19.1	15.1	10.1 - 20.1	11.4	7.5 - 15.3	8.2	4.7 - 11.7
RACE-ETHNICITY*														
WHITE	14.8	11.7 - 17.9	14.0	10.9 - 17.1	17.6	14.1 - 21.1	16.4	11.2 - 21.5	18.8	14.6 - 23.1	15.8	12.5 - 19.1	17.7	13.6 - 21.9
BLACK	16.3	11.6 - 21.1	17.2	10.9 - 23.6	†		†		†		†		†	
HISPANIC	20.1	13.1 - 27.0	21.9	15.7 - 28.1	16.5	9.0 - 24.0	15.5	11.1 - 19.9	20.6	12.2 - 28.9	†		†	
DISABILITY														
DISABILITY	29.8	23.3 - 36.2	29.2	22.4 - 36.0	25.5	18.2 - 32.8	26.2	18.3 - 34.2	26.9	20.0 - 33.8	30.8	23.6 - 38.0	29.1	20.9 - 37.2
NO DISABILITY	12.5	9.9 - 15.1	13.5	10.5 - 16.5	15.3	11.9 - 18.7	13.6	9.5 - 17.7	13.6	9.9 - 17.3	12.2	8.2 - 16.1	11.7	8.3 - 15.1
EDUCATION														
< HIGH SCHOOL	25.6	15.6 - 35.5	23.5	16.4 - 30.6	26.2	15.9 - 36.4	14.0	8.9 - 19.0	18.8	11.4 - 26.2	18.3	12.5 - 24.0	17.4	9.7 - 25.1
HIGH SCHOOL OR SOME COLLEGE	13.4	10.5 - 16.3	17.1	13.5 - 20.7	16.5	12.3 - 20.6	16.2	11.0 - 21.4	20.6	15.7 - 25.6	16.6	12.2 - 21.0	15.3	11.3 - 19.3
4+ YRS COLLEGE	15.2	11.7 - 18.8	12.7	8.5 - 17.0	14.2	10.0 - 18.4	14.7	7.9 - 21.5	13.1	7.9 - 18.4	12.2	6.6 - 17.8	15.8	9.6 - 22.0
HOUSEHOLD INCOME														
<\$25,000	19.8	15.2 - 24.4	20.5	16.0 - 24.9	21.0	15.5 - 26.5	17.6	12.2 - 23.1	22.5	16.0 - 29.0	18.9	14.1 - 23.6	16.5	11.4 - 21.6
\$25,000-74,999	14.2	9.9 - 18.5	17.8	12.8 - 22.9	13.9	8.8 - 19.1	14.4	8.9 - 20.0	16.8	11.6 - 22.0	18.3	12.8 - 23.8	13.3	8.9 - 17.7
\$75,000+	14.7	10.8 - 18.6	†		15.8	10.8 - 20.9	†		14.8	6.8 - 22.9	†		14.1	6.8 - 21.3

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY HAD EVER BEEN DIAGNOSED WITH ASTHMA



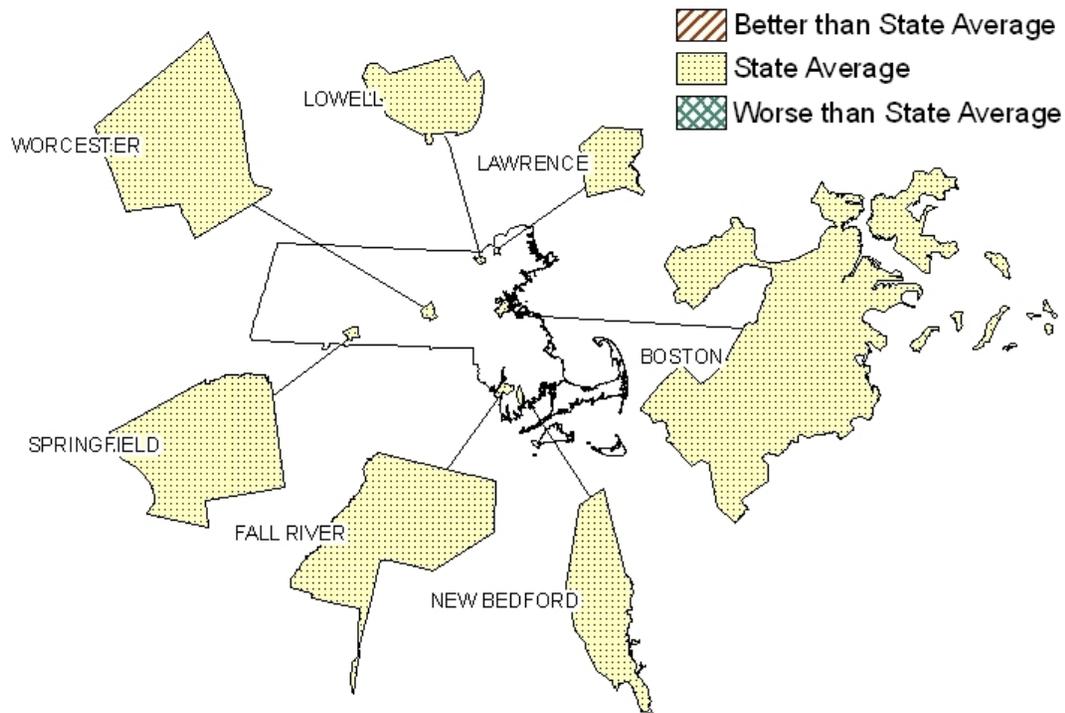
Data source: MA BRFSS
Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	↗
SPRINGFIELD	↔	↗
WORCESTER	↔	↗
LAWRENCE	↔	↗
LOWELL	↔	→
FALL RIVER	↔	→
NEW BEDFORD	↔	→
STATE-WIDE	---	↗

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
→	No trend
↘	Downward trend

*based on 95% statistical significance

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY CURRENTLY HAVE ASTHMA, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE	
	%	95% CI
	N=20429	
OVERALL	9.6	9.0 - 10.3
GENDER		
MALE	7.2	6.3 - 8.2
FEMALE	11.8	10.9 - 12.7
AGE GROUP		
18-34	10.8	9.0 - 12.5
35-64	9.3	8.6 - 10.0
65+	8.9	7.9 - 10.0
RACE-ETHNICITY*		
WHITE	9.4	8.7 - 10.2
BLACK	11.2	7.5 - 15.0
HISPANIC	11.1	8.9 - 13.3
DISABILITY		
DISABILITY	17.4	15.7 - 19.1
NO DISABILITY	7.7	6.9 - 8.5
EDUCATION		
< HIGH SCHOOL	14.2	10.6 - 17.7
HIGH SCHOOL OR SOME COLLEGE	10.2	9.2 - 11.2
4+ YRS COLLEGE	8.2	7.3 - 9.0
HOUSEHOLD INCOME		
<\$25,000	13.3	11.7 - 14.9
\$25,000–74,999	9.5	8.5 - 10.6
\$75,000+	7.9	6.9 - 8.9

*White and Black race categories refer to non-Hispanic

†Insufficient data

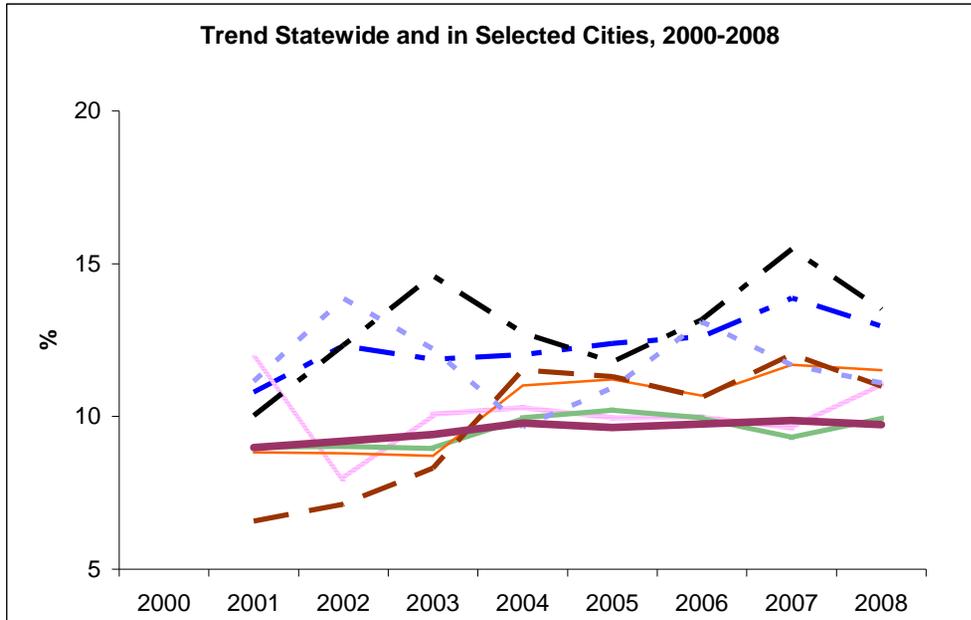
PERCENTAGE OF ADULTS WHO REPORTED THAT THEY CURRENTLY HAVE ASTHMA, 2008

	BOSTON			SPRINGFIELD			WORCESTER			LAWRENCE			LOWELL			FALL RIVER			NEW BEDFORD		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
TOTAL SAMPLE (N)	N=2056			N=1201			N=1238			N=760			N=1142			N=1026			N=982		
OVERALL	10.5	8.6	- 12.5	12.6	10.2	- 15.0	11.5	9.1	- 13.9	10.6	7.9	- 13.4	11.9	9.0	- 14.8	11.6	9.2	- 14.0	11.9	9.0	- 14.8
GENDER																					
MALE	8.0	5.1	- 10.9	8.1	4.4	- 11.9	10.6	6.9	- 14.2	7.1	3.2	- 11.0	8.5	4.7	- 12.3	8.3	4.9	- 11.6	8.6	4.0	- 13.3
FEMALE	12.7	10.1	- 15.3	16.2	13.1	- 19.3	12.4	9.1	- 15.7	13.5	9.7	- 17.3	15.7	11.5	- 19.9	14.2	10.9	- 17.5	15.1	11.6	- 18.5
AGE GROUP																					
18-34	10.8	6.8	- 14.8	12.9	7.9	- 17.9	13.3	7.7	- 18.9	9.9	4.9	- 14.8	11.1	5.8	- 16.3	11.3	6.0	- 16.6	14.3	7.6	- 21.0
35-64	9.5	7.6	- 11.5	12.6	9.6	- 15.6	10.8	8.0	- 13.6	11.6	8.2	- 15.1	12.8	8.9	- 16.7	13.0	10.0	- 15.9	11.9	9.1	- 14.7
65+	13.0	8.9	- 17.1	12.5	8.5	- 16.4	10.2	6.7	- 13.8	†			11.9	7.4	- 16.5	8.7	5.2	- 12.2	6.5	3.5	- 9.6
RACE-ETHNICITY*																					
WHITE	10.5	7.9	- 13.2	10.7	7.9	- 13.5	11.3	8.4	- 14.2	11.1	7.1	- 15.1	12.9	9.3	- 16.5	11.4	8.9	- 14.0	14.2	10.3	- 18.2
BLACK	11.3	7.1	- 15.6	12.2	6.7	- 17.8	†			†			†			†			†		
HISPANIC	11.3	6.5	- 16.1	15.4	9.9	- 20.9	14.2	6.9	- 21.4	11.0	7.4	- 14.7	13.3	5.8	- 20.7	†			†		
DISABILITY																					
DISABILITY	22.8	17.0	- 28.7	24.7	18.0	- 31.3	18.8	12.2	- 25.4	23.0	15.3	- 30.7	22.7	16.3	- 29.2	26.9	19.8	- 33.9	25.0	17.0	- 33.0
NO DISABILITY	7.8	5.8	- 9.9	8.7	6.3	- 11.2	9.7	6.9	- 12.5	8.1	4.9	- 11.2	6.5	4.1	- 8.8	6.8	4.4	- 9.1	7.7	5.0	- 10.4
EDUCATION																					
< HIGH SCHOOL	15.3	6.8	- 23.8	14.3	9.1	- 19.6	19.4	10.6	- 28.2	11.4	6.6	- 16.2	14.3	8.0	- 20.6	14.2	9.3	- 19.0	12.9	5.6	- 20.1
HIGH SCHOOL OR SOME COLLEGE	8.9	6.7	- 11.1	13.4	10.0	- 16.8	12.9	9.1	- 16.7	9.6	5.7	- 13.6	12.7	8.7	- 16.6	11.7	8.4	- 14.9	11.8	8.2	- 15.4
4+ YRS COLLEGE	11.0	7.9	- 14.0	9.3	5.5	- 13.1	7.2	4.5	- 10.0	11.9	5.5	- 18.2	10.0	5.1	- 14.9	7.1	3.1	- 11.1	10.9	5.8	- 15.9
HOUSEHOLD INCOME																					
<\$25,000	14.2	10.5	- 17.9	15.2	11.3	- 19.0	16.2	11.2	- 21.2	14.0	9.2	- 18.8	16.5	10.7	- 22.3	16.1	11.8	- 20.5	13.8	9.0	- 18.7
\$25,000-74,999	8.1	5.0	- 11.1	12.7	7.9	- 17.4	9.4	4.9	- 13.9	7.8	3.9	- 11.7	9.3	5.7	- 12.9	12.8	8.3	- 17.2	9.8	6.1	- 13.4
\$75,000+	10.5	7.0	- 14.1	†			8.0	4.6	- 11.4	†			†			†			†		

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS WHO REPORTED THAT THEY CURRENTLY HAVE ASTHMA



Data source: MA BRFSS
 Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	➔
SPRINGFIELD	↔	➔
WORCESTER	↔	↗
LAWRENCE	↔	↗
LOWELL	↔	➔
FALL RIVER	↔	➔
NEW BEDFORD	↔	➔
STATE-WIDE	---	↗

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
➔	No trend
↘	Downward trend

*based on 95% statistical significance

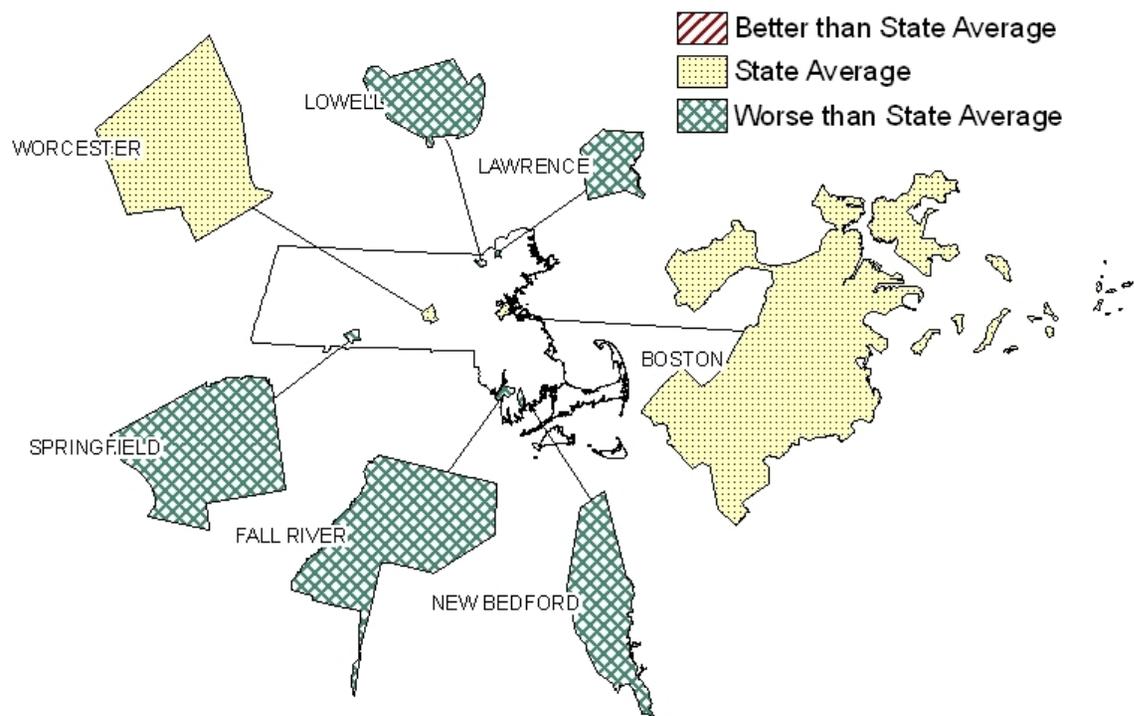
CANCER SCREENING

Section 5.1: Colorectal Cancer Screening

Cancer of the colon or rectum is the second leading cause of cancer-related deaths in the United States and it is estimated that there will be 49,920 deaths due to colorectal cancer in 2009, accounting for almost 9% of all cancer deaths [31,32]. It is estimated that at least one-third of colorectal cancer deaths could be prevented if everyone 50 years and older were screened. Fecal occult blood tests, sigmoidoscopy, and colonoscopy are screening procedures that are performed to detect colorectal cancer in the early stages [33].

Respondents, ages 50 and older, were asked if they ever had had a sigmoidoscopy or colonoscopy, tests that examine the bowel for signs of cancer or other health problems. Presented here is the percentage of those respondents who reported that they had had a sigmoidoscopy or colonoscopy in the past five years.

PERCENTAGE OF ADULTS AGE 50+ WHO REPORT THAT THEY HAVE HAD A COLONOSCOPY OR SIGMOIDOSCOPY IN THE PAST FIVE YEARS, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE		
	%	95% CI	
	N=11195		
OVERALL	63.5	62.2	- 64.8
GENDER			
MALE	66.3	64.3	- 68.4
FEMALE	61.2	59.6	- 62.8
AGE GROUP			
50-64	62.6	60.9	- 64.4
65+	64.8	62.9	- 66.6
RACE-ETHNICITY*			
WHITE	64.3	63.0	- 65.6
BLACK	59.7	52.1	- 67.3
HISPANIC	56.6	50.1	- 63.1
DISABILITY			
DISABILITY	64.0	61.7	- 66.4
NO DISABILITY	63.7	62.1	- 65.3
EDUCATION			
< HIGH SCHOOL	53.0	48.6	- 57.3
HIGH SCHOOL OR SOME COLLEGE	60.4	58.6	- 62.2
4+ YRS COLLEGE	69.1	67.1	- 71.1
HOUSEHOLD INCOME			
<\$25,000	55.2	52.6	- 57.8
\$25,000-74,999	64.4	62.2	- 66.5
\$75,000+	69.9	67.5	- 72.3

*White and Black race categories refer to non-Hispanic

†Insufficient data

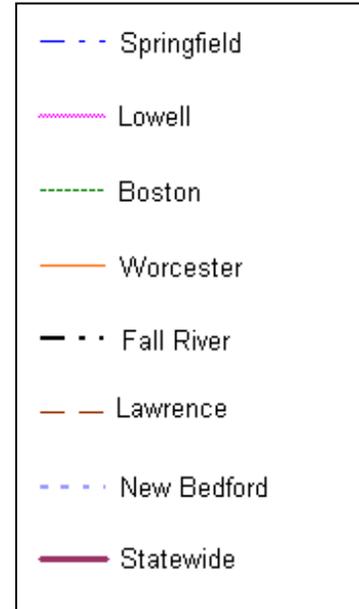
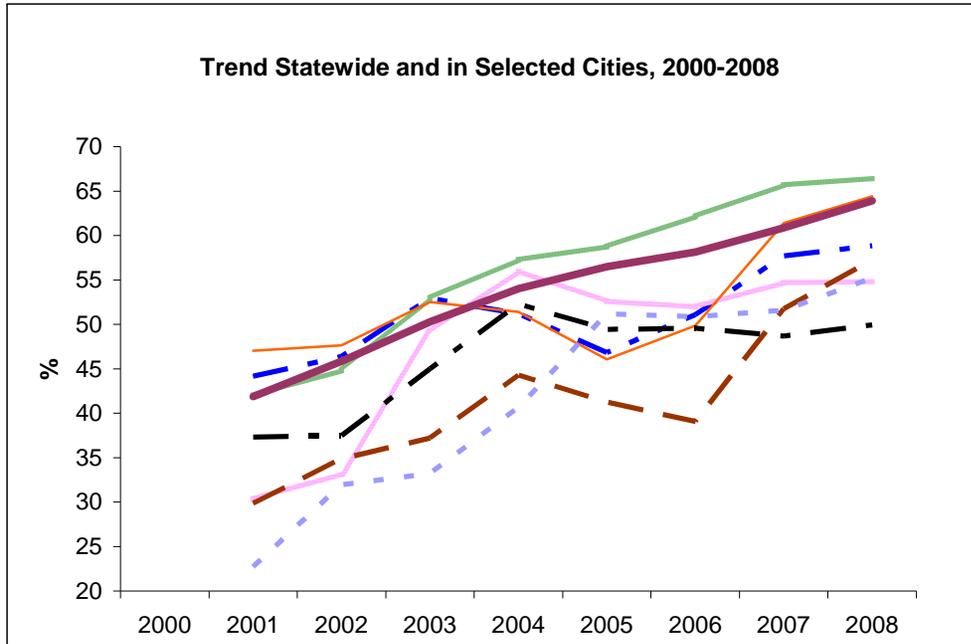
PERCENTAGE OF ADULTS AGE 50+ WHO REPORTED THAT THEY HAVE HAD A COLONOSCOPY OR SIGMOIDOSCOPY IN PAST 5 YEARS, 2008

	BOSTON		SPRINGFIELD		WORCESTER		LAWRENCE		LOWELL		FALL RIVER		NEW BEDFORD	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL SAMPLE (N)	N=1007		N=630		N=661		N=349		N=598		N=556		N=570	
OVERALL	63.7	59.8 - 67.6	56.2	51.3 - 61.1	62.7	58.1 - 67.4	53.6	47.3 - 60.0	51.2	46.5 - 55.9	52.7	47.7 - 57.6	55.3	50.5 - 60.2
GENDER														
MALE	61.6	55.2 - 68.1	52.0	43.5 - 60.5	62.5	55.0 - 70.1	53.1	41.9 - 64.3	54.3	46.4 - 62.3	50.5	41.4 - 59.7	57.4	48.9 - 66.0
FEMALE	65.4	60.8 - 70.0	59.1	53.5 - 64.8	62.9	57.2 - 68.6	54.0	46.7 - 61.4	48.6	43.1 - 54.2	54.0	48.4 - 59.6	53.9	48.2 - 59.7
RACE-ETHNICITY*														
WHITE	65.1	60.6 - 69.5	55.1	48.9 - 61.2	64.4	59.7 - 69.2	61.3	53.5 - 69.1	51.9	46.9 - 57.0	54.5	49.6 - 59.4	55.3	49.9 - 60.7
BLACK	67.5	60.1 - 74.9	61.4	49.5 - 73.3	†		†		†		†		†	
HISPANIC	52.5	38.1 - 67.0	52.8	41.2 - 64.5	63.9	47.1 - 80.8	48.7	39.4 - 58.0	45.6	32.0 - 59.2	†		†	
DISABILITY														
DISABILITY	66.2	59.7 - 72.7	56.7	49.1 - 64.4	62.8	54.0 - 71.7	64.2	53.6 - 74.7	59.3	51.4 - 67.2	53.9	44.6 - 63.3	56.6	48.7 - 64.4
NO DISABILITY	62.4	57.4 - 67.4	58.4	51.7 - 65.1	62.7	56.9 - 68.5	49.0	40.7 - 57.2	45.3	39.2 - 51.5	55.4	49.3 - 61.6	55.8	49.4 - 62.3
EDUCATION														
< HIGH SCHOOL	54.4	44.3 - 64.5	54.6	43.5 - 65.6	50.4	36.9 - 63.9	55.4	45.2 - 65.5	48.9	37.6 - 60.3	45.0	36.5 - 53.6	42.0	32.5 - 51.5
HIGH SCHOOL OR SOME COLLEGE	59.3	53.9 - 64.7	55.0	48.9 - 61.1	59.4	52.8 - 66.1	53.0	43.1 - 63.0	48.3	41.8 - 54.7	55.1	48.3 - 61.9	56.5	50.1 - 62.8
4+ YRS COLLEGE	72.9	66.4 - 79.4	61.8	50.4 - 73.2	72.7	65.7 - 79.7	50.5	37.4 - 63.6	56.9	48.5 - 65.3	60.9	47.2 - 74.6	67.8	57.6 - 78.0
HOUSEHOLD INCOME														
<\$25,000	55.7	49.2 - 62.3	50.4	42.9 - 57.9	52.3	44.1 - 60.5	52.0	42.5 - 61.6	50.2	41.9 - 58.5	50.7	43.1 - 58.3	53.1	45.6 - 60.5
\$25,000-74,999	60.2	52.4 - 68.1	62.5	54.7 - 70.3	67.8	60.2 - 75.5	59.2	47.4 - 70.9	50.9	43.0 - 58.9	57.6	48.9 - 66.2	61.3	53.3 - 69.3
\$75,000+	79.8	73.7 - 85.8	56.8	39.2 - 74.3	66.6	56.2 - 77.1	†		56.0	43.7 - 68.3	†		†	

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS AGE 50+ WHO REPORT THAT THEY HAVE HAD A COLONOSCOPY OR SIGMOIDOSCOPY IN THE PAST FIVE YEARS



Data source: MA BRFS
Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	↗
SPRINGFIELD	↓	↗
WORCESTER	↔	↗
LAWRENCE	↓	↗
LOWELL	↓	↗
FALL RIVER	↓	↗
NEW BEDFORD	↓	↗
STATE-WIDE	---	↗

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
→	No trend
↘	Downward trend

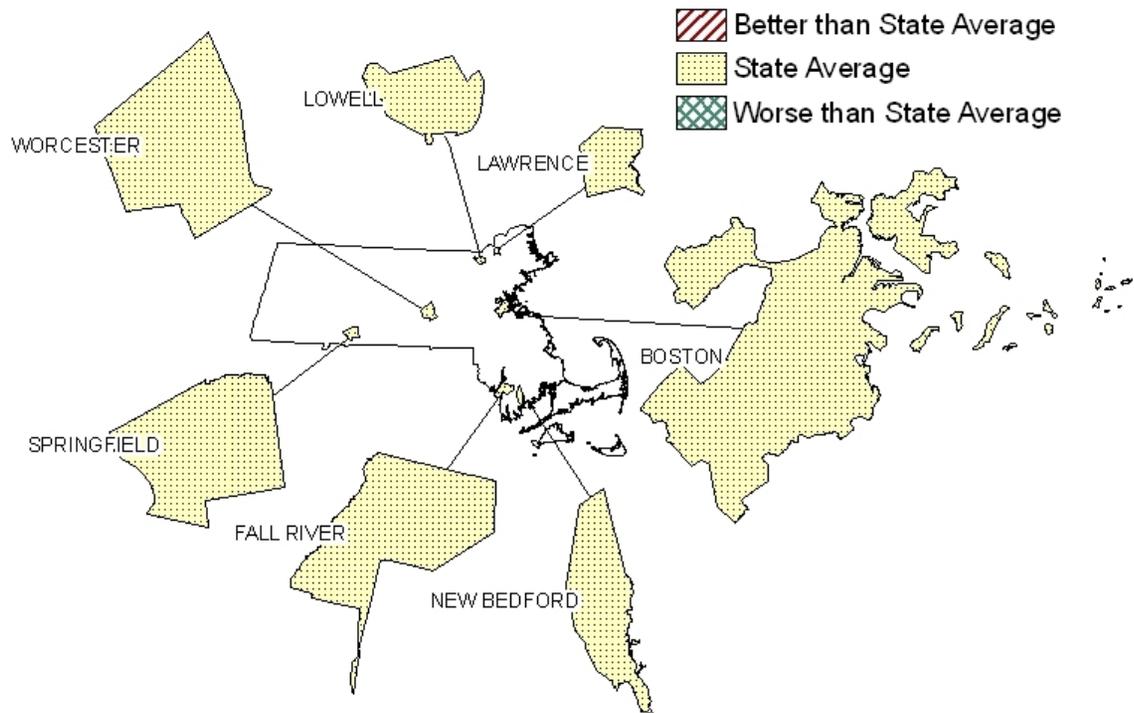
*based on 95% statistical significance

Section 5.2: Breast Cancer Screening

Cancer of the breast is the most commonly diagnosed cancer among women in the United States. In 2007, breast cancer was the second leading cause of cancer death among Massachusetts women [24]. Early detection of breast cancer can occur through the use of screening tools such as mammography and clinical breast exams. A mammogram, an X-ray of the breast, is the one of the methods to detect breast cancer early and before it is big enough to feel or to cause symptoms [34].

All female respondents were asked about breast cancer screening. Those women who reported that they ever had had a mammogram were asked how long it had been since their last mammogram. One Healthy People 2010 objective is to have 70% of women age 40 and older reporting that they have had a mammogram in the past two years; the percentage of women age 50 and older in Massachusetts who reported that they had had a mammogram in the past two years is presented in this report.

PERCENTAGE OF WOMEN AGE 50+ WHO REPORTED THAT THEY HAD A MAMMOGRAM IN THE PAST TWO YEARS, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE		
	%	95% CI	
	N=7293		
OVERALL	87.3	86.2	- 88.3
AGE GROUP			
50-64	89.6	88.2	- 91.0
65+	84.4	82.7	- 86.0
RACE-ETHNICITY*			
WHITE	87.0	85.9	- 88.2
BLACK	89.3	84.7	- 93.8
HISPANIC	92.4	89.0	- 95.7
DISABILITY			
DISABILITY	84.6	82.5	- 86.8
NO DISABILITY	88.6	87.3	- 89.8
EDUCATION			
< HIGH SCHOOL	84.6	81.3	- 88.0
HIGH SCHOOL OR SOME COLLEGE	85.4	83.9	- 86.9
4+ YRS COLLEGE	90.7	89.1	- 92.2
HOUSEHOLD INCOME			
<\$25,000	81.2	78.9	- 83.4
\$25,000-74,999	88.0	86.2	- 89.8
\$75,000+	91.9	89.9	- 93.9

*White and Black race categories refer to non-Hispanic

†Insufficient data

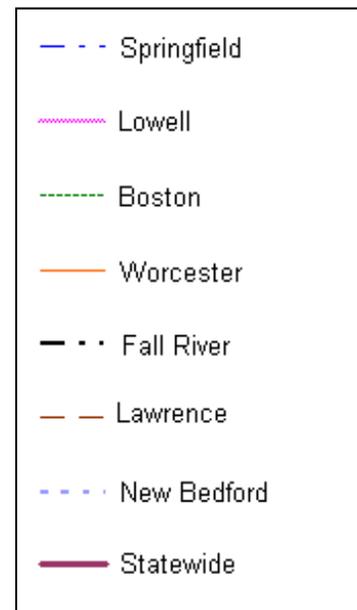
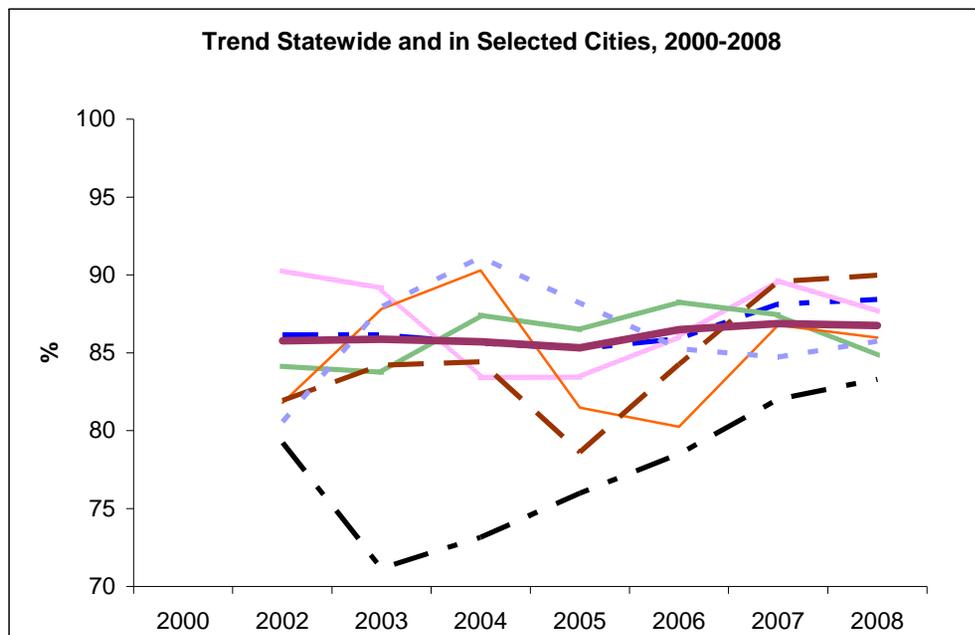
PERCENTAGE OF WOMEN AGE 50+ WHO REPORTED THAT THEY HAD A MAMMOGRAM IN THE PAST TWO YEARS, 2008

	BOSTON		SPRINGFIELD		WORCESTER		LAWRENCE		LOWELL		FALL RIVER		NEW BEDFORD	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL SAMPLE (N)	N=659		N=437		N=419		N=244		N=386		N=401		N=394	
OVERALL	86.0	82.4 - 89.6	87.6	83.8 - 91.3	83.7	79.5 - 87.9	90.3	86.1 - 94.4	83.8	79.8 - 87.8	83.5	79.3 - 87.7	85.4	81.1 - 89.7
RACE-ETHNICITY*														
WHITE	82.6	77.3 - 87.9	85.3	80.4 - 90.3	84.0	79.4 - 88.5	82.6	74.7 - 90.6	81.5	76.8 - 86.2	83.7	79.4 - 88.0	87.0	82.5 - 91.5
BLACK	89.8	84.1 - 95.6	96.0	92.5 - 99.6	†		†		†		†		†	
HISPANIC	90.6	81.1 - 100	86.7	76.7 - 96.7	†		96.5	93.7 - 99.4	†		†		†	
DISABILITY														
DISABILITY	79.1	70.7 - 87.6	86.3	80.9 - 91.7	76.3	67.8 - 84.9	92.5	87.5 - 97.5	76.6	68.6 - 84.6	83.1	76.2 - 90.0	83.8	75.9 - 91.6
NO DISABILITY	88.7	84.5 - 92.8	87.2	81.7 - 92.8	86.7	81.7 - 91.8	88.8	82.6 - 95.1	85.4	80.6 - 90.3	83.2	77.6 - 88.9	86.8	81.5 - 92.1
EDUCATION														
< HIGH SCHOOL	78.6	66.8 - 90.4	86.6	79.2 - 94.0	84.3	74.6 - 94.0	90.9	85.3 - 96.4	83.6	74.1 - 93.0	80.2	73.4 - 87.0	77.4	67.4 - 87.5
HIGH SCHOOL OR SOME COLLEGE	86.5	81.5 - 91.5	87.3	82.2 - 92.4	79.1	72.7 - 85.5	87.7	80.2 - 95.3	82.3	76.5 - 88.1	84.1	77.8 - 90.3	88.6	83.5 - 93.8
4+ YRS COLLEGE	89.6	84.9 - 94.3	89.3	81.6 - 97.0	92.9	87.5 - 98.3	†		85.5	78.4 - 92.6	90.1	79.9 - 100	86.2	76.1 - 96.2
HOUSEHOLD INCOME														
<\$25,000	85.6	79.1 - 92.0	86.5	81.6 - 91.4	74.2	66.0 - 82.4	87.5	81.0 - 94.1	81.0	74.4 - 87.7	78.1	71.1 - 85.1	83.1	76.3 - 90.0
\$25,000–74,999	83.0	75.7 - 90.3	85.3	76.6 - 94.0	80.9	73.0 - 88.9	95.1	89.9 - 100	81.6	74.1 - 89.1	88.3	80.0 - 96.5	88.7	81.9 - 95.6
\$75,000+	94.4	90.2 - 98.6	†		95.8	91.4 - 100	†		†		†		†	

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF WOMEN AGE 50+ WHO REPORTED THAT THEY HAD A MAMMOGRAM IN THE PAST TWO YEARS



Data source: MA BRFSS
 Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	➔
SPRINGFIELD	↔	➔
WORCESTER	↔	➔
LAWRENCE	↔	➔
LOWELL	↔	➔
FALL RIVER	↔	➔
NEW BEDFORD	↔	➔
STATE-WIDE	---	➔

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
➔	No trend
↘	Downward trend

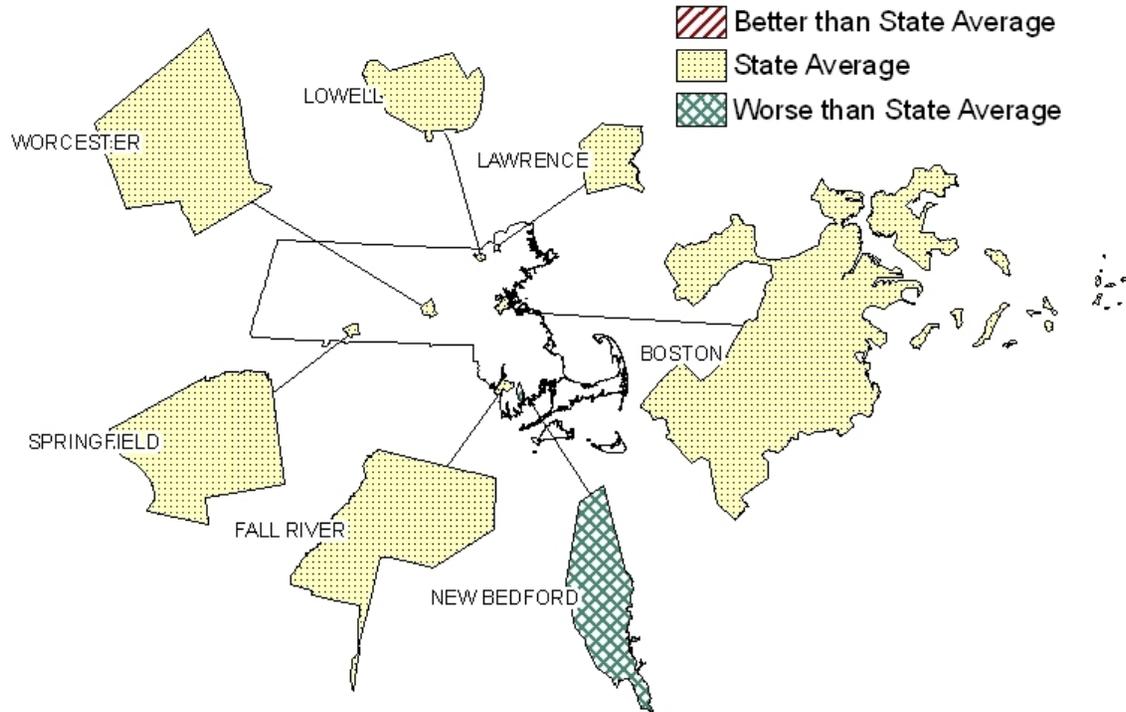
*based on 95% statistical significance

Section 5.3: Cervical Cancer Screening

Cervical cancer can be detected and treated early if women are screened regularly with a Pap smear, also referred to as a Pap test. Most often cervical cancer develops in women ages 40 and older; however, precursors to cervical cancer most often occur in young women. Pap smears reduce both the incidence of and mortality from cervical cancer [35]. Women who have been sexually active should have regular Pap tests every three years because the chances of being cured are higher if cervical cancer is detected early [36].

All women were asked if they ever had had a Pap smear, a screening test for cancer of the cervix. Those who reported that they had had a Pap smear were then asked how long it had been since their last pap smear. The percentage of women who reported having had a pap smear in the past 3 years is presented.

PERCENTAGE OF WOMEN WHO REPORTED THAT THEY HAD A PAP SMEAR IN THE PAST THREE YEARS, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE		
	%	95% CI	
	N=12133		
OVERALL	83.5	82.4	- 84.7
AGE GROUP			
18-34	84.9	81.6	- 88.1
35-64	90.7	89.8	- 91.6
65+	61.7	59.5	- 64.0
RACE-ETHNICITY*			
WHITE	83.5	82.2	- 84.7
BLACK	79.3	73.6	- 84.9
HISPANIC	86.1	82.4	- 89.8
DISABILITY			
DISABILITY	77.6	75.3	- 79.9
NO DISABILITY	85.5	84.1	- 86.8
EDUCATION			
< HIGH SCHOOL	71.8	66.0	- 77.5
HIGH SCHOOL OR SOME COLLEGE	78.8	77.0	- 80.6
4+ YRS COLLEGE	91.1	89.9	- 92.3
HOUSEHOLD INCOME			
<\$25,000	73.1	70.5	- 75.7
\$25,000-74,999	85.6	84.0	- 87.3
\$75,000+	92.5	90.9	- 94.1

*White and Black race categories refer to non-Hispanic

†Insufficient data

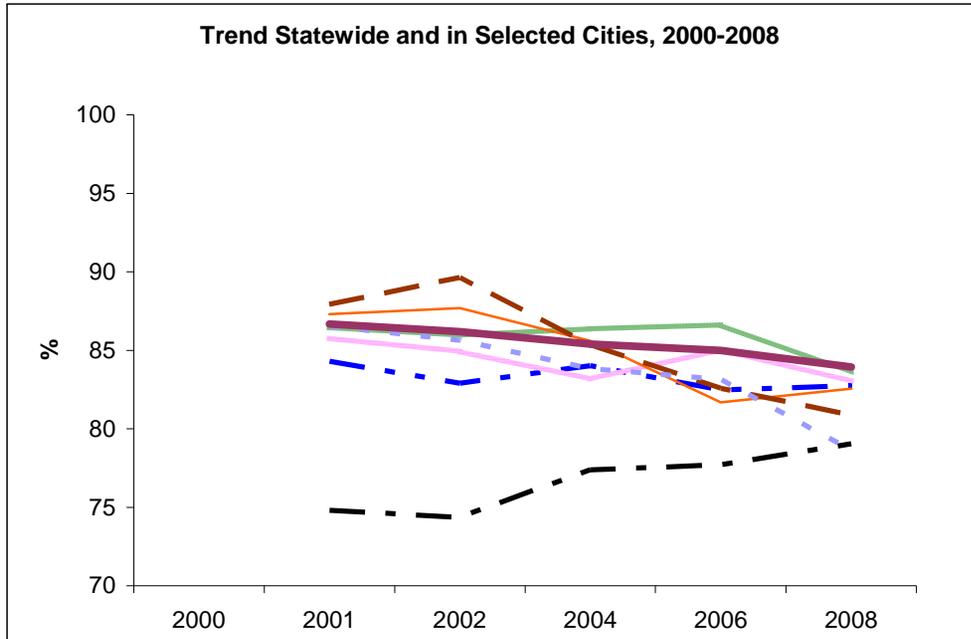
PERCENTAGE OF WOMEN WHO REPORTED THAT THEY HAD A PAP SMEAR IN THE PAST THREE YEARS, 2008

	BOSTON		SPRINGFIELD		WORCESTER		LAWRENCE		LOWELL		FALL RIVER		NEW BEDFORD	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL SAMPLE (N)	N=1233		N=759		N=718		N=495		N=665		N=647		N=611	
OVERALL	80.9	77.2 - 84.6	84.1	80.8 - 87.5	86.1	83.1 - 89.1	81.9	77.0 - 86.8	80.8	76.5 - 85.1	80.4	76.6 - 84.2	76.7	72.6 - 80.8
AGE GROUP														
18-34	78.2	69.5 - 86.8	88.1	81.1 - 95.1	90.0	83.4 - 96.6	79.8	70.2 - 89.5	90.2	81.7 - 98.6	86.1	77.2 - 95.0	87.3	79.3 - 95.3
35-64	89.9	87.1 - 92.7	91.3	88.4 - 94.2	92.5	89.9 - 95.0	88.9	84.6 - 93.3	87.6	83.8 - 91.4	84.6	80.6 - 88.6	80.4	75.3 - 85.5
65+	60.8	54.2 - 67.4	58.1	50.2 - 66.1	61.7	53.9 - 69.4	65.9	55.3 - 76.5	44.8	35.6 - 54.0	61.7	54.1 - 69.2	52.4	43.9 - 60.8
RACE-ETHNICITY*														
WHITE	80.9	75.5 - 86.4	81.3	76.9 - 85.8	86.2	83.2 - 89.2	72.7	63.4 - 82.0	79.0	74.5 - 83.6	80.8	76.8 - 84.7	74.7	69.9 - 79.5
BLACK	74.5	66.4 - 82.6	83.7	73.8 - 93.6	†		†		†		†		†	
HISPANIC	86.4	79.5 - 93.2	89.3	84.1 - 94.6	85.1	73.8 - 96.3	84.9	79.0 - 90.9	85.3	73.4 - 97.2	†		83.4	71.6 - 95.1
DISABILITY														
DISABILITY	78.4	72.4 - 84.4	77.4	71.6 - 83.2	77.6	70.8 - 84.3	82.6	71.9 - 93.4	73.0	65.7 - 80.3	76.5	68.1 - 84.8	69.5	61.6 - 77.4
NO DISABILITY	81.8	77.2 - 86.5	86.5	82.2 - 90.8	89.0	85.5 - 92.4	81.1	75.2 - 87.0	84.2	79.5 - 88.8	82.3	77.9 - 86.7	80.6	75.7 - 85.4
EDUCATION														
< HIGH SCHOOL	76.4	66.0 - 86.7	77.5	67.2 - 87.8	81.1	71.4 - 90.7	79.4	70.5 - 88.4	70.8	59.2 - 82.3	67.5	59.8 - 75.3	65.8	55.9 - 75.7
HIGH SCHOOL OR SOME COLLEGE	74.8	68.6 - 80.9	83.6	79.5 - 87.8	81.9	76.9 - 86.9	82.1	75.2 - 88.9	78.1	72.1 - 84.0	83.5	78.5 - 88.6	79.3	74.2 - 84.4
4+ YRS COLLEGE	89.4	85.5 - 93.3	90.5	85.1 - 96.0	94.4	91.6 - 97.1	86.7	76.1 - 97.4	93.3	90.3 - 96.4	87.2	79.9 - 94.4	82.7	74.8 - 90.6
HOUSEHOLD INCOME														
<\$25,000	75.2	68.8 - 81.6	80.7	75.0 - 86.4	73.7	66.6 - 80.7	81.3	73.7 - 88.8	74.2	65.3 - 83.1	75.6	69.0 - 82.2	78.0	72.2 - 83.8
\$25,000-74,999	84.1	78.5 - 89.7	87.3	82.2 - 92.3	87.6	82.8 - 92.5	83.9	75.1 - 92.7	83.2	78.2 - 88.3	86.8	80.8 - 92.8	77.4	70.5 - 84.3
\$75,000+	93.6	90.4 - 96.9	91.1	82.0 - 100	97.0	94.8 - 99.2	†		92.0	83.9 - 100	90.8	83.5 - 98.2	†	

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF WOMEN WHO REPORTED THAT THEY HAD A PAP SMEAR IN THE PAST THREE YEARS



Data source: MA BRFSS
Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↔	➔
SPRINGFIELD	↔	➔
WORCESTER	↔	➔
LAWRENCE	↔	➔
LOWELL	↔	➔
FALL RIVER	↔	➔
NEW BEDFORD	↓	➔
STATE-WIDE	---	➡

↑	Better than state average
↔	State average
↓	Worse than state average
↗	Upward trend
➔	No trend
↘	Downward trend

*based on 95% statistical significance

ADDITIONAL INDICATORS OF HEALTH

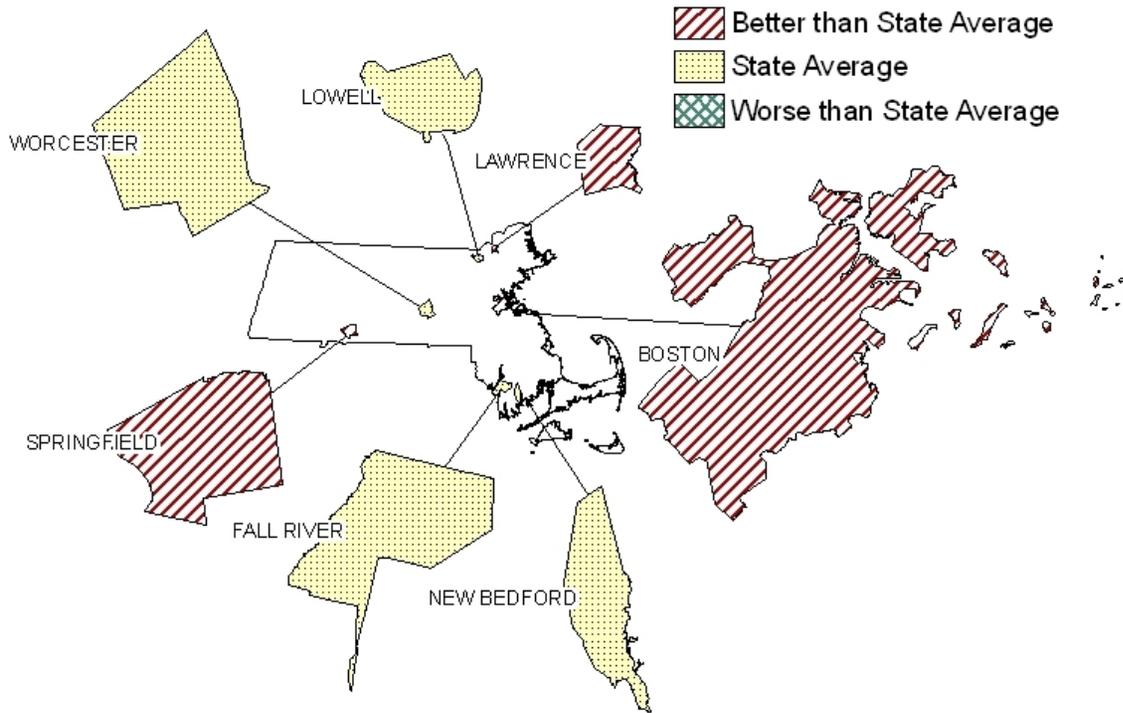
Section 6.1: HIV Testing

In Massachusetts, the number of people living with HIV/AIDS increases each year due to the fact that 1) new HIV infection diagnoses exceed the number of deaths among people reported with HIV/AIDS and 2) there are more survivors due to improved treatment options over time. One-fourth of people infected with HIV do not know they have it. Early awareness of an HIV infection through HIV testing can prevent further spread of the disease [37].

All respondents ages 18-64 were asked if they had ever been tested for HIV. Respondents were told not to include times that HIV testing had been done as part of a blood donation.

Respondents who reported that they had ever been tested for HIV were asked the date of their most recent HIV test. Presented here is the percentage of respondents who report ever having been tested for HIV.

PERCENTAGE OF ADULTS AGE 18-64 WHO REPORTED THAT THEY HAVE EVER BEEN TESTED FOR HIV, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATEWIDE		
	%	95% CI	
N=13534			
OVERALL	40.6	39.2	- 42.0
GENDER			
MALE	38.9	36.8	- 41.0
FEMALE	42.2	40.4	- 44.0
AGE GROUP			
18-34	46.4	43.3	- 49.5
35-64	37.4	36.1	- 38.7
RACE-ETHNICITY*			
WHITE	37.8	36.3	- 39.4
BLACK	57.7	51.7	- 63.7
HISPANIC	55.5	50.9	- 60.1
DISABILITY			
DISABILITY	46.7	43.5	- 49.9
NO DISABILITY	38.6	37.1	- 40.2
EDUCATION			
< HIGH SCHOOL	47.2	40.7	- 53.6
HIGH SCHOOL OR SOME COLLEGE	39.3	37.2	- 41.4
4+ YRS COLLEGE	41.1	39.2	- 43.0
HOUSEHOLD INCOME			
<\$25,000	47.2	43.6	- 50.7
\$25,000-74,999	39.7	37.3	- 42.1
\$75,000+	40.4	38.4	- 42.5

*White and Black race categories refer to non-Hispanic
 †Insufficient data

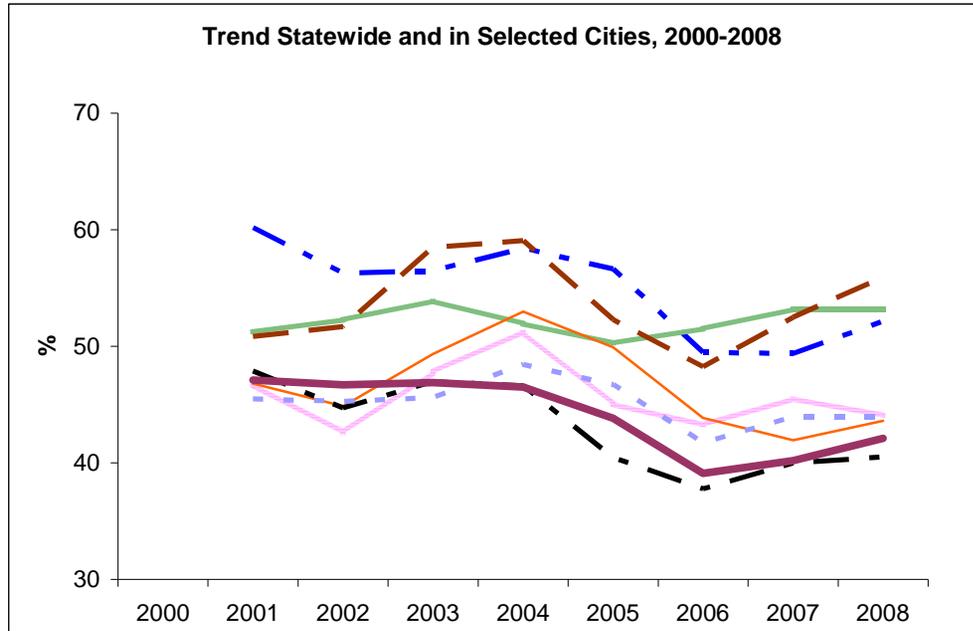
PERCENTAGE OF ADULTS AGE 18-64 WHO REPORTED THAT THEY HAD EVER BEEN TESTED FOR HIV, 2008

	BOSTON			SPRINGFIELD			WORCESTER			LAWRENCE			LOWELL			FALL RIVER			NEW BEDFORD		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
TOTAL SAMPLE (N)	N=1427			N=823			N=828			N=558			N=782			N=676			N=666		
OVERALL	52.5	48.4	- 56.5	50.8	46.1	- 55.4	42.7	38.0	- 47.5	53.1	47.4	- 58.7	44.5	39.6	- 49.4	39.5	34.5	- 44.6	41.2	35.9	- 46.5
GENDER																					
MALE	54.2	48.3	- 60.1	45.6	37.9	- 53.3	40.8	34.0	- 47.7	48.8	39.2	- 58.3	40.6	33.2	- 48.0	34.3	26.4	- 42.2	36.2	28.0	- 44.4
FEMALE	50.9	45.4	- 56.4	55.3	50.0	- 60.6	44.7	38.2	- 51.3	56.5	49.9	- 63.2	49.1	43.0	- 55.2	44.0	37.7	- 50.3	46.8	40.6	- 53.0
AGE GROUP																					
18-34	52.6	45.0	- 60.2	59.4	50.9	- 67.9	48.5	39.6	- 57.3	54.6	45.0	- 64.1	50.2	41.2	- 59.3	47.0	37.1	- 56.9	48.6	38.7	- 58.5
35-64	52.3	48.5	- 56.2	43.3	38.5	- 48.1	38.7	33.7	- 43.7	51.6	45.4	- 57.7	39.5	34.6	- 44.4	34.1	29.3	- 38.9	34.9	30.0	- 39.8
RACE-ETHNICITY*																					
WHITE	43.8	38.4	- 49.2	41.0	34.5	- 47.5	39.4	34.1	- 44.6	42.3	32.8	- 51.8	40.6	35.1	- 46.1	38.1	32.7	- 43.5	35.5	29.6	- 41.4
BLACK	64.8	57.0	- 72.7	62.6	52.2	- 73.0	56.9	41.4	- 72.3	†			†			†			†		
HISPANIC	61.4	52.8	- 70.1	58.8	49.3	- 68.2	54.6	40.5	- 68.7	56.0	49.0	- 63.0	53.8	41.7	- 66.0	†			48.8	35.0	- 62.6
DISABILITY																					
DISABILITY	59.2	51.1	- 67.3	48.1	39.1	- 57.1	43.1	33.3	- 52.9	59.2	47.5	- 70.8	61.1	51.4	- 70.8	48.7	39.2	- 58.2	62.4	53.6	- 71.2
NO DISABILITY	49.8	45.1	- 54.5	50.2	44.6	- 55.8	43.5	38.1	- 48.9	52.2	45.7	- 58.8	40.2	34.7	- 45.7	36.3	30.2	- 42.4	35.0	28.9	- 41.1
EDUCATION																					
< HIGH SCHOOL	63.7	50.8	- 76.5	59.9	47.7	- 72.0	53.1	37.0	- 69.2	51.9	41.8	- 62.0	48.1	34.4	- 61.9	27.9	17.5	- 38.3	35.3	24.1	- 46.5
HIGH SCHOOL OR SOME COLLEGE	52.4	46.4	- 58.4	49.3	43.2	- 55.4	38.8	32.3	- 45.3	54.7	46.6	- 62.9	45.1	38.0	- 52.1	41.0	34.5	- 47.5	44.6	37.7	- 51.5
4+ YRS COLLEGE	50.2	44.2	- 56.3	48.7	40.0	- 57.5	45.7	38.5	- 52.9	50.1	37.8	- 62.4	42.5	35.4	- 49.7	46.2	35.1	- 57.3	38.1	26.5	- 49.6
HOUSEHOLD INCOME																					
<\$25,000	55.2	47.4	- 62.9	57.0	48.8	- 65.3	50.2	40.4	- 60.0	61.2	53.0	- 69.4	53.6	42.5	- 64.7	42.7	34.2	- 51.2	58.3	49.3	- 67.3
\$25,000-74,999	57.9	50.0	- 65.7	48.7	41.3	- 56.1	39.7	32.1	- 47.3	43.7	33.6	- 53.8	46.9	39.4	- 54.5	35.7	28.4	- 43.0	32.9	25.7	- 40.1
\$75,000+	50.1	44.2	- 56.1	45.9	35.1	- 56.7	41.5	33.6	- 49.4	49.7	32.6	- 66.7	35.8	27.9	- 43.8	42.1	27.8	- 56.5	31.7	18.9	- 44.5

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

PERCENTAGE OF ADULTS AGE 18-64 WHO REPORTED THAT THEY HAVE EVER BEEN TESTED FOR HIV



Data source: MA BRFSS
 Chart shows two-year moving averages.

	2008 PREVALENCE COMPARED TO STATE*	TREND 2000-2008*
BOSTON	↑	➔
SPRINGFIELD	↑	⬇
WORCESTER	↔	➔
LAWRENCE	↑	➔
LOWELL	↔	➔
FALL RIVER	↔	⬇
NEW BEDFORD	↔	➔
STATE-WIDE	---	⬇

↑	Better than state average
↔	State average
⬇	Worse than state average
↗	Upward trend
➔	No trend
↘	Downward trend

*based on 95% statistical significance

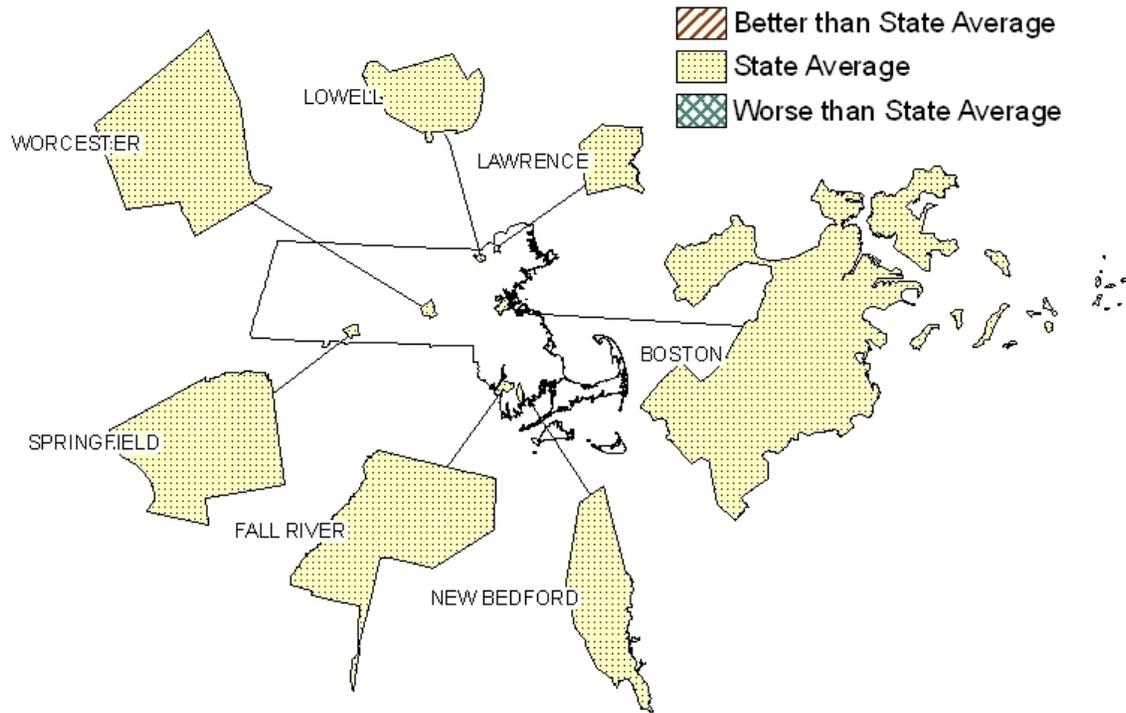
Section 6.2: Unintentional Falls

Falls are an important yet preventable public health problem among older adults. These events can lead to significant injury and disability as well as precipitate a downward decline in the health of older adults. The types of injuries which can result from a fall include, but are not limited to, traumatic brain injuries, hip and other limb fractures, sprains and strains. In Massachusetts, residents ages 65 years and older have the highest rates of traumatic brain injury-related (TBI) death and inpatient hospitalizations, compared with other age groups; the leading cause of these TBI's is a fall.

In 2006, there were 340 fall deaths, 20,209 hospital stays (hospital discharges and observation stays), and 36,751 emergency department discharges associated with nonfatal fall injuries among Massachusetts residents ages 65 years and older. Twenty-seven percent of all fall-related hospital stays among Massachusetts adults ages 45 and older were associated with a hip fracture; approximately 10% of all fall-related hospital stays involved a traumatic brain injury [38,39,40,41].

Respondents ages 45 and older were asked if they had fallen in the past 3 months. They were also asked if they were injured by a fall in the past 3 months. A fall was defined as unintentionally coming to rest on the ground or another lower level. Presented here is the percentage of adults ages 45 and older who reported falling in the past 3 months. Time trends are not presented for this indicator due to a lack of continuous years of data.

PERCENTAGE OF ADULTS AGE 65+ WHO REPORTED AN UNINTENTIONAL FALL IN THE PAST THREE MONTHS, 2008



The city maps are sized on a scale approximately proportionate to population size.

	STATE-WIDE		
	%	95% CI	
	N=5395		
OVERALL	15.6	14.2	- 17.0
GENDER			
MALE	16.3	13.9	- 18.8
FEMALE	15.1	13.4	- 16.8
RACE-ETHNICITY*			
WHITE	15.3	13.8	- 16.8
BLACK	11.4	5.3	- 17.4
HISPANIC	22.1	13.0	- 31.2
DISABILITY			
DISABILITY	22.9	20.0	- 25.7
NO DISABILITY	11.4	9.9	- 13.0
EDUCATION			
< HIGH SCHOOL	17.9	13.7	- 22.1
HIGH SCHOOL OR SOME COLLEGE	15.8	13.9	- 17.7
4+ YRS COLLEGE	14.6	12.1	- 17.0
HOUSEHOLD INCOME			
<\$25,000	16.8	14.2	- 19.5
\$25,000–74,999	15.2	12.9	- 17.5
\$75,000+	13.1	9.6	- 16.6

*White and Black race categories refer to non-Hispanic
 †Insufficient data

PERCENTAGE OF ADULTS AGE 65+ WHO REPORTED AN UNINTENTIONAL FALL IN THE PAST 3 MONTHS, 2008

	BOSTON		SPRINGFIELD		WORCESTER		LAWRENCE		LOWELL		FALL RIVER		NEW BEDFORD	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
TOTAL SAMPLE (N)	N=476		N=311		N=328		N=154		N=291		N=280		N=263	
OVERALL	14.0	10.6 - 17.3	12.4	8.5 - 16.3	16.7	11.8 - 21.7	15.9	9.3 - 22.5	13.4	9.1 - 17.7	19.3	12.3 - 26.2	16.8	11.5 - 22.0
GENDER														
MALE	13.4	8.1 - 18.6	†		†		†		†		†		20.8	10.0 - 31.7
FEMALE	14.3	9.9 - 18.7	14.3	9.3 - 19.4	20.2	13.4 - 26.9	15.0	6.5 - 23.4	13.9	8.8 - 19.0	16.5	10.3 - 22.8	14.8	9.1 - 20.4
RACE-ETHNICITY*														
WHITE	14.8	10.4 - 19.2	12.8	8.1 - 17.5	15.6	10.6 - 20.7	15.6	7.0 - 24.1	14.8	9.9 - 19.7	15.6	10.9 - 20.4	15.7	10.1 - 21.3
BLACK	11.8	5.6 - 17.9	†		†		†		†		†		†	
HISPANIC	†		†		†		†		†		†		†	
DISABILITY														
DISABILITY	22.5	14.7 - 30.2	20.5	12.7 - 28.3	18.6	10.7 - 26.4	†		19.4	11.1 - 27.6	31.4	14.0 - 48.8	21.9	11.6 - 32.2
NO DISABILITY	11.0	7.2 - 14.7	†		16.6	9.4 - 23.7	†		10.4	5.1 - 15.6	13.4	6.9 - 20.0	12.8	7.0 - 18.7
EDUCATION														
< HIGH SCHOOL	11.6	4.9 - 18.2	†		†		†		†		22.4	13.0 - 31.9	22.0	11.6 - 32.4
HIGH SCHOOL OR SOME COLLEGE	14.5	9.7 - 19.3	10.8	6.3 - 15.4	19.0	11.8 - 26.1	†		12.8	6.8 - 18.9	9.8	4.1 - 15.4	12.7	7.0 - 18.5
4+ YRS COLLEGE	14.9	8.2 - 21.6	†		13.7	6.3 - 21.0	†		†		†		†	
HOUSEHOLD INCOME														
<\$25,000	12.5	7.5 - 17.4	13.7	8.0 - 19.4	22.9	15.1 - 30.8	16.1	7.0 - 25.2	9.1	4.1 - 14.0	22.2	13.3 - 31.1	15.1	8.6 - 21.6
\$25,000–74,999	9.7	5.0 - 14.4	†		11.5	4.7 - 18.2	†		19.4	9.7 - 29.0	†		†	
\$75,000+	19.2	8.2 - 30.2	†		†		†		†		†		†	

*White and Black race categories refer to non-Hispanic; Asian category is excluded due to insufficient numbers.

†Insufficient data

**PERCENTAGE OF ADULTS AGE 65+ WHO REPORTED AN UNINTENTIONAL
FALL IN THE PAST THREE MONTHS**

	2008 PREVALENCE COMPARED TO STATE*
BOSTON	↔
SPRINGFIELD	↔
WORCESTER	↔
LAWRENCE	↔
LOWELL	↔
FALL RIVER	↔
NEW BEDFORD	↔
STATE-WIDE	--

↑	Better than state average
↔	State average
↓	Worse than state average

*based on 95% statistical significance

APPENDIX

DEMOGRAPHICS OF ASIAN RESPONDENTS IN LOWELL, 2003-2008[†]		
	LOWELL	
	UNWEIGHTED SAMPLE SIZE	WEIGHTED PERCENT
	N	%
OVERALL	143	100.0
GENDER		
MALE	79	73.1
FEMALE	64	26.9
AGE GROUP		
18-34	70	66.9
35-64	67	32.7
65+*	4	0.5
EDUCATION		
< HIGH SCHOOL*	17	10.2
HIGH SCHOOL OR SOME COLLEGE	67	51.5
4+ YRS COLLEGE	58	38.3
HOUSEHOLD INCOME		
<\$25,000*	38	32.5
\$25,000–74,999	55	50.6
\$75,000+*	27	16.9

*Insufficient data to provide stable estimates

SELECTED HEALTH INDICATORS FOR ASIAN RESPONDENTS IN LOWELL, 2003-2008[†]			
	N	%	95% CI
HEALTH STATUS			
FAIR/POOR HEALTH*	143	10.1	2.4 - 17.8
HEALTH CARE ACCESS			
NO INSURANCE, 18-64*	137	16.2	6.5 - 26.0
NO PERSONAL DOCOTR	141	22.7	12.3 - 33.1
COULD NOT SEE DOCTOR DUE TO COST, PAST 12 MONTHS*	140	15.6	6.1 - 25.0
CHECKUP IN PAST YEAR	107	83.0	74.3 - 91.7
DENTAL VISIT IN PAST YEAR	77	63.4	47.0 - 79.9
HEALTH RISKS			
CURRENT SMOKER	143	14.4	6.0 - 22.7
EXPOSED TO ENVIRONMENTAL TOBACCO SMOKE*	77	39.8	25.8 - 53.8
BINGE DRINKING*	134	9.7	2.0 - 17.4
OVERWEIGHT/OBESE	138	31.5	21.6 - 41.3
OBESE*	138	4.0	0.7 - 7.4
ANY EXERCISE	143	67.3	57.5 - 77.1

*Variability of data is too high to provide stable estimates

[†]In order to provide stable estimates for Asian respondents in Lowell, analysis is based on 6 years of aggregated data.

LIMITATIONS

There are some limitations that should be considered when interpreting results from the BRFSS based on the nature of the survey data:

- The health characteristics estimated from the BRFSS pertain to the adult population, aged 18 years and older, who do not live in group quarters.
- As in previous years, the number of Asian respondents to the 2008 BRFSS survey was disproportionately small. In Lowell, for example, 19% of the population is estimated to be Asian [1]; in 2008, only 6% of BRFSS respondents from Lowell reported their race as Asian. Due to the small number of Asian respondents in each city, health indicator data for Asians are suppressed in this report. The small numbers could be the result of language barriers or cultural differences, or most likely, a combination of these factors. Currently, the Massachusetts BRFSS is not administered in any Asian languages.
- As noted above, respondents are identified through telephone-based methods.
- Telephone penetration in the United States is estimated at 95.0%; in Massachusetts, telephone penetration is estimated at 96.1%, meaning that only 3.9% of households do not have any telephone service [42].
- Telephone coverage varies across population subgroups: minorities and those in lower socioeconomic groups typically have lower telephone coverage. No direct method of compensating for non-telephone coverage is employed by the BRFSS; however, post-stratification weights are used, which may partially correct for any bias caused by non-telephone coverage. Post-stratification is designed to make the total number of cases equal to some desired number which, for MA BRFSS data, is the number of people in the state who are aged 18 years and older. In the BRFSS, such post-stratification serves as a blanket adjustment for non coverage and non response and forces the total number of cases to equal population estimates.
- Evidence of acceptable performance on surveys is measured by the following quality assurance indicators: CASRO [Completed/(Eligible + Presumed Eligible)] or other response rate, refusal rate, refusal conversion, and timeliness of providing data. A high response rate indicates low potential bias. CASRO response rate (named for the Council of American Research Organizations, who first proposed this method) is a main indicator of survey quality. The CASRO rate is a measure of respondent cooperation and is generally defined as the proportion of all eligible respondents in the sample for whom an interview has been completed. In 2008, the MA BRFSS had an average CASRO rate of 48%, which is higher than the required BRFSS standard of 40%.
- Another factor to consider is the growth of cellular telephone only households. Preliminary results from the 2008 National Health Interview Survey indicate that almost 18% of American households had only wireless telephone service [43]. Cellular telephones were not included as part of the regular BRFSS sample in 2008. In order to increase the coverage and reduce sampling bias, interviews will be conducted with respondents who use only cellular telephones in addition to the landline survey starting in 2009.
- All data collected by the BRFSS are based on self-report from the respondents. By its nature, self-reported data may be subject to error for several reasons. An individual may have difficulty remembering events that occurred a long time ago or the frequency of certain behaviors. Some respondents may over report socially desirable behaviors, while underreporting behaviors they perceive to be less acceptable. Finally, because the BRFSS surveys a randomly selected sample of Massachusetts adults, these results may differ from another random sample to some extent simply due to chance.
- Persons with the most severe limitations and with certain disabilities are not represented in this sample since individuals living in institutions are not included in the BRFSS. BRFSS methodology also precludes anyone from assisting respondents in completing the interview if the selected adult had difficulty in participating for any reason, such as an intellectual or developmental disability.

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