A Profile of Health Among Massachusetts Adults, 2012

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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Introduction

The Behavioral Risk Factor Surveillance System (BRFSS) is a continuous multimode 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 landline telephone portion of the survey has been conducted in Massachusetts since 1986; a cell phone component was added in 2011. 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 2012, 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 other Massachusetts Department of Public Health programs, added a number of topics to the surveillance instrument including environmental tobacco exposure, cancer survivorship, sexual violence, and other selected topics.

In 2012, 18,325 landline interviews and 3,398 cell phone interviews were completed among Massachusetts adults. To increase the number of respondents who belong to racial and/or ethnic minority groups, the cities of Boston, Brockton, Lowell, Lynn, New Bedford, Quincy, Springfield, and Worcester were oversampled. Interviews were administered in the respondents' preferred language, with a choice of English, Spanish, or Portuguese.

About This Report

This report summarizes selected results from the combined landline and cell phone portions of the 2012 Massachusetts BRFSS. In each section of the report, a description of survey questions used to obtain estimates for key variables is provided along with an explanation of the importance of each indicator for public health. Tables detailing the overall estimates and estimates by demographic and socioeconomic characteristics (gender, age, race-ethnicity, disability status, education, annual household income, and Massachusetts health service regions) are provided in the main body of the report in the form of crude percentages.

In the Appendix of the report, tables are presented detailing age-adjusted percentages for 2012 indicators and their 95% confidence intervals. United States (US) median data for all participating states and territories for variables with comparable national data are presented for 2012 in a separate table. The *Healthy People 2020* objectives are presented separately as a new challenging goal for public health.

All percentages in this report are weighted (see definition on page 7) to represent the total Massachusetts population in 2012.

New in This Report

This report is the second to include data based on the combined landline and cell phone samples and to utilize the new weighting methodology first implemented in 2011. The cell phone sample size in 2012 was increased to comprise 20% of the land line sample. Respondents who received 90% or more of their calls on their cell phone were included in the cell phone sample as “cell mostly users”. The increased cell phone sample size and the addition of “cell mostly users” might affect annual health indicators in comparison to 2011. Due to the methodological changes that occurred in 2011, it is too soon to provide trend analyses; however, this report does include a Comparison Table on page 104 which presents the prevalence of main health indicators for the years 2011 and 2012.

This report contains two new items. The first is a “Spotlight” which uses the BRFSS data to demonstrate how the successful efforts of one program have contributed to improving the health of all residents of the Commonwealth. This year’s “Spotlight” is on the adult immunization program and highlights significant increases in the percent of adults ages 60 and older vaccinated against shingles and in the percent of females ages 18-34 adequately vaccinated against Human Papilloma Virus (HPV).

The second new item is a special section “Health Indicators Among Massachusetts Workers by Occupation Group” which presents associations between occupation groups and health risks, chronic disease, and access to health care. The industry and occupation module is an important part of the Massachusetts BRFSS and has been included in the survey since 2010. The module is essential for characterizing the type of work a person does and provides information about the potential impact of work on a person’s health.

Terms, Definitions, and Statistical Methodology Used in This Report

Massachusetts BRFSS utilizes a **complex sample design**, which allows for the collection of more data with a smaller sample size while obtaining more information about different population subgroups.

This report presents data from the **combined sample** - both landline and cell phone respondents except where specifically noted. The combined sample contained 21,723 respondents.

- **The landline component** contained 18,325 respondents (84% of the combined sample). Massachusetts landline sample design included three versions (or "splits"), to allow for an increase in the number of optional modules and Massachusetts-added questions asked without an increase in the length of the survey:
  - Split 1 contained 6,077 respondents,
  - Split 2 contained 6,191 respondents,
  - Split 3 contained 6,057 respondents.
  - In order to obtain more information about minorities, cities of Boston, Brockton, Lowell, Lynn, New Bedford, Quincy, Springfield, and Worcester were oversampled.
- **The cell phone component** contained 3,398 respondents (16% of the combined sample). The cell phone sample was designed without splits or oversampling. This survey was shorter than the landline survey, consisting of the CDC core questions and only a few Massachusetts-added questions.
- Both the landline and cell phone questionnaires can be found at http://www.mass.gov/eohhs/gov/departments/dph/programs/health-stats/health-survey/brfss/surveys.html

The BRFSS data were **weighted** to represent the adult population of Massachusetts. Weighting makes the sample representative in two ways:

- It adjusts for differences in the probability 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 reduce bias from non-response, non-coverage of households without landline telephones or cell phones, and differential participation by sex, age, race/ethnicity, marital status, education, and owner/renter status.

All the weighting factors were multiplied together to get the final weight for each respondent so that the weighted BRFSS data represent the adult population of Massachusetts. Weights were produced for the combined (landline and cell phone) sample, for the entire landline sample, and for each of the three versions of the landline questionnaire.

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 proportion is a weighted ratio of those who answered "yes" to the corresponding question versus all who responded to the question. Those who responded "don't know" or refused to respond to a question were excluded from the analysis of that question. The underlying size of the sample used to produce particular estimates varies depending on whether the data come from the combined land line and cell phone sample or from one of the sample splits through which some of the optional modules and Massachusetts-added questions were administered.

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 **age-adjusted percentage** is a weighted average of the age-specific proportions. The projected 2000 US population was used as a standard for the calculation. The age-adjusted percentage is a single, calculated number. Age-adjustment is done in order to be able to compare population subgroups with potentially different age structures (e.g., Hispanic vs. White non-Hispanic). The reader should exercise caution when using age-adjusted percentages for the comparison of survey data subgroups. While the estimates have been adjusted by age, other factors like gender, income, or education and their possible correlation may also have an impact on the results of subgroup comparisons (see Appendix). The percentages were not age-adjusted for health indicators obtained for restricted age groups such as cancer screening. Age-adjusted estimates are presented in tables in the Appendix of this report.

The **data presented** here are univariate, descriptive percentages that are either crude or age-adjusted. No multivariate analysis was performed on this data. In addition, all data presented here are cross-sectional and thus this report contains no inferences about causality.

The US median was calculated for the estimates from all participating states, the District of Columbia, and territories for each respective indicator when available. The values were ordered from lowest to highest and the middle value is then chosen (if the number of values is odd) or calculated as the average of the two middle values (if the number of values is even). The median then represents a value for which half of the states have higher estimates and half of the states have lower estimates.

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 and age-adjusted 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 if a ratio of standard error to the estimate itself 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.[1]

Statistical significance (at the 95% probability level) was considered as a basis when we used the terms “more likely”, “less likely”, “about the same“, “increase” or “decrease.” Differences between percentages for respective subgroups are presented when a difference is statistically significant.

We considered 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 estimation for determining statistical significance.[2] We use the terms “**more likely**” or “**less likely**” when comparing percentages that met the criteria for statistical significance.

Disability was defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) use special equipment or require help from others to get around. This definition is consistent with CDC criteria but **differs from the definition used in reports prior to 2011.** Massachusetts historically has used

more stringent criteria, requiring that the disability has persisted for at least one year. The question relating to duration of disability is state-added and was not asked on the cell phone survey.

Race-ethnicity categories in this report include White, Black, Hispanic, and Asian. When referring to White, Black, or Asian, these categories include only non-Hispanic respondents. All respondents reporting Hispanic ethnicity are included in the Hispanic category regardless of race.

Healthy People 2020 Objectives*: Healthy People 2020: National Health Promotion and Disease Prevention Objectives* is a national agenda that aims to significantly improve the health of Americans in the decade preceding the year 2020. Developed nationally through an extensive governmental, professional, and public process, Healthy People 2020 defined four overarching national goals to: attain high-quality, longer lives free of preventable disease, disability, injury, and premature death; achieve health equity, eliminate disparities, and improve the health of all groups; create social and physical environments that promote good health for all; and promote quality of life, healthy development, and healthy behaviors across all life stages. These goals are organized into 42 Objective Topic Areas, and each area contains specific numeric national targets for the year 2020.[3] For each health status indicator in this report that has a corresponding Healthy People 2020 Objective, the year 2020 target is shown in the summary table in the Appendix.

Demographic Characteristics of Respondents

MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2012

	UNWEIGHTED SAMPLE SIZE N	WEIGHTED PERCENT %†
OVERALL	21,723	100
GENDER		
MALE	8,668	47.7
FEMALE	13,055	52.3
AGE GROUP		
18–24	1,113	13.3
25–34	2,171	16.3
35–44	2,907	16.2
45–54	4,221	19.2
55–64	4,573	16.0
65–74	3,510	10.2
75 AND OLDER	2,912	8.7
RACE-ETHNICITY*		
WHITE	17,128	79.7
BLACK	1,328	6.2
HISPANIC	1,796	9.0
ASIAN	500	5.1
DISABILITY¶		
DISABILITY	5,387	19.9
NO DISABILITY	15,425	80.1
EDUCATION		
< HIGH SCHOOL	1,905	11.2
HIGH SCHOOL	5,343	26.4
COLLEGE 1–3 YRS	5,036	26.7
COLLEGE 4+ YRS	9,226	35.7
HOUSEHOLD INCOME		
<$25,000	5,089	24.0
$25,000–34,999	1,779	9.1
$35,000–49,999	2,220	12.1
$50,000–74,999	2,635	14.3
$75,000+	6,343	40.5
REGION		
I–WESTERN	2,884	16.1
II–CENTRAL	2,662	14.4
III–NORTH EAST	4,824	18.0
IV–METRO WEST	3,219	20.5
V–SOUTH EAST	5,075	20.6
VI-BOSTON	2,317	10.3

* White, Black, and Asian race categories refer to non-Hispanic

† See BRFSS methodology in "Terms, Definitions and Methodology Used in this Report"

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.


Commonwealth of Massachusetts
Region 1
Region 2
Region 3
Region 4
Region 5
Region 6
EOHHS Regions
Region 1: Western
Region 2: Central
Region 3: North East
Region 4: Metro West
Region 5: South East
Region 6: Boston
Executive Office of
Health and Human Services
Regions

Spotlight on Immunization

Prevention and wellness are key priorities for the Massachusetts Department of Public Health, and the many local communities and organizations with which it partners. This annual report highlights the Commonwealth's successes in health, as well as the challenges that many residents face in their lives. The focus of this Spotlight is successes in the area of adult immunizations.

Immunizations are not only for children, but are a key component of prevention and wellness for adults. Recommended immunizations for adults include influenza, tetanus, pneumonia, shingles, and HPV (if not received as a teenager). 2012 saw many successes in this area, most notably, increases in the percent of older adults who report that they have received the shingles vaccine and in the percent of younger females who have received the HPV vaccine.

The shingles vaccine, Zostavax®, first became available in May 2006 and is currently recommended for adults ages 60 and older. A *Healthy People 2020* objective is to increase the shingles vaccine rate to 30% of older adults. In 2012, Massachustts made significant progress toward meeting this objective; 23.7% of Massachusetts adults ages 60 and older reported that they had received the shingles vaccine. This was a significant increase over 2011, when 17.0% reported having received the vaccine. Increases occurred among both males and females, although the increase was greater among males (24.0% in 2012 vs. 14.9% in 2011). Those adults with the lowest and the highest household incomes had the greatest increases. Increases were seen across the state, including increases in five EOHHS regions (region 4 was not statistically significant).

The HPV vaccine (Cervarix® or Gardisil®) is recommended for persons ages 9-26. As the BRFSS asks if the vaccine was "ever" received, ages 18-34 are measured here. Among females ages 18-34, there was a significant increase in 2012 over 2011 in the percent who reported that they had ever received the HPV vaccine (41.9% vs. 34.7%). Comparisons between 2011 and 2012 for subgroups are complicated by small sample sizes; however, increases (not statistically significant) were seen among Whites, Blacks and Hispanics, among all levels of educational attainment, and in all six EOHHS regions. [There was insufficient data for males.]

In addition to increases in shingles and HPV immunization, in 2012, Massachusetts maintained high prevalence estimates of other adult immunizations including tetanus, influenza and pneumonia vaccines. 77.2% of Massachusetts adults reported that they were current on tetanus vaccination (having received the vaccine within the past ten years). Among those 65 and older, 63.6% reported receiving an influenza vaccination in the past year, and 70.2% reported that they have received the pneumonia vaccine - both are higher than national medians.

The MDPH Immunization Program, Division of Epidemiology and Immunization, Bureau for Infectious Diseases, collaborates with many partners on a number of activities to increase adult vaccination and decrease racial/ethnic disparities in adult vaccination rates. For 17 years, a statewide Adult Immunization Coalition (http://maic.jsi.com/), with representatives from 200 organizations, has worked together to promote evidence-based strategies, such as standing orders, and to increase consumer awareness and provider knowledge about vaccine recommendations and schedules. The Adult Immunization Coalition also sponsors an annual Adult Immunization Conference attended by more than 300 health care providers.

The Immunization Program works to expand access to adult vaccines, partnering with the Associated Industries of Massachusetts (AIM) to increase worksite vaccination; with pharmacists to expand their authority to administer all recommended vaccines to adults; and with MassHealth and private health plans to enable local health departments to be reimbursed for purchasing and

administering vaccines to adults. The Massachusetts Immunization Information System (MIIS), a life-span registry, gives providers access to patients' vaccination history and a clinical decision tool to ensure that adults receive all the vaccines for which they are due. The Immunization Program monitors data from a number of sources, including the BRFSS, the Pregnancy Risk Assessment System (PRAMS), and the National Immunization Survey to identify gaps and disparities, disseminates the information, and works with its partners to address any gaps. The MDPH Office for Health Equity, the Massachusetts League of Community Health Centers, MassHealth, and local public health are especially important partners in addressing disparities in access to adult vaccination information and services.

Section 1: Health Indicators among Massachusetts Workers by Occupation Group

Health Indicators among Massachusetts Workers by Occupation Group

Work is one of many determinants of health. Work exposures can impact health directly, and the work environment can also influence lifestyle choices that in turn influence health. Work is also closely associated with other determinants of health including income, education, and access to health care services.

The industry and occupation module is an important part of the Massachusetts BRFSS and has been included in the survey since 2010. The module is essential for characterizing the type of work a person does and provides information about the potential impact of work on a person's health. Data on health indicators by industry and occupation are also useful for designing workplace prevention and wellness programs. In the following section we present the results of five key health indicators from the 2012 combined landline and cell phone sample by **occupation** group: current asthma, obesity, current smoking, fair or poor health status, and unable to see a doctor due to cost in the past 12 months.

All respondents who answered that they were employed for wages, self-employed, or out of work for less than one year were asked about their occupation[1]: *What kind of work do you do, that is, what is your occupation? For example, registered nurse, janitor, cashier, auto mechanic.* Massachusetts BRFSS interviewers were trained on how to ask the question. This training included information about the general concept of occupation, techniques on how to probe, and examples of insufficient and sufficient answers.

The open-ended occupation responses were coded by CDC's National Institute for Occupational Safety and Health (NIOSH) using the automated NIOSH Industry and Occupation Computerized Coding System as well as trained coding staff. Responses were each assigned a 4-digit 2002 Census Occupation Code (COC). Of the 12,183 respondents employed within the last year in the 2012 sample, 10,648 (87.4%) were assigned an occupation code and included in our analyses.

Coded occupation responses were categorized into 16 groups for the present analyses. These groups are based on ten major COC groups, with two major groups further broken down to allow for analysis of important occupation subgroups in Massachusetts. *Professional and Related* was divided into three subgroups and *Service* was split into five for a total of 16 groups. Notably, other states may choose to categorize occupations differently depending on their workforce distributions.

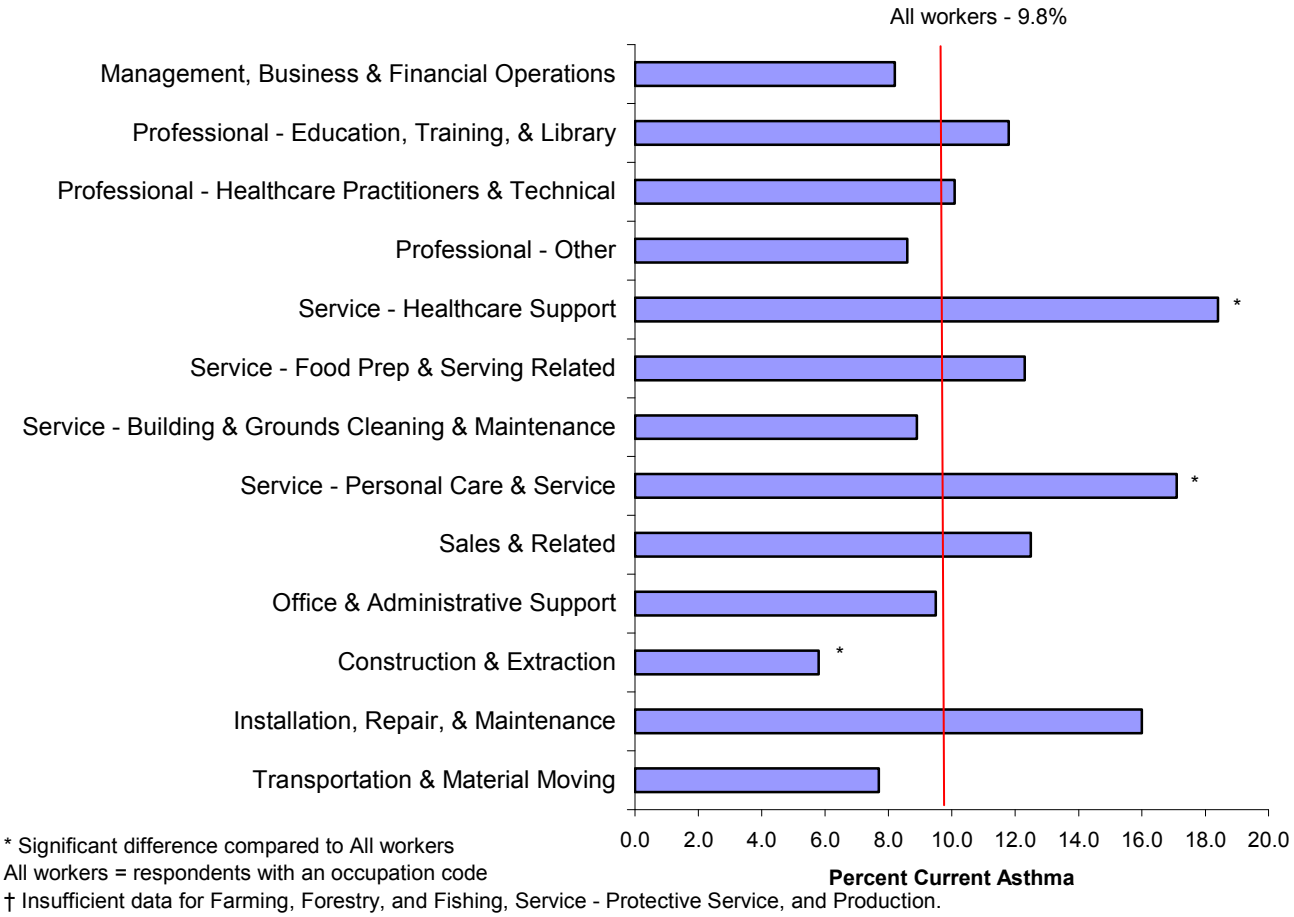
Table 1 presents the distributions of employed respondents by the 16 occupation groups from the BRFSS and Current Population Survey (CPS). Example occupations for each group are provided. The CPS, a joint effort of the U.S. Census Bureau and Bureau of Labor Statistics, is a main source of labor force statistics for the U.S. population (http://www.census.gov/cps/). As shown in Table 1, the estimated distribution of employed respondents by occupation in the BRFSS is, for the most part, similar to the distribution of the Massachusetts workforce based on the CPS. Figures 1 - 5 present the following health indicators among Massachusetts workers by occupation group: current asthma, obesity, current smoking, fair or poor health status, and unable to see a doctor due to cost in the past 12 months. Additional indicators may be available in future reports. The 'All workers' line in each figure represents the estimate for all employed respondents with an occupation code who answered the question about the corresponding health indicator.

[1] An industry question was asked immediately following the occupation question:
What kind of business or industry do you work in? For example, nursing home, elementary school, clothing manufacturing, fast food restaurant.
Industry results are available upon request.

Table 1: Distribution of BRFSS respondents by occupation group			
Occupation Group[1]	**Example occupations[2]**	**Workforce Distribution (%)**	
		BRFSS	**Current Population Survey[3]**
Management, Business & Financial Operations	legislator, sales manager, accountant, finance officer, bank examiner, HR specialist, school principal	14.4	17.0
Professional – Education, Training, & Library	preschool teacher, high school teacher, tutor, librarian, professor, athletic coach, art conservator	8.2	7.8
Professional – Healthcare Practitioners & Technical	pharmacist, physician, EMT, veterinarian, x-ray tech, nutritionist, registered nurse, physical therapist	8.6	6.4
Professional – Other	software engineer, biostatistician, architect, electrical engineer, geologist, social worker, attorney, actor, paralegal, fashion designer, sports writer, book critic	16.4	15.6
Service – Healthcare Support	home health aide, nurse's aide, medical aide, dental assistant, pharmacy assistant, massage therapist	2.4	2.9
Service – Protective Service	corrections officer, police officer, fire fighter, bailiff, animal control worker, security guard, lifeguard	2.1	1.8
Service – Food Prep & Serving Related	cook, waiter, bar tender, dishwasher, host/hostess	3.8	4.7
Service – Building & Grounds Cleaning & Maintenance	janitor, housekeeper, landscaper, tree trimmer, pest control worker, pesticide applicator	3.2	3.5
Service – Personal Care & Service	barber, hairdresser, manicurist, cosmetologist, daycare worker, personal care attendant, flight attendant, animal trainer, recreation assistant	2.9	3.6
Sales & Related	cashier, store clerk, car salesman, art dealer, travel agent, insurance agent, realtor, telemarketer	10.5	9.4
Office & Administrative Support	bookkeeper, receptionist, customer service agent, library clerk, hotel clerk, mail carrier, courier	9.8	12.4
Farming, Forestry, & Fishing	egg grader, berry picker, orchard hand, log cutter, aquaculture worker, lobsterman, fishing boat captain	0.3	0.3
Construction & Extraction	carpenter, stonemason, roofer, electrician, insulation worker, asphalt worker, construction laborer	5.9	4.8
Installation, Repair, & Maintenance	locksmith, auto body worker, HVAC mechanic, cable TV installer, vending machine servicer	3.0	1.8
Production	electronics assembler, coat maker, furniture refinisher, printing press operator, butcher, distiller	4.1	4.1
Transportation & Material Moving	bus driver, taxi driver, air traffic controller, pumping station operator, parking attendant, waste collector	4.5	3.9

1. Occupation groups based on 2002 Census Occupation Codes: http://www.census.gov/people/io/. COC for each occupation group are included in the Appendix on page 116.
2. Example occupations do not represent actual responses from BRFSS survey
3. 2012 Current Population Survey: Massachusetts, employed, ages 18-90. http://dataferrett.census.gov

Figure 1: Prevalence of Current Asthma Among MA Workers by Occupation Group, 2012



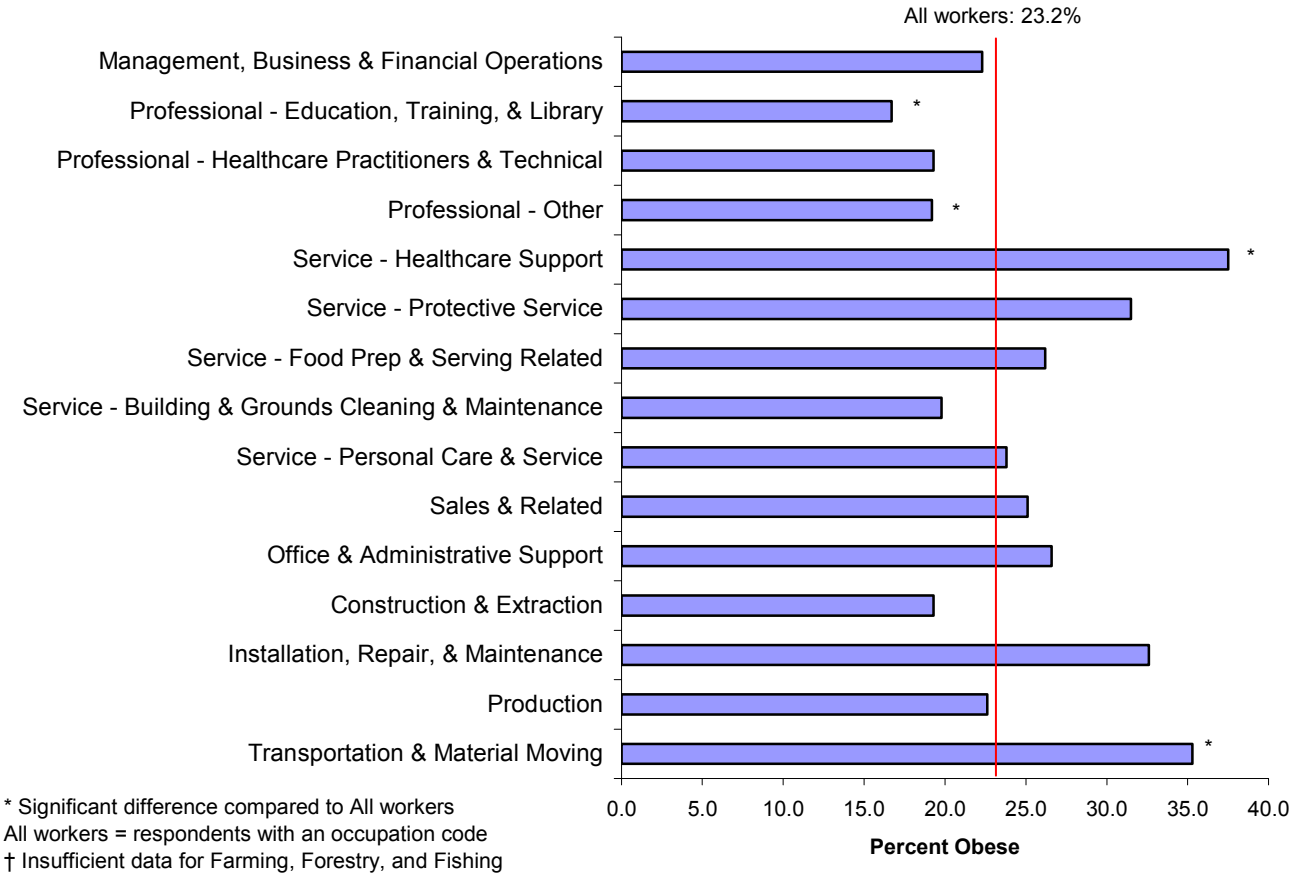
* Significant difference compared to All workers
All workers = respondents with an occupation code
† Insufficient data for Farming, Forestry, and Fishing, Service - Protective Service, and Production.

- *Service – Healthcare Support* (18.4%) and *Service – Personal Care & Service* (17.1%) occupation groups had the highest percentage of current asthma; percentages for both groups were significantly higher than that for All workers (9.8%).

- *Construction & Extraction* (5.8%) had the lowest percentage of current asthma; this percentage was significantly lower than that for All workers (9.8%).

See section 6.2 for more data on asthma.
See the following link for 2010 data on current asthma by occupation:
http://www.mass.gov/eohhs/docs/dph/occupational-health/sensor-lung-disease-bulletins/oct2012.pdf

Figure 2: Obesity Prevalence Among MA Workers by Occupation Group, 2012



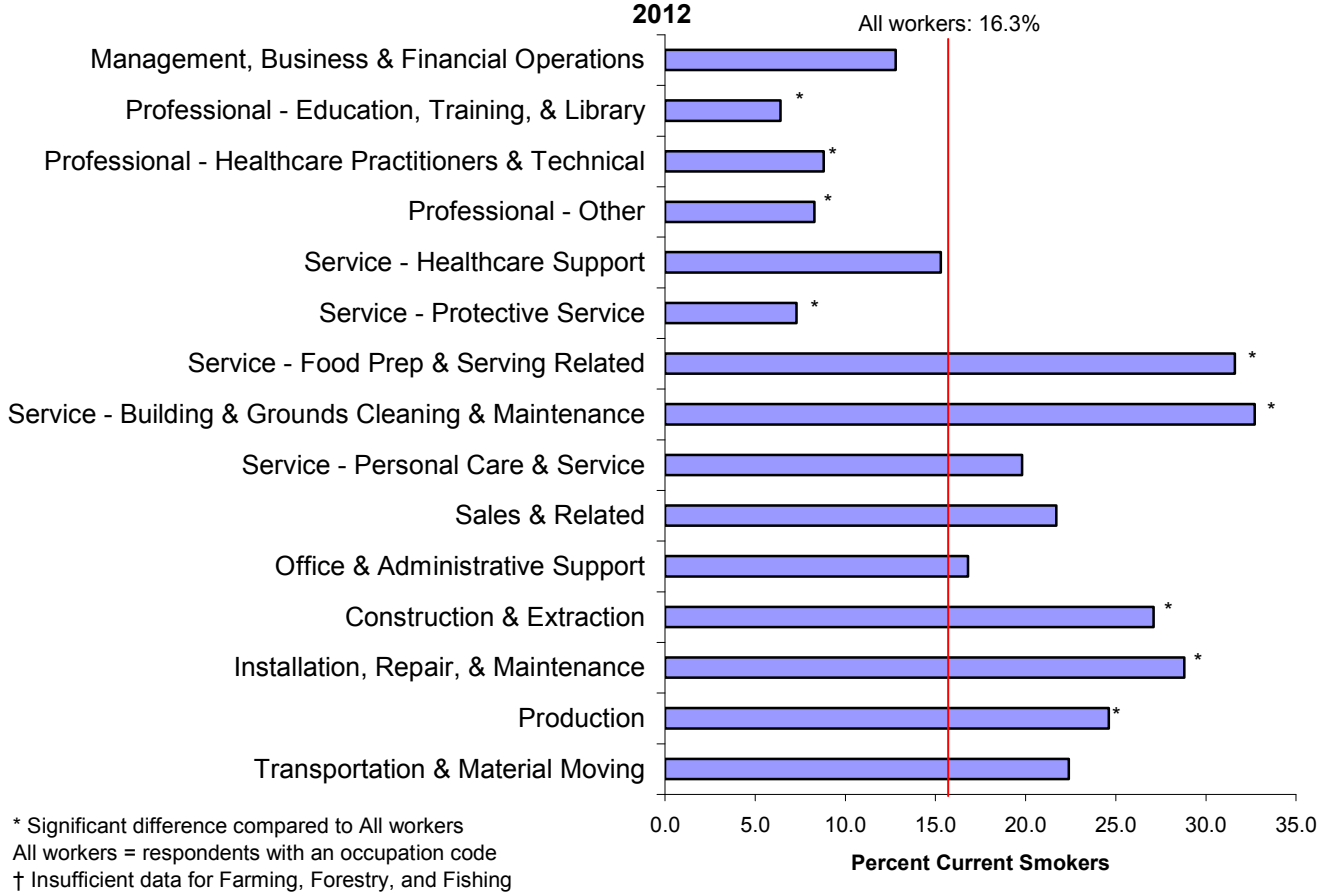
* Significant difference compared to All workers
All workers = respondents with an occupation code
† Insufficient data for Farming, Forestry, and Fishing

- *Service – Healthcare Support* (37.5%) and *Transportation & Material Moving* (35.3%) occupation groups had the highest percentage of obesity; percentages for both groups were significantly higher than that for All workers (23.2%).

- *Professional- Education, Training, & Library* (16.7%) and *Professional – Other* (19.2%) occupation groups had the lowest percentage of obesity; percentages for both groups were significantly lower than that for All workers (23.2%).

See section 4.5 for more data on obesity.

Figure 3: Current Smoking Prevalence Among MA Workers by Occupation Group, 2012



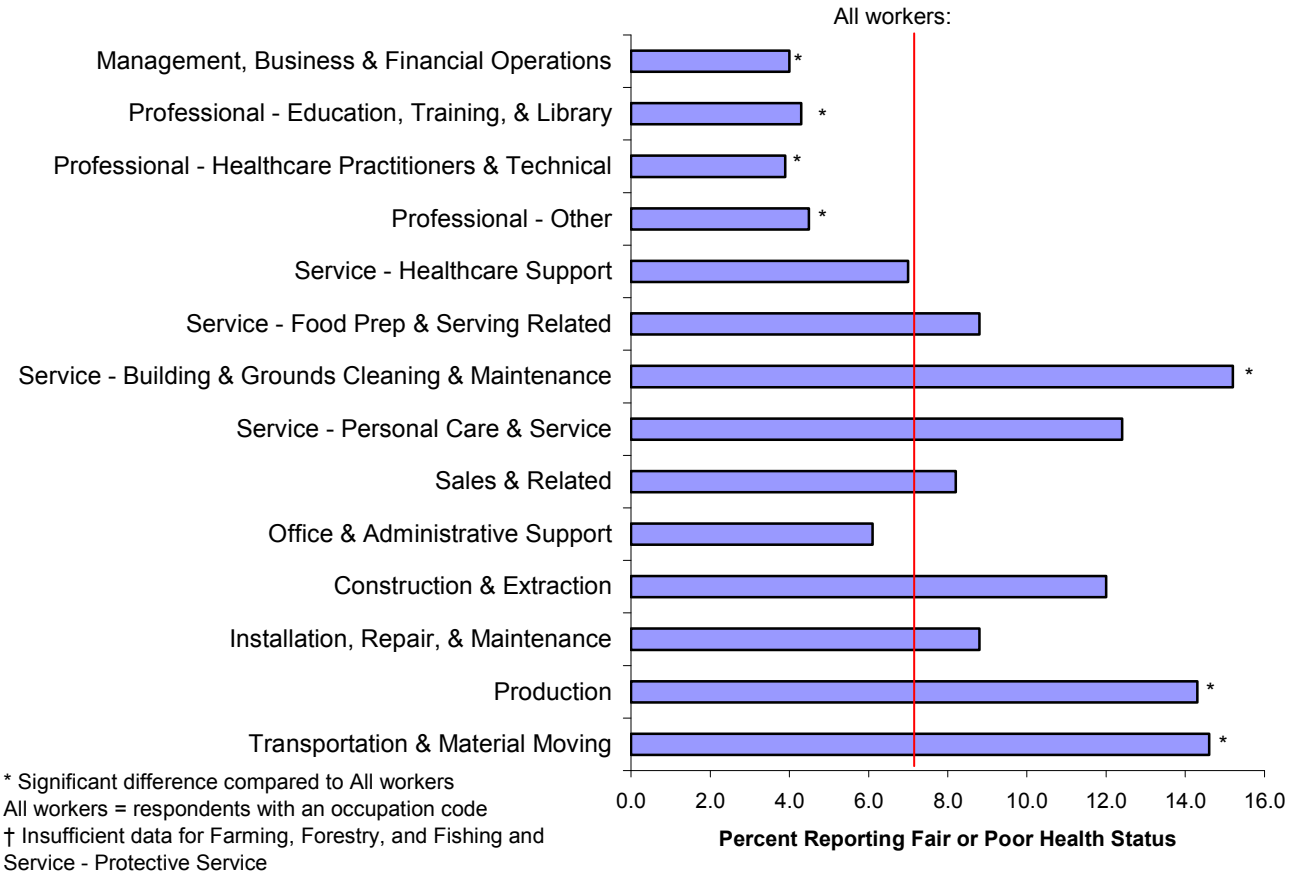
* Significant difference compared to All workers
All workers = respondents with an occupation code
† Insufficient data for Farming, Forestry, and Fishing

- *Service – Food Prep & Serving Related* (31.6%) and *Service – Building & Grounds Cleaning & Maintenance* (32.7%) occupation groups had the highest percentage of current smoking; percentages for both groups were significantly higher than that for All workers (16.3%).

- *Professional – Education, Training, & Library* (6.4%) and *Service - Protective Service* (7.3%) occupation groups had the lowest percentage of current smoking; percentages for both groups were significantly lower than that for All workers (16.3%).

See section 4.1 for more data on tobacco use.

Figure 4: Prevalence of Fair or Poor Self-Reported Health Status Among MA Workers by Occupation Group, 2012



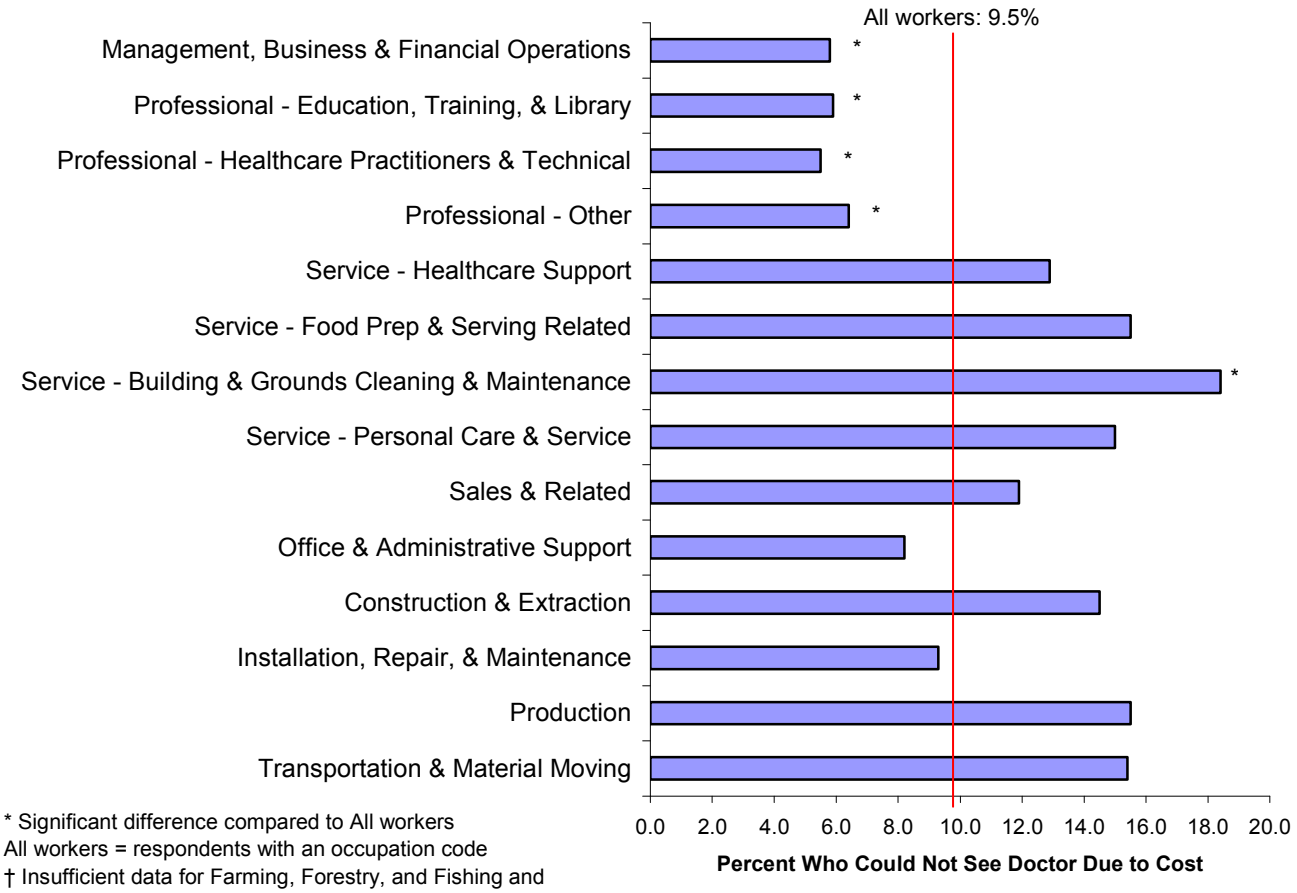
* Significant difference compared to All workers
All workers = respondents with an occupation code
† Insufficient data for Farming, Forestry, and Fishing and Service - Protective Service

- *Service – Building & Ground Cleaning & Maintenance* (15.2%) and *Transportation & Material Moving* (14.6%) occupation groups had the highest percentage of fair or poor health; percentages for both groups were significantly higher than that for All workers (7.2%).

- *Professional – Healthcare Practitioners & Technical* (3.9%) and *Management, Business & Financial Operations* (4.0%) occupation groups had the lowest percentage of fair or poor health; percentages for both groups were significantly lower than that for All workers (7.2%).

See section 2.1 for more data on overall health status.

Figure 5: Percent of Respondents Who Were Unable to See Doctor Due to Cost in Past 12 Months Among MA Workers by Occupation Group, 2012



* Significant difference compared to All workers
All workers = respondents with an occupation code
† Insufficient data for Farming, Forestry, and Fishing and Service - Protective Service

- *Service – Building & Grounds Cleaning & Maintenance* (18.4%) had the highest percentage of respondents who were unable to see a doctor due to cost in the past 12 months; this percentage was significantly higher than that for All workers (9.5%).
- *Professional – Healthcare Practitioners & Technical* (5.5%) had the lowest percentage of respondents who were unable to see a doctor due to cost in the past 12 months; this percentage was significantly lower than that for All workers (9.5%).

See section 3.2 for more data on health care access.

Conclusions

Important findings from this section illustrate that *Service* occupation subgroups consistently had higher percentages of workers reporting these indicators of adverse health compared to all occupations. *Production* and *Transportation & Material Moving* groups also had higher percentages for some of the five adverse health indicators. In contrast, *Professional* subgroups had lower percentages of workers for all adverse health indicators, except current asthma. These findings are important for health care providers and employers to consider when treating or communicating with workers. They are also important for public health practitioners and policy makers to consider in planning and implementing prevention strategies. The cross-sectional nature of BRFSS data did not allow us to look at any causal relationships. More research is needed to discover the specific factors that are influencing the prevalence of these five health indicators in Massachusetts workers. Additional indicators may be available in future reports. Continued use of the industry and occupation module in the BRFSS will allow for more in-depth data analyses with multiple years of data and the ability to analyze trends.

Section 2: Overall Health Measures

SECTION 2: OVERALL HEALTH MEASURES

Section 2.1: Overall 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.[4] General health status is useful in determining unmet health needs, identifying disparities among subpopulations, and characterizing the burden of chronic diseases within a population.[5]

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.

TABLE 2.1 – OVERALL HEALTH STATUS AMONG MASSACHUSETTS ADULTS, 2012

	FAIR OR POOR HEALTH		
	N	%	95% CI
OVERALL	21,671	13.4	12.7 - 14.1
GENDER			
MALE	8,640	14.3	13.2 - 15.4
FEMALE	13,031	12.6	11.7 - 13.4
AGE GROUP			
18–24	1,113	7.1	5.1 - 9.2
25–34	2,165	8.5	6.9 - 10.1
35–44	2,903	8.6	7.2 - 10.0
45–54	4,214	14.1	12.6 - 15.6
55–64	4,562	17.4	15.6 - 19.1
65–74	3,497	20.0	18.0 - 22.0
75 AND OLDER	2,902	24.8	22.3 - 27.3
RACE-ETHNICITY*			
WHITE	17,101	11.9	11.1 - 12.6
BLACK	1,322	15.5	12.9 - 18.1
HISPANIC	1,788	27.4	24.3 - 30.4
ASIAN	498	4.6	2.5 - 6.7
DISABILITY¶			
DISABILITY	5,371	39.4	37.3 - 41.6
NO DISABILITY	15,400	7.0	6.4 - 7.6
EDUCATION			
< HIGH SCHOOL	1,894	35.1	31.6 - 38.6
HIGH SCHOOL	5,325	16.1	14.7 - 17.5
COLLEGE 1–3 YRS	5,025	12.2	11.0 - 13.5
COLLEGE 4+ YRS	9,216	5.5	4.9 - 6.1
HOUSEHOLD INCOME			
<$25,000	5,070	27.9	25.9 - 29.9
$25,000–34,999	1,777	16.0	13.5 - 18.5
$35,000–49,999	2,219	10.3	8.3 - 12.2
$50,000–74,999	2,635	8.7	7.1 - 10.3
$75,000+	6,334	5.0	4.2 - 5.8
REGION			
I–WESTERN	2,876	15.8	13.9 - 17.7
II–CENTRAL	2,660	11.5	9.8 - 13.1
III–NORTH EAST	4,812	14.1	12.5 - 15.7
IV–METRO WEST	3,214	9.6	8.1 - 11.0
V–SOUTH EAST	5,061	15.6	14.0 - 17.3
VI–BOSTON	2,310	16.5	14.3 - 18.8

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 2.2: Quality of Life

A person's perceived physical and mental health is used to measure the effects of numerous disorders, short- and long-term disabilities, and diseases. An overarching goal of *Healthy People 2020* is to promote quality of life, healthy development, and healthy behaviors across all life stages. Perceived quality of life can help guide public health policies and interventions to improve health and fulfill unmet health needs.[6]

All respondents were asked to report: (1) the number of days during the past month that their physical health, which includes physical illness and injury, had not been good; and (2) the number of days during the past month they would describe their mental health, which includes stress, depression, and problems with emotions, as not good.

Presented here are the percentages of adults who reported that either:

(1) they had experienced at least 15 days of poor physical health in the previous month; or
(2) their mental health was not good for at least 15 days during the past month.

TABLE 2.2 – QUALITY OF LIFE AMONG MASSACHUSETTS ADULTS, 2012

	15+ DAYS OF POOR PHYSICAL HEALTH					15+ DAYS OF POOR MENTAL HEALTH				
	N	%	95% CI			N	%	95% CI		
OVERALL	21,302	9.5	9.0	-	10.1	21,349	10.9	10.2	-	11.6
GENDER										
MALE	8,519	9.5	8.6	-	10.4	8,519	9.8	8.8	-	10.8
FEMALE	12,783	9.5	8.8	-	10.3	12,830	11.9	11.0	-	12.9
AGE GROUP										
18–24	1,105	3.1	2.0	-	4.2	1,102	11.3	8.9	-	13.7
25–34	2,146	5.8	4.4	-	7.1	2,147	12.7	10.7	-	14.7
35–44	2,880	7.5	6.1	-	9.0	2,877	11.7	10.0	-	13.4
45–54	4,163	11.2	9.7	-	12.7	4,161	13.5	11.9	-	15.1
55–64	4,498	13.0	11.5	-	14.5	4,491	10.6	9.3	-	11.9
65–74	3,419	13.0	11.3	-	14.6	3,427	6.5	5.3	-	7.8
75 AND OLDER	2,788	16.9	14.7	-	19.0	2,843	5.4	4.2	-	6.7
RACE-ETHNICITY*										
WHITE	16,838	9.4	8.7	-	10.0	16,869	10.4	9.7	-	11.2
BLACK	1,284	8.6	6.5	-	10.6	1,298	12.9	10.1	-	15.7
HISPANIC	1,750	12.8	10.4	-	15.2	1,746	14.4	12.1	-	16.7
ASIAN	491	2.3	1.0	-	3.7	492	7.4	4.1	-	10.7
DISABILITY¶										
DISABILITY	5,197	34.8	32.7	-	37.0	5,236	27.2	25.1	-	29.3
NO DISABILITY	15,240	3.5	3.0	-	3.9	15,244	7.0	6.4	-	7.6
EDUCATION										
< HIGH SCHOOL	1,810	18.3	15.5	-	21.1	1,821	17.7	14.9	-	20.5
HIGH SCHOOL	5,219	11.8	10.6	-	13.0	5,231	12.4	11.0	-	13.8
COLLEGE 1–3 YRS	4,941	9.9	8.7	-	11.0	4,968	12.3	10.9	-	13.7
COLLEGE 4+ YRS	9,131	5.0	4.4	-	5.5	9,129	6.9	6.1	-	7.6
HOUSEHOLD INCOME										
<$25,000	4,950	18.7	17.1	-	20.4	4,972	20.6	18.7	-	22.5
$25,000–34,999	1,747	8.7	7.0	-	10.4	1,751	12.7	10.1	-	15.2
$35,000–49,999	2,197	9.8	7.8	-	11.8	2,202	9.2	7.3	-	11.0
$50,000–74,999	2,611	7.1	5.6	-	8.6	2,613	9.4	7.6	-	11.1
$75,000+	6,300	4.4	3.7	-	5.1	6,308	5.5	4.6	-	6.4
REGION										
I–WESTERN	2,825	11.6	10.0	-	13.3	2,826	14.7	12.7	-	16.7
II–CENTRAL	2,614	8.8	7.4	-	10.3	2,625	11.0	9.2	-	12.7
III–NORTH EAST	4,729	9.7	8.3	-	11.0	4,734	11.4	9.8	-	13.0
IV–METRO WEST	3,179	6.8	5.6	-	7.9	3,182	8.8	7.4	-	10.2
V–SOUTH EAST	4,967	11.2	9.8	-	12.6	4,993	10.0	8.6	-	11.4
VI–BOSTON	2,267	10.9	8.9	-	13.0	2,265	10.9	9.0	-	12.8

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 2.3: Disability

According to the Census Bureau, in 2010, 56.7 million people (18.7% of the population) had some level of disability and 38.3 million (12.6% of the population) had a severe disability.[7] A major goal for *Healthy People 2020* is to promote the health and well-being of people with disabilities.[3]

In 2012, respondents to the Massachusetts BRFSS were asked about disabilities and activity limitations. Respondents were classified as having a disability if they answered "yes" to one or both of the following questions:

1. Are you limited in any way in any activities because of physical, mental, or emotional problems?

2. Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?

TABLE 2.3 – DISABILITY AMONG MASSACHUSETTS ADULTS, 2012

	HAVE DISABILITY¶		
	N	%	95% CI
OVERALL	20,812	19.9	19.1 - 20.7
GENDER			
MALE	8,276	20.1	18.8 - 21.3
FEMALE	12,536	19.8	18.8 - 20.8
AGE GROUP			
18–24	1,056	8.3	6.0 - 10.6
25–34	2,075	13.5	11.4 - 15.6
35–44	2,799	14.6	12.7 - 16.4
45–54	4,046	21.6	19.7 - 23.5
55–64	4,413	26.0	24.1 - 27.9
65–74	3,384	27.5	25.3 - 29.7
75 AND OLDER	2,764	36.6	33.9 - 39.4
RACE-ETHNICITY*			
WHITE	16,530	20.5	19.6 - 21.4
BLACK	1,238	16.7	14.0 - 19.4
HISPANIC	1,688	19.9	17.2 - 22.6
ASIAN	473	6.7	3.7 - 9.7
EDUCATION			
< HIGH SCHOOL	1,801	29.7	26.3 - 33.0
HIGH SCHOOL	5,079	23.2	21.4 - 25.0
COLLEGE 1–3 YRS	4,874	20.9	19.3 - 22.5
COLLEGE 4+ YRS	8,986	13.8	12.9 - 14.7
HOUSEHOLD INCOME			
<$25,000	4,920	33.9	31.8 - 36.0
$25,000–34,999	1,722	20.4	17.6 - 23.2
$35,000–49,999	2,174	17.7	15.2 - 20.2
$50,000–74,999	2,588	16.9	14.9 - 18.9
$75,000+	6,237	11.5	10.4 - 12.6
REGION			
I–WESTERN	2,829	24.0	21.7 - 26.3
II–CENTRAL	2,595	19.4	17.3 - 21.5
III–NORTH EAST	4,706	20.2	18.4 - 22.1
IV–METRO WEST	3,143	16.5	14.7 - 18.2
V–SOUTH EAST	4,937	22.0	20.1 - 23.9
VI–BOSTON	2,253	19.0	16.7 - 21.2

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 3: Health Care Access and Utilization

SECTION 3: HEALTH CARE ACCESS AND UTILIZATION

Section 3.1: 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.[8 9]

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, Commonwealth Care, 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. Table 3.1 presents the Massachusetts BRFSS data.

TABLE 3.1 – HEALTH INSURANCE STATUS AMONG MASSACHUSETTS ADULTS, AGES 18-64, 2012

	NO HEALTH INSURANCE		
	N	%	95% CI
OVERALL	14,913	4.4	3.9 - 4.9
GENDER			
MALE	6,260	6.2	5.3 - 7.1
FEMALE	8,653	2.7	2.2 - 3.2
AGE GROUP			
18–24	1,091	4.9	3.3 - 6.4
25–34	2,157	7.7	6.0 - 9.4
35–44	2,899	3.9	2.9 - 5.0
45–54	4,208	3.6	2.8 - 4.3
55–64	4,558	2.3	1.7 - 2.9
RACE-ETHNICITY*			
WHITE	11,285	3.2	2.7 - 3.7
BLACK	1,040	10.6	7.4 - 13.8
HISPANIC	1,492	9.0	6.7 - 11.2
ASIAN	457	4.3	1.9 - 6.6
DISABILITY¶			
DISABILITY	3,124	3.6	2.4 - 4.7
NO DISABILITY	11,204	4.5	4.0 - 5.1
EDUCATION			
< HIGH SCHOOL	1,070	9.8	7.0 - 12.6
HIGH SCHOOL	3,323	6.2	4.9 - 7.4
COLLEGE 1–3 YRS	3,506	4.2	3.3 - 5.1
COLLEGE 4+ YRS	6,890	1.9	1.4 - 2.3
HOUSEHOLD INCOME			
<$25,000	3,091	9.8	8.1 - 11.6
$25,000–34,999	1,039	7.1	4.8 - 9.4
$35,000–49,999	1,429	5.4	3.7 - 7.1
$50,000–74,999	1,991	3.6	2.5 - 4.8
$75,000+	5,364	0.5	0.3 - 0.8
REGION			
I–WESTERN	1,972	4.9	3.6 - 6.2
II–CENTRAL	1,870	3.5	2.4 - 4.6
III–NORTH EAST	3,319	4.5	3.1 - 5.9
IV–METRO WEST	2,259	2.9	2.0 - 3.9
V–SOUTH EAST	3,262	5.8	4.4 - 7.3
VI–BOSTON	1,669	5.0	3.4 - 6.6

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 3.2: Health Care Access

Access to health care impacts physical, social and mental health status; prevention of disease and disability; detection and treatment of health conditions; quality of life; preventable death; and life expectancy. A goal of *Healthy People 2020* is to improve access to comprehensive, quality health care services.[3]

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 at any time in the past year due to cost and about how long since they last visited a doctor for a routine checkup. Presented here are the percentages of adults who reported that they did not have a personal health care provider, the percentages of adults who reported that cost had prevented them from seeing a doctor at some point in the past year, and the percentage of adults who had visited a medical provider for a checkup in the past year.

TABLE 3.2 - HEALTH CARE ACCESS AMONG MASSACHUSETTS ADULTS, 2012

	HAVE PERSONAL HEALTH CARE PROVIDER					COULD NOT SEE DOCTOR DUE TO COST				
	N	%	95% CI			N	%	95% CI		
OVERALL	21,649	88.5	87.8	-	89.2	21,658	9.2	8.6	-	9.9
GENDER										
MALE	8,636	84.1	82.9	-	85.3	8,629	9.5	8.5	-	10.4
FEMALE	13,013	92.5	91.7	-	93.2	13,029	9.0	8.2	-	9.8
AGE GROUP										
18–24	1,099	75.1	71.9	-	78.3	1,111	9.4	7.3	-	11.6
25–34	2,160	78.0	75.7	-	80.4	2,167	13.7	11.6	-	15.7
35–44	2,902	87.9	86.1	-	89.7	2,900	11.4	9.7	-	13.1
45–54	4,210	92.9	91.8	-	94.0	4,207	11.8	10.3	-	13.2
55–64	4,565	95.4	94.4	-	96.4	4,564	7.0	5.8	-	8.1
65–74	3,504	96.5	95.6	-	97.5	3,503	2.9	2.2	-	3.6
75 AND OLDER	2,897	97.0	96.2	-	97.8	2,894	3.4	2.4	-	4.3
RACE-ETHNICITY*										
WHITE	17,085	91.1	90.3	-	91.8	17,093	7.7	7.0	-	8.3
BLACK	1,320	83.1	79.7	-	86.5	1,321	13.6	10.7	-	16.5
HISPANIC	1,786	76.1	73.0	-	79.3	1,788	19.2	16.4	-	22.0
ASIAN	494	80.7	76.4	-	85.0	492	7.8	4.6	-	11.0
DISABILITY¶										
DISABILITY	5,368	92.2	90.8	-	93.6	5,366	14.4	12.7	-	16.0
NO DISABILITY	15,383	87.6	86.8	-	88.5	15,391	7.9	7.2	-	8.5
EDUCATION										
< HIGH SCHOOL	1,892	80.5	77.4	-	83.6	1,896	16.6	13.8	-	19.5
HIGH SCHOOL	5,316	87.9	86.4	-	89.3	5,317	10.6	9.3	-	12.0
COLLEGE 1–3 YRS	5,023	88.1	86.7	-	89.5	5,025	9.8	8.6	-	11.1
COLLEGE 4+ YRS	9,209	91.8	90.9	-	92.6	9,212	5.5	4.8	-	6.1
HOUSEHOLD INCOME										
<$25,000	5,067	80.7	78.7	-	82.6	5,067	17.9	16.1	-	19.7
$25,000–34,999	1,774	85.4	82.5	-	88.2	1,772	12.9	10.4	-	15.5
$35,000–49,999	2,214	87.3	84.9	-	89.8	2,212	9.2	7.1	-	11.3
$50,000–74,999	2,633	91.0	89.4	-	92.6	2,634	8.9	7.2	-	10.6
$75,000+	6,336	93.6	92.7	-	94.5	6,341	3.7	2.9	-	4.4
REGION										
I–WESTERN	2,878	85.9	83.8	-	88.0	2,879	11.6	9.7	-	13.5
II–CENTRAL	2,653	89.8	87.9	-	91.8	2,652	10.0	8.1	-	11.9
III–NORTH EAST	4,808	90.3	88.8	-	91.9	4,810	8.8	7.3	-	10.3
IV–METRO WEST	3,208	91.4	90.1	-	92.8	3,210	5.5	4.4	-	6.5
V–SOUTH EAST	5,057	89.2	87.6	-	90.8	5,063	9.8	8.4	-	11.1
VI–BOSTON	2,309	83.9	81.5	-	86.3	2,306	10.4	8.5	-	12.3

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

TABLE 3.2 (CONTINUED) - HEALTH CARE ACCESS AMONG MASSACHUSETTS ADULTS, 2012

	HAD A ROUTINE CHECKUP IN THE PAST YEAR		
	N	%	95% CI
OVERALL	21,562	78.7	77.8 - 79.5
GENDER			
MALE	8,588	74.6	73.2 - 76.0
FEMALE	12,974	82.4	81.3 - 83.4
AGE GROUP			
18–24	1,097	74.5	71.3 - 77.8
25–34	2,154	68.1	65.4 - 70.7
35–44	2,897	71.6	69.2 - 74.0
45–54	4,195	77.9	76.0 - 79.7
55–64	4,544	85.0	83.4 - 86.5
65–74	3,490	90.6	89.1 - 92.0
75 AND OLDER	2,883	93.1	91.6 - 94.6
RACE-ETHNICITY*			
WHITE	17,027	78.7	77.8 - 79.7
BLACK	1,320	81.1	77.5 - 84.7
HISPANIC	1,775	78.6	75.6 - 81.6
ASIAN	490	74.1	69.2 - 79.0
DISABILITY¶			
DISABILITY	5,325	82.9	81.1 - 84.7
NO DISABILITY	15,346	77.6	76.6 - 78.6
EDUCATION			
< HIGH SCHOOL	1,875	79.0	75.7 - 82.2
HIGH SCHOOL	5,288	80.3	78.6 - 82.1
COLLEGE 1–3 YRS	5,012	78.4	76.6 - 80.2
COLLEGE 4+ YRS	9,181	77.3	76.1 - 78.6
HOUSEHOLD INCOME			
<$25,000	5,045	76.9	74.9 - 78.9
$25,000–34,999	1,767	77.1	73.8 - 80.4
$35,000–49,999	2,212	78.8	76.0 - 81.7
$50,000–74,999	2,625	77.1	74.6 - 79.5
$75,000+	6,330	79.3	77.8 - 80.7
REGION			
I–WESTERN	2,862	77.4	75.1 - 79.8
II–CENTRAL	2,651	77.9	75.4 - 80.4
III–NORTH EAST	4,786	82.0	80.0 - 84.0
IV–METRO WEST	3,199	76.5	74.4 - 78.5
V–SOUTH EAST	5,041	80.6	78.7 - 82.6
VI–BOSTON	2,293	79.5	77.0 - 82.0

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 3.3: Oral Health

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 65 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.[10]

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. Presented here is the percentage of adults with six or more teeth missing.

TABLE 3.3 - DENTAL HEALTH CARE AMONG MASSACHUSETTS ADULTS, 2012

	DENTAL VISIT IN PAST YEAR					SIX OR MORE TEETH MISSING				
	N	%	95% CI			N	%	95% CI		
OVERALL	21,523	76.2	75.3	-	77.1	21,075	14.9	14.2	-	15.6
GENDER										
MALE	8,582	73.5	72.1	-	74.9	8,434	14.6	13.6	-	15.7
FEMALE	12,941	78.6	77.5	-	79.7	12,641	15.2	14.3	-	16.0
AGE GROUP										
18–24	1,091	78.9	76.0	-	81.8	†				
25–34	2,155	68.4	65.7	-	71.1	2,160	3.7	2.6	-	4.9
35–44	2,897	76.2	73.9	-	78.5	2,881	5.7	4.3	-	7.0
45–54	4,199	78.9	77.0	-	80.8	4,153	11.4	10.0	-	12.8
55–64	4,541	80.7	79.0	-	82.4	4,438	23.0	21.1	-	24.8
65–74	3,475	74.7	72.5	-	77.0	3,355	36.8	34.3	-	39.3
75 AND OLDER	2,859	72.5	70.0	-	75.0	2,703	44.4	41.5	-	47.3
RACE-ETHNICITY*										
WHITE	17,003	78.2	77.3	-	79.2	16,639	15.5	14.7	-	16.2
BLACK	1,307	64.5	60.3	-	68.7	1,284	16.9	14.1	-	19.7
HISPANIC	1,769	67.8	64.3	-	71.2	1,743	12.8	10.7	-	14.8
ASIAN	492	78.1	73.4	-	82.8	†				
DISABILITY¶										
DISABILITY	5,333	67.5	65.4	-	69.5	5,161	31.1	29.1	-	33.1
NO DISABILITY	15,312	78.4	77.4	-	79.4	15,066	11.0	10.3	-	11.7
EDUCATION										
< HIGH SCHOOL	1,854	59.6	55.9	-	63.4	1,810	32.4	29.1	-	35.8
HIGH SCHOOL	5,283	71.6	69.6	-	73.5	5,137	20.5	18.9	-	22.0
COLLEGE 1–3 YRS	4,993	75.1	73.4	-	76.9	4,885	14.6	13.3	-	15.9
COLLEGE 4+ YRS	9,189	85.5	84.5	-	86.5	9,049	5.6	5.0	-	6.1
HOUSEHOLD INCOME										
<$25,000	5,028	59.5	57.3	-	61.8	4,911	28.2	26.3	-	30.2
$25,000–34,999	1,766	66.1	62.5	-	69.7	1,721	19.3	16.7	-	22.0
$35,000–49,999	2,204	72.1	69.0	-	75.1	2,151	15.8	13.6	-	18.1
$50,000–74,999	2,629	79.9	77.6	-	82.3	2,587	11.7	10.0	-	13.4
$75,000+	6,328	88.0	86.8	-	89.2	6,264	5.8	5.0	-	6.7
REGION										
I–WESTERN	2,857	73.3	70.8	-	75.7	2,792	19.3	17.2	-	21.4
II–CENTRAL	2,647	74.8	72.2	-	77.3	2,585	14.9	13.1	-	16.8
III–NORTH EAST	4,779	78.4	76.4	-	80.4	4,667	14.9	13.3	-	16.4
IV–METRO WEST	3,200	80.9	79.0	-	82.7	3,149	10.8	9.4	-	12.2
V–SOUTH EAST	5,026	74.7	72.7	-	76.7	4,913	18.0	16.4	-	19.6
VI–BOSTON	2,286	73.5	70.8	-	76.3	2,249	13.6	11.7	-	15.5

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 4: Risk Factors and Preventive Behaviors

SECTION 4: RISK FACTORS AND PREVENTIVE BEHAVIORS

Section 4.1: Tobacco Use

Tobacco use is the leading preventable cause of death in the United States, resulting in approximately 443,000 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.[11] In Massachusetts, more than 8,000 residents die each year from the effects of tobacco. The health and economic burden of tobacco use has resulted in more than 4.3 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.[12] [13]

A current smoker was defined as someone who has smoked at least 100 cigarettes in his/her lifetime and who currently smokes either some days or everyday. A former smoker was defined as someone who has smoked at least 100 cigarettes in his/her lifetime but no longer smokes. Presented here are the percentage of adults who reported being current smokers and the percentage of adults who reported being former smokers.

There are two main types of smokeless tobacco, chewing tobacco and snuff. Users place the tobacco between their gum and cheek and either suck or chew on the tobacco. Prevalence of smokeless tobacco use is higher among persons aged 18 -24 years and those with a high school education or less. It is also higher among men than women across all states and territories. Smokeless tobacco is addictive, known to cause cancer, and affects oral and reproductive health.[14]

Respondents were asked if they currently use chewing tobacco, snuff, or snus (Swedish for snuff) every day, some days, or not at all. Presented is the percentage of adults who reported using chewing tobacco, snuff or snus either every day or some days.

TABLE 4.1 – TOBACCO USE AMONG MASSACHUSETTS ADULTS, 2012

	CURRENT SMOKER					FORMER SMOKER				
	N	%	95% CI			N	%	95% CI		
OVERALL	20,682	16.4	15.5	-	17.2	20,682	27.7	26.8	-	28.6
GENDER										
MALE	8,234	18.0	16.7	-	19.3	8,234	28.8	27.4	-	30.1
FEMALE	12,448	14.8	13.8	-	15.9	12,448	26.8	25.6	-	27.9
AGE GROUP										
18–24	1,060	17.7	14.7	-	20.7	1,060	5.1	3.5	-	6.7
25–34	2,069	23.8	21.2	-	26.5	2,069	17.3	15.1	-	19.5
35–44	2,789	18.0	15.9	-	20.2	2,789	23.1	20.8	-	25.3
45–54	4,026	17.0	15.4	-	18.7	4,026	27.3	25.2	-	29.3
55–64	4,383	15.5	13.9	-	17.1	4,383	37.5	35.3	-	39.7
65–74	3,360	10.7	9.2	-	12.2	3,360	47.6	45.0	-	50.1
75 AND OLDER	2,728	5.6	4.3	-	6.9	2,728	49.9	47.0	-	52.8
RACE-ETHNICITY*										
WHITE	16,433	16.4	15.5	-	17.3	16,433	31.0	30.0	-	32.1
BLACK	1,232	18.3	14.7	-	21.8	1,232	15.2	12.3	-	18.1
HISPANIC	1,676	16.9	14.0	-	19.7	1,676	16.7	14.0	-	19.4
ASIAN	471	7.7	4.5	-	11.0	471	8.9	5.6	-	12.3
DISABILITY¶										
DISABILITY	5,298	25.7	23.6	-	27.7	5,298	34.2	32.1	-	36.3
NO DISABILITY	15,267	14.1	13.2	-	14.9	15,267	26.1	25.1	-	27.1
EDUCATION										
< HIGH SCHOOL	1,792	29.6	26.0	-	33.3	1,792	25.4	22.1	-	28.7
HIGH SCHOOL	5,032	22.5	20.6	-	24.3	5,032	29.6	27.7	-	31.6
COLLEGE 1–3 YRS	4,846	17.7	16.1	-	19.3	4,846	28.5	26.7	-	30.4
COLLEGE 4+ YRS	8,941	7.0	6.3	-	7.8	8,941	26.4	25.2	-	27.6
HOUSEHOLD INCOME										
<$25,000	4,874	28.3	26.1	-	30.5	4,874	25.0	23.1	-	27.0
$25,000–34,999	1,714	21.3	18.1	-	24.5	1,714	29.2	25.9	-	32.5
$35,000–49,999	2,162	16.0	13.5	-	18.5	2,162	29.8	26.9	-	32.8
$50,000–74,999	2,583	17.5	15.1	-	19.8	2,583	31.9	29.3	-	34.5
$75,000+	6,206	8.3	7.3	-	9.3	6,206	28.9	27.4	-	30.5
REGION										
I–WESTERN	2,805	20.0	17.6	-	22.3	2,805	30.8	28.3	-	33.3
II–CENTRAL	2,575	17.3	15.0	-	19.6	2,575	27.9	25.5	-	30.3
III–NORTH EAST	4,684	16.1	14.2	-	17.9	4,684	28.0	25.9	-	30.1
IV–METRO WEST	3,131	11.5	9.9	-	13.2	3,131	26.1	24.2	-	28.1
V–SOUTH EAST	4,907	19.3	17.4	-	21.3	4,907	31.6	29.4	-	33.7
VI–BOSTON	2,234	13.4	11.4	-	15.4	2,234	20.5	18.3	-	22.8

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

TABLE 4.1(CONTINUED) - SMOKELESS TOBACCO USE AMONG MASSACHUSETTS ADULTS, 2012

	USE SMOKELESS TOBACCO		
	N	%	95% CI
OVERALL	20,803	1.3	1.1 - 1.6
GENDER			
MALE	8,281	2.5	1.9 - 3.0
FEMALE	12,522	0.3	0.2 - 0.4
AGE GROUP			
18–24	1,060	3.8	2.2 - 5.5
25–34	2,074	1.9	1.2 - 2.6
35–44	2,796	0.8	0.4 - 1.1
45–54	4,050	1.3	0.8 - 1.8
55–64	†		
65–74	†		
75 AND OLDER	†		
RACE-ETHNICITY*			
WHITE	16,528	1.2	0.9 - 1.6
BLACK	†		
HISPANIC	†		
ASIAN	†		
DISABILITY¶			
DISABILITY	5,331	1.0	0.6 - 1.5
NO DISABILITY	15,352	1.4	1.1 - 1.7
EDUCATION			
< HIGH SCHOOL	†		
HIGH SCHOOL	5,071	1.4	0.9 - 1.9
COLLEGE 1–3 YRS	4,883	1.8	1.1 - 2.5
COLLEGE 4+ YRS	8,980	0.8	0.5 - 1.0
HOUSEHOLD INCOME			
<$25,000	4,900	1.2	0.7 - 1.7
$25,000–34,999	†		
$35,000–49,999	†		
$50,000–74,999	2,587	1.3	0.7 - 1.9
$75,000+	6,236	1.3	0.8 - 1.9
REGION			
I–WESTERN	†		
II–CENTRAL	2,592	1.5	0.8 - 2.2
III–NORTH EAST	4,718	1.7	0.9 - 2.5
IV–METRO WEST	3,136	0.8	0.3 - 1.2
V–SOUTH EAST	4,932	0.9	0.5 - 1.2
VI–BOSTON	2,248	2.5	1.2 - 3.8

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 4.2: Smoking Cessation

Some of the immediate health benefits to quitting smoking are: improved heart rate and blood pressure, improved circulation and lung function, and improved sense of smell and taste. Long-term benefits include reduced risk of cancer and other diseases caused by smoking, such as heart disease and COPD. [15]

Respondents who were current smokers were asked if they had stopped smoking for one day or longer in the past 12 months because they were trying to quit smoking. They were also asked if they had any intention of trying to quit smoking within the next 30 days. Presented here is the percentage of adult current smokers who reported that they had attempted to quit smoking for one day or longer in the past 12 months and the percentage of adult current smokers who reported that they had plans to quit smoking within the next 30 days.

TABLE 4.2 – SMOKING CESSATION AMONG MASSACHUSETTS ADULTS, 2012

	QUIT ATTEMPT					PLANNING TO QUIT				
	N	%	95% CI			N	%	95% CI		
OVERALL	3,188	60.7	57.9	-	63.4	2,813	38.6	35.8	-	41.4
GENDER										
MALE	1,394	59.2	55.2	-	63.1	1,245	39.3	35.2	-	43.3
FEMALE	1,794	62.3	58.6	-	66.1	1,568	37.8	34.0	-	41.7
AGE GROUP										
18–24	184	65.4	56.3	-	74.6	160	30.0	20.9	-	39.1
25–34	405	59.7	53.1	-	66.2	361	35.4	28.9	-	41.9
35–44	487	66.1	59.8	-	72.5	440	38.5	31.7	-	45.3
45–54	798	61.2	56.0	-	66.4	710	43.2	37.7	-	48.6
55–64	739	56.5	50.9	-	62.1	656	42.9	37.0	-	48.7
65–74	410	51.1	43.5	-	58.7	354	44.7	36.6	-	52.7
75 AND OLDER	145	51.5	39.9	-	63.0	118	37.3	24.6	-	50.0
RACE-ETHNICITY*										
WHITE	2,502	59.0	56.0	-	62.1	2,234	37.0	33.8	-	40.1
BLACK	221	64.7	53.4	-	76.0	189	41.0	29.9	-	52.1
HISPANIC	252	70.3	61.3	-	79.2	209	56.2	46.0	-	66.3
ASIAN	†					†				
DISABILITY¶										
DISABILITY	1,207	61.6	56.8	-	66.5	1,079	39.9	34.9	-	44.8
NO DISABILITY	1,966	60.5	57.1	-	63.8	1,724	37.9	34.5	-	41.3
EDUCATION										
< HIGH SCHOOL	460	65.5	58.3	-	72.8	390	45.1	37.0	-	53.1
HIGH SCHOOL	1,099	61.7	57.1	-	66.4	948	36.7	32.1	-	41.4
COLLEGE 1–3 YRS	943	56.3	51.5	-	61.1	850	35.2	30.5	-	40.0
COLLEGE 4+ YRS	681	59.9	54.5	-	65.4	622	41.4	35.5	-	47.3
HOUSEHOLD INCOME										
<$25,000	1,206	63.0	58.2	-	67.8	1,057	43.2	38.2	-	48.1
$25,000–34,999	316	62.1	53.9	-	70.3	275	37.7	29.5	-	46.0
$35,000–49,999	323	55.7	47.0	-	64.4	278	37.2	28.8	-	45.6
$50,000–74,999	392	58.1	50.6	-	65.5	359	36.9	29.2	-	44.6
$75,000+	504	57.6	51.3	-	64.0	465	34.4	28.3	-	40.5
REGION										
I–WESTERN	491	65.3	59.0	-	71.7	436	37.9	31.2	-	44.6
II–CENTRAL	405	56.2	48.8	-	63.6	352	37.0	29.7	-	44.3
III–NORTH EAST	747	62.6	56.5	-	68.7	662	39.6	33.2	-	46.1
IV–METRO WEST	334	55.7	48.0	-	63.5	314	37.5	30.0	-	45.0
V–SOUTH EAST	888	59.5	53.8	-	65.2	779	38.3	32.4	-	44.1
VI–BOSTON	277	61.3	53.3	-	69.3	249	44.7	36.2	-	53.2

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 4.3: Environmental Tobacco Smoke

Environmental tobacco smoke (ETS), referred to as 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. [16]

Respondents were asked about rules regarding smoking in their households. Answer selections were: no smoking is allowed, smoking is allowed in some places or at some times, or smoking is permitted anywhere in the household. Presented here is the percentage of adults reporting that no smoking was allowed in their household. Respondents were also 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.

Questions about environmental tobacco smoke were asked only on the MA BRFSS landline survey in 2012 and not the cell phone survey; therefore the results in Table 4.3 represent the landline sample only.

TABLE 4.3 – ENVIRONMENTAL TOBACCO AMONG MASSACHUSETTS ADULTS, 2012

	LIVE IN A HOUSEHOLD WHERE SMOKING IS NOT ALLOWED			EXPOSED TO ENVIRONMENTAL TOBACCO SMOKE §		
	N	%	95% CI	N	%	95% CI
OVERALL	19,101	82.7	81.8 - 83.5	15,888	36.4	35.0 - 37.9
GENDER						
MALE	7,569	81.2	79.9 - 82.6	5,880	41.8	39.5 - 44.1
FEMALE	11,532	84.0	82.9 - 85.1	10,008	31.5	29.7 - 33.3
AGE GROUP						
18–24	943	74.3	70.6 - 78.1	390	59.0	52.8 - 65.1
25–34	1,852	82.7	80.2 - 85.2	1,063	48.4	43.9 - 52.8
35–44	2,613	86.2	84.3 - 88.1	2,062	36.0	32.8 - 39.3
45–54	3,780	83.1	81.3 - 84.8	3,192	33.6	31.0 - 36.2
55–64	4,124	82.2	80.4 - 83.9	3,682	29.2	26.9 - 31.6
65–74	3,142	84.5	82.7 - 86.4	2,933	24.1	21.7 - 26.5
75 AND OLDER	2,428	85.4	83.2 - 87.5	2,378	16.5	14.1 - 19.0
RACE-ETHNICITY*						
WHITE	15,314	82.6	81.6 - 83.5	13,125	35.2	33.6 - 36.8
BLACK	1,091	79.0	74.9 - 83.1	857	38.8	33.1 - 44.5
HISPANIC	1,499	86.2	83.5 - 88.9	1,037	45.7	40.3 - 51.2
ASIAN	420	87.9	83.9 - 91.8	252	35.6	27.1 - 44.1
DISABILITY¶						
DISABILITY	4,940	74.1	72.0 - 76.2	4,302	41.5	38.6 - 44.4
NO DISABILITY	14,062	84.8	83.9 - 85.8	11,504	35.1	33.4 - 36.7
EDUCATION						
< HIGH SCHOOL	1,601	74.4	70.7 - 78.2	1,293	45.9	40.7 - 51.2
HIGH SCHOOL	4,562	77.7	75.8 - 79.6	3,752	39.0	36.0 - 42.0
COLLEGE 1–3 YRS	4,525	80.7	78.9 - 82.5	3,702	39.4	36.4 - 42.3
COLLEGE 4+ YRS	8,359	90.0	89.0 - 90.9	7,093	30.0	27.9 - 32.0
HOUSEHOLD INCOME						
<$25,000	4,455	71.9	69.6 - 74.2	3,562	45.4	42.1 - 48.7
$25,000–34,999	1,578	80.7	77.8 - 83.6	1,302	37.8	32.7 - 43.0
$35,000–49,999	2,000	82.0	79.2 - 84.8	1,679	36.9	32.3 - 41.4
$50,000–74,999	2,455	81.6	79.3 - 84.0	2,039	37.1	33.3 - 40.9
$75,000+	5,858	89.9	88.7 - 91.1	5,034	30.4	28.1 - 32.7
REGION						
I–WESTERN	2,626	80.7	78.3 - 83.0	2,220	37.5	34.0 - 41.1
II–CENTRAL	2,420	79.7	77.1 - 82.4	2,027	37.9	34.0 - 41.8
III–NORTH EAST	4,360	84.0	82.1 - 85.8	3,762	36.9	33.5 - 40.2
IV–METRO WEST	2,928	87.3	85.6 - 89.0	2,356	30.8	27.7 - 34.0
V–SOUTH EAST	4,542	81.0	79.0 - 83.0	3,966	37.7	34.5 - 40.8
VI–BOSTON	2,080	81.3	78.7 - 83.9	1,549	40.6	35.9 - 45.4

§ Data presented for the landline sample only
* White, Black, and Asian race categories refer to non-Hispanic
¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 4.4: Alcohol Use

Excessive alcohol consumption is among the leading causes of preventable death in the United States.[17] 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.[18] In 2010, driving while under the influence of alcohol accounted for 115 alcohol-related fatalities in Massachusetts – 36% of the total traffic fatalities for the year.[19]

All respondents were asked about their consumption of alcohol in the past month. A drink of alcohol was defined as a twelve ounce can or bottle of beer, one five ounce glass of wine, or one drink with 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. Heavy drinking was defined as consumption of more than 60 drinks in the past month for men and consumption of more than 30 drinks in the past month for women. Presented here are the percentage of adults who reported binge drinking and the percentage of adults who reported heavy drinking.

TABLE 4.4 – ALCOHOL USE AMONG MASSACHUSETTS ADULTS, 2012

	BINGE DRINKING					HEAVY DRINKING				
	N	%	95% CI			N	%	95% CI		
OVERALL	20,391	19.7	18.8	-	20.6	20,401	7.4	6.9	-	8.0
GENDER										
MALE	8,086	25.6	24.1	-	27.1	8,089	7.7	6.7	-	8.6
FEMALE	12,305	14.4	13.4	-	15.5	12,312	7.2	6.5	-	8.0
AGE GROUP										
18–24	1,033	35.1	31.3	-	38.9	1,025	10.2	7.9	-	12.5
25–34	2,036	33.5	30.8	-	36.3	2,041	8.7	6.9	-	10.5
35–44	2,743	23.3	21.0	-	25.7	2,758	7.9	6.4	-	9.4
45–54	3,977	17.0	15.3	-	18.8	3,973	6.8	5.7	-	8.0
55–64	4,312	11.0	9.5	-	12.5	4,326	6.9	5.6	-	8.2
65–74	3,340	6.6	5.2	-	7.9	3,332	6.3	5.0	-	7.6
75 AND OLDER	2,698	3.1	2.0	-	4.2	2,694	4.5	3.2	-	5.8
RACE-ETHNICITY*										
WHITE	16,252	21.0	20.0	-	22.1	16,248	8.1	7.4	-	8.8
BLACK	1,196	13.9	10.5	-	17.4	1,201	6.7	3.7	-	9.7
HISPANIC	1,640	16.8	14.0	-	19.7	1,643	4.4	2.6	-	6.1
ASIAN	453	12.5	8.6	-	16.4	†				
DISABILITY¶										
DISABILITY	5,233	14.7	12.9	-	16.5	5,240	6.6	5.2	-	7.9
NO DISABILITY	15,041	21.0	20.0	-	22.0	15,045	7.7	7.0	-	8.4
EDUCATION										
< HIGH SCHOOL	1,768	16.9	13.5	-	20.3	1,762	7.3	4.7	-	9.9
HIGH SCHOOL	4,922	18.6	16.8	-	20.4	4,944	6.4	5.3	-	7.5
COLLEGE 1–3 YRS	4,781	22.2	20.2	-	24.1	4,784	8.6	7.3	-	9.9
COLLEGE 4+ YRS	8,851	19.7	18.5	-	20.9	8,841	7.4	6.7	-	8.2
HOUSEHOLD INCOME										
<$25,000	4,807	16.0	14.1	-	17.9	4,816	6.0	4.7	-	7.3
$25,000–34,999	1,685	17.6	14.7	-	20.4	1,686	6.1	4.4	-	7.8
$35,000–49,999	2,135	21.2	18.2	-	24.2	2,138	8.3	6.3	-	10.3
$50,000–74,999	2,557	24.2	21.6	-	26.9	2,561	8.1	6.6	-	9.6
$75,000+	6,154	22.5	20.9	-	24.1	6,157	8.5	7.4	-	9.5
REGION										
I–WESTERN	2,766	19.2	16.8	-	21.6	2,773	7.7	6.1	-	9.4
II–CENTRAL	2,555	21.6	19.0	-	24.1	2,555	8.7	7.0	-	10.4
III–NORTH EAST	4,624	19.6	17.5	-	21.7	4,614	7.2	5.8	-	8.5
IV–METRO WEST	3,071	18.3	16.4	-	20.3	3,076	6.2	5.2	-	7.2
V–SOUTH EAST	4,830	18.6	16.4	-	20.7	4,839	7.4	5.9	-	8.9
VI–BOSTON	2,205	20.1	17.6	-	22.6	2,206	8.2	6.4	-	10.0

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 4.5: Overweight and Obesity Status

Obese and/or overweight adults are at an 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. [20]

To address this significant public health problem in the state of Massachusetts, in January 2009, the Department of Public Health launched the Mass in Motion program. A multi-pronged approach to address the obesity epidemic, Mass in Motion (a public/private initiative) includes: support for regulatory changes to promote healthy diet and exercise, such as menu labeling; grants to cities and towns to promote wellness at the community level; the expansion of workplace wellness programs; and a state-sponsored web-site promoting better eating and increasing physical activity.[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. 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. Presented here are the percentages of adults who were defined as overweight and obese. Please note that the overweight category includes all adults with a BMI of greater than 25.0, including those who are obese.

TABLE 4.5 – OVERWEIGHT AND OBESE AMONG MASSACHUSETTS ADULTS, 2012

	OVERWEIGHT (BMI ≥ 25.0)					OBESE (BMI ≥ 30.0)				
	N	%	95% CI			N	%	95% CI		
OVERALL	19,904	58.8	57.7	-	59.8	19,904	22.9	22.0	-	23.8
GENDER										
MALE	8,322	68.6	67.1	-	70.2	8,322	24.6	23.3	-	26.0
FEMALE	11,582	49.1	47.6	-	50.5	11,582	21.2	20.0	-	22.3
AGE GROUP										
18–24	1,028	37.3	33.4	-	41.1	1,028	13.1	10.4	-	15.8
25–34	1,947	55.9	52.9	-	58.9	1,947	21.3	18.8	-	23.8
35–44	2,678	60.8	58.2	-	63.4	2,678	23.3	21.0	-	25.6
45–54	3,917	64.0	61.8	-	66.2	3,917	27.2	25.2	-	29.3
55–64	4,211	67.3	65.2	-	69.3	4,211	27.7	25.7	-	29.7
65–74	3,252	67.5	65.1	-	69.9	3,252	27.0	24.7	-	29.4
75 AND OLDER	2,684	56.1	53.2	-	59.0	2,684	17.3	15.0	-	19.6
RACE-ETHNICITY*										
WHITE	15,856	58.4	57.2	-	59.6	15,856	22.3	21.3	-	23.3
BLACK	1,196	69.8	65.5	-	74.1	1,196	34.9	30.8	-	39.1
HISPANIC	1,568	69.6	66.1	-	73.1	1,568	30.4	26.9	-	33.9
ASIAN	451	28.2	23.0	-	33.5	451	5.6	3.3	-	7.9
DISABILITY¶										
DISABILITY	5,042	67.2	65.0	-	69.4	5,042	33.3	31.2	-	35.4
NO DISABILITY	14,370	56.6	55.4	-	57.8	14,370	20.2	19.2	-	21.2
EDUCATION										
< HIGH SCHOOL	1,692	66.7	62.8	-	70.7	1,692	30.7	27.1	-	34.2
HIGH SCHOOL	4,926	64.5	62.3	-	66.7	4,926	26.5	24.6	-	28.4
COLLEGE 1–3 YRS	4,658	58.9	56.7	-	61.1	4,658	25.2	23.3	-	27.1
COLLEGE 4+ YRS	8,573	52.0	50.5	-	53.5	8,573	16.2	15.1	-	17.2
HOUSEHOLD INCOME										
<$25,000	4,748	62.3	60.0	-	64.6	4,748	28.8	26.7	-	30.9
$25,000–34,999	1,673	58.1	54.2	-	62.0	1,673	22.6	19.5	-	25.7
$35,000–49,999	2,090	60.8	57.5	-	64.2	2,090	22.6	19.8	-	25.4
$50,000–74,999	2,517	61.7	58.9	-	64.5	2,517	26.4	23.8	-	28.9
$75,000+	6,037	57.1	55.3	-	59.0	6,037	19.5	18.0	-	20.9
REGION										
I–WESTERN	2,684	62.9	60.1	-	65.7	2,684	26.4	24.1	-	28.8
II–CENTRAL	2,484	62.9	60.0	-	65.8	2,484	29.0	26.2	-	31.8
III–NORTH EAST	4,478	60.4	57.9	-	62.9	4,478	22.0	20.1	-	24.0
IV–METRO WEST	3,029	53.2	50.8	-	55.7	3,029	17.5	15.7	-	19.3
V–SOUTH EAST	4,709	60.4	58.0	-	62.8	4,709	22.9	20.9	-	24.9
VI–BOSTON	2,147	54.9	51.7	-	58.0	2,147	22.8	20.2	-	25.5

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 4.6: 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]

In 2012, all respondents were asked if during the past month, other than their regular job, they participated in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise. Presented here is the percentage of adults who participated in any leisure time physical activity in the last 30 days.

TABLE 4.6 – ANY LEISURE TIME PHYSICAL ACTIVITY AMONG MASSACHUSETTS ADULTS, 2012

	EXERCISED IN THE PAST MONTH		
	N	%	95% CI
OVERALL	21,691	80.2	79.4 - 81.1
GENDER			
MALE	8,652	81.7	80.5 - 82.9
FEMALE	13,039	78.9	77.8 - 80.0
AGE GROUP			
18–24	1,112	87.5	85.0 - 89.9
25–34	2,169	83.4	81.2 - 85.5
35–44	2,904	82.3	80.3 - 84.3
45–54	4,215	80.2	78.2 - 82.2
55–64	4,568	78.9	77.0 - 80.7
65–74	3,504	75.1	72.9 - 77.4
75 AND OLDER	2,905	67.8	65.2 - 70.4
RACE-ETHNICITY*			
WHITE	17,107	83.0	82.1 - 83.8
BLACK	1,325	73.2	69.4 - 77.0
HISPANIC	1,793	65.6	62.2 - 69.0
ASIAN	499	77.6	72.7 - 82.6
DISABILITY¶			
DISABILITY	5,372	63.7	61.6 - 65.8
NO DISABILITY	15,412	84.6	83.8 - 85.5
EDUCATION			
< HIGH SCHOOL	1,898	62.9	59.2 - 66.5
HIGH SCHOOL	5,332	74.3	72.5 - 76.1
COLLEGE 1–3 YRS	5,027	81.4	79.9 - 83.0
COLLEGE 4+ YRS	9,221	89.4	88.5 - 90.2
HOUSEHOLD INCOME			
<$25,000	5,076	68.3	66.2 - 70.4
$25,000–34,999	1,778	76.6	73.5 - 79.7
$35,000–49,999	2,219	78.1	75.2 - 81.0
$50,000–74,999	2,635	83.2	81.2 - 85.3
$75,000+	6,336	90.0	88.9 - 91.1
REGION			
I–WESTERN	2,882	78.1	75.9 - 80.3
II–CENTRAL	2,658	81.5	79.4 - 83.6
III–NORTH EAST	4,819	78.8	76.9 - 80.8
IV–METRO WEST	3,213	83.9	82.0 - 85.7
V–SOUTH EAST	5,066	79.3	77.4 - 81.1
VI–BOSTON	2,313	78.2	75.6 - 80.8

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 5: Immunization

SECTION 5: IMMUNIZATION

Section 5.1: Flu Vaccine and Pneumonia Vaccine

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. Because of the fluctuations in the length and severity of the flu from year to year, the CDC estimates that from the 1976-1977 season to the 2006-2007 flu season, flu-associated deaths ranged from a low of about 3,000 to a high of about 49,000 people.[23] Adults 65 years or older, children younger than 2 years old, and individuals with chronic medical conditions are at an increased risk for pneumococcal infection. In Massachusetts, flu and pneumonia were the seventh leading causes of death in 2010 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 ages 18-49 years, 50-64 years and ages 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.

TABLE 5.1.1 – FLU VACCINE AMONG MASSACHUSETTS ADULTS, AGES 18-64, 2012

	FLU VACCINE IN PAST YEAR, AGES 18-49					FLU VACCINE IN PAST YEAR, AGES 50-64				
	N	%	95% CI			N	%	95% CI		
OVERALL	7,696	34.5	33.0	-	36.0	6,492	47.3	45.5	-	49.2
GENDER										
MALE	3,336	28.1	26.1	-	30.2	2,594	42.7	39.8	-	45.5
FEMALE	4,360	40.7	38.6	-	42.9	3,898	51.6	49.3	-	54.0
AGE GROUP										
18–24	1,038	32.0	28.3	-	35.7					
25–34	2,041	31.9	29.2	-	34.6					
35–44	2,767	37.4	34.8	-	40.0					
45–49	1,850	37.3	34.1	-	40.5					
50-64						6,492	47.3	45.5	-	49.2
RACE-ETHNICITY*										
WHITE	5,445	35.0	33.2	-	36.8	5,400	48.1	46.1	-	50.0
BLACK	582	28.6	23.3	-	33.9	373	38.4	31.4	-	45.4
HISPANIC	986	33.2	29.0	-	37.4	403	47.4	38.2	-	56.5
ASIAN	347	39.7	33.1	-	46.4	76	54.2	38.4	-	70.1
DISABILITY¶										
DISABILITY	1,181	35.7	31.6	-	39.7	1,865	53.2	49.5	-	57.0
NO DISABILITY	6,473	34.3	32.7	-	36.0	4,589	45.5	43.3	-	47.6
EDUCATION										
< HIGH SCHOOL	542	26.1	20.8	-	31.4	455	44.2	36.0	-	52.4
HIGH SCHOOL	1,662	29.2	26.0	-	32.3	1,465	39.8	35.8	-	43.8
COLLEGE 1–3 YRS	1,810	33.4	30.3	-	36.4	1,563	46.3	42.6	-	50.0
COLLEGE 4+ YRS	3,669	41.5	39.4	-	43.6	2,991	53.4	50.9	-	55.9
HOUSEHOLD INCOME										
<$25,000	1,561	26.3	23.2	-	29.3	1,384	43.4	38.9	-	47.9
$25,000–34,999	551	28.8	23.2	-	34.4	444	44.1	36.5	-	51.7
$35,000–49,999	737	33.1	28.2	-	38.0	653	41.2	35.2	-	47.1
$50,000–74,999	1,030	32.7	28.8	-	36.6	907	43.5	38.8	-	48.2
$75,000+	2,869	41.6	39.0	-	44.2	2,359	52.8	50.0	-	55.7
REGION										
I–WESTERN	964	31.9	27.9	-	36.0	958	46.4	42.0	-	50.9
II–CENTRAL	985	32.6	28.6	-	36.6	821	40.7	35.9	-	45.5
III–NORTH EAST	1,687	36.5	32.9	-	40.1	1,531	46.7	42.5	-	50.9
IV–METRO WEST	1,236	39.2	35.6	-	42.8	956	55.2	51.0	-	59.3
V–SOUTH EAST	1,612	26.9	23.6	-	30.2	1,527	43.0	38.9	-	47.2
VI–BOSTON	954	40.5	36.3	-	44.7	653	52.9	47.1	-	58.7

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

TABLE 5.1.2 – FLU VACCINE AMONG MASSACHUSETTS ADULTS, AGES 65 YEARS AND OLDER, 2012

	FLU VACCINE IN PAST YEAR, AGES 65+		
	N	%	95% CI
OVERALL	6,045	63.6	61.7 - 65.5
GENDER			
MALE	2,133	64.2	61.1 - 67.2
FEMALE	3,912	63.2	60.8 - 65.5
AGE GROUP			
65–74	3,340	60.5	58.0 - 63.0
75 AND OLDER	2,705	67.3	64.6 - 70.1
RACE-ETHNICITY*			
WHITE	5,290	64.7	62.7 - 66.7
BLACK	225	52.4	42.2 - 62.6
HISPANIC	256	54.2	44.7 - 63.7
ASIAN	†		
DISABILITY¶			
DISABILITY	2,152	67.3	64.1 - 70.4
NO DISABILITY	3,859	61.9	59.6 - 64.2
EDUCATION			
< HIGH SCHOOL	760	58.9	52.9 - 65.0
HIGH SCHOOL	1,792	61.6	58.1 - 65.1
COLLEGE 1–3 YRS	1,371	62.2	58.4 - 66.0
COLLEGE 4+ YRS	2,092	69.3	66.7 - 72.0
HOUSEHOLD INCOME			
<$25,000	1,836	61.5	57.8 - 65.3
$25,000–34,999	689	64.2	58.8 - 69.6
$35,000–49,999	739	61.5	56.2 - 66.8
$50,000–74,999	606	67.7	62.4 - 73.0
$75,000+	903	68.0	63.7 - 72.2
REGION			
I–WESTERN	818	64.7	59.9 - 69.5
II–CENTRAL	731	61.4	56.0 - 66.7
III–NORTH EAST	1,367	64.9	60.9 - 68.9
IV–METRO WEST	873	69.1	65.2 - 73.1
V–SOUTH EAST	1,660	59.8	55.8 - 63.7
VI–BOSTON	573	61.5	55.2 - 67.7

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

TABLE 5.1.3 – PNEUMONIA VACCINE AMONG MASSACHUSETTS ADULTS, AGES 65 YEARS AND OLDER, 2012

	EVER HAD PNEUMONIA VACCINE, AGES 65+		
	N	%	95% CI
OVERALL	5,710	70.2	68.4 - 72.1
GENDER			
MALE	1,969	69.2	66.1 - 72.3
FEMALE	3,741	71.0	68.8 - 73.2
AGE GROUP			
65–74	3,125	65.4	62.8 - 67.9
75 AND OLDER	2,585	75.9	73.5 - 78.4
RACE-ETHNICITY*			
WHITE	5,034	72.4	70.6 - 74.3
BLACK	209	49.6	39.0 - 60.2
HISPANIC	215	46.6	36.4 - 56.7
ASIAN	†		
DISABILITY¶			
DISABILITY	2,050	76.0	73.1 - 78.8
NO DISABILITY	3,625	67.7	65.4 - 69.9
EDUCATION			
< HIGH SCHOOL	689	65.1	59.0 - 71.2
HIGH SCHOOL	1,719	70.9	67.6 - 74.2
COLLEGE 1–3 YRS	1,312	69.6	65.9 - 73.3
COLLEGE 4+ YRS	1,962	72.6	69.9 - 75.2
HOUSEHOLD INCOME			
<$25,000	1,749	68.5	64.7 - 72.3
$25,000–34,999	656	73.0	67.8 - 78.1
$35,000–49,999	709	71.6	66.8 - 76.5
$50,000–74,999	575	69.5	64.2 - 74.8
$75,000+	839	68.6	64.2 - 72.9
REGION			
I–WESTERN	785	71.0	66.3 - 75.8
II–CENTRAL	691	74.1	69.3 - 78.9
III–NORTH EAST	1,301	72.5	68.7 - 76.4
IV–METRO WEST	815	73.7	69.8 - 77.5
V–SOUTH EAST	1,574	67.5	63.7 - 71.3
VI–BOSTON	524	56.8	50.1 - 63.4

*White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 5.2: Human Papilloma Virus (HPV)

Genital human papilloma virus (also called HPV) is the most common sexually transmitted infection (STI). Approximately 20 million Americans are currently infected with HPV. Another 6 million people become newly infected each year. HPV is so common that at least 50% of sexually active men and women get it at some point in their lives.[25]

Vaccines can protect both males and females against some of the most common types of HPV. These vaccines are given in three shots. It is important to get all three doses to get the best protection. The vaccines are most effective when given before a person's first sexual contact. Cervarix and Gardisil protect females against HPV that causes most cervical cancer. Gardisil protects both males and females from genital warts.[25]

All respondents between the ages of 18-49 were asked if they had ever received the HPV vaccine; if they responded yes, they were then asked how many HPV shots they had received. Presented are the percentage of females aged 18-34 who had ever received the HPV vaccine and the percentage of those who had completed the series of three shots. Percentages for males are not presented due to insufficient data. Note that this is a narrower age range than presented in prior years' reports.

TABLE 5.2 – HPV VACCINE AMONG MASSACHUSETTS FEMALES, AGES 18-34 YEARS, 2012

	EVER HAD HPV VACCINE				COMPLETED SERIES **			
	N	%	95% CI		N	%	95% CI	
OVERALL	1,456	41.9	38.3 -	45.5	510	79.1	74.5 -	83.7
AGE GROUP								
18-24	464	64.9	59.1 -	70.7	293	81.5	76.3 -	86.7
25-34	992	22.7	19.2 -	26.2	217	73.2	64.5 -	81.9
RACE-ETHNICITY*								
WHITE	948	44.8	40.3 -	49.3	342	84.7	80.0 -	89.3
BLACK	120	40.0	27.4 -	52.7	†			
HISPANIC	236	38.3	29.6 -	47.0	82	61.3	47.0 -	75.6
ASIAN	85	28.0	15.9 -	40.1	†			
DISABILITY¶								
DISABILITY	171	33.8	22.9 -	44.8	†			
NO DISABILITY	1,279	42.7	38.9 -	46.6	466	80.8	76.3 -	85.3
EDUCATION								
< HIGH SCHOOL	97	31.7	18.1 -	45.3	†			
HIGH SCHOOL	313	38.7	31.1 -	46.3	104	73.0	62.3 -	83.6
COLLEGE 1–3 YRS	435	48.9	42.5 -	55.3	175	83.3	76.9 -	89.7
COLLEGE 4+ YRS	608	39.5	34.2 -	44.9	208	84.8	78.2 -	91.5
HOUSEHOLD INCOME								
<$25,000	397	37.4	31.1 -	43.8	138	72.1	61.9 -	82.2
$25,000–34,999	131	31.1	19.8 -	42.4	†			
$35,000–49,999	143	53.1	41.5 -	64.6	62	87.5	78.7 -	96.3
$50,000–74,999	192	39.5	30.0 -	48.9	70	78.9	67.5 -	90.3
$75,000+	366	35.6	28.2 -	43.1	104	88.2	80.5 -	95.8
REGION								
I–WESTERN	224	34.7	25.9 -	43.5	72	86.5	77.6 -	95.4
II–CENTRAL	176	43.0	32.5 -	53.5	58	88.1	77.8 -	98.5
III–NORTH EAST	333	42.6	34.7 -	50.6	120	66.1	54.0 -	78.3
IV–METRO WEST	210	45.4	36.5 -	54.3	87	81.1	71.1 -	91.1
V–SOUTH EAST	286	37.7	28.7 -	46.7	76	77.3	64.3 -	90.3
VI–BOSTON	194	45.8	36.8 -	54.9	79	76.7	65.3 -	88.1

* White, Black, and Asian race categories refer to non-Hispanic
** Analysis conducted among those who reported ever having had vaccine
† Insufficient data
¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 5.3: Hepatitis B Virus (HBV) Vaccine

Hepatitis is the inflammation of the liver and also refers to viral infections that affect the liver. The most common types are Hepatitis A, Hepatitis B, and Hepatitis C.

Hepatitis is the leading cause of liver cancer and the most common reason for liver transplantation. Among persons with chronic Hepatitis B, the risk for premature death from cirrhosis or hepatocellular carcinoma is 15%–25%. HBV is transmitted by contact with infected blood or body fluids. Transmission can occur during birth from an infected mother, during unprotected sex with an infected partner, and using contaminated needles. An estimated 4.4 million Americans are living with chronic hepatitis; most do not know they are infected. An estimated 800,000–1.4 million of those have chronic HBV infection.[26]

The rate of new HBV infections has declined by approximately 82% since 1990, when a national strategy to eliminate HBV infection was implemented in the United States. The decline has been greatest among children born since 1991, when routine vaccination of children was first recommended.[26] From 1999-2008 Massachusetts reported that rates of acute Hepatitis B decreased by 57%.[27]

All respondents were asked if they had ever received the Hepatitis B vaccine. They were told to respond yes only if they had received the entire series of 3 shots. Presented below is the percentage of adults who reported that they had ever received the Hepatitis B vaccine.

Questions about HBV vaccination were asked only on the MA BRFSS landline survey in 2012 and not the cell phone survey; therefore the results in Table 5.3 represent the landline sample only.

TABLE 5.3 – HEPATITIS B VACCINE AMONG MASSACHUSETTS ADULTS, 2012[§]

	RECEIVED 3 SHOTS HBV VACCINE		
	N	%	95% CI
OVERALL	14,308	35.2	33.7 - 36.7
GENDER			
MALE	5,276	29.3	27.0 - 31.5
FEMALE	9,032	40.6	38.6 - 42.5
AGE GROUP			
18–24	340	51.5	44.7 - 58.2
25–34	905	57.9	53.1 - 62.8
35–44	1,774	40.5	37.0 - 44.1
45–54	2,824	30.3	27.7 - 32.8
55–64	3,419	25.4	23.1 - 27.7
65–74	2,697	19.8	17.5 - 22.1
75 AND OLDER	2,171	8.1	6.5 - 9.8
RACE-ETHNICITY*			
WHITE	11,784	32.6	31.0 - 34.2
BLACK	788	40.1	34.0 - 46.2
HISPANIC	935	43.0	37.4 - 48.6
ASIAN	217	56.5	47.2 - 65.7
DISABILITY[¶]			
DISABILITY	3,935	28.4	25.5 - 31.2
NO DISABILITY	10,286	37.1	35.4 - 38.9
EDUCATION			
< HIGH SCHOOL	1,187	22.4	17.6 - 27.2
HIGH SCHOOL	3,498	26.8	23.9 - 29.7
COLLEGE 1–3 YRS	3,370	36.3	33.2 - 39.3
COLLEGE 4+ YRS	6,206	44.5	42.2 - 46.7
HOUSEHOLD INCOME			
<$25,000	3,308	31.3	28.0 - 34.6
$25,000–34,999	1,231	34.4	28.9 - 40.0
$35,000–49,999	1,526	32.0	27.2 - 36.7
$50,000–74,999	1,823	35.6	31.6 - 39.6
$75,000+	4,377	39.6	37.1 - 42.2
REGION			
I–WESTERN	2,024	35.7	32.1 - 39.4
II–CENTRAL	1,832	35.3	31.3 - 39.4
III–NORTH EAST	3,370	34.5	31.0 - 37.9
IV–METRO WEST	2,045	38.2	34.7 - 41.7
V–SOUTH EAST	3,636	29.7	26.7 - 32.8
VI–BOSTON	1,393	40.7	35.8 - 45.5

§ Data presented for the landline sample only

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 5.4: Tetanus Vaccine

Tetanus (or lockjaw) is a serious disease that causes painful tightening of the muscles, usually all over the body. It can lead to "locking" of the jaw so the victim cannot open his mouth or swallow. Even with treatment, tetanus leads to death in about 1 in 10 cases.

Several vaccines are used to prevent tetanus among children, adolescents, and adults including DTaP and Tdap (Diphtheria, Tetanus and Pertussis); and DT, and Td (Diphtheria and Tetanus). Due to widespread immunization in childhood, tetanus is now extremely rare in developed countries. In the US, only 130 cases were reported in the period 1998-2000 most occurring among unvaccinated or inadequately vaccinated individuals following an acute injury.[28] The last reported case of tetanus in Massachusetts was in 1996.[29]

Presented here is the percentage of adults who reported receiving the tetanus vaccine in the past 10 years.

Questions about tetanus vaccination were asked only on the MA BRFSS landline survey in 2012 and not the cell phone survey; therefore the results in Table 5.4 represent the landline sample only.

TABLE 5.4 – TETANUS VACCINE AMONG MASSACHUSETTS ADULTS, 2012[§]

	RECEIVED TETANUS VACCINE IN PAST 10 YEARS		
	N	%	95% CI
OVERALL	15,098	77.2	76.0 - 78.4
GENDER			
MALE	5,659	77.1	75.2 - 78.9
FEMALE	9,439	77.3	75.8 - 78.7
AGE GROUP			
18–24	371	84.5	80.0 - 89.1
25–34	1,014	79.3	75.6 - 83.0
35–44	1,950	80.5	77.7 - 83.2
45–54	3,049	78.4	76.0 - 80.8
55–64	3,535	76.6	74.4 - 78.8
65–74	2,767	70.0	67.4 - 72.6
75 AND OLDER	2,230	63.5	60.5 - 66.4
RACE-ETHNICITY*			
WHITE	12,418	78.2	77.0 - 79.5
BLACK	834	68.7	63.3 - 74.1
HISPANIC	981	73.3	68.5 - 78.2
ASIAN	238	76.1	68.5 - 83.8
DISABILITY[¶]			
DISABILITY	4,093	77.4	75.0 - 79.7
NO DISABILITY	10,917	77.2	75.8 - 78.6
EDUCATION			
< HIGH SCHOOL	1,246	66.9	62.0 - 71.9
HIGH SCHOOL	3,649	76.2	74.0 - 78.5
COLLEGE 1–3 YRS	3,535	79.4	77.1 - 81.7
COLLEGE 4+ YRS	6,621	79.2	77.5 - 80.9
HOUSEHOLD INCOME			
<$25,000	3,447	71.4	68.5 - 74.3
$25,000–34,999	1,273	73.2	68.5 - 77.8
$35,000–49,999	1,578	77.7	74.0 - 81.4
$50,000–74,999	1,946	80.2	77.3 - 83.1
$75,000+	4,680	81.3	79.4 - 83.1
REGION			
I–WESTERN	2,124	75.8	72.7 - 78.9
II–CENTRAL	1,947	81.3	78.4 - 84.1
III–NORTH EAST	3,549	76.2	73.4 - 78.9
IV–METRO WEST	2,196	79.9	77.3 - 82.4
V–SOUTH EAST	3,807	74.7	72.1 - 77.3
VI–BOSTON	1,469	74.6	70.7 - 78.6

§ Data presented for the landline sample only
* White, Black, and Asian race categories refer to non-Hispanic
¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 5.5: Shingles

Almost 1 out of every 3 people in the United States will develop shingles during their lifetime. There are an estimated one million cases of shingles each year in the US. Approximately half of all cases occur in adults ages 60 and older. Shingles (or herpes zoster) is caused by the chickenpox virus and is characterized by a painful skin rash with blisters in a limited area on one side of the body, often in a stripe. The most common complication of shingles is a condition called postherpetic neuralgia (PHN). People with PHN have severe pain in the areas where they had the shingles rash, even after the rash clears up. Shingles may also lead to serious complications involving the eye. Very rarely, shingles can also lead to pneumonia, hearing problems, blindness, brain inflammation (encephalitis) or death.[30] The shingles vaccine, Zostavax ® first became available in May 2006. A *Healthy People 2020* objective is to increase the shingles vaccine rate to 30% of older adults.[3]

All respondents ages 50 and older were asked if they had ever received the shingles vaccine. Presented here is the percentage of adults ages 60 or older who had ever received the shingles vaccine. Note that this is a narrower age range than has been presented in prior years' reports.

Questions about shingles vaccine were asked only on the MA BRFSS landline survey in 2012 and not the cell phone survey; therefore the results in Table 5.5 represent the landline sample only.

TABLE 5.5 – SHINGLES VACCINE AMONG MASSACHUSETTS ADULTS, AGE 60+, 2012[§]

	EVER HAD SHINGLES VACCINE		
	N	%	95% CI
OVERALL	7,369	23.7	22.3 - 25.2
GENDER			
MALE	2,609	24.0	21.6 - 26.4
FEMALE	4,760	23.5	21.8 - 25.3
AGE GROUP			
60-69	3,607	23.0	20.9 - 25.0
70-79	2,284	27.4	24.7 - 30.1
80 AND OLDER	1,478	19.9	17.1 - 22.7
RACE-ETHNICITY*			
WHITE	6,486	25.5	23.9 - 27.0
BLACK	†		
HISPANIC	†		
ASIAN	†		
DISABILITY[¶]			
DISABILITY	2,562	21.1	18.7 - 23.6
NO DISABILITY	4,768	24.9	23.2 - 26.7
EDUCATION			
< HIGH SCHOOL	770	10.3	6.9 - 13.7
HIGH SCHOOL	2,048	19.8	17.1 - 22.5
COLLEGE 1–3 YRS	1,680	23.5	20.5 - 26.5
COLLEGE 4+ YRS	2,842	33.6	31.3 - 35.9
HOUSEHOLD INCOME			
<$25,000	2,063	15.3	13.0 - 17.7
$25,000–34,999	794	21.6	17.2 - 25.9
$35,000–49,999	904	22.2	18.1 - 26.3
$50,000–74,999	845	26.7	22.6 - 30.8
$75,000+	1,441	33.6	30.3 - 37.0
REGION			
I–WESTERN	1,045	23.9	20.4 - 27.4
II–CENTRAL	890	21.5	17.3 - 25.6
III–NORTH EAST	1,700	22.8	19.7 - 25.9
IV–METRO WEST	1,047	30.5	26.9 - 34.2
V–SOUTH EAST	1,997	20.4	17.7 - 23.2
VI–BOSTON	684	22.0	17.9 - 26.1

§ Data presented for the landline sample only
* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient data
¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 6: Chronic Health Conditions

SECTION 6: CHRONIC HEALTH CONDITIONS

Section 6.1: 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.[31] 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 2010, 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.[32]

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 adults who reported that a doctor had ever told them that they had diabetes and the percentage of adults who reported that a doctor had ever told them that they had pre-diabetes.

Questions about pre-diabetes were asked only on the MA BRFSS landline survey in 2012 and not the cell phone survey; therefore the pre-diabetes results in Table 6.1 represent the landline sample only. Questions on diabetes were asked on both the landline and cell phone surveys, and unlike pre-diabetes, results for diabetes represent the combined sample.

TABLE 6.1 – DIABETES AMONG MASSACHUSETTS ADULTS, 2012

	PRE-DIABETES[§]			DIABETES		
	N	%	95% CI	N	%	95% CI
OVERALL	14,663	6.2	5.6 - 6.8	21,678	8.3	7.8 - 8.9
GENDER						
MALE	5,370	6.2	5.3 - 7.2	8,649	8.9	8.1 - 9.7
FEMALE	9,293	6.1	5.4 - 6.9	13,032	7.8	7.2 - 8.5
AGE GROUP						
18–24	†			†		
25–34	1,098	2.8	1.5 - 4.2	2,170	2.6	1.5 - 3.7
35–44	2,068	2.8	1.9 - 3.6	2,902	4.3	3.2 - 5.4
45–54	3,043	7.6	6.0 - 9.2	4,213	7.5	6.4 - 8.7
55–64	3,313	9.9	8.3 - 11.6	4,566	13.0	11.5 - 14.6
65–74	2,474	10.8	9.1 - 12.6	3,506	19.9	17.9 - 21.9
75 AND OLDER	2,056	11.3	9.2 - 13.4	2,905	17.9	15.8 - 20.1
RACE-ETHNICITY*						
WHITE	12,133	6.2	5.5 - 6.8	17,101	8.0	7.4 - 8.6
BLACK	791	7.4	5.0 - 9.9	1,327	10.9	8.7 - 13.1
HISPANIC	897	6.8	3.7 - 9.9	1,790	10.4	8.7 - 12.2
ASIAN	†			497	4.6	2.1 - 7.1
DISABILITY[¶]						
DISABILITY	3,548	11.0	9.4 - 12.7	5,372	17.1	15.6 - 18.7
NO DISABILITY	11,019	5.0	4.3 - 5.6	15,408	6.3	5.7 - 6.8
EDUCATION						
< HIGH SCHOOL	1,080	6.7	4.5 - 8.9	1,900	13.1	11.1 - 15.1
HIGH SCHOOL	3,401	7.6	6.2 - 9.0	5,330	11.1	9.8 - 12.3
COLLEGE 1–3 YRS	3,405	6.5	5.3 - 7.7	5,030	7.9	6.8 - 8.9
COLLEGE 4+ YRS	6,732	4.8	4.1 - 5.5	9,211	5.1	4.5 - 5.7
HOUSEHOLD INCOME						
<$25,000	3,055	8.2	6.6 - 9.8	5,078	12.7	11.4 - 14.0
$25,000–34,999	1,180	6.2	4.4 - 8.1	1,775	10.0	8.1 - 11.9
$35,000–49,999	1,547	6.3	4.7 - 7.9	2,218	8.5	6.8 - 10.2
$50,000–74,999	1,902	6.6	4.9 - 8.4	2,634	7.6	6.1 - 9.0
$75,000+	4,841	4.6	3.7 - 5.5	6,337	4.8	4.1 - 5.5
REGION						
I–WESTERN	2,023	7.8	5.9 - 9.6	2,877	9.7	8.3 - 11.1
II–CENTRAL	1,880	5.7	4.2 - 7.2	2,656	8.0	6.6 - 9.3
III–NORTH EAST	3,424	5.5	4.2 - 6.7	4,816	9.2	7.9 - 10.5
IV–METRO WEST	2,227	5.8	4.5 - 7.0	3,213	6.1	5.0 - 7.1
V–SOUTH EAST	3,639	5.9	4.7 - 7.1	5,069	10.2	8.8 - 11.5
VI–BOSTON	1,460	6.8	4.6 - 9.0	2,310	7.3	6.0 - 8.7

§ Data presented for the landline sample only
* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient data
¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 6.2: Asthma

Asthma is a chronic inflammatory disorder that affects the lungs, causing repeated episodes of wheezing, breathlessness, coughing, and chest tightness.[33] Asthma attacks can be triggered by a variety of causes such as second hand smoke, air pollution, allergens, irritants, medicines, sulfites in foods or drinks, physical activity, and respiratory viral infections. These environmental irritants are also potential risk factors associated with the development of asthma.[34] The prevalence of asthma in the state of Massachusetts is one of the highest reported for a state across the nation, and the costs of treatment 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.[35]

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 adults who have ever had asthma and those who currently have asthma.

TABLE 6.2 – ASTHMA AMONG MASSACHUSETTS ADULTS, 2012

	EVER HAD ASTHMA					CURRENTLY HAVE ASTHMA				
	N	%	95% CI			N	%	95% CI		
OVERALL	21,648	15.5	14.7	-	16.3	21,550	10.8	10.2	-	11.5
GENDER										
MALE	8,628	13.3	12.2	-	14.4	8,599	7.9	7.0	-	8.8
FEMALE	13,020	17.5	16.4	-	18.6	12,951	13.5	12.5	-	14.5
AGE GROUP										
18–24	1,108	19.9	16.9	-	22.9	1,104	12.7	10.1	-	15.3
25–34	2,166	19.4	17.1	-	21.8	2,152	12.2	10.2	-	14.3
35–44	2,898	14.8	13.0	-	16.6	2,889	11.1	9.5	-	12.6
45–54	4,208	13.9	12.4	-	15.3	4,188	10.4	9.1	-	11.7
55–64	4,561	14.3	12.7	-	15.8	4,542	11.1	9.7	-	12.6
65–74	3,499	13.4	11.7	-	15.1	3,481	9.2	7.7	-	10.6
75 AND OLDER	2,901	11.6	9.7	-	13.5	2,887	7.5	5.9	-	9.1
RACE-ETHNICITY*										
WHITE	17,075	15.2	14.3	-	16.1	16,993	10.7	9.9	-	11.4
BLACK	1,324	15.8	12.8	-	18.9	1,318	12.2	9.5	-	14.9
HISPANIC	1,790	20.2	17.6	-	22.9	1,784	13.0	10.8	-	15.2
ASIAN	496	8.7	5.2	-	12.2	†				
DISABILITY¶										
DISABILITY	5,360	24.5	22.5	-	26.4	5,322	18.8	17.1	-	20.6
NO DISABILITY	15,390	13.3	12.4	-	14.1	15,334	8.9	8.2	-	9.6
EDUCATION										
< HIGH SCHOOL	1,893	20.5	17.5	-	23.4	1,882	15.8	13.1	-	18.5
HIGH SCHOOL	5,320	16.5	14.8	-	18.1	5,293	11.6	10.2	-	13.0
COLLEGE 1–3 YRS	5,022	16.3	14.7	-	17.9	4,998	11.4	10.0	-	12.8
COLLEGE 4+ YRS	9,201	12.8	11.8	-	13.7	9,165	8.4	7.6	-	9.1
HOUSEHOLD INCOME										
<$25,000	5,074	20.6	18.7	-	22.5	5,053	15.3	13.6	-	16.9
$25,000–34,999	1,776	11.8	9.6	-	14.1	1,766	8.1	6.2	-	10.1
$35,000–49,999	2,212	15.9	13.4	-	18.4	2,201	11.1	8.9	-	13.4
$50,000–74,999	2,633	15.3	13.2	-	17.3	2,621	9.6	8.0	-	11.2
$75,000+	6,332	12.6	11.4	-	13.9	6,315	8.6	7.6	-	9.7
REGION										
I–WESTERN	2,871	18.7	16.5	-	20.8	2,855	13.9	11.9	-	15.8
II–CENTRAL	2,653	15.8	13.5	-	18.0	2,643	11.4	9.4	-	13.3
III–NORTH EAST	4,808	15.2	13.5	-	17.0	4,784	10.7	9.2	-	12.1
IV–METRO WEST	3,207	14.0	12.2	-	15.7	3,198	9.2	7.7	-	10.7
V–SOUTH EAST	5,059	14.6	13.0	-	16.3	5,035	10.5	9.2	-	11.9
VI–BOSTON	2,309	16.1	13.9	-	18.4	2,296	9.8	8.0	-	11.6

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 6.3: Chronic Obstructive Pulmonary Disease (COPD)

Chronic Obstructive Pulmonary Disease, or COPD, refers to a group of diseases that cause airflow blockage and breathing-related problems. It includes emphysema, chronic bronchitis, and in some cases asthma. In the United States, tobacco use is a key factor in the development and progression of COPD, but asthma, exposure to air pollutants in the home and workplace, genetic factors, and respiratory infections also play a role. [36] In 2012, approximately 36% of Massachusetts adults who reported a diagnosis of COPD also reported current smoking.

Presented here is the percentage of adults who reported that they had ever been diagnosed with COPD, emphysema or chronic bronchitis.

TABLE 6.3 – CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) AMONG MASSACHUSETTS ADULTS, 2012

	EVER DIAGNOSED WITH COPD		
	N	%	95% CI
OVERALL	21,576	5.4	5.0 - 5.9
GENDER			
MALE	8,602	4.5	3.9 - 5.1
FEMALE	12,974	6.3	5.7 - 6.9
AGE GROUP			
18–24	1,102	2.8	1.5 - 4.1
25–34	2,162	3.1	2.0 - 4.3
35–44	2,893	3.1	2.2 - 4.0
45–54	4,200	4.9	3.9 - 5.9
55–64	4,539	7.1	6.0 - 8.2
65–74	3,485	9.5	8.1 - 10.9
75 AND OLDER	2,887	11.9	10.1 - 13.7
RACE-ETHNICITY*			
WHITE	17,033	5.8	5.3 - 6.3
BLACK	1,320	4.9	2.5 - 7.2
HISPANIC	1,776	3.8	2.6 - 5.0
ASIAN	†		
DISABILITY¶			
DISABILITY	5,329	15.6	14.1 - 17.1
NO DISABILITY	15,359	3.0	2.6 - 3.4
EDUCATION			
< HIGH SCHOOL	1,878	10.7	8.5 - 12.8
HIGH SCHOOL	5,297	6.8	5.9 - 7.8
COLLEGE 1–3 YRS	5,004	6.2	5.3 - 7.1
COLLEGE 4+ YRS	9,188	2.3	1.9 - 2.6
HOUSEHOLD INCOME			
<$25,000	5,045	10.8	9.5 - 12.1
$25,000–34,999	1,773	7.4	5.3 - 9.4
$35,000–49,999	2,210	5.9	4.3 - 7.5
$50,000–74,999	2,625	4.3	3.2 - 5.4
$75,000+	6,322	1.8	1.3 - 2.2
REGION			
I–WESTERN	2,869	6.3	5.0 - 7.5
II–CENTRAL	2,637	5.9	4.7 - 7.2
III–NORTH EAST	4,789	5.3	4.3 - 6.2
IV–METRO WEST	3,202	4.2	3.2 - 5.2
V–SOUTH EAST	5,046	7.0	5.9 - 8.1
VI–BOSTON	2,299	3.4	2.5 - 4.3

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 6.4: Heart Disease and Stroke

Heart disease includes a number of different heart conditions, the most common of which is coronary heart disease, a condition that can lead to a heart attack. A stroke occurs when blood to the brain is blocked or a blood vessel in the brain bursts, causing damage to the individual's brain. Heart disease and stroke account for more than 1/3 of all U.S. deaths. [37] They are also major causes of disability. In 2010, heart disease and stroke were the second (after cancer-related deaths) and third leading causes of death, respectively, in Massachusetts.[24]

All respondents were asked whether a doctor, nurse, or other health professional had ever told them that they had had a myocardial infarction ("MI," also called a "heart attack"), angina or coronary heart disease, or a stroke. Presented here are the percentages of adults 35 and older who reported being told that they had experienced a heart attack, had angina or coronary heart disease, or had a stroke.

TABLE 6.4.1 – HEART DISEASE AMONG MASSACHUSETTS ADULTS, AGES 35 YEARS AND OLDER, 2012

	EVER DIAGNOSED WITH MYOCARDIAL INFARCTION			EVER DIAGNOSED WITH ANGINA OR CORONARY HEART DISEASE		
	N	%	95% CI	N	%	95% CI
OVERALL	18,032	5.4	4.9 - 5.9	17,944	5.5	5.0 - 6.0
GENDER						
MALE	7,026	7.5	6.6 - 8.3	6,994	7.8	6.9 - 8.7
FEMALE	11,006	3.6	3.1 - 4.0	10,950	3.5	3.0 - 4.0
AGE GROUP						
35–44	2,897	1.2	0.6 - 1.8	2,899	1.0	0.5 - 1.6
45–54	4,214	2.7	2.0 - 3.4	4,194	2.3	1.6 - 3.0
55–64	4,541	5.1	4.1 - 6.1	4,527	5.4	4.3 - 6.5
65–74	3,494	10.1	8.6 - 11.6	3,479	11.1	9.5 - 12.7
75 AND OLDER	2,886	14.2	12.2 - 16.2	2,845	15.0	13.0 - 17.0
RACE-ETHNICITY*						
WHITE	14,747	5.4	4.8 - 5.9	14,674	5.6	5.0 - 6.1
BLACK	1,031	6.5	4.2 - 8.8	1,029	4.5	2.6 - 6.4
HISPANIC	1,236	5.3	3.8 - 6.9	1,234	6.0	4.1 - 7.9
ASIAN	†			†		
DISABILITY¶						
DISABILITY	4,935	11.6	10.2 - 13.0	4,871	11.9	10.5 - 13.4
NO DISABILITY	12,390	3.4	3.0 - 3.9	12,371	3.6	3.1 - 4.1
EDUCATION						
< HIGH SCHOOL	1,625	9.9	7.8 - 12.1	1,605	7.5	5.6 - 9.4
HIGH SCHOOL	4,474	7.1	6.0 - 8.2	4,450	7.5	6.4 - 8.7
COLLEGE 1–3 YRS	4,049	6.3	5.2 - 7.4	4,031	6.6	5.4 - 7.8
COLLEGE 4+ YRS	7,720	2.4	2.0 - 2.8	7,694	3.1	2.6 - 3.5
HOUSEHOLD INCOME						
<$25,000	4,169	10.7	9.2 - 12.1	4,141	10.2	8.8 - 11.6
$25,000–34,999	1,482	7.0	5.2 - 8.8	1,475	7.6	5.4 - 9.7
$35,000–49,999	1,866	6.8	5.1 - 8.5	1,852	6.6	4.8 - 8.3
$50,000–74,999	2,190	4.2	2.9 - 5.5	2,181	3.6	2.6 - 4.6
$75,000+	5,431	2.2	1.7 - 2.8	5,424	3.1	2.5 - 3.8
REGION						
I–WESTERN	2,403	5.8	4.5 - 7.1	2,398	5.0	3.8 - 6.1
II–CENTRAL	2,255	5.3	4.0 - 6.7	2,248	4.7	3.5 - 5.9
III–NORTH EAST	4,055	6.0	4.8 - 7.1	4,030	5.8	4.7 - 7.0
IV–METRO WEST	2,685	4.2	3.3 - 5.1	2,677	4.9	3.7 - 6.0
V–SOUTH EAST	4,378	5.7	4.7 - 6.7	4,356	6.9	5.7 - 8.0
VI–BOSTON	1,812	5.9	4.2 - 7.5	1,793	6.2	4.4 - 8.0

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

TABLE 6.4.2 – STROKE AMONG MASSACHUSETTS ADULTS, AGES 35 YEARS AND OLDER, 2012

	STROKE		
	N	%	95% CI
OVERALL	18,060	2.8	2.4 - 3.1
GENDER			
MALE	7,046	2.9	2.4 - 3.5
FEMALE	11,014	2.7	2.2 - 3.1
AGE GROUP			
35–44	2,899	0.6	0.3 - 0.9
45–54	4,215	1.7	1.0 - 2.4
55–64	4,558	2.1	1.6 - 2.6
65–74	3,494	4.8	3.8 - 5.8
75 AND OLDER	2,894	8.2	6.5 - 9.9
RACE-ETHNICITY*			
WHITE	14,757	2.8	2.4 - 3.2
BLACK	1,036	2.9	1.6 - 4.1
HISPANIC	1,249	2.5	1.4 - 3.5
ASIAN	†		
DISABILITY¶			
DISABILITY	4,945	6.8	5.7 - 7.9
NO DISABILITY	12,407	1.6	1.3 - 1.9
EDUCATION			
< HIGH SCHOOL	1,629	5.6	3.7 - 7.4
HIGH SCHOOL	4,494	3.4	2.7 - 4.2
COLLEGE 1–3 YRS	4,049	2.9	2.2 - 3.5
COLLEGE 4+ YRS	7,723	1.5	1.2 - 1.8
HOUSEHOLD INCOME			
<$25,000	4,190	6.4	5.1 - 7.6
$25,000–34,999	1,489	2.8	1.8 - 3.9
$35,000–49,999	1,870	3.1	1.9 - 4.2
$50,000–74,999	2,189	2.1	1.3 - 3.0
$75,000+	5,428	0.8	0.6 - 1.1
REGION			
I–WESTERN	2,406	4.1	3.0 - 5.2
II–CENTRAL	2,261	2.6	1.7 - 3.6
III–NORTH EAST	4,065	2.8	2.1 - 3.5
IV–METRO WEST	2,684	1.6	1.1 - 2.2
V–SOUTH EAST	4,388	3.3	2.3 - 4.2
VI–BOSTON	1,811	2.4	1.6 - 3.2

* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient data
¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 6.5: Cancer Diagnosis

In this report, the term “cancer survivor” is used to describe a person from the time of cancer diagnosis through the remaining years of life.

The number of cancer survivors increased from approximately 3 million adults and children in 1971 to approximately 14 million in 2012. [38] This increase in cancer survivors can be attributed to multiple factors including: earlier detection, improved diagnostic methods, more effective treatment, and an aging US population. Breast, prostate and colorectal cancers are the most common types of cancer among survivors. [39]

In Massachusetts, though cancer rates fluctuated by year, overall cancer incidence from 2005-2009 declined for both males and females. During the same time period, cancer mortality decreased by 2.1% per year for males and 1.2% per year for females. The most common cancer diagnoses for men during this time period were prostate, bronchus and lung, colon/rectum and urinary bladder. For women, the most commonly diagnosed cancers were breast, bronchus and lung, colon/rectum, and uterus.[40]

Presented is the percentage of adults who were ever told they had one or more types of cancer by a doctor, nurse, or other health professional.

TABLE 6.5 – CANCER DIAGNOSIS AMONG MASSACHUSETTS ADULTS, 2012

	EVER DIAGNOSED WITH CANCER		
	N	%	95% CI
OVERALL	21,610	11.0	10.4 - 11.5
GENDER			
MALE	8,619	10.2	9.3 - 11.0
FEMALE	12,991	11.7	10.9 - 12.5
AGE GROUP			
18–24	†		
25–34	2,163	2.5	1.5 - 3.4
35–44	2,896	4.1	3.1 - 5.2
45–54	4,201	9.8	8.5 - 11.1
55–64	4,547	13.9	12.4 - 15.4
65–74	3,492	25.9	23.7 - 28.0
75 AND OLDER	2,895	34.3	31.6 - 36.9
RACE-ETHNICITY*			
WHITE	17,048	12.9	12.2 - 13.5
BLACK	1,323	4.7	3.3 - 6.1
HISPANIC	1,785	3.3	2.4 - 4.3
ASIAN	†		
DISABILITY¶			
DISABILITY	5,337	19.8	18.2 - 21.5
NO DISABILITY	15,377	8.8	8.2 - 9.4
EDUCATION			
< HIGH SCHOOL	1,886	9.2	7.2 - 11.2
HIGH SCHOOL	5,311	11.5	10.2 - 12.7
COLLEGE 1–3 YRS	5,018	10.9	9.8 - 12.0
COLLEGE 4+ YRS	9,186	11.2	10.4 - 12.0
HOUSEHOLD INCOME			
<$25,000	5,049	11.6	10.4 - 12.9
$25,000–34,999	1,772	12.6	10.5 - 14.7
$35,000–49,999	2,211	12.0	10.0 - 13.9
$50,000–74,999	2,626	11.0	9.4 - 12.5
$75,000+	6,332	10.1	9.1 - 11.0
REGION			
I–WESTERN	2,862	12.6	10.9 - 14.3
II–CENTRAL	2,650	9.4	8.0 - 10.8
III–NORTH EAST	4,804	10.9	9.6 - 12.2
IV–METRO WEST	3,204	10.9	9.6 - 12.1
V–SOUTH EAST	5,052	13.4	12.0 - 14.8
VI–BOSTON	2,303	7.9	6.6 - 9.2

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 6.6: Depression

Depression is characterized by depressed or sad mood, diminished interest in activities which used to be pleasurable, weight gain or loss, psychomotor agitation or retardation, fatigue, inappropriate guilt, difficulties concentrating, as well as recurrent thoughts of death. But depression is more than a “bad day”; diagnostic criteria established by the American Psychiatric Association dictate that five or more of the above symptoms must be present for a continuous period of at least two weeks. As an illness, depression falls within the spectrum of affective disorders.

The urgency of the rate of depression to public health is likely compounded by the recognition that – if not effectively treated – depression is likely to lapse into a chronic disease. Just experiencing one episode of depression places the individual at a 50% risk for experiencing another, with subsequent episodes raising the likelihood of experiencing more episodes in the future. [41] [42]

In addition to being a chronic disease in its own right, the burden of depression is further increased as depression appears to be associated with behaviors linked to other chronic diseases. Depression has been shown to be positively associated with smoking, alcohol consumption, physical inactivity and sleep disturbances. [42]

Presented here is the percentage of adults who were ever told by a doctor, nurse or other health professional that they had a depressive disorder (including depression, major depression, dysthymia, or minor depression).

TABLE 6.6 – DEPRESSION AMONG MASSACHUSETTS ADULTS, 2012

	EVER DIAGNOSED WITH DEPRESSION		
	N	%	95% CI
OVERALL	21,598	18.9	18.1 - 19.7
GENDER			
MALE	8,613	14.9	13.8 - 16.1
FEMALE	12,985	22.5	21.4 - 23.7
AGE GROUP			
18–24	1,104	16.9	14.2 - 19.7
25–34	2,159	23.1	20.5 - 25.6
35–44	2,891	17.5	15.6 - 19.3
45–54	4,203	21.5	19.7 - 23.4
55–64	4,551	21.6	19.9 - 23.3
65–74	3,492	16.0	14.3 - 17.7
75 AND OLDER	2,896	10.7	9.0 - 12.4
RACE-ETHNICITY*			
WHITE	17,040	19.2	18.2 - 20.1
BLACK	1,320	14.8	11.8 - 17.8
HISPANIC	1,782	24.2	21.3 - 27.1
ASIAN	495	8.0	4.5 - 11.4
DISABILITY¶			
DISABILITY	5,335	41.9	39.7 - 44.1
NO DISABILITY	15,375	13.3	12.5 - 14.2
EDUCATION			
< HIGH SCHOOL	1,889	27.2	23.9 - 30.5
HIGH SCHOOL	5,305	20.6	18.8 - 22.3
COLLEGE 1–3 YRS	5,013	19.7	18.0 - 21.3
COLLEGE 4+ YRS	9,182	14.8	13.8 - 15.8
HOUSEHOLD INCOME			
<$25,000	5,056	31.2	29.1 - 33.3
$25,000–34,999	1,773	18.4	15.6 - 21.2
$35,000–49,999	2,211	17.3	14.8 - 19.7
$50,000–74,999	2,628	19.1	16.9 - 21.3
$75,000+	6,327	12.6	11.4 - 13.8
REGION			
I–WESTERN	2,866	24.7	22.3 - 27.1
II–CENTRAL	2,650	19.0	16.8 - 21.3
III–NORTH EAST	4,798	17.5	15.7 - 19.4
IV–METRO WEST	3,201	15.7	14.0 - 17.4
V–SOUTH EAST	5,050	19.9	18.1 - 21.8
VI–BOSTON	2,298	16.8	14.7 - 19.0

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 7: Cancer Screening

SECTION 7: CANCER SCREENING

Section 7.1: Colorectal Cancer Screening

Cancer of the colon or rectum is the third leading cause of cancer-related death in the United States and it is projected that there will be 49,380 deaths due to colorectal cancer in 2011. It is estimated that more than half of these lives could have been saved with recommended screening such as fecal occult blood tests, sigmoidoscopy, and colonoscopy, screening procedures that are performed to detect colorectal cancer in the early stages.[43]

Respondents, ages 50 and older, were asked if they ever had had a blood stool test using a home test kit to determine if their stool contained blood and were also asked if they had ever had a sigmoidoscopy or colonoscopy, tests that examine the bowel for signs of cancer or other health problems. Presented here is the percentage of adults who had a blood stool test using a home test kit in the past two years and the percentage of adults who had a sigmoidoscopy or colonoscopy in the past five years.

TABLE 7.1 – COLORECTAL CANCER SCREENING AMONG MASSACHUSETTS ADULTS, AGES 50 YEARS AND OLDER, 2012

	BLOOD STOOL TEST IN THE PAST TWO YEARS					SIGMOIDOSCOPY OR COLONOSCOPY IN PAST FIVE YEARS				
	N	%	95% CI			N	%	95% CI		
OVERALL	12,061	16.3	15.3	-	17.3	12,136	61.4	60.1	-	62.8
GENDER										
MALE	4,572	15.7	14.2	-	17.2	4,575	63.6	61.5	-	65.7
FEMALE	7,489	16.8	15.5	-	18.0	7,561	59.6	57.9	-	61.3
AGE GROUP										
50-59	4,148	11.5	10.1	-	12.9	4,179	57.7	55.4	-	59.9
60-69	3,963	17.0	15.2	-	18.8	4,000	66.9	64.7	-	69.1
70-79	2,410	23.7	21.1	-	26.2	2,429	64.3	61.3	-	67.2
80 AND OLDER	1,540	20.1	17.1	-	23.1	1,528	55.2	51.3	-	59.1
RACE-ETHNICITY*										
WHITE	10,326	16.8	15.7	-	17.9	10,413	62.0	60.6	-	63.4
BLACK	571	12.6	9.1	-	16.1	570	57.7	51.5	-	64.0
HISPANIC	618	11.8	6.7	-	17.0	614	57.9	50.3	-	65.5
ASIAN	†					94	57.3	43.3	-	71.4
DISABILITY¶										
DISABILITY	3,868	17.5	15.7	-	19.3	3,888	60.0	57.6	-	62.5
NO DISABILITY	8,129	15.8	14.7	-	17.0	8,181	61.9	60.3	-	63.5
EDUCATION										
< HIGH SCHOOL	1,128	15.8	12.1	-	19.5	1,127	57.4	52.2	-	62.6
HIGH SCHOOL	3,110	17.0	15.0	-	19.0	3,125	58.2	55.5	-	60.9
COLLEGE 1–3 YRS	2,847	17.8	15.8	-	19.8	2,861	59.4	56.7	-	62.1
COLLEGE 4+ YRS	4,934	14.9	13.5	-	16.2	4,978	66.7	64.9	-	68.5
HOUSEHOLD INCOME										
<$25,000	3,084	19.3	16.9	-	21.6	3,087	54.4	51.4	-	57.3
$25,000–34,999	1,109	17.9	14.6	-	21.2	1,109	59.9	55.2	-	64.6
$35,000–49,999	1,349	15.7	12.9	-	18.5	1,369	57.9	53.7	-	62.1
$50,000–74,999	1,475	15.6	13.0	-	18.2	1,493	64.5	61.0	-	68.0
$75,000+	3,165	14.3	12.6	-	15.9	3,206	66.2	63.8	-	68.5
REGION										
I–WESTERN	1,704	15.6	13.2	-	18.1	1,722	61.2	57.9	-	64.6
II–CENTRAL	1,493	15.9	13.3	-	18.6	1,505	58.4	54.6	-	62.2
III–NORTH EAST	2,794	18.3	16.0	-	20.6	2,789	63.5	60.6	-	66.5
IV–METRO WEST	1,757	14.8	12.6	-	17.0	1,784	63.4	60.5	-	66.4
V–SOUTH EAST	3,068	18.6	16.5	-	20.8	3,088	61.2	58.4	-	64.1
VI–BOSTON	1,181	10.8	8.4	-	13.1	1,186	58.6	54.2	-	63.0

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 7.2: Breast Cancer Screening

Cancer of the breast is the most commonly diagnosed cancer among women in the United States. In 2010, 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 one of the methods to detect breast cancer early, before it is large enough to feel or to cause symptoms.

All female respondents were asked about breast cancer screening. Those women who reported that they had ever had a mammogram were asked how long it had been since their last mammogram. Those women who reported that they ever had a clinical breast exam (when a doctor, nurse or other health professional feels the breast for lumps) were asked how long it had been since their last clinical breast exam. One Healthy People 2020 objective is to increase the proportion of women who have breast cancer screening by 10% to 81.1%.[3] The percentage of women age 40 and older in Massachusetts who reported that they had had a mammogram in the past two years and who reported they had a clinical breast exam in the past two years is presented in Table 7.2.

TABLE 7.2 – BREAST CANCER SCREENING AMONG MASSACHUSETTS WOMEN AGES 40 AND OLDER, 2012

	MAMMOGRAM IN THE PAST TWO YEARS					CLINICAL BREAST EXAM IN THE PAST TWO YEARS				
	N	%	95% CI			N	%	95% CI		
OVERALL	9,616	84.6	83.5	-	85.7	9,480	86.4	85.4	-	87.3
AGE GROUP										
40-49	1,907	77.9	75.3	-	80.6	1,890	89.3	87.4	-	91.2
50-59	2,543	89.8	88.2	-	91.4	2,520	90.0	88.4	-	91.6
60-69	2,481	91.0	89.4	-	92.6	2,456	88.2	86.4	-	90.0
70-79	1,617	84.7	81.9	-	87.5	1,578	82.1	79.4	-	84.8
80 AND OLDER	1,068	73.3	69.1	-	77.4	1,036	67.7	63.2	-	72.2
RACE-ETHNICITY*										
WHITE	8,035	84.5	83.4	-	85.7	7,935	86.8	85.8	-	87.9
BLACK	513	84.7	79.8	-	89.6	507	85.3	80.8	-	89.9
HISPANIC	650	88.0	84.1	-	92.0	639	80.5	75.6	-	85.3
ASIAN	77	72.5	57.2	-	87.8	72	85.8	76.6	-	94.9
DISABILITY¶										
DISABILITY	2,894	81.6	79.5	-	83.8	2,845	80.6	78.4	-	82.8
NO DISABILITY	6,677	85.6	84.3	-	86.8	6,590	88.2	87.1	-	89.3
EDUCATION										
< HIGH SCHOOL	861	83.4	79.3	-	87.6	834	76.8	72.2	-	81.4
HIGH SCHOOL	2,430	83.2	80.9	-	85.4	2,381	83.2	81.1	-	85.4
COLLEGE 1–3 YRS	2,345	83.6	81.5	-	85.8	2,325	86.6	84.7	-	88.5
COLLEGE 4+ YRS	3,950	86.7	85.2	-	88.2	3,913	90.7	89.5	-	91.9
HOUSEHOLD INCOME										
<$25,000	2,424	80.0	77.5	-	82.5	2,379	78.1	75.5	-	80.7
$25,000–34,999	827	83.4	79.8	-	87.1	815	82.6	78.9	-	86.2
$35,000–49,999	1,046	82.6	79.0	-	86.2	1,033	87.0	84.1	-	89.9
$50,000–74,999	1,164	85.4	82.5	-	88.4	1,157	87.3	84.5	-	90.2
$75,000+	2,510	87.3	85.4	-	89.2	2,497	92.8	91.5	-	94.1
REGION										
I–WESTERN	1,348	84.4	81.8	-	87.1	1,322	82.2	79.4	-	85.1
II–CENTRAL	1,213	83.5	80.5	-	86.5	1,204	87.7	85.1	-	90.2
III–NORTH EAST	2,194	85.5	83.1	-	87.9	2,159	86.0	83.7	-	88.3
IV–METRO WEST	1,411	84.0	81.5	-	86.5	1,397	89.0	87.1	-	91.0
V–SOUTH EAST	2,420	85.5	83.2	-	87.7	2,378	86.9	84.9	-	88.9
VI–BOSTON	984	86.8	83.7	-	89.9	974	85.0	81.7	-	88.2

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 7.3: 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.[44] HPV infection is the primary risk factor for cervical cancer and sexually transmitted HPV infection is more common among women in their late teens and early twenties. Although HPV infection is common, only a small percentage develops into cervical cancer.[45] Women who have been sexually active should have regular Pap tests at least every three years as the chances of being cured are higher if cervical cancer is detected early.[46] (See Also Section 5.2, HPV Vaccine)

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.

TABLE 7.3 – CERVICAL CANCER SCREENING AMONG MASSACHUSETTS WOMEN, 2012

	PAP SMEAR TEST WITHIN PAST THREE YEARS		
	N	%	95% CI
OVERALL	11,985	77.6	76.3 - 78.8
AGE GROUP			
18–24	526	49.4	43.8 - 55.0
25–34	1,141	90.4	88.0 - 92.7
35–44	1,624	92.2	90.3 - 94.0
45–54	2,262	90.7	89.1 - 92.3
55–64	2,566	85.9	84.1 - 87.8
65–74	2,056	69.1	66.1 - 72.1
75 AND OLDER	1,639	41.2	37.4 - 45.0
RACE-ETHNICITY*			
WHITE	9,573	78.2	76.8 - 79.6
BLACK	722	74.2	68.9 - 79.4
HISPANIC	1,025	80.9	76.8 - 85.1
ASIAN	204	67.0	58.3 - 75.6
DISABILITY¶			
DISABILITY	3,141	69.6	67.0 - 72.2
NO DISABILITY	8,783	79.5	78.1 - 80.9
EDUCATION			
< HIGH SCHOOL	979	67.7	62.4 - 73.0
HIGH SCHOOL	2,866	70.7	67.9 - 73.6
COLLEGE 1–3 YRS	2,975	75.3	72.7 - 77.9
COLLEGE 4+ YRS	5,127	86.5	85.2 - 87.8
HOUSEHOLD INCOME			
<$25,000	2,962	70.6	67.9 - 73.2
$25,000–34,999	1,029	70.8	65.9 - 75.8
$35,000–49,999	1,279	78.4	74.3 - 82.5
$50,000–74,999	1,484	82.9	79.9 - 85.9
$75,000+	3,238	87.9	86.0 - 89.8
REGION			
I–WESTERN	1,669	75.7	72.3 - 79.0
II–CENTRAL	1,480	76.5	72.7 - 80.2
III–NORTH EAST	2,726	78.3	75.5 - 81.0
IV–METRO WEST	1,739	79.0	76.2 - 81.8
V–SOUTH EAST	2,891	77.6	75.1 - 80.2
VI–BOSTON	1,304	76.6	72.7 - 80.5

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 8: Other Topics

SECTION 8: OTHER TOPICS

Section 8.1: Sexual Orientation and Gender Identity

Health research indicates that health disparities exist between the homosexual (gay, lesbian)/bisexual population and the heterosexual population.[47] Differences exist with respect to access to health care, overall health status, cancer screening, chronic health conditions, mental health, substance use including tobacco smoking, sexual health, and violence/victimization. Fear of discrimination and stigma keep many from seeking care or disclosing relevant information once in care.[48]

All respondents were asked if they considered themselves to be heterosexual or straight, homosexual (gay, lesbian), bisexual or other. The percentage of those who self-identified as homosexual, bisexual or other is presented.

All respondents were also asked whether they consider themselves to be transgender. Overall, in 2012, 0.4% of Massachusetts adults self-identified as transgender. A table of this data is not presented due to the low prevalence.

TABLE 8.1 - SEXUAL ORIENTATION AMONG MASSACHUSETTS ADULTS, 2012

	SELF-IDENTIFIED AS HOMOSEXUAL, BISEXUAL OR OTHER		
	N	%	95% CI
OVERALL	18,853	4.5	4.1 - 5.0
GENDER			
MALE	7,557	4.5	3.9 - 5.2
FEMALE	11,296	4.5	3.9 - 5.2
AGE GROUP			
18–24	945	6.7	4.6 - 8.8
25–34	1,857	6.4	4.8 - 7.9
35–44	2,603	4.1	3.1 - 5.1
45–54	3,755	4.6	3.7 - 5.5
55–64	4,094	4.0	3.2 - 4.9
65–74	3,063	2.4	1.6 - 3.1
75 AND OLDER	2,330	2.1	1.2 - 2.9
RACE-ETHNICITY*			
WHITE	15,317	4.5	4.0 - 5.0
BLACK	1,072	6.1	3.5 - 8.8
HISPANIC	1,346	5.0	3.4 - 6.5
ASIAN	†		
DISABILITY¶			
DISABILITY	4,818	5.1	4.2 - 6.0
NO DISABILITY	13,941	4.4	3.9 - 4.9
EDUCATION			
< HIGH SCHOOL	1,432	3.1	1.7 - 4.6
HIGH SCHOOL	4,478	4.7	3.7 - 5.8
COLLEGE 1–3 YRS	4,518	4.4	3.5 - 5.3
COLLEGE 4+ YRS	8,379	4.9	4.2 - 5.5
HOUSEHOLD INCOME			
<$25,000	4,276	6.7	5.4 - 8.0
$25,000–34,999	1,556	4.1	2.6 - 5.5
$35,000–49,999	2,014	5.0	3.3 - 6.8
$50,000–74,999	2,481	3.4	2.5 - 4.3
$75,000+	5,923	3.9	3.2 - 4.6
REGION			
I–WESTERN	2,601	5.5	4.3 - 6.8
II–CENTRAL	2,372	3.8	2.5 - 5.1
III–NORTH EAST	4,284	4.2	3.1 - 5.2
IV–METRO WEST	2,915	4.3	3.2 - 5.4
V–SOUTH EAST	4,530	3.6	2.7 - 4.6
VI–BOSTON	2,014	7.2	5.7 - 8.7

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 8.2: 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. An estimated 18% 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.[49]

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 adults ages 18-64 who report ever having been tested for HIV and the percentage who had been tested in the past year.

TABLE 8.2 – HIV TESTING AMONG MASSACHUSETTS ADULTS, AGES 18-64, 2012

	EVER TESTED FOR HIV					TESTED FOR HIV IN PAST YEAR				
	N	%	95% CI			N	%	95% CI		
OVERALL	13,609	42.9	41.7	-	44.2	12,201	10.7	9.8	-	11.5
GENDER										
MALE	5,688	40.5	38.7	-	42.4	5,089	10.2	9.0	-	11.4
FEMALE	7,921	45.3	43.6	-	47.0	7,112	11.2	10.0	-	12.3
AGE GROUP										
18–24	1,018	30.9	27.4	-	34.5	961	16.7	13.8	-	19.6
25–34	1,988	59.3	56.3	-	62.3	1,743	18.8	16.4	-	21.3
35–44	2,667	57.0	54.3	-	59.7	2,342	11.1	9.4	-	12.9
45–54	3,807	39.1	36.9	-	41.4	3,401	5.4	4.4	-	6.4
55–64	4,129	26.4	24.4	-	28.4	3,754	3.1	2.3	-	3.9
RACE-ETHNICITY*										
WHITE	10,401	40.3	38.9	-	41.7	9,463	7.9	7.0	-	8.7
BLACK	917	63.0	57.9	-	68.1	762	23.0	18.6	-	27.4
HISPANIC	1,340	57.6	53.5	-	61.7	1,125	25.3	21.3	-	29.4
ASIAN	403	31.7	25.7	-	37.6	376	9.1	5.4	-	12.8
DISABILITY¶										
DISABILITY	2,935	50.4	47.4	-	53.3	2,548	12.8	10.5	-	15.0
NO DISABILITY	10,605	41.3	40.0	-	42.7	9,599	10.2	9.3	-	11.1
EDUCATION										
< HIGH SCHOOL	961	46.6	41.7	-	51.6	830	17.0	13.0	-	20.9
HIGH SCHOOL	3,001	41.0	38.4	-	43.7	2,685	11.2	9.4	-	13.0
COLLEGE 1–3 YRS	3,246	41.5	39.0	-	44.0	2,908	12.1	10.4	-	13.7
COLLEGE 4+ YRS	6,374	44.3	42.6	-	46.0	5,758	7.6	6.6	-	8.6
HOUSEHOLD INCOME										
<$25,000	2,821	53.0	50.1	-	55.9	2,456	18.7	16.3	-	21.1
$25,000–34,999	972	43.9	39.1	-	48.7	878	12.3	9.0	-	15.6
$35,000–49,999	1,337	43.2	39.1	-	47.3	1,200	11.7	9.0	-	14.5
$50,000–74,999	1,864	40.8	37.5	-	44.0	1,717	7.6	5.9	-	9.4
$75,000+	5,017	40.5	38.6	-	42.5	4,565	6.4	5.4	-	7.5
REGION										
I–WESTERN	1,850	45.7	42.4	-	49.0	1,631	12.2	9.9	-	14.4
II–CENTRAL	1,718	39.6	36.3	-	43.0	1,562	8.6	6.5	-	10.7
III–NORTH EAST	3,077	42.7	39.8	-	45.6	2,760	9.7	7.7	-	11.7
IV–METRO WEST	2,090	40.4	37.7	-	43.2	1,883	7.4	5.9	-	8.9
V–SOUTH EAST	3,023	40.0	37.0	-	42.9	2,753	9.0	7.0	-	11.0
VI–BOSTON	1,558	53.1	49.5	-	56.6	1,344	21.1	17.9	-	24.3

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 8.3: Sexual Violence

Sexual violence results in harmful and lasting consequences for victims, families, and communities. In addition to the potential for injury and the consequences of being a victim of sexual violence, many victims experience physiological, reproductive, social, and behavioral problems. Some of these problems include chronic headaches, back pain, fatigue, sleep disturbances, recurrent nausea, decreased appetite, menstrual pain, and sexual dysfunction.[50] Psychological problems include post traumatic stress disorder, suicidal behavior, anxiety, eating disorders, and substance abuse. [50 51]

Respondents were asked if they had experienced sexual violence at any time in their lifetime. Sexual violence was defined as having the sexual parts of the body touched without consent or attempted or completed sex without consent. Presented here are the percentages of men and women who reported that they had experienced sexual violence at some time in their lifetime.

Questions about sexual violence were asked only on the MA BRFSS landline survey in 2012 and not the cell phone survey; therefore the results in Table 8.3 represent the landline sample only.

TABLE 8.3 – SEXUAL VIOLENCE AMONG MASSACHUSETTS ADULTS, 2012§

	SEXUAL VIOLENCE, WOMEN			SEXUAL VIOLENCE, MEN		
	N	%	95% CI	N	%	95% CI
OVERALL	2,637	16.0	13.5 - 18.6	1,563	5.5	3.2 - 7.7
AGE GROUP						
18–24	†			†		
25–34	169	16.5	8.4 - 24.6	†		
35–44	375	22.3	15.9 - 28.6	†		
45–54	559	17.5	13.3 - 21.8	†		
55–64	617	17.4	13.3 - 21.4	†		
65–74	484	9.1	5.8 - 12.5	†		
75 AND OLDER	346	5.3	2.7 - 7.8	†		
RACE-ETHNICITY*						
WHITE	2,174	16.7	13.8 - 19.6	1,308	4.5	2.4 - 6.5
BLACK	155	15.4	7.2 - 23.7	†		
HISPANIC	†			†		
ASIAN	†			†		
DISABILITY¶						
DISABILITY	744	27.3	21.5 - 33.2	407	12.4	5.7 - 19.2
NO DISABILITY	1,879	12.9	10.1 - 15.7	1,147	4.0	1.7 - 6.3
EDUCATION						
< HIGH SCHOOL	†			†		
HIGH SCHOOL	542	8.9	5.2 - 12.6	†		
COLLEGE 1–3 YRS	666	14.2	9.5 - 18.9	†		
COLLEGE 4+ YRS	1,228	22.9	18.7 - 27.0	771	3.9	2.3 - 5.5
HOUSEHOLD INCOME						
<$25,000	613	18.6	12.7 - 24.6	†		
$25,000–34,999	224	12.4	6.0 - 18.9	†		
$35,000–49,999	255	20.2	9.4 - 30.9	†		
$50,000–74,999	350	15.2	9.8 - 20.6	†		
$75,000+	813	14.7	11.1 - 18.3	†		
REGION						
I–WESTERN	368	18.7	12.3 - 25.1	†		
II–CENTRAL	332	13.1	7.9 - 18.2	†		
III–NORTH EAST	621	18.8	11.7 - 25.9	†		
IV–METRO WEST	399	16.2	10.1 - 22.3	†		
V–SOUTH EAST	639	13.7	9.2 - 18.2	†		
VI–BOSTON	278	13.6	8.2 - 19.1	†		

§ Data presented for the landline sample only
* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient data
¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 8.4: 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. Massachusetts residents ages 65 years and over 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.[52]

In 2010, unintentional falls were a leading cause of injury-related hospitalizations (27,308), observation stays (3,984), and emergency department visits (180,335) among Massachusetts residents.[53] [54] [55] In 2009, there were 491 unintentional fall-related deaths. Fall-related deaths were the second leading cause of all injury and unintentional injury deaths (they were the third leading cause in 2007). The vast majority of these deaths occurred among older adults ages 65 years and older.[24]

Respondents ages 45 and older were asked if they had fallen in the past 12 months. They were also asked if they were injured by a fall in the past 12 months. A fall was defined as unintentionally coming to rest on the ground or another lower level. An injury from a fall was defined as one that caused the respondent to limit regular activities for at least a day or to go see a doctor. Presented here is the percentage of adults ages 65 and older who reported falling in the past 12 months and the percentage that were injured from a fall in the past 12 months.

Please note that the time frame for the falls questions was changed in 2012 to ask about the previous 12 months. Prior years' surveys asked only about the previous 3 months. This results in a higher prevalence of falls and falls with injury. Also, note that this is a narrower age range than has been presented in prior years' reports.

TABLE 8.4 - UNINTENTIONAL FALLS, MASSACHUSETTS ADULTS 65 AND OLDER, 2012

	UNINTENTIONAL FALLS					INJURED BY UNINTENTIONAL FALL				
	N	%	95% CI			N	%	95% CI		
OVERALL	6,011	25.5	23.9	-	27.2	5,997	9.5	8.5	-	10.6
GENDER										
MALE	2,117	24.3	21.6	-	27.1	2,113	7.2	5.6	-	8.7
FEMALE	3,894	26.4	24.3	-	28.4	3,884	11.2	9.8	-	12.6
AGE GROUP										
65–74	3,312	24.5	22.3	-	26.7	3,306	9.1	7.7	-	10.4
75-84	1,973	25.6	22.6	-	28.5	1,967	9.6	7.7	-	11.6
85 AND OLDER	726	30.2	24.9	-	35.6	724	11.3	8.3	-	14.4
RACE-ETHNICITY*										
WHITE	5,264	25.6	23.8	-	27.4	5,254	9.1	8.0	-	10.2
BLACK	226	22.9	15.5	-	30.4	226	11.9	6.2	-	17.7
HISPANIC	251	27.9	19.7	-	36.1	249	14.5	8.8	-	20.2
ASIAN	†			-		†				
DISABILITY¶										
DISABILITY	2,135	39.3	36.1	-	42.5	2,122	18.6	16.1	-	21.1
NO DISABILITY	3,842	19.3	17.4	-	21.2	3,841	5.4	4.5	-	6.4
EDUCATION										
< HIGH SCHOOL	749	28.3	22.6	-	34.0	747	9.8	6.9	-	12.7
HIGH SCHOOL	1,783	24.1	21.1	-	27.1	1,780	8.5	6.8	-	10.3
COLLEGE 1–3 YRS	1,367	26.7	23.3	-	30.1	1,363	11.8	9.2	-	14.4
COLLEGE 4+ YRS	2,083	24.9	22.4	-	27.3	2,079	8.7	7.2	-	10.2
HOUSEHOLD INCOME										
<$25,000	1,820	27.9	24.4	-	31.4	1,816	10.3	8.3	-	12.2
$25,000–34,999	685	23.2	18.6	-	27.7	684	7.9	5.2	-	10.7
$35,000–49,999	744	24.5	19.9	-	29.0	744	9.0	6.2	-	11.9
$50,000–74,999	604	21.6	17.2	-	25.9	604	7.2	4.8	-	9.7
$75,000+	897	23.8	19.9	-	27.6	895	7.0	4.8	-	9.2
REGION										
I–WESTERN	812	26.6	22.2	-	31.1	811	9.0	6.4	-	11.6
II–CENTRAL	727	26.6	21.6	-	31.7	727	8.5	5.7	-	11.3
III–NORTH EAST	1,354	25.9	22.2	-	29.6	1,348	11.3	8.5	-	14.0
IV–METRO WEST	871	22.5	19.0	-	25.9	870	9.8	7.4	-	12.1
V–SOUTH EAST	1,655	26.2	22.8	-	29.7	1,651	8.5	6.5	-	10.5
VI–BOSTON	569	27.1	21.5	-	32.7	567	11.6	8.3	-	14.9

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 8.5: Drinking and Driving

Alcohol-related motor vehicle crashes killed 10,839 people in 2009, representing an average of one alcohol-related fatality every 48 minutes. In the same year, 32 percent of all traffic-related deaths in the United States were caused by alcohol-related motor vehicle crashes.[56] In 2009, there were 347 motor vehicle fatalities in Massachusetts, of which 39% involved the use of drugs and alcohol.[57] Effective measures to prevent injuries and deaths from alcohol-related motor vehicle crashes should be implemented including health promotion to influence policy and community-based efforts.

All respondents were asked if they had had at least one alcoholic drink in the past month. A drink of alcohol was defined as a twelve ounce can or bottle of beer, one five ounce glass of wine, or one drink with one shot of liquor. Those who reported that they had had at least one alcoholic drink in the past month were asked how many times during the past 30 days they had driven after having too much to drink. Presented here is the percentage of all adults who reported driving at least one time during the past month after drinking too much in their opinion.

TABLE 8.5 – DRINKING AND DRIVING AMONG MASSACHUSETTS ADULTS, 2012

	DRINKING AND DRIVING IN PAST 30 DAYS		
	N	%	95% CI
OVERALL	20,490	2.2	1.9 - 2.5
GENDER			
MALE	8,114	3.2	2.7 - 3.8
FEMALE	12,376	1.3	1.0 - 1.6
AGE GROUP			
18–24	1,047	3.7	2.4 - 5.0
25–34	2,041	4.0	2.8 - 5.1
35–44	2,755	2.1	1.4 - 2.9
45–54	3,973	2.2	1.6 - 2.8
55–64	4,350	1.4	0.9 - 1.9
65–74	3,336	0.7	0.3 - 1.0
75 AND OLDER	†		
RACE-ETHNICITY*			
WHITE	16,308	2.5	2.1 - 2.9
BLACK	†		
HISPANIC	†		
ASIAN	†		
DISABILITY¶			
DISABILITY	5,249	1.7	1.1 - 2.3
NO DISABILITY	15,122	2.3	2.0 - 2.7
EDUCATION			
< HIGH SCHOOL	†		
HIGH SCHOOL	4,984	1.8	1.2 - 2.3
COLLEGE 1–3 YRS	4,809	2.5	1.8 - 3.2
COLLEGE 4+ YRS	8,863	2.5	2.0 - 3.0
HOUSEHOLD INCOME			
<$25,000	4,822	1.6	1.0 - 2.2
$25,000–34,999	1,696	1.6	0.8 - 2.4
$35,000–49,999	2,148	3.7	2.2 - 5.1
$50,000–74,999	2,562	3.1	2.1 - 4.1
$75,000+	6,154	2.5	2.0 - 3.1
REGION			
I–WESTERN	2,785	2.1	1.3 - 2.8
II–CENTRAL	2,561	2.4	1.5 - 3.2
III–NORTH EAST	4,640	2.4	1.6 - 3.2
IV–METRO WEST	3,092	2.1	1.4 - 2.7
V–SOUTH EAST	4,854	2.3	1.5 - 3.0
VI–BOSTON	2,216	1.9	0.9 - 2.9

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 8.6: Seatbelt Use

Traffic crashes are the third leading cause of unintentional injury death in Massachusetts.[24] In 2010, there were an additional 3,699 hospital discharges and 66,062 emergency department visits, and 694 observation stays at MA acute care hospitals associated with unintentional nonfatal motor vehicle traffic-related injuries. [53] [54] [55]**Error! Bookmark not defined.** Wearing a seatbelt is the simplest and least expensive way to reduce deaths and serious injuries. When crash victims are unbuckled, their medical treatment costs are 50 percent higher.[58] Seat belt use is required by law in Massachusetts.

Respondents were asked how often they wear a seatbelt when riding or driving in a car. Presented here is the percentage of adults who reported that they always wear their seatbelts.

TABLE 8.6 – SEATBELT USE AMONG MASSACHUSETTS ADULTS, 2012

	ALWAYS USE A SEATBELT		
	N	%	95% CI
OVERALL	20,361	78.3	77.4 - 79.3
GENDER			
MALE	8,088	72.0	70.5 - 73.5
FEMALE	12,273	84.1	83.0 - 85.2
AGE GROUP			
18–24	1,040	67.2	63.4 - 71.0
25–34	2,043	72.9	70.1 - 75.7
35–44	2,762	81.2	78.9 - 83.4
45–54	3,954	80.2	78.3 - 82.0
55–64	4,317	81.5	79.6 - 83.4
65–74	3,310	82.3	80.3 - 84.3
75 AND OLDER	2,674	84.5	82.3 - 86.7
RACE-ETHNICITY*			
WHITE	16,270	78.5	77.5 - 79.6
BLACK	1,180	72.9	68.8 - 77.0
HISPANIC	1,610	78.0	74.8 - 81.3
ASIAN	454	85.8	81.2 - 90.4
DISABILITY¶			
DISABILITY	5,181	76.0	73.9 - 78.0
NO DISABILITY	15,067	78.9	77.8 - 80.0
EDUCATION			
< HIGH SCHOOL	1,716	68.8	64.9 - 72.8
HIGH SCHOOL	4,929	71.3	69.2 - 73.4
COLLEGE 1–3 YRS	4,787	76.6	74.7 - 78.5
COLLEGE 4+ YRS	8,863	87.5	86.5 - 88.5
HOUSEHOLD INCOME			
<$25,000	4,740	72.2	70.0 - 74.5
$25,000–34,999	1,686	73.0	69.4 - 76.5
$35,000–49,999	2,146	75.2	72.1 - 78.3
$50,000–74,999	2,560	77.6	75.0 - 80.1
$75,000+	6,165	84.6	83.2 - 86.0
REGION			
I–WESTERN	2,764	74.3	71.6 - 77.0
II–CENTRAL	2,553	80.7	78.3 - 83.0
III–NORTH EAST	4,615	77.1	74.8 - 79.3
IV–METRO WEST	3,084	84.4	82.5 - 86.2
V–SOUTH EAST	4,823	75.0	72.8 - 77.3
VI–BOSTON	2,182	77.4	74.6 - 80.3

* White, Black, and Asian race categories refer to non-Hispanic

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 8.7: Family Planning

An unplanned pregnancy is a pregnancy that is unexpected at the time of conception. Women whose pregnancies are unplanned may seek prenatal care later, because they find out about their pregnancies later than women with planned pregnancies. Unplanned pregnancies are associated with an increased risk of morbidity for women and with health behaviors during pregnancy that may adversely affect the health of the newborn infant.[59] In addition, in 2006, the public cost of births from unintended pregnancies was estimated at $11.1 billion nationwide and $181.8 million in Massachusetts.[60]

All women ages 18-50 who were currently pregnant or had been pregnant in the past five years were asked if they had wanted to be pregnant sooner, later, or not at all. Unplanned pregnancy was defined as wanting to be pregnant later or not at all. Women ages 18-50, who had not had a hysterectomy or sterilization, were not currently pregnant, and whose partners were not reported to have been sterilized nor had a vasectomy also were asked whether they or their partners currently use some form of birth control. Presented below are the percentage of females ages 18-44 who reported an unplanned pregnancy and the percentage of females ages 18-44 who reported that they or their partner use some form of birth control. The more restricted ages are presented here to be consistent with national data.

Questions about family planning were asked only on the MA BRFSS landline survey in 2012 and not the cell phone survey; therefore the results in Table 8.7 represent the landline sample only.

TABLE 8.7 – FAMILY PLANNING AMONG MASSACHUSETTS WOMEN, AGES 18-44, 2012

	UNPLANNED PREGNANCY					USE BIRTH CONTROL				
	N	%	95% CI			N	%	95% CI		
OVERALL	264	25.6	16.0	-	35.2	642	70.3	64.0	-	76.5
AGE GROUP										
18–24	†					64	53.0	36.3	-	69.8
25–34	120	28.5	15.6	-	41.3	178	76.4	67.2	-	85.6
35–44	†					400	76.1	70.0	-	82.2
RACE-ETHNICITY*										
WHITE	179	23.1	11.1	-	35.1	446	74.7	67.6	-	81.9
BLACK	†					†				
HISPANIC	†					78	61.8	41.6	-	81.9
ASIAN	†					†				
DISABILITY¶										
DISABILITY	†					81	61.3	42.6	-	79.9
NO DISABILITY	236	25.0	14.6	-	35.4	556	71.5	64.8	-	78.2
EDUCATION										
< HIGH SCHOOL	†					†				
HIGH SCHOOL	†					116	54.7	39.5	-	70.0
COLLEGE 1–3 YRS	61	33.9	14.0	-	53.8	151	77.4	66.3	-	88.4
COLLEGE 4+ YRS	†					338	77.6	70.4	-	84.7
HOUSEHOLD INCOME										
<$25,000	†					117	56.7	41.5	-	71.8
$25,000–34,999	†					†				
$35,000–49,999	†					53	81.1	68.9	-	93.3
$50,000–74,999	†					88	81.2	69.9	-	92.4
$75,000+	†					261	78.8	69.8	-	87.9
REGION										
I–WESTERN	†					79	47.2	31.4	-	63.0
II–CENTRAL	†					94	79.0	65.0	-	93.0
III–NORTH EAST	†					172	73.6	60.7	-	86.4
IV–METRO WEST	†					87	90.5	80.1	-	100
V–SOUTH EAST	†					145	63.5	49.2	-	77.9
VI–BOSTON	†					65	59.5	38.1	-	80.9

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around.

Section 8.8: Social Context

Social context is defined as the socio-cultural forces that shape people's day-to-day experiences and that directly and indirectly affect health and behavior.[61] The ability to work and get paid an adequate amount of money directly affects how individuals or families can afford a home, food, utilities, clothing, healthcare, etc. The Census Bureau's September 2012 announcement that the U.S. poverty rate had increased to 15.1% in 2010, up from 14.3% in 2009, put the issue of poverty into the national dialogue.[62]

Respondents who had indicated they paid a rent or mortgage were asked if they were worried or stressed over the past 12 months about having enough money to pay for their rent or mortgage. Respondents were also asked if they were worried or stressed over the past 12 months about having enough money to buy nutritious meals. Presented below is the percentage of people who were worried or stressed about having money to pay the mortgage or rent and buy nutritious meals.

TABLE 8.8 –SOCIAL CONTEXT AMONG MASSACHUSETTS ADULTS, 2012

	WORRIED ABOUT PAYING RENT/MORTGAGE IN PAST 12 MONTHS					WORRIED ABOUT MONEY FOR FOOD IN PAST 12 MONTHS				
	N	%	95% CI			N	%	95% CI		
OVERALL	5,133	50.0	47.7	-	52.4	5,352	29.5	27.3	-	31.7
GENDER										
MALE	1,949	46.8	43.2	-	50.4	2,043	25.3	22.1	-	28.6
FEMALE	3,184	52.6	49.6	-	55.7	3,309	32.8	29.8	-	35.8
AGE GROUP										
18–24	97	40.5	26.3	-	54.8	128	37.6	25.0	-	50.3
25–34	339	62.4	53.8	-	71.1	363	46.6	37.7	-	55.4
35–44	696	63.4	58.0	-	68.7	710	37.2	31.6	-	42.9
45–54	1,055	55.5	50.9	-	60.1	1,082	31.3	27.1	-	35.6
55–64	1,146	47.2	42.6	-	51.8	1,177	22.9	19.2	-	26.6
65–74	981	36.1	31.6	-	40.7	1,023	18.8	15.0	-	22.6
75 AND OLDER	763	34.9	29.3	-	40.4	807	16.4	12.0	-	20.9
RACE-ETHNICITY*										
WHITE	4,250	49.2	46.7	-	51.7	4,430	27.8	25.4	-	30.2
BLACK	275	66.8	57.6	-	76.0	287	48.1	37.5	-	58.7
HISPANIC	346	59.8	49.3	-	70.3	360	42.5	32.7	-	52.3
ASIAN	71	30.9	16.3	-	45.6	†				
DISABILITY¶										
DISABILITY	1,413	57.7	53.2	-	62.1	1,482	40.2	35.6	-	44.8
NO DISABILITY	3,696	47.9	45.2	-	50.6	3,845	26.4	23.9	-	28.9
EDUCATION										
< HIGH SCHOOL	402	50.0	40.3	-	59.7	427	38.8	29.9	-	47.8
HIGH SCHOOL	1,248	58.4	53.6	-	63.2	1,306	39.4	34.5	-	44.3
COLLEGE 1–3 YRS	1,147	56.7	51.9	-	61.6	1,202	32.6	27.9	-	37.3
COLLEGE 4+ YRS	2,323	39.9	37.0	-	42.9	2,400	18.4	16.1	-	20.7
HOUSEHOLD INCOME										
<$25,000	1,149	64.3	59.1	-	69.5	1,206	53.8	48.4	-	59.2
$25,000–34,999	406	55.5	46.6	-	64.5	433	35.2	27.0	-	43.4
$35,000–49,999	570	56.7	49.8	-	63.6	585	33.5	26.5	-	40.5
$50,000–74,999	694	58.3	52.4	-	64.2	708	34.0	27.8	-	40.1
$75,000+	1,611	39.8	36.1	-	43.5	1,631	14.4	11.4	-	17.4
REGION										
I–WESTERN	727	52.8	47.0	-	58.6	753	35.5	29.7	-	41.3
II–CENTRAL	657	57.3	51.1	-	63.5	684	32.6	26.5	-	38.8
III–NORTH EAST	1,169	49.1	43.7	-	54.5	1,224	24.9	20.5	-	29.2
IV–METRO WEST	763	39.4	34.4	-	44.4	788	21.3	17.0	-	25.5
V–SOUTH EAST	1,313	54.6	49.6	-	59.5	1,379	32.8	27.9	-	37.7
VI–BOSTON	501	47.1	39.7	-	54.4	521	31.5	24.4	-	38.6

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

¶ Disability defined as having one or more of the following conditions: (1) physical, mental, or emotional problem that limited activities or caused cognitive difficulties; or (2) used special equipment or required help from others to get around..

Appendix

Comparison Table

MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM COMPARISON TABLE			
VARIABLES	2011 %	2012 %	DIFFERENCE ¶
FAIR OR POOR HEALTH	14.0	13.4	
15+ POOR MENTAL HEALTH DAYS	10.4	10.9	
15+ DAYS IN POOR PHYSICAL HEALTH	9.7	9.5	
DISABILITY	23.1	19.9	**LOWER**
NO HEALTH INSURANCE (18-64)	4.4	4.4	
HAVE PERSONAL HEALTH CARE PROVIDER	88.3	88.5	
COULD NOT SEE DOCTOR DUE TO COST	9.5	9.2	
CHECKUP IN PAST YEAR	78.8	78.7	
CURRENT SMOKER	18.2	16.4	**LOWER**
FORMER SMOKER	28.3	27.7	
USE SMOKELESS TOBACCO	1.7	1.3	
QUIT ATTEMPT AMONG CURRENT SMOKERS	60.1	60.7	
PLAN TO QUIT AMONG CURRENT SMOKERS	37.0	38.6	
LIVE IN HH WHERE SMOKING IS NOT ALLOWED	80.5	82.7	**HIGHER**
EXPOSED TO ENVIRONMENTAL SMOKE	37.9	36.4	
BINGE DRINKING	20.6	19.7	
HEAVY DRINKING	7.9	7.4	
OVERWEIGHT (BASED ON HP 2010)	59.3	58.8	
OBESITY	22.7	22.9	
FLU VACCINE IN PAST YEAR (50-64)	48.7	47.3	
FLU VACCINE IN PAST YEAR (65+)	66.9	63.6	
EVER HAD PNEUMONIA VACCINATION (65+)	72.2	70.2	
HPV VACCINATION (FEMALES AGES 18-34)	34.7	41.9	**HIGHER**
COMPLETED HPV VACCINE SERIES (FEMALES AGES 18-34)	74.8	79.1	
HEPATITIS B VACCINE (3 SHOTS)	36.5	35.2	
TETANUS VACCINE IN PAST 10 YRS	76.8	77.2	
EVER SHINGLES VACCINE (60+)	17.0	23.7	**HIGHER**
PRE-DIABETES	5.5	6.2	
DIABETES	8.0	8.3	
EVER HAD ASTHMA	15.3	15.5	
CURRENTLY HAVE ASTHMA	10.7	10.8	
MYOCARDIAL INFARCTION (35+)	5.1	5.4	
ANGINA (35+)	5.2	5.5	
STROKE (35+)	3.1	2.8	
EVER CANCER DIAGNOSIS	10.9	11.0	
EVER TESTED FOR HIV (18-64)	45.5	42.9	
TESTED FOR HIV IN PAST YEAR (18-64)	11.2	10.7	
SEXUAL VIOLENCE (WOMEN)	20.1	16.0	
SEATBELT USE	79.7	78.3	

¶ Statistically significant increase or decrease noted by 'Higher' or 'Lower'. Blanks indicate no difference between 2011 and 2012.

AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS

MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2012												
	FAIR OR POOR HEALTH			POOR MENTAL HEALTH			POOR PHYSICAL HEALTH			DISABILITY		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
OVERALL	12.9	12.2	- 13.5	11.1	10.4	- 11.8	9.3	8.7	- 9.9	19.2	18.4	- 20.0
GENDER												
MALE	13.9	12.9	- 15.0	9.7	8.7	- 10.7	9.3	8.4	- 10.2	19.6	18.3	- 20.9
FEMALE	11.8	11.0	- 12.7	12.3	11.3	- 13.3	9.1	8.3	- 9.8	18.7	17.7	- 19.7
RACE-ETHNICITY*												
WHITE	10.8	10.1	- 11.6	10.8	10.0	- 11.6	8.7	8.1	- 9.4	19.1	18.2	- 20.1
BLACK	16.7	14.1	- 19.3	12.5	9.8	- 15.2	9.3	7.1	- 11.4	18.2	15.5	- 20.9
HISPANIC	33.7	30.5	- 36.8	15.4	12.9	- 17.9	15.9	13.2	- 18.6	24.4	21.5	- 27.4
ASIAN	4.7	2.7	- 6.8	8.2	4.3	- 12.1	†			10.1	5.5	- 14.8
DISABILITY												
DISABILITY	35.6	32.9	- 38.3	30.8	27.9	- 33.8	32.0	29.5	- 34.5	100.0		
NO DISABILITY	7.0	6.3	- 7.6	7.0	6.3	- 7.6	3.5	3.0	- 3.9			
EDUCATION												
< HIGH SCHOOL	34.5	31.0	- 38.0	18.9	15.9	- 22.0	18.6	15.6	- 21.5	30.0	26.5	- 33.5
HIGH SCHOOL	15.4	14.0	- 16.8	12.8	11.3	- 14.4	11.3	10.0	- 12.5	22.3	20.4	- 24.2
COLLEGE 1–3 YRS	11.9	10.7	- 13.1	12.7	11.2	- 14.1	10.3	9.0	- 11.6	21.4	19.7	- 23.1
COLLEGE 4+ YRS	5.5	4.8	- 6.2	6.8	6.0	- 7.7	4.8	4.2	- 5.3	13.0	12.1	- 13.8
HOUSEHOLD INCOME												
<$25,000	28.5	26.5	- 30.5	22.3	20.2	- 24.4	19.7	17.9	- 21.6	35.7	33.5	- 37.9
$25,000–34,999	15.0	12.4	- 17.6	14.2	11.2	- 17.1	8.3	6.4	- 10.1	19.7	16.5	- 22.8
$35,000–49,999	9.7	7.8	- 11.6	9.5	7.5	- 11.5	9.2	7.2	- 11.2	16.5	14.0	- 19.0
$50,000–74,999	8.4	6.8	- 10.0	9.7	7.7	- 11.7	6.9	5.3	- 8.5	15.9	13.9	- 17.9
$75,000+	5.3	4.3	- 6.2	5.5	4.5	- 6.5	4.3	3.6	- 5.0	11.6	10.4	- 12.8
REGION												
I–WESTERN	14.9	13.1	- 16.8	15.5	13.2	- 17.7	11.5	9.7	- 13.2	23.5	21.0	- 25.9
II–CENTRAL	11.2	9.6	- 12.8	11.0	9.2	- 12.9	8.6	7.2	- 10.0	19.2	17.1	- 21.4
III–NORTH EAST	13.4	11.8	- 15.0	11.4	9.8	- 13.1	9.2	7.9	- 10.5	19.0	17.2	- 20.8
IV–METRO WEST	9.1	7.7	- 10.6	8.9	7.4	- 10.3	6.4	5.3	- 7.5	15.3	13.6	- 17.0
V–SOUTH EAST	14.3	12.6	- 15.9	10.3	8.8	- 11.9	10.3	8.9	- 11.8	20.3	18.3	- 22.2
VI–BOSTON	17.6	15.5	- 19.8	11.3	9.4	- 13.2	11.6	9.5	- 13.6	20.5	18.2	- 22.7

AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS (CONTINUED)

MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2012															
	NO HEALTH INSURANCE				PERSONAL DOCTOR				NO DOCTOR DUE TO COST				CHECKUP IN PAST YEAR			
	%	%			%	%			%	95% CI			%	95% CI		
OVERALL	4.6	4.0	-	5.1	87.8	87.0	-	88.6	9.5	8.8	-	10.2	77.6	76.6	-	78.5
GENDER																
MALE	6.5	5.5	-	7.4	83.5	82.2	-	84.7	9.7	8.7	-	10.7	73.7	72.3	-	75.2
FEMALE	2.8	2.2	-	3.3	91.9	91.1	-	92.8	9.5	8.6	-	10.4	81.4	80.2	-	82.5
RACE-ETHNICITY*																
WHITE	3.4	2.8	-	3.9	89.9	89.1	-	90.8	8.2	7.5	-	9.0	76.7	75.6	-	77.8
BLACK	10.4	7.3	-	13.4	84.4	81.3	-	87.6	13.2	10.4	-	15.9	82.3	79.0	-	85.7
HISPANIC	8.5	6.4	-	10.6	79.6	76.8	-	82.4	19.0	16.3	-	21.7	80.4	77.7	-	83.1
ASIAN	3.7	1.6	-	5.8	85.1	81.7	-	88.5	7.7	4.5	-	10.9	77.1	72.4	-	81.9
DISABILITY																
DISABILITY	4.3	2.4	-	6.1	87.9	85.4	-	90.4	17.2	14.7	-	19.6	78.0	75.2	-	80.7
NO DISABILITY	4.6	4.0	-	5.2	87.6	86.8	-	88.5	8.0	7.3	-	8.7	77.3	76.2	-	78.3
EDUCATION																
< HIGH SCHOOL	9.9	7.2	-	12.6	79.1	75.8	-	82.4	18.6	15.4	-	21.8	77.4	73.9	-	80.9
HIGH SCHOOL	6.6	5.2	-	7.9	86.6	85.0	-	88.3	11.8	10.2	-	13.4	78.6	76.6	-	80.5
COLLEGE 1–3 YRS	4.5	3.4	-	5.6	88.5	87.1	-	89.9	10.5	9.2	-	11.8	77.6	75.7	-	79.5
COLLEGE 4+ YRS	2.0	1.4	-	2.6	90.3	89.2	-	91.4	5.6	4.8	-	6.3	76.4	75.1	-	77.8
HOUSEHOLD INCOME																
<$25,000	9.8	8.0	-	11.5	79.8	77.6	-	81.9	19.7	17.7	-	21.8	75.7	73.5	-	77.9
$25,000–34,999	7.4	5.0	-	9.8	84.2	81.2	-	87.2	14.9	12.0	-	17.8	74.6	70.9	-	78.3
$35,000–49,999	5.8	3.9	-	7.7	85.8	83.2	-	88.4	10.1	7.9	-	12.4	77.4	74.5	-	80.4
$50,000–74,999	3.8	2.5	-	5.2	90.1	88.4	-	91.9	8.7	6.9	-	10.4	75.9	73.1	-	78.6
$75,000+	0.5	0.3	-	0.8	92.8	91.8	-	93.9	3.7	2.9	-	4.6	79.6	78.1	-	81.2
REGION																
I–WESTERN	5.6	4.0	-	7.2	84.3	81.9	-	86.6	12.6	10.5	-	14.7	75.9	73.3	-	78.5
II–CENTRAL	3.6	2.4	-	4.8	89.2	87.1	-	91.2	10.2	8.2	-	12.2	77.4	74.8	-	79.9
III–NORTH EAST	4.8	3.3	-	6.2	89.4	87.7	-	91.2	9.1	7.5	-	10.7	80.9	78.8	-	83.0
IV–METRO WEST	3.1	2.0	-	4.1	90.5	89.0	-	92.1	5.4	4.3	-	6.4	75.1	72.9	-	77.2
V–SOUTH EAST	6.0	5.9	-	6.2	87.6	85.7	-	89.4	10.8	9.2	-	12.4	78.5	76.3	-	80.7
VI–BOSTON	4.8	3.3	-	6.4	85.8	83.7	-	87.8	10.4	8.5	-	12.3	80.4	78.0	-	82.7

AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS (CONTINUED)

MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2012																
	DENTAL VISIT			6+TEETH MISSING			CURRENT SMOKER			FORMER SMOKER			QUIT ATTEMPT			
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		
OVERALL	75.8	74.8	- 76.7	13.9	13.3	- 14.5	16.9	16.0	- 17.7	26.7	25.8	- 27.6	60.4	57.7	-	63.0
GENDER																
MALE	72.8	71.4	- 74.3	14.3	13.3	- 15.2	18.5	17.1	- 19.8	28.5	27.1	- 29.8	58.2	54.3	-	62.1
FEMALE	78.5	77.3	- 79.7	13.6	12.8	- 14.3	15.4	14.3	- 16.5	25.3	24.2	- 26.5	62.4	58.7	-	66.0
RACE-ETHNICITY*																
WHITE	77.7	76.7	- 78.8	13.3	12.6	- 14.0	17.5	16.5	- 18.6	28.8	27.7	- 29.8	58.8	55.7	-	61.8
BLACK	63.3	59.2	- 67.4	20.3	17.6	- 22.9	18.1	14.7	- 21.4	17.0	14.0	- 20.1	64.6	54.1	-	75.2
HISPANIC	66.5	63.0	- 70.0	19.3	16.8	- 21.7	16.5	13.7	- 19.3	18.7	15.9	- 21.5	68.6	67.6	-	69.6
ASIAN	78.1	72.6	- 83.6	†			6.5	3.7	- 9.3	12.1	7.1	- 17.1	†			
DISABILITY																
DISABILITY	66.3	63.4	- 69.3	23.6	21.7	- 25.4	31.5	28.5	- 34.5	27.3	25.1	- 29.5	61.4	55.8	-	66.9
NO DISABILITY	78.0	77.0	- 79.0	11.1	10.5	- 11.8	14.1	13.3	- 15.0	26.4	25.5	- 27.4	59.5	56.3	-	62.8
EDUCATION																
< HIGH SCHOOL	59.5	55.6	- 63.3	30.4	27.4	- 33.5	31.5	27.6	- 35.3	24.1	20.8	- 27.4	65.8	58.8	-	72.7
HIGH SCHOOL	71.2	69.1	- 73.2	18.1	16.7	- 19.6	24.6	22.5	- 26.6	28.1	26.1	- 30.0	60.7	56.1	-	65.3
COLLEGE 1–3 YRS	74.2	72.3	- 76.0	14.3	13.1	- 15.5	18.8	17.1	- 20.5	29.4	27.5	- 31.3	56.1	51.4	-	60.8
COLLEGE 4+ YRS	84.5	83.3	- 85.7	5.6	5.1	- 6.1	7.5	6.6	- 8.4	25.1	23.9	- 26.3	59.1	53.6	-	64.6
HOUSEHOLD INCOME																
<$25,000	58.7	56.3	- 61.1	27.1	25.2	- 29.1	30.6	28.3	- 32.9	24.1	22.1	- 26.1	62.7	58.2	-	67.2
$25,000–34,999	65.7	61.8	- 69.6	16.4	13.9	- 18.8	23.9	20.3	- 27.5	25.0	21.9	- 28.0	61.6	53.7	-	69.5
$35,000–49,999	71.1	67.8	- 74.4	13.5	11.6	- 15.4	16.5	13.8	- 19.1	28.2	25.2	- 31.1	55.8	47.0	-	64.7
$50,000–74,999	79.3	76.7	- 81.9	10.7	9.2	- 12.1	17.4	14.9	- 20.0	30.4	27.9	- 33.0	56.7	49.3	-	64.0
$75,000+	87.6	86.3	- 89.0	6.3	5.4	- 7.3	8.4	7.2	- 9.6	28.0	26.5	- 29.5	59.5	52.8	-	66.2
REGION																
I–WESTERN	72.2	69.5	- 74.9	17.4	15.5	- 19.3	21.7	19.1	- 24.3	29.3	26.8	- 31.8	64.4	58.3	-	70.4
II–CENTRAL	74.1	71.4	- 76.8	14.6	12.9	- 16.3	17.6	15.2	- 20.0	27.0	24.7	- 29.3	†			
III–NORTH EAST	78.1	76.0	- 80.2	13.6	12.2	- 15.0	16.4	14.5	- 18.3	26.8	24.7	- 28.8	63.6	58.0	-	69.2
IV–METRO WEST	80.0	78.0	- 82.0	10.0	8.7	- 11.3	11.7	9.9	- 13.5	24.5	22.7	- 26.3	54.9	54.8	-	55.1
V–SOUTH EAST	74.7	72.5	- 76.9	14.9	13.6	- 16.2	21.2	18.9	- 23.4	28.5	26.4	- 30.6	59.2	53.6	-	64.7
VI–BOSTON	73.4	70.7	- 76.1	15.9	13.9	- 17.9	13.6	11.6	- 15.5	22.9	20.6	- 25.2	62.0	54.3	-	69.7

AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS (CONTINUED)

MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2012																
	PLANNING TO QUIT			NO SMOKING IN HOUSE			ENVIRONMENTAL SMOKE			BINGE DRINKING			HEAVY DRINKING			
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		
OVERALL	38.9	36.1	- 41.7	82.8	81.9	- 83.7	37.3	35.8	- 38.8	20.9	20.0	- 21.9	7.6	7.0	-	8.3
GENDER																
MALE	39.0	35.1	- 43.0	81.5	80.1	- 82.8	42.0	39.7	- 44.2	26.3	24.8	- 27.7	7.8	6.8	-	8.8
FEMALE	38.5	34.7	- 42.4	84.0	82.8	- 85.2	33.1	31.1	- 35.0	15.8	14.6	- 16.9	7.4	6.6	-	8.2
RACE-ETHNICITY*																
WHITE	36.8	33.7	- 40.0	82.5	81.4	- 83.5	37.0	35.3	- 38.7	23.7	22.5	- 24.8	8.5	7.7	-	9.2
BLACK	41.1	36.5	- 45.7	79.5	75.7	- 83.2	37.5	32.5	- 42.5	13.6	10.2	- 16.9	6.5	3.6	-	9.4
HISPANIC	58.5	57.6	- 59.3	87.4	85.1	- 89.8	40.2	35.4	- 44.9	14.2	11.7	- 16.7	4.0	2.3	-	5.6
ASIAN	†			90.7	87.8	- 93.5	32.6	24.6	- 40.6	10.6	6.5	- 14.6	†			
DISABILITY																
DISABILITY	39.4	33.6	- 45.1	72.0	68.9	- 75.0	50.0	46.2	- 53.7	20.6	17.8	- 23.5	8.2	6.0	-	10.3
NO DISABILITY	39.1	35.7	- 42.5	85.2	84.2	- 86.1	34.9	33.3	- 36.4	21.1	20.1	- 22.2	7.7	7.1	-	8.4
EDUCATION																
< HIGH SCHOOL	46.2	38.5	- 53.8	74.9	71.2	- 78.7	48.2	42.5	- 53.8	18.6	14.9	- 22.3	7.8	4.9	-	10.7
HIGH SCHOOL	36.3	31.7	- 40.8	77.3	75.2	- 79.4	41.4	38.2	- 44.7	20.3	18.3	- 22.3	6.6	5.5	-	7.8
COLLEGE 1–3 YRS	36.7	31.8	- 41.7	81.6	79.8	- 83.3	38.9	36.1	- 41.8	22.3	20.3	- 24.2	8.5	7.2	-	9.9
COLLEGE 4+ YRS	39.9	34.1	- 45.7	89.1	87.9	- 90.3	32.3	29.9	- 34.8	23.0	21.5	- 24.4	8.3	7.3	-	9.3
HOUSEHOLD INCOME																
<$25,000	43.5	38.7	- 48.3	70.7	68.3	- 73.1	49.0	45.5	- 52.6	16.1	14.2	- 18.0	6.1	4.8	-	7.4
$25,000–34,999	38.6	37.3	- 39.9	80.0	76.6	- 83.3	41.3	35.6	- 46.9	18.6	15.5	- 21.6	5.8	4.1	-	7.5
$35,000–49,999	38.7	29.9	- 47.5	82.5	79.7	- 85.2	38.3	33.4	- 43.2	23.1	19.9	- 26.3	8.5	6.4	-	10.7
$50,000–74,999	36.5	28.2	- 44.8	81.5	78.9	- 84.1	38.1	33.7	- 42.5	26.4	23.5	- 29.3	8.5	6.7	-	10.2
$75,000+	35.0	28.5	- 41.5	89.3	87.8	- 90.8	31.5	29.0	- 34.1	24.5	22.7	- 26.3	9.0	7.7	-	10.2
REGION																
I–WESTERN	38.2	31.6	- 44.8	80.0	77.4	- 82.7	39.7	36.1	- 43.2	20.8	18.2	- 23.4	7.8	6.1	-	9.6
II–CENTRAL	†			79.5	76.8	- 82.2	38.3	34.6	- 41.9	22.4	19.7	- 25.0	9.0	7.1	-	10.8
III–NORTH EAST	39.3	33.3	- 45.4	84.3	82.4	- 86.2	38.1	34.7	- 41.6	21.0	18.8	- 23.2	7.5	6.0	-	9.0
IV–METRO WEST	37.4	37.4	- 37.4	87.4	85.6	- 89.2	31.7	28.3	- 35.1	20.5	18.4	- 22.5	6.4	5.3	-	7.6
V–SOUTH EAST	38.5	32.6	- 44.4	80.8	78.6	- 83.0	39.6	36.3	- 42.9	21.2	18.8	- 23.6	7.8	6.1	-	9.5
VI–BOSTON	44.8	36.6	- 53.1	82.1	79.8	- 84.5	39.3	35.1	- 43.4	18.5	16.2	- 20.8	7.7	6.1	-	9.4

AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS (CONTINUED)

MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2012															
	OVERWEIGHT			OBESITY			PHYSICAL ACTIVITY			PRE-DIABETES			DIABETES		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
OVERALL	58.5	57.4	59.6	22.7	21.7	23.6	80.8	79.9	81.6	5.9	5.3	6.5	7.8	7.3	8.4
GENDER															
MALE	68.5	67.0	70.0	24.5	23.1	25.9	81.8	80.5	83.0	6.1	5.2	6.9	8.6	7.8	9.4
FEMALE	48.6	47.1	50.1	21.0	19.7	22.2	79.5	78.3	80.6	5.9	5.1	6.6	7.1	6.4	7.7
RACE-ETHNICITY*															
WHITE	57.6	56.3	58.8	21.9	20.8	22.9	84.1	83.2	85.0	5.6	5.0	6.2	6.9	6.4	7.5
BLACK	70.9	67.0	74.9	35.5	31.4	39.5	73.1	69.4	76.7	9.2	6.4	12.1	12.6	10.2	15.0
HISPANIC	71.6	68.4	74.8	32.1	28.7	35.6	64.2	60.7	67.6	7.5	4.4	10.5	15.5	13.3	17.7
ASIAN	29.7	23.7	35.8	5.6	3.3	7.9	77.0	71.7	82.4	†			†		
DISABILITY															
DISABILITY	63.9	60.9	66.8	31.3	28.7	33.9	67.7	65.2	70.2	9.2	7.5	11.0	13.0	11.6	14.3
NO DISABILITY	57.0	55.8	58.2	20.4	19.4	21.4	84.5	83.6	85.4	5.0	4.4	5.7	6.3	5.7	6.8
EDUCATION															
< HIGH SCHOOL	67.7	63.7	71.8	30.8	27.1	34.5	62.7	59.0	66.4	6.0	4.0	8.0	11.9	9.9	13.9
HIGH SCHOOL	65.5	63.3	67.8	27.3	25.2	29.4	75.1	73.3	77.0	6.9	5.7	8.2	10.2	9.0	11.5
COLLEGE 1–3 YRS	61.6	59.5	63.7	26.1	24.1	28.1	80.5	78.9	82.2	6.5	5.3	7.7	7.7	6.7	8.7
COLLEGE 4+ YRS	50.6	48.9	52.2	15.3	14.2	16.3	89.5	88.5	90.4	4.6	4.0	5.3	5.0	4.3	5.7
HOUSEHOLD INCOME															
<$25,000	64.2	61.9	66.6	29.9	27.7	32.1	67.6	65.4	69.8	7.7	6.2	9.3	12.4	11.1	13.8
$25,000–34,999	58.3	54.3	62.2	23.3	19.9	26.7	76.3	72.9	79.7	5.9	3.9	7.9	8.4	6.7	10.0
$35,000–49,999	61.0	57.7	64.3	22.6	19.7	25.6	78.4	75.4	81.4	5.7	4.3	7.2	7.4	5.8	8.9
$50,000–74,999	60.4	57.3	63.5	25.6	22.9	28.3	83.9	81.8	86.0	6.0	4.5	7.6	7.0	5.6	8.4
$75,000+	55.7	53.7	57.7	18.3	16.8	19.8	90.0	88.9	91.2	5.0	4.0	6.1	5.0	4.3	5.7
REGION															
I–WESTERN	62.6	59.7	65.6	26.4	23.9	28.9	78.5	76.2	80.7	7.5	5.8	9.2	8.6	7.3	9.9
II–CENTRAL	62.3	59.3	65.3	28.8	25.9	31.6	81.6	79.5	83.7	5.8	4.4	7.2	7.7	6.3	9.0
III–NORTH EAST	59.8	57.2	62.3	21.4	19.4	23.4	79.4	77.4	81.4	5.3	4.1	6.4	8.5	7.2	9.7
IV–METRO WEST	52.3	49.7	54.8	17.2	15.3	19.1	84.0	82.1	86.0	5.1	4.0	6.2	5.4	4.5	6.4
V–SOUTH EAST	60.0	57.4	62.5	22.5	20.4	24.6	80.7	78.7	82.6	5.5	4.4	6.6	8.9	7.5	10.2
VI–BOSTON	57.7	54.8	60.5	24.4	21.8	27.1	77.4	74.8	80.0	7.2	5.3	9.0	8.3	6.8	9.8

AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS (CONTINUED)

MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2012																
	HEPATITIS B VACCINE			TETANUS VACCINE			EVER ASTHMA			CURRENT ASTHMA			CANCER DIAGNOSIS			
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		
OVERALL	37.1	35.5	- 38.7	77.7	76.5	- 78.9	15.8	14.9	- 16.6	11.0	10.3	- 11.7	10.0	9.5	-	10.6
GENDER																
MALE	30.2	27.9	- 32.5	77.2	75.3	- 79.1	13.4	12.3	- 14.5	7.9	7.1	- 8.8	9.8	9.0	-	10.5
FEMALE	43.9	41.8	- 45.9	78.1	76.5	- 79.7	17.8	16.7	- 19.0	13.8	12.7	- 14.8	10.4	9.7	-	11.2
RACE-ETHNICITY*																
WHITE	35.7	33.8	- 37.5	79.1	77.7	- 80.5	15.9	14.9	- 16.9	11.0	10.2	- 11.9	10.9	10.3	-	11.5
BLACK	38.8	33.2	- 44.5	67.9	62.7	- 73.1	15.7	12.8	- 18.6	12.2	9.5	- 14.8	5.7	4.1	-	7.3
HISPANIC	38.4	33.4	- 43.3	71.5	66.8	- 76.2	21.2	18.5	- 23.9	13.6	11.4	- 15.8	5.2	3.8	-	6.6
ASIAN	52.5	43.7	- 61.3	73.7	65.9	- 81.5	11.1	5.2	- 17.0	†			†			
DISABILITY																
DISABILITY	36.0	31.5	- 40.6	80.7	77.9	- 83.4	26.8	24.1	- 29.6	20.4	17.9	- 22.9	14.4	12.8	-	16.1
NO DISABILITY	37.5	35.8	- 39.2	77.2	75.9	- 78.6	13.2	12.4	- 14.1	8.8	8.1	- 9.6	8.8	8.2	-	9.4
EDUCATION																
< HIGH SCHOOL	25.3	19.9	- 30.6	68.0	62.5	- 73.5	20.3	17.2	- 23.4	15.7	12.9	- 18.5	7.7	5.9	-	9.4
HIGH SCHOOL	29.2	25.9	- 32.4	77.4	75.1	- 79.8	16.8	15.0	- 18.5	11.9	10.3	- 13.4	9.9	8.7	-	11.1
COLLEGE 1–3 YRS	37.4	34.3	- 40.4	79.2	76.8	- 81.6	16.7	15.0	- 18.5	11.9	10.4	- 13.4	10.7	9.6	-	11.7
COLLEGE 4+ YRS	47.3	45.0	- 49.7	79.3	77.2	- 81.4	13.1	12.0	- 14.2	8.4	7.5	- 9.4	10.7	10.0	-	11.4
HOUSEHOLD INCOME																
<$25,000	34.6	30.9	- 38.3	72.8	69.6	- 76.1	20.7	18.8	- 22.6	15.5	13.8	- 17.2	10.5	9.3	-	11.7
$25,000–34,999	38.3	32.4	- 44.2	74.2	69.3	- 79.1	12.2	9.8	- 14.7	8.3	6.2	- 10.4	9.5	7.7	-	11.3
$35,000–49,999	36.3	31.0	- 41.6	78.9	74.8	- 82.9	16.1	13.5	- 18.7	11.3	9.0	- 13.7	10.0	8.3	-	11.7
$50,000–74,999	37.2	32.3	- 42.1	81.2	78.0	- 84.5	16.0	13.7	- 18.4	9.7	7.9	- 11.4	10.2	8.8	-	11.6
$75,000+	40.0	37.3	- 42.8	81.3	79.3	- 83.2	13.2	11.8	- 14.6	8.7	7.5	- 10.0	10.8	9.8	-	11.8
REGION																
I–WESTERN	39.0	35.4	- 42.5	75.6	72.4	- 78.9	19.8	17.4	- 22.2	14.5	12.4	- 16.6	11.6	9.9	-	13.3
II–CENTRAL	36.2	32.1	- 40.3	81.4	78.5	- 84.2	16.0	13.7	- 18.4	11.4	9.4	- 13.5	8.9	7.6	-	10.3
III–NORTH EAST	36.4	32.8	- 40.1	77.3	74.6	- 80.0	15.5	13.7	- 17.4	10.8	9.3	- 12.4	9.5	8.4	-	10.7
IV–METRO WEST	40.5	39.7	- 41.3	80.4	79.9	- 80.9	14.3	12.5	- 16.2	9.3	7.7	- 10.8	9.6	8.6	-	10.7
V–SOUTH EAST	31.8	28.5	- 35.2	75.4	72.7	- 78.2	14.9	13.0	- 16.7	10.8	9.3	- 12.4	10.8	9.6	-	11.9
VI–BOSTON	40.9	36.6	- 45.2	74.2	70.7	- 77.8	15.7	13.7	- 17.8	9.9	8.2	- 11.6	9.0	7.7	-	10.4

AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS (CONTINUED)

MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2012																
	PAP SMEAR, PAST 3 YEARS			SEXUAL ORIENTATION			EVER TESTED FOR HIV			TESTED FOR HIV PAST YEAR			SEXUAL VIOLENCE - WOMEN			
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI		
OVERALL	79.1	78.0	- 80.2	4.6	4.1	- 5.1	45.2	43.9	- 46.4	11.3	10.4	- 12.2	16.4	13.6	-	19.2
GENDER																
MALE				4.5	3.8	- 5.2	42.3	40.5	- 44.1	10.7	9.4	- 12.0				
FEMALE	79.1	78.0	- 80.2	4.7	4.0	- 5.4	48.1	46.4	- 49.8	11.9	10.7	- 13.1	16.4	13.6	-	19.2
RACE-ETHNICITY*																
WHITE	80.0	78.7	- 81.2	4.7	4.1	- 5.3	43.4	42.0	- 44.8	8.7	7.8	- 9.7	17.3	13.8	-	20.7
BLACK	74.9	70.5	- 79.3	5.5	3.1	- 7.8	64.8	60.2	- 69.3	23.3	19.0	- 27.6	16.0	7.0	-	25.1
HISPANIC	80.8	77.1	- 84.5	4.7	3.2	- 6.3	56.2	52.2	- 60.3	22.7	19.1	- 26.3	†			
ASIAN	78.7	71.7	- 85.7	†			31.7	25.4	- 38.0	7.7	4.5	- 11.0	†			
DISABILITY																
DISABILITY	73.5	70.0	- 76.9	5.7	4.4	- 6.9	54.9	51.1	- 58.6	16.7	13.5	- 19.9	29.2	22.0	-	36.4
NO DISABILITY	80.6	79.4	- 81.8	4.3	3.8	- 4.9	43.2	41.9	- 44.6	10.5	9.6	- 11.4	13.1	10.3	-	15.9
EDUCATION																
< HIGH SCHOOL	72.0	67.1	- 76.9	3.2	1.7	- 4.7	47.9	43.1	- 52.8	16.4	12.8	- 20.0	†			
HIGH SCHOOL	76.2	73.8	- 78.5	5.0	3.8	- 6.1	44.7	42.0	- 47.3	12.3	10.3	- 14.3	10.0	5.4	-	14.5
COLLEGE 1–3 YRS	79.5	77.6	- 81.4	4.1	3.2	- 5.0	46.5	44.0	- 49.1	13.0	11.2	- 14.9	15.1	10.0	-	20.2
COLLEGE 4+ YRS	84.2	82.5	- 85.9	4.8	4.0	- 5.6	44.6	42.8	- 46.5	8.7	7.4	- 10.0	25.1	17.5	-	32.7
HOUSEHOLD INCOME																
<$25,000	75.4	73.1	- 77.8	6.7	5.4	- 8.0	54.9	52.1	- 57.8	18.6	16.3	- 20.9	20.8	14.2	-	27.4
$25,000–34,999	76.0	72.0	- 80.0	4.6	2.9	- 6.3	45.3	40.5	- 50.1	12.8	9.3	- 16.4	11.2	10.3	-	12.1
$35,000–49,999	81.7	78.3	- 85.1	5.3	3.5	- 7.2	45.5	41.3	- 49.7	12.4	9.6	- 15.3	18.9	8.7	-	29.2
$50,000–74,999	80.4	76.8	- 83.9	3.2	2.3	- 4.1	43.0	39.6	- 46.4	8.5	6.6	- 10.5	14.0	8.8	-	19.2
$75,000+	82.8	80.4	- 85.1	3.9	3.0	- 4.7	41.6	39.6	- 43.6	7.6	6.4	- 8.9	13.3	10.0	-	16.6
REGION																
I–WESTERN	78.0	75.3	- 80.6	5.7	4.4	- 7.1	50.2	46.8	- 53.5	14.0	11.4	- 16.6	19.6	13.0	-	26.3
II–CENTRAL	77.2	74.3	- 80.2	3.9	2.5	- 5.2	41.4	38.0	- 44.8	9.2	7.0	- 11.5	13.5	8.6	-	18.3
III–NORTH EAST	79.5	77.0	- 82.0	4.3	3.1	- 5.4	44.4	41.5	- 47.3	10.1	8.0	- 12.1	20.9	13.0	-	28.7
IV–METRO WEST	78.9	78.7	- 79.1	4.4	3.2	- 5.6	42.5	39.7	- 45.3	8.4	6.7	- 10.2	16.3	16.2	-	16.3
V–SOUTH EAST	79.6	76.8	- 82.4	3.9	2.8	- 4.9	42.4	42.0	- 42.7	9.7	9.4	- 9.9	12.4	7.9	-	16.8
VI–BOSTON	79.4	76.5	- 82.4	7.0	5.6	- 8.4	55.3	53.8	- 56.8	21.0	19.8	- 22.3	14.9	11.1	-	18.7

AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS (CONTINUED)

	SEATBELT USE			EVER DIAGNOSED WITH DEPRESSION		
	%	95% CI		%	95% CI	
OVERALL	78.1	77.1	- 79.1	19.1	18.2	- 20.0
GENDER						
MALE	72.0	70.4	- 73.5	14.7	13.5	- 15.8
FEMALE	83.7	82.5	- 84.9	23.0	21.8	- 24.3
RACE-ETHNICITY*						
WHITE	77.9	76.7	- 79.0	19.6	18.6	- 20.6
BLACK	74.1	70.4	- 77.9	14.4	11.7	- 17.2
HISPANIC	81.2	78.5	- 83.9	26.2	23.2	- 29.2
ASIAN	88.4	84.8	- 92.1	7.4	4.1	- 10.6
DISABILITY						
DISABILITY	73.2	70.2	- 76.1	46.3	43.3	- 49.4
NO DISABILITY	79.1	78.1	- 80.2	13.4	12.6	- 14.2
EDUCATION						
< HIGH SCHOOL	68.5	64.5	- 72.6	28.5	25.0	- 32.1
HIGH SCHOOL	70.4	68.2	- 72.6	21.2	19.4	- 23.1
COLLEGE 1–3 YRS	76.5	74.6	- 78.4	20.4	18.6	- 22.1
COLLEGE 4+ YRS	86.6	85.3	- 87.9	14.5	13.3	- 15.6
HOUSEHOLD INCOME						
<$25,000	71.8	69.5	- 74.2	33.1	30.8	- 35.3
$25,000–34,999	72.4	68.7	- 76.1	19.7	16.5	- 22.9
$35,000–49,999	74.5	71.3	- 77.8	17.8	15.2	- 20.4
$50,000–74,999	77.3	74.5	- 80.1	18.5	16.2	- 20.8
$75,000+	83.8	82.1	- 85.5	12.2	10.9	- 13.6
REGION						
I–WESTERN	73.1	70.3	- 76.0	25.5	23.0	- 28.0
II–CENTRAL	80.3	77.8	- 82.8	19.3	17.0	- 21.7
III–NORTH EAST	76.7	74.4	- 79.0	17.6	15.7	- 19.5
IV–METRO WEST	84.1	82.1	- 86.1	15.7	13.9	- 17.5
V–SOUTH EAST	73.9	71.4	- 76.4	20.2	18.2	- 22.2
VI–BOSTON	78.6	76.0	- 81.2	17.3	15.2	- 19.4

Massachusetts and National Estimates

MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2012			
VARIABLES	MA %	US MEDIAN¶ %	US RANGE¶ %
OVERALL HEALTH MEASURES			
FAIR OR POOR HEALTH	13.4	17.1	11.7 - 36.1
15+ POOR MENTAL HEALTH DAYS	10.9	11.0	7.4 - 16.7
15+ DAYS IN POOR PHYSICAL HEALTH	9.5	11.1	7.8 - 16.2
HEALTH CARE ACCESS AND UTILIZATION			
HAVE PERSONAL HEALTH CARE PROVIDER	88.5	77.9	62.8 - 88.5
COULD NOT SEE DOCTOR DUE TO COST	9.2	15.2	8.1 - 22.1
CHECKUP IN PAST YEAR	78.7	67.7	55.7 - 80.1
DENTAL VISIT IN THE PAST YEAR	76.2	67.2	53.7 - 76.2
6 OR MORE TEETH MISSING	14.9	15.4	8.8 - 32.3
RISK FACTORS AND PREVENTIVE BEHAVIORS			
CURRENT SMOKER	16.4	19.6	10.6 - 28.3
FORMER SMOKER	27.7	25.0	13.5 - 31.6
USE SMOKELESS TOBACCO	1.3	4.1	0.7 - 8.6
QUIT ATTEMPT AMONG CURRENT SMOKERS	60.7	59.9	51.0 - 69.8
BINGE DRINKING	19.7	16.9	10.2 - 25.2
HEAVY DRINKING	7.4	6.1	3.5 - 8.5
OVERWEIGHT (BASED ON HP 2010)	58.8	64.2	51.9 - 69.6
OBESITY	22.9	28.1	20.5 - 34.7
PHYSICAL ACTIVITY IN PAST MONTH	80.2	76.9	57.6 - 83.7
FLU VACCINE IN PAST YEAR (50-64)	47.3	40.7	16.5 - 49.2
FLU VACCINE IN PAST YEAR (65+)	63.6	60.1	26.3 - 70.1
EVER HAD PNEUMONIA VACCINATION (65+)	70.2	68.5	22.2 - 76.2
CHRONIC HEALTH CONDITIONS			
DIABETES	8.3	9.7	7.0 - 16.4
EVER HAD ASTHMA	15.5	13.3	10.5 - 16.9
CURRENTLY HAVE ASTHMA	10.8	8.9	5.8 - 11.1
MYOCARDIAL INFARCTION (35+)	5.4	6.3	4.1 - 9.8
ANGINA (35+)	5.5	6.0	3.8 - 11.1
STROKE (35+)	2.8	3.9	2.5 - 6.0
CANCER SCREENING			
BLOOD STOOL TEST IN PAST 2 YRS (50+)	16.3	14.2	5.7 - 27.9
SIGMOID OR COLONOSCOPY PAST 5 YRS (50+)	61.4	52.5	32.6 - 62.0
MAMMOGRAPHY IN PAST 2 YRS (40+)	84.6	74.0	61.9 - 84.6
CLINICAL BREAST EXAM (40+)	86.4	74.2	55.2 - 86.4
PAP SMEAR IN PAST THREE YEARS	77.6	72.2	60.8 - 79.3
OTHER TOPICS			
EVER TESTED FOR HIV (18-64)	42.9	39.9	25.8 - 72.1
DRINKING & DRIVING	2.2	1.8	0.7 - 3.4
UNINTENTIONAL FALLS (45+)	24.8	27.5	14.9 - 35.9
INJURY FROM UNINTENTIONAL FALL (45+)	10.3	10.5	4.8 - 13.9
SEATBELT USE	78.3	84.7	61.9 - 93.7

¶ The US median percentage and range are based on data for all 50 states, District of Columbia, and Puerto Rico.

Massachusetts Estimates and Healthy People 2020^

MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2012		
VARIABLES	MA %	HP 2020^ %
HEALTH CARE ACCESS AND UTILIZATION		
NO HEALTH INSURANCE (18-64)	4.4	0.0
HAVE PERSONAL HEALTH CARE PROVIDER	88.5	83.9
DENTAL VISIT IN THE PAST YEAR	76.2	49.0
RISK FACTORS AND PREVENTIVE BEHAVIORS		
CURRENT SMOKER	16.4	12.0
USE SMOKELESS TOBACCO	1.3	0.3
QUIT ATTEMPT AMONG CURRENT SMOKERS	60.7	80.0
LIVE IN HH WHERE SMOKING IS NOT ALLOWED	82.7	87.0
EXPOSED TO ENVIRONMENTAL SMOKE	36.4	68.0
BINGE DRINKING	19.7	24.3
HEAVY DRINKING	7.4	25.3
OBESITY (20+)	23.5	30.6
FLU VACCINE IN PAST YEAR (18-64)	38.6	80.0
FLU VACCINE IN PAST YEAR (65+)	63.6	90.0
EVER HAD PNEUMONIA VACCINATION (65+)	63.6	90.0
EVER SHINGLES VACCINE (50+)	14.9	30.0
CANCER SCREENING		
BLOOD STOOL TEST IN PAST 2 YRS (50+)	16.3	70.5
SIGMOID OR COLONOSCOPY PAST 5 YRS(50+)	61.4	70.5
MAMMOGRAPHY IN PAST 2 YRS (40+)	84.6	81.1
CLINICAL BREAST EXAM (40+)	86.4	81.1
PAP SMEAR IN PAST THREE YEARS	77.6	93.0
OTHER TOPICS		
TESTED FOR HIV IN PAST YEAR (18-44)	15.5	16.9
SEATBELT USE	78.3	92.4

^ Healthy People 2020 Objectives

Item-Specific Non-Response

MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2012	
	PERCENTAGE OF NON-RESPONSE* %
FAIR OR POOR HEALTH	0.2
15+ DAYS IN POOR PHYSICAL HEALTH	1.9
15+ POOR MENTAL HEALTH DAYS	1.7
DISABILITY	4.2
NO HEALTH INSURANCE (AGES 18-64)	0.5
HAVE PERSONAL HEALTH CARE PROVIDER	0.3
COULD NOT SEE DOCTOR DUE TO COST	0.3
HAD CHECKUP IN PAST YEAR	0.7
DENTAL VISIT IN THE PAST YEAR	0.9
6 OR MORE TEETH MISSING	3.0
CURRENT SMOKER	4.8
FORMER SMOKER	4.8
QUIT ATTEMPT AMONG CURRENT SMOKERS	0.5
EXPOSED TO ENVIRONMENTAL SMOKE	13.3
BINGE DRINKING	6.1
HEAVY DRINKING	6.1
OVERWEIGHT	8.4
OBESITY	8.4
PHYSICAL ACTIVITY	0.2
FLU VACCINE IN THE PAST YEAR (50-64)	5.1
FLU VACCINE IN THE PAST YEAR (65+)	5.9
EVER HAD PNEUMONIA VACCINE(65+)	11.1
HPV VACCINATION	15.4
HEPATITIS B VACCINE	21.9
TETANUS VACCINE IN PAST 10 YRS	17.6
EVER HAD SHINGLES VACCINE	11.6
PRE-DIABETES	8.6
DIABETES	0.2
EVER HAD ASTHMA	0.4
CURRENTLY HAVE ASTHMA	0.8
HEART ATTACK (35+)	0.5
ANGINA OR CORONARY HEART DISEASE (35+)	1.0
STROKE (35+)	0.4
EVER CANCER DIAGNOSIS	0.5
CHRONIC OBSTRUCTIVE PULMONARY DISEASE	0.7
EVER DIAGNOSED WITH DEPRESSION	0.6
SIGMOID OR COLONOSCOPY PAST 5 YRS(50+)	8.5
MAMMOGRAPHY IN PAST 2 YRS (40+)	6.3
EVER TESTED FOR HIV (18-64)	9.2
DRINKING & DRIVING	5.7
UNINTENTIONAL FALLS (45+)	6.3
SEATBELT USE	6.3
UNPLANNED PREGNANCY	4.0

* The item-specific unweighted non-response % was calculated using the number of respondents who had finished the demographic section of the 2012 BRFSS as the denominator and those who reported don't know or refused as the numerators.

2002 Census Occupation Codes (COC) for 16 Occupation Groups	
Occupation Group	**COC**
Management, Business & Financial Operations	0010-0950
Professional - Education, Training, & Library	2200-2550
Professional - Healthcare Practitioners & Technical	3000-3540
Professional – Other	
• Computer & Mathematical	1000-1240
• Architecture & Engineering	1300-1560
• Life, Physical, & Social Services	1600-1960
• Community & Social Services	2000-2060
• Legal	2100-2150
• Arts, Design, Entertain., Sports, & Media	2600-2960
Service - Healthcare Support	3600-3650
Service - Protective Service	3700-3950
Service - Food Prep & Serving Related	4000-4160
Service - Building & Grounds Cleaning & Maintenance	4200-4250
Service - Personal Care & Service	4300-4650
Sales & Related	4700-4960
Office & Administrative Support	5000-5930
Farming, Forestry, & Fishing	6000-6130
Construction & Extraction	6200-6940
Installation, Repair, & Maintenance	7000-7620
Production	7700-8960
Transportation & Material Moving	9000-9750

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 live in households with either a landline telephone or a cell phone.
- As noted above, respondents are identified through telephone-based methods.
- Telephone penetration in the United States is estimated at 96.7%; in Massachusetts, telephone penetration is estimated at 98.3%, meaning that only 1.7% of households do not have any telephone service.[63]
- 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, weighted data are used, which may partially correct for any bias caused by non-telephone coverage. Weighting 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 weighting 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: response rate, refusal rate, cooperation rate, and timeliness of providing data. In 2012, the MA BRFSS had an AAPOR response rate 4 of 45% for the landline survey and 30% for the cell phone survey, The refusal rate was 11.5% for landline and 11.9% for cell phone. The cooperation rate was 61.4% for landline and 67.8% for cell phone. [64]
- 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.

References

[1] National Center for Health Statistics. (January 11, 2007). *Reliability of Survey Estimates*. Retrieved August 2, 2007, from http://www.cdc.gov/nchs/ahcd/ahcd_estimation_reliability.htm
[2] Rosner, B. (2005). *Fundamentals of Biostatistics, 6th Ed.* Pacific Grove, CA: Duxbury Press.
[3] U.S. Dept. of Health and Human Services. *Healthy People 2020.* Retrieved on March 2, 2011, from http://www.healthypeople.gov/2020/default.aspx
[4] Idler EL & Benyamini Y. *Self-rated health and mortality: A review of twenty-seven community studies.* J Health Soc Behav 1997; 38:p. 21-37.
[5] Centers for Disease Control and Prevention. (2000). *Measuring Healthy Days*. Retrieved October 19, 2006, from http://www.cdc.gov/hrqol/pdfs/mhd.pdf.
[6] Centers for Disease Control and Prevention. *Health-Related Quality of Life*. Retrieved October 19, 2006, from http://www.cdc.gov/hrqol/
[7] U.S. Census Bureau, *Americans with Disabilities: 2010, Issued July 2012* Retrieved on May 17, 2013, http://www.census.gov/prod/2012pubs/p70-131.pdf
[8] *Self-assessed health status and selected behavioral risk factors among persons with and without health-care coverage. United States, 1994-1995.* MMWR. **47**(09): p. 176-180.
[9] Weissman, J.S. & Epstein, A.M. (1993). *The insurance gap: does it make a difference?* Annu Rev Public Health, 14, 243-270.
[10] Centers for Disease Control and Prevention. (2011). Preventing *Cavities, Gum Disease, Tooth Loss, and Oral Cancers: At A Glance 2010.* Retrieved on March 2, 2011 from http://www.cdc.gov/chronicdisease/resources/publications/AAG/doh.htm
[11] Centers for Disease Control and Prevention. (2011). *Tobacco Use: Targeting the Nation's Leading Killer*: At A Glance. Retrieved on March 2, 2011, from http://www.cdc.gov/chronicdisease/resources/publications/aag/osh.htm
[12] Massachusetts Department of Public Health, Tobacco Control Program. (2008). *Health Effects of Smoking Massachusetts Fact Sheet*. Retrieved on June 10, 2013, from http://www.mass.gov/eohhs/docs/dph/tobacco-control/adults-health-consequences.pdf
[13] Massachusetts Department of Public Health, Tobacco Control Program. (2008). Economic Costs of Smoking Massachusetts Fact Sheet. Retrieved on June 10, 2013, from http://www.mass.gov/eohhs/docs/dph/tobacco-control/economic-costs-of-smoking.pdf
[14] *State-Specific Prevalence of Cigarette Smoking and Smokeless Tobacco Use Among Adults. United States, 2009. MMWR. 59 (43): p. 1400-1406*
[15] National Cancer Institute. (2011). *Harms of Smoking and Health Benefits of Quitting*. Retrieved March 7, 2011 from http://www.cancer.gov/cancertopics/factsheet/Tobacco/cessation
[16] U.S. Dept. of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. (2006). *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. Retrieved on November 1, 2006, from http://www.surgeongeneral.gov/library/reports/secondhandsmoke/factsheet6.html
[17] Danaei, G., et al. (2009). *The Preventable Causes of Death in the United States: Comparative Risk Assessment of Dietary, Lifestyle, and Metabolic Risk Factors.* PLoS Med 6(4): e1000058. Retrieved on March 3, 2011 from http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000058
[18] Centers for Disease Control and Prevention. (2011). *Alcohol and Public Health: FAQs.* Retrieved on March 4, 2011 from http://www.cdc.gov/alcohol/faqs.htm#heavyDrinking
[19] National Highway Traffic Safety Administration, National Center for Statistics and Analysis (2010). *Traffic Safety Facts – Alcohol-Impaired Driving (2010 Data) – April 2012.* Retrieved on April 23, 2012 from http://www-nrd.nhtsa.dot.gov/Pubs/811606.pdf
[20] Centers for Disease Control and Prevention. (updated May 29, 2009). *Overweight and Obesity: Economic Consequences*. Retrieved on June 2, 2009 from http://www.cdc.gov/nccdphp/dnpa/obesity/economic_consequences.htm
[21] Massachusetts Department of Public Health, (2011), *About Mass in Motion*, Retrieved on May 6, 2011 from http://www.mass.gov/eohhs/gov/departments/dph/programs/community-health/mass-in-motion/
[22] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. (1996). *Physical Activity and Health: a Report of the Surgeon General*. Retrieved on April 6, 2010 from http://www.cdc.gov/physicalactivity/everyone/health/

[23] Centers for Disease Control and Prevention. (2011). *Estimating Seasonal Influenza-Associated Deaths in the United States: CDC Study Confirms Variability of Flu*. Retrieved on March 8, 2011, from http://www.cdc.gov/flu/about/disease/us_flu-related_deaths.htm
[24] Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research and Evaluation. (January 2012). *Massachusetts Deaths 2010*. Boston, MA
[25] Centers for Disease Control and Prevention. (2011). *Sexually Transmitted Diseases (STDs) - Genital HPV Infection - Fact Sheet.* Retrieved March 8, 2011 from http://www.cdc.gov/std/hpv/stdfact-hpv.htm/
[26] Centers for Disease Control and Prevention. (March 2011). Viral Hepatitis. Retrieved on March 8, 2011 from http://www.cdc.gov/hepatitis/
[27] National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention. (2010) *Massachusetts - 2010 Profile.* Retrieved on March 8, 2011 from http://www.cdc.gov/nchhstp/stateprofiles/pdf/massachusetts_profile.pdf
[28] Dire, Daniel, (2010) *Tetanus.* MedScape, eMedicine Emergency. Retrieved on March 9, 2011 from http://emedicine.medscape.com/article/786414-overview
[29] MA Department of Public Health, Bureau of Communicable Disease Control. (2006) *Tetanus.* Retrieved on March 9, 2011 from http://www.mass.gov/eohhs/docs/dph/disease-reporting/guide/tetanus.rtf
[30] Centers for Disease Control and Prevention. (2011) *Shingles (Herpes Zoster).*Retrieved on May 10, 2011 from http://www.cdc.gov/shingles/about/overview.html
[31] American Diabetes Association. (2011). *Diabetes Basics.* Retrieved on March 14, 2011 from:. http://www.diabetes.org/diabetes-basics/
[32] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (2011). *National diabetes fact sheet, 2011*. Retrieved on March 14, 2011 from http://www.cdc.gov/diabetes/pubs/pdf/ndfs_2011.pdf
[33] Centers for Disease Control and Prevention. (updated May 5, 2009). *Basic Facts About Asthma*. Retrieved on May 29, 2009, from http://www.cdc.gov/asthma/faqs.htm
[34] National Heart Lung and Blood Institute. (2011). *Diseases and conditions index: Asthma*. Retrieved on March 14, 2011 from http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma_WhatIs.html
[35] Massachusetts Department of Public Health, Asthma Prevention and Control Program. (April 2009). *Burden of Asthma in Massachusetts*. Retrieved on May 28, 2009, from http://www.mass.gov/eohhs/docs/dph/com-health/asthma/burden-in-mass.pdf
[36] Centers for Disease Control and Prevention, Chronic Obstructive Pulmonary Disease. Retrieved on May 1, 2012 from http://www.cdc.gov/copd/
[37] Centers for Disease Control and Prevention, Chronic Disease Prevention and Health Promotion. (2011). *Heart Disease and Stroke: Addressing The Nation's Leading Killers: At A Glance 2010.* Retrieved on March 15, 2011 from http://www.cdc.gov/chronicdisease/resources/publications/AAG/dhdsp.htm
[38] National Cancer Institue, *Estimated U.S. Cancer Prevalence.* Retrieved on June 19, 2012 from http://dccps.nci.nih.gov/ocs/prevalence/prevalence.html#survivor
[39] American Cancer Society, *Cancer Facts & Figures, 2013.* Retrieved on June 12, 2013 from http://www.cancer.org/acs/groups/content/@epidemiologysurveilance/documents/document/acspc-036845.pdf
[40] Massachusetts Department of Public Health. *Cancer Incidence and Mortality in Massachusetts, 2005-2009, A Statewide Report.* Retrieved on June 26, 2013, from http://www.mass.gov/eohhs/docs/dph/cancer/registry-statewide-05-09-report.pdf
[41] National Institutes of Mental Health. *Depression*. Retrieved on June 12, 2013 from http://www.nimh.nih.gov/health/topics/depression/index.shtml
[42] Centers for Disease Control and Prevention. *Depression as a Correlate of Adverse Health Behaviors.* Retrieved on May 1, 2012 from http://www.cdc.gov/mentalhealth/basics/mental-illness/depression.htm
[43] American Cancer Society. (2011) *Colorectal Cancer Facts & Figures 2011-2013*. Retrieved on March 16, 2011 from http://www.cancer.org/acs/groups/content/@epidemiologysurveilance/documents/document/acspc-028323.pdf
[44] U.S. Preventive Services Task Force. (January 2003). *Screening for Cervical Cancer*. Retrieved on March 16, 2011, from http://www.uspreventiveservicestaskforce.org/uspstf/uspscerv.htm
[45] National Cancer Institute. (December 21, 2010). *Pap Test Fact Sheet*. Retrieved on May 6, 2011, from http://www.cancer.gov/cancertopics/factsheet/detection/Pap-test
[46] Centers for Disease Control and Prevention. (2003). *Cervical Cancer Screening Fact Sheet*. Retrieved on May 1, 2007, from http://www.cdc.gov/cancer/cervical/pdf/cc_basic.pdf

[47] Centers for Disease Control and Prevention. *Lesbian, Gay, Bisexual, and Transgender Health*. Retrieved June 14, 2013 from http://www.cdc.gov/lgbthealth/about.htm
[48] HealthyPeople. *Lesbian, Gay, Bisexual, and Transgender Health*. Retrieved June 14, 2013 from http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=25
[49] Massachusetts Department of Public Health, Office of HIV/AIDS. Massachusetts HIV/AIDS Data Fact Sheet: The Massachusetts HIV/AIDS Epidemic at a Glance. Retrieved June 14 2013 from http://www.mass.gov/eohhs/gov/departments/dph/programs/id/hiv-aids/epi-profile/epi-2013/statewide-fact-sheets.html
[50] Centers for Disease Control and Prevention. *Intimate Partner Violence: Prevention Strategies*. Updated April 8, 2010, from http://www.cdc.gov/ViolencePrevention/intimatepartnerviolence/prevention.html
[51] The National Center for Victims of Crime, (2012), About Sexual Assault. Retrieved June 14, 2013 from http://www.victimsofcrime.org/our-programs/dna-resource-center/sexual-assault-kit-backlog-reduction/about-sexual-assault
[52] Massachusetts Department of Public Health,2011, *Injury Prevention for Older Adults,* Retrieved on May 6, 2011 from http://www.mass.gov/eohhs/gov/departments/dph/programs/community-health/dvip/injury-prevention/injury-prevention-for-older-adults.html
[53] Massachusetts Department of Public Health, Injury Surveillance Program. *Injury Related Hospital Discharges, 2010.* Retrieved on January 23, 2013 from http://www.mass.gov/eohhs/docs/dph/injury-surveillance/ma-resident-hosp-discharge-summary10.pdf
[54] Massachusetts Department of Public Health, Injury Surveillance Program. *Injury Related Outpatient Observation Stays, 2010.* Retrieved on January 23, 2013 from http://www.mass.gov/eohhs/docs/dph/injury-surveillance/ma-residents-outpatient-summary10.pdf
[55] Massachusetts Department of Public Health, Injury Surveillance Program. (2011). *Injury Related Emergency Department Visits, 2010.* Retrieved on January 23, 2013 from http://www.mass.gov/eohhs/docs/dph/injury-surveillance/ma-residents-emergency-visits-summary10.pdf
[56] United State Department of Transportation, National Highway Traffic Safety Administration. (2010). *Traffic Safety Facts 2008 Data: Alcohol-Impaired Driving*. Retrieved on March 17, 2011, from http://www-nrd.nhtsa.dot.gov/Pubs/811385.PDF
[57] Massachusetts Executive Office of Public Safety and Security. (2011) *Drunk Driving, Over the Limit, Under Arrest.* Retrieved on March 22, 2011 from http://www.mass.gov/eopss/crime-prev-personal-sfty/traffic-safety/drunk-driving-over-the-limit-under-arrest.html
[58] Blincoe, L., et al. (2002). *The Economic Impact of Motor Vehicle Crashes.* Sponsored by the U.S. Department of Transportation, National Highway Traffic Safety Administration, Washington, D.C Retrieved on June 19, 2013 from http://www.nhtsa.gov/search?q=The+Economic+Impact+of+Motor+Vehicle+Crashes&x=7&y=7
[59] The National Campaign to Prevent Teen and Unplanned Pregnancy. (May 2008). *Fast Facts: The Consequences of Unplanned Pregnancy*. Retrieved on May 29, 2009, from http://www.thenationalcampaign.org/resources/pdf/fast-facts-consequences-of-unplanned-pregnancy.pdf
[60] Sonfield, A et al. *The Public Costs of Births Resulting from Unintended Pregnancies: National and State-Level Estimates.* Perspectives on Sexual and Reproductive Health. June 2011, Vol 43, No. 2, pp. 94-102
[61] Burke, N.J et al. (2009). *Theorizing Social Context: Rethinking Behavioral Theory* Health Educ Behav, 36, 55S Retrieved on June 4, 2013 from http://heb.sagepub.com/content/36/5_suppl/55S.full.pdf+html
[62] Dollars & Sense Real World Economics. (2012). *Different Anti-Poverty Programs, Same Single-Mother Poverty.* Retrieved on June 4, 2013 from http://www.dollarsandsense.org/archives/2012/0112albelda.html
[63] Belinfante, A. (February 2010). *Telephone subscribership in the United States: Data though March 2010.* Federal Communications Commission. Retrieved on June 19,2012 from http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-301241A1.pdf
[64] The American Association for Public Opinion Research (2009) *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys* Retrieved on July 1, 2013 from http://www.aapor.org/Content/NavigationMenu/ResourcesforResearchers/StandardDefinitions/StandardDefinitions2009new.pdf