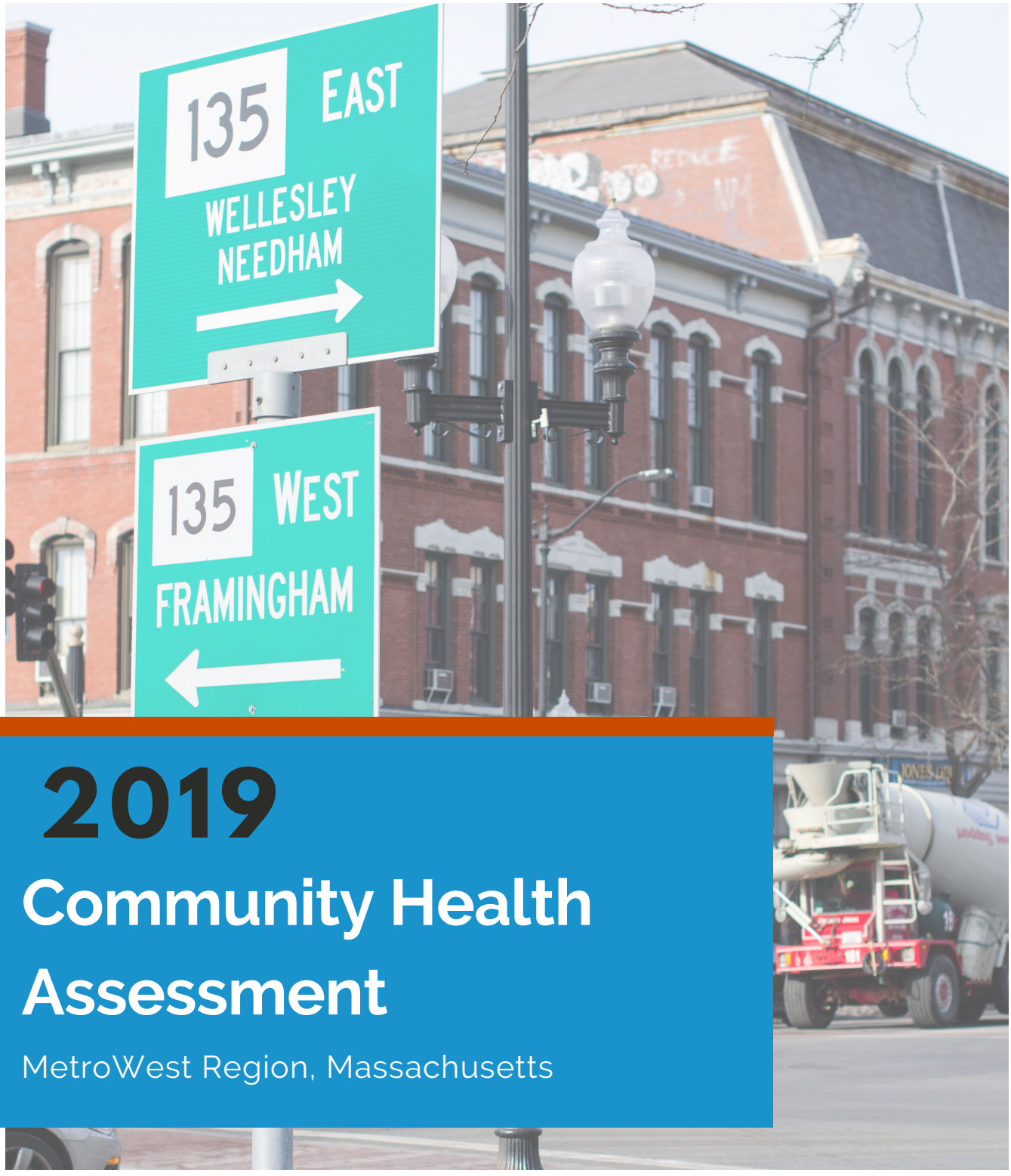

2019 Community Health Assessment

MetroWest Region, Massachusetts

Report prepared by

Health Resources in Action®
Advancing Public Health and Medical Research

Made possible with funding from

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CONTENTS

ACKNOWLEDGEMENTS

We are pleased to present the third collaborative Community Health Assessment (CHA) for the MetroWest area of Massachusetts. This assessment, similar to the first two, is a result of extensive primary and secondary research, which included input from residents, organizational leaders, and stakeholders from across 22 MetroWest communities.

In addition to satisfying a regulatory requirement of the Affordable Care Act, this CHA represents an unprecedented effort and opportunity to gather local health data and community input to provide a more detailed and complete profile of our region's health needs. The long-term goal of this activity is to achieve greater regional collaboration that will serve to leverage the resources, talent and expertise of our diverse stakeholders and communities to make the MetroWest region a healthier place to live and work.

We wish to thank the community organizations that participated in this endeavor (see Appendix A) and the residents who completed our online survey or participated in one of the focus groups held throughout the region.

The MetroWest Health Foundation provided financial support and managed the assessment, which included fundraising and securing the technical and research resources to complete the project. The foundation is grateful to the following organizations that also provided core funding and leadership for this project: UMass Memorial-Marlborough Hospital, MetroWest Medical Center, CHNA 7 MetroWest, Framingham Health Department, and Hudson Health Department.

Copies of this report can be downloaded from the foundation's website at www.mwhealth.org

We also invite your comments and feedback on this CHA, which can be sent to us at info@mwhealth.org

EXECUTIVE SUMMARY

Introduction

Improving the health of a community is critical to ensuring the quality of life of its residents and fostering sustainability and future prosperity. Understanding the current health status of the community is an important first step that allows residents and advocates to identify existing strengths and assets upon which to build, priorities for future planning and funding, and areas for further collaboration and coordination across organizations, institutions, and community groups. To this end, a collaborative group of organizational partners in the MetroWest region— CHNA 7 MetroWest, Framingham Health Department, Hudson Health Department, MetroWest Health Foundation, MetroWest Medical Center, and UMass Memorial-Marlborough Hospital —led a comprehensive process to update the community health assessment (CHA) that was conducted in 2016. The goals of the 2019 CHA are to:

- Update the 2016 CHA data to provide a portrait of MetroWest communities;
- Identify how the social determinants of health may affect residents;
- Determine whether residents' perceptions of the four previously-identified areas of need -- access to care, healthy aging, behavioral health, and healthy eating/active living – have changed over the past three years;
- Identify strategic programmatic, collaborative, and funding opportunities for the future.

As a collaborative effort, the CHA process was led by an advisory committee comprised of a range of organizations and partners working across the MetroWest region. The CHA process used a participatory approach in that all members were engaged providing feedback on data collection instruments, guiding the assessment methodology, organizing data collection efforts such as focus groups, and conducting the focus groups themselves or engaging with community partners to do so. The collaborative worked with Health Resources in Action (HRiA), a non-profit public health consulting organization, to provide strategic guidance and technical assistance for the community health assessment process to analyze secondary and community survey data, and to develop the final CHA report deliverables. This report details the findings of the CHA conducted from September 2018 – June 2019.

Methods

This CHA aims to identify the health-related needs and strengths of the MetroWest region by defining health in the broadest sense and recognizing numerous factors – from employment to housing to access to care – that have an impact on the community's health. Social, economic, and health data were drawn from existing data sources, such as the Massachusetts (MA) Department of Public Health, the U.S. Census Bureau, the U.S. Bureau of Labor Statistics, and the University of Wisconsin Population Health Institute's County Health Rankings, among others. In addition to an online community survey that engaged nearly 800 residents, approximately 84 individuals representing area residents, community stakeholders, and multi-sector organizations, participated in eight focus groups and nine interviews to gather feedback on community strengths, challenges, priority health concerns, and opportunities for the future.

Key Themes

Demographics

- All MetroWest communities experienced increases in their population size between 2011 and 2017, ranging from a 2.9% increase in Westborough to a 12.1% increase in Hopkinton.
- The percentage of households with older adults is growing, with over one quarter of all households in the MetroWest region having seniors. Key informant interviewees voiced concerns about supporting the aging population: ***"In elderly people we see increased social isolation which puts them at risk for depression and other issues."***
- Between 2011 and 2017, both MA and the MetroWest region saw decreases in the percentage of the population that is White, non-Hispanic, and increases in the percentages of the population that are Black, non-Hispanic; Asian, non-Hispanic; and Hispanic/Latino. Some focus group participants suggested that school, town, and health care personnel should strengthen their knowledge of other cultures and histories in order to improve interpersonal and community relations.
- Focus group participants and key informant interviewees highlighted the need for more language services and improved cultural sensitivity. One key informant interviewee noted, ***"We don't have many bi-lingual facilitat[ors] and providers. Spanish and Portuguese [are] the languages that we see most often and can't find providers for."***

Social Determinants of Health

- The high school graduation rate increased in MA from 84.7% in 2012 to 88.3% in 2017. In the MetroWest region in 2017, three school districts (Hudson, Framingham, and Marlborough) had 4-year graduation rates below that of the state whereas graduation rates were 90% or greater in all other MetroWest school districts.
- The unemployment rates have declined greatly in MA from 5.7% in 2014 to 3.3% in 2018. Similarly, all communities within the MetroWest region saw unemployment rates fall over that time period, with current unemployment rates ranging from a low of 2.2% Sherborn to a high of 3.5% in Hudson.
- Between 2011 and 2017, the median household income in MA increased 12.4% (from $65,981 to $74,167). All but one MetroWest community (Southborough) experienced an increase in median household income in that time period. In 2017, the median household incomes in the MetroWest region ranged from a low of $73,182 in Framingham to a high of $170,945 in Sudbury.
- Between 2011 and 2017, both Massachusetts and the MetroWest region overall saw increases in the percentage of its populations living below the poverty level. In 2017, the MetroWest Region had a lower percentage of its population living below the poverty level, compared to the state overall (5.4% vs. 11.1%). However, Framingham, Maynard, Marlborough, Plainville and Hudson had rates that were higher than the region overall.
- Between 2011 and 2017, the percentage of housing cost burdened owners decreased in Massachusetts (from 30.6% to 23.6%) and in the MetroWest region (from 26.5% to 19.9%). However, the percentage of housing cost burdened renters remained steady in Massachusetts (from 40.4% to 40.0%) and increased slightly in the MetroWest region (from 34.7% to 37.4%).
- In focus groups and key informant interviews, transportation was the most frequently discussed issue in relation to the availability of health care services in the region and referred to as a ***'major issue'***. This included the lack of transportation options for specific populations, such as seniors or those requiring mental health services, and transportation options at off-peak times (e.g., late-night service). Many participants noted that for those living in the smaller municipalities, the limited

transportation options, coupled with fewer venues or opportunities for entertainment in these communities, contribute to a sense of isolation or loneliness for some residents, particularly seniors and non-English speaking residents.

- There were some contrasting perspectives of the availability and/or need for services that support healthy behaviors (i.e., opportunities for physical activity, healthy nutrition) between focus group participants and key informant interviewees. Several interviewees thought these were still important issues in their community, while focus group participants felt needs were adequately being met in the community and therefore not a priority at this time.

Community Health Issues

- A majority of community health survey respondents rated the health status of their community as good, very good, or excellent (84.9%), though this percentage reflects a slight decline from the 2016 survey findings (90.4%).
- Survey respondents who identified as a minority race/ethnicity were more likely to rate the overall health of the community as fair or poor compared to respondents who did not identify as a minority race/ethnicity.
- **Figure 1** shows the top health concerns impacting the community as identified via community health surveys in the 2013, 2016, and 2019 CHAs.

FIGURE 1. TOP FIVE HEALTH CONCERNS PERCEIVED TO HAVE LARGEST IMPACT ON COMMUNITY, 2013 TO 2019

	Health Concerns of Community Health Survey Respondents		
Rank	**2013**	**2016**	**2019**
1	Overweight / obesity	Alcohol / Substance Use	Alcohol / Substance Use
2	Aging problems	Mental health issues	Mental health issue
3	Mental health issues	Aging problems	Aging problems
4	Cancer	Overweight / Obesity	Smoking / Vaping
5	Alcohol / Substance Use	Cancer	Overweight / Obesity

- Alcohol and substance use were ranked as the greatest health concern by community health survey respondents in 2016 and 2019. From 2014-2018, the opioid-related overdose mortality rate increased 49.3% in MA and 73.9% in the MetroWest region, though the MetroWest region's rate never rose above the state rate. The Bureau of Substance Addiction Services (BSAS) data on treatment admissions shows that MA saw a 13.0% increase while the MetroWest region saw an 8.8% decrease in its alcohol-related BSAS admission rate from 2015-2018.
- All MetroWest communities had a lower percentage of adults reporting fifteen or more days of poor mental health in the last month compared to the state percentage of 11.0%. However, mental health issues were the second most frequently identified health concern among community health survey respondents. Additionally, there was consistent support across focus group participants and key informant interviewees on the need for better mental health services, particularly in order to address substance and alcohol misuse: ***"Our patients are actively using drugs or having serious mental health issues, so our priority is getting these addressed as fast as we can. There aren't enough treatment options for these issues."*** *(Key Informant Interviewee).*

- Among youth in the region, mental health issues appeared to be a growing concern. The MetroWest Adolescent Health Survey found that the percentage of middle school and high school students in the region that reported life as "very stressful" in the past 30 days increased between 2012 to 2018
- Overweight/obesity ranked within the top 5 health concerns by community health survey respondents. Twelve MetroWest communities had higher heart disease mortality rates than the state rate, and particularly high rates were observed in Hopkinton and Marlborough. However nearly all communities had lower rates of hospital admissions for cardiovascular disease or diabetes compared to the state.
- Cancer did not appear among the top five health concerns impacting the community in the 2019 survey, however several towns had significantly higher than expected cancer incidence ratios for colorectal cancer (Hudson, Marlborough, and Hudson), breast cancer (Foxborough, Sudbury, Walpole, and Wayland), and prostate cancer (Holliston, Medfield, and Walpole).

Health Care Access and Utilization

- Insurance coverage was cited as a challenge by focus group participants and key informant interviewees. Many participants mentioned the difficulty of finding a doctor that accepts their insurance and challenges around their insurance not covering the types of health care that were needed, such as dental care, mental health care, and psychiatric care.
- The overall MetroWest region has a lower uninsured percentage than the state (2.7% v. 3.0%, respectively), while the municipalities of Hudson, Marlborough and Framingham have higher uninsured rates (4.1%, 4.8% and 6.7% respectively). Data were also explored by race/ethnicity and a number of MetroWest communities had substantially higher uninsured rates among Black/African American and Hispanic residents.
- The top five barriers to physical health services reported by community health survey respondents were long wait times for an appointment, the cost of care, the doctor's office not accepting new patients, insurance problems/lack of coverage, and lack of weekend or evening services.
- The top five barriers differed slightly based upon race/ethnicity. Respondents who identified as a minority race/ethnicity were more likely to report insurance problems/lack of coverage and cost of care compared to respondents who did not identify as a minority race/ethnicity. Respondents who identified as a minority race/ethnicity were also more likely to identify lack of transportation as a top barrier.
- The top five barriers to behavioral health services reported by survey respondents were insurance problems/lack of coverage, long waits for an appointment, the cost of care, the doctor's office not accepting new patients, and that respondents did not know what type of services were available. Differences in barriers to behavioral health services were not observed by race/ethnicity.

Vision for the Future

- When asked what they would like to see in their community three to five years from now, focus group participants frequently discussed the desire for more opportunities for social connections and a stronger sense of community with improved emotional support and personal connection between people: ***"[A] strong sense of community – communities where people are watching out for each other, there are places to gather, people are seen and cared for, feel a sense of belonging."*** (Focus Group Participant)
- A sense of belonging or feeling part of one's community was a particular concern among focus group participants of minority race or ethnicity. Some suggested that school, town, and even health care personnel should strengthen their knowledge of other cultures and histories in order to

improve interpersonal and community relations: ***"We are not likely to be drawn to or feel comfortable in a place like the [Senior] Center because they don't have the environment that is sensitive to multi-cultural needs….no one looks like us."*** (Focus Group Participant)

- The top three priorities identified by community health survey respondents related to 'access to care' were helping individuals obtain health insurance, increasing health/medical services to low-income individuals, and increasing dental services to low-income individuals.
- The top three priorities identified by community health survey respondents related to access to behavioral health care were' providing more mental health/counseling services for youth', 'integrating mental health and substance use services into primary care settings', and 'expanding support services to people affected by mental health and substance abuse'.
- Community health survey respondents reported increasing services that help seniors to remain in their homes, providing more support to caregivers, expanding health/medical services to seniors age 65 and older, and providing more education on caring for someone with Alzheimer's or dementia as the top priorities related to 'healthy aging'.
- Community health survey respondents reported making fresh fruits and vegetables more affordable and available, expanding school-based programs that promote physical activity and health eating, improving walkability, and offering more programs/services focusing on physical activity, nutrition, or obesity as the top priorities related to 'healthy eating and physical activity'.

Conclusions

- **Residents' top health concerns remained mostly consistent between 2016 and 2019**, though smoking/vaping rose to the 4th greatest health concern and cancer fell to the 8th greatest health concern in 2019.
- **While MetroWest as a region generally had similar or better health outcomes and social determinants of health compared to the state overall, this varied across municipalities.** Residents of some MetroWest communities were less likely to possess some of the protective social determinants of health, such as higher educational attainment or higher household income compared to the state or the region overall. Residents of some MetroWest communities were also more likely to experience poorer health outcomes, such as heart disease, cancer, and substance use compared to the state.
- **Alcohol, substance use, and mental health issues persisted as the greatest health concerns identified by survey respondents from 2016 to 2019.** Existing data corroborated the concerns around mental health and substance use. Focus group and interview participants desired the integration of mental health and substance use services into primary care settings and expanding support services to people affected by mental health and substance use.
- **Significant barriers to accessing health care exist in the MetroWest region.** Top barriers to both physical health services and behavioral health services included long wait times for an appointment, insurance problems/lack of coverage, the cost of care, and the doctor's office not accepting new patients. Transportation was one of the most frequently discussed issues in relation to access to health care services in the region by focus group participants. They specifically mentioned a lack of outpatient mental health services, stigma related to mental health, and long wait times to see specialists (including mental health and substance use specialists) as barriers to accessing behavioral health care.
- **Perceptions of community health, identified top health concerns, and experience with accessing care differed by race/ethnicity.** Compared to respondents who did not identify as a minority race/ethnicity, respondents who identified as a minority race/ethnicity were more likely to rate the

overall health of the community as fair or poor; were more likely to identify diabetes as a top health issue; and were less likely to report that they never experienced difficulty in getting physical health care. Barriers to care also differed by race/ethnicity, with respondents of minority race/ethnicity more likely to cite lack of transportation, insurance problems/lack of coverage, and cost of care as barriers to physical health services, compared to respondents who did not identify as a minority race/ ethnicity.

- **As the MetroWest region population ages, improved services for seniors will likely be needed.** A future with more or better transportation options, particularly for elderly and disabled residents, was also discussed frequently in the resident focus groups. Increasing services that help seniors to remain in their homes longer was selected as a high priority related to healthy aging by over two thirds of community survey respondents.
- **A stronger sense of community was a consistent vision for the future**. When asked what they would like to see in their community three to five years from now, focus group participants frequently discussed the desire for more opportunities for social connections and a stronger sense of community with improved emotional support and personal connection between people.

INTRODUCTION

Improving the health of a community is critical to ensuring the quality of life of its residents. Health influences the multiple facets of our lives, and the environments in which we work and live are inextricably tied to our health. Understanding the current health status of a community—and the multitude of factors that influence health—is important in order to identify the existing strengths and assets on which to build upon, priorities for future planning and funding, and areas for further collaboration and coordination across organizations, institutions, and community groups.

To this end, a collaborative group of organizational partners in the MetroWest region—CHNA-7 MetroWest, Framingham Health Department, Hudson Health Department, MetroWest Health Foundation, MetroWest Medical Center, and UMass Memorial-Marlborough Hospital — collaboratively led a comprehensive community health assessment (CHA) process in 2018-2019. This is the third CHA undertaken on behalf of the region. The goals of the 2019 CHA are to:

- Update the 2016 CHA data to provide a portrait of MetroWest communities;
- Identify how the social determinants of health may affect residents;
- Determine whether residents' perceptions of the four previously-identified areas of need -- access to care, healthy aging, behavioral health, and healthy eating/active living – have changed over the past three years;
- Identify strategic programmatic, collaborative, and funding opportunities for the future.

The CHA process was spearheaded, funded, and managed by an advisory committee comprising a range of organizations and partners working across the MetroWest region. A list of these organizational partners can be found in **Appendix A**. The 22 municipalities included in the assessment (**Figure 2**) are those that belong to CHNA 7, the regional health collaborative created by the Massachusetts Department of Public Health that includes Framingham, Hudson, and Marlborough. The 22 municipalities encompass three counties: Middlesex, Norfolk, and Worcester Counties.

FIGURE 2. GEOGRAPHIC SCOPE OF METROWEST COMMUNITY HEALTH ASSESSMENT

The CHA process used a participatory approach in that all members were engaged in providing feedback on data collection instruments, guiding the assessment methodology, organizing data collection efforts, and conducting interviews and focus groups themselves or engaging with community partners to do so. Health Resources in Action (HRiA), a nonprofit public health organization, provided strategic guidance and technical assistance for the community health assessment process to analyze secondary and community survey data and to develop the final CHA deliverables.

This report details the findings of the MetroWest region community health assessment conducted from September 2018 – June 2019.

BACKGROUND

Social Determinants of Health

Having a healthy population requires more than delivering quality health care to residents. Where a person lives, learns, works, and plays has an enormous impact on health. Health is not only affected by people's genes and lifestyle behaviors, but by upstream factors such as employment status, quality of housing stock, and economic policies. In the present community health needs assessment, this Social Determinants of Health framework (**Figure 3**), was used to guide the types and sources of data used to assess the health of MetroWest residents.

FIGURE 3. SOCIAL DETERMINANTS OF HEALTH FRAMEWORK

DATA SOURCE: Health Resources in Action, 2018.

Health Equity

> ***"Health equity means that everyone has a fair and just opportunity to be as healthy as possible. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care."*** – Robert Wood Johnson Foundation[1]

The opportunity to lead a healthy life with full access to the resources needed to maintain that health (i.e. the Social Determinants of Health) is not a universal experience in the United States. The influences of race, ethnicity, income, and geography on health are complex and intertwined with the political and social systems in which we live. Institutional racism, economic inequality, discriminatory policies, and historical oppression of specific groups are a few of the factors that drive health inequities. For example, in the United States, social, economic, and political processes ascribe social status based on race and ethnicity. This has resulted in inequitable opportunities for educational or occupational advancement and housing options, two factors that profoundly affect health.

The barriers to the resources needed to live a healthy life tend to be concentrated among certain populations, such as communities of color, low-income populations, persons experiencing homelessness, persons with disabilities, and the lesbian, gay, bisexual, transgender, and queer communities. Inequitable opportunities and resources ultimately lead to observable health disparities, or differences, between population groups in length of life, quality of life, rates of disease, disability, and death, severity of disease, and access to prevention or treatment.

Put into practice, health equity means ***"removing economic and social obstacles to health such as poverty and discrimination"***.[1] In the present community health assessment, the social, economic, and community context in which MetroWest residents live was explored with the goal of understanding the upstream factors that influence health. While effort was made to include data specific to vulnerable population groups or at more granular geographic levels, this was not always possible due to limitations of the data source or small sub-sample sizes. However, bringing a clearer understanding of health equity or applying a health equity lens to subsequent community health planning processes will help ensure that the selected priorities and strategies yield a broader and more equitable impact on MetroWest residents.

DATA COLLECTION METHODS

Many sources and data collection methodologies were used to obtain a comprehensive view of the health and health care needs of the region. The development and administration of all data collection instruments was led and coordinate by the MetroWest Community Health Assessment steering committee. Organizations and persons representing vulnerable and medically underserved populations and minorities were included throughout the planning and implementation process. Conscientious

[1] Braveman P, Arkin E, Orleans T, Proctor D, and Plough A. *What Is Health Equity? And What Difference Does a Definition Make?* Princeton, NJ: Robert Wood Johnson Foundation, 2017.

efforts were made to reach a wide-ranging population of residents during data collection to ensure broad representation of community interests and perspectives.

Review of Existing Data

Existing data from national, state, and local sources were reviewed. The types of data collected included demographics, vital statistics, public health surveillance data, as well as some self-reported health behaviors from large, population-based surveys conducted at the state level. Data sources included, but were not limited to, the U.S. Census Bureau, the Centers for Disease Control and Prevention, and the Massachusetts Department of Public Health. Secondary data were also included in this report from sources such as Marlborough Hospital ED discharge statistics.

For each of the 22 focus municipalities that defined the scope of the MetroWest Community Health Assessment (Ashland, Foxborough, Framingham, Holliston, Hopkinton, Hudson, Marlborough, Maynard, Medfield, Millis, Natick, Norfolk, Northborough, Plainville, Sherborn, Southborough, Stow, Sudbury, Walpole, Wayland, Westborough, and Wrentham), data were obtained and aggregated to provide a single regional data point when possible. To visualize key findings throughout the report, the municipal level data were compared to regional estimates when possible. When regional data were not available, the state estimate was used as the comparative reference.

Community Health Survey

To understand public perceptions around a range of health issues in the MetroWest region, a community health survey was developed and administered online and via paper surveys to residents throughout the 22 communities. The survey explored key health concerns of community residents, access to services, and their primary priorities for services and programming. The MetroWest community partners disseminated the survey link via their networks as well as through local media.

The survey was available in English, Spanish, and Portuguese and was advertised through language-specific channels as well. Respondents were asked to respond to the survey according to the community which they 'knew best'. A total of 799 respondents were included in the final sample. **Table 1** details the number of responses by community and demographic characteristics. A majority of respondents either live (49.4%) or both live and work (31.5%) in the community that they selected as the community they knew best. The majority (78.4%) of survey respondents were female and over half (55.5%) were age 50 years or older. One quarter (25.2%) of respondents self-identified as a minority race/ethnicity, including 13.1% who identified as Hispanic or Latino. Further demographic details for the community health survey respondents are available in **Appendix B**.

TABLE 1. COMMUNITY HEALTH SURVEY RESPONDENT CHARACTERISTICS, 2019

	N	%
Town (n=799)		
Ashland	41	5.1%
Framingham	349	43.7%
Foxborough	2	0.3%
Holliston	58	7.3%
Hopkinton	14	1.8%
Hudson	62	7.8%
Marlborough	93	11.6%

	N	%
Maynard	15	1.9%
Medfield	6	0.8%
Millis	3	0.4%
Natick	59	7.4%
Norfolk	0	0.0%
Northborough	9	1.1%
Plainville	1	0.1%
Sherborn	2	0.3%
Southborough	8	1.0%
Stow	7	0.9%
Sudbury	33	4.1%
Walpole	4	0.5%
Wayland	17	2.1%
Westborough	16	2.0%
Wrentham	0	0.0%
Gender (n=589)		
Male	125	21.2%
Female	462	78.4%
Transgender	2	0.3%
Racial/Ethnic Background (n=799)*		
African American/Black	13	1.6%
American Indian/Native American	6	0.8%
Asian/Pacific Islander	21	2.6%
Brazilian	55	6.9%
White	412	51.6%
Hispanic/Latino(a)	105	13.1%
Middle Eastern	4	0.5%
Multiple races	26	3.3%
Declined to answer	200	25.0%
Age group (n=611)		
Under 30 years old	46	7.5%
30 to 49 years	226	37.0%
50 to 64 years	218	35.7%
65 years and older	121	19.8%

DATA SOURCE: MetroWest Region Community Health Survey, 2019. NOTE: * denotes where respondents were allowed to select multiple responses, and therefore, percentages may not add up to 100%

To explore differences in perspective and opinion by race/ethnicity, statistical comparisons between survey respondents who identified as a minority race and/or Hispanic ethnicity and those that did not identify as such were conducted during analyses using chi-square tests. More specifically, survey respondents who self-identified as African American/Black, American Indian/Native American, Asian/Pacific Islander, Brazilian, Hispanic/Latino(a), Middle Eastern, or Mixed Race were categorized as "identified as a minority race/ethnicity" (total n=201). Survey respondents who self-identified only as white or that declined to answer the demographic questions were categorized as ''did not identify as a minority race/ethnicity" or referred to as "other respondents" (total n=598). Results are detailed throughout the report where findings were statistically significant based on criterion of $P<0.001$.

Community Focus Groups and Key Informant Interviews

Between February and March 2019, eight focus groups and nine key informant interviews (total of 84 individuals) were conducted to gather feedback on people's priority health concerns, community challenges to addressing these concerns, current strengths of the area, and opportunities for the future. Participants for the focus groups and key informant interviews were recruited by and discussions or interviews were led by community partners and members of the MetroWest Community Health Assessment steering committee with the goal of engaging a cross-section of residents, service providers, and community leaders.

The focus groups spanned a number of age groups, geographies, and roles in the community. Groups represented a range of populations, including seniors, persons of color, immigrants, residents with mental health needs, and social and health service professionals, among others. Key informant interviewees represented agencies serving elders, low income populations, immigrant residents, and young adults, as well as local law enforcement or judicial system. A list of the types of focus groups and interviews conducted, as well as the community organizations that helped to organize the focus groups can be found in **Appendix C**.

Data Limitations

As with all data collection efforts, there are several limitations that should be acknowledged. A number of secondary data sources were drawn upon in creating this report. Although all are considered highly credible, each source may use different methods, assumptions, or time periods and may not be directly comparable to one another. As this assessment was focused on health, a heavy reliance was placed upon data provided by Massachusetts Department of Public Health. While these data are highly valuable as they provide health outcome data directly based on each town's population, data were not available for more recent years and data availability varied by topic. Furthermore, the MA DPH Population Health Information Tool (PHIT)[2] did not allow stratification of health outcome data by race/ethnicity, which prevented exploration of health disparities for the MetroWest health assessment.

For the MetroWest community health survey, convenience sampling was used and data were collected from those who were readily available and willing to participate. Further, while the survey was available in Spanish and Portuguese and efforts were made to disseminate the survey via community-based organizations that work with lower income populations, the survey sample tended to skew higher educated, consistent with most online surveys. Thus, findings may not be generalizable to the larger population or to specific sub-populations of MetroWest residents. Finally, while focus groups and key informant interviews provide valuable insights, results are not statistically representative of a larger population due to non-random recruiting techniques and a small sample size.

Incarcerated Populations

One unique aspect of the MetroWest region is the presence of four correctional facilities, including Massachusetts Correctional Institution (MCI) Norfolk in Norfolk, MCI Framingham and South Middlesex

[2] Massachusetts Department of Public Health, Population Health Information Tool (PHIT), https://www.mass.gov/health-outcomes-data, Accessed April-June, 2019

Correctional Center in Framingham, and MCI Cedar Junction in Walpole. Per the 2010 US Census, the total incarcerated population residing in Norfolk numbered 2,241 (19.9% of the population), in Framingham numbered 823 (1.2% of the population), and in Walpole numbered 482 (2.0% of the population)[3]. The inclusion of incarcerated individuals in secondary data may influence town level estimates for a number of indicators and outcomes.

Incarcerated individuals are likely included in data collected and reported from MA DPH for a given town if the reported health outcome occurred at the time the individual was incarcerated in the town. Additionally, incarcerated individuals are included in data collected and reported from the U.S. Census Bureau data, including the Decennial Census and the American Community Survey. While the direction and magnitude of impact on the data included in this report are unknown, it is important to understand this context when interpreting findings, particularly for Norfolk where this group makes up approximately one-fifth of the total population.

[3] US Census Bureau, Group Quarters Population by Group Quarters Type, 2010 Census Summary File 1

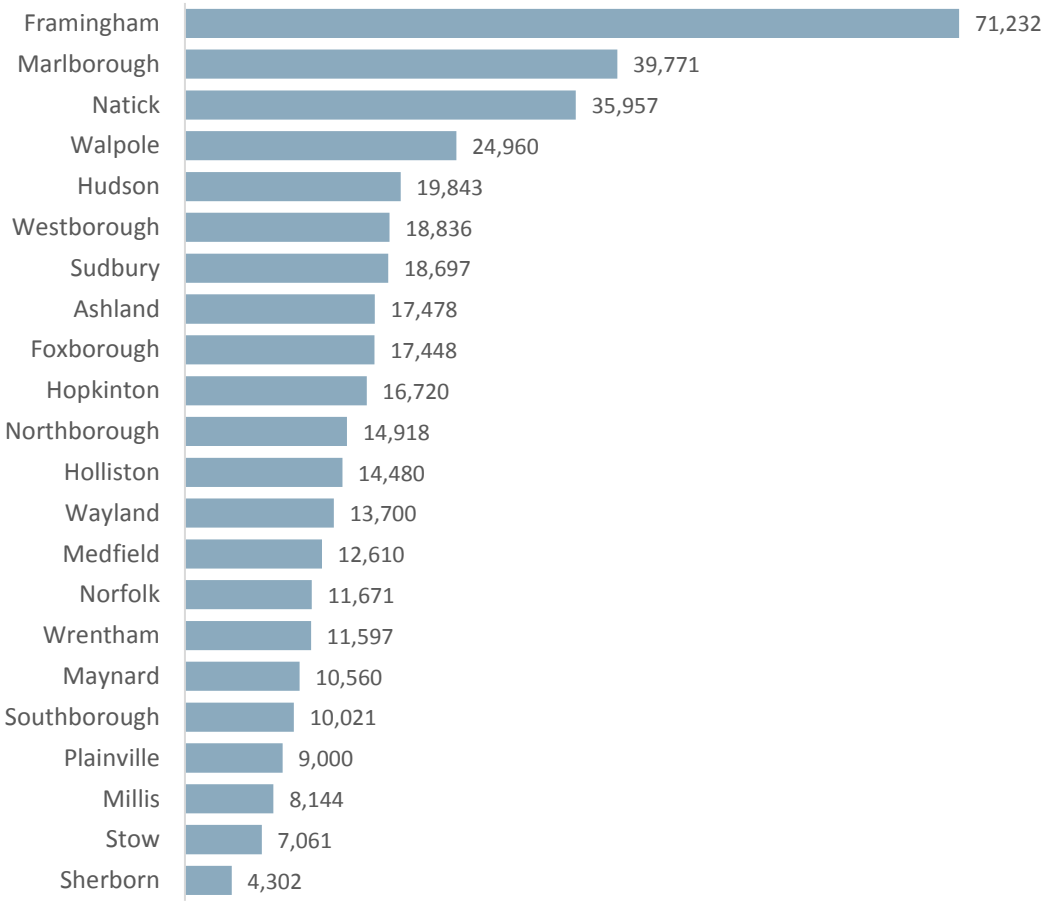
FINDINGS

Demographic Characteristics

Population Size

The total population of the MetroWest region is 409,006. The population size varies across the MetroWest communities, from a low of 4,302 in Sherborn to a high of 71,232 in Framingham (**Figure 4**).

FIGURE 4. TOTAL POPULATION, 2017

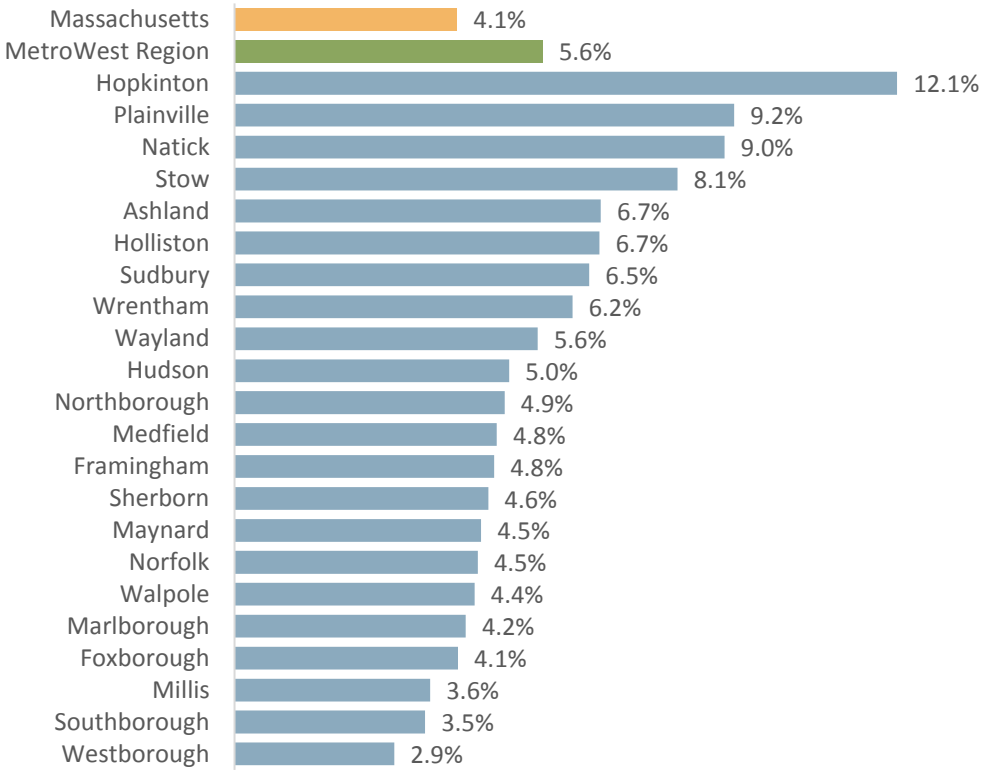


DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017.

All MetroWest communities experienced growth in their total population between 2011 and 2017. The MetroWest region had a higher percent increase in population size than the state (5.6% vs. 4.1%, respectively (**Figure 5**). Across the MetroWest communities, these population increases ranged from a 2.9% increase in Westborough to a 12.1% increase in Hopkinton. The recent MetroWest Health Foundation Trends and Projections report by Metropolitan Area Planning Council conducted more in-depth analyses and projects that the population growth in the region will slow in coming years, with an expected overall growth of 4% in the MetroWest region between 2010 to 2040.[4]

[4] MetroWest Health Foundation Trends and Projections report by Metropolitan Area Planning Council

FIGURE 5. PERCENT CHANGE IN TOTAL POPULATION, 2011 TO 2017

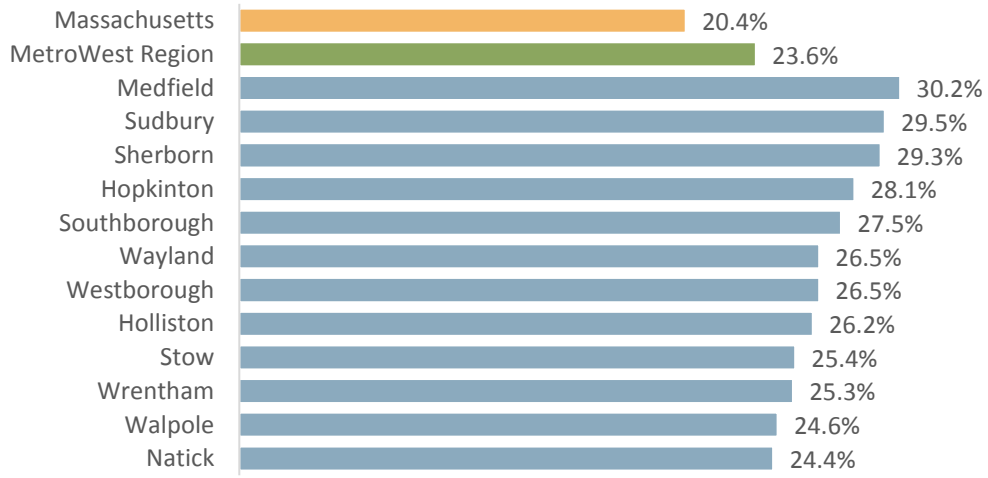


DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2007-2011 & 2013-2017.

Vulnerable Age Groups

The MetroWest region overall has a greater percentage of the population under the age of 18 compared to the state (23.6% vs., 20.4%, respectively) (**Figure 6**). The percentage of the population under the age of 18 within the MetroWest region ranged from a low of 19.8% in Hudson to a high of 30.2% in Medfield. Between 2011 and 2017, the percentage of the population that is under the age of 18 decreased slightly, from 21.8% to 20.4% in Massachusetts and from 25.8% to 23.6% in MetroWest.

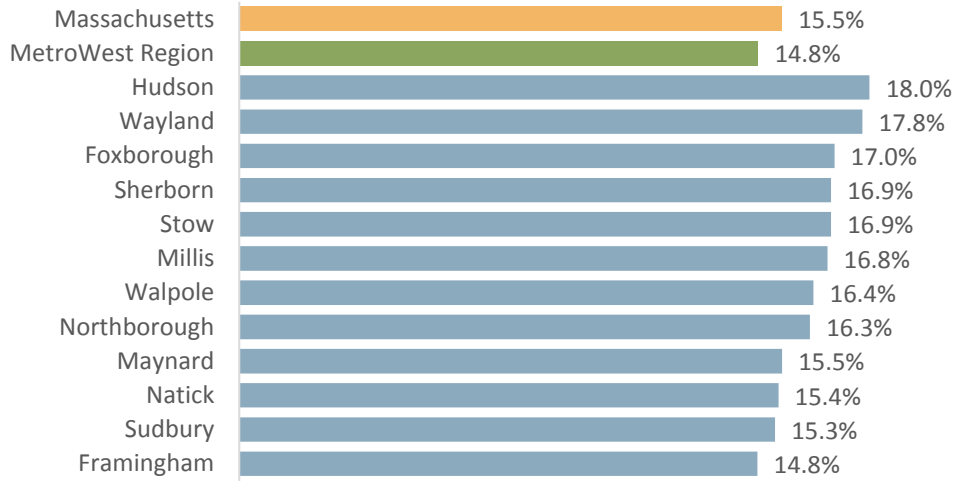
FIGURE 6. PERCENTAGE OF POPULATION UNDER 18 YEARS OF AGE, 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

The MetroWest region overall has a similar percentage of its population age 65 and older as Massachusetts (14.8% vs. 15.5%, respectively) (**Figure 7**). The percentage of the population age 65 and older within the MetroWest region ranges from a low of 9.8% in Hopkinton to a high of 18.0% in Hudson. Between 2011 and 2017, the percentage of the population that is age 65 and older increased slightly from 13.7% to 15.5% in Massachusetts and from 12.3% to 14.8% in MetroWest. The recent MetroWest Health Foundation Trends and Projections report by Metropolitan Area Planning Council conducted more in-depth analyses and projected growth in the percentage of households with older adults - it is anticipated that nearly one in four residents in the region will be 65 and older by 2040.[5]

FIGURE 7. PERCENTAGE OF POPULATION 65 YEARS OF AGE AND OVER, 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

Racial and Ethnic Diversity

Growing racial/ethnic/language diversity of the population in the region was mentioned across the resident focus groups. Specific municipalities mentioned included Framingham, Hudson, Ashland, Milford, and Westboro and the specific groups identified were Brazilian, Portuguese, Black or African American, Indian, and Hispanic or Latino.

> ***"We have seen the minority population change over time from African Americans, to Latinos, to the Brazilian population that's very present in the businesses and residing throughout the city."*** - Focus Group Participant

Focus group participants that were of minority race/ethnicity/language expressed the need to seek out members of their own communities and backgrounds to feel comfortable and connected as a resident of the region.

> ***"It's normal for people who have backgrounds in common to stick together. People with the same language or race tend to seek out each other to be together to share their common customs and culture."*** - Focus Group Participant

[5] MetroWest Health Foundation Trends and Projections' report by Metropolitan Area Planning Council

This contributed to a sense of distinct or occasionally overlapping communities that minority residents learn to navigate in order to reside in an area with abundant educational and economic opportunity.

> ***"To me "community" is a multi-level thing. We belong to the Millis community because we live there, our faith experience is another, our workplace is yet another, and they don't always overlap."*** - Focus Group Participant

This sentiment was true even for focus group participants that grew up in the Metro West region:

> ***"Like my childhood experience growing up in Natick, you can often feel like you have to live two lives…where you don't really fit in among the majority in school and in the neighborhood that you reside in, AND you don't really fit in with extended family that may still reside in urban communities of color. I was teased from both communities. Being "the only" can be painful and a challenge just to ensure a better education and life."*** - *Focus Group Participant*

The importance of community-based social organizations to residents of minority racial/ethnic/language groups was clearly articulated. Focus group participants noted that finding local organizations of their culture is very important and helps residents to feel supported as they live or work in the region.

> ***"That's why the church (GFCC) was created…to be able to bring our community together. We knew that it was important for our children to have this community. In fact, that's why the word 'community' is in the name of the church."*** - Focus Group Participant

> ***"The Indian community does not have much support outside of its own community. India Society has brought people together to celebrate culture and offer community and a sense of belonging and camaraderie."*** - Focus Group Participant

Additionally, there was some consistency among focus group participants of minority race or ethnicity in feeling it was necessary to play a very active role in advocating for themselves when accessing health care:

> ***"When our family first moved into the town, there were very few people of color. Over the years that number has increased. But we still find ourselves needing to advocate for ourselves to get proper and appropriate service in the town's schools, hospitals, and other medical facilities."*** - Focus Group Participant

> ***"...we as a community need to look at how we are advocating for our families to ensure that they experience fair and quality health care. We need to accompany our family members to provide that assistance."*** - Focus Group Participant

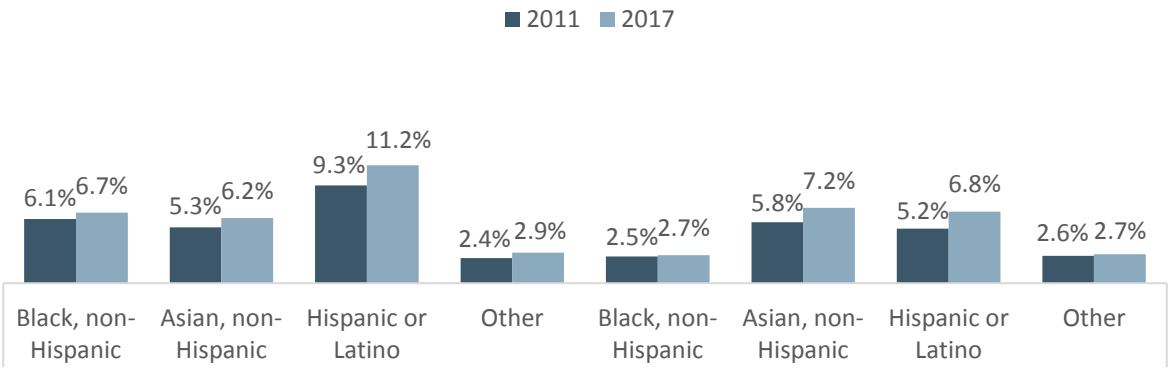
Some participants suggested that school, town, and even health care personnel should strengthen their knowledge of other cultures and histories in order to improve interpersonal and community relations:

> ***"We are not likely to be drawn to or feel comfortable in a place like the [Senior] Center because they don't have the environment that is sensitive to multi-cultural needs….no one looks like us."*** - Focus Group Participant

Several municipalities, including Framingham and Milford, were specifically noted as doing a better job of reflecting the diversity of their municipalities, by making multi-cultural materials or services available to address the needs of various populations.

Between 2011 and 2017, both Massachusetts and the MetroWest region saw decreases in the percentage of the population that is White, non-Hispanic (from 76.9% to 72.9% in Massachusetts and from 83.8% to 80.6% in MetroWest) and increases in the percentages of the population that is Black, non-Hispanic; Asian, non-Hispanic; Hispanic/Latino; and other races/ethnicities (**Figure 8**). During this time period, all but 4 MetroWest communities (Maynard, Millis, Plainville, and Southborough) experienced decreases in the percentage of their population that is White, non-Hispanic population (data not shown).

FIGURE 8. RACIAL/ETHNIC DISTRIBUTION, 2011 AND 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2007-2011 & 2013-2017.

Table 2 details the racial/ethnic distribution for the MetroWest municipalities as of 2017. The percentage of White, non-Hispanic residents ranged from a low of 66.0% in Framingham to a high of 95.3% in Plainville. The percentage of Black, non-Hispanic residents ranged from a low of 0.0% in Stow to a high of 5.5% in Norfolk and Framingham. The percentage of Asian, non-Hispanic residents ranged from a low of 0.8% in Wrentham to a high of 23.4% in Westborough. The percentage of Hispanic/Latino residents ranged from a low of 0.2% in Plainville to 16.3% in Framingham.

TABLE 2. RACIAL/ETHNIC DISTRIBUTION OF TOTAL POPULATION, 2017

	White, non-Hispanic	Black, non-Hispanic	Asian, non-Hispanic	Hispanic or Latino	Other
Massachusetts	72.9%	6.7%	6.2%	11.2%	2.9%
MetroWest Region	80.6%	2.7%	7.2%	6.8%	2.7%
Ashland	81.5%	3.0%	8.5%	4.9%	2.0%
Foxborough	87.7%	5.3%	1.8%	2.9%	2.2%
Framingham	66.0%	5.5%	7.7%	16.3%	4.5%
Holliston	89.0%	1.1%	4.2%	3.7%	2.0%
Hopkinton	87.2%	1.9%	6.3%	2.7%	1.8%
Hudson	87.5%	1.3%	2.7%	6.7%	1.9%
Marlborough	73.0%	2.7%	5.4%	13.0%	6.0%
Maynard	88.6%	4.1%	2.9%	2.8%	1.5%
Medfield	90.8%	1.1%	5.1%	1.8%	1.2%
Millis	92.7%	0.2%	1.2%	5.2%	0.7%
Natick	80.1%	1.7%	12.5%	3.9%	1.8%
Norfolk	84.1%	5.6%	1.3%	7.6%	1.4%
Northborough	84.4%	1.7%	8.7%	3.1%	2.1%
Plainville	95.3%	0.7%	2.0%	0.2%	1.8%

	White, non-Hispanic	Black, non-Hispanic	Asian, non-Hispanic	Hispanic or Latino	Other
Sherborn	89.4%	0.4%	4.1%	2.9%	3.2%
Southborough	84.2%	1.1%	11.2%	2.0%	1.5%
Stow	91.0%	0.0%	4.0%	2.5%	2.5%
Sudbury	84.7%	0.6%	10.0%	1.8%	2.8%
Walpole	87.0%	2.3%	4.3%	4.3%	2.2%
Wayland	82.5%	0.7%	11.0%	3.9%	1.9%
Westborough	67.4%	2.3%	23.4%	4.8%	2.0%
Wrentham	94.1%	2.0%	0.8%	2.8%	0.3%

DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Other includes American Indian and Alaskan Native, non-Hispanic; Native Hawaiian or other Pacific Islander, non-Hispanic; some other race, non-Hispanic; and Two or more races, non-Hispanic; NOTE: approximately 20% of Norfolk's population is incarcerated and this may skew the racial/ethnic distribution detailed above as non-white individuals are over-represented in incarcerated populations.

Language

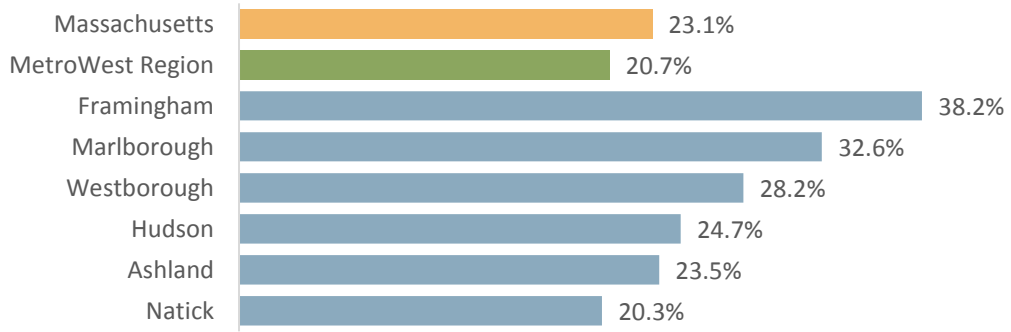
Focus group participants and key informant interviewees highlighted the need for more language services and improved multi-cultural sensitivity.

> ***"We don't have many bi-lingual facilitat[ors] and providers. Spanish and Portuguese [are] the languages that we see most often and can't find providers for."*** - Key Informant Interviewee

> ***"Generally, we offer resources in English, Spanish, Portuguese, and Haitian Creole, but there is a need for more language support in the region."*** - Key Informant Interviewee

A lower percentage of the MetroWest region population speaks a language other than English at home, compared to the state overall (20.7% vs. 23.1%, respectively) (**Figure 9**). Within the MetroWest region, the percentage of the population that speaks a language other than English at home ranges from a low of 3.6% in Plainville to a high of 38.2% in Framingham. Between 2011 and 2017, the percentage of the population that speaks a language other than English at home increased in both Massachusetts (from 21.4% to 23.1%) and the MetroWest Region (from 17.8% to 20.7%).

FIGURE 9. PERCENT POPULATION (5 YEARS AND OVER) WHO SPEAK A LANGUAGE OTHER THAN ENGLISH AT HOME, 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

Detailed information on which languages were spoken at home in 2017 were not available from the US Census Bureau, however data for 2015 (for which a slightly lower percentage of the population spoke a

language other than English at home) indicated that most common non-English languages spoken in the MetroWest region were Spanish (26.5%) and Portuguese (23.1%) (**Table 3**). Smaller percentages of the non-English speaking population speak Chinese (8.2%), Russian (4.8%), French (4.2%), and Hindi (3.9%), though each of these groups accounts for approximately 1% of the overall population in the MetroWest region.

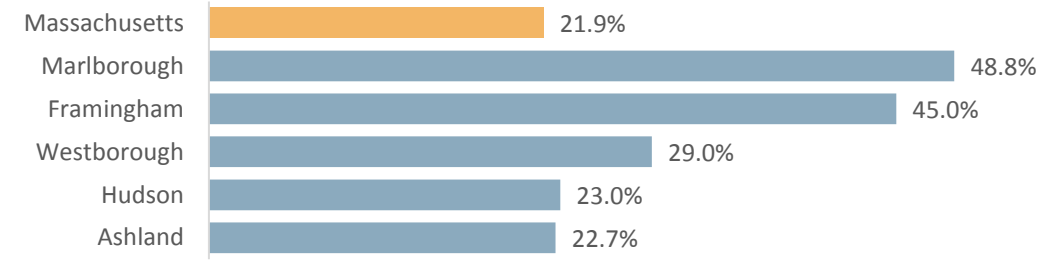
TABLE 3. TOP TEN INDIVIDUAL LANGUAGES SPOKEN AT HOME IN METROWEST REGION, 2015

	Count	Percent of Total Population	Percent of Population Speaking a non-English Language
English Only	305,065	80.59%	--
Non-English Language	73,481	19.4%	--
Spanish	19,484	5.1%	26.5%
Portuguese	16,940	4.5%	23.1%
Chinese	6,010	1.6%	8.2%
Russian	3,517	0.9%	4.8%
French	3,112	0.8%	4.2%
Hindi	2,846	0.8%	3.9%
Arabic	1,766	0.5%	2.4%
Greek	1,224	0.3%	1.7%
German	1,194	0.3%	1.6%

DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2011-2015.

For the 2018-2019 school year, English was not the first language for 21.9% of the Massachusetts public-school population (**Figure 10**). Within the MetroWest region, that percentage ranged from a low of 0.2% in Norfolk County Agricultural School District to a high of 48.8% in the Marlborough School District.

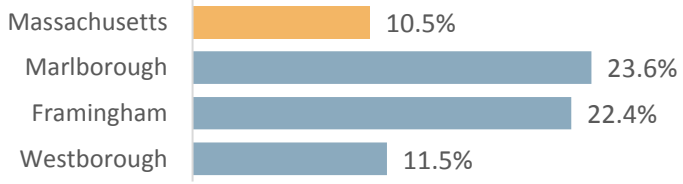
FIGURE 10. PERCENT OF PUBLIC-SCHOOL POPULATION WHOSE FIRST LANGUAGE IS NOT ENGLISH, 2018/2019



DATA SOURCE: Massachusetts Department of Elementary and Secondary Education, 2018/2019. NOTE: Chart only shows the districts with rates that meet or exceed that of the state.

For the 2018-2019 school year, 21.9% of the Massachusetts public-school population was English Language Learners (**Figure 11**). Within the MetroWest region, that percentage ranges from 0.2% in Norfolk County Agricultural School District to 23.6% in the Marlborough School District.

FIGURE 11. PERCENT OF PUBLIC-SCHOOL POPULATION WHO ARE ENGLISH LANGUAGE LEARNERS, 2018/2019



DATA SOURCE: Massachusetts Department of Elementary and Secondary Education, 2018/2019. NOTE: Chart only shows the districts with rates that meet or exceed that of the state; English Language Learners are defined as "a student whose first language is a language other than English and who is unable to perform ordinary classroom work in English."

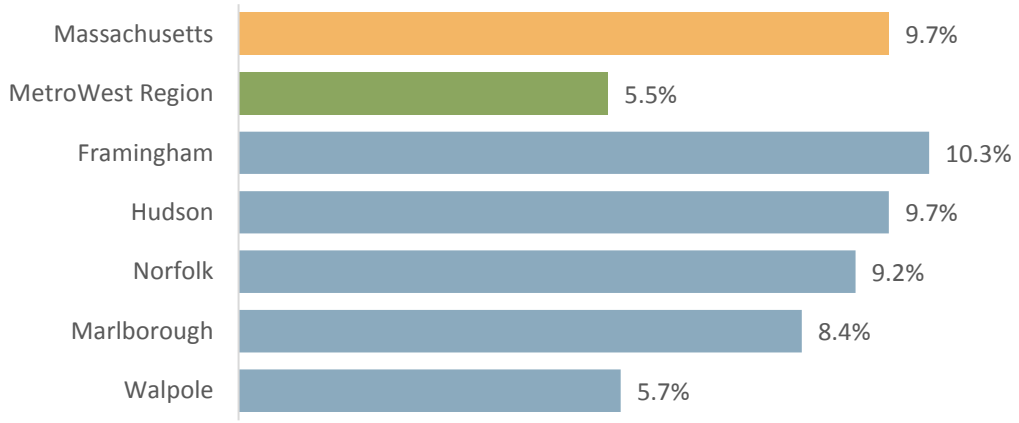
Social Determinants of Health

Education and Employment

Residents of the MetroWest region have high levels of educational achievement. Compared to Massachusetts overall, a larger percentage of the MetroWest region has a bachelor's degree or higher (42.1% vs. 55.9% respectively) and percentages have increased between 2011 and 2017 in both Massachusetts (from 38.7% to 42.1%) and MetroWest (from 52.6% to 55.9%). Within the MetroWest region, in 2017 the percentage of those with at least a bachelor's degree ranged from a low of 39.3% in Marlborough to highs of 82.9% in Sherborn and 82.7% in Wayland.

In Massachusetts, 9.7% of the population has less education than a high school diploma, compared to 5.5% of the MetroWest region population (**Figure 12**). The percentage of the population in the MetroWest region with less education than a high school diploma ranged from a low of 0.3% in Stow to a high of 10.3% in Framingham.

FIGURE 12. PERCENT POPULATION (25 YEARS AND OVER) WITH LESS THAN HIGH SCHOOL DIPLOMA, 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

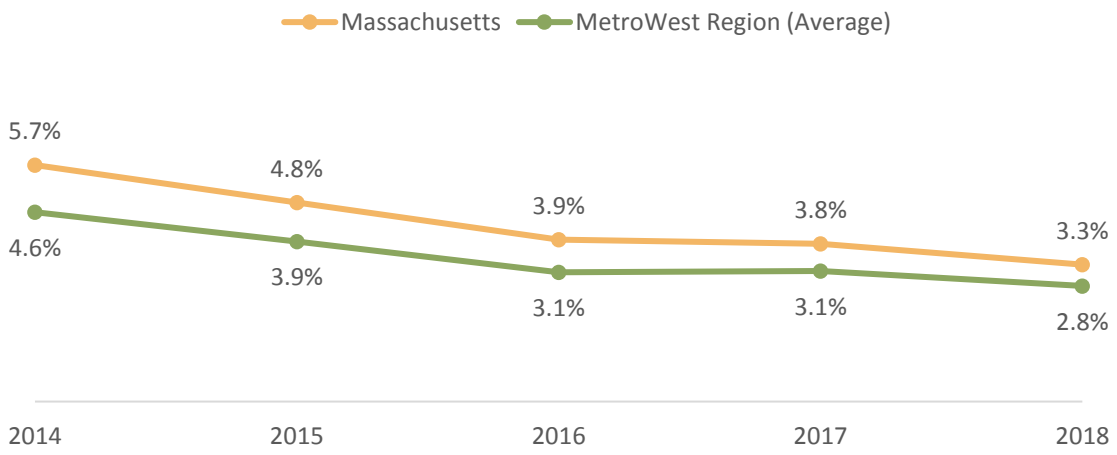
The 4-year high school graduation rate has increased in Massachusetts, from 84.7% in 2012 to 88.3% in 2017. In the MetroWest region in 2017, three communities had 4-year graduation rates below that of the state, specifically Hudson (79.0%), Framingham (82.6%), and Marlborough (85.3%). Rates were 90% or greater in all other communities.[6] Between 2012 and 2017, Marlborough and Maynard saw the largest increases in 4-year high school graduate rates in the MetroWest region (Maynard from 81.3% to 90.8% and Marlborough from 80.1% to 85.3%).

Figure 13 shows the trend in unemployment rate for Massachusetts and the average for the MetroWest region. 2018 unemployment rates in the MetroWest region ranged narrowly from a low of 2.2% in Ashland to a high of 3.5% in Hudson. All municipalities within the MetroWest region saw unemployment

[6] Massachusetts Department of Elementary and Secondary Education, School and District Profiles, 2012 & 2017

rates fall between 2014 and 2018, with biggest declines occurring in Marlborough (from 5.0% to 3.1%) and Plainville (from 5.2% to 3.0%).

FIGURE 13. UNEMPLOYMENT RATE, 2014-2018



DATA SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Local Area Unemployment Statistics, 2017. NOTE: Data is seasonally adjusted; MetroWest region data is based on the average unemployment rate across the 22 municipalities.

Income and Poverty

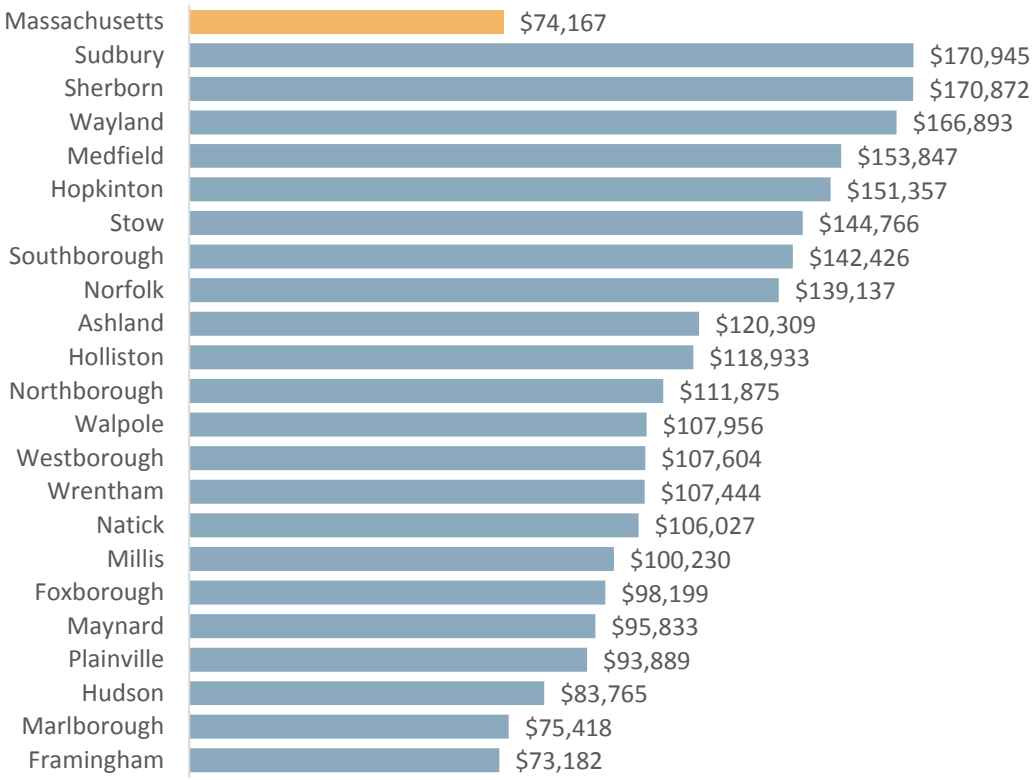
> ***"There is high turnover in this region because workers cannot afford to live in this area, and they can get paid better working for the state."*** - Key informant interviewee

The median household income in Massachusetts in 2017 was $74,167. (**Figure 14**) Median household incomes in the MetroWest region ranged from a low of $73,182 in Framingham to a high of $170,945 in Sudbury. All MetroWest municipalities except Framingham had higher median household incomes than the state. The recent MetroWest Health Foundation Trends and Projections report by Metropolitan Area Planning Council conducted more in-depth analyses and detailed the racial disparities in income across the MetroWest region. Asian and White, non-Hispanic households have the higher median income levels ($128,43 and $105,961, respectively) compared to Hispanic and Black households ($56,011 and $61,848, respectively).[7]

Between 2011 and 2017, the median household income in Massachusetts increased by 12.4% (from $65,981 to $74,167). All but one MetroWest community experienced increases in median household income between 2011 and 2017, ranging from the lowest increase of 3.5% in Marlborough (from $72,853 to $75,418) to the highest increase of 33.4% in Wayland (from $125,076 to $166,893). Southborough saw a slight 0.1% decrease in median household income (from $142,520 to $142,426).

[7] MetroWest Health Foundation Trends and Projections report by Metropolitan Area Planning Council

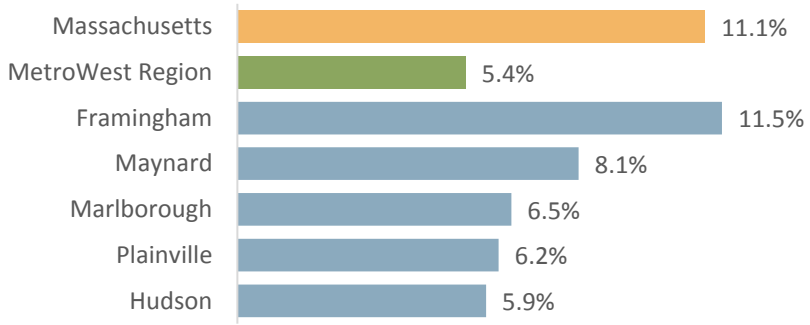
FIGURE 14. MEDIAN HOUSEHOLD INCOME, 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017.

In 2017, the MetroWest region had a lower percentage of its population living below the poverty level, compared to the state (5.4% vs. 11.1%, respectively) (**Figure 15)**. Across the MetroWest region, the percentage of the population living below the poverty level ranged from a low of 1.4% in Holliston to a high of 11.5% in Framingham.

FIGURE 15. PERCENT POPULATION LIVING BELOW POVERTY LEVEL, 2017

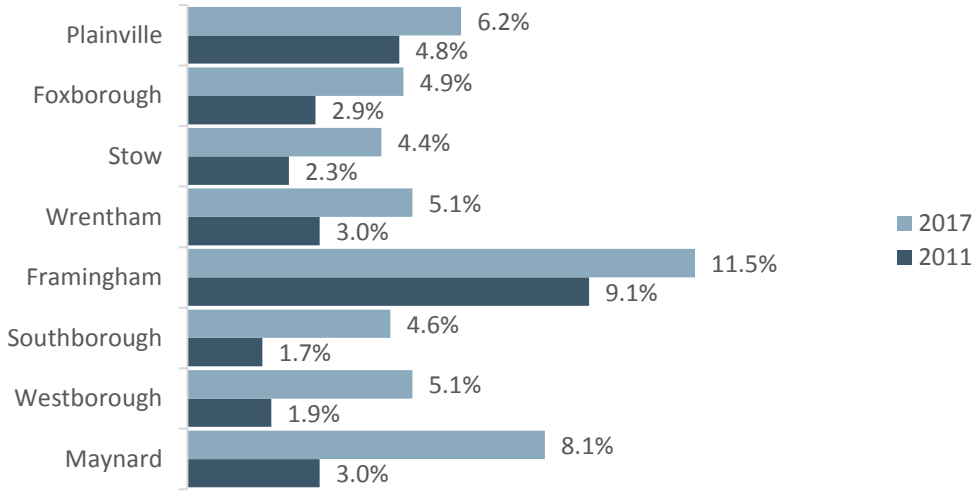


DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

Between 2011 and 2017, both Massachusetts and the MetroWest region overall saw increases in the percentage of its populations living below the poverty level, from 10.7% to 11.1% in MA and from 4.7% to 5.4% in MetroWest, respectively. During this time period, many of the individual MetroWest communities experienced even larger increases in the percentage of the population living below the poverty level. **Figure 16** details the percentages of individuals living below the poverty line in 2011 vs.

2017 for those MetroWest communities that had the largest percent increases during the time period (each had an increase of 1% or more percentage points). The percentage of those living below the poverty line decreased between 2011 and 2017 in Holliston, Medfield, Walpole, Norfolk, Ashland, and Natick (data not shown).

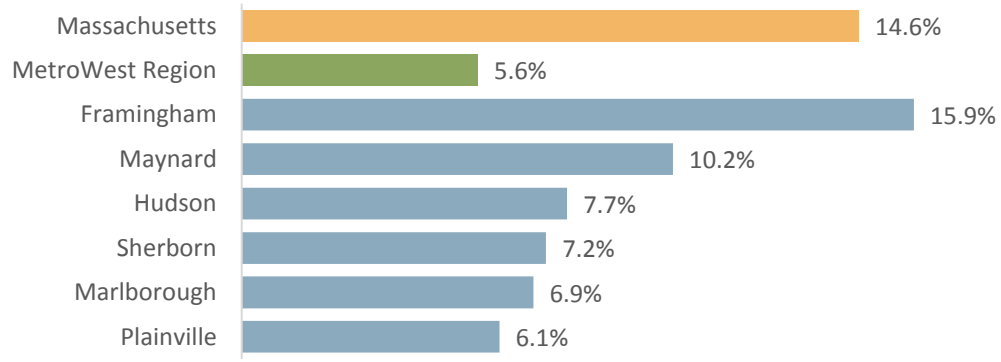
FIGURE 16. PERCENTAGE OF POPULATION LIVING BELOW POVERTY LEVEL, 2011 VS. 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2007-2011 & 2013-2017. NOTE: Chart only shows the communities that had a 1% or greater percentage point increase in poverty rate.

In 2017, the MetroWest region had a lower percentage of the population under the age of 18 living below the poverty level compared to the state overall (5.6% vs. 14.6%, respectively) (**Figure 17**). Across the region, the percentage of the population under the age of 18 living below the poverty level ranged from a low of 0.0% in Holliston to a high of 15.9% in Framingham. Between 2011 and 2017, the percentage of the population under the age of 18 living below the poverty line increased less in MetroWest (from 5.5% to 5.6%) than in the state overall (from 13.5% to 14.6%).

FIGURE 17. PERCENTAGE OF POPULATION UNDER 18 YEARS LIVING BELOW POVERTY LEVEL, 2017

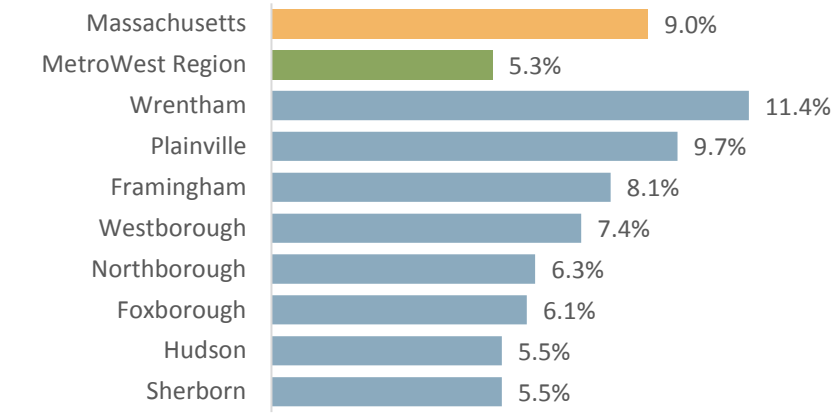


DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

In 2017, the MetroWest region had a lower percentage of the population age 65 and older living below the poverty level compared to the state overall (5.3% vs. 9.0%, respectively) (**Figure 18**). Across the region, the percentage of the population age 65 and older living below the poverty level ranged from a low of 1.5% in Sudbury to a high of 11.4% in Wrentham. Between 2011 and 2017, the percentage of the

population age 65 and older living below the poverty line decreased slightly in the MetroWest region (from 5.8% to 5.3%) and the state (from 9.3% to 9.0%). However, some MetroWest municipalities had increases in the percentage of the population age 65 and older living below the poverty line, specifically Westborough (from 1.2% in 2011 to 7.4% in 2017) and Wrentham (from 6.4% in 2011 to 11.4% in 2017).

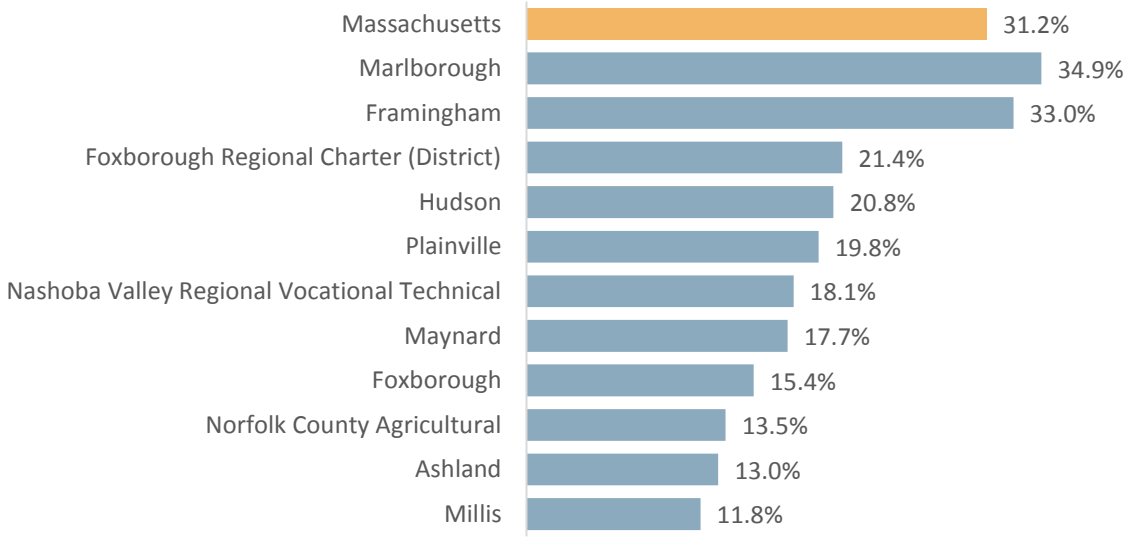
FIGURE 18. PERCENTAGE OF POPULATION AGE 65 AND OLDER LIVING BELOW POVERTY LEVEL, 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

During the 2018-2019 school-year, 31.2% of Massachusetts public school students qualified as economically disadvantaged (**Figure 19**) which is defined as participation in one or more state-administered programs (the Supplemental Nutrition Assistance Program (SNAP); the Transitional Assistance for Families with Dependent Children (TAFDC); the Department of Children and Families' (DCF) foster care program; and MassHealth (Medicaid)) The percentage of economically disadvantaged students in the MetroWest region ranged from a low of 3.8% in the Dover-Sherborn School District to a highs of 34.9% in the Marlborough School District and 33.0% in the Framingham School District.

FIGURE 19. PERCENT OF PUBLIC-SCHOOL STUDENTS THAT ARE ECONOMICALLY DISADVANTAGED, 2018/2019



DATA SOURCE: Massachusetts Department of Elementary and Secondary Education, 2018/2019. NOTE: Economic disadvantage is calculated based on a student's participation in one or more of the following state-administered programs: SNAP, TAFDC, DCF foster care program, or MassHealth; Chart only shows the communities with rates that meet or exceed the MetroWest regional average of 11%.

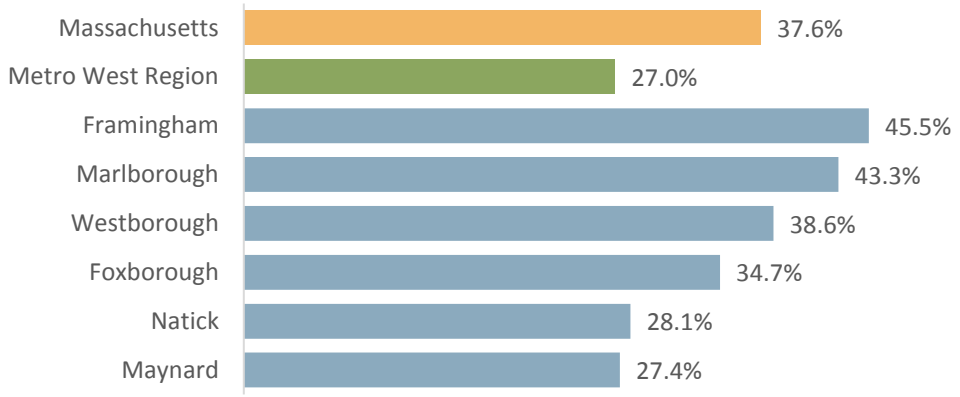
Housing and Housing Costs

"The cost of housing is very high and that affects our clients." - Key Informant Interviewee

Homelessness/poor housing ranked sixth among all health concerns facing the community, with 14.4% of survey respondents selecting homelessness/poor housing as one of their top three issues (**Figure 37**).

Overall, 73.0% of households in the MetroWest region were owner-occupied and 27.0% of households were renter-occupied (**Figure 20**), which indicates a higher home-ownership rate in the region than in the state. Across the MetroWest communities, the renter-occupied rate ranged from a low of 5.1% in Norfolk to a high of 45.5% in Framingham.

FIGURE 20. PERCENTAGE OF HOUSEHOLDS THAT ARE RENTER-OCCUPIED, 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

Table 4 details the number of owner-occupied households and renter-occupied households in the state and MetroWest region for 2011 and 2017. Between the two timepoints, the number of owner-occupied households increased by 1,937 households and renter-occupied households increased by 3,788 households in the region. The communities with the largest increases in the number of owner-occupied households included Walpole (+531), Sudbury (+433), and Hopkinton (+353). The communities with the largest increases in the number of renter-occupied households included Framingham (+1,420), Natick (+683), Marlborough (+411), and Foxborough (+394).

In contrast, some MetroWest communities saw declines in their numbers of households; Marlborough, Westborough, and Foxborough each had decreases in the number of owner-occupied households (-738, -320, and -238, respectively). Maynard, Walpole, Hudson, and Millis each had decreases in the number of renter-occupied households (-224, -224, -216, and -176, respectively).

TABLE 4. COUNT OF OWNER AND RENTER-OCCUPIED HOUSEHOLDS, 2011 AND 2017

	2011			2017			2017 vs. 2011	
	All	Owner Occupied	Renter Occupied	All	Owner Occupied	Renter-Occupied	Change in Owner Count	Change in Renter Count
Massachusetts	2,522,409	1,604,473	917,936	2,585,715	1,612,329	973,386	+7,856	+55,450
MetroWest	145,569	108,452	37,117	151,294	110,389	40,905	+1,937	+3,788
Ashland	6,484	5,411	1,073	6,689	5,368	1,321	-43	+248

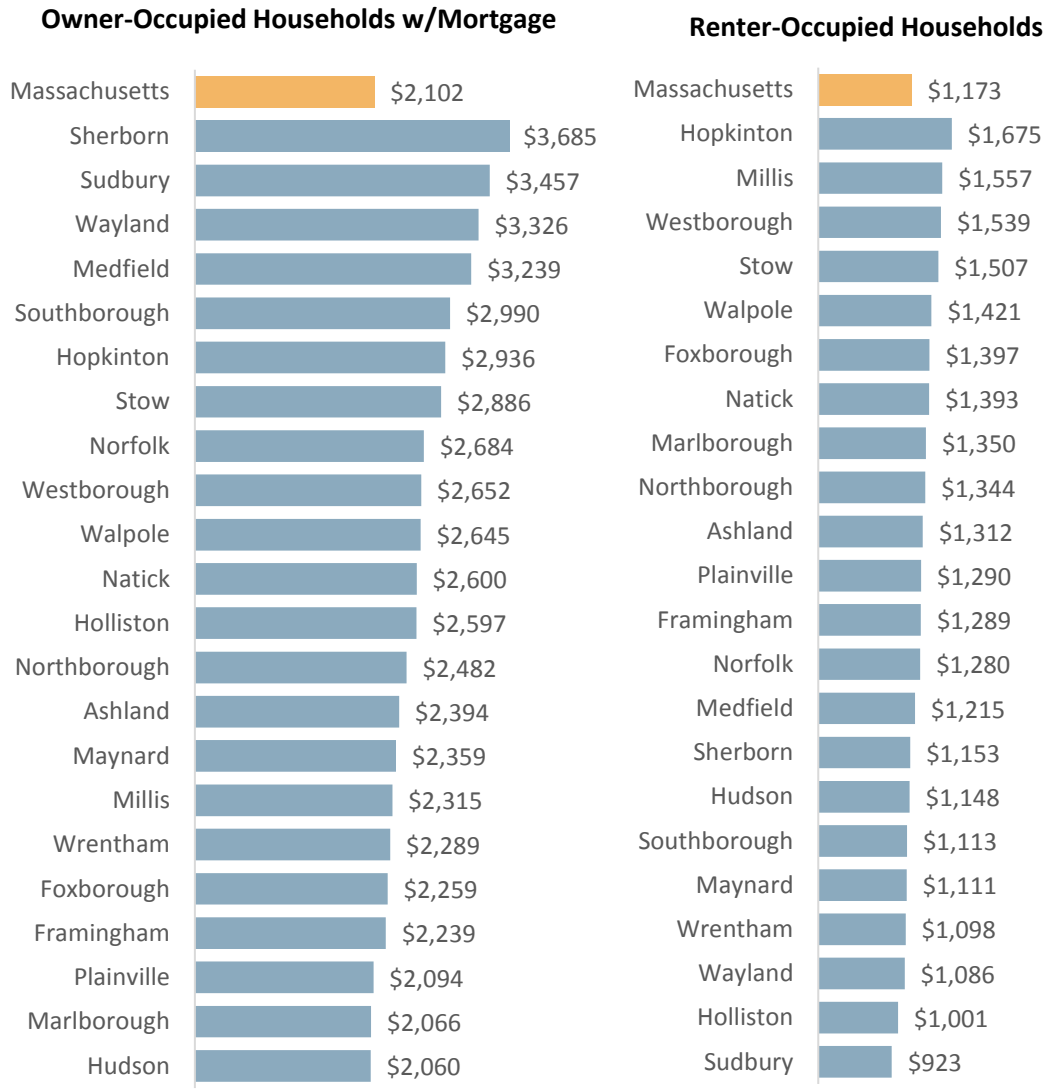
	2011			2017			2017 vs. 2011	
	All	Owner Occupied	Renter Occupied	All	Owner Occupied	Renter-Occupied	Change in Owner Count	Change in Renter Count
Foxborough	6,470	4,567	1,903	6,626	4,329	2,297	-238	+394
Framingham	26,167	14,948	11,219	27,770	15,131	12,639	+183	+1,420
Holliston	4,918	4,376	542	5,171	4,539	632	+163	+90
Hopkinton	4,893	4,464	429	5,614	4,817	797	+353	+368
Hudson	7,679	5,549	2,130	7,708	5,794	1,914	+245	-216
Marlborough	15,856	9,543	6,313	15,529	8,805	6,724	-738	+411
Maynard	4,222	2,828	1,394	4,274	3,104	1,170	+276	-224
Medfield	4,011	3,582	429	4,189	3,641	548	+59	+119
Millis	3,043	2,378	665	3,100	2,611	489	+233	-176
Natick	13,440	10,109	3,331	14,263	10,249	4,014	+140	+683
Norfolk	3,125	2,910	215	3,183	3,020	163	+110	-52
Northborough	5,114	4,329	785	5,278	4,350	928	+21	+143
Plainville	3,232	2,569	663	3,474	2,588	886	+19	+223
Sherborn	1,463	1,290	173	1,480	1,369	111	+79	-62
Southborough	3,285	3,020	265	3,403	3,013	390	-7	+125
Stow	2,328	2,062	266	2,627	2,361	266	+299	0
Sudbury	5,613	5,308	305	6,226	5,741	485	+433	+180
Walpole	8,626	7,049	1,577	8,933	7,580	1,353	+531	-224
Wayland	4,902	4,391	511	4,999	4,456	543	+65	+32
Westborough	6,720	4,425	2,295	6,682	4,105	2,577	-320	+282
Wrentham	3,978	3,344	634	4,076	3,418	658	+74	+24

DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2007-2011 & 2013-2017.

In 2017, the median monthly housing costs for owner-occupied households with mortgages were $2,102 in Massachusetts (**Figure 21**). Across the MetroWest region, costs for owners with mortgages exceeded the state average in all but 3 communities (Plainville, Marlborough, and Hudson) and ranged from a high of $3,685 in Sherborn to a low of $2,060 in Hudson. Between 2011 and 2017, the MetroWest communities that experienced particularly large increases in the median monthly housing costs for owners with mortgages included Natick, Medfield, Southborough, Holliston, Walpole, and Maynard (all increased by more than 4%) (data not shown). A number of municipalities had decreases in the median monthly housing costs for owners with mortgages between 2011 and 2017, including Marlborough, Wrentham, Sherborn, Plainville, and Framingham (all decreased by more than 5%) (data not shown).

Among renter-occupied households, the median monthly housing costs were $1,173 in Massachusetts in 2017 (**Figure 21**). Over half of the MetroWest communities had median monthly housing costs for renters that exceeded the state average. Costs ranged from a high of $1,675 in Hopkinton to a low of $923 in Sudbury.

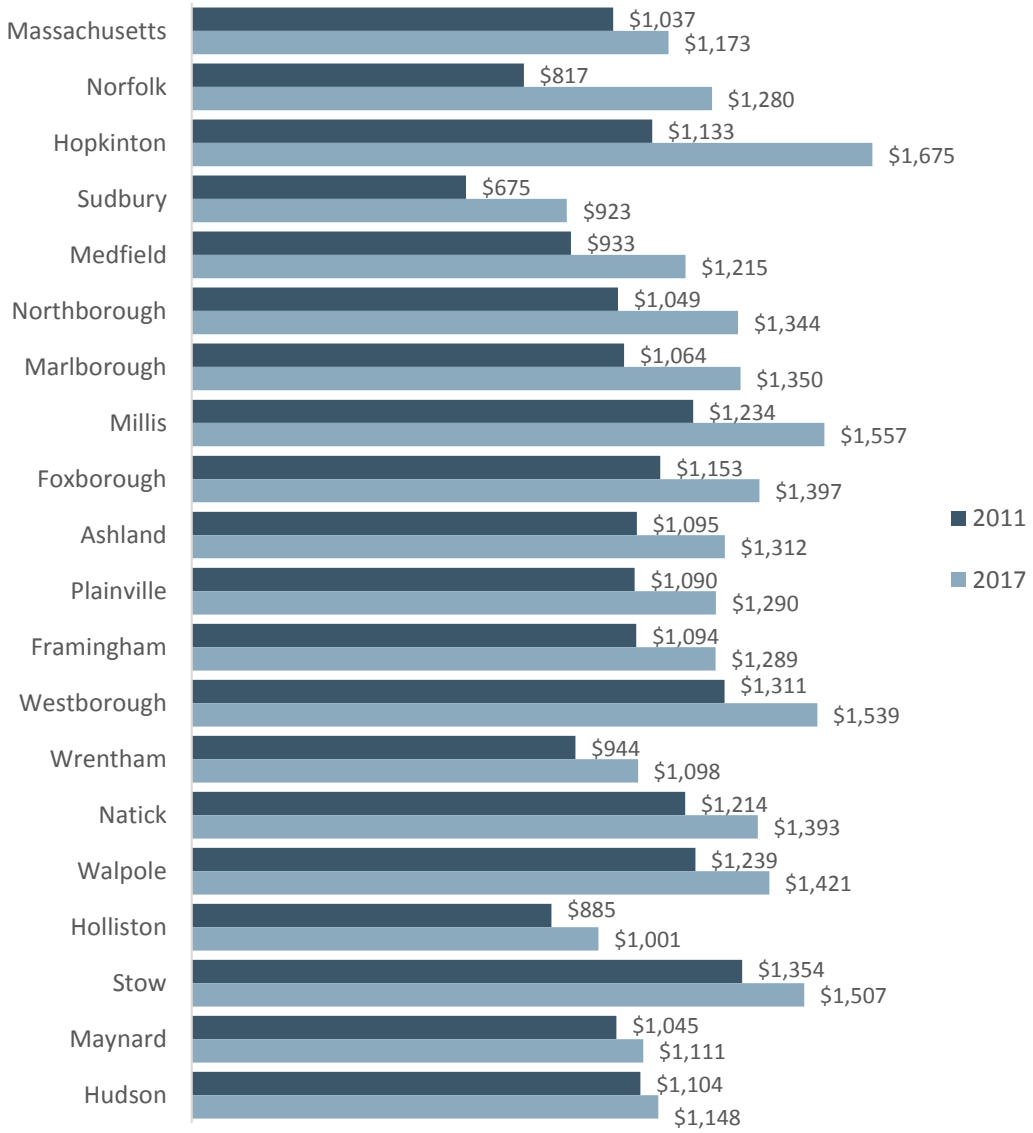
FIGURE 21. MEDIAN MONTHLY HOUSING COST, 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017.

Between 2011 and 2017, median monthly housing costs for renter-occupied households increased by 13.1% in Massachusetts, from $1,073 to $1,173. Within the MetroWest region, all but three communities experienced increases in the median monthly housing costs for renters, ranging from a 4.0% increase in Hudson to a 56.7% increase in Norfolk (**Figure 22**). The median monthly housing costs for renters decreased in three municipalities between 2011 and 2017: Sherborn (42.4% decrease), Southborough (12.2% decrease), and Wayland (6.9% decrease).

FIGURE 22. MEDIAN MONTHLY HOUSING COST FOR RENTER-OCCUPIED HOUSEHOLDS, 2011 VS. 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2007-2011 & 2013-2017. NOTE: Chart only shows the communities with an increase in median rental costs, ranked in order of percent increase highest to lowest.

Table 5 details median household incomes stratified by the owner/renter status of households in Massachusetts and the MetroWest region between 2011 and 2017. In the state overall, household incomes rose by $11,600 (13.3% increase) for owner-occupied households and by $5,136 (14.4% increase) for renter-occupied households.

In the MetroWest region, the median household incomes for owner-occupied households increased in all municipalities between 2011 and 2017, ranging from an increase of $3,007 (2.0% increase) in Southborough to an increase of $45,085 (33.3% increase) in Wayland.

Among renter-occupied households, changes in median household income between 2011 and 2017 varied, ranging from decreases in Sherborn, Walpole, Southborough, Maynard, Holliston, Medfield, Sudbury, and Framingham to an increase of $58,655 (200% increase) in Norfolk.

Looking at 2017, a range of income disparities between renter-occupied and owner-occupied households were observed. The overall median income disparity in Massachusetts was -$58,271 less in renter-occupied households compared to owner-occupied households. Within the MetroWest region, this disparity ranged from a low of -$28,713 less in Plainville to a high of -$146,071 less in Sudbury.

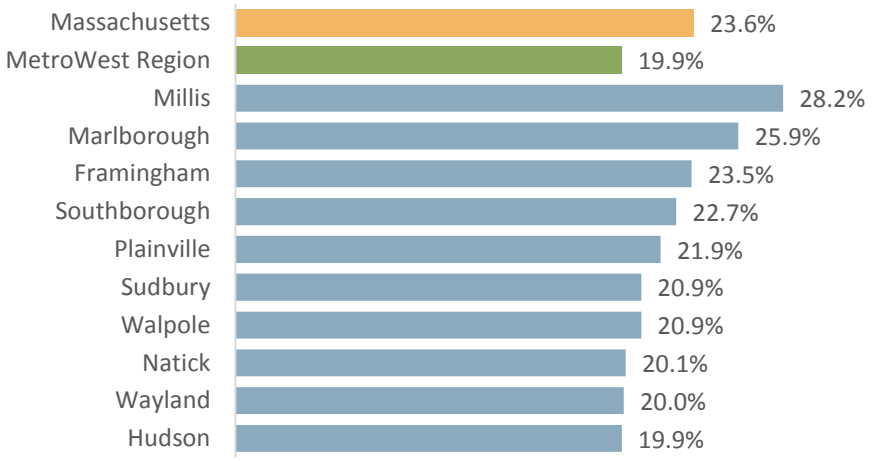
TABLE 5. MEDIAN HOUSEHOLD INCOMES, OWNER-OCCUPIED AND RENTER-OCCUPIED HOUSEHOLD, 2011-2017

	2011		2017		2017 vs. 2011	
	Owner-Occupied Household	Renter-Occupied Household	Owner-Occupied Household	Renter-Occupied Household	Change in Owner Income	Change in Renter Income
Massachusetts	$87,425	$35,624	$99,031	$40,760	+$11,606	+$5,136
Ashland	$111,583	$36,223	$137,415	$60,083	+$25,832	+$23,860
Foxborough	$113,329	$48,601	$123,295	$62,212	+$9,966	+$13,611
Framingham	$96,333	$38,801	$111,289	$38,712	+$14,956	-$89
Holliston	$114,459	$36,375	$137,682	$30,667	+$23,223	-$5,708
Hopkinton	$137,907	$34,006	$169,875	$73,681	+$31,968	+$39,675
Hudson	$94,562	$40,739	$101,250	$45,769	+$6,688	+$5,030
Marlborough	$95,244	$44,170	$102,372	$55,781	+$7,128	+$11,611
Maynard	$93,415	$41,583	$113,125	$35,474	+$19,710	-$6,109
Medfield	$138,163	$40,787	$174,395	$37,143	+$36,232	-$3,644
Millis	$96,653	$50,729	$105,818	$51,319	+$9,165	+$590
Natick	$106,613	$54,393	$131,643	$55,083	+$25,030	+$690
Norfolk	$129,079	$26,806	$142,568	$85,461	+$13,489	+$58,655
Northborough	$119,556	$42,198	$123,179	$63,856	+$3,623	+$21,658
Plainville	$94,784	$64,063	$99,583	$70,870	+$4,799	+$6,807
Sherborn	$168,824	$75,481	$176,402	$41,319	+$7,578	-$34,162
Southborough	$147,965	$48,150	$150,972	$37,250	+$3,007	-$10,900
Stow	$126,181	$54,063	$157,848	n/a	+$31,667	n/a
Sudbury	$166,987	$35,766	$180,321	$34,250	+$13,334	-$1,516
Walpole	$101,571	$52,523	$121,511	$40,037	+$19,940	-$12,486
Wayland	$135,280	$38,348	$180,365	$38,487	+$45,085	+$139
Westborough	$124,836	$69,188	$140,642	$73,697	+$15,806	+$4,509
Wrentham	$116,375	$26,985	$127,011	$29,262	+$10,636	+$2,277

DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2007-2011 & 2013-2017.

In Massachusetts, 23.6% of owners are considered housing cost burdened (monthly housing costs are 35% of more of their household income) (**Figure 23**). In the MetroWest region overall, 19.9% of owners are housing cost burdened, ranging from a low of 12.6% in Maynard to a high of 28.2% in Millis. Between 2011 and 2017, the percentage of housing cost burdened owners decreased in Massachusetts (from 30.6% to 23.6%) and in the MetroWest region (from 26.5% to 19.9%). All but one MetroWest community (Southborough) experienced a decrease in the percentage of owner-occupied households that are cost burdened.

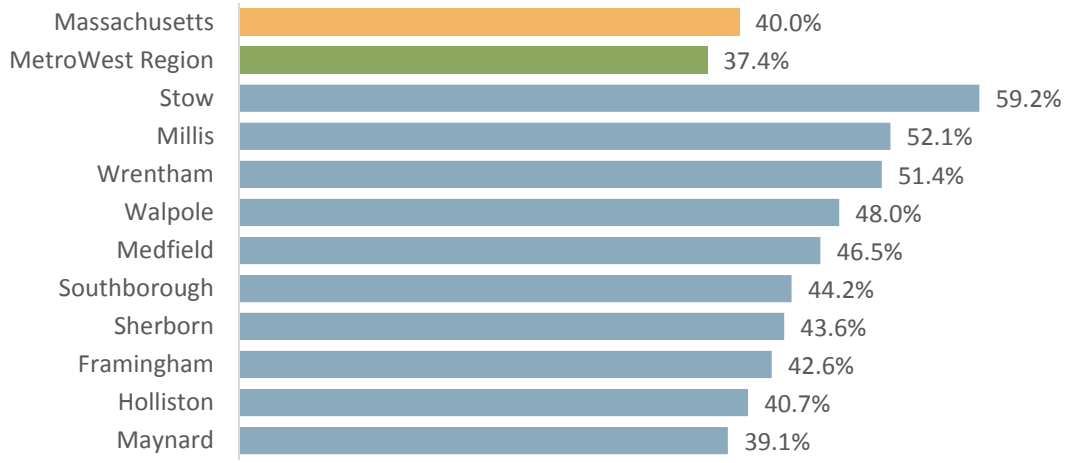
FIGURE 23. PERCENT OF OWNER-OCCUPIED HOUSEHOLDS THAT ARE HOUSING COST BURDENED, 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Housing cost burden is defined by total monthly housing costs that are 35% or more of household income; Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

In Massachusetts, 40.0% of renters are considered housing cost burdened (defined as monthly rent that is 35% or more of household income) (**Figure 24**). In the MetroWest region overall, 37.4% of renters are housing cost burdened, ranging in from a low of 10.3% in Norfolk to a high of 59.2% in Stow. Between 2011 and 2017, the percentage of housing cost burdened renters remained steady in Massachusetts (from 40.4% to 40.0%) and increased slightly in the MetroWest region (from 34.7% to 37.4%). Change in the percentage of housing cost burdened renters varied across the MetroWest region: Norfolk had a large decrease (from 37.9% to 10.3%), while Stow (18.7% to 59.2%) and Sherborn (16.8% to 43.6%) had large increases.

FIGURE 24. PERCENT OF RENTER-OCCUPIED HOUSEHOLDS THAT ARE HOUSING COST BURDENED, 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

The recent MetroWest Health Foundation Trends and Projections report by Metropolitan Area Planning Council conducted more in-depth analyses and identified disparities in housing cost burden by race[8]. A

[8] MetroWest Health Foundation Trends and Projections report by Metropolitan Area Planning Council

higher bar was used to define housing cost burden in this report – i.e. monthly housing costs that are 50% or more of household income. Among Asian and White, non-Hispanic households, 9% and 12% were housing cost burdened by this definition, respectively, whereas 20% of Hispanic household and 22% of Black households were housing cost burdened by this definition.

Transportation

> ***"[Transportation] has always been a problem in MetroWest. We must provide this service to ensure some of our clients can access care and improve their health outcomes -this cost is relatively small for us in relation to the benefits."*** - Key Informant Interviewee

> ***"Transportation is not really an issue for us, except for seniors who do not drive."*** - Key Informant Interviewee

> ***"Transportation is not as much of an issue in Framingham. There is a bus, train stop, walking… but it is hard for patients to get to us from other communities."*** - Key Informant Interviewee

In focus groups and key informant interviews, transportation was the most frequently discussed issue in relation to the availability of health care services in the region and referred to as a '*major issue*'. Many focus group participants mentioned the need to travel to reach health care services (e.g. to Framingham, Marlborough, or into Boston), however a lack of transportation was identified as a barrier regardless of location:

> ***"As a caregiver, it's very complex to get the resources in MetroWest like it is in Boston."*** - Focus Group Participant

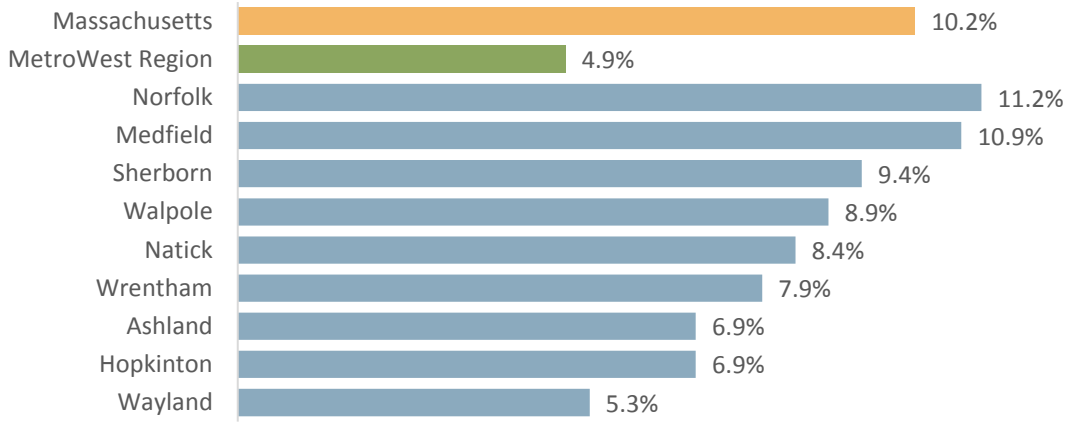
Limited public transportation options in the region was a consistent theme across the resident focus groups. This included the lack of transportation options for specific populations, such as seniors or those requiring mental health services, and transportation options at off-peak times (e.g., late-night service):

> ***"Transportation is definitely an issue around here. Some of our young adults want jobs but the buses stop running at 7pm, so they are restricted in the jobs they can choose."*** -Key Informant Interviewee

Many participants noted that for those living in the smaller municipalities, the limited transportation options, coupled with fewer venues or opportunities for entertainment in these, contribute to a sense of isolation or loneliness for some residents, particularly seniors and non-English speaking residents.

In the MetroWest region, 78.3% of the working population travels to work via their own transportation which is higher than for Massachusetts (70.7%), although a similar percentage carpool (7.6% in MetroWest and 7.5% in MA). The use of public transportation to travel to work was lower in the MetroWest region compared to the state (**Figure 25**) and ranged from a low of 1.1% in Hudson to a high of 11.2% in Norfolk. Between 2011 and 2017, the percentage of the working population using public transportation to travel to work increased from 10.3% to 11.7% in Massachusetts and from 8.5% to 9.2% in the MetroWest region. Several municipalities had larger increases in the percentage of workers taking public transportation between 2011 and 2017, specifically Maynard (from 1% to 4.3%), Wrentham (from 3.9% to 7.9%), and Sherborn (from 3.2% to 9.4%).

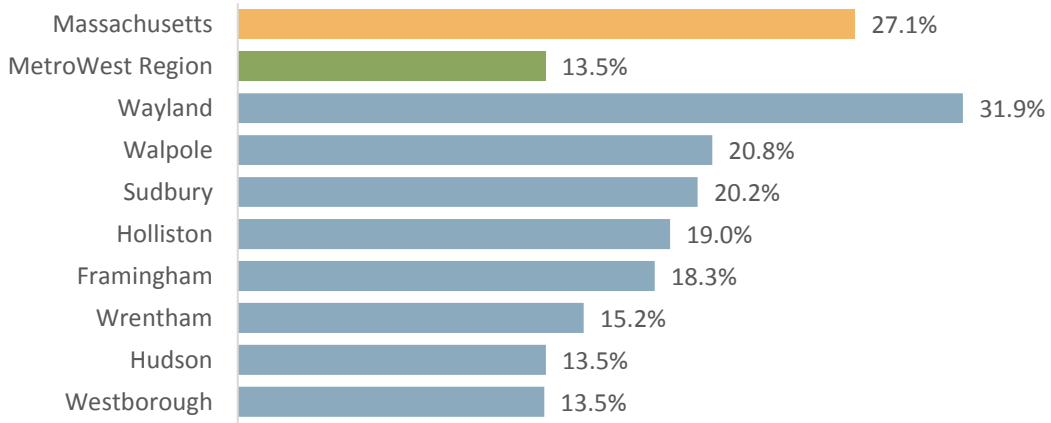
FIGURE 25. PERCENT OF WORKERS (16 YEARS AND OVER) USING PUBLIC TRANSPORTATION, 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

Across the MetroWest region, the percentage of households without access to a vehicle varied greatly depending upon owner/renter status. At the state level, 3.5% of owner-occupied households did not have access to a car, compared to 1.7% in the MetroWest region. This ranged from a high of 2.7% in Natick to a low of 0.6% in Wrentham (data not shown). In contrast, a much larger percentage of renter-occupied households did not have access to a car. The rate was 27.1% in Massachusetts and 13.5% in the MetroWest region (**Figure 26**), ranging from a high of 31.9% in Wayland to a low of 0% in Sherborn.

FIGURE 26. PERCENT OF RENTER-OCCUPIED HOUSEHOLDS WITH NO ACCESS TO A CAR, 2017

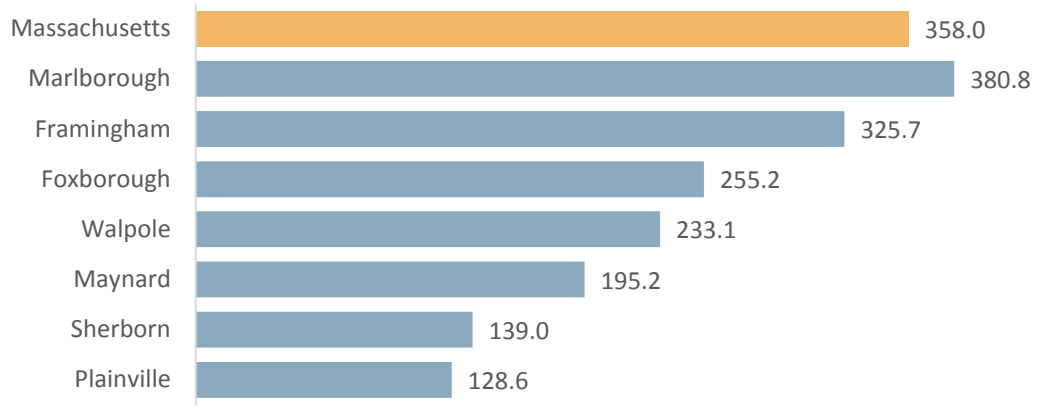


DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

Crime and Safety

Violent crime is generally lower in MetroWest municipalities than the state (**Figure 27**). Within the MetroWest region, the violent crime rate ranged from 8.5 per 100,000 in Norfolk to 380.8 per 100,000 in Marlborough (data for Hopkinton, Medfield and Millis were not available for 2017). Between 2011 and 2017, the violent crime rate decreased by 16.4% in Massachusetts (from 428.4 per 100,000 to 358.0 per 100,000). The change in violent crime rates between 2011 and 2017 varied across MetroWest communities, from an 81.2% decrease in Northborough (from 105.3 per 100,000 to 19.9 per 100,000) to a 411.1% increase in Sudbury (from 11.3 per 100,000 to 57.5 per 100,00).

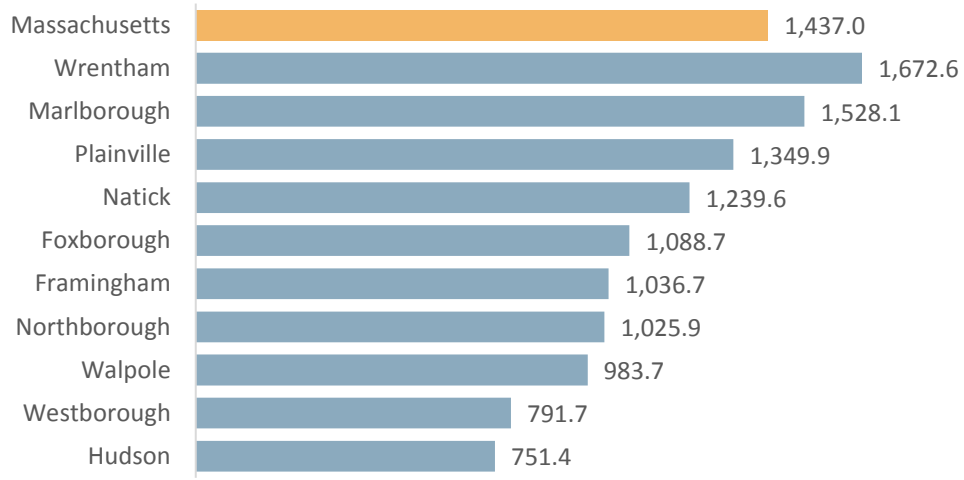
FIGURE 27. VIOLENT CRIME RATE PER 100,000 POPULATION, 2017



DATA SOURCE: Federal Bureau of Investigation, Uniform Crime Reports, Offenses Known to Law Enforcement, by state, by city, 2017; NOTE: Violent crime includes: murder and non-negligent manslaughter; forcible rape; robbery; and aggravated assault; Chart only shows the communities with rates that meet or exceed the average of the MetroWest region (121.7 per 100,000).

Property crime is generally lower in MetroWest municipalities than the state (**Figure 28**). Within the MetroWest region in 2017, the property crime rate ranged from 64.4 per 100,000 in Wayland to 1,672.6 per 100,000 in Wrentham (data for Medfield and Millis were not available for 2017). Between 2011 and 2017, the property crime rate decreased by 36.4% in Massachusetts (from 2,258.7 per 100,000 to 1,437.00 per 100,000). The change in property crime between 2011 and 2017 varied across MetroWest communities, from a 77.6% decrease in Sherborn (from 723.9 per 100,000 to 162.1 per 100,000) to a 12.4% increase in Northborough (from 912.9 per 100,000 to 1,025.9 per 100,000).

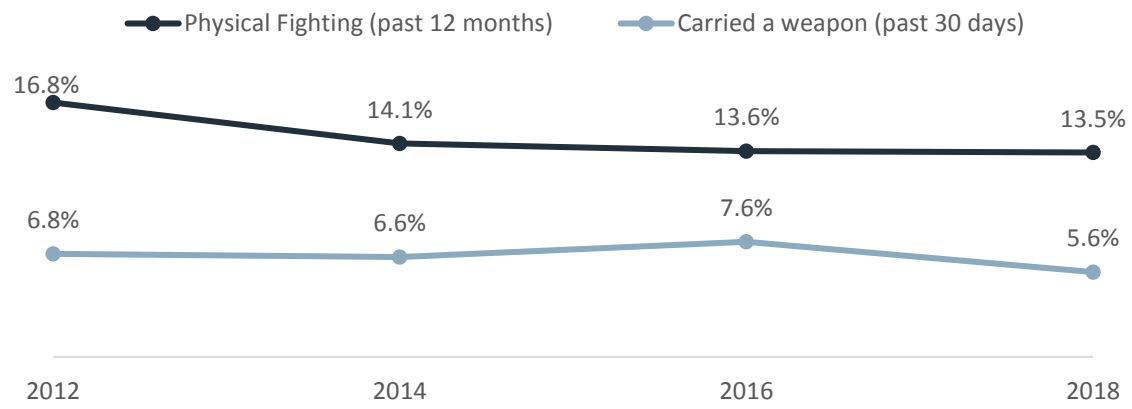
FIGURE 28. PROPERTY CRIME RATE PER 100,000 POPULATION, 2017



DATA SOURCE: Federal Bureau of Investigation, Uniform Crime Reports, Offenses Known to Law Enforcement, by state, by city, 2017; NOTE: Property crime includes: burglary; larceny-theft; motor vehicle theft; and arson; Chart only shows the communities with rates that meet or exceed the average of the MetroWest region (747.5 per 100,000).

In the MetroWest region, the percentage of high school students reporting that they engaged in physical fighting in the last 12 months decreased between 2012 and 2018 (from 16.8% to 13.5%) (**Figure 29**). Similarly, the percentage of high school students reporting that they carried a weapon decreased from 6.8% in 2012 to 5.6% in 2018.

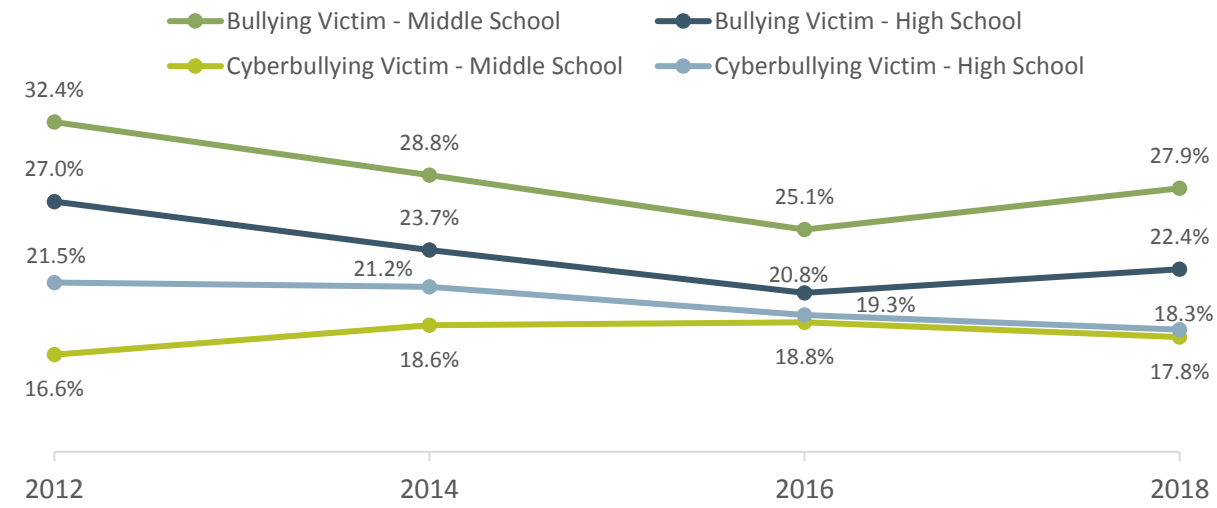
FIGURE 29. PERCENT OF HIGH SCHOOL STUDENTS REPORTING VIOLENT BEHAVIORS, 2012-2018



DATA SOURCE: MetroWest Adolescent Health Surveys, 2012, 2014, 2016 & 2018.

In the MetroWest region, bullying has decreased between 2012 and 2018 among both high school students (from 32.4% to 27.9%) and middle school students (from 27.0% to 22.4%) (**Figure 30**). Between 2012 and 2018, cyberbullying has also declined among high school students (21.5% to 18.3%), however cyberbullying increased among middle school students (from 16.6% to 17.8%).

FIGURE 30. PERCENT OF STUDENTS REPORTING BULLYING, 2012-2018



DATA SOURCES: MetroWest Adolescent Health Surveys, 2012, 2014, 2016 & 2018.

Findings from the 2018 MetroWest Adolescent Health Survey report identified several sub-populations of students that were particularly vulnerable to bullying and harassment, including LGBTQ youth – "28% of LGBTQ youth have been verbally harassed due to their sexual orientation or gender identity, and 32% have been bullied in the past year, compared with 21% of heterosexual cisgender youth" and youth with disabilities – "18% of youth with physical and/or learning disabilities have been verbally harassed due to their disabilities, and 33% have been bullied in the past year, compared with 20% of youth without disabilities".[9]

[9] MetroWest Adolescent Health Survey Regional Highlights Report - High School Youth, Spring 2019

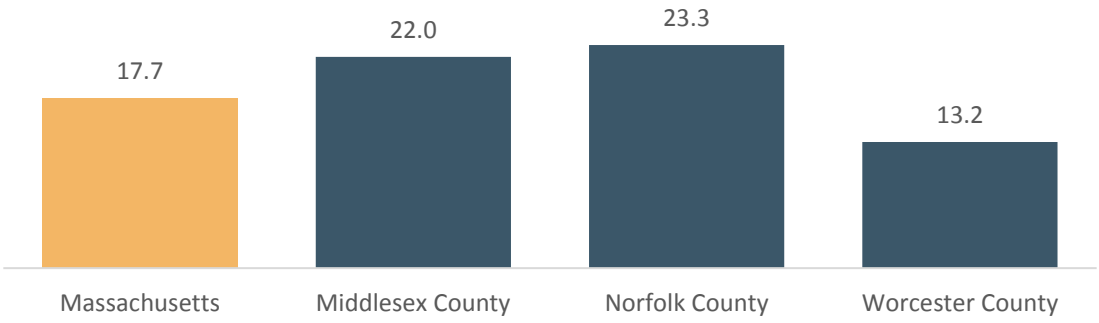
Access to Healthy Foods and Recreation

There were some contrasting perspectives between focus group participants and key informant interviewees on the topic of services that support healthy behaviors (i.e., opportunities for physical activity, healthy nutrition). Generally, focus group participants felt needs were adequately being met in the community and therefore not a priority at this time. However, several interview participants thought these were still important issues in their community:

> ***"Primary prevention and a focus on nutrition/healthy eating and exercise/active living – focus on the issues that can keep people healthy."*** - Key Informant Interviewee

Overall, the density of recreation and fitness facilities in Massachusetts has increased slightly (from 16.2 per 100,000 in 2013 to 17.7 per 100,000 in 2016). In the MetroWest region (**Figure 31**), Norfolk County has the highest density of recreation and fitness facilities of the three MetroWest region counties at 23.3 per 100,000, followed by Middlesex County at 22.02 per 100,000, and Worcester County at 13.2 per 100,000. Only Worcester County has a lower rate compared to the state rate.

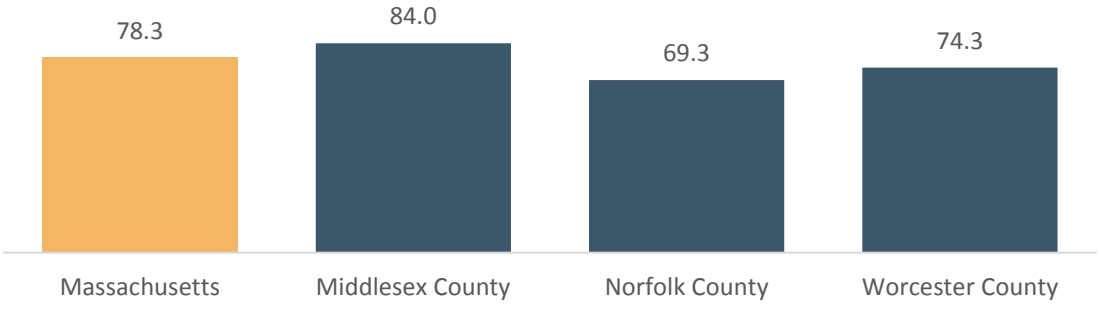
FIGURE 31. DENSITY OF RECREATION AND FITNESS FACILITIES PER 100,000 POPULATION, 2016



DATA SOURCE: U.S. Census Bureau, County Business Patterns with data analysis by CARES, as reported by Community Commons, 2016.

Overall, the density of fast food restaurants has increased in Massachusetts (from 77.2 per 100,000 in 2013 to 78.3 per 100,000 in 2016). As of 2016, Middlesex County had the highest density of fast food restaurants per 100,000 compared to Massachusetts overall (**Figure 32**), with Norfolk and Worcester Counties, having densities below the state (69.3 and 74.3 per 100,000, respectively).

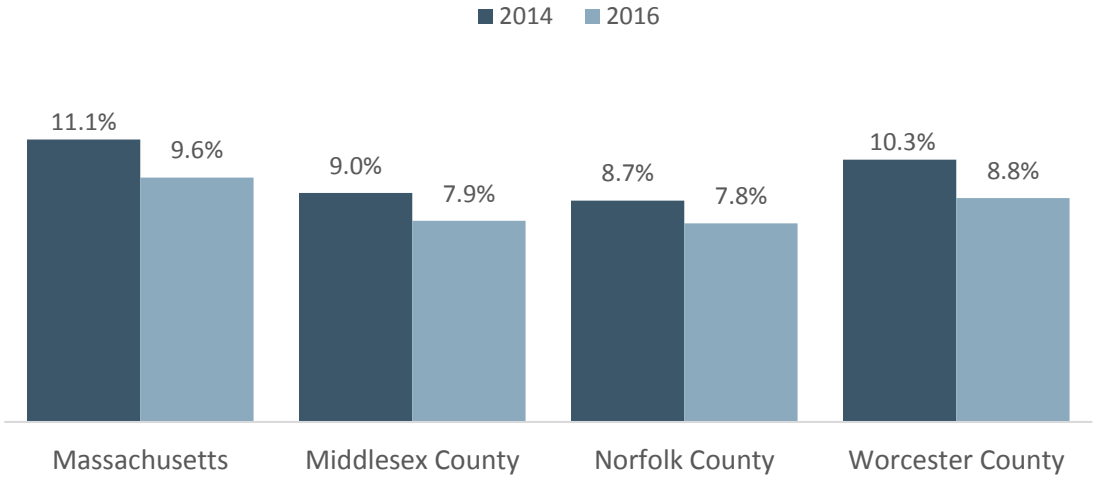
FIGURE 32. DENSITY OF FAST FOOD RESTAURANTS PER 100,000 POPULATION, 2016



DATA SOURCE: U.S. Census Bureau, County Business Patterns with data analysis by CARES, as reported by Community Commons, 2016.

Only a small percentage (8.1%) of community health survey respondents selected 'hunger/poor nutrition' as a top health issue facing the community. The percentage of the population that was estimated to be food insecure decreased between 2014 and 2016 in Massachusetts and each of the MetroWest region counties (**Figure 33**). In 2016, 9.6% of the Massachusetts population was food insecure, higher than the 8.8% in Worcester County, 7.9% in Middlesex County, and 7.8% in Norfolk County.

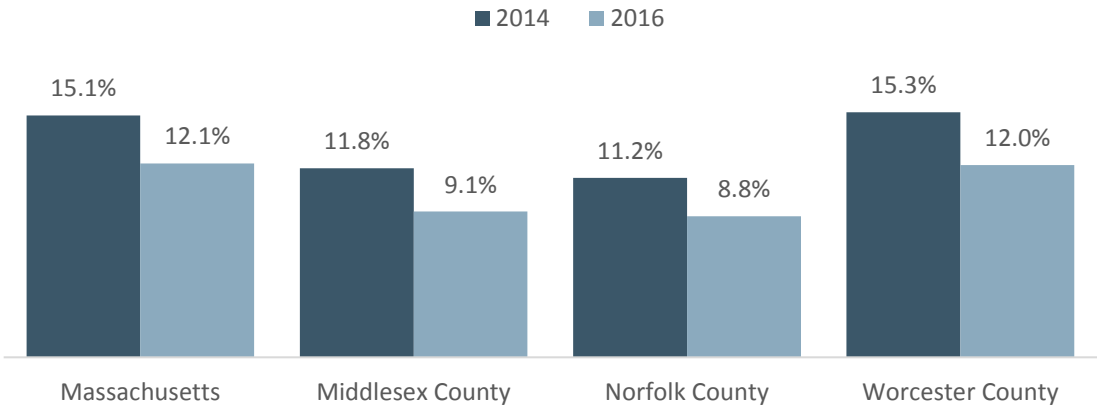
FIGURE 33. PERCENT OF POPULATION THAT IS FOOD INSECURE, 2014 AND 2016



DATA SOURCE: Feeding America, Map the Meal Gap, 2014 & 2016.

The percentage of the population under age 18 that is estimated to be food insecure also decreased between 2014 and 2016 in Massachusetts and each of the MetroWest region counties (**Figure 34**). In 2016, 12.1% of the Massachusetts population under the age 18 was food insecure, equal to the 12.0% in Worcester County but higher than the 9.1% in Middlesex County and 8.8% in Norfolk County.

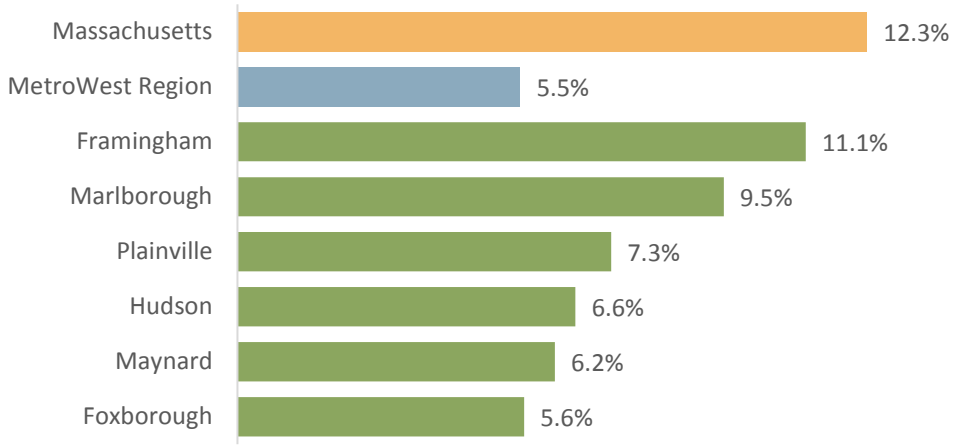
FIGURE 34. PERCENT POPULATION UNDER 18 YEARS OF AGE THAT IS FOOD INSECURE, 2014 AND 2016



DATA SOURCE: Feeding America, Map the Meal Gap, 2014 & 2016.

The MetroWest region has a lower percentage of households receiving SNAP benefits than the state overall (5.5% vs. 12.3%, respectively) (**Figure 35**). This percentage ranged across the MetroWest region, from a low of 1.5% in Wayland to a high of 11.1% in Framingham.

FIGURE 35. PERCENT HOUSEHOLDS RECEIVING SNAP BENEFITS, 2017



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017. NOTE: Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

Community Health Issues

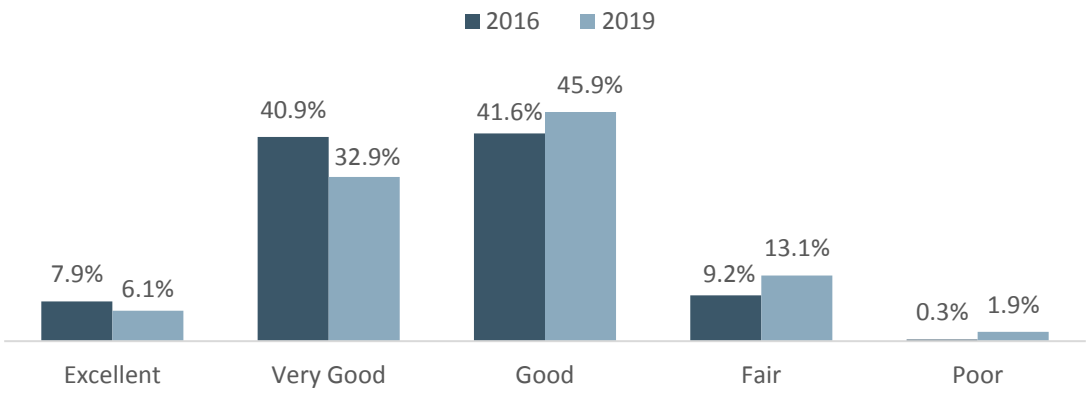
Community Perceptions and Concerns

When asked to describe their community, the broad access and availability of services was frequently mentioned across the resident focus groups. Most services were mentioned as being in Framingham, Natick, or Marlborough, but proximity to these municipalities was seen as a strength of their own community and the region as a whole. Quality schools and the presence of youth sports programs were also mentioned by several focus group participants as were a variety of amenities such as parks, lakes, recreational facilities. Many participants used terms like ***'nice'***, ***'safe'***, and ***'centrally located'*** to describe their community.

A majority of community health survey respondents rated the health status of their community as good (45.9%), very good (32.9%), or excellent (6.1%). When stratified by race/ethnicity, respondents who identified as a minority race/ethnicity were significantly more likely to rate the overall health of the community as fair or poor compared respondents who did not identify as a minority race/ethnicity (24.4% vs. 11.9%; $p < .001$).

As **Figure 36** demonstrates, the perceived health status trended downward from 2016 to 2019. In the 2019 community health survey, respondents were slightly less likely than respondents in 2016 to rate their community's health as excellent (from 7.9% to 6.1% respectively) or very good (from 40.9% to 32.9%, respectively). Respondents of the 2019 community health survey were slightly more likely than 2016 respondents to rate their community's health as fair (13.1% vs. 9.2%, respectively) or poor (1.9% vs. 0.3%, respectively).

FIGURE 36. PERCEIVED HEALTH STATUS OF COMMUNITY, 2016 AND 2019



DATA SOURCE: MetroWest Region Community Health Survey, 2016 (n=607) and 2019 (n=799).

Figure 37 details the leading health concerns that were perceived to have the largest impact on their community by community health survey respondents. Respondents to the 2019 survey ranked alcohol and substance use as the top health concern impacting the community, followed by mental health issues, aging problems, smoking/vaping, and obesity.

FIGURE 37. TOP FIVE HEALTH CONCERNS PERCEIVED TO HAVE LARGEST IMPACT ON COMMUNITY, 2013 TO 2019

	Health Concerns of Community Health Survey Respondents		
Rank	2013	2016	2019
1	Overweight / obesity	Alcohol / Substance Use	Alcohol / Substance Use
2	Aging problems	Mental health issues	Mental health issue
3	Mental health issues	Aging problems	Aging problems
4	Cancer	Overweight / Obesity	Smoking / Vaping
5	Alcohol / Substance Use	Cancer	Overweight / Obesity

DATA SOURCE: MetroWest Region Community Health Assessment Survey, 2013, 2016 and 2019. NOTE: 2013 and 2016 data reflect percent respondents who selected the issue for community where they live.

Notable trends also emerged across time. In 2013 and 2016, cancer was identified as a top community health concern. However, cancer was not within the top five health concerns in 2019. Smoking/vaping emerged as a top concern in 2019 while it was not in prior assessments (note: vaping is an emerging issue and was not specifically included in the 2013 and 2016 surveys). Concern for overweight/obesity declined, falling from number one in 2013 to number five in 2019. Conversely, alcohol and substance use ranked 5th as health concern in 2013 but rose to the number one concern in 2016 and 2019.

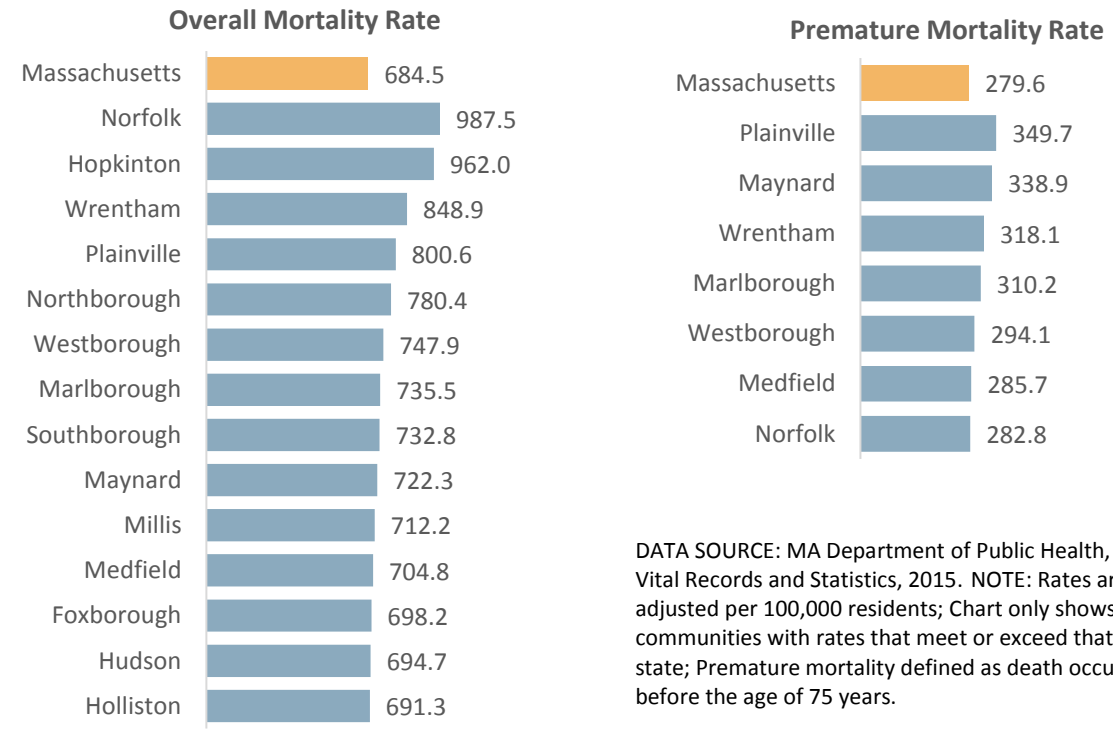
Community health survey respondents who identified as a minority race/ethnicity were significantly less likely than other respondents to identify aging problems (21.1% vs. 43.1%, respectively, $p < .001$) and mental health issues (34.5% vs. 57.2%, respectively, $p < .001$) as top health issues facing the community. And while they did not emerge in the top five health concern for the community, significantly larger

percentages of respondents who identified as a minority race/ethnicity selected asthma/allergies (18.6% vs. 4.5%, respectively, P<0.001), oral health (9.3% vs. 1.2%, respectively, P<0.001), teen pregnancy (4.6% vs. 0.3%, respectively, P<0.001), and diabetes (30.4% vs. 7.9%, respectively, P<0.001) as health concerns compared to respondents who did not identify as a minority race/ethnicity.

Overall Mortality

The age-adjusted all-cause mortality rate statewide was 684.5 per 100,000 in 2015 (**Figure 38**). This rate ranged within the MetroWest region, from a low of 531.3 per 100,000 in Wayland to a high of 987.5 per 100,000 in Norfolk. The pre-mature mortality rate statewide was 279.6 per 100,000. This rate ranged across the MetroWest Region, from a low of 96.0 per 100,000 in Sudbury to high of 349.7 per 100,000 in Plainville.

FIGURE 38. OVERALL AND PREMATURE MORTALITY RATE PER 100,000 POPULATION, 2015



DATA SOURCE: MA Department of Public Health, Registry of Vital Records and Statistics, 2015. NOTE: Rates are age-adjusted per 100,000 residents; Chart only shows the communities with rates that meet or exceed that of the state; Premature mortality defined as death occurring before the age of 75 years.

Chronic Disease

Cardiovascular Disease

Heart disease (including stroke and hypertension) was ranked as the 9th greatest health concern among all community health survey respondents. Of the MetroWest communities with available Behavioral Risk Factor Surveillance System (BRFSS) data[10], all had lower percentages of adults age 35 and older with self-reported angina or coronary heart disease (CHD) compared to the state percentage of 5.3%. The

[10] Massachusetts Department of Public Health, Small Area Estimates, 2014. Note: community-level data are based on multi-year aggregated data

percentage of adults age 35 and older with angina or CHD ranged from a low of 2.9% in Hopkinton to a high of 4.1% in Wayland.

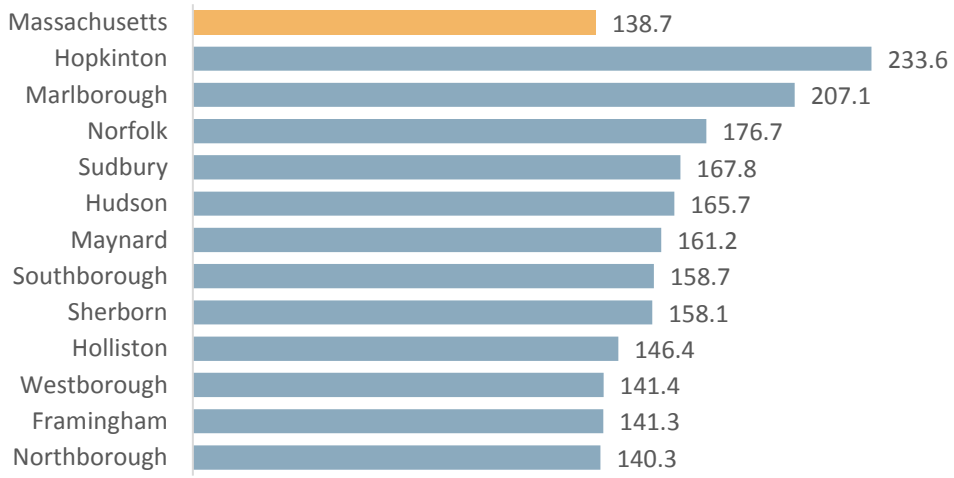
Of the MetroWest communities, only Norfolk had a cardiovascular disease hospital admission rate that was higher than the state, at 1,641.8 per 100,000 compared to 1,563.1 per 100,000, respectively (**Figure 39**). Wayland had the lowest cardiovascular disease hospital admission rate of the MetroWest communities at 895.6 per 100,000.

FIGURE 39. CARDIOVASCULAR DISEASE ADMISSIONS/OBSERVATIONS PER 100,000 POPULATION, 2014

DATA SOURCE: Massachusetts Department of Public Health, Center for Health Information and Analysis (CHIA), 2014. NOTE: Rates are age-adjusted per 100,000 residents; Chart only shows the communities with rates that meet or exceed that of the state.

Twelve communities in the MetroWest region had higher heart disease mortality rates than the state rate (**Figure 40**). Heart disease mortality rates ranged from a low of 104.4 per 100,000 in Wayland to a high of 233.6 per 100,000 in Hopkinton.

FIGURE 40. HEART DISEASE MORTALITY RATE PER 100,000 POPULATION, 2015



DATA SOURCE: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2015. NOTE: Rates are age-adjusted per 100,000 residents; Chart only shows the communities with rates that meet or exceed that of the state.

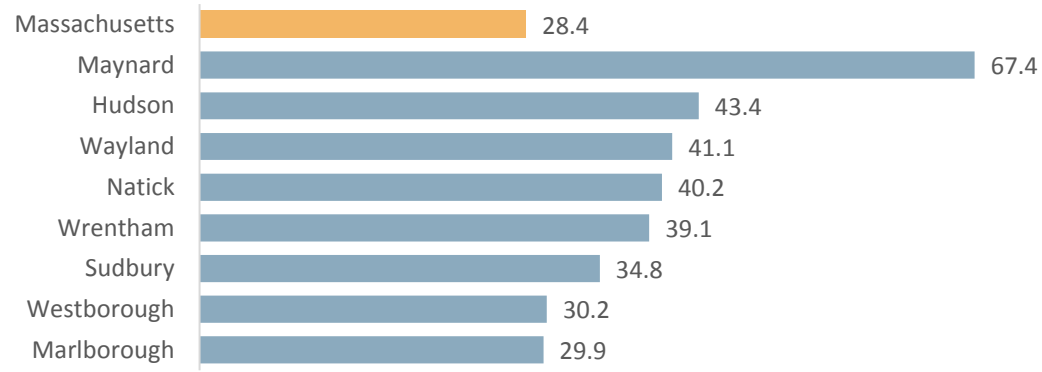
Of the twenty-one MetroWest communities with available data, all had stroke-related hospital admission rates that were lower than the state rate of 255.1 per 100,000 (data not shown). The stroke-related admission rate ranged from a low of 109.5 per 100,000 in Plainville to high of 253.3 per 100,000 in Millis. However, for stroke-related emergency department visits, two of the ten communities with available data MetroWest communities had rates that were higher than the state (**Figure 41**), specifically Maynard (98.2 per 100,000) and Foxborough (82.6 per 100,000).

FIGURE 41. STROKE-RELATED EMERGENCY DEPARTMENT VISITS PER 100,000 POPULATION, 2014

DATA SOURCE: Massachusetts Department of Public Health, Center for Health Information and Analysis (CHIA), 2014. NOTE: Rates are age-adjusted per 100,000 residents; Chart only shows the communities with rates that meet or exceed that of the state.

Of the eleven MetroWest communities with available data, eight communities had higher cerebrovascular disease (i.e. stroke) mortality rates than the state rate (**Figure 42**). The stroke mortality rate ranged from a low of 24.1 per 100,000 in Framingham to a high of 67.4 per 100,000 in Maynard.

FIGURE 42. STROKE MORTALITY RATE PER 100,000 POPULATION, 2015



DATA SOURCE: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2015. NOTE: Rates are age-adjusted per 100,000 residents; Chart only shows the communities with rates that meet or exceed that of the state.

Diabetes

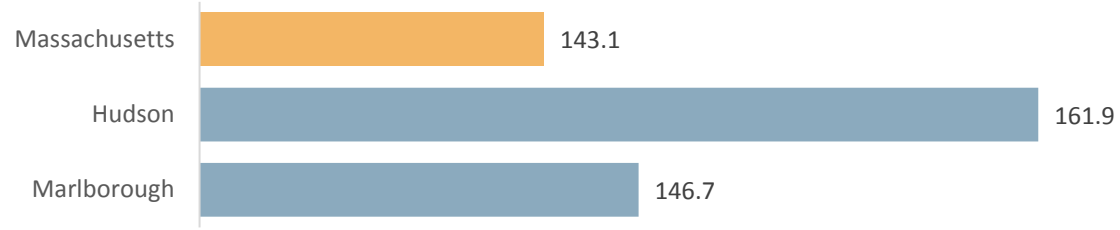
Diabetes was ranked as the 7th greatest health concern among all community health survey respondents. Survey respondents who identified as a minority race/ethnicity were more likely to select diabetes as a top health issue facing the community than respondents who did not identify as a minority race/ethnicity (30.4% vs. 7.9%, respectively, $p < .001$). Of the twenty-one MetroWest communities with available Behavioral Risk Factor Surveillance System (BRFSS) data[11], all had lower percentages of adults with self-reported diabetes compared to the state percentage of 8.9%. The percentages of adults with diabetes ranged from a low of 4.2% in Natick to a high of 8.4% in Marlborough.

Of the thirteen MetroWest communities with available data, all had lower diabetes-related hospital admission rates compared to the state rate of 158.9 per 100,000 (Data not shown). Diabetes hospital admission rates ranged from a low of 53.2 per 100,000 in Foxborough to a high of 148.9 per 100,000 in Holliston. However, for diabetes-related ED visits, two of the six MetroWest communities with available

[11] Massachusetts Department of Public Health, Small Area Estimates, 2012-2014. Note: community-level data are based on multi-year aggregated data

data had rates that were higher than the state (**Figure 43**), specifically Hudson (161.9 per 100,000) and Marlborough (146.7 per 100,000).

FIGURE 43. DIABETES-RELATED EMERGENCY DEPARTMENT VISITS PER 100,000 POPULATION, 2014



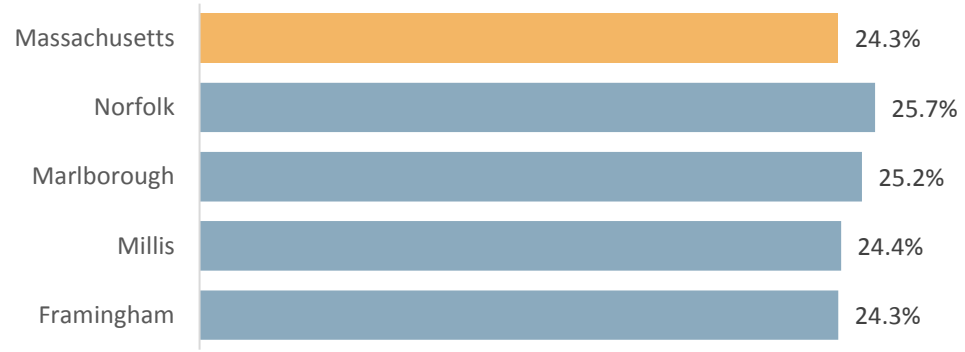
DATA SOURCE: Massachusetts Department of Public Health, Center for Health Information and Analysis (CHIA), 2014. NOTE: Rates are age-adjusted per 100,000 residents; Chart only shows the communities with rates that meet or exceed that of the state.

Overweight and Obesity

As previously noted, overweight/obesity ranked as the fifth greatest health concern by community health survey respondents (**Figure 37**), down from ranking first in the 2013 survey. However, this concern may be more of a current priority among services providers in the region, as one key informant interviewee described obesity as, "***[Obesity] is the first domino to fall and lead[s] into so many other health issues and chronic diseases.***"

Of the twenty-one MetroWest communities with available Behavioral Risk Factor Surveillance System (BRFSS) data, five communities (Norfolk, Marlborough, Millis, Framingham, and Northborough) had percentages of adults with self-reported obesity (BMI>30.0) that were the same or higher than the state percentage of 24.3% (**Figure 44**). The percentage of adults with self-reported obesity ranged from a low of 14.7% in Sudbury to a high of 25.7% in Norfolk.

FIGURE 44. PERCENT ADULTS WITH SELF-REPORTED OBESITY, 2012-2014



DATA SOURCE: Massachusetts Department of Public Health, Behavioral Risk Factor Surveillance System (BRFSS) Small Area Estimates, 2012-2014. NOTE: Community-level data are based on multi-year aggregated data.

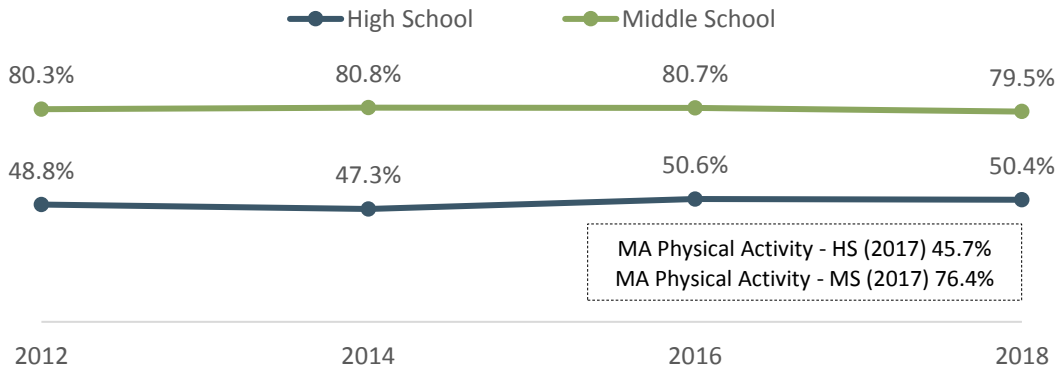
Of the twenty-one MetroWest communities with available Behavioral Risk Factor Surveillance System (BRFSS) data, six communities (Marlborough, Plainville, Westborough, Hudson, Norfolk, and Foxborough) had percentages of adults self-reporting consumption of five or more fruits and vegetables daily that were lower than the state percentage of 19.6% (**Figure 45**). The percentage of adults self-reporting consumption of five or more fruits and vegetables daily ranged from a low of 16.0% in Marlborough to a high of 25.8% in Wayland.

FIGURE 45. PERCENT ADULTS CONSUMING 5 OR MORE FRUIT AND VEGETABLES DAILY, 2012-2015

DATA SOURCE: Massachusetts Department of Public Health, Behavioral Risk Factor Surveillance System (BRFSS) Small Area Estimates, 2012-2014. NOTE: Community-level data are based on multiple years of aggregated data.

Among public school students in the MetroWest region, nearly 80% of middle school students were achieving at least 20 minutes of exercise on 3 or more days per week in 2018 (**Figure 46**). This rate has remained stable since 2012. For high school students, the physical activity target is higher (at least 60 minutes on 5 or more days per week) and fewer students achieved that in 2018 (50.4%). However, this rate has also remained consistent since 2012.

FIGURE 46. PERCENT OF STUDENTS MEETING PHYSICAL ACTIVITY TARGETS, 2012-2018



DATA SOURCE: MetroWest Adolescent Health Surveys, 2012, 2014, 2016 & 2018 and MA Youth Health Survey 2017. NOTE: Middle School physical activity target is ≥20 minutes on 3 or more days/week; High School physical activity target is ≥60 minutes on 5 or more days/week.

Cancer

Cancer was ranked as the 8th greatest health concern among all community health survey respondents. The most common types of cancer cases affecting MA residents are lung, breast (women), prostate (men), and colorectal. Standardized incidence ratios (SIR) allow for community-level comparisons to state cancer incidence. **Table 6** presents the SIR for each MetroWest community. For lung and bronchus cancers, the SIR ranged from 54 in Stow to 114 in Ashland and no municipality had a higher than expected SIR. For breast cancer, the SIR ranged from 90 in Marlborough to 164 in Sudbury; Foxborough, Sudbury, Walpole, and Wayland had higher than expected SIRs. For prostate cancer, the SIR ranged from 73 in Ashland to 140 in Medfield; Holliston, Medfield, and Walpole each had higher than expected SIRS. For colorectal cancer, the SIR ranged from 57 in Hopkinton to 159 in Maynard; Hudson, Marlborough, and Maynard had higher than expected SIRs.

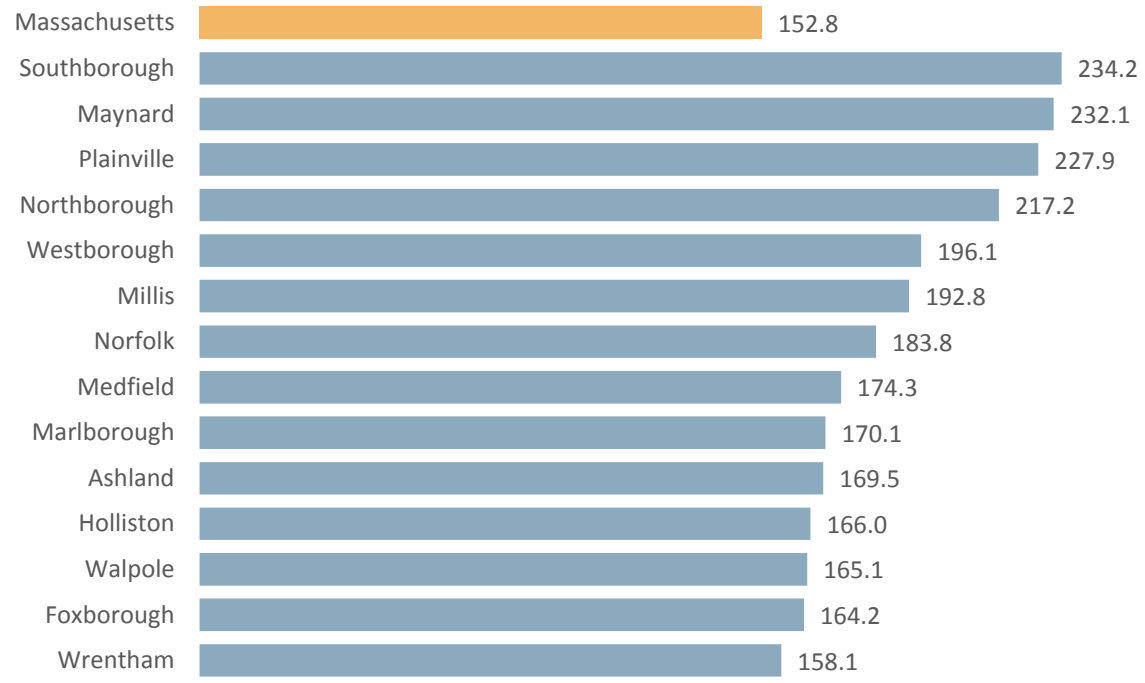
TABLE 6. CANCER STANDARDIZED INCIDENCE RATIOS FOR LEADING CANCER TYPES, 2009-2013

	Lung and Bronchus Cancer	Breast Cancer (Women)	Prostate Cancer (Men)	Colorectal Cancer
Massachusetts	100	100	100	100
Ashland	114	96	73	100
Foxborough	102	126	106	105
Framingham	97	97	90	103
Holliston	75	119	131	99
Hopkinton	73	95	120	57
Hudson	86	95	108	132
Marlborough	88	90	105	128
Maynard	74	109	83	159
Medfield	59	107	140	105
Millis	92	96	115	123
Natick	87	104	94	105
Norfolk	88	126	96	89
Northborough	63	114	95	83
Plainville	117	108	111	104
Sherborn	66	128	111	113
Southborough	91	111	106	90
Stow	54	114	134	106
Sudbury	63	164	110	101
Walpole	86	127	132	112
Wayland	69	131	120	60
Westborough	85	113	91	102
Wrentham	75	121	110	126

DATA SOURCE: Massachusetts Cancer Registry, 2009-2013. NOTE: SIR=100 indicates incidence is equal to expected based upon statewide average, SIR>100 indicates incidence is higher than expected based upon statewide average, SIR<100 indicated incidence is lower than expected based upon statewide average; highlighted cells indicate whether the SIR for that community is statistically significantly higher (red) or lower (green) than expected

In the MetroWest region, fourteen communities had higher overall cancer mortality rates than the state rate of 152.8 per 100,000 (**Figure 47**). Overall cancer mortality rates ranged from a low of 134.4 per 100,000 in Wayland to a high of 234.2 per 100,000 in Southborough.

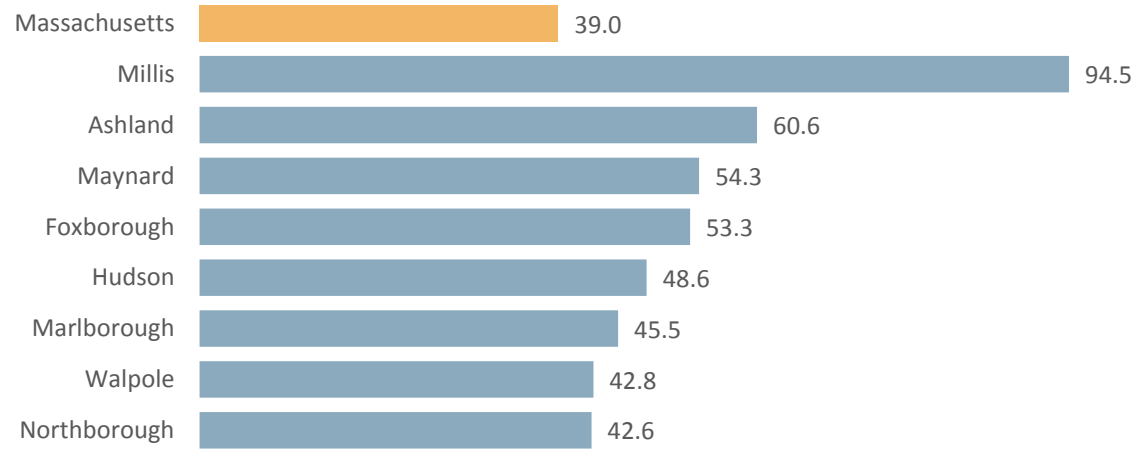
FIGURE 47. OVERALL CANCER MORTALITY RATE PER 100,000 POPULATION, 2015



DATA SOURCE: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2015. NOTE: Rates are age-adjusted per 100,000 residents; Chart only shows the communities with rates that meet or exceed that of the State.

Of the eleven MetroWest communities with data available, eight had lung cancer mortality rates higher than the state rate of 39.0 per 100,000 (**Figure 48**). The lung cancer mortality rates ranged from a low of 27.6 per 100,000 in Natick to a high of 94.5 per 100,000 in Millis.

FIGURE 48. LUNG CANCER MORTALITY RATE PER 100,000 POPULATION, 2015



DATA SOURCE: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2015. NOTE: Rates are age-adjusted per 100,000 residents; Chart only shows the communities with rates that meet or exceed that of the state.

Only two MetroWest communities had female breast cancer mortality rates available. Both of which, Marlborough and Framingham, had higher female breast cancer mortality rates compared to the state rate of 17.7 per 100,000 (**Figure 49**).

FIGURE 49. FEMALE BREAST CANCER MORTALITY RATE PER 100,000 POPULATION, 2015

DATA SOURCE: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2015. NOTE: Rates are age-adjusted per 100,000 residents; Chart only shows the communities with rates that meet or exceed that of the state.

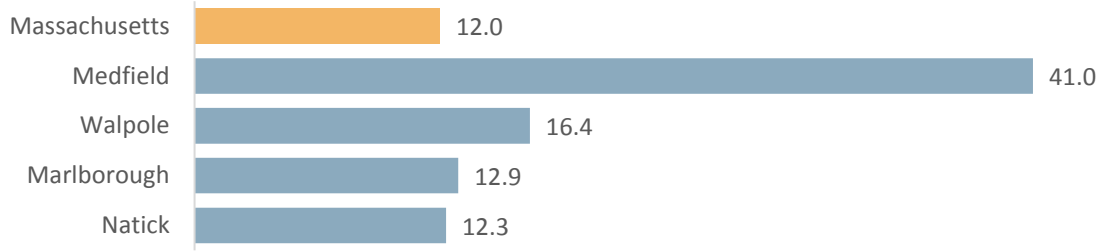
Only one MetroWest community had available prostate cancer mortality data available and it, Framingham, had a higher prostate cancer mortality rate compared to the state rate of 17.9 per 100,000 (**Figure 50**).

FIGURE 50. PROSTATE CANCER MORTALITY RATE PER 100,000 POPULATION, 2015

DATA SOURCE: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2015. NOTE: Rates are age-adjusted per 100,000 residents; Chart only shows the communities with rates that meet or exceed that of the state.

Of the nine MetroWest communities with colorectal mortality rates available, four had higher colorectal mortality rates compared to the state rate of 12.0 per 100,000 (**Figure 51**).

FIGURE 51. COLORECTAL CANCER MORTALITY RATE PER 100,000 POPULATION, 2015



DATA SOURCE: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2015. NOTE: Rates are age-adjusted per 100,000 residents; Chart only shows the communities with rates that meet or exceed that of the state.

Mental Health

> ***"We also need to understand how the African American community has historically seen mental health…as a stigma."*** - Focus Group Participant
>
> ***There is a lot of stigma around mental health for Brazilian people."*** – Key Informant Interviewee
>
> ***"There is a lot of stigma about mental health among older adults."*** – Key Informant Interviewee

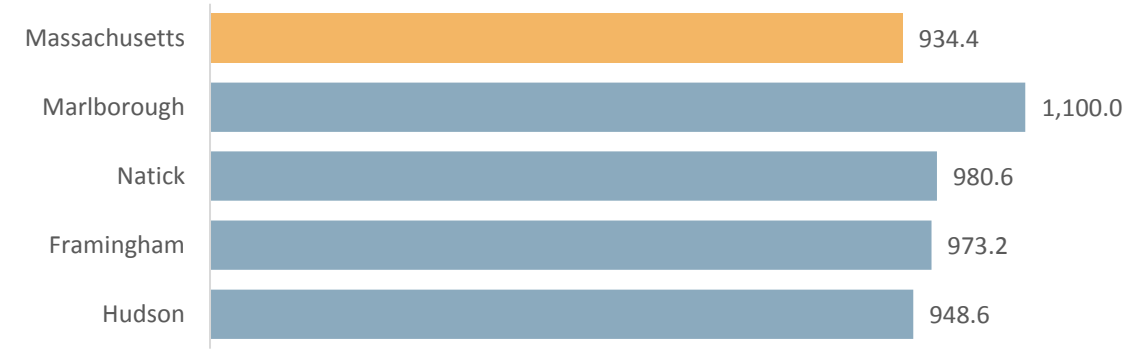
"The lack of outpatient support for mental health issues creates suppression of issues until something may happen that requires inpatient." - Focus Group Participant

Nearly all key informant interviewees ranked mental health as one of the top health concerns in the community, with many emphasizing that poor mental health impacts many other facets of an individual's health care. There was consistent support across all focus groups for better mental health treatment services in the region. Focus group participants additionally discussed that the experience of loneliness was common and could lead to stress, depression, and anxiety. These issues were noted as particularly problematic for older adults and non-English speaking residents, but some perceived youth and younger adults as being impacted too. Several focus group participants also mentioned stigma preventing the receipt of care for mental health issues, particularly for persons of color and immigrant residents. Several other focus group participants noted a lack of access to outpatient psychiatric services as a major barrier to care for mental health issues. Concern for mental health was also high among community health survey respondents, who identified mental health as the 2nd greatest health concern (**Figure 37**).

In Massachusetts, the rate of mental health hospital admissions was 934.4 per 100,000 (**Figure 52**). Among MetroWest communities, the rate of mental health hospital admissions ranged from a low of 453.0 per 100,000 in Stow to a high of 1,100.0 per 100,000 in Marlborough. In addition to Marlborough, Natick, Framingham, and Hudson all had mental health hospital admission rates higher than the state.

In contrast, all MetroWest communities had lower rates of mental health Emergency Department visits compared to the state rate of 2,465.6 per 100,000. Among MetroWest communities rates ranged from a low of 785.2 per 100,000 in Wayland to a high of 2,303.6 in Marlborough (data not shown).

FIGURE 52. MENTAL HEALTH ADMISSIONS/OBSERVATIONS PER 100,000, 2014



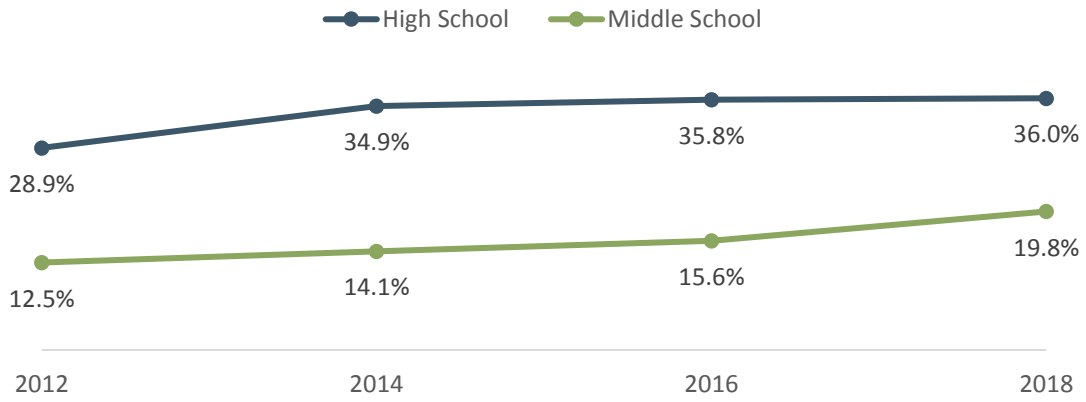
DATA SOURCE: Massachusetts Department of Public Health, Center for Health Information and Analysis (CHIA), 2014. NOTE: Rates are age-adjusted per 100,000 residents; Chart only shows the communities with rates that meet or exceed that of the state.

Of the twenty-one MetroWest communities with available Behavioral Risk Factor Surveillance System (BRFSS) data, all had a lower percentage of adults self-reporting fifteen or more days of poor mental health in the last month compared to the state percentage of 11.0%, ranging from a low of 7.6% in Sudbury to a high of 10.6% in Maynard (data not shown).

Among youth in the region, mental health issues appeared to be a growing concern. The MetroWest Adolescent Health Survey found that the percentage of middle school and high school students in the region that reported life as "very stressful" in the past 30 days increased between 2012 to 2018 (**Figure 53**). Among high school students, 36.0% indicated life as "very stressful" in 2018 compared to 28.9% in

2012. Among middle school students, 19.8% reported life as “very stressful” in 2018 compared to 12.5% in 2012.

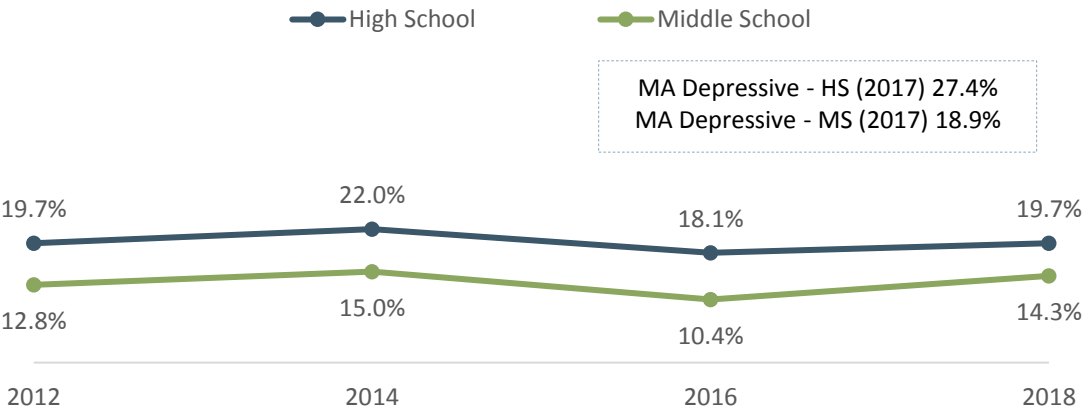
FIGURE 53. PERCENT OF STUDENTS REPORTING LIFE AS "VERY STRESSFUL" IN THE PAST 30 DAYS, 2012-2018



DATA SOURCE: MetroWest Adolescent Health Survey, 2012, 2014, 2016 & 2018

Between 2012 and 2018, the percentage of high school students reporting depressive symptoms has remained the same, 19.7% in both 2012 and 2018, although the 2018 represents a slight increase since 2016 (**Figure 54**). In the same time period, among middle school students, the percentage increased slightly from 12.8% in 2012 to 14.2% in 2018. These percentages are lower compared to statewide reports of 27.4% of high school students and 18.9% of middle school students reporting depressive symptoms in 2017.

FIGURE 54. PERCENT OF STUDENTS REPORTING DEPRESSIVE SYMPTOMS IN THE PAST 30 DAYS, 2012-2018



DATA SOURCE: MetroWest Adolescent Health Surveys, 2012, 2014, 2016 & 2018 and MA Youth Health Survey 2017.

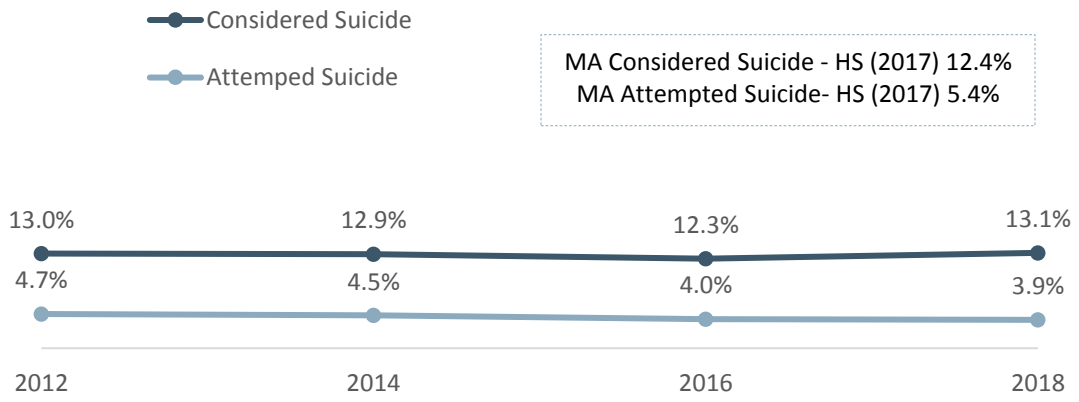
Previous research from MetroWest Health Foundation has found that social media use and poor mental health were correlated.[12] This research found that daily use of social media is nearly universal, with 80% of middle school students and 92% of high school students reporting daily use of social media.

[12] Social Media Fact Sheet: Social Media Use among MetroWest Region Youth, 2016; MetroWest Health Foundation

Additionally, youth with higher levels of social media use (three or more hours a day) were more likely to report being bullied at school (22% vs 15%), being cyberbullied (29% vs. 16%), and depressive symptoms (26% vs. 15%) compared to youth with lower levels of social media use. The percentage of students spending 3 or more hours on social media per day has remained consistent between 2016 and 2018 - about 18% of middle school students and 28% of high school students.

Suicidal ideation among MetroWest high school students remained consistent between 2012 and 2018; about 13% considered suicide each year (**Figure 55**). Attempted suicide reached a low of 3.9% among MetroWest high school students, down from 4.7% in 2012. Statewide, 12.4% of high school students reported considering suicide and 5.4% reported attempting suicide in the last 12 months.

FIGURE 55. PERCENT OF HIGH SCHOOL STUDENTS REPORTING SUICIDAL IDEATION OR ATTEMPT IN THE PAST 12 MONTHS, 2012-2018



DATA SOURCE: MetroWest Adolescent Health Surveys, 2012, 2014, 2016 & 2018 and MA Youth Health Survey 2017.

For high school students in the MetroWest region, self-injury rates slightly decreased from 15.6% in 2012 to 13.5% in 2018 (data not shown). For middle school students in the MetroWest region, self-injury rates slightly increased from 7.8% in 2012 to 9.7% in 2018. Statewide, self-injury was reported by 14.5% of high school students and 16.8% of middle school students in 2017.

Findings from the 2018 MetroWest Adolescent Health Survey[13] reveal disparate mental health findings for a number of sub-groups. Specifically, the report notes that "females continue to report depressive symptoms and self-injury around twice as much as males (in 2018, self-injury was reported by 19% of females and 8% of males). Females are also more likely to report suicidal thoughts and attempts, though the difference is not as great." Additionally, "LGBTQ youth report elevated levels of mental health problems. Compared with heterosexual cisgender youth, they are more than 2.5 times as likely to report depressive symptoms (41% vs. 16%) and more than three times as likely to report self-injury (35% vs. 10%), seriously considering suicide (32% vs. 10%), and attempting suicide (10% vs. 3%)." Comparisons by student race/ethnicity were not reported.

[13] MetroWest Adolescent Health Survey Regional Highlights Report - High School Youth, Spring 2019

Alcohol and Substance Use

> ***"Substance use is a huge issue- but it is a huge issue because there are [a] lack of things- access to long term treatment/residential services, medica[tion] assisted treatment, other supports for sobriety."*** **–** Key Informant Interviewee
>
> ***"Prevention at the elementary and middle school levels around drug and alcohol abuse would be helpful – we see young adults here who have had years and years of substance abuse and it would be ideal to prevent it from a young age."*** -Key Informant Interviewee
>
> ***"When I see the lines at the recreational pot store near my home, I see that many of them in line are elderly people. I don't have data about this but many people use it for pain management and are susceptible to drugs that help with pain management."*** – Key Informant Interviewee

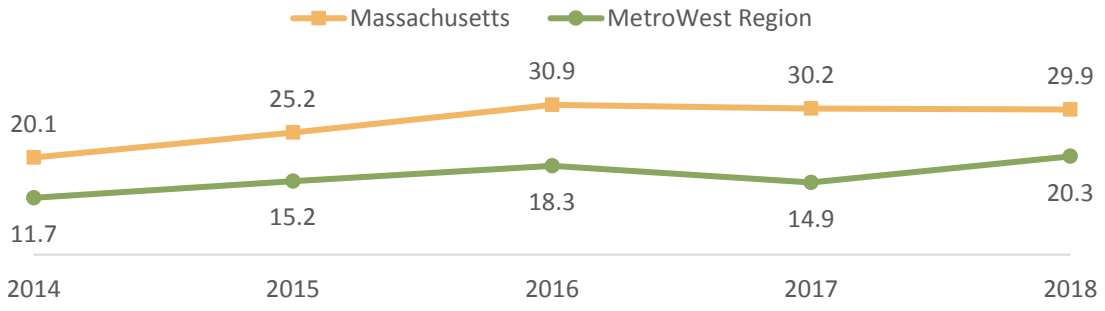
Alcohol and substance use were ranked as the greatest health concern by community health survey respondents in 2019 which is consistent with the results of the 2016 survey (**Figure 37**). Alcohol and substance use were also identified as a leading health issues by a majority of the key informant interviewees. Interviewees discussed the problem as a huge issue with a lack of treatment and support services as the key issues. Some also pointed to older adults and youth as population at high risk of substance misuse.

In contrast, substance use was discussed in much less detail among the resident focus groups. Opioids or opioid-related overdose were never specifically mentioned by any of the focus group participants; most made only general reference to ***'drug use'***, ***'drugs'***, or ***'substance use disorders'.*** Those that did specify substances of concern, mentioned only marijuana (and 'dabbing' of marijuana), alcohol, or vaping. Youth were noted by focus group participants as a population at particularly high risk for substance use, particularly use of marijuana and alcohol.

Opioids and Overdose

The mortality rate due to opioid-related overdose increased nearly 49.3% in Massachusetts between 2014 and 2018, rising from 20.1 per 100,000 in 2014 to 29.9 per 100,000 in 2018 (**Figure 56**). The rate in the MetroWest region remained consistently lower than the state rate over the same time period. However, the rate in the MetroWest region increased 73.9% between 2014 and 2018, rising from 11.7 per 100,000 in 2014 to 20.3 per 100,000 in 2018.

FIGURE 56. ESTIMATED MORTALITY RATE DUE TO OPIOID-RELATED OVERDOSE PER 100,000, 2014-2018



DATA SOURCE: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2019. NOTE: Rates are calculated by HRiA based upon ACS total population estimates for 2013-2017 and should be considered as unofficial estimates only; 2017 and 2018 death data are preliminary and subject to updates.

Between 2014 and 2018, the average number of opioid-related overdose deaths was 1,861 per year in Massachusetts and 66 per year in the MetroWest region (**Table 7**). The 5-year average number ranged within the MetroWest communities, from 0 per year in Southborough to 14 per year in Framingham.

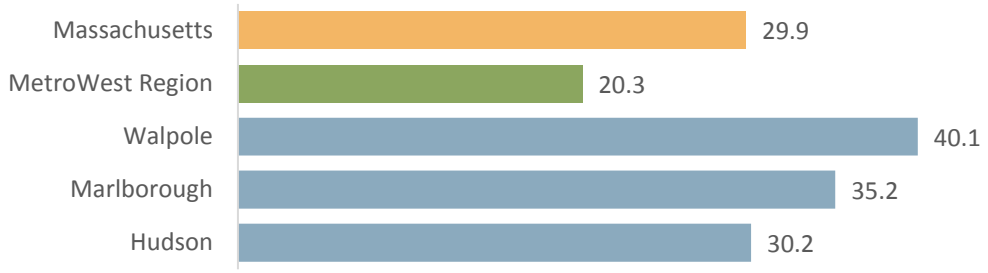
TABLE 7. COUNT OF OPIOID-RELATED OVERDOSE DEATHS, ALL INTENTS, 2014-2018

	2014	2015	2016	2017	2018	5-Year Average
Massachusetts	1,362	1,710	2,100	2,050	2,033	1,851
MetroWest Region	48	62	75	61	83	66
Ashland	1	4	4	3	2	3
Foxborough	3	0	7	2	3	3
Framingham	11	12	18	8	19	14
Holliston	0	5	1	3	1	2
Hopkinton	3	4	0	3	3	3
Hudson	1	6	3	4	6	4
Marlborough	9	8	4	5	14	8
Maynard	2	3	0	2	1	2
Medfield	0	0	1	0	2	1
Millis	1	1	4	1	2	2
Natick	7	5	3	7	4	5
Norfolk	1	2	3	0	2	2
Northborough	0	0	3	2	1	1
Plainville	4	0	3	5	0	2
Sherborn	1	1	1	1	1	1
Southborough	0	0	1	0	1	0
Stow	0	1	1	1	0	1
Sudbury	0	0	0	0	3	1
Walpole	1	4	7	4	10	5
Wayland	1	1	2	2	2	2
Westborough	1	3	4	3	5	3
Wrentham	1	2	5	5	1	3

DATA SOURCE: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, Number of Opioid-Related Overdose Deaths All Intents by City/Town 2013-2019 (updated April 2019)

Focusing on opioid-related overdose that occurred in 2018, the mortality rate due to opioid-related overdose was lower in the MetroWest Region compared to Massachusetts overall (20.3 vs. 29.9 per 100,000, respectively) (**Figure 57**). Walpole, Marlborough and Hudson had higher rates than the state overall (35.2 per 100,000 and 30.2 per 100,000, respectively). Across MetroWest communities, the estimated mortality rate ranged from a low of 6.7 per 100,000 in Northborough to a high of 40.1 per 100,000 in Walpole.

FIGURE 57. ESTIMATED MORTALITY RATE DUE TO OPIOID-RELATED OVERDOSE, 2018

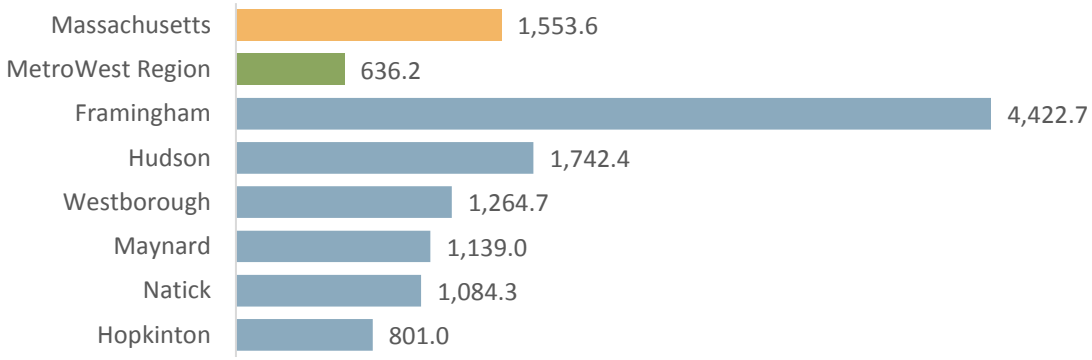


DATA SOURCE: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2019. NOTE: Rates are calculated by HRiA based upon ACS total population estimates for 2013-2017 and should be considered unofficial estimates only; 2017 and 2018 death data are preliminary and subject to updates; Chart only shows the communities with rates that meet or exceed that of the state.

The Bureau of Substance Addiction Services (BSAS) provides data on treatment admissions to state funded programs. From 2015 to 2018, Massachusetts saw an 8.4% increase in its overall BSAS admission rate, rising from 1,433.3 per 100,000 in 2015 to 1,553.6 per 100,000 in 2018. In contrast, there was a 15.3% decrease in the overall BSAS admission rate in the MetroWest region, falling from 751.3 per 100,000 in 2015 to 636.2 per 100,000 in 2018.

In 2018, the overall BSAS admission rate in Massachusetts was 1,553.6 per 100,000 (**Figure 58**). The MetroWest region had a much lower rate, at 636.2 per 100,000. Within MetroWest, Framingham, Hudson, Westborough, Maynard, Natick, and Hopkinton all had rates that exceeded the regional rate.

FIGURE 58. BUREAU OF SUBSTANCE ADDICTION SERVICES (BSAS) OVERALL ADMISSION RATE, 2018

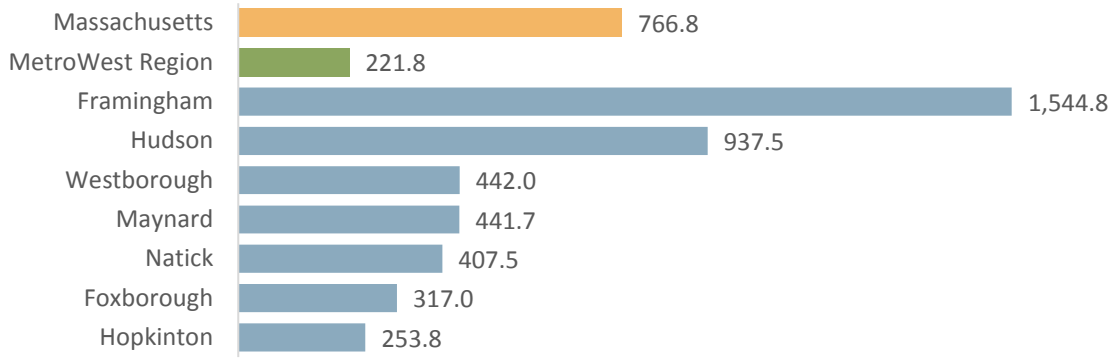


DATA SOURCE: Massachusetts Department of Public Health, Bureau of Substance Addiction Services, Office of Statistics and Evaluation, FY2018. NOTE: Rates are calculated by HRiA based upon ACS total population estimates for 2013-2017 and should be considered estimates only; Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

Between 2015 and 2018, Massachusetts saw a 0.17% decrease in its heroin-related BSAS admission rate, falling from 768.1 per 100,000 in 2015 to 766.8 per 100,000 in 2018. The MetroWest region saw a 25.8% decrease in its heroin-related BSAS admission rate, falling from 299.0 per 100,000 in 2015 to 221.8 per 100,000 in 2018.

In 2018, approximately half (49%) of all BSAS admissions statewide identified heroin as the primary substance of use. Within the MetroWest region, about a third (39.8%) of admissions identified heroin as the primary substance of use. The rate of heroin-related BSAS admissions was lower for the MetroWest region compared to the state in 2018 (221.8 per 100,000 vs. 766.8 per 100,000 (**Figure 59**). Within the MetroWest region, Framingham, Hudson, Westborough, Natick, Foxborough, and Hopkinton all had rates that exceeded the regional rate.

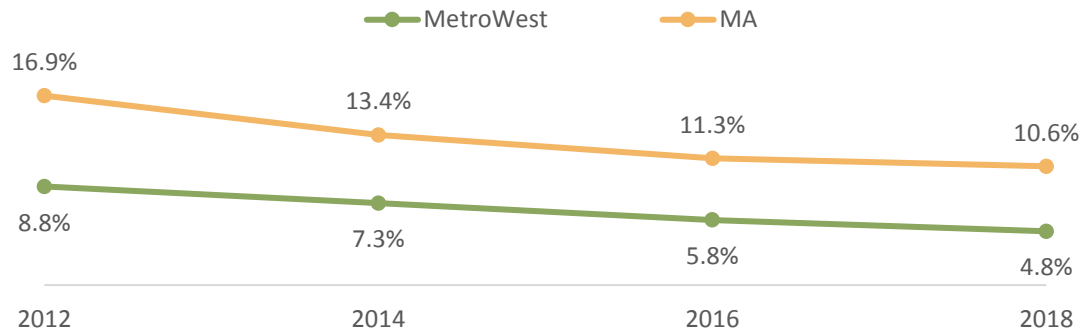
FIGURE 59. BUREAU OF SUBSTANCE ADDICTION SERVICES (BSAS) ADMISSIONS RATE WITH HEROIN AS PRIMARY SUBSTANCE OF USE, 2018



DATA SOURCE: Massachusetts Department of Public Health, Bureau of Substance Addiction Services, Office of Statistics and Evaluation, FY2018. NOTE: Rates are calculated by HRiA based upon ACS total population estimates for 2013-2017 and should be considered estimates only; Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

While estimates of substance use at the local level are generally not available, the MetroWest Adolescent Health Survey provides data on drug use and abuse among youth. The percentage of high school students reporting prescription drug misuse, which is an established risk factor for opioid addiction, decreased between 2012 and 2018 in both Massachusetts and the MetroWest region (**Figure 60**). The percentage fell from 16.9% in 2012 to 10.6% in 2018 for Massachusetts and the percentage fell from 8.8% in 2012 to 4.8% in 2018 for the MetroWest region.

FIGURE 60. PERCENT OF HIGH SCHOOL STUDENTS REPORTING LIFETIME PRESCRIPTION DRUG MISUSE, 2012-2018



DATA SOURCE: MetroWest Adolescent Health Surveys, 2012, 2014, 2016 & 2018 and MA Youth Health Survey 2011, 2013, 2015, and 2017. NOTE: Data represent lifetime misuse, at any time prior to the survey.

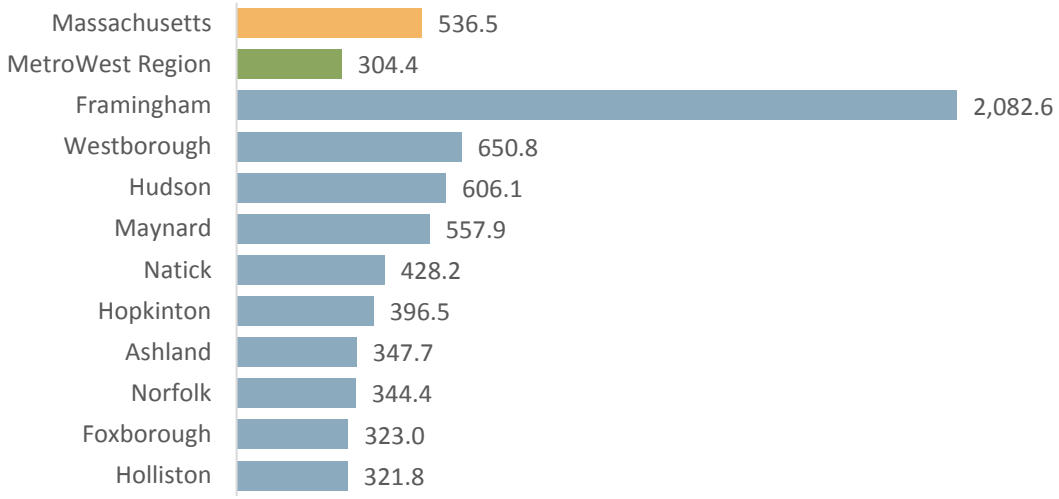
Alcohol

Between 2015 and 2018, Massachusetts saw a 13.0% increase in its alcohol-related BSAS admission rate, rising from 475.0 per 100,000 in 2015 to 536.5 per 100,000 in 2018. In contrast, there was an 8.8% decrease in the alcohol-related BSAS admission rate in the MetroWest region, falling from 333.7 per 100,000 in 2015 to 304.4 per 100,000 in 2018 (data not shown).

In 2018, approximately one third (34.5%) of all BSAS admissions statewide identified alcohol as the primary substance of use. Within the MetroWest region, a slightly larger percentage (40.5%) of admissions identified alcohol as the primary substance of use.

In 2018, the alcohol-related BSAS admission rate in Massachusetts was 536.5 per 100,000 (**Figure 61**). The MetroWest region overall had a lower rate at 304.4 per 100,000. However, within the MetroWest communities, the rate ranged considerably from a low of 79.6 per 100,000 in Sudbury to a high of 2,082.6 in Framingham. In addition to Framingham, Westborough, Hudson and Marlborough had higher rates of alcohol-related BSAS admissions rates compared to the state overall.

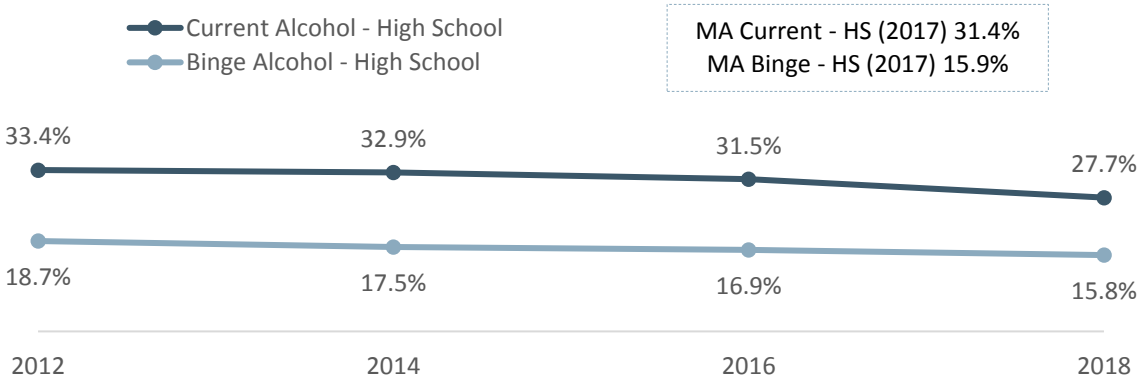
FIGURE 61. BUREAU OF SUBSTANCE ADDICTION SERVICES (BSAS) ADMISSIONS RATE WITH ALCOHOL AS PRIMARY SUBSTANCE OF USE, 2018



DATA SOURCE: Massachusetts Department of Public Health, Bureau of Substance Addiction Services, Office of Statistics and Evaluation, FY2018. NOTE: Rates are calculated by HRiA based upon ACS total population estimates for 2013-2017 and should be considered estimates only; Chart only shows the communities with rates that meet or exceed that of the MetroWest region.

In resident focus groups, youth were noted as a population at particular risk for alcohol use. The percentage of high school students in the MetroWest region reporting current alcohol use declined in recent years, falling from 33.4% in 2012 to 27.7% in 2018 (**Figure 62**). The percentage of high school students in the MetroWest region reporting binge drinking (4 or more drinks in a row for females and 5 or more drinks in a row for males) has also declined in recent years, falling from 18.7% in 2012 to 15.8% in 2018. These rates of alcohol use are slightly below the state for both indicators.

FIGURE 62. PERCENT OF HIGH SCHOOL STUDENTS REPORTING ALCOHOL USE, 2012-2018

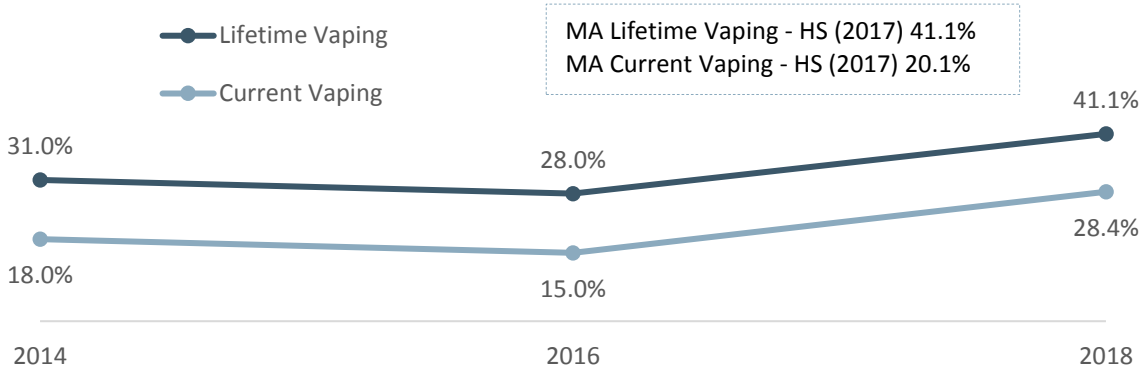


DATA SOURCE: DATA SOURCE: MetroWest Adolescent Health Surveys, 2012, 2014, 2016 & 2018 and MA Youth Health Survey 2017. NOTE: Binge drinking was defined as 4 or more drinks in a row for females and 5 or more drinks in a row for males; Current use includes past 30 days (at time of survey)

Tobacco and Vaping

While current cigarette use has decreased in recent years to a very low rate of 3.2% among high school students in the MetroWest region in 2018 (data not shown), more high school students are reporting vaping (**Figure 63**). The percentage of high school students reporting ever vaping increased from 30.5% in 2014 to 41.1% in 2018. The percentage of high school students reporting currently vaping increased from 17.5% in 2014 to 28.4% in 2018. Comparatively, in 2017, the same percentage of Massachusetts high school students (41.1%) reported ever vaping and a slightly lower percentage (20.1%) reported currently vaping.

FIGURE 63. PERCENT OF HIGH SCHOOL STUDENTS REPORTING VAPING, 2014-2018

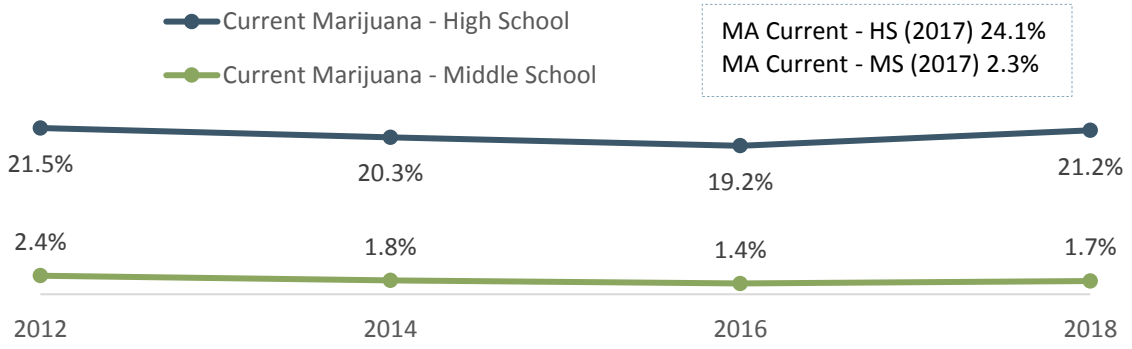


DATA SOURCE: MetroWest Adolescent Health Surveys, 2014, 2016 & 2018. NOTE: Vaping includes electronic cigarettes (e-cigarettes) like JUUL, Phix, Vuse, MarkTen, and blu, and other electronic vapor products, like vapes, vape pens, e-cigars, e-hookahs, hookah pens and mods; Current use includes past 30 days (at time of survey)

Marijuana

In resident focus groups, youth were discussed as a population at particular risk for abuse of marijuana, particularly with the legalization of recreational use. Among high school students in the MetroWest region, current marijuana use decreased from 21.5% in 2012 to 19.2% in 2016, before increasing slightly again to 21.2% in 2018 (**Figure 64**). Among middle school students in the MetroWest region, current marijuana use decreased from 2.4% in 2012 to 1.4% in 2016, before increasing slightly to 1.7% in 2018. These rates of marijuana use are below the state for each indicator.

FIGURE 64. PERCENT OF STUDENTS REPORTING MARIJUANA USE, 2012-2018



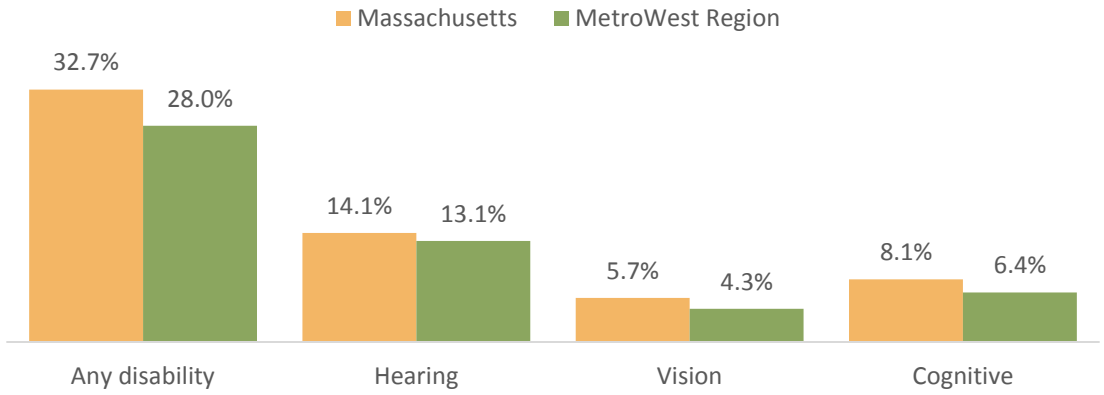
DATA SOURCE: MetroWest Adolescent Health Surveys, 2014, 2016 & 2018. NOTE: Current use includes past 30 days (at time of survey).

Disability

A small percentage (7.2%) of community health survey respondents selected disabilities as a top health concern in the community, with 3.9% of respondents selecting autism as a top health concern (note: disabilities and autism were new categories for the 2019 survey). A total of 14.2% of community health survey respondents reported that they are a caretaker for someone with a disability -- 8.7% reported that they live in a household with an adult with a disability that is under their care and an additional 5.4% reported that they have caregiving responsibilities for an adult with a disability with whom they do not share a household. The focus group conducted with adult caregivers highlighted the issue of physical access to public spaces for the disabled population (e.g. wheelchair-friendly spaces, handicapped parking spaces, etc.) which limits their engagement in the community, professionally and recreationally.

Overall, the MetroWest region has a smaller population of adults age 65 and older living with a disability compared to the state overall (28.0% vs. 32.7%) (**Figure 65**). However, five MetroWest communities had larger percentages of adults age 65 and older with any type of disability than the region overall; Natick (33.7%), Framingham (33.0%), Hudson (32.0%), Wrentham (31.9%), and Millis (31.0%).

FIGURE 65. PERCENT ADULTS AGE 65 OR OLDER WITH DISABILITY, BY TYPE, 2017



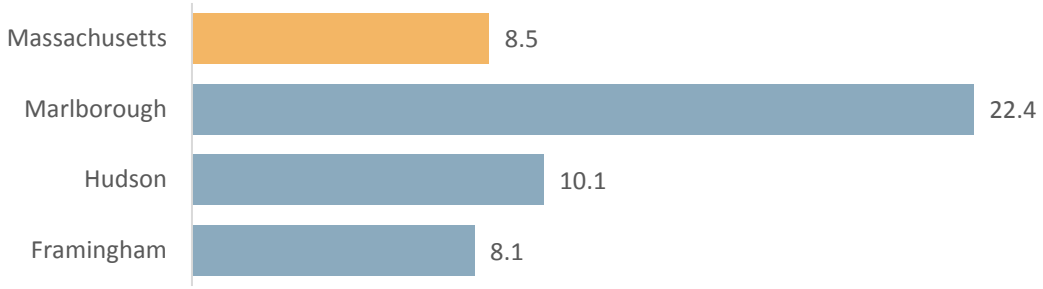
DATA SOURCE: US Census Bureau, American Community Survey, 5-Year Estimates 2013-2017.
NOTE: Percentages are based on non-institutionalized individuals, aged 65 and older

Reproductive Health

Teen Births

In 2016, the teen birth rate in Massachusetts was 8.5 per 1,000 mothers age 15-19 (**Figure 66**). Data for most communities within the MetroWest region were 0.0 or had counts that were suppressed due to small counts. Framingham and Hudson had similar teen birth rates as Massachusetts overall, at 8.1 and 10.1 per 1,000, respectively. Marlborough's teen birth rate was more than double that of Massachusetts at 22.4 per 1,000. Teen birth rates were available by race/ethnicity for select communities in 2016. Data showed that teen birth rates were particularly high among Hispanic mothers age 15-19 in both Framingham (30.4 per 1,000) and Marlborough (92.9 per 1,000). The state rate for Hispanic teen births is 29.9 per 1,000.

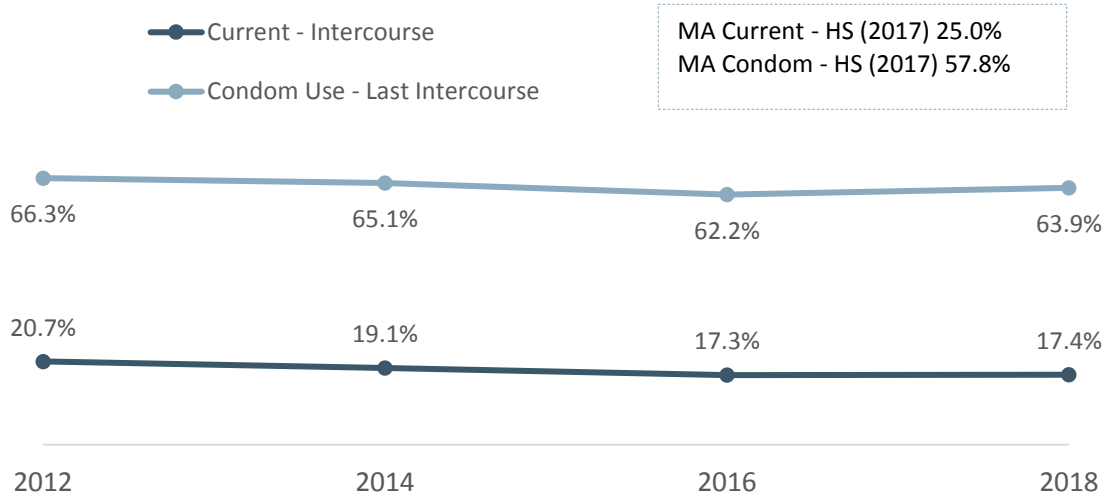
FIGURE 66. TEEN BIRTH RATE PER 1,000 FEMALES AGED 15-19, 2016



DATA SOURCE: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2016. NOTE: All other MetroWest communities had rates of 0.0 per 1,000 or rates that were suppressed due to small counts (< 5).

The percentage of high school students in the MetroWest region reporting sexual activity in the prior three months has declined in recent years (**Figure 67**). In 2012, 20.7% of high school students reported currently engaging in sexual activity; down to 17.4% by 2018. However, over this same time period, the percentage of high school students in the MetroWest region reporting condom use at last intercourse also declined slightly from 66.3% in 2012 to 63.9% in 2018.

FIGURE 67. PERCENT OF HIGH SCHOOL STUDENTS REPORTING SEXUAL ACTIVITY AND CONDOM USE, 2012-2018

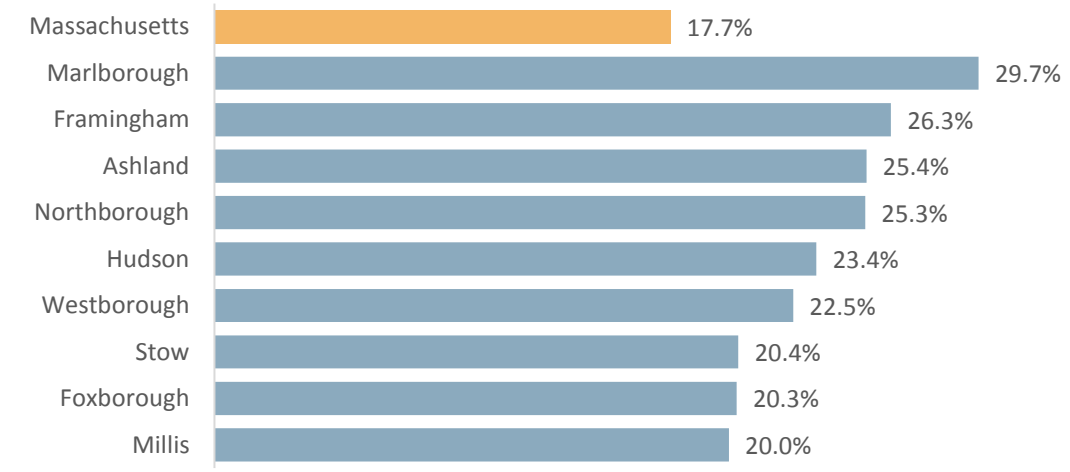


DATA SOURCE: MetroWest Adolescent Health Surveys, 2012, 2014, 2016 & 2018. NOTE: Current sexual activity includes past 3 months; rate of condom use based upon youth who are currently sexually active.

Birth Outcomes

The percentage of all births with inadequate prenatal care (defined as care beginning after the 4th month of pregnancy or receiving less than 50% of recommended visits received) in Massachusetts was 17.7% in 2016. Among the MetroWest communities with data available, nine communities had higher percentages of births with inadequate prenatal as compared to the state (**Figure 68**), including Marlborough, Framingham, Ashland, and Northborough which each had rates that represented 1 in 4 births.

FIGURE 68. PERCENT BIRTHS WITH INADEQUATE PRENATAL CARE, 2016



DATA SOURCE: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2016. NOTE: Care adequacy is based on the Adequacy of Prenatal Care Utilization Index (APNCU); Chart only shows the communities with rates that meet or exceed that of the state.

In Massachusetts in 2016, 8.7% of births were premature (i.e. born prior to 37 weeks gestation). Among the nineteen MetroWest communities with data, five had higher percentages of premature births: Northborough (11.9%), Plainville (11.7%), Framingham (10.4%), Foxborough (10.2%), and Hudson (9.9%). Among the seventeen MetroWest communities with birthweight data, five had percentages of low birth weight births that were higher than the state: Northborough (11.2%), Framingham (8.4%), Foxborough (8.2%), and Hopkinton (8.2%), with Norfolk (10.5%) compared to 7.5% in the state.

Infant mortality data was only available for Framingham. In 2016, Framingham's infant mortality rate was 6.8 per 1,000 live births, higher than the state rate of 4.3 per 1,000 live births. Framingham consistently ranked within the top five MetroWest communities across poor birth outcomes.

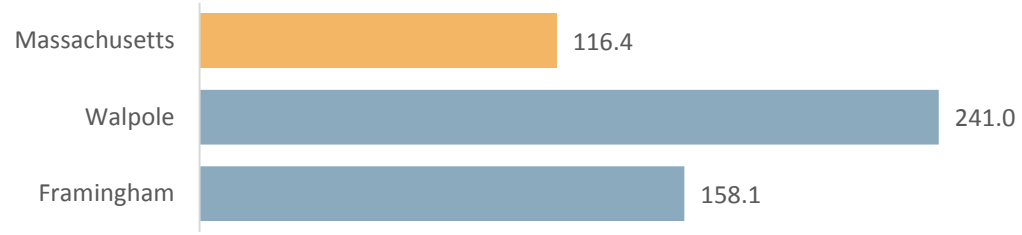
Sexually Transmitted Infections

> ***"Infectious disease. STI's, new HIV cases, new Hep C, lots of STIs are being diagnosed through new screenings - these are increasing in MetroWest."*** - Key Informant Interviewee

Very few community health survey respondents selected sexually transmitted infections (e.g., HIV/AIDS, chlamydia, etc.) as a top health issues facing the community (0.9%) and no focus group discussions brought up issues around sexually transmitted infections. However, some key informant interviewees discussed increasing identification of sexually transmitted infections in the MetroWest region.

In 2017, the state rate of Hepatitis C was 116.5 per 100,000 (**Figure 69**). Two MetroWest communities had higher Hepatitis C rates than the state, Walpole (241.0 per 100,000) and Framingham (158.1 per 100,000). Between 2016 and 2017, Ashland saw the greatest increase in its Hepatitis C rate, from 31.9 to 72.3 per 100,000, a 126.5% increase. Holliston saw the greatest decrease in its Hepatitis C rate, from 65.1 to 36.9 per 100,000, a 28.2% decrease.

FIGURE 69. HEPATITIS C CASE RATE PER 100,000 POPULATION, 2017



DATA SOURCE: Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences, 2017. NOTE: Data includes confirmed and probable cases; NOTE: Chart only shows the communities with rates that meet or exceed that of the state.

In 2018, the state rate of chlamydia was 446.0 per 100,000. All MetroWest communities had lower chlamydia rates than the state, ranging from a low of 121.5 per 100,000 in Stow to a high of 404.5 per 100,000 in Framingham (data not shown). However, chlamydia rates have increased between 2015 and 2018 in most MetroWest communities, with Stow and Hudson experiencing the largest increases (Stow: from 71.1 to 121.5 per 100,000, a 70.9% increase; Hudson: from 117.9 to 252.0 per 100,000, a 113.7% increase).

In 2017, the gonorrhea rate in Massachusetts was 111.6 per 100,000. Of the fourteen MetroWest communities with available data, the gonorrhea rate ranged from a low of 0.0 per 100,000 in Sudbury and Norfolk to a high of 89.1 per 100,000 in Maynard. In 2017, the syphilis rate in Massachusetts was 16.7 per 100,000. Framingham was the only MetroWest community with syphilis reported, with a rate of 14.7 per 100,000.

Other Health Indicators

According Marlborough Hospital data for fiscal years 2016 to 2018, the three most common health issues among ED patients who were admitted were pneumonia (N = 414, 6.7%), sepsis (N = 342, 5.5%), and Chronic Obstructive Pulmonary Disorder (COPD; N = 266, 4.3%) (**Table 8**). Among ED patients who were observed but not admitted, the three most common health issues were unspecified chest pain (N = 449, 11.8%), syncope (N = 242, 6.4%), and other chest pain (N = 191, 5.0%). Among outpatient ED patients, the three most common health issues were unspecified chest pain (N = 991, 2.2%), urinary tract infection (N = 874, 2.0%), and abdominal pain (N = 830, 1.9%).

TABLE 8. ED VISITS BY PRIMARY ICD10 DIAGNOSIS CODE, MARLBOROUGH HOSPITAL, FY2016-2018

	FY 2016		FY 2017		FY 2018		3-Year Aggregate	
Primary Diagnosis Code	**Count**	**% of Total**	**Count**	**% of Total**	**Count**	**% of Total**	**Count**	**% of Total**
Inpatient								
Total Count	1,912		2,249		2,043		6,204	
Pneumonia, unspecified organism	131	6.9%	148	6.6%	135	6.6%	414	6.7%
Sepsis, unspecified organism	113	5.9%	111	4.9%	118	5.8%	342	5.5%
Chronic Obstructive Pulmonary Disease with (Acute) Exacerbation	91	4.8%	86	3.8%	89	4.4%	266	4.3%
Urinary Tract Infection, site not specified	40	2.1%	65	2.9%	53	2.6%	158	2.5%

Primary Diagnosis Code	FY 2016		FY 2017		FY 2018		3-Year Aggregate	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
Hypertensive Heart Disease with Heart Failure	-	-	53	2.4%	81	4.0%	134	2.2%
Acute Kidney Failure, unspecified	36	1.9%	36	1.6%	43	2.1%	115	1.9%
Hypertensive Heart and Chronic Kidney Disease	11	0.6%	38	1.7%	60	2.9%	109	1.8%
Non-ST elevation (NSTEMI) Myocardial Infarction	28	1.5%	34	1.5%	34	1.7%	96	1.5%
Alcohol Dependence with Withdrawal, unspecified	27	1.4%	30	1.3%	32	1.6%	89	1.4%
Schizophrenia, unspecified	25	1.3%	28	1.2%	17	0.8%	70	1.1%
Observation								
Total Count	1,477		1,139		1,193		3,809	
Chest Pain, unspecified	188	12.7%	186	16.3%	75	6.3%	449	11.8%
Syncope and Collapse	80	5.4%	77	6.8%	85	7.1%	242	6.4%
Other Chest pain	47	3.2%	31	2.7%	113	9.5%	191	5.0%
Abnormal Electrocardiogram ECG EKG	164	11.1%	17	1.5%	1	0.1%	182	4.8%
Dizziness and Giddiness	50	3.4%	45	4.0%	43	3.6%	138	3.6%
Chronic Obstructive Pulmonary Disease with (acute) exacerbation	36	2.4%	30	2.6%	46	3.9%	112	2.9%
Urinary Tract Infection, site not specified	44	3.0%	43	3.8%	16	1.3%	103	2.7%
Weakness	23	1.6%	18	1.6%	35	2.9%	76	2.0%
Essential (primary) Hypertension	45	3.0%	18	1.6%	5	0.4%	68	1.8%
Noninfective Gastroenteritis and Colitis, unspecified	30	2.0%	19	1.7%	16	1.3%	65	1.7%
Outpatient, excluding Observation								
Total Count	14,895		15,020		14,862		44,777	
Chest pain, unspecified	352	2.4%	379	2.5%	260	1.7%	991	2.2%
Urinary Tract Infection, site not specified	318	2.1%	311	2.1%	245	1.6%	874	2.0%
Unspecified Abdominal Pain	287	1.9%	390	2.6%	153	1.0%	830	1.9%
Low Back Pain	296	2.0%	279	1.9%	167	1.1%	742	1.7%
Acute Upper Respiratory Infection, unspecified	199	1.3%	258	1.7%	274	1.8%	731	1.6%
Nausea with Vomiting, unspecified	232	1.6%	252	1.7%	193	1.3%	677	1.5%
Unspecified Injury of Head, initial encounter	168	1.1%	248	1.7%	226	1.5%	642	1.4%
Headache	209	1.4%	219	1.5%	192	1.3%	620	1.4%
Acute Pharyngitis, unspecified	170	1.1%	199	1.3%	139	0.9%	508	1.1%
Fever, unspecified	183	1.2%	171	1.1%	128	0.9%	482	1.1%

DATA SOURCE: Marlborough Hospital, Fiscal Year 2016, 2017, & 2018

Healthcare Access and Utilization

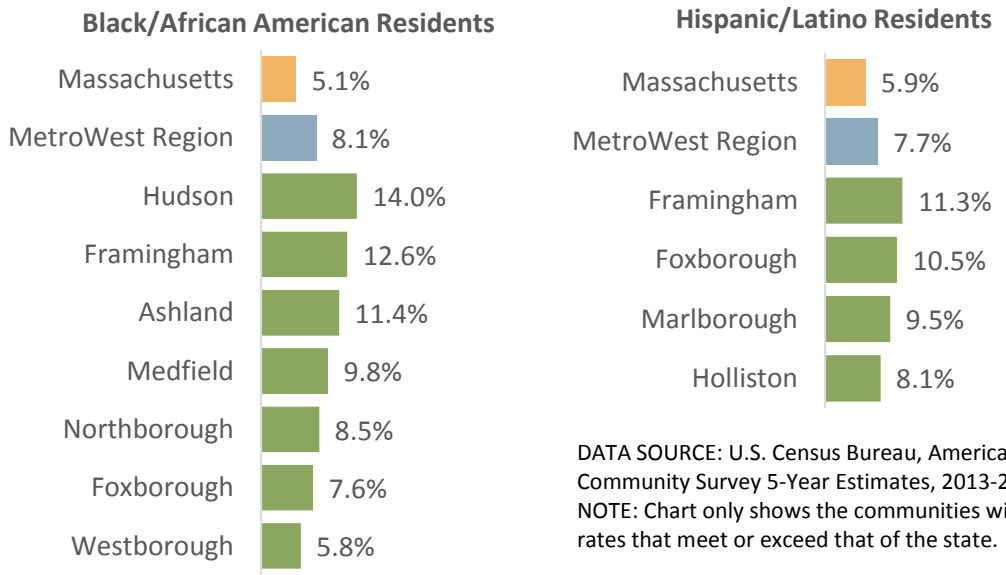
Insurance Coverage

Insurance coverage was cited as a challenge by focus group participants and key informant interviewees. Many participants mentioned the difficulty of finding a doctor that accepts their insurance. Further, several participants mentioned challenges around their insurance not covering the types of health care that were needed (i.e. dental care, mental health care, psychiatric care).

> ***"When hospitals/providers only take some insurance plans this causes immediate impact on patients' ability to access and follow through with treatment. It sends the message that some patients' health/lives are more valuable than others and people receive that message."*** - Key Informant Interviewee
>
> **"*Coverage in MassHealth for dental services is awful."* -** Focus Group Participant
>
> ***"Clinicians see the struggle with insurance – whether not understanding, not having it, not having procedures done due to costs – every day. Education on options is crucial."*** - Focus Group Participant
>
> ***"Hospitals and providers need to figure out how they can take more insurance programs and figure out the financial balance so that more people can have care."*** - Key Informant Interviewee

The American Community Survey estimates that 3.0% of the Massachusetts population is uninsured. The MetroWest region had a lower overall uninsured percentage than the state, at 2.7%. MetroWest communities with overall uninsured rates higher than the state included Framingham (6.7%), Marlborough (4.8%), and Hudson (4.1%) (data not shown). Data were also explored by race/ethnicity and a number of MetroWest communities had substantially higher uninsured rates among Black/African American and Hispanic residents (**Figure 70**).

FIGURE 70. PERCENTAGE OF POPULATION WITH NO HEALTH INSURANCE, BY RACE/ETHNICITY 2017



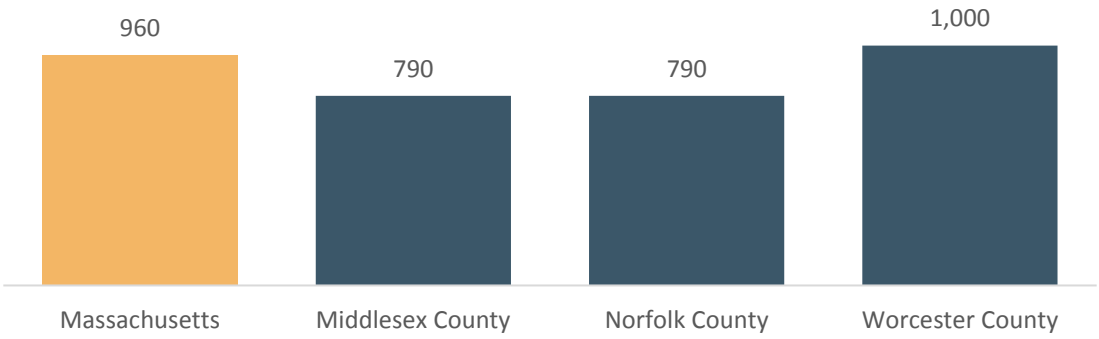
DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2013-2017
NOTE: Chart only shows the communities with rates that meet or exceed that of the state.

Among community health survey respondents, 65.3% reported having private health insurance, 2.1% reported having Medicare, and 19.8% reported having MassHealth/Medicaid.

Availability of Health Care Services

Of the three counties that make up the MetroWest region, Worcester County has a higher ratio of population per primary care provider compared to the state of Massachusetts overall (1,000 residents per provider vs. 960.0 residents per provider, respectively) which suggests there are fewer primary care providers in Worcester County (**Figure 71**). Middlesex and Norfolk Counties (both 790.0 residents per provider) have lower ratios than the state and Worcester County, suggesting there are more primary care providers in those counties relative to the population size.

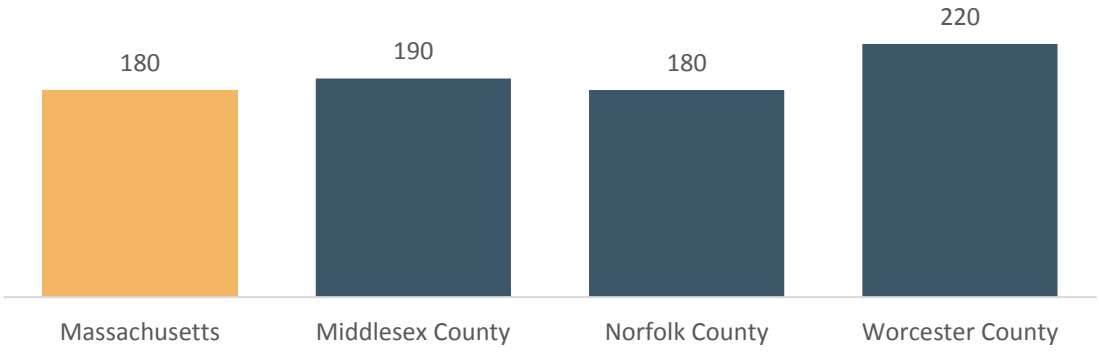
FIGURE 71. RATIO OF POPULATION PER PRIMARY CARE PROVIDER, 2016



DATA SOURCE: American Medical Association, Area Health Resource File, as reported by County Health Rankings, 2016.

Middlesex (190.0 residents per provider) and Worcester Counties (220.0 residents per provider) had higher ratios of population per mental health providers compared to the state (**Figure 72**), which suggests fewer mental health providers in those counties relative to the population size.

FIGURE 72. RATIO OF POPULATION PER MENTAL HEALTH PROVIDERS, 2018



DATA SOURCE: American Medical Association, Area Health Resource File, as reported by County Health Rankings, 2018.

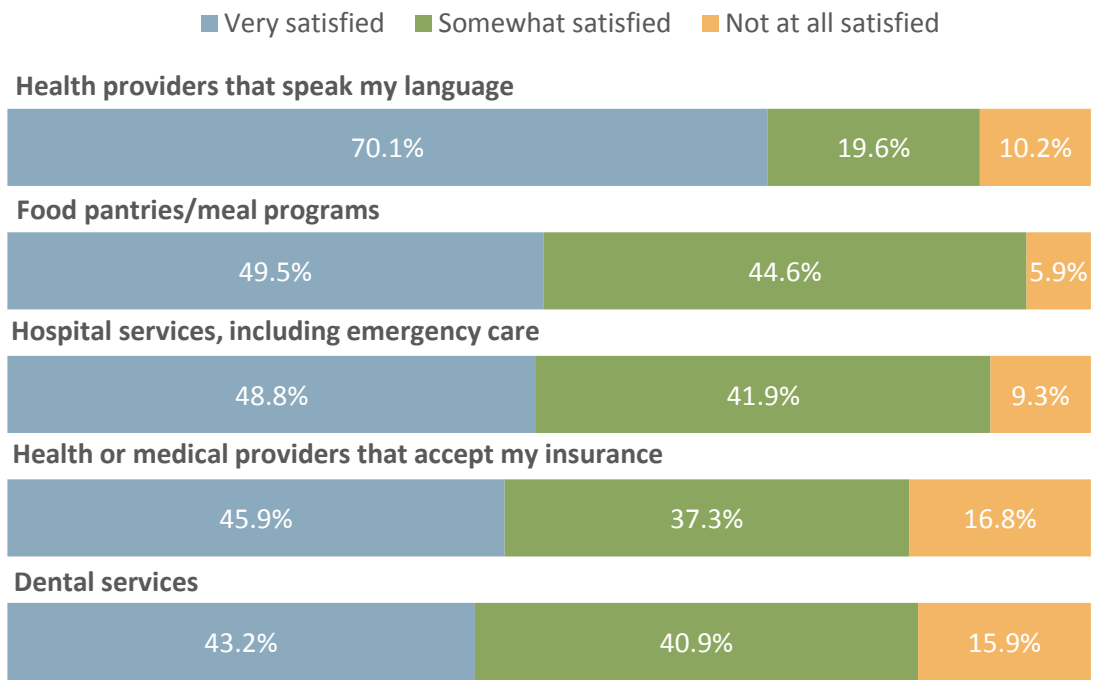
Focus group discussions delved deeper into the perceptions of health care services available in their communities as well as barriers to getting health care services in their communities. Overall the responses tended toward a positive opinion of the available health care services. Participants most frequently used the term ***'good'***, but often this was followed by qualifiers such as ***'once you get in'***, ***'need to travel to get there'***, ***'if you have insurance'***, or ***'if they take MassHealth'*** which suggests a number of barriers are experienced by residents.

Overall, community health survey respondents were most satisfied with the availability of health providers that speak their language (70.1% “very satisfied”), food pantries/meal programs (49.5% “very satisfied”), hospital services including emergency care (48.8% “very satisfied”), health or medical providers that accept their insurance (45.9% “very satisfied”), and dental services (43.2% “very satisfied”) (**Significant differences** were observed by race/ethnicity. Survey respondents who identified as a minority race/ethnicity were significantly less satisfied than other respondents with the availability of the following services in their community: health providers that speak their language (46.7% vs. 79.8% “very satisfied”, respectively, $p < .001$); health or medical providers that accept their insurance (35.3% vs. 50.1% “very satisfied”, respectively, $p < .001$); and dental services (33.5% vs. 47.2% “very satisfied”, respectively, $p < .001$).

Figure 73).

Significant differences were observed by race/ethnicity. Survey respondents who identified as a minority race/ethnicity were significantly less satisfied than other respondents with the availability of the following services in their community: health providers that speak their language (46.7% vs. 79.8% “very satisfied”, respectively, $p < .001$); health or medical providers that accept their insurance (35.3% vs. 50.1% “very satisfied”, respectively, $p < .001$); and dental services (33.5% vs. 47.2% “very satisfied”, respectively, $p < .001$).

FIGURE 73. TOP FIVE SERVICES WITH HIGHEST PERCENTAGE RATING OF 'VERY SATISFIED', 2019

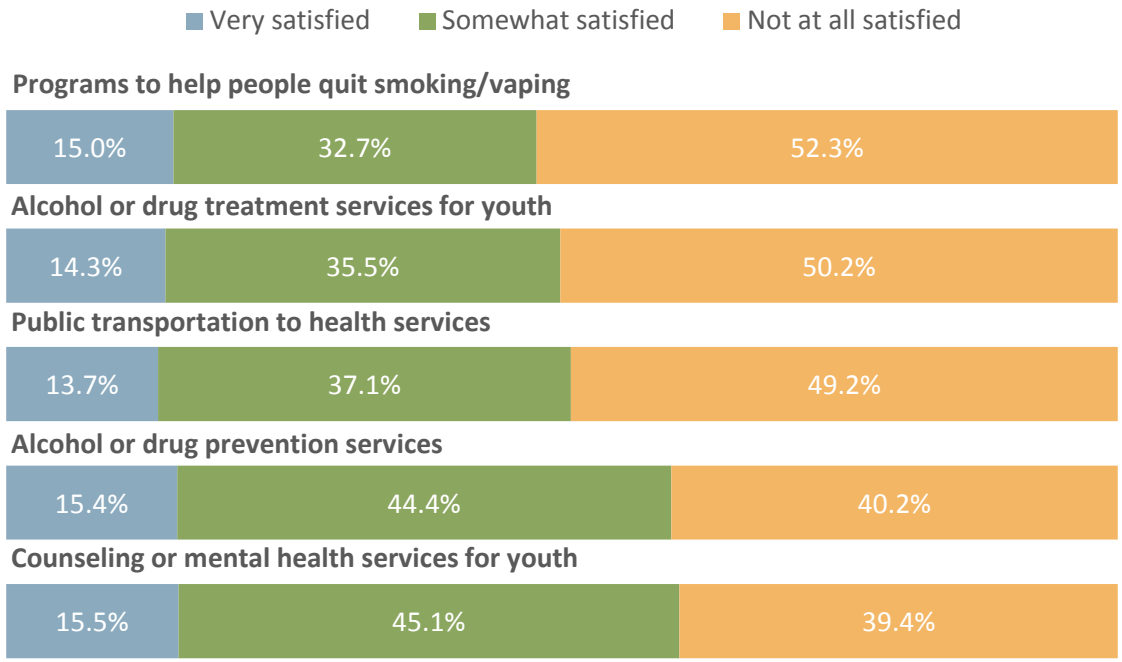


DATA SOURCE: MetroWest Region Community Health Assessment Survey, 2019.

When looking at specific health services, community health survey respondents were least satisfied with the availability of programs to help people quit smoking/vaping (52.3% “not at all satisfied”), alcohol or drug treatment services for youth (50.2% “not at all satisfied”), public transportation to health services (49.2% “not at all satisfied”), alcohol or drug prevention services (40.2% “not at all satisfied”), and counseling or mental health services for youth (39.4%“not at all satisfied”) (**Figure 74**).

Significant differences emerged by race/ethnicity. Survey respondents who identified as a minority race/ethnicity were significantly more satisfied compared to respondents who did not identify as a minority race/ethnicity with the availability of the following in their community: alcohol or drug treatment services for youth (37.6% vs. 54.2% "not at all satisfied", respectively, $p < .001$); and public transportation access to health services (37.6% vs. 54.2% "not at all satisfied", respectively, $p < .001$).

FIGURE 74. SERVICES WITH HIGHEST PERCENTAGE RATING OF 'NOT AT ALL SATISFIED', 2019



DATA SOURCE: MetroWest Region Community Health Assessment Survey, 2019.

Community survey respondents also provided feedback via open response questions and emphasized the need for additional health care services focused on youth:

> ***"Counseling/mental health services to youth are desperately needed in the schools."*** – Community Survey Respondent

> ***"The biggest issue has been the availability of qualified providers who accept insurance and have availability to work with High School age youth. The High School schedule in Framingham is not consistent week to week and with after school sports, it becomes almost impossible to find available providers."*** – Community Survey Respondent

Challenges to Accessing Health Care Services

Overall, 31.0% of community health survey respondents reported that they never experienced any difficulty in getting physical health care. However, a significantly smaller percentage of respondents who identified as a minority race/ethnicity reported that they never experienced difficulty in getting physical health care compared to other respondents (15.1% vs. 37.9%, respectively, $p < .01$).

Figure 75 displays the top five barriers to physical health services in the last two years as reported by community health survey respondents. The findings are reported overall and stratified by respondents

who identified as a minority race/ethnicity compared to respondents who did not identify as such. The top five barriers to physical health services reported overall were: long wait time for an appointment (22.2%), cost of care (21.4%), doctor's office not accepting new patients (20.9%), insurance problems/lack of coverage (20.8%), and lack of weekend or evening services (20.2%).

The top five barriers differed slightly based upon race/ethnicity. Respondents who identified as a minority race/ethnicity were significantly more likely to report insurance problems/lack of coverage (29.7% vs. 16.9%, respectively, $p < .01$) and cost of care (29.2% vs. 18.1%, respectively, $p < .01$) compared to respondents who did not identify as a minority race/ethnicity. Respondents who identified as a minority race/ethnicity were also significantly more likely to identify lack of transportation as a top barrier to care (23.4% vs. 11.7%, respectively; $p < .01$), a barrier that was not among the top five barriers for other respondents.

FIGURE 75. PERCEIVED TOP FIVE BARRIERS TO PHYSICAL HEALTH SERVICES IN PRIOR TWO YEARS, 2019

	Barrier to Physical Health Services in Prior Two Years		
	All Survey Respondents (n=799)	**Identified as a Minority Race/Ethnicity (n=201)**	**Did not Identify as a Minority Race/Ethnicity (n=598)**
	I have never experienced any difficulty in getting care 31.0%	I have never experienced any difficulty in getting care 15.1%*	I have never experienced any difficulty in getting care 37.9%
Rank			
1	Long wait for an appointment 22.2%	Insurance problems/lack of coverage 29.7%*	Long wait for an appointment 21.9%
2	Cost of care 21.4%	Cost of care 29.2%*	Office not accepting new patients 20.5%
3	Office not accepting new patients 20.9%	Lack of transportation 23.4%*	Lack of evening or weekend services 19.2%
4	Insurance problems/lack of coverage 20.8%	Long wait for an appointment 22.9%	Cost of care 18.1%
5	Lack of evening or weekend services 20.2%	Lack of evening or weekend services 22.4%	Insurance problems/lack of coverage 16.9%

DATA SOURCE: MetroWest Region Community Health Assessment Survey, 2019. NOTE: Asterisk (*) indicates percentage is significantly different between respondents who identified as a minority race/ethnicity and respondents who did not identify as a minority race/ethnicity, P<0.01.

Community survey respondents also provided feedback via open response questions emphasized the cost of care and highlighted the importance of language and culturally appropriate care in access to health care services:

> ***"Health care costs, even with private insurance, are a burden and prevent people from getting preventive care. Cost also makes people wait too long to have problems treated, endangering long-term health."*** – Community Survey Respondent

> ***"Culturally appropriate care - it's more than language"*** – Community Survey Respondent

"Providers/staff that do not speak a patient's language should utilize remote interpretation services." – Community Survey Respondent

Overall, 42.2% of community health survey respondents reported that they did not need behavioral health care services in the last two years and 7.8% reported that they never experienced any difficulty in getting behavioral health care. **Figure 76** displays the top five barriers to behavioral health services in the last two years as reported by community health survey respondents. The findings are reported overall, and then stratified by respondents who identified as a minority race/ethnicity compared to respondents who did not identify as a minority race/ethnicity.

The top five barriers to behavioral health services reported overall were: insurance problems/lack of coverage (18.3%), long wait for an appointment (18.1%), cost of care (16.9%), office not accepting new patients (14.7%), and respondent did not know what type of services were available (13.3%). No significant differences were observed by race/ethnicity.

FIGURE 76. PERCEIVED TOP FIVE BARRIERS TO BEHAVIORAL HEALTH SERVICES IN PRIOR TWO YEARS, 2019

	Barrier to Behavioral Health Services in Prior Two Years		
	All Survey Respondents (n=799)	**Identified as a Minority Race/Ethnicity (n=201)**	**Did not Identify as a Minority Race/Ethnicity (n=598)**
	I have not needed to get behavioral health care services in the last two years 42.2%	I have not needed to get behavioral health care services in the last two years 34.4%	I have not needed to get behavioral health care services in the last two years 45.2%
	I have never experienced any difficulty in getting behavioral health care 7.8%	I have never experienced any difficulty in getting behavioral health care 4.3%	I have never experienced any difficulty in getting behavioral health care 9.2%
Rank			
1	Insurance problems/lack of coverage 18.3%	Cost of care 21.5%	Insurance problems/lack of coverage 17.5%
2	Long wait for an appointment 18.1%	Insurance problems/lack of coverage 20.2%	Long wait for an appointment 17.3%
3	Cost of care 16.9%	Long wait for an appointment 20.2%	Cost of care 15.1%
4	Office not accepting new patients 14.7%	Don't know what types of services are available 18.4%	Office not accepting new patients 14.4%
5	Don't know what types of services are available 13.3%	Lack of transportation 17.2%	Lack of evening or weekend services 13.5%

DATA SOURCE: MetroWest Region Community Health Assessment Survey, 2019. NOTE: Asterisk (*) indicates percentage is significantly different between respondents who identified as a minority race/ethnicity and respondents who did not identify as a minority race/ethnicity, P<0.01.

Access to behavioral health services was identified as a major regional need by focus group participants and key informant interviewees alike, as described previously in the substance use section. Several focus group participants noted a lack of access to outpatient psychiatric services as a major barrier to care for mental health issues.

> ***"If there were additional baseline support options (more psychiatrists, as each individual doctor is limited to number of patients they can see) this may help resolve issue."*** - Focus Group Participant

> ***"We definitely need culturally competent providers who also understand the connection between physical ailments and mental health and how to communicate these issues to members of our community." -*** Focus Group Participant

> ***"Our clients are experiencing such acute issues that all other health related concerns fall to the wayside so they might be experiencing some of the other things you listed but they're not the top priority for us. Our patients are actively using drugs or having serious mental health issues, so our priority is getting these addressed as fast as we can. There aren't enough treatment options for these issues."*** - Key Informant Interviewee

Focus group participants and key informant interviewees cited that there was a stigma related to mental health, which created a barrier to accessing mental health services:

> **"*We also need to understand how the African American community has historically seen mental health…as a stigma."*** - Focus Group Participant

> ***"[There is a] stigma around accessing mental health services, especially around dementia-related care"*** - Key Informant Interviewee

Wait times were frequently mentioned as a barrier to health care in focus groups. Specifically, long waits to be seen by specialists. The timeliness of care received was also discussed in a number of focus groups. Some health care services were perceived as simply not available unless a person is in crisis, including mental health and substance use treatment and specialty care like neurology:

> ***"When trying to get mental health care it is sometimes hard do if you not in a crisis."*** - Focus Group Participant

> ***"Trying to get a neurology appointment and being told it is a 6 month to 1 year wait."*** - Focus Group Participant

Several Community health survey respondents also mentioned the need for services that treat emerging substance use problems which echoed the focus group discussions:

> ***"This [behavioral health care] is a real and pervasive problem, even for us who have good health insurance. Long wait time. No availability for new patients. No programs to treat emerging substance use disorder!"*** -Community Survey Respondent

> ***"No services available for emerging substance use disorder."*** – Community Survey Respondent

Vision for the Future

The resident focus group discussions concluded with a visioning question – when they think about the community 3 to 5 years from now, what would they like to see? Focus group participants frequently discussed the desire for more opportunities for social connections and a stronger ***"sense of community"*** with improved emotional support and personal connection between people. This was particularly important for more vulnerable residents such as youth or the disabled. ***"Respect"*** for and between all members of the community was also mentioned as important to their vision of the future:

> ***"[A] strong sense of community – communities where people are watching out for each other, there are places to gather, people are seen and cared for, feel a sense of belonging."*** - Focus Group Participant

A future with more or better transportation options, particularly for elderly and disabled residents, was also discussed frequently in the resident focus groups. This was seen as clear structural need in the community, but it would also support the goal of residents being less isolated and feeling more connected to their communities.

A variety of suggestions around health and health care were offered by focus group participants. Many wanted to see an increased focus on prevention to promote healthy aging. This would include providing better information sharing around what services are currently available and offering new education around health (via seminars, classes, education, include in existing community events, new Spanish language radio programming, etc.). Several participants also thought there should be greater awareness of who needs help in order to improve targeting of such efforts. And other participants stressed the need to reach out to younger-older adults (i.e., those approximately age 50) rather than just focusing on the elderly in order to make more of an impact with prevention activities. Generally, most focus group participants agreed that more health care services (e.g. doctors, therapists, support groups, clinics, etc.) were needed, in addition to better communication and education around health insurance for new residents/immigrants.

Focus group participants also suggested that success would be more likely if strong multi-sector partnerships between municipalities, community services, public schools, health insurers, and the health care system were developed. Working partnerships and collaborations between sectors was seen as essential to tackle the most pressing health needs in the region. Suggestions were made to institute resident advisory groups at the town level and at the health care system level that would include members of the community and those with particular health needs or risk factors – the people getting the services.

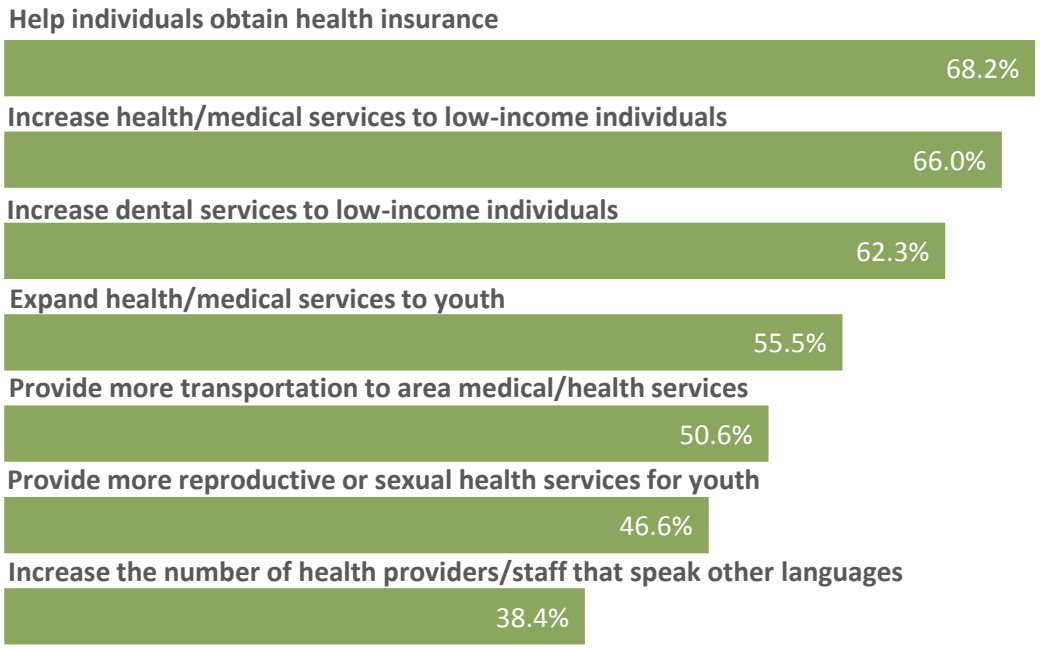
> ***"It will be slow & steady collaboration, as so many organizations need to be involved – but we need to start somewhere. Tackling communication between hospitals/doctors and school nurses would be the less difficult to tackle."*** - Focus Group Participant

Priorities around Access to Care

The leading issues related to access to care that were identified as a high priority by community health survey respondents were: helping individuals obtain health insurance (68.2%), increasing health/medical services to low-income individuals (66.0%), and increasing dental services to low-income individuals (62.3%) (**Figure 77**).

Community survey respondents who identified as a minority race/ethnicity were more likely than other respondents to view the following access to care issues as high priority: helping individuals to obtain health insurance (79.3% vs. 63.3%, respectively, $p < .001$); increasing in health/medical services to low-income individuals (79.8% vs. 60.0%, respectively, $p < .001$); increasing dental services to low-income individuals (77.8% vs. 55.3%, respectively, $p < .001$); and increasing the number of health providers/staff that speak other languages (53.1% vs. 32.0%, $p < .001$).

FIGURE 77. SURVEY RESPONDENTS IDENTIFYING ACCESS TO CARE ISSUES AS "HIGH PRIORITY", 2019



DATA SOURCE: MetroWest Region Community Health Assessment Survey, 2019.

Priorities around Behavioral Health

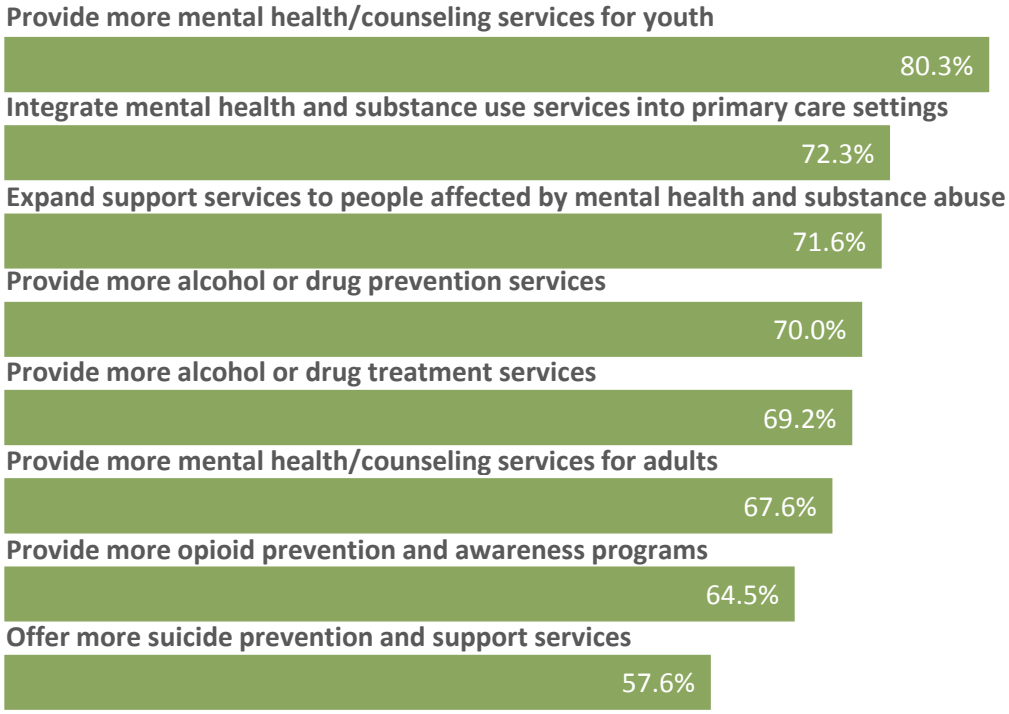
In open response survey questions, several community health survey respondents indicated that the integration of mental health or substance use services into primary care and improved accessibility for youth should be priorities:

> ***"Integrate mental health and substance use services into primary care settings – this is most important."*** - Community Survey Respondent
>
> ***"Primary Care needs to a lot more substance use services."*** – Community Survey Respondent
>
> ***"Integrate mental health services into the school system."*** – Community Survey Respondent
>
> ***"Youth mental health services are experiencing a workforce crisis, with not enough providers to meet demands. This results in lengthy waitlists and challenges while children/families are waiting."*** – Community Survey Respondent
>
> ***"I think there should be more money allocated to Youth and Family Services for counseling in local communities. And the information about the availability of these services needs to be shared."*** – Community Survey Respondent

Overall, the leading issues related to access to behavioral health care that were identified as a high priority by community health survey respondents were: providing more mental health/counseling services for youth (80.3%); integrating mental health and substance use services into primary care settings (72.3%); and expanding support services to people affected by mental health and substance abuse (71.6%) (**Figure 78**).

Survey respondents who identified as a minority race/ethnicity were more likely to view offering more suicide prevention and support services as a high priority than respondents who did not identify as a minority race/ethnicity (71.9% vs. 51.7%, respectively, $p < .001$).

FIGURE 78. SURVEY RESPONDENTS IDENTIFYING BEHAVIORAL HEALTH ISSUES AS "HIGH PRIORITY", 2019



DATA SOURCE: MetroWest Region Community Health Assessment Survey, 2019.

Priorities around Healthy Aging

Several key informant interviewees voiced concerns about supporting the aging population in the region, as did community health survey respondents:

> ***"In elderly people we see increased social isolation which puts them at risk for depression and other issues."; "[We need] supports for the aging population, particularly those who experience dementia and Alzheimer's Disease."*** – Key Informant Interviewee

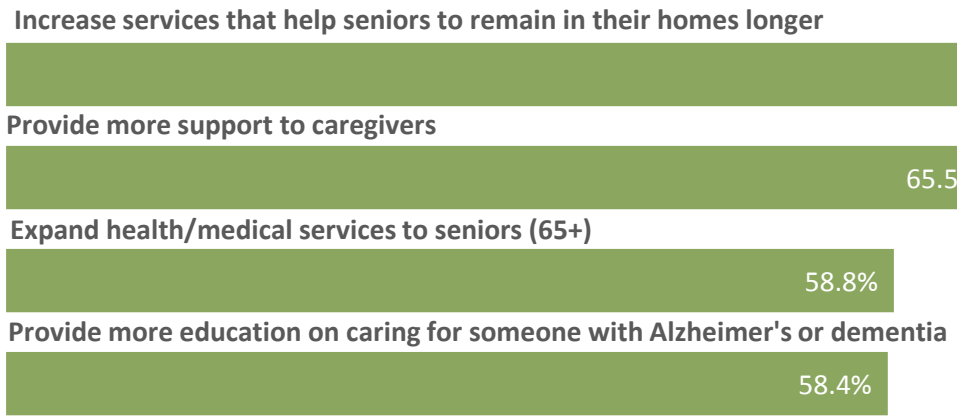
> ***"Address [the] shortage of consistent care workers (HHA, CNA, PCAs) that enable people to remain in their homes longer."*** – Community Survey Respondent

> ***"Reach out to seniors in their homes to give help with daily care and ways to understand their meds and insurance. They need an advocate at their appointments."*** – Community Survey Respondent

Overall, the leading issues related to healthy aging that were identified as a high priority by community health survey respondents were: increasing services that help seniors to remain in their homes longer (69.8%); providing more support to caregivers (65.5%); expanding health/medical services to seniors age 65 and older (58.8%); and providing more education on caring for someone with Alzheimer's or dementia (58.4%) (**Figure 79**).

Survey respondents who identified as a minority race/ethnicity were more likely to view expanding health and medical services to seniors as a high priority than other respondents (72.3% vs. 52.9%, respectively, $p < .001$).

FIGURE 79. SURVEY RESPONDENTS IDENTIFYING HEALTHY AGING ISSUES AS "HIGH PRIORITY", 2019



DATA SOURCE: MetroWest Region Community Health Assessment Survey, 2019

Priorities around Healthy Eating/Active Living

The leading issues related to healthy eating/active living that were identified as a high priority by community health survey respondents were: making fresh fruits and vegetables more affordable and available (66.3%); expanding school-based programs that promote physical activity and health eating (63.0%); improving walkability (61.0%); and offering more programs/services focusing on physical activity, nutrition, or obesity (50.4%) (**Figure 80**).

Survey respondents who identified as a minority race/ethnicity were more likely than those who did not identify as a minority race/ethnicity to view the following issues as high priority: offering more programs/services focusing on physical activity, nutrition and obesity (65.6% vs. 43.6%, respectively, $p < .001$) and expanding school-based programs that promote physical activity and healthy eating (72.8% vs. 58.7%, respectively, $p < .01$) compared to other respondents.

FIGURE 80. SURVEY RESPONDENTS IDENTIFYING HEALTHY EATING AND ACTIVE LIVING ISSUES AS "HIGH PRIORITY", 2019

DATA SOURCE: MetroWest Region Community Health Assessment Survey, 2019.

CONCLUSIONS

The current MetroWest Community Health Assessment represents the third such assessment undertaken on behalf of the region. Under the direction of a multi-sectoral and collaborative advisory group, the assessment included a comprehensive review of existing data, a community survey distributed in three languages, and multiple discussions with community residents and key informants. This assessment report provides a detailed overview of the socioeconomic context and health-related needs of residents in the MetroWest region, including vulnerable population groups. Overarching themes that emerged from the synthesis of findings include the following:

- **Residents' top health concerns remained mostly consistent between 2016 and 2019**, though smoking/vaping rose to the 4th greatest health concern and cancer fell to the 8th greatest health concern in 2019.
- **While MetroWest as a region generally had similar or better health outcomes and social determinants of health compared to the state overall, this varied across municipalities.** Residents of some MetroWest communities were less likely to possess some of the protective social determinants of health, such as higher educational attainment or higher household income compared to the state or the region overall. Residents of some MetroWest communities were also more likely to experience poorer health outcomes, such as heart disease, cancer, and substance use compared to the state.
- **Alcohol and substance use and mental health persisted as the two greatest health concern identified by survey respondents from 2016 to 2019.** Existing data corroborated the concerns around mental health and substance use. The integration of mental health and substance use services into primary care settings and the expansion of support services to people affected by these conditions were mentioned by focus group and interview participants alike.
- **Significant barriers to accessing health care exist in the MetroWest region.** Top barriers to both physical health services and behavioral health services included long wait times for an appointment, insurance problems/lack of coverage, the cost of care, and the doctor's office not accepting new patients. Transportation was one of the most frequently discussed issues in relation to access to health care services in the region by focus group participants. They specifically mentioned a lack of outpatient mental health services, stigma related to mental health, and long wait times to see specialists (including mental health and substance use specialists) as barriers to accessing behavioral health care.

- **Perceptions of community health, identified top health concerns, and experience with accessing care differed by race/ethnicity.** Compared to respondents who did not identify as a minority race/ethnicity, respondents who identified as a minority race/ethnicity were more likely to rate the overall health of the community as fair or poor; were more likely to identify diabetes as a top health issue; and were less likely to report that they never experienced difficulty in getting physical health care. Barriers to care also differed by race/ethnicity, with respondents of minority race/ethnicity more likely to cite lack of transportation, insurance problems/lack of coverage, and cost of care as barriers to physical health services, compared to respondents who did not identify as a minority race/ ethnicity.
- **As the MetroWest population ages, improved services for seniors will likely be needed.** A future with more or better transportation options, particularly for elderly and disabled residents, was also discussed frequently in the resident focus groups. Increasing services that help seniors to remain in their homes longer was selected as a high priority related to healthy aging by over two thirds of community survey respondents.
- **A stronger sense of community was a consistent vision for the future**. When asked what they would like to see in their community three to five years from now, focus group participants frequently discussed the desire for more opportunities for social connections and a stronger sense of community with improved emotional support and personal connection between people: ***"[A] strong sense of community – communities where people are watching out for each other, there are places to gather, people are seen and cared for, feel a sense of belonging."*** (Focus Group Participant)

APPENDIX A: COLLABORATIVE PARTNERS

Advocates
CHNA 7 MetroWest
Edward M. Kennedy Community Health Center
Framingham Health Department
Health Care For All
Hudson Health Department
Latino Health Insurance Program
MetroWest Free Medical Program
MetroWest Health Foundation
MetroWest Medical Center
Reliant Foundation
UMass Memorial-Marlborough Hospital

Steering Committee Members:
Milagros Abreu, Latino Health Insurance Program
Kate Baker, MetroWest Health Foundation
Candice Beaulieu, MetroWest Medical Center
Kelli Calo, Hudson Health Department
Martin Cohen, MetroWest Health Foundation
Alex DePalo, Framingham Health Department
Rebecca Donham, MetroWest Health Foundation
Craig Gaudette, Advocates
Maria Gonzalez, Health Care for All
Diane Gould, Advocates
Paula Kaminow, Edward M. Kennedy Community Health Center
Denise Lau, CHNA 7 MetroWest
Gloria Pascual, Marlborough Hospital
Kim Prendergast, MetroWest Free Medical Program
Edna Smith, CHNA 7 MetroWest
Kelsa Zereski, Reliant Foundation

APPENDIX B: COMMUNITY HEALTH SURVEY DATA TABLES

TABLE 9: DEMOGRAPHIC CHARACTERISTICS OF SURVEY RESPONDENTS

	Number	Percent
Community Respondent Knows Best	799	
Ashland	41	5.1%
Framingham	349	43.7%
Foxborough	2	0.3%
Holliston	58	7.3%
Hopkinton	14	1.8%
Hudson	62	7.8%
Marlborough	93	11.6%
Maynard	15	1.9%
Medfield	6	0.8%
Millis	3	0.4%
Natick	59	7.4%
Norfolk	0	0.0%
Northborough	9	1.1%
Plainville	1	0.1%
Sherborn	2	0.3%
Southborough	8	1.0%
Stow	7	0.9%
Sudbury	33	4.1%
Walpole	4	0.5%
Wayland	17	2.1%
Westborough	16	2.0%
Wrentham	0	0.0%
Live or Work in this community	799	
Live	395	49.4%
Work	152	19.0%
Both live and work	252	31.5%
Role in Community*	795	
Resident	580	73.0%
Student	37	4.7%
Health care employee	83	10.4%
Social service employee	107	13.5%
Municipal/government employee	57	7.2%
School employee	58	7.3%
Business employee	41	5.2%
Faith leader	16	2.0%
Community leader	61	7.7%
Other	82	10.3%
Age	611	
Under 18 years old	4	0.7%

	Number	Percent
18-29 years old	42	6.9%
30-49 years old	226	37.0%
50-64 years old	218	35.7%
65-74 years old	89	14.6%
75 years old or older	32	5.2%
Gender	589	
Male	125	21.2%
Female	462	78.4%
Transgender	2	0.3%
Ethnic/racial/cultural background	799*	
African American/Black	13	1.6%
American Indian/Native American	6	0.8%
Asian/Pacific Islander	21	2.6%
Brazilian	55	6.9%
White	412	51.6%
Hispanic/Latino(a)	105	13.1%
Middle Eastern	4	0.5%
Mixed Race	26	3.3%
Declined to Answer	200	25.0%
Identified as a Minority Race/Ethnicity	799	
Yes**	201	25.2%
No	598	74.8%
Primary Language Spoken at Home	601	
American Sign	4	0.7%
Arabic	3	0.5%
Chinese	3	0.5%
English	490	81.5%
Filipino	0	0.0%
French	3	0.5%
Greek	1	0.2%
Hindi	3	0.5%
Italian	1	0.2%
Japanese	0	0.0%
Korean	0	0.0%
Portuguese	69	11.5%
Polish	1	0.2%
Russian	1	0.2%
Spanish	91	15.1%
Other	13	2.2%
Highest Level of Education	603	
Some primary school	10	1.7%
Primary or middle school	28	4.6%

	Number	Percent
Some high school	30	5.0%
High school graduate or GED	34	5.6%
Some college	33	5.5%
Associate or technical degree/certificate	41	6.8%
College graduate	154	25.5%
Graduate or professional degree	273	45.3%

NOTE: * Respondents were allowed to select multiple responses, and therefore, percentages may not add up to 100%; ** Respondents who self-identified as African American/Black, American Indian/Native American, Asian/Pacific Islander, Brazilian, Hispanic/Latino(a), Middle Eastern, or Mixed Race were categorized as "identified as a minority race/ethnicity". Survey respondents who self-identified only as White or that Declined to Answer the question were categorized as ''did not identify as a minority race/ethnicity".

TABLE 10: CAREGIVER STATUS

	Number	Live in Household	Do NOT live in household but have caretaking responsibility for	Not Applicable
Children under the age of 6	389	16.7%	2.8%	80.5%
Children aged 6-12	420	27.1%	2.9%	70.0%
Children aged 13-18	424	27.8%	2.8%	69.3%
Young adults 19-26	409	17.6%	11.5%	70.9%
Adult with a disability	367	8.7%	5.4%	85.8%
Seniors (aged 65+)	396	20.5%	12.9%	66.7%

NOTE: "Number" specifies the total number of survey respondents who answered the question; for example, 16.7% of 389 total respondents have a caregiving responsibility for a child under the age of 6 who lives in their household.

TABLE 11: PERCEPTIONS OF COMMUNITY HEALTH

	Number	Percent
Perceived Health Status of Community	799	
Excellent	49	6.1%
Very Good	263	32.9%
Good	367	45.9%
Fair	105	13.1%
Poor	15	1.9%
Health Issues Facing this Community*	792	
Aging problems (Alzheimer's, arthritis, dementia, etc.)	299	37.8%
Alcohol and substance use (marijuana, opioids, heroin, etc.)	430	54.3%
Asthma/Allergies	63	8.0%
Autism	31	3.9%
Bullying/Cyberbullying	74	9.3%
Cancer	99	12.5%
Diabetes	106	13.4%

	Number	Percent
Disabilities	57	7.2%
Domestic violence	33	4.2%
Heart disease (stroke, hypertension, etc.)	89	11.2%
Homelessness/Poor housing	114	14.4%
Hunger/Poor nutrition	64	8.1%
Infectious/Contagious disease (tuberculosis, pneumonia, flu, etc.)	19	2.4%
Mental health issues (anxiety, depression, etc.)	409	51.6%
Oral health	25	3.2%
Overweight/Obesity	154	19.4%
Sexually transmitted infections (HIV/AIDS, chlamydia, etc.,)	7	0.9%
Smoking/Vaping	163	20.6%
Suicide	18	2.3%
Teen pregnancy	11	1.4%
Other	43	5.4%

NOTE: * denotes where respondents were allowed to select multiple responses, and therefore, percentages may not add up to 100%; respondents were asked to select the top 3 health issues

TABLE 12: AVAILABILITY OF SERVICES

	Number	Not at all satisfied	Somewhat satisfied	Very satisfied
Satisfaction with Availability of Services				
Hospital services, including emergency care	625	9.3%	41.9%	48.8%
Community health center services	470	17.2%	47.2%	35.5%
Primary care providers	560	12.5%	44.8%	42.7%
Health or medical services for seniors (>65 years old)	398	12.6%	53.5%	33.9%
Health or medical services for youth (<21 years old)	457	14.2%	47.0%	38.7%
Alcohol or drug treatment services for adults	322	36.6%	45.7%	17.7%
Alcohol or drug treatment services for youth	307	50.2%	35.5%	14.3%
Alcohol or drug prevention services	351	40.2%	44.4%	15.4%
Programs to help people quit smoking/vaping	306	52.3%	32.7%	15.0%
Counseling or mental health services for youth	426	39.4%	45.1%	15.5%
Counseling or mental health services for adults	435	31.0%	51.7%	17.2%
Services for LGBTQ people	260	31.9%	50.0%	18.1%
Public transportation to health services	439	49.2%	37.1%	13.7%
Birth control/sexual health services	293	21.5%	47.1%	31.4%
Dental services	533	15.9%	40.9%	43.2%
Affordable prescription drugs	512	30.3%	45.1%	24.6%
Health or medical providers that accept my insurance	584	16.8%	37.3%	45.9%
Health providers that speak my language	566	10.2%	19.6%	70.1%
Interpreter services during medical visits or when receiving health information	257	19.5%	38.9%	41.6%
Food pantries/meal programs	471	5.9%	44.6%	49.5%
Housing assistance	354	31.1%	47.7%	21.2%

	Number	Not at all satisfied	Somewhat satisfied	Very satisfied
Specialty care	285	17.9%	46.0%	36.1%

NOTE: "Number" specifies the total number of survey respondents who answered the question; for example, 9.3% of 625 total respondents are 'not at all satisfied' with the availability of hospital services, including emergency care

TABLE 13: BARRIERS TO ACCESSING HEALTH SERVICES

	Number	Percent
Barriers to Accessing Physical Health Services*	635	
Lack of transportation	97	15.3%
Have no regular source of health care (primary care physician or clinic)	48	7.6%
Cost of care	136	21.4%
Lack of evening or weekend services	128	20.2%
Insurance problems/lack of coverage	132	20.8%
Language/communications problems with health provider	38	6.0%
Health provider does not understand my culture/beliefs/values	31	4.9%
Felt discriminated against	20	3.1%
Afraid to get care	22	3.5%
Don't know what types of services are available	84	13.2%
No provider available near me	56	8.8%
Difficulty navigating the health care system	101	15.9%
Long wait for an appointment	141	22.2%
Office not accepting new patients	133	20.9%
Health information is not kept confidential	8	1.3%
Lack of care coordination	52	8.2%
Lack of providers who accept MassHealth	74	11.7%
I have never experienced any difficulty in getting care	197	31.0%
Other	43	6.8%
Barriers to Accessing Behavioral Health Services*	586	
Lack of transportation	69	11.8%
Have no primary care provider to make referral	23	3.9%
Cost of care	99	16.9%
Lack of evening or weekend services	77	13.1%
Insurance problems/lack of coverage	107	18.3%
Language/communication problems with health provider	39	6.7%
Provider does not understand my culture/beliefs/values	26	4.4%
Felt discriminated against	23	3.9%
Afraid of what people might think about me	39	6.7%
Don't know what types of services are available	78	13.3%
No provider available near me	66	11.3%
Difficulty navigating the health care system	73	12.5%
Long wait for an appointment	106	18.1%
Office not accepting new patients	86	14.7%
Health information is not kept confidential	6	1.0%

	Number	Percent
Lack of providers who accept MassHealth	57	9.7%
I have never experienced any difficulty in getting behavioral health care	46	7.8%
I have not needed to get behavioral health care services in the last two years.	247	42.2%
Other	25	4.3%

NOTE: * denotes where respondents were allowed to select multiple responses, and therefore, percentages may not add up to 100%; barriers specifically asked about experience in the last two years

TABLE 14: PERCEIVED PRIORITIES

	Number	Low priority	Medium priority	High priority
Access to Care				
Increase the number of health providers/staff that speak other languages	588	18.9%	42.7%	38.4%
Provide more transportation to area medical/health services	593	9.9%	39.5%	50.6%
Increase health/medical services to low-income individuals	583	5.7%	28.3%	66.0%
Increase dental services to low-income individuals	594	7.9%	29.8%	62.3%
Help individuals obtain health insurance	595	6.9%	24.9%	68.2%
Expand health/medical services to youth	584	9.1%	35.4%	55.5%
Provide more reproductive or sexual health services for youth	577	13.3%	40.0%	46.6%
Behavioral Health				
Provide more alcohol or drug prevention services	593	4.9%	25.1%	70.0%
Provide more alcohol or drug treatment services	597	4.7%	26.1%	69.2%
Provide more mental health/counseling services for youth	595	3.7%	16.0%	80.3%
Provide more mental health/counseling services for adults	598	4.2%	28.3%	67.6%
Expand support services to people affected by mental health and substance abuse	591	3.7%	24.7%	71.6%
Provide more opioid prevention and awareness programs	580	6.0%	29.5%	64.5%
Integrate mental health and substance use services into primary care settings	584	5.5%	22.3%	72.3%
Offer more suicide prevention and support services	583	5.0%	37.4%	57.6%
Healthy Aging				
Expand health/medical services to seniors (65+)	587	5.6%	35.6%	58.8%
Increase services that help seniors to remain in their homes longer	593	3.7%	26.5%	69.8%
Provide more support to caregivers	594	3.9%	30.6%	65.5%
Provide more education on caring for someone with Alzheimer's or dementia	586	4.4%	37.2%	58.4%
Healthy Eating/Active Living				
Offer more programs/services focusing on physical activity, nutrition or obesity	601	8.5%	41.1%	50.4%
Make fresh fruits and vegetables more affordable and available	605	6.6%	27.1%	66.3%
Improve walkability (e.g. sidewalks, bike lanes, street lights, etc.)	603	8.3%	30.7%	61.0%
Expand school-based programs that promote physical activity and healthy eating	603	8.1%	28.9%	63.0%

NOTE: "Number" specifies the total number of survey respondents who answered the question; for example, 18.9% of 588 total respondents specified that the increasing the number of health providers/staff that speak other languages is a low priority

TABLE 15: HEALTH COVERAGE AND INFORMATION

	Number	Percent
Type of Health Insurance*	616	
Private insurance (through employer/spouse/parents/Connector or buy my own)	402	65.3%
Medicare	132	21.4%
MassHealth/Medicaid	122	19.8%
Veteran's Administration or TriCare	7	1.1%
Health Safety Net/MassHealth Limited	28	4.5%
I do not have insurance	21	3.4%
Other	22	3.6%
Location for Majority of Medical Care Received	611	
Private doctor's office or group practice	458	75.0%
Community health center (e.g. Edward M. Kennedy Community Health Center)	48	7.9%
Walk-in medical clinic (e.g. CareWell, AFC Urgent Care)	21	3.4%
Hospital-based clinic	38	6.2%
Pharmacy clinic (e.g. CVS MinuteClinic)	5	0.8%
Free medical program (e.g. MetroWest Free Medical Program)	21	3.4%
Emergency Room	12	2.0%
Veteran's Administration facility	0	0.0%
Other	8	1.3%
Source for Majority of Health Information	610	
Doctor, nurse or other health provider	369	60.5%
Pharmacy	5	0.8%
Family members	23	3.8%
Friends	16	2.6%
School	5	0.8%
Religious or spiritual advisor	0	0.0%
Employer	6	1.0%
Library	0	0.0%
Television/Radio	3	0.5%
Newspaper/Magazines	6	1.0%
Books/Medical journals	23	3.8%
Websites	121	19.8%
Social Media	10	1.6%
Other	23	3.8%

NOTE: * denotes where respondents were allowed to select multiple responses, and therefore, percentages may not add up to 100%

APPENDIX C: FOCUS GROUP AND INTERVIEW INFORMATION

Focus Group Segments:

- African Americans
- Latino older adults
- South Asians
- Families affected by disabilities
- Adults with mental illness
- Jail Diversion Program clinicians
- MetroWest Medical Center clinicians
- MetroWest Medical Center patients

Focus Group Hosts:

- Advocates
- Greater Framingham Community Church
- India Society of Worcester
- Latino Health Insurance Program
- MetroWest Medical Center

Key Informants

- A Place to Turn
- BayPath Elder Services
- BRACE
- Framingham Police Department
- JRI Health
- Latino Health Insurance Program
- Marlborough Probation Department
- MetroWest YMCA
- Tempo Young Adult Resource Center