

St. Elizabeth's Medical Center

A STEWARD FAMILY HOSPITAL



Community Health Needs Assessment 2021

Table of Contents



• Acknowledgements.....	3
• Executive Summary.....	4
• Introduction.....	5
• Methods.....	6
• Findings.....	8
• Demographics.....	9
• Race and ethnicity.....	10
• Age.....	12
• Citizenship.....	12
• Language.....	14
• Prioritization of Community Health Needs.....	15
• Profiles of Prioritized Community Health Needs.....	16
• Chronic Conditions.....	16
• Mental and Behavioral Health.....	24
• Substance Use Disorder.....	26
• Obesity.....	30
• Social Determinants of Health.....	32
• Education.....	32
• Employment.....	34
• Poverty.....	35
• Food Insecurity.....	40
• Housing and homelessness.....	41
• Transportation.....	43
• Access to Care.....	44
• Culturally Competent Care.....	45
• Recommendations.....	46
• Health Professional Perspectives.....	46
• Chronic conditions.....	49
• Mental Health.....	49
• Substance Use Disorder.....	50
• Obesity.....	50
• COVID-19.....	51
• Access and Involvement.....	53
• Other Suggestions.....	54
• Limitations.....	54
• References.....	56
• Appendices.....	59
• Appendix A: Key Informant Interview Questions.....	59
• Appendix B: Focus Group Questions.....	60
• Appendix C: Health Professionals Survey.....	61
• Appendix D: Note on Data Accuracy.....	62

Acknowledgements



Executive Summary



This report is a comprehensive analysis of health indicators for the St. Elizabeth Medical Center (SEMC) service areas, which include Brighton, Newton, Waltham, Watertown, Allston, Brookline, West Roxbury, Weston, and Back Bay. Data was gathered by analyzing publicly available information, by reviewing community feedback gathered through focus groups, by conducting an extensive review of published literature on the health of the population residing in the region and in the Commonwealth of Massachusetts, and by surveying service providers. This data-driven methodology allows SEMC to investigate the resource requirements of the community in order to better streamline resources and inform community-based initiatives. The information from our 2018 Community Health Needs Assessment highlights some of the needs identified within the community and may be used to develop targeted population health improvement strategies.

Our goal has been to learn from community residents, particularly those most at-risk for experiencing health disparities, and implement programming that will give all individuals an opportunity to live a healthy life. This is particularly true for those persons at greatest risk for health inequities, defined by the World Health Organization as, “avoidable inequalities in health between groups of people within countries and between countries”, herein identified as high-priority populations. Through community-oriented best practices, SEMC collaborates with community partners to improve the health status of residents within our service area. We accomplish this by: addressing root causes of health disparities; educating community members on prevention and self-care, particularly for chronic diseases such as cancer, heart disease, diabetes, obesity, substance use disorder; and addressing social determinants of health.

Social determinants of health, including social, behavioral, and environmental influences have become increasingly prevalent factors in addressing population health. Literature recommends linking health care and social service agencies in addressing social determinants of health to increase the efficacy of health promotion and chronic disease prevention programs. In particular, services related to housing, nutritional assistance, education, public safety, and income supports are areas for cross sector collaboration with health services in the community. Multicultural communities face particularly complex issues when accessing and receiving treatment in their daily lives.

A key take-away from this analysis is that collaboration on health promotion and chronic disease prevention among health and social services organizations is critical to the success of population health improvement strategies. From promoting access to affordable health care, creating a stable positive economic environment in the region, ensuring that those most at-risk have access to basic needs for better health outcomes such as stable affordable housing, low-cost nutritional food choices, and a healthy environment, SEMC is well positioned to implement community benefits programs that support a healthy and thriving community. The information

and recommendations herein are offered as a tool for guidance for the hospital and the community to implement strategic actions to improve public health outcomes.

Introduction



Part of the Steward Health Care System, SEMC is a full-service tertiary care hospital located in the Brighton neighborhood of Boston. Steward Health Care System is the largest for-profit private hospital operator in the United States and is a physician-led health care services organization committed to providing the highest quality of care in its communities.

SEMC is a 308-bed academic medical center, and is a Boston University teaching hospital.. Its clinical strengths include family medicine, cardiovascular care, women and infants' health, oncology, neurology, and orthopedics. Located just west of downtown Boston, SEMC is accessible by the green line of the MBTA, by several local bus routes, and by car. The hospital primary service area includes the neighborhoods of Allston-Brighton, Back Bay and West Roxbury neighborhoods of Boston, Brookline, Newton, Waltham, Weston and Watertown.

The hospital is also an active member of the Allston Brighton Health Collaborative, a collaboration of organizations devoted to working together to promote and improve the health and wellbeing of the communities of Allston and Brighton.

This report presents the results of an examination of the health conditions and social factors affecting the people living in the neighborhoods and towns surrounding SEMC as well as the key issues the hospital needs to address to improve quality and decrease cost. Evaluation of both the needs of the community and the strategic goals of the hospital furthers the prospect of working collectively to improve both the health delivery system and the health of the population.

Community Benefits Mission Statement

Steward Health Care is committed to serving the physical and spiritual needs of our community by delivering the highest quality care with compassion and respect. We dedicate ourselves to: Delivering affordable health care to all in the communities we serve; Being responsible partners in the communities we serve; Serving as advocates for the poor and underserved in the communities we serve.

Community Benefits Statement of Purpose

- SEMC is committed to serving the entire community, including the uninsured, underinsured, poor, and disadvantaged
- SEMC is dedicated to providing accessible, high-quality health care services to all within its culturally-diverse community; particularly its host community of Allston-Brighton

- SEMC is dedicated to maintaining the well-being of its community by providing excellence in health care through preventative health, education, and wellness services.
- SEMC is dedicated to collaborating with our community to identify and respond to issues by fulfilling the physical, spiritual, emotional, and social needs of the people it serves.



Methods

The 2022 St. Elizabeth's Medical Center Community Health Needs Assessment (CHNA) was developed in full compliance with the Commonwealth of Massachusetts Office of Attorney General-The Attorney General's Community Benefits Guidelines for Non-Profit Hospitals released in February 2018. To conduct this needs assessment, SEMC engaged various community organizations and members to ensure that varying perspectives on health and social topics were considered. Below is a brief description of the data collection process.

Health Indicators and Demographics- Data Analysis

In order to get a broader view of the health and sociodemographic trends in the SEMC primary service area, extensive public data was collected to enable key findings to be derived from the research of online data sources, in partnership with the Massachusetts Department of Public Health (MDPH). Data sources used by the team included U.S. Census Bureau, Department of Early and Secondary Education (DESE), Uniform Crime Reporting (UCR) Program of the Federal Bureau of Investigation and the Center for Disease Control and Prevention (CDC). Health indicator data, such as mortality, disease prevalence, hospitalizations and admissions to substance misuse programs was provided by the MDPH Office of the Commissioner and MassCHIP staff.

Key Informant Interviews

SEMC conducted 5 key informant interviews. Key informants consisted of individuals involved in community partner organizations. Key informants were interviewed virtually through zoom. Questions asked of key informants can be found in Appendix A. Organizations represented by key informants were:

- Allston Brighton Health Collaborative
- Allston/Brighton Substance Abuse Task Force
- West End House
- SEMC Patient Advocate

Focus Groups

Three focus groups were conducted virtually through Zoom in the Spring of 2021. Questions asked of participants can be found in Appendix B.

Public Focus Group

One group, containing 5 members, was conducted with the public. Demographics for this group are as follows:

Age			Race			Gender		
18-20	2	40%	White	4	80%	Male	4	80%
31-45	1	20%	Asian	1	20%	Female	1	20%
45-65	1	20%						
65+	1	20%						

Allston/Brighton Substance Abuse Task Force

Another group, containing 5 members, was conducted in partnership with the Allston/Brighton Substance Abuse Task Force. Demographics for this group are as follows:

Age			Race			Gender		
17	4	100%	Asian	3	75%	Male	1	25%
			Black	1	25%	Female	3	75%

2Life Brighton

In partnership with 2Life Brighton, an additional focus group contained 9 members. Demographics for this group are as follows:

Age			Race			Gender		
18-30	1	11%	White	6	66%	Male	1	11%
31-45	4	44%	Asian	2	22%	Female	8	88%
45-65	4	44%	Black	1	11%			

Health Professionals Survey

A Health Professionals Survey was developed and distributed electronically to all SEMC staff, affiliated medical providers, community partner organizations, and area health and human service organizations. In total, 85 individuals submitted responses to this survey.

Literature Review

A literature review of recent governmental, public policy, and scholarly works was conducted. The public health information was analyzed and a summary report which included common themes and public health trends among high-priority populations in the SEMC service area was created to inform this Community Health Needs Assessment.

Findings



Chronic Conditions

In 2017, approximately 49.8% of mortality in Massachusetts was due to cancer, heart

disease, lower respiratory disease, and diabetes. Waltham (55.9%), Newton (51.6%), Watertown (50.9%), and Brookline

(46.9%) showed higher rates of deaths due to chronic conditions than the state level. Lower respiratory disease mortality rates were especially high within Waltham. Health professionals saw diabetes, high blood pressure, and heart health as particularly concerning chronic conditions within their service area.

Mental Health

In the early stages of the COVID-19 pandemic, rates of depression and anxiety have drastically increased, with 28.2% of Americans reporting symptoms of depression and 24.4% of reporting symptoms for anxiety (NCHS, 2020). Health professionals surveyed indicated mental health was among the largest obstacle to healthy living among their consumers and many of those in focus groups listed mental health among young adults as particularly concerning.

Obesity

Rates of obesity are rising faster than rates seen for any other chronic illness. While the crude prevalence of obesity in the SEMC service area is lower than both the state and national average, those in Roslindale (22.5%) have a higher percentage of their community who are obese. Health professionals indicated obesity was a major source of concern within SEMC's service area.

COVID-19

COVID-19 was responsible for more than 300,000 deaths in the US and more than 10,000 deaths in Massachusetts in 2020 (NCHS, 2021). Certain racial and age groups were more susceptible to both having COVID-19 and dying from the disease. Suffolk county ranked second worst among

other Massachusetts counties in the COVID-19 Pandemic Vulnerability Index with a score of 0.49 out of 1 (NIEHS, 2021). This score puts Suffolk County in the 20th to 40th percentile of all counties nationwide. Norfolk County ranked fourth worst among other Massachusetts counties in the COVID-19 Pandemic Vulnerability Index with a score of 0.44 out of 1 (NIEHS, 2021). This score puts Norfolk County in the 40th to 60th percentile of all counties nationwide.

Access to Care

Addressing access to care is one of the first steps that need to be taken to address health equity. Although Massachusetts is a leader in healthcare services and access to care, there are still barriers of cost, transportation, childcare, language interpreters, etc. that may impact individuals' ability to access healthcare. In Massachusetts, there are 970 residents for every one primary care (Robert Wood Johnson Foundation, 2021). When surveyed, health professionals saw lack of access to mental health support, cost of care, and lack of coordination services as the largest barriers to accessing care.

Demographics



St. Elizabeth's Medical Center is a large medical facility and teaching hospital in the Brighton neighborhood of Boston, Massachusetts. The St. Elizabeth Medical Center (SEMC) primary service area encompasses cities and towns in the Middlesex, Norfolk, and Suffolk counties.

In 2018, Suffolk County had a population of 807,000 people with a median age of 32.9 and a median household income of \$69,985. Between 2017 and 2018 the population of Suffolk County, MA grew from 797,939 to 807,252, a 1.17% increase and its median household income grew from \$66,459 to \$69,985, a 5.31% increase. The 5 largest ethnic groups in Suffolk County, MA are White (Non-Hispanic) (44.5%), Black or African American (Non-Hispanic) (19.9%), White (Hispanic) (10.4%), Asian (Non-Hispanic) (8.66%), and Other (Hispanic) (6.31%). Of the people in Suffolk County, 39.1% speak a non-English language, and 84.7% are U.S. citizens (Data USA, 2019).

In 2018, Norfolk County had a population of 705,000 people with a median age of 40.7 and a median household income of \$100,356. Between 2017 and 2018 the population of Norfolk County, MA grew from 700,322 to 705,388, a 0.723% increase and its median household income declined from \$100,829 to \$100,356, a -0.469% decrease. The 5 largest ethnic groups in Norfolk County, MA are White (Non-Hispanic) (74%), Asian (Non-Hispanic) (11.7%), Black or African American (Non-Hispanic) (7.07%), White (Hispanic) (2.56%), and two or more races (Non-Hispanic) (1.85%). Of the people in Norfolk County, 23.1% speak a non-English language and 92.3% are U.S. citizens (Data USA, 2019).

In 2018, Middlesex County, MA had a population of 1.61M people with a median age of 38.4 and a median household income of \$100,517. Between 2017 and 2018 the population of Middlesex County grew from 1.6M to 1.61M, a 0.734% increase and its median household income grew from \$98,555 to \$100,517, a 1.99% increase. The 5 largest ethnic groups in Middlesex County, MA are White (Non-Hispanic) (71%), Asian (Non-Hispanic) (12.3%), Black or African American (Non-Hispanic) (5%), White (Hispanic) (4.93%), and multiracial (Non-Hispanic) (2.63%). Of the people in Middlesex County, 26.2% speak a non-English language and 89.1% are U.S. citizens (Data USA, 2019).

The demographic characteristics and social environments of those within SEMC's service area have a stark impact on their experience with and willingness to receive medical care. Language barriers, systemic racism, gender biases, and financial barriers, contribute to many populations being medically underserved. These medically underserved populations (MUPs) often include those who are homeless, low-income, Medicaid eligible, Native American, or migrant workers (HRSA, 2021).

Race and Ethnicity

The U.S Census data from 2019 (Table 1) shows that residents of Massachusetts are primarily White (78.1%), followed by Black (7.6%), Asian (6.6%), Other Race (4.2%), Two or More Races (3.3%), American Indian (0.2%), and Native Hawaiian/Pacific Islander (0.0%). With the exceptions of Watertown, West Roxbury, and West newton, each city/town had higher population identifying as white than the state level. Allston showed the lowest proportion of white residents (56.5%) and the highest proportion of Asian residents (26.0%), whereas Roslindale had the highest proportion of residents who identified as Black or African American (28.0%)

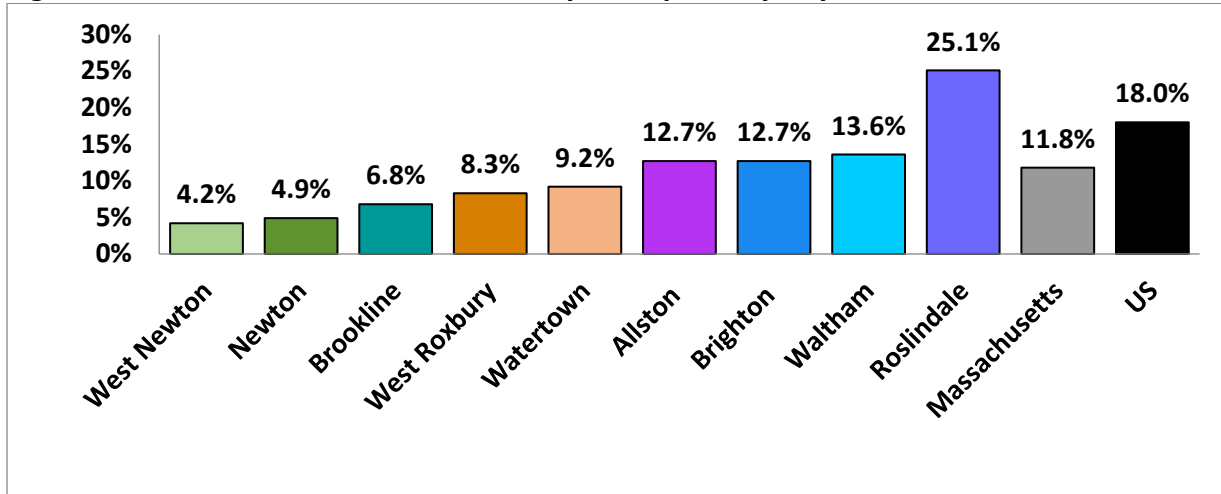
Table 1: Distribution of Race by City/ Town - 2019

	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some Other Race	Two or More Races
Allston	56.5%	6.0%	0.5%	26.0%	0.0%	8.3%	2.7%
Roslindale	57.8%	28.0%	0.4%	2.1%	0.0%	7.8%	3.9%
Brighton	71.9%	5.3%	0.3%	13.5%	0.1%	6.0%	3.0%
Waltham	71.9%	7.1%	0.4%	11.7%	0.0%	5.1%	3.8%
Brookline	72.0%	3.2%	0.2%	17.3%	0.0%	2.1%	5.1%
Newton	76.7%	3.0%	0.1%	14.8%	0.0%	1.9%	3.5%
West Newton	78.7%	2.6%	0.0%	12.7%	0.0%	1.4%	4.6%
West Roxbury	81.1%	6.0%	0.0%	7.6%	0.0%	2.8%	2.4%
Watertown	82.8%	1.6%	0.3%	9.9%	0.0%	3.0%	2.5%
Massachusetts	78.1%	7.6%	0.2%	6.6%	0.0%	4.2%	3.3%
US	72.5%	12.7%	0.8%	5.5%	0.2%	4.9%	3.3%

Source: US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Just over half of the service area communities had a lower percentage of Hispanic residents than the state level (Figure 1). Roslindale (25.1%) had the largest proportion, with a quarter of residents identifying as Hispanic.

Figure 1: Distribution of those who identify as Hispanic by City/Town



Source: US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

In 2019, the Massachusetts public school population was more racially diverse than the adult population (Table 2). Boston (14.6%) and Waltham (40.5%) had lower proportions of public-school students who identified as White than the state (57.5%) or national level (46.6%). Boston was especially diverse with 43.7% of students Identifying as Hispanic and 30.2% identifying as Black or African American.

Table 2: Distribution of Race in Public School Population by City/Town (2019-20)

	White	Black or African American	Hispanic	Asian	Native American	Native Hawaiian and Other Pacific Islander	Two or More Races (Non-Hispanic)
Boston	14.6%	30.2%	42.7%	8.8%	0.3%	0.2%	3.2%
Waltham	40.5%	9.1%	42.8%	5.1%	0.1%	0.0%	2.4%
Brookline	53.4%	5.8%	10.6%	20.5%	0.0%	0.1%	9.6%
Newton (Including West Newton)	60.9%	4.6%	7.8%	19.5%	0.1%	0.1%	7.1%
Watertown	63.9%	4.1%	18.5%	7.4%	0.5%	0.0%	5.6%
Massachusetts	57.5%	9.3%	21.9%	7.1%	0.2%	0.1%	3.9%
US	46.6%	15.1%	27.3%	5.4%	1.0%	0.4%	4.3%

Source: MA Dept. of Elementary and Secondary Education, 2019-2020, School and District Profiles

Age

While most communities in SEMC’s service area showed similar age group trends, Allston (52.3%) and Brighton (49.6%) showed especially high proportions of their populations aged 25 to 44 (Table 3). Herein, Allston was nearly double the state (26.4%) and national (26.5%) levels of citizens in this age group. Additionally, Allston had the lowest percentages of those ages 45 to 64 (11.4%) and 65 and older (5.1%).

Table 3: Age Distribution by City/Town - 2019

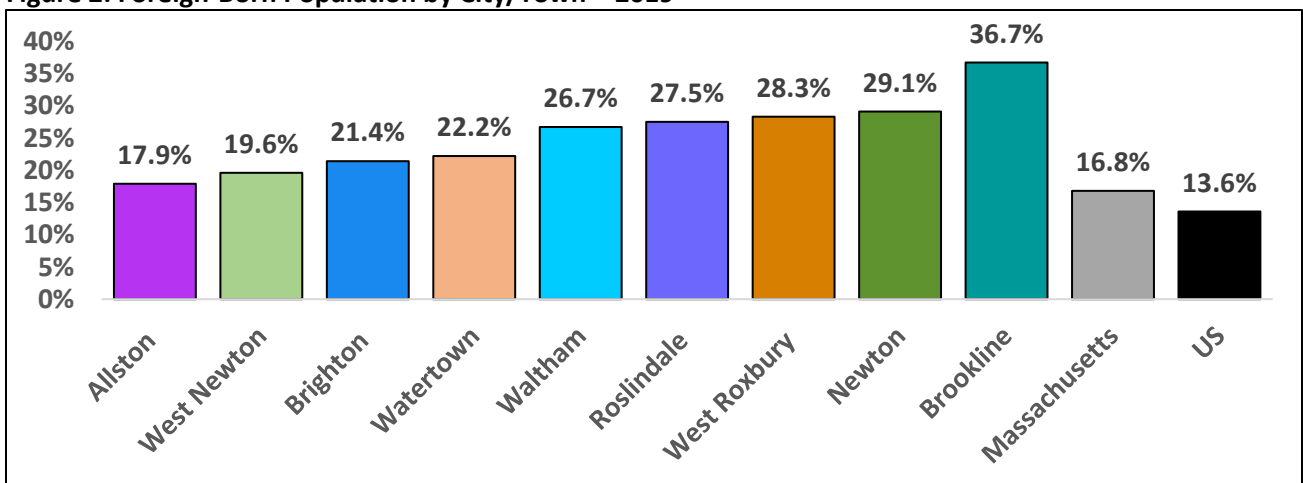
	24 and under	25 to 44	45 to 64	65 and older
Allston	31.1%	52.3%	11.4%	5.1%
Roslindale	27.5%	31.6%	28.2%	12.9%
Brighton	24.6%	49.6%	13.5%	12.3%
Waltham	31.8%	33.1%	21.4%	13.8%
Brookline	31.9%	31.9%	20.2%	16.0%
Newton	34.3%	20.6%	27.1%	18.0%
West Newton	30.9%	23.7%	29.0%	16.4%
West Roxbury	22.1%	27.6%	29.7%	20.6%
Watertown	21.4%	37.9%	24.6%	16.2%
Massachusetts	30.2%	26.4%	27.3%	16.1%
US	32.0%	26.5%	25.9%	15.6%

Source: US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Citizenship

All cities and towns in the service area reported higher proportions of foreign-born populations compared to the state (16.8%) and national (13.6%) levels (Figure 2). Brookline (36.7%) has an especially high proportion of residents who are foreign born, at more than twice the state level.

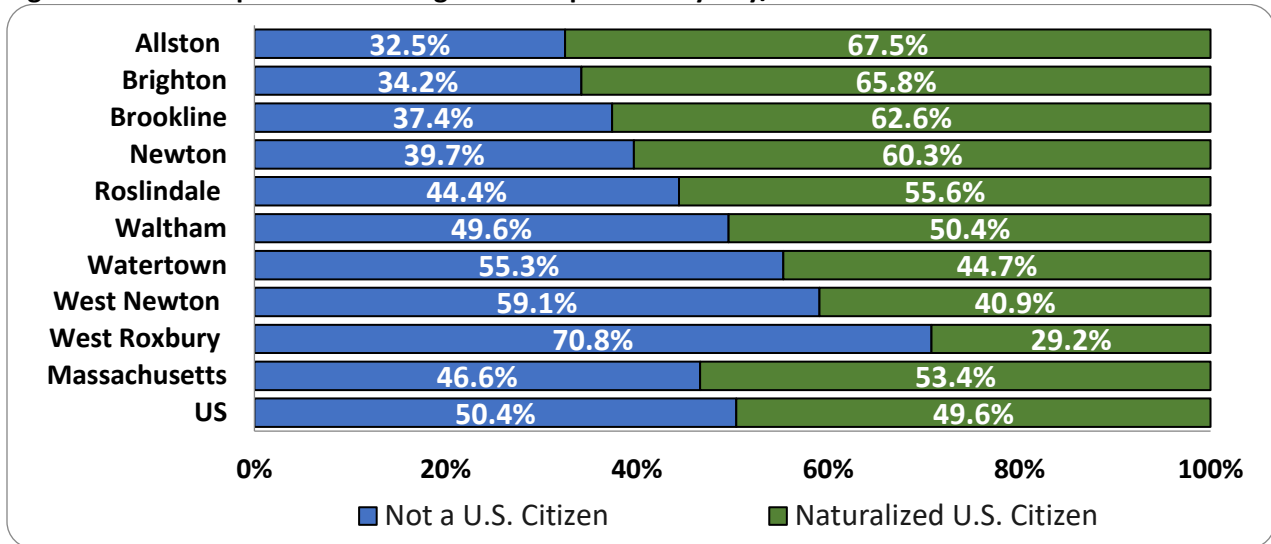
Figure 2: Foreign-Born Population by City/Town – 2019



Source: US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Of those who are foreign-born, West Roxbury (70.8%), West Newton (59.1%), and Watertown (55.3%) have the highest proportion of Non-U.S. Citizens (Figure 3). Meanwhile, Allston (32.5%) and Brighton (34.2%) have the lowest proportion of Non-U.S. Citizens.

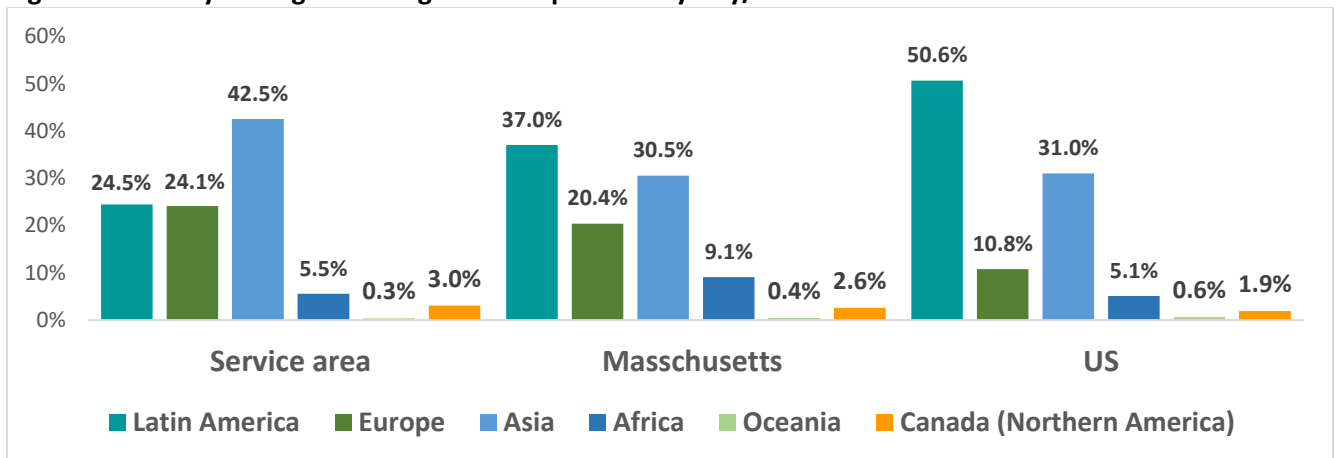
Figure: 3 Citizenship Status of Foreign-Born Population by City/Town



Source: US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

The largest proportion of foreign-born residents in the service area come from Asian countries (42.5%) (Figure 4). This is much higher than the state (30.5%) or national (31.0%) levels. The proportion of foreign-born residents from Latin America were notably smaller in the SEMC service area (24.5%) compared to the state (37.0%) and national (50.6%) levels. The foreign-born population from Europe was similar between the service area (24.1%) and state (20.4%). The foreign-born population from Europe was similar between the service area (24.1%) and state (20.4%).

Figure 4: Country of Origin – Foreign Born Population by City/Town – 2019



Source: US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Language

Aside from West Newton (17.6%), each city/town had a higher proportion of residents who spoke a language other than English than the national level (21.6%) in 2019 (Table 4). Allston had the highest percentage of residents that spoke a language other than English (43.2%), followed by Roslindale (41.0%) and Brighton (35%). Roslindale (17.6%), Allston (17.3%), and Brighton (14.8%) had high proportions of residents who speak English "less than very well", all well above state (9.2%) and national (8.4%) levels.

Table 4: Distribution of Language Characteristics by Town/City –2019

	Speaks only English	Speaks a language other than English	Speaks English less than very well
Allston	56.8%	43.2%	17.3%
Roslindale	59.0%	41.0%	17.6%
Brighton	65.0%	35.0%	14.8%
Waltham	67.5%	32.5%	11.2%
Brookline	66.4%	33.6%	10.1%
Newton	73.7%	26.3%	6.4%
West Newton	82.4%	17.6%	3.3%
West Roxbury	77.9%	22.1%	7.8%
Watertown	71.0%	29.0%	7.3%
Massachusetts	76.2%	23.8%	9.2%
US	78.4%	21.6%	8.4%

Source: US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

With the exception of Waltham and Roslindale, other Indo-European languages were the most common spoken other than English in SEMC's service area (Table 5). Most cities/towns also had especially high proportions of residents who spoke Asian and Pacific Islander languages, with Roslindale being the only town at or below the state (4.3%) or national (3.5%) levels. Allston (19.1%) and Brookline (12.9%) had exceptionally high levels of residents who spoke Asian and Pacific Islander languages.

Table 5: Language Distribution (Other Than English) by Town/City – 2019

	Spanish	Other Indo-European languages	Asian and Pacific Islander languages	Other languages
Allston	9.1%	13.5%	19.1%	1.5%
Roslindale	21.4%	15.5%	1.5%	2.6%
Brighton	10.3%	13.6%	9.6%	1.4%
Waltham	11.5%	10.7%	8.0%	2.3%
Brookline	5.5%	11.7%	12.9%	3.5%
Newton	3.7%	10.9%	10.2%	1.5%

West Newton	2.5%	7.5%	7.0%	0.6%
West Roxbury	5.7%	8.7%	5.8%	1.8%
Watertown	5.6%	16.6%	5.0%	1.8%
Massachusetts	9.1%	9.0%	4.3%	1.4%
US	13.4%	3.7%	3.5%	1.1%

Source: US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

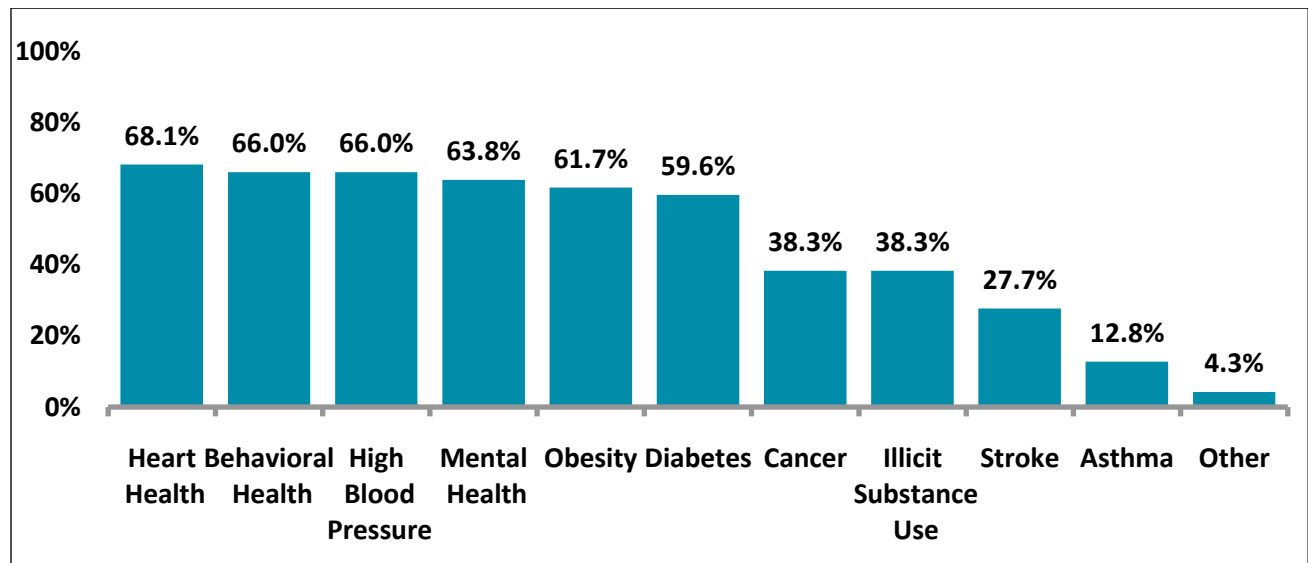
Prioritization of Community Health Needs

To identify the community’s health needs, SEMC surveyed health professionals in their service area, conducted focus groups with vulnerable citizens within the community, and interviewed key informants who serve those in the community. Issues that were most commonly brought by these groups served as the basis for SEMC’s prioritized health needs.

Health Professionals Survey

When asked what they perceived to be the greatest health issues impacting the community they serve, most health professionals selected issues pertaining to heart health (68.1%), behavioral health (66.0%), high blood pressure (66.0%), mental health (63.8%), obesity (61.7%), and diabetes (59.6%) (Figure 5). Issues related to cancer (38.3%) and illicit substance use (38.3%) were also moderately endorsed, followed by stroke (27.7%) and asthma (12.8%).

Figure 5: Perceived Major Health Concerns (other than COVID-19)



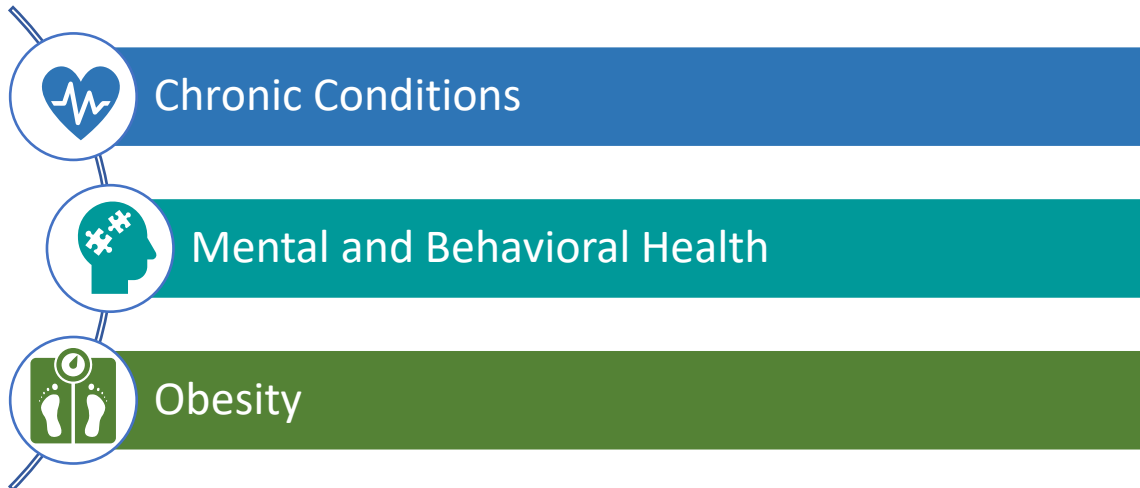
Interviews and Focus Groups

When asked what the specific health needs of their community were, focus group participants mentioned a variety of issues. Chief among these were mental health, including increased

stress, isolation, and depression. Chronic conditions, such as diabetes were also a major cause of concern, along with lack of exercise and physical fitness. When asked what their top 3 health and wellness concerns within the community were, the most common responses among key informants were mental and behavioral health, heart health, diabetes, access to care, and homelessness.

Rankings

Based on this feedback, we believe the top 3 prioritized needs for SEMC's service area are:



Profiles of Prioritized Community Health Needs

Chronic Conditions

According to the Massachusetts Department of Public Health (MDPH), prevention and treatment of chronic illnesses are public health priorities (MDPH, 2017). Chronic illness is a broad term used to describe health conditions lasting longer than a year, these conditions require ongoing care and are leading causes of death and disability in the United States (CDC Wonder, 2021). The CDC estimates that chronic illness, including heart disease, cancer, and diabetes; combined with mental illness accounts for 90% of the nations \$3.8 trillion in annual healthcare expenditures. The leading drivers of death, disability, and monetary cost are heart disease, cancer, obesity, and diabetes. What is unique about these conditions is that they are often preventable if the underlying lifestyle behaviors behind so many of them are addressed.

One year before the onset the COVID-19 pandemic (2019), there were approximately 2.8 million deaths in the United States (869.7 per 100,000 population) (CDC Wonder, 2021), 58,630 of these deaths occurred in Massachusetts at a rate of 850.6 deaths per 100,000 population). Mortality from four of the top causes declined in 2019, these included cancer, unintentional injuries, chronic respiratory diseases, and heart disease (Kochanek, Xu, & Arias, 2019). The cumulative decrease in mortality from these causes led to a modest increase in life expectancy to 78.8 years.

Health Professionals Survey

Chronic disease represents a major area of concern for health professionals. When asked what they perceive as major health concerns among their consumers, high blood pressure (66%), heart health (68.1%), diabetes (59.6%), obesity (61.7%), cancer (38.3%), stroke (27.8%), and asthma (12.8%) emerged as top areas of concern.

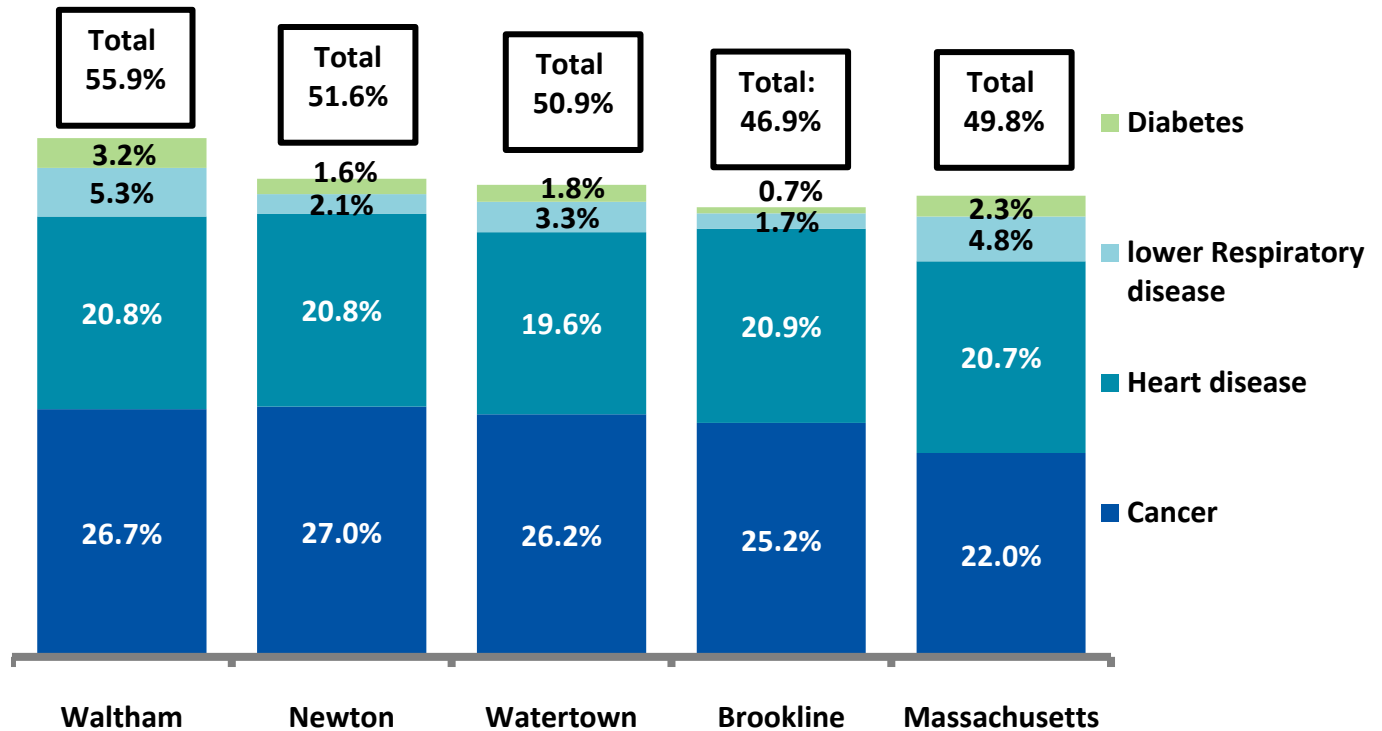
Interviews and Focus Groups

Participants mentioned several chronic conditions that effect their community, including dementia, cognitive disorders, and diabetes. These conditions were noted to be exacerbated by the pandemic and experienced stigma. Some members suggested these chronic conditions are particularly challenging for immigrant populations, who lack access to home and health services.

Prevalence

In 2017, approximately 49.8% of mortality in Massachusetts was due to cancer, heart disease, lower respiratory disease, and diabetes (Figure 6). Of the cities/towns reporting data in the service area, only Brookline (46.9%) has a mortality rate due to chronic conditions below the state level. Waltham (55.9%) reports the highest rate of mortalities due to chronic conditions, exhibiting especially high rates of mortality due to lower respiratory disease (5.3%) and diabetes (3.2%) compared to other cities/towns in the service area.

Figure 6: Chronic Disease Mortality 2017 (percentage of all causes)



Source: Massachusetts Deaths 2017, Massachusetts Department of Public Health

Cancer

Since 2006, cancer has been the leading cause of death in Massachusetts over heart disease (CDC Wonder, 2021). Nationally, the rate of cancer diagnosis has risen each year since 2016. In 2019 the national rate was 7.3% while the Massachusetts rate was 7.5% (UHF, 2019). Data from the American Cancer Society indicated that there would be an estimated 1.89 million new cases of cancer and 608,570 deaths from cancer in the United States in 2020 (ACS, 2019). In Massachusetts, there were 42,750 estimated diagnoses and 12,540 estimated deaths (ACS, 2020).

The incidence rate for all sites of cancer in Massachusetts was 456.9 per 100,000 population with men having a higher cancer incidence rate than women (470.8 versus 439.5 per 100,000 population) (ACS, 2019). The mortality rate for males was also higher than that seen for females (183.3 vs. 132.5 per 100,000 population) (ACS, 2019). Historic data has shown that Black non-Hispanic men and White non-Hispanic women had the highest incidence rate of cancer when looking at all sites. Across the Commonwealth, breast cancer among women and prostate cancer among men have the highest incidence rates. Lung cancer, colon cancer, and melanoma have also been among the leading types of cancer in both women and men. Together, these

five cancers account for more than half of all cancer cases across the Commonwealth (ACS, 2020)

Health Professionals Survey

38.3% of health professionals identified cancer as the most pressing health concern in their community.

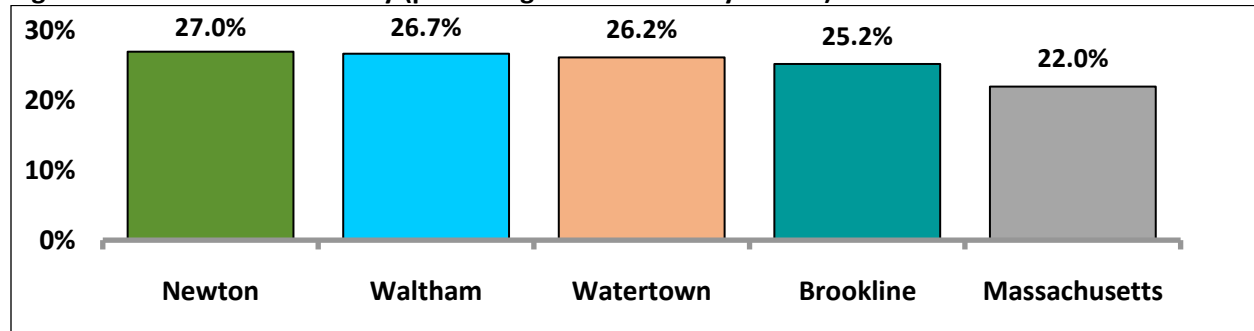
Interviews and Focus Groups

Cancer was not mentioned by participants, however several socioeconomic factors that contribute to a prevalence of cancer were discussed. Participants identified issues surrounding food insecurity and limited access to healthy food options; limited access to green spaces that would allow for physical exercise; and a prevalence of vape shops in the area. These all contribute to increasing one’s risk of developing cancer.

Prevalence

In 2017, all cities/towns reporting data within SEMC’s service area reported rates above the state level (22.0%) (Figure 7). Newton (27.0%), Waltham (26.7%), Watertown (26.2%), and Brookline (25.2%) all showed similar rates, accounting for over a quarter of the mortality rate.

Figure 7: Total Cancer Mortality (percentage of all mortality causes) -- 2017



Source: Massachusetts Deaths 2017, Massachusetts Department of Public Health

Of the reported deaths due to certain types of cancer, lung cancer appeared to have the highest level of mortalities in every town/service area, followed by colorectal (Table 6).

Table 6: Total Cancer Counts by Diagnosis (observed and expected case counts)

	Breast	Lung	Cervix	Colorectal	Melanoma	Oral
Allston	0	4	0	0	0	0
Roslindale	9	8	0	1	0	1
Brighton	2	9	0	8	1	3
Waltham (02543)	2	15	0	3	1	2
Brookline	3	5	0	3	0	0
Newton	0	4	0	0	1	1

West Newton	4	6	0	1	1	0
West Roxbury	5	13	0	7	1	1
Watertown	2	14	1	10	2	0

Source: Cancer Deaths Steward

Cardiovascular disease

Cardiovascular disease is a broad term used to refer to congestive heart failure, myocardial infarction, and stroke. After cancer, heart disease is the leading cause of death in Massachusetts. Cardiovascular diseases are the most common causes of death in men, women, and most racial and ethnic groups in the United States. It's estimated that 655,000 Americans die annually from cardiovascular disease, approximately one in every four deaths (CDC "About Heart Disease", 2021). Research also suggests that heart disease will become an even more pressing concern in the coming years because of COVID-19. This is due to the impact that the virus has on the cardiovascular system and lifestyle behaviors during and following the pandemic (AHA, 2021). In Massachusetts, mortality rates from cardiovascular disease are low compared to other states. Massachusetts had the third-lowest rate of death from cardiovascular disease at just 127.2 deaths per 100,000 residents (CDC Wonder, 2021). The national trend of higher rates of cardiovascular disease among Black (Non-Hispanic) individuals compared to White (Non-Hispanic) individuals was also observed in Massachusetts. However, the difference in mortality rate between these two races in Massachusetts is not significant. In Suffolk County, there were 157.8 deaths from cardiovascular disease per 100,000 population. In Norfolk County, there were 161.3 deaths from cardiovascular disease per 100,000 population

Hypertension is a critical risk factor for adverse cardiovascular and cerebrovascular outcomes, including stroke, heart attacks, and congestive heart failure. In 2019, 28.1% of Massachusetts adults were told by health professionals that they had hypertension. Racial/ethnic disparities in hypertension are likely an important contributing factor to hospitalizations for congestive heart failure, myocardial infarction, and stroke (UHF, 2019). In 2018, stroke accounted for 1 of every 19 deaths in the US. Stroke is the leading cause of serious long-term disability in the US (RWJF, 2019). In Suffolk County, there were 24.9 deaths from stroke per 100,000 population. In Norfolk County, there were 25.8 deaths from cardiovascular disease per 1000,000.

Health Professionals Survey

68.1% of health professionals noted heart health as a major health concern within their community, and 66% noted high blood pressure as a major factor. 27.7% of health professionals rated stroke as a major health concern within their community.

Interviews and Focus Groups

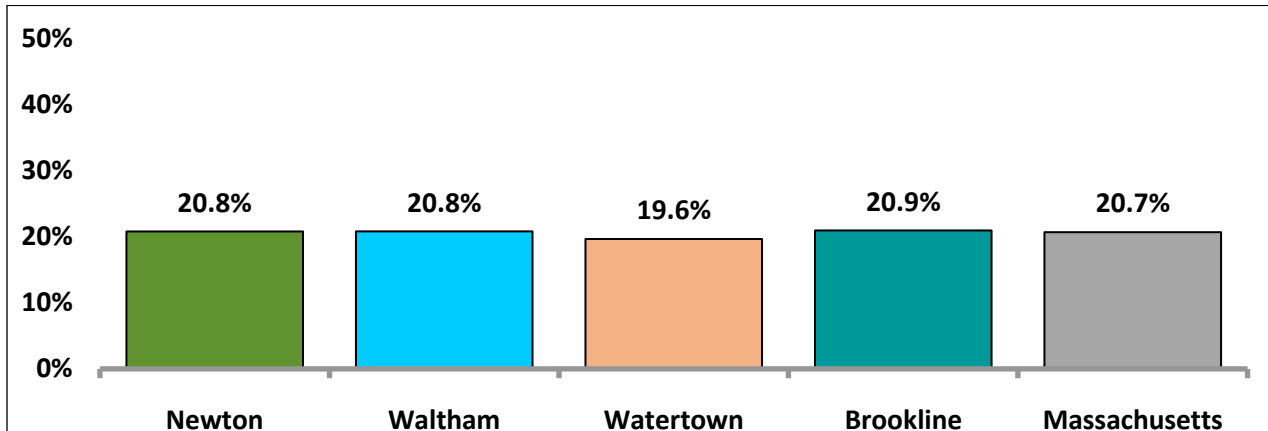
While cardiovascular health was not explicitly discussed by participants, the lack of access to exercise and nutritious foods was a dominant point of conversation. Participants also discussed several stressors, such as increased cost of living and limited access to healthcare that could

contribute to increasing risk-factors for cardiovascular health concerns. Stroke and hypertension were not a topic of discussion within the focus groups or interviews.

Prevalence

In 2017, the mortality rate of due to heart disease in the state of Massachusetts was 20.7% (Figure 8). The cites/towns in SEMC's service area reflected the state level, with little variation among them. The lowest rate of heart disease mortality within SEMC's service area was in Watertown (19.6%).

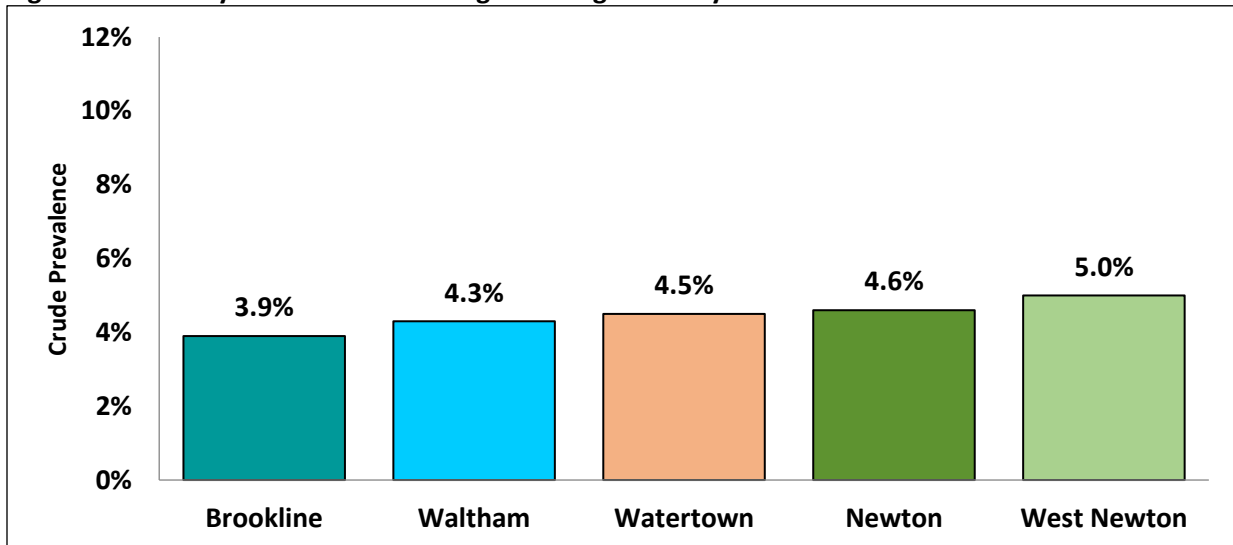
Figure 8: Total Heart Disease mortality (percentage of all mortality causes)-2017



Source: Massachusetts Deaths 2017, Massachusetts Department of Public Health

Additionally, rates of coronary heart disease among adults varied just over one percentage point among the cities/towns within SEMC's service area (Figure 9). The lowest rate of coronary disease was found in Brookline (3.9%), while the highest rate was in West Newton (5.0%).

Figure 9: Coronary heart disease among adults aged >=18 years



Source: Behavioral Risk Factor Surveillance System (BRFSS) - (2018)

Diabetes

Diabetes was the seventh leading cause of death in the United States in 2018. According to recent data from the CDC, around 8.4% of Massachusetts residents had diabetes in 2019. This is 2.4% less than the national rate (UHF, 2019). In Massachusetts, Black non-Hispanics (13.1%) and Hispanics (10.6%) had higher rates of diabetes compared to White non-Hispanics (7.8%), similar trends were seen at the national level (UHF, 2019). Studies show that the onset of type 2 diabetes can be largely prevented through weight loss as well as increasing physical activity and improving dietary choices.

Socioeconomic disparities exist in diabetes prevalence. In Massachusetts, adults with an annual household income of less than \$25,000 (16.2%) are more than two times as likely to be diagnosed with diabetes as compared to those with an annual household income of more than \$75,000 (5.8%) (UHF, 2019). The prevalence of diabetes also decreases as educational attainment increases. A total of 17.9% of adults without a high school degree were diagnosed with diabetes compared to 5.6% of adults with four or more years of post-high school education (UHF, 2019).

Health Professionals Survey

60% of health care professionals identified diabetes as a pressing health concern within their community.

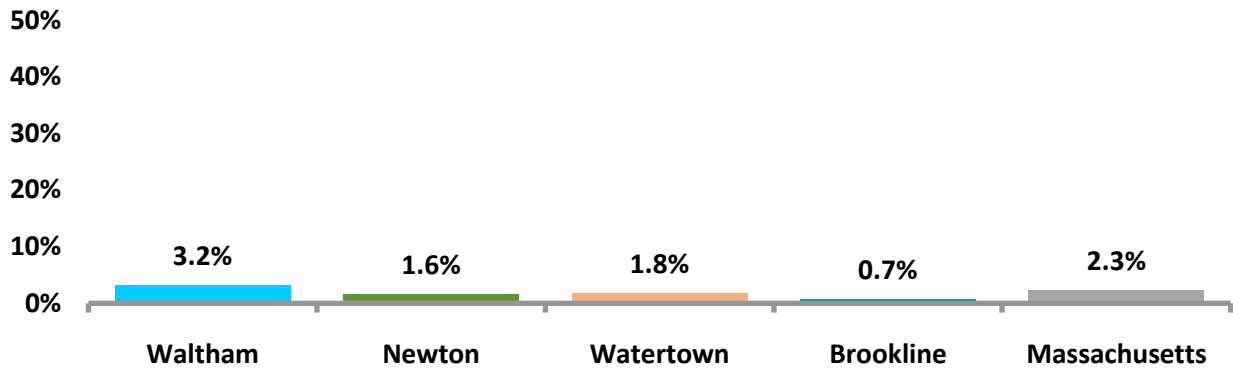
Interviews and Focus Groups

Diabetes was mentioned as a significant health concern among community members but was not discussed in detail. Rather, many participants detailed lifestyle behaviors that may lead to diabetes, including lack of physical exercise, poor diet and nutrition, and stress.

Prevalence

Aside from Waltham (3.2%) all towns reporting data in the service area have a lower mortality rate due to diabetes than the state level (2.3%) (Figure 10). The mortality rate of Brookline was especially low (2.3%).

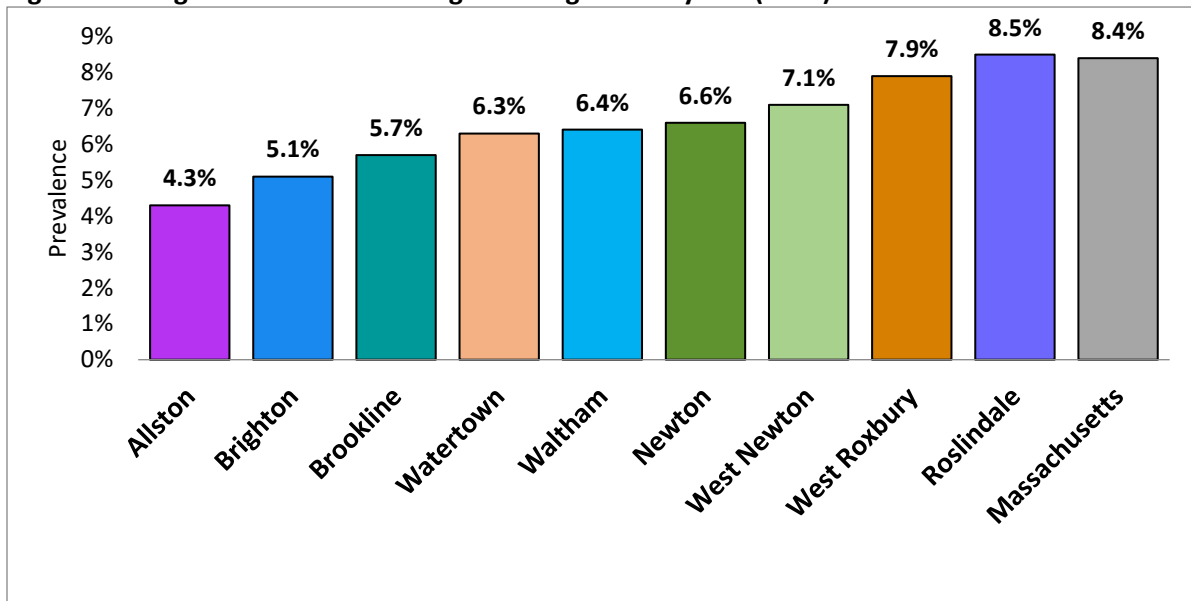
Figure 10: Total diabetes mortality (percentage of all mortality cases)- 2017



Source: Massachusetts Deaths 2017, Massachusetts Department of Health

All cities/towns in the service area of SEMC have diabetes diagnoses at or below the level for the State of Massachusetts (8.4%) (Figure 11). Roslindale (8.4%) and West Roxbury (7.9%) have the highest rate of diabetes, and Allston (4.3%) and Brighton (5.1%) have the lowest rate.

Figure 11: Diagnosed diabetes among adults aged >=18 years (2018) Crude Prevalence



Sources: Behavioral Risk Factor Surveillance System (BRFSS) - (2018)

Respiratory Conditions

Chronic lower respiratory diseases affect the airways and other structures of the lung. These include asthma, chronic obstructive pulmonary disease (COPD), emphysema, and bronchitis. Risk factors for chronic lower respiratory diseases can include environmental exposures such as tobacco smoke, air pollution, dust, fumes, and mold (MDPH, 2017). Because of this, those in less healthy environments are at a greater risk for prevalence and severity asthma symptoms.

Health Professionals Survey

12.8% of health care professionals cited asthma as a major health concern of their community.

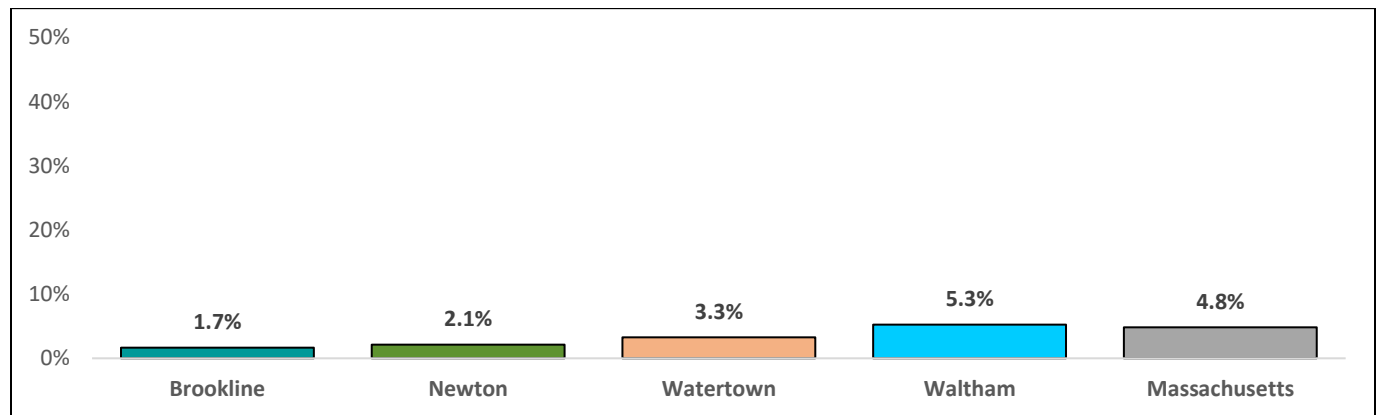
Interviews and Focus Groups

Community members mentioned asthma as a concern brought about by congested living conditions and unclear air. Members mentioned the importance of having green space to allow for more recreational activities and encourage higher levels of activity, which can improve respiratory health.

Prevalence

Waltham (5.3%) reported a higher total of deaths caused by chronic lower respiratory disease when compared to the state level (4.8%). Brookline (1.7%) had the lowest reported total deaths due to lower respiratory disease (Figure 12)

Figure 12: Total chronic lower respiratory mortality (percentage of all mortality causes)-2017



Source: Massachusetts Deaths 2017, Massachusetts Department of Public Health

Mental and Behavioral Health

Behavioral health is a broad term used to describe the connection between behavior and physical health, which includes mental health and substance use disorders. Approximately 15% of Americans suffer from any mental illness, and a small portion of this group (24%) also suffer from a serious mental illness (SAMHSA, 2019). It is thought that these rates will rise dramatically in the wake of COVID-19, with preliminary surveys finding that rates of symptoms for anxiety and depression have risen between 2019 and 2020. These findings show that in 2019, 6.6% of Americans reported having experienced depression and 8.2% have experienced anxiety. These rates are highest in the young adult population, between the ages of 18 and 25, although it's worth noting mental illness can occur in all age group.

Health Professionals Survey

Among participants in the health professional survey, 66% identified behavioral health as a major concern in their community, and 63.8% identified mental health. Additionally, 31.9% of health professionals also rated a lack of access to mental health support as the greatest obstacle to healthy living, while 34% rated expanded access to mental health resources as the most important support service to benefit consumers.

Interviews and Focus Groups

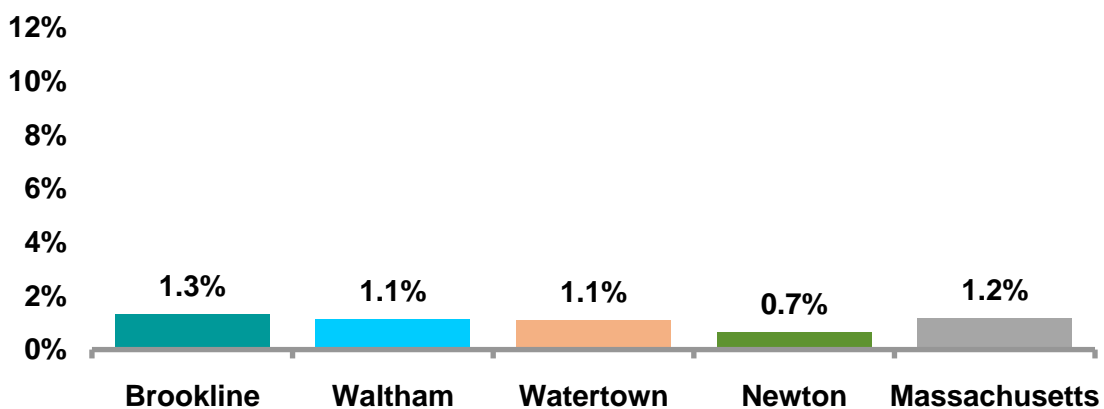
Mental health was a prevalent topic of discussion for all residents. Many residents felt that youth were at an increased risk due to a lack of opportunities to interact with others and socialize because of the pandemic. Among adults, participants noted that mental health may not be taken as seriously but represents a significant issue within the community. The social isolation brought on by the pandemic is also a large source of stress for elderly residents. Some residents mentioned that social factors, such as experienced racism can also lead to reduced mental health.

Within the healthcare system, members discussed the difficulty of accessing mental health services at SEMC, where there is a 3-week waiting list. One participant discussed the lack of targeted resources for mental and behavioral health, making it difficult for health professionals to identify mental illness.

Prevalence

While not a broad indicator of poor mental health, suicidality is often the result of poor mental health. In 2017, most communities within SEMC's service area reported suicide rates at or below the state level (Figure 13).

Figure 13: Suicide Deaths Crude Prevalence 2017



Source: Massachusetts Deaths 2017, Massachusetts Department of Public Health

Substance Use Disorder

According to the National Survey on Drug Use and Health (NSDUH) in 2015, an estimated 53.2 million people in the US aged 12 and older used illicit drugs in the past year, approximately 19% of the population (SAMHSA, 2019). This rate was nearly twice as high for the 18 to 25-year-old population (39.4%). Of these, most (43.5 million) reported using marijuana, and 5.5 million misused prescription painkillers. During the same survey period, an estimated 21.2 million people needed substance use treatment (i.e., treatment for problems related to the use of alcohol or illicit drugs) in the past year. Of this population, just 11.1% received treatment.

Health Professionals Survey

37.03% of health professionals rate illicit substance use as the most pressing health concern within their community.

Interviews and Focus Groups

Illicit substance misuse was a prevalent topic of discussion, with particular concern given to young adults who have easy access to marijuana and alcohol. It was suggested that reliance on illicit substances may be a coping mechanism for young people experiencing depression or anxiety. Youth vaping was noted to be escalating, thanks, in part, to local vape shops. One participant recommended hospital help young people to understand the risks of substance use. Alcohol misuse was also noted to be increasing among women and the opioid crisis remained a strong cause of concern.

Alcohol

Alcohol is the most widely misused substance in the United States and is the third leading cause of preventable death nationally (UHF, 2019). Each year in the US, 95,000 deaths are attributed to alcohol-related causes. In 2019, the percentage of Massachusetts adults that reported binge drinking in the last 30 days was 21.3%, slightly higher than the national percentage of 18.6% (UHF, 2019). Alcohol misuse is most prevalent in younger age groups both nationally and at the state level. The most recent national data shows that about 5% of adolescents aged 12 and over and 10% of adults aged 18-25 have misused alcohol in the past year (SAMHSA, 2019).

Health Professionals Survey

Alcohol use did not emerge as a theme in the health professionals survey.

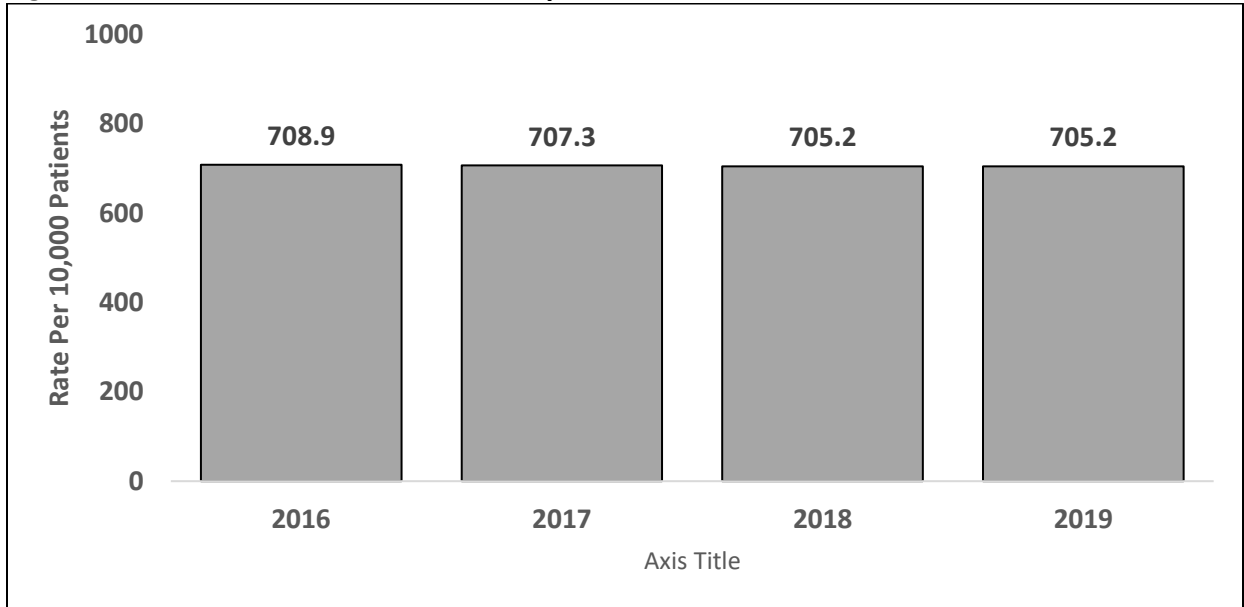
Interviews and Focus Groups

One key informant mentioned concern that underage college students had easy access to alcohol with very little regulation. Additionally, alcohol use among women was reported to be on the rise.

Prevalence

Hospitalization rates have remained relatively stable for alcohol-related disorders, with little variation since 2016 (Figure 14).

Figure 14: Alcohol-Related Disorders: Hospitalization rate



Source: MA Inpatient Hospital Discharge Database, Center for Health Information and Analysis (CHIA)

Opioids

Opioid-related poisonings show a slight downward trend from 2016 through 2019. The other primary concern is the ongoing opioid misuse epidemic. Massachusetts had one of the higher rates of opioid overdose deaths in the nation, at 32.8 deaths per 100,000 population (CDC “Drug Overdose Deaths,” 2020). The CDC has stated that the country is in the third stage of the opioid epidemic which is primarily being driven by synthetic opioids such as fentanyl or tramadol (CDC “Drug Overdose Deaths,” 2020).

After peaking in 2017, the number of opioid-related deaths in Massachusetts has remained relatively stable through 2019, decreasing by just about 1% between 2017 (1,993) and 2019 (1,967) (MDPH, 2020).

Health Professionals Survey

Opioid use did not emerge as a theme in the health professionals survey.

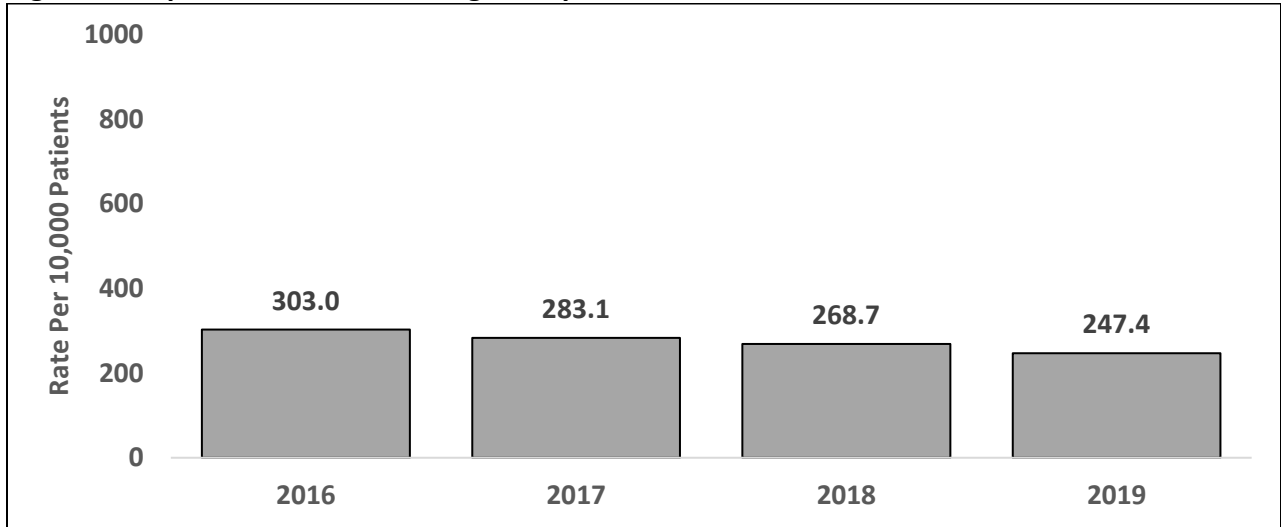
Interviews and Focus Groups

Key informants mentioned that the opioid crisis is still ongoing, and that substance misuse has been exacerbated by the pandemic.

Prevalence

Hospitalizations for opioid-related poisonings show a slow, but steady decline from 2016 (303.0 per 10,000 patients) to 2019 (247.4 per 10,000 patients) (Figure 15).

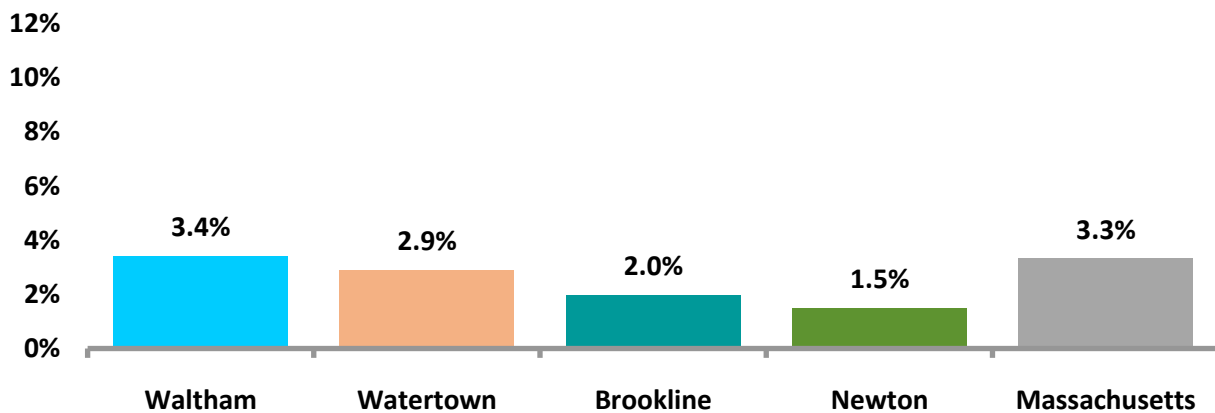
Figure 15: Opioid-Related Poisonings: Hospitalizations



Source: MA Inpatient Hospital Discharge Database, Center for Health Information and Analysis (CHIA)

In 2017, the towns and cities within SEMC’s service area reported rates of death due to opioids at or below the state level (3.3%) (Figure 16). Waltham had the highest rate opioid mortality (3.4%), whereas Newton had the lowest (1.5%).

Figure 16: Opioid-Related deaths (percentage of all mortality cases)- 2017



Source: Massachusetts Deaths 2017, Massachusetts Department of Public Health

Smoking

Smoking, like other risk behaviors, is strongly influenced by one's social environment (MDPH, 2017). However, smoking is one of the leading preventable causes to a host of chronic illnesses (NCCDPHP, 2021).

Health Professionals Survey

Smoking did not emerge as a theme in the health professionals survey.

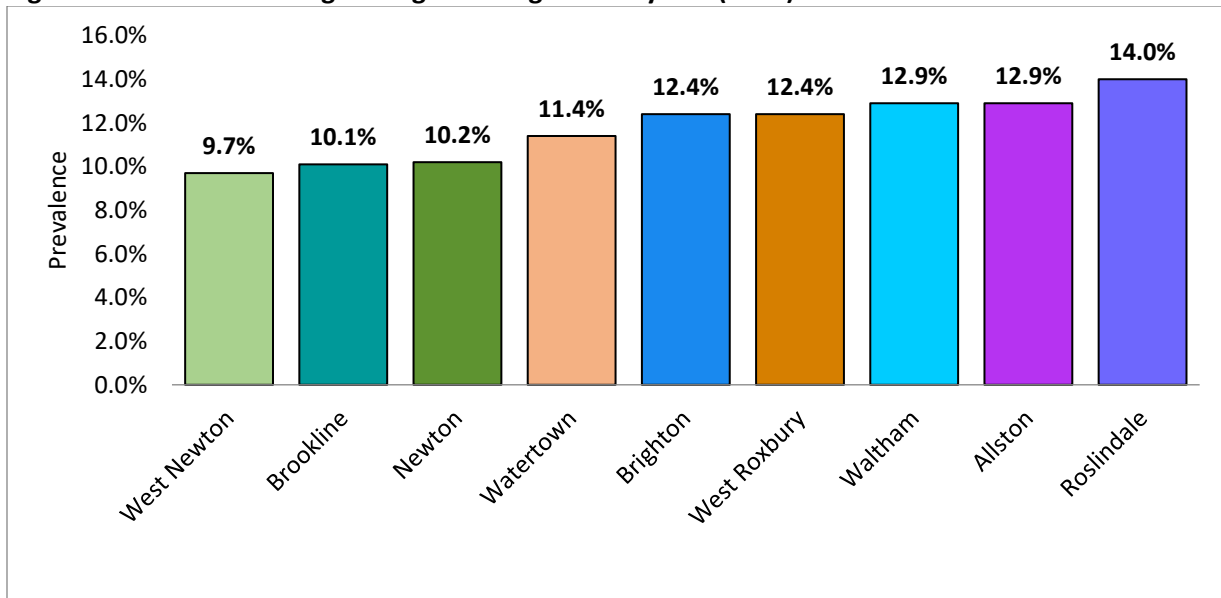
Interviews and Focus groups

Focus group participants recognized smoking as an ongoing health concern within the area. One participant explained smoking as part of the culture within their community.

Prevalence

Roslindale had the largest proportion of smokers in their community (14.0%), while West Newton (9.7%), Brookline (10.1%), and Newton (10.2%) had the lowest proportion of residents who smoke.

Figure 17: Current smoking among adults aged >=18 years (2018) Crude Prevalence

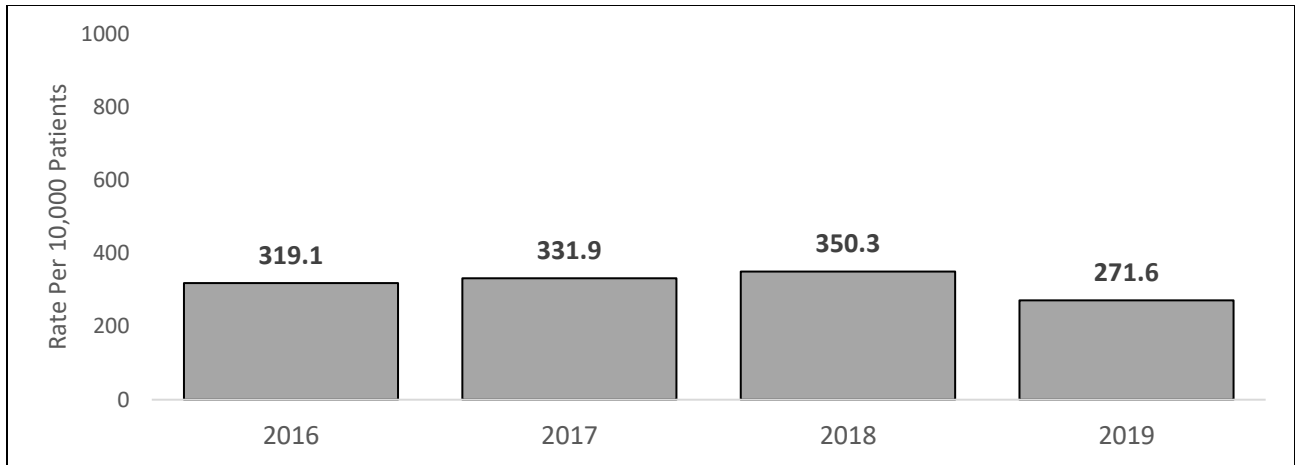


Sources: Behavioral Risk Factor Surveillance System (BRFSS) - (2018)

Other Drug-related Poisonings

Other drug-related poisonings have remained fairly stable but show a slight downward trend in 2019 compared to 2018, moving from 844 drug-related hospitalizations in 2018 to 651 in 2019 (Figure 15).

Figure 18: Other Drug-Related Poisonings: Hospitalizations



Source: MA Inpatient Hospital Discharge Database, Center for Health Information and Analysis (CHIA)

Obesity

Rates of obesity are rising faster than any other chronic illness. The latest data from the CDC estimated that 31.9% of American adults and 18.5% of American adolescents/children are obese. In Massachusetts, the state rate has never exceeded the national rate (CDC “Overweight & Obesity,” 2019). In 2019, the Massachusetts rate for adults was 25%, nearly 7% less than the rate seen nationally. These rates are significantly higher for demographic groups such as women, middle-aged to older adults, and Black (non-Hispanic) adults (UHF, 2019). In Suffolk County, the obesity rate was 21% in 2016, and in Norfolk County, the obesity rate was 20% (RWJF, 2019). According to Centers for Disease Control and Prevention, as of 2020, Middlesex had an adult obesity rate of 22%, physical inactivity at 19%, and access to exercise opportunities at 98%. In 2019, Middlesex had an adult obesity rate of 23%, physical inactivity at 18%, and access to exercise opportunities at 97%, in relation to the other 14 counties (CDC, 2021).

Health Professionals Survey

61.7% of health professionals noted obesity as a pressing health concern within their community.

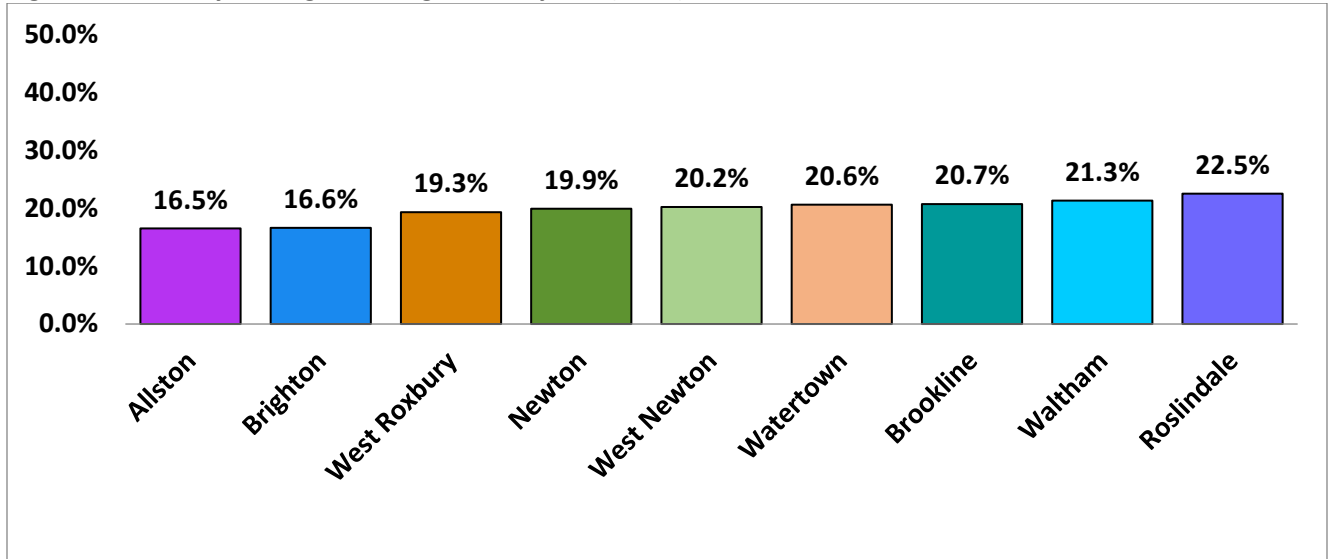
Interviews and Focus Groups

Many residents raised concerns surrounding physical fitness, unhealthy eating, and sedentary lifestyles. Residents face issues of food insecurity and a lack of affordable healthy options. For example, one participant referred to the area as a ‘food desert,’ given the lack of nutritious and affordable food options. Physical exercise and fitness were also a central topic of discussion across groups. One participant suggested the need for a central place where people could look for health resources, including access to available green spaces.

Prevalence

All cities/towns in SEMC's service area report a lower prevalence of obesity when compared to Massachusetts (25%). Roslindale (22.5%) had the highest rate of obesity cases in the area, while Allston (16.5%) and Brighton (16.5%) had the lowest rate of obesity (Figure 19).

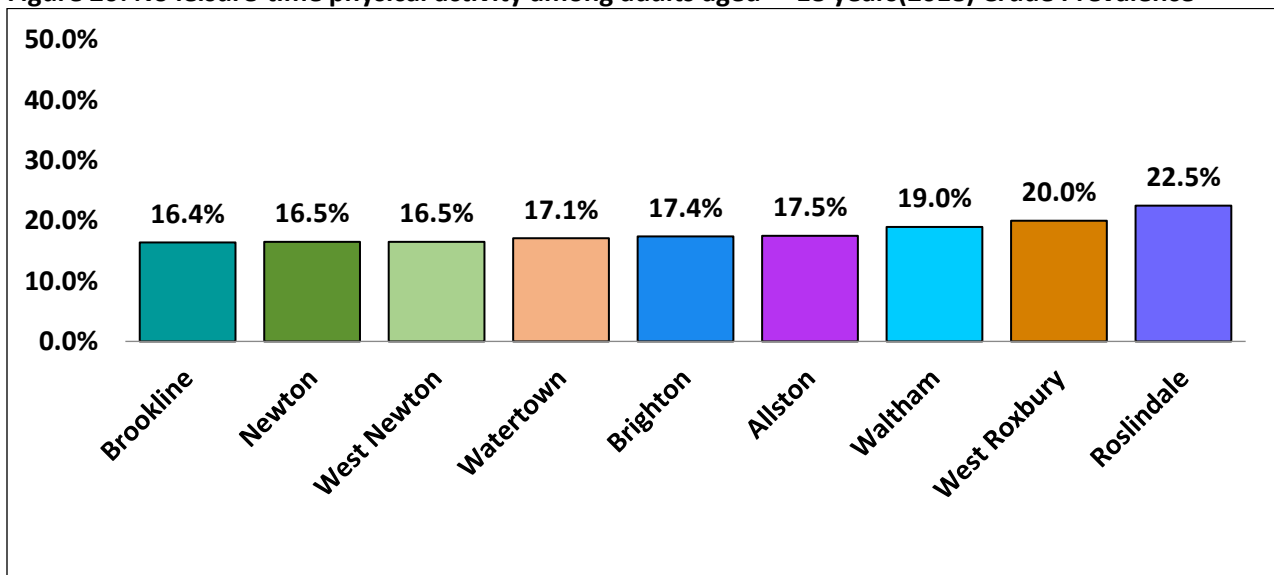
Figure 19: Obesity among adults aged ≥ 18 years (2018) Crude Prevalence



Sources: Behavioral Risk Factor Surveillance System (BRFSS) - (2018)

Brookline (16.4%), Newton (16.5%), West Newton (16.5%) had the lowest prevalence of adults reporting no leisure time focused on physical activity (Figure 20). Roslindale (22.5%) and West Roxbury (20%) having the highest proportion of adults indicating they have no leisure time focused on physical activity.

Figure 20: No leisure-time physical activity among adults aged ≥ 18 years(2018) Crude Prevalence



Sources: Behavioral Risk Factor Surveillance System (BRFSS) - (2018)

Social Determinants of Health



Education

Educational engagement often helps individuals have access to resources that promote good health, such as physical activity breaks, school lunches, after-school programs, and health-based resources such as screenings and management of chronic conditions. These programs have been shown to improve health outcomes, like childhood obesity, and mental health as well as school performance and learning outcomes (MDPH, 2017). Not all school systems have the resources to provide these vital programs. As students spend a significant portion of their day in school, schools also provide necessities such as shelter, sanitary facilities, food and water, and opportunities for socialization. All of these school resources are directly associated with both better health and learning outcomes (MDPH, 2017).

Even after leaving the education system, educational attainment continues to impact individuals' health. Education is associated with better jobs, higher incomes, and economic stability. Education can also provide a greater sense of control over one's life and stronger social networks, which again are linked to the ability to engage in healthy behaviors and better overall health (MDPH, 2017). Unfortunately, educational attainment in Massachusetts is not equitable. Students from low-income communities and communities of color may face challenges in getting to school, differential public-school resources, inequitable discipline practices, resources, and afterschool programming (MDPH, 2017).

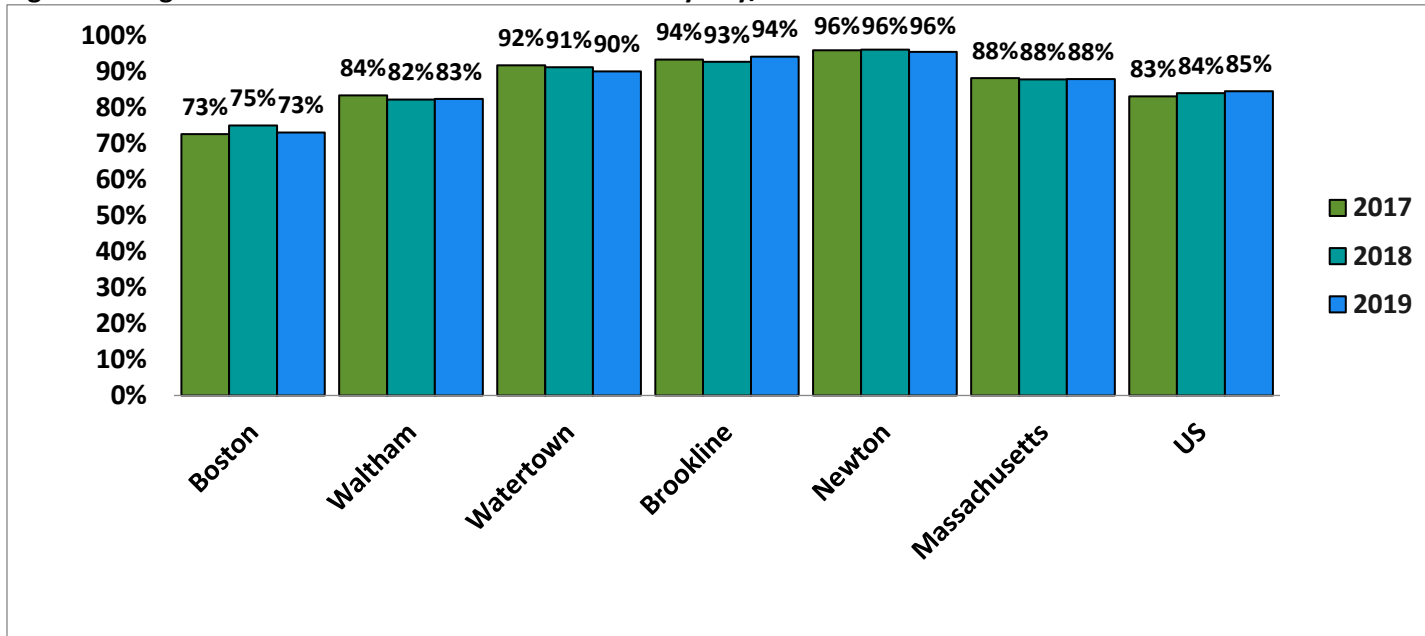
Interviews and Focus Groups

Community members noted that students are struggling with remote education, which leads to further social isolation and anxiety, as there is no clear distinction between school and home life. Community member raised concerns that schools could be a breeding ground for toxic behaviors and relationships.

Prevalence

High school graduation rates have remained fairly consistent across service areas over time. Except for Boston and Waltham, high school graduation rates have exceeded the state and national averages each year from 2017 to 2019 (Figure 21).

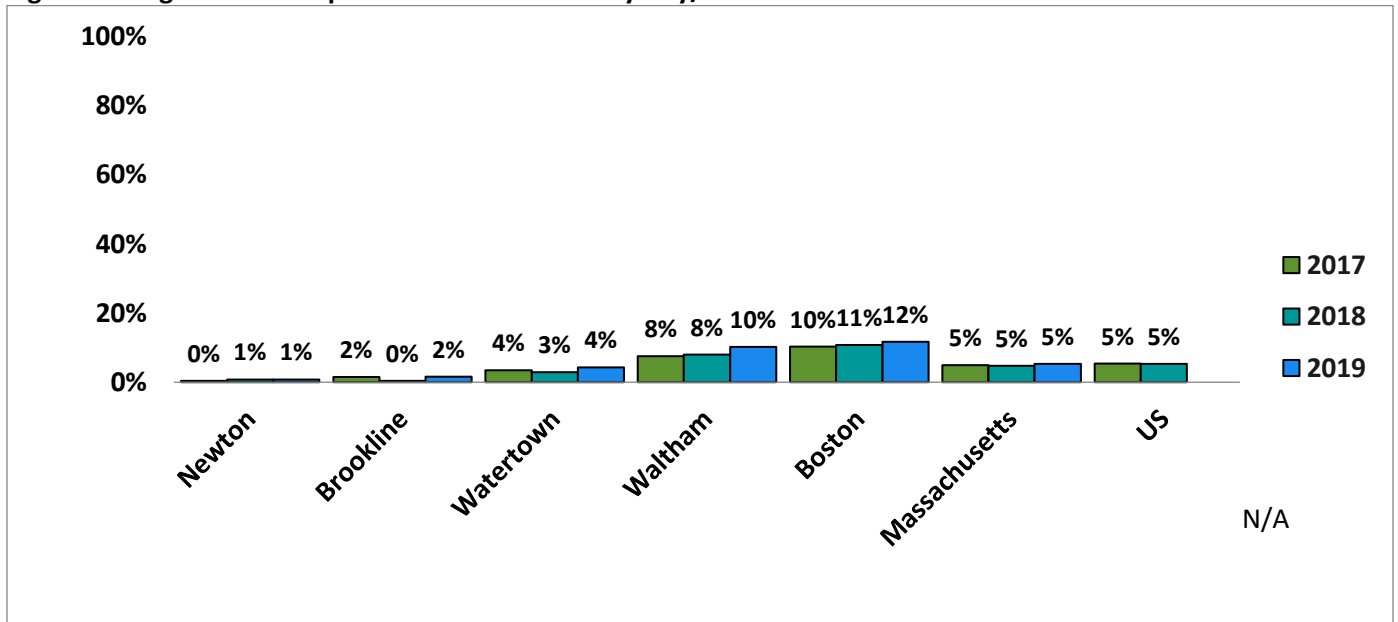
Figure 21: High School Graduation Rates 2017 to 2019 by City/Town



Source: MA Dept. of Elementary and Secondary Education, 2019-2020, School and District Profiles

Boston and Waltham had higher dropout rates than state and country, and these rates show an increase over time. Newton had the lowest dropout rates for both 2017 and 2019, and these rates show stability between 2018 and 2019 (Figure 22).

Figure 22: High School Drop-out Rates Over Time by City/Town



Source: MA Dept. of Elementary and Secondary Education, 2019-2020, School and District Profiles

In 2019, the proportion of those with less than a high school education in Roslindale (10.1%) was higher than the state (9.3%) level. All service areas had larger proportions of those with graduate or professional degrees compared to the state. Newton (49.3%) and West Newton (46.3%) show the highest proportion of individuals with a graduate or professional degree, well above the state (19.6%) or national (12.4%) levels (Table 7).

Table 7: Highest Educational Attainment (age 25 years and over) by City/Town

	Less than high school	High school graduate or equivalent	Some college or Associate's Degree	Bachelor's Degree	Graduate or Professional Degree
Brookline	2.6%	5.7%	8.1%	29.9%	53.5%
Newton	2.6%	8.2%	10.1%	29.9%	49.3%
Waltham	8.0%	19.2%	18.6%	29.4%	24.8%
Watertown	4.9%	14.8%	14.3%	32.3%	33.6%
Roslindale	10.1%	22.0%	23.4%	23.0%	21.5%
West Roxbury	5.8%	18.9%	19.0%	26.9%	29.5%
Allston	7.3%	11.9%	12.8%	36.4%	31.7%
Brighton	6.4%	11.2%	14.2%	40.1%	28.1%
West Newton	2.7%	11.5%	10.3%	29.2%	46.3%
Massachusetts	9.3%	24.0%	23.0%	24.1%	19.6%
US	12.0%	27.0%	28.9%	19.8%	12.4%

Source: US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Employment

While being employed is important for economic stability, employment affects health through more than economic drivers alone. Physical workspace, employer policies, and employee benefits all directly impact an individual's health. The physical workplace can influence health through workplace hazards and unsafe working conditions which lead to injuries, illness, stress, and death. Long work hours and jobs with poor stability can negatively impact health by increasing stress, contributing to poor eating habits, leading to repetitive injuries, and limiting sleep and leisure time. Job benefits such as health insurance, sick and personal leave, child and elder services, and wellness programs can impact the ability of both the worker and their family to achieve good health (MDPH, 2017).

The proportion of unemployed Massachusetts residents declined from 5.8% in 2015 to 2.8% in 2019, reflecting a 70% decrease over this period (MA DUA, 2021). From 2015 to 2019, the percentage of Massachusetts residents who were unemployed was lower than the national average of 3.7% (MA DUA, 2021). With the economic slowdown associated with COVID-19, unemployment rates increased dramatically. In Massachusetts, unemployment peaked at 17.7% in June 2020 and was above 16% from April to July (MA DUA, 2021). From March 2020 through the end of the year, Massachusetts had a higher unemployment rate than the national

average. Underemployment is linked to chronic disease, lower positive self-concept, and depression. Workers with incomes below the poverty line are part of the working poor, who are more likely to have low paying, unstable jobs, have health constraints, and lack health insurance. Discriminatory hiring practices have limited the ability of people of color to secure employment. Those who have been arrested, have a conviction, felony, or have been incarcerated are severely limited in their ability to find employment due to policies placing limitations on individuals who have interacted with the criminal justice system (MDPH, 2017).

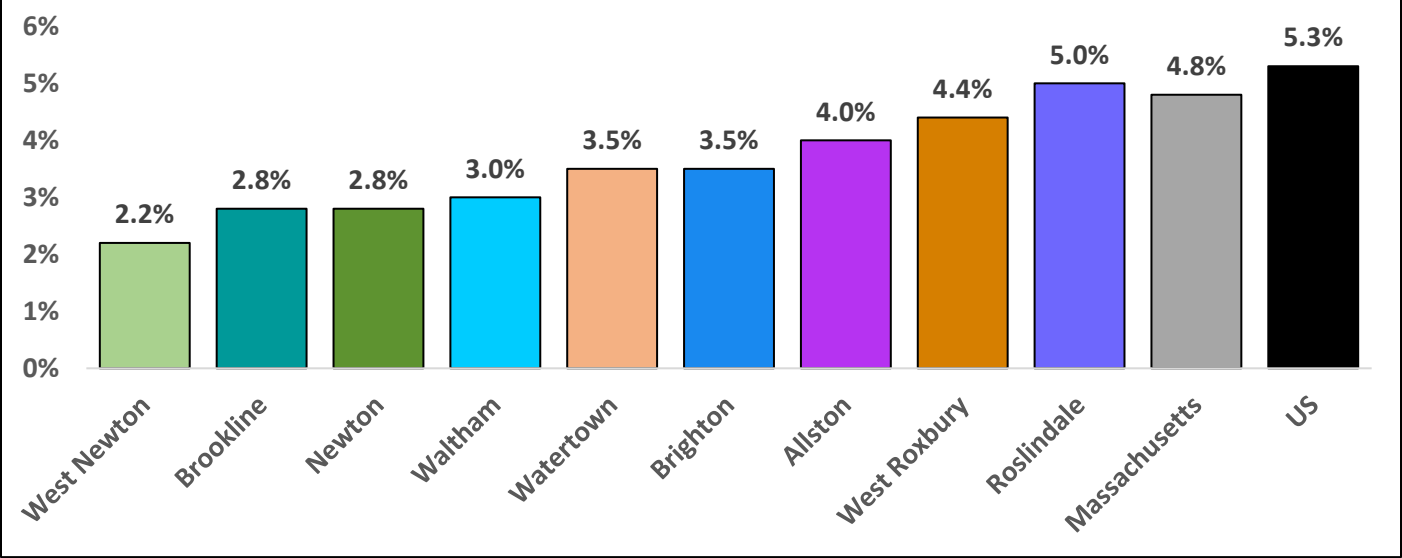
Interviews and Focus Groups

Community members raised concerns of job stability and income. For example, Allston was noted to have many essential workers who work in industries hit particularly hard by the pandemic. Additionally, members discussed the income disparities within their community, especially considering the high cost of living.

Prevalence

All towns and cities in the SEMC service area have unemployment rates below the national level (5.3%). Except for Roslindale (5.0%), all cities and towns also fall below the state (4.8%) unemployment level. West Newton (2.2%), Brookline (2.8%), and Newton (2.8%) had the lowest unemployment rates (Figure 23).

Figure 23: Unemployment Rates (Pop. 16+)



Source US Census - 2019: ACS 5-Year Estimates

Poverty

Income influences where people choose to live, purchase healthy foods, participate in physical and leisure activities, and access health care and screening services. Having a job and job-related income provides individuals the opportunities to make healthy choices, engage in healthy

behaviors, access necessary health care services, and enjoy a long life (MDPH, 2017). In Massachusetts, 9.4% of the population lives below the Federal Poverty Line, this is the 8th lowest poverty rate in the nation and is approximately 2% lower than the national rate for 2020 (“Talk Poverty”, 2020). Before 2015, a greater percentage of children lived in poverty in Massachusetts as compared to the United States as a whole. However, this rate has dropped to 11.3%, as of 2020 (“Talk Poverty”, 2020). Massachusetts ranks among the worst states when it comes to income inequality. In 2020 Massachusetts had an income inequality ratio of 18.2 out of 20, the 47th poorest ratio of all states (“Talk Poverty”, 2020). Stark racial disparities exist in poverty rates across Massachusetts. In 2020 nearly one-third of all Native American Massachusetts residents had incomes below the poverty line (“Talk Poverty”, 2020). This was followed by approximately one in five (19.6%) Hispanic residents and 17.6% of Black non-Hispanic residents (“Talk Poverty”, 2020). These rates stand in dramatic contrast to less than one in ten (6.5%) White non-Hispanic and one in ten (10.6%) Asian non-Hispanic residents with incomes below the federal poverty level (“Talk Poverty”, 2020).

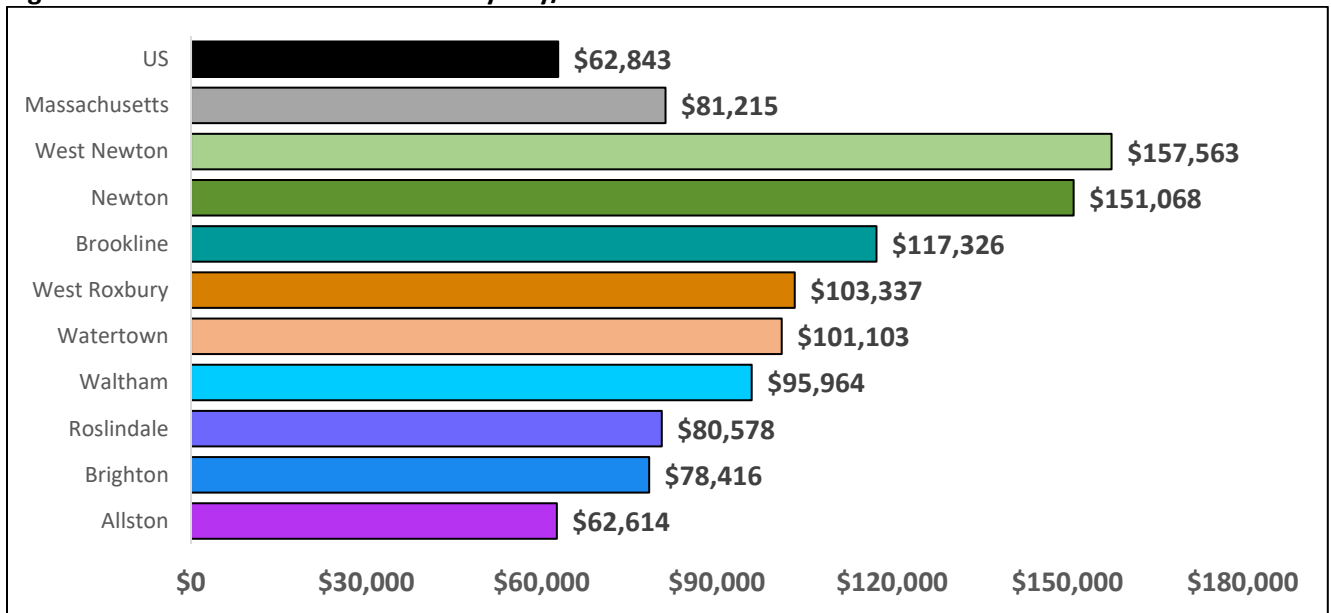
Interviews and Focus Groups

Focus group participants expressed concerns around the resources available to those with lower incomes, as convenience stores and fast-food restaurants are often more convenient and affordable sources for food among these groups. for unhealthy foods. Poverty was discussed as a major obstacle to good health, particularly as it limits access to preventive care and medicine.

Prevalence

Three service area communities, Allston (\$62,614), Brighton (\$78,416), and Roslindale (\$80,578) had lower median household incomes than Massachusetts (\$81,215). Allston’s median household income was also just under the U.S. Median household income (\$62, 843). While West Newton (\$157,563) and Newton (\$151,068) had significantly higher median household incomes than the state (\$81,215) and country (\$62,843), with almost double the state median (Figure 24).

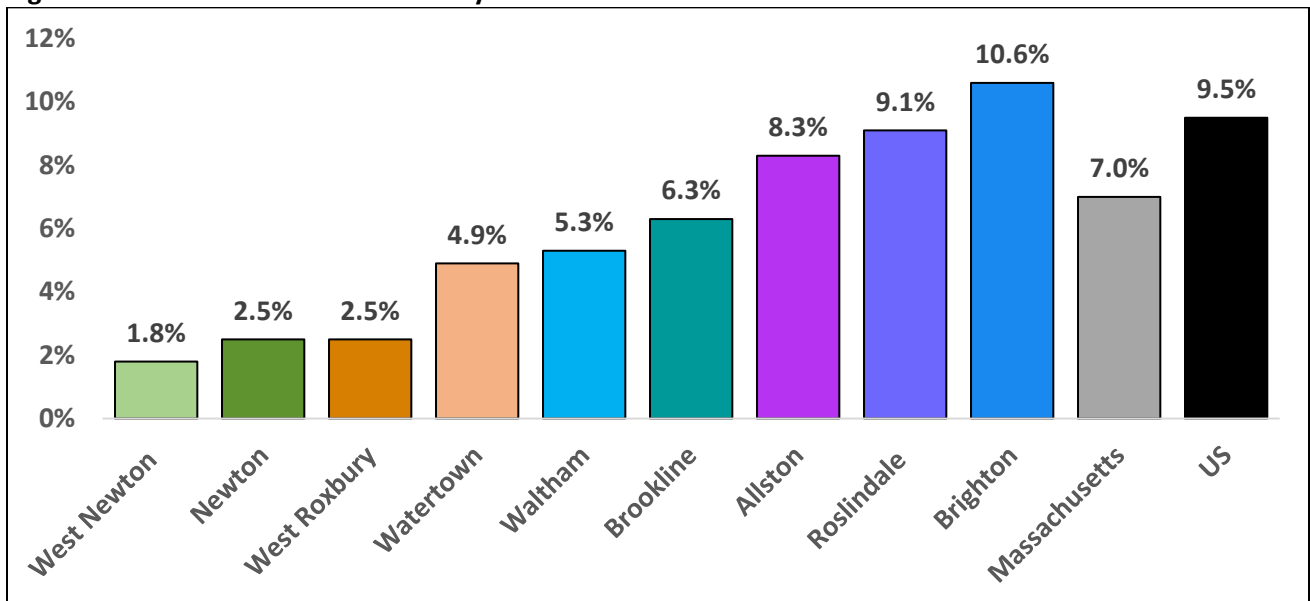
Figure 24: Median Household Income by City/Town



Source: US Census - 2019: ACS 5-Year Estimates

Brighton (10.6%) had a higher rate of total families below the poverty level than both the state (7.0%) and national (9.5%) levels (Figure 25). Roslindale (9.1%) and Allston (8.3%) also showed poverty rates above the state level. Newton (2.5%), West Roxbury (2.5%), and West Newton (1.8%) have less than half the poverty rate of total families compared to the state.

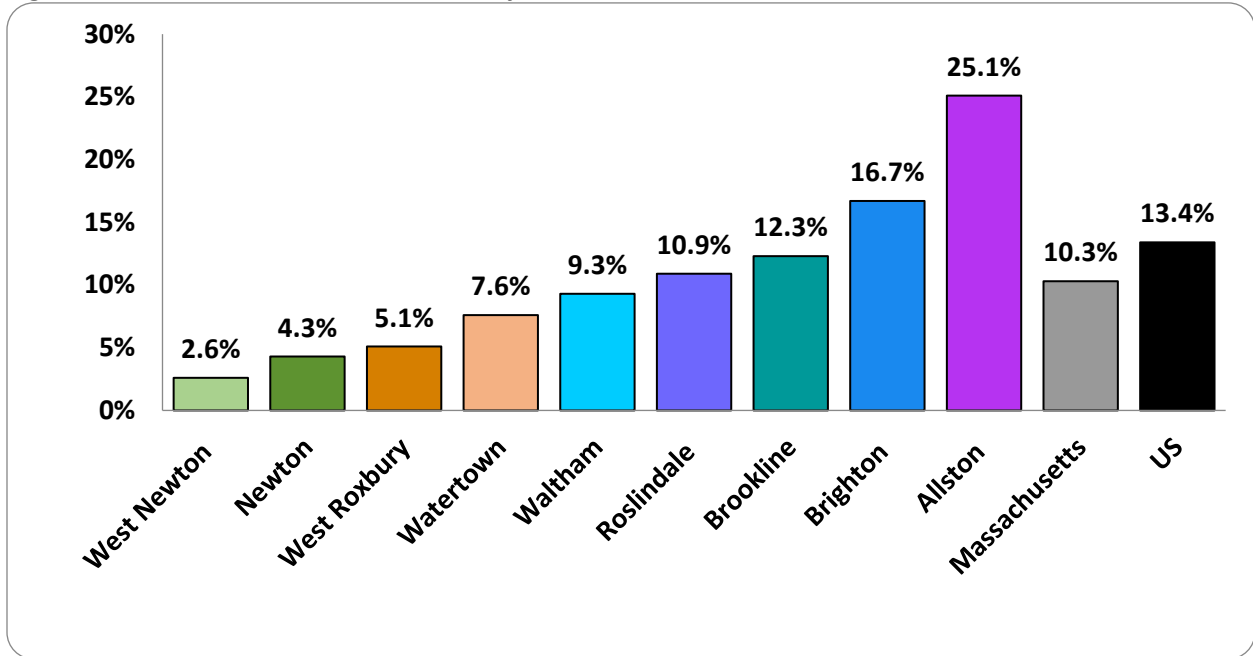
Figure 25: Total Families Below Poverty Level-2019



Source: US Census - 2019: ACS 5-Year Estimates

Allston (25.1%) had the highest percentage of total individuals below poverty level, at approximately double the state (10.30%) and national (13.4%) levels (Figure 26). Brighton (16.7%) also had an individual poverty rate above the state and national levels, while Brookline (12.3%) and Roslindale (10.9%) displayed rates above the state level. Newton (2.6%), on the other hand, was approximately a fourth of the state level and about a fifth of the national level.

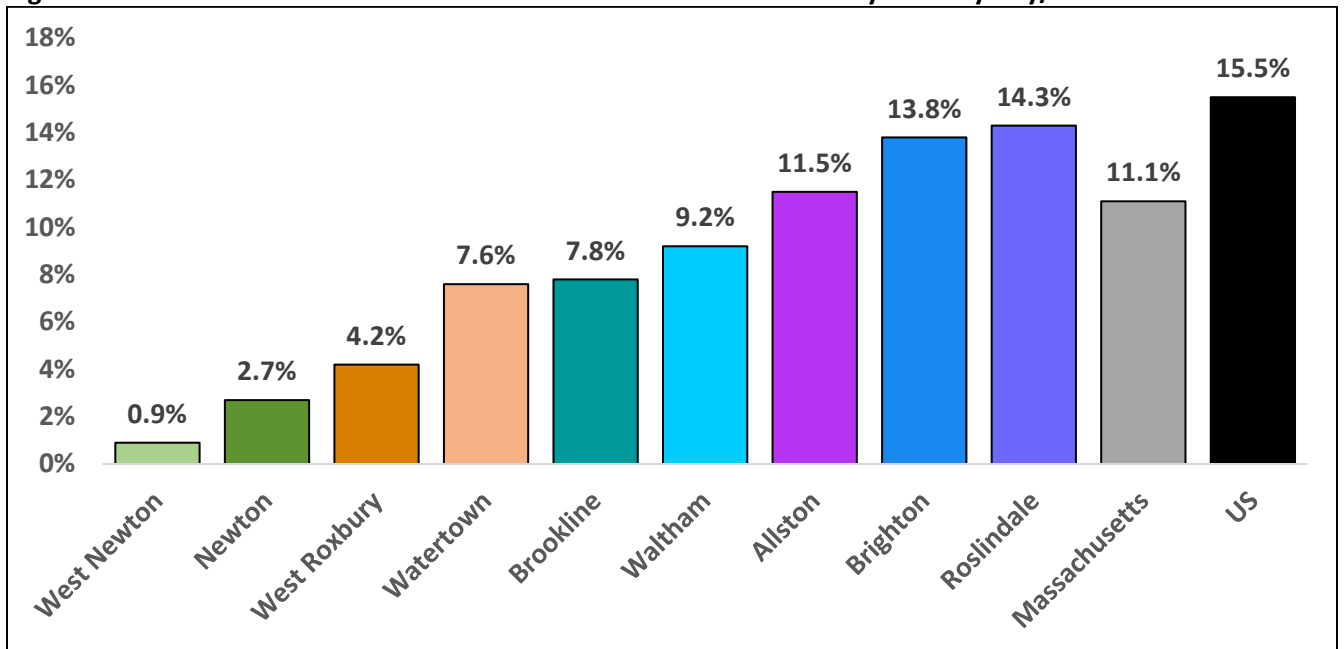
Figure 26: Total Individuals Below Poverty Level -2019



Source: US Census - 2019: ACS 5-Year Estimates

Roslindale (14.3%), Brighton (13.8%), and Allston (11.5%) all had higher poverty rates among families with children than the state level (11.1%). West Newton (0.9%) and Newton (2.7%) had considerably lower levels than the state or nation (Figure 27).

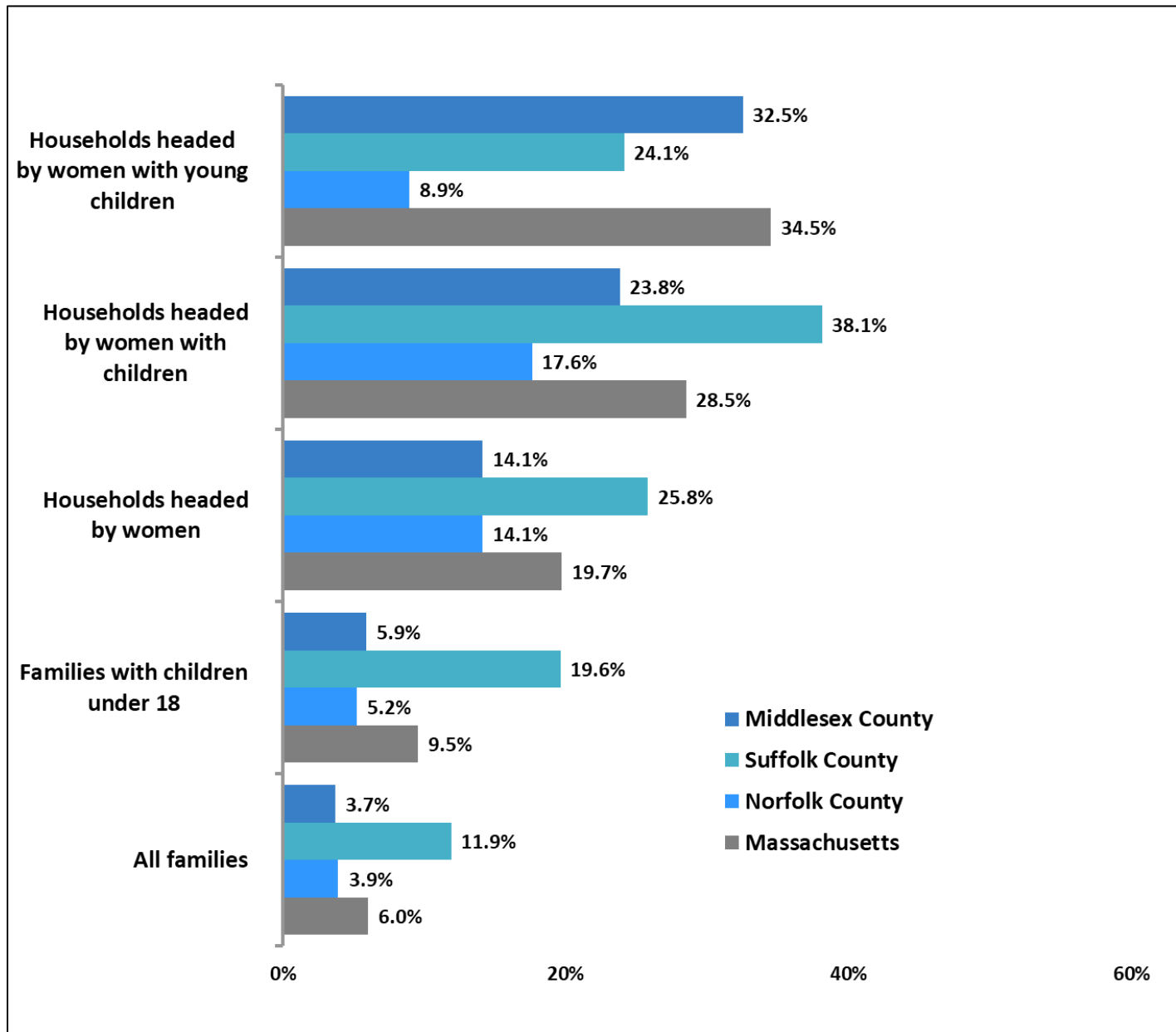
Figure 27: Families with Related Children Under 18 Years Below Poverty Level by City/Town



Source: US Census - 2019: ACS 5-Year Estimates

Compared to Massachusetts, Suffolk County has a larger proportion of all types of households below the poverty level besides those headed by women with young children (Figure 28). Norfolk county was well below the poverty line for all household types. Middlesex County had a particularly high rate of households with young children below the poverty level, compared to other counties in the service area.

Figure 28: Households Below the Poverty Line (percentage) - 2019



Source: US Census Bureau, 2019 American Community Survey 1-Year Estimates

Food Insecurity

Access to healthy food is a major area of concern for those dealing with low household incomes or below the poverty level. While Bristol County ranks well in measures of healthy food access, 14% of Suffolk County residents lack adequate food access (RWJF, 2020). Additionally, Suffolk County scored an 8.1 out of 10 (higher value is better) on the food environment index, the Massachusetts value for this index was 9.3 (RWJF, 2020).

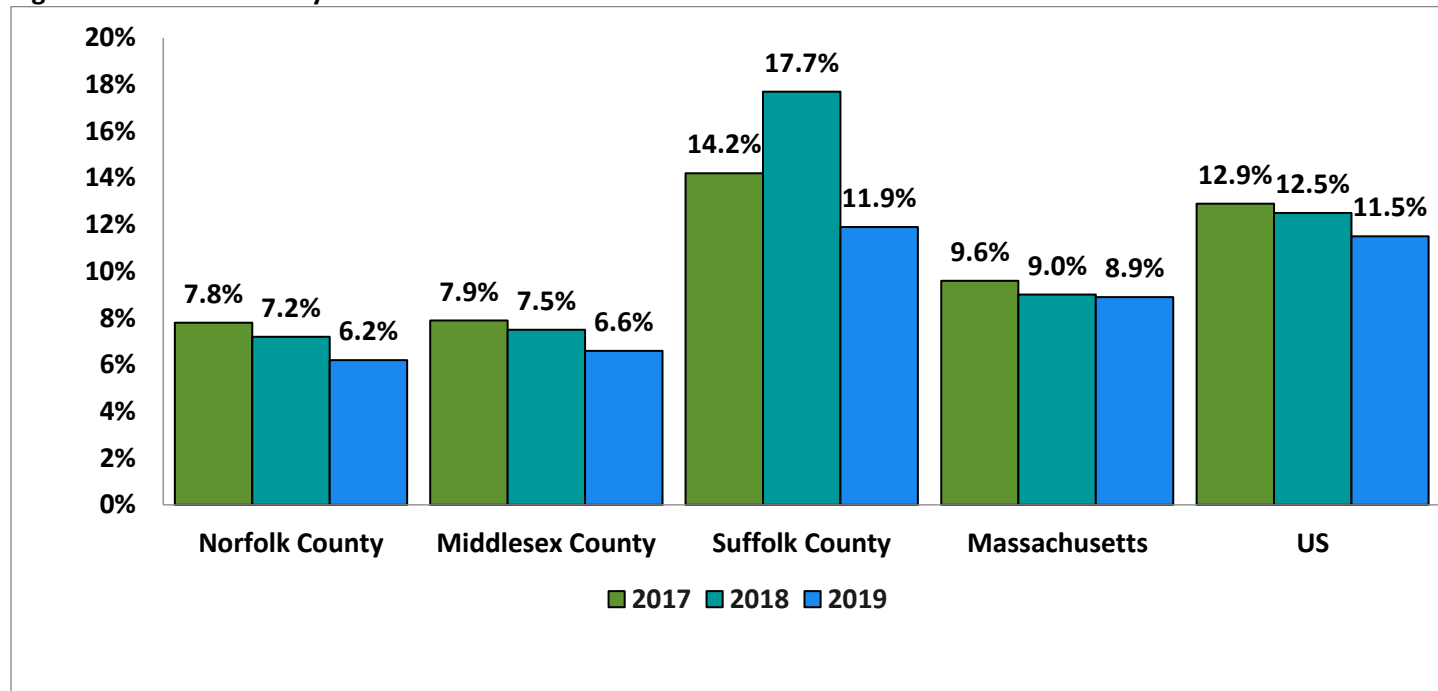
Interviews and Focus groups

Focus group members mentioned limited access to healthy foods and a lack of nutrition education as large needs in their communities. Many advocated for increased coordination between food distribution services and food security initiatives in partnership with SEMC. Key informants also noted having access to healthy food as a major need in the community. Many mentioned the difficulties working parents may face in finding nutritious, convenient food options.

Prevalence

While Norfolk and Middlesex counties show low levels of food insecurity that have consistently declined from 2017 to 2019, Suffolk County displays rates well above the state and national level for each year (Figure 29). Suffolk County also shows a dramatic increase in food security in 2018, compared to 2017. However, rates have declined from 2018 to 2019.

Figure 29: Food insecurity rates



Source: FeedingAmerica.org

Housing & Homelessness

Massachusetts is currently dealing with two independent sets of housing crises, the first is due in large part to a low rate of housing production which has not kept pace with population growth and needs, leading to rising prices that have outpaced wages. As a result, there is a shortage of suitable and affordable accommodations for most young workers, growing families,

and the increasing senior population. Metropolitan Boston has become one of the most expensive places in the country to buy a home, now ranking the fourth most expensive of the 25 largest metropolitan areas in the U.S. Cost burdens for renters have increased throughout Greater Boston since 2000.

Homelessness is a growing issue in Massachusetts. From 2017 to 2018 the rate of homelessness increased by 14.2% (MA DUA, 2021). It is estimated that during this time, more than 3,400 families were homeless; additionally, in Boston public schools alone more than 3,500 students were reported as homeless (MA DUA, 2021). Homelessness is yet another issue that affects certain races more dramatically than others. For example, Massachusetts has the highest rate of Hispanic/Latinx homelessness at 107 homeless residents per 10,000 population (MA DUA, 2021). An area where the state performs well is in housing the homeless, Massachusetts currently houses 95% of its homeless population which is among the highest rates of any state (MA DUA, 2021). Over the past decade, the number of homeless families in Greater Boston increased by 27% and the number of homeless individuals by 45%, with a spike in 2018 driven by an influx of displaced residents of Puerto Rico (UMass Dartmouth, 2019).

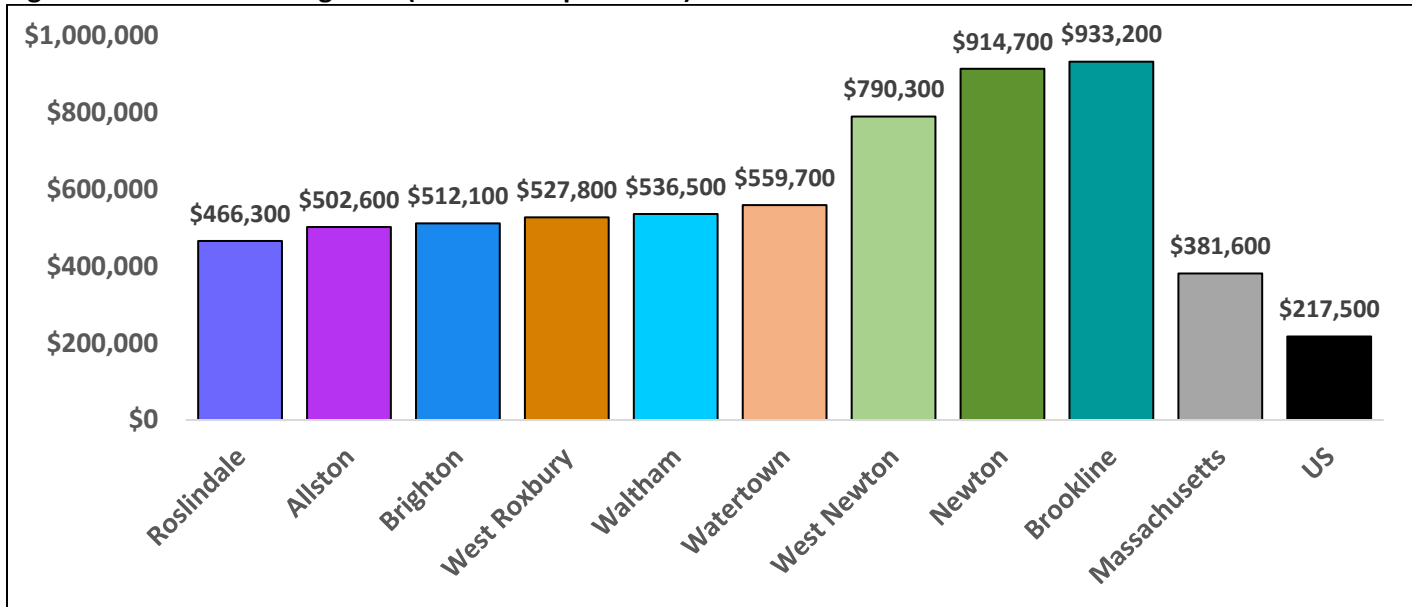
Interviews and Focus Groups

Focus group participants emphasized housing as a primary concern in their communities, noting that it is difficult of finding safe and affordable housing. Key informants also brought up the lack of stable housing in the area, particularly as it relates to landlords who do not maintain healthy standards of housing. Housing disparities have become exacerbated due to unemployment and COVID. One participant suggested improved connections between the healthcare systems and housing services, helping residents to find housing, secure rental assistance, and develop new housing initiatives.

Prevalence

Housing prices in the SEMC service area were well above the state (\$381,600) and national (\$217,500) levels. Brookline (\$933,200) and Newton (\$914,700) had especially high median housing prices (Figure 30).

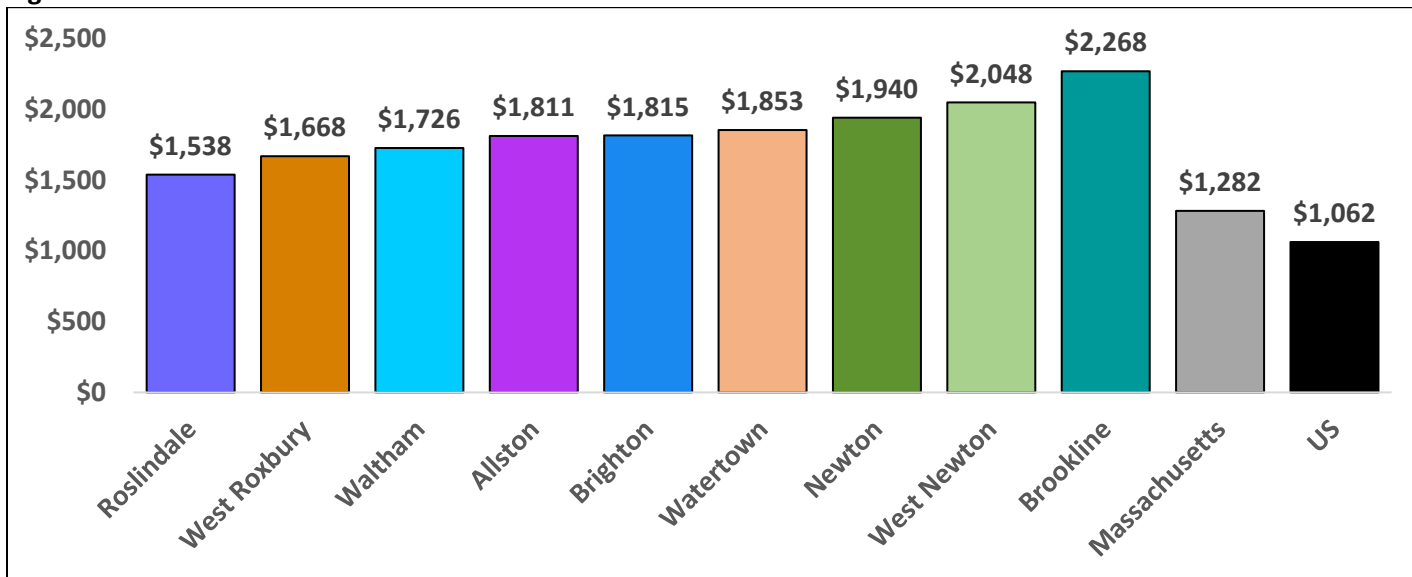
Figure 30: Median Housing Price (Owner-occupied units)-2019



Source: US Census - 2019: ACS 5-Year Estimates

Median gross rent in SEMC's service area also outpaces the state (\$1,282) and national (\$1,062) levels (Figure 31). Roslindale (\$1,538) has the lowest gross rent in the area, while Brookline (\$2,268) has the highest rent in the area.

Figure 31: Median Gross Rent-2019



Source: US Census - 2019: ACS 5-Year Estimates

Transportation

Transportation barriers are barriers to healthcare access. Transportation barriers lead to rescheduled or missed appointments, delayed care, and missed or delayed medication use.

These consequences may lead to poorer management of chronic illness and thus poorer health outcomes. Chronic disease care requires clinician visits, medication access, and changes to treatment plans to provide evidence-based care. However, without transportation, delays in clinical interventions result. Such delays in care may lead to a lack of appropriate medical treatment, chronic disease exacerbations or unmet health care needs, which can accumulate and worsen health outcomes. A review of studies conducted in 2013 found that evidence supports that transportation barriers are an important barrier to healthcare access, particularly for those with lower incomes or the under/uninsured (Syed, Gerber, & Sharp, 2013).

Interviews and Focus Groups

Focus group participants listed transportation as one of the biggest challenges to healthy living. Many expressed the concern that residents with physical or mental impairments had difficulty or were unable to use public transportation. Low-income residents also expressed concern about the accessibility of public transportation. Because of their reduced ability to access public transport, these populations often struggle to receive preventative care or community resources. Additionally, focus group members mentioned that transportation is also needed to help community members access COVID vaccinations and healthy foods.

Access to Care

In 2016, 45% of uninsured adults did not have access to adequate healthcare due to the cost. While the Affordable Care Act (ACA) has provided millions of Americans with affordable health care services, there are still 27.6 million more without coverage nationwide. This issue is not nearly as widespread in Massachusetts which has one of the highest health insurance coverage rates in the nation at about 97%. Although Massachusetts is a leader in healthcare services and access to care, there are still barriers of cost, transportation, childcare, language interpreters, etc. that may impact individuals' ability to access healthcare. Additionally, healthcare professionals are not equally distributed throughout the state for example, in Massachusetts, there are 970 residents for every one primary care physician (there is only one primary care physician per 1,880 residents in Bristol County, by far the worst ratio in the state) (RWJF, 2021).

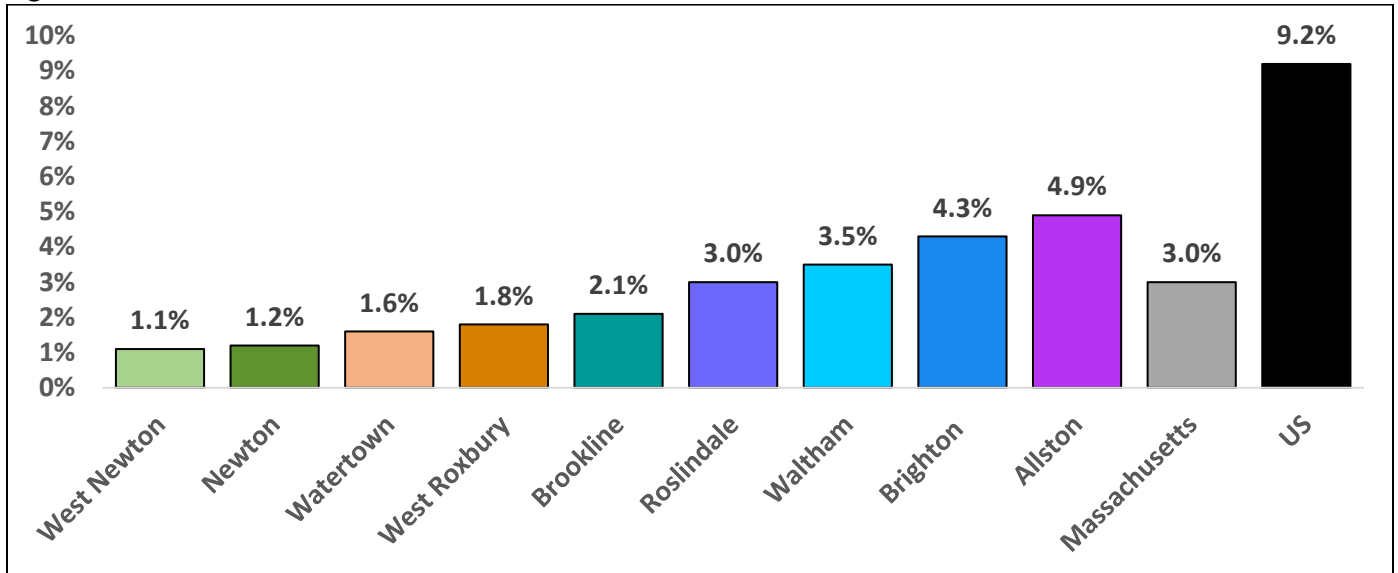
Interviews and Focus Groups

Many focus group participants brought up access to care as a major concern. Some mentioned that immigrants and migrant communities had limited access to care and needed resources to improve cultural competence. Focus group members also brought up that accessing healthcare is too expensive, as it may require time away from work and often costs money both to access transportation and treatment. Many also discussed the limited access to the COVID-19 vaccine, either due to availability, transportation, or hesitancy issues.

Prevalence

All towns and cities in SEMC’s service area have lower rates of uninsured residents when compared to the national level (9.2%) (Figure 32). Roslindale (3.0%), Waltham (3.5%), Brighton (4.3%), and Allston (4.9%) have equal or higher rates of uninsured residents when compared to the state level (3.0%).

Figure 32: Uninsured Residents – 2019



Source: US Census - 2019: ACS 5-Year Estimates

Culturally Competent Care

Cultural competence is defined as the ability of providers and organizations to effectively deliver health care services that meet the social, cultural, and linguistic needs of patients. A culturally competent health care system can help improve health outcomes and quality of care and can contribute to the elimination of racial and ethnic health disparities. Of the more than 37 million adults in the U.S. who speak a language other than English, some 18 million people (48%) report that they speak English less than “very well.” Language and communication barriers can affect the amount and quality of health care received. For example, Spanish-speaking Latinos are less likely than Whites to visit a physician or mental health provider or receive preventive care (Georgetown University Health Policy Institute, 2021). If the providers, organizations, and systems are not working together to provide culturally competent care, patients are at higher risk of having negative health consequences, receiving poor quality care, or being dissatisfied with their care. African Americans and other ethnic minorities report less partnership with physicians, less participation in medical decisions, and lower levels of satisfaction with care. The quality of patient-physician interactions is lower among non-White patients, particularly Latino/as and Asian Americans. Lower quality patient-physician interactions are associated with lower overall satisfaction with health care

Interviews and Focus Groups

Many focus group participants suggested having a referral network that reaches hard-to-reach populations, especially immigrants of Asian, Brazilian, and Hispanic descent. Participants described these individuals as facing several challenges in seeking care, including difficulty trusting, fear of deportation, and difficulty in communicating needs. Some participants suggested that resources need to be interconnected, that more work needs to be done to establish a community wide referral network to connect people to local resources that exist outside of the hospital system. They also noted the need for culturally competent care, primarily in the form of providers of color and/or providers who spoke languages other than English. Finally, many key informants and focus group participants spoke of racism within their community, which may aggregate and amplify existing challenges, causing additional stress and trauma for minority populations.

Recommendations

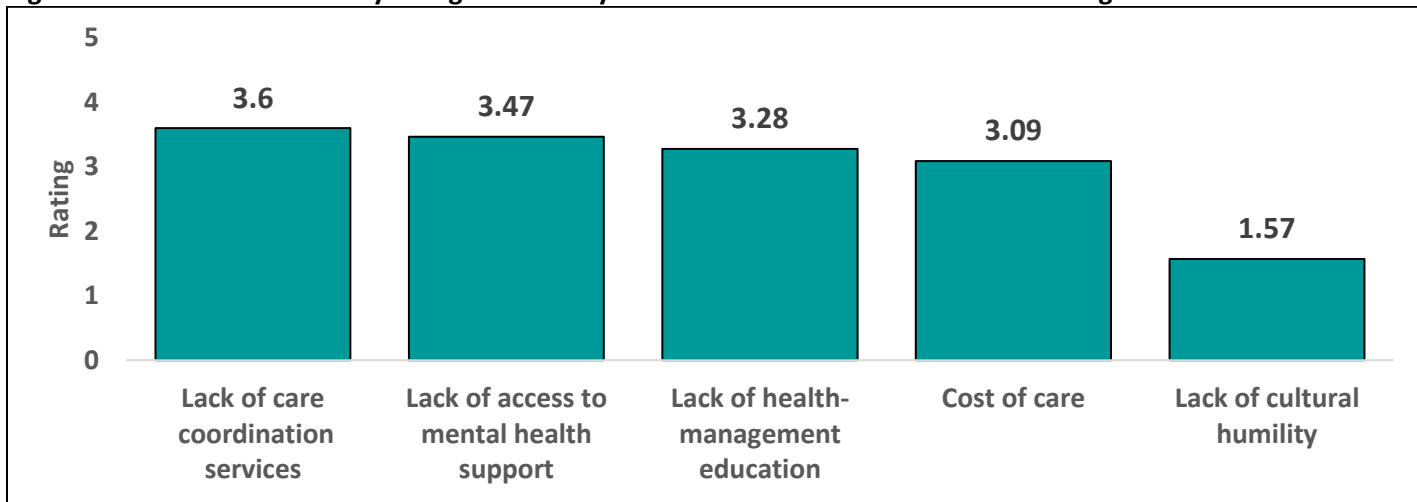


Many of the risk factors that lead to poor health in the communities are modifiable, as such many cases of chronic illnesses are considered preventable. Prevention requires a comprehensive approach that not only treats the symptoms but also addresses the underlying lifestyle behaviors behind many chronic conditions. These approaches must also address access to healthcare at different levels of the socio-economic model to best generate the largest impact. Various studies have shown that, although the three leading risk factors are modifiable, the conditions in which people live, learn, work, and play do not offer equal access or opportunity to make this possible. For example, a history of policies rooted in structural racism has resulted in environments in which there are inequities in access to healthy foods, safe spaces for physical activity, walkable communities, quality education, housing, employment, and health care services. The health implications of this are evident is the fact that Black and Hispanic residents of Massachusetts are consistently and disproportionately impacted by the high prevalence of all chronic diseases, as well as the related deaths and high acute care service utilization. Healthy people cannot exist in unhealthy environments (MDPH, 2017).

Health Professionals Perspective

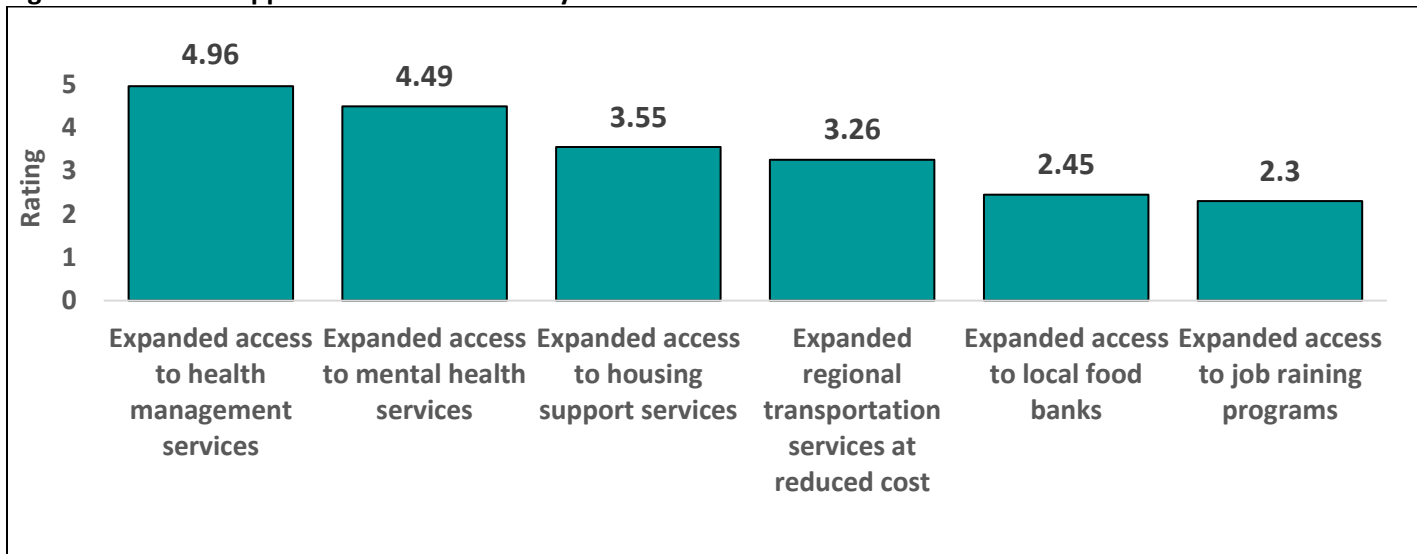
Health professionals in SEMC's service area rated lack of care coordination services as the largest obstacle to healthy living among their constituents, followed by lack of access to mental health support, and lack of health management education (Figure 33).

Figure 33: Obstacles to Healthy Living Believed by Health Professionals to be Most Pressing



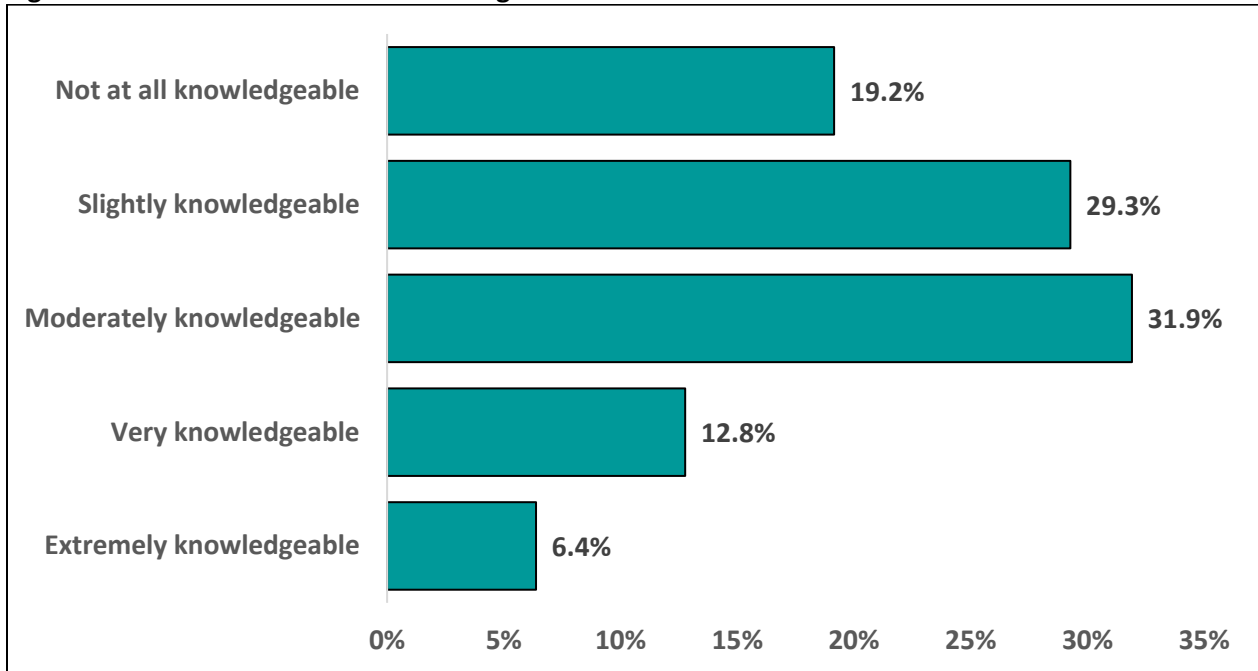
Similarly, when asked what they believed would most benefit consumers, the largest areas of need according to health professionals within SEMC’s service area were expanded access to health management services and expanded access to mental health services (Figure 34). As such, many health professionals see a need in the community for SEMC to be involved in expanding services in these areas.

Figure 34: Health Support Services Believed by Health Professionals to Most Benefit Consumers



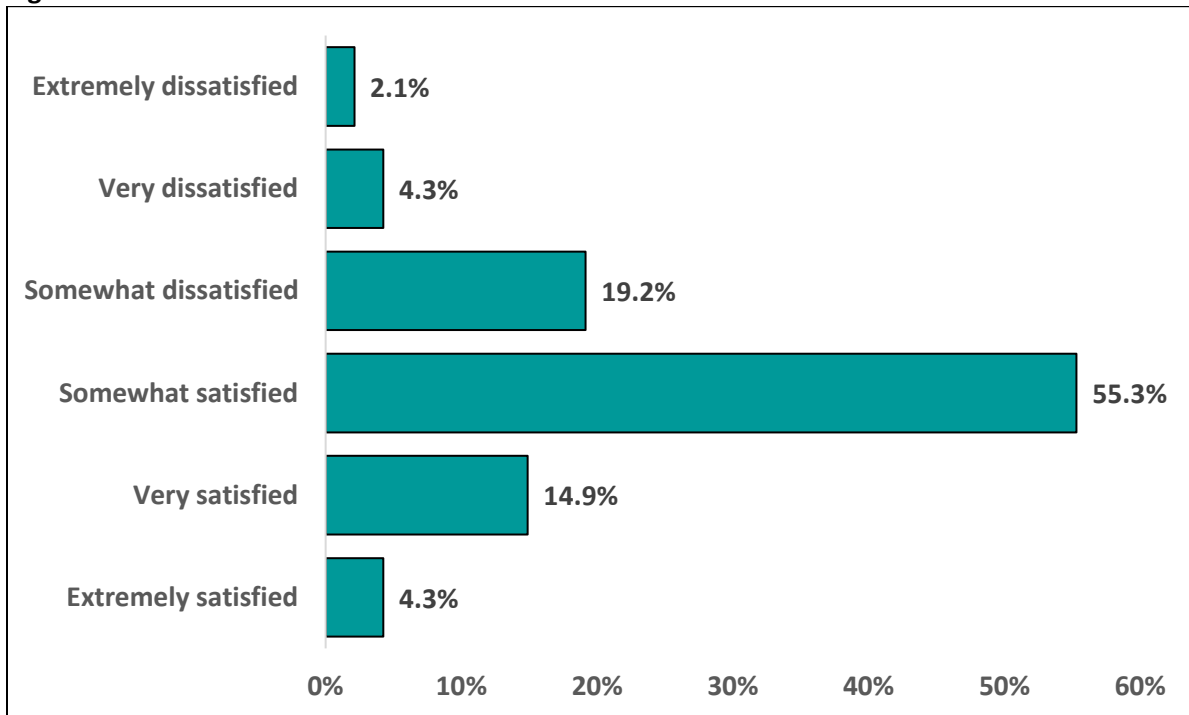
Nearly half of health professionals (48.5%) they were either not knowledgeable or had slight knowledge of the community health programs offered by SEMC (Figure 35). Nearly a third (31.9%) indicated moderate knowledge (31.9%) of the community health programs offered by SEMC, while nearly 1 in 5 (19.2%) feeling as if they were very or extremely knowledgeable.

Figure 35: Health Professionals Knowledge of SEMC Health Services



Just over 1 in 4 (25.6%) of health professionals indicated they were less than somewhat satisfied with SEMC's services (Figure 36). Over half (55.3%) were somewhat satisfied and nearly 1 in 5 (19.2%) were very or extremely satisfied.

Figure 36: Health Professionals Satisfaction with SEMC Services



Chronic Conditions

Prevention of chronic conditions requires a comprehensive approach that not only treats the symptoms but also addresses the underlying lifestyle behaviors behind them. These approaches must also address access to healthcare at different levels of the socio-economic model to best generate the largest impact. The CDC has estimated that up to 80% of heart disease, stroke, and type 2 diabetes; as well as 40% of cancer is likely preventable (Fight Chronic Disease, 2006). Additionally, the CDC and other sources have found evidence showing that efforts at all levels from policymaking to individual interventions can have a positive impact on preventing chronic illness in communities-(NCCDPHP, 2021).

Community wide recommendations

- Provide programs that encourage residents to be proactive in avoiding chronic conditions.

Health system recommendations

- Provide more diagnostic services for early detection of chronic conditions.
- Offer clinics within service area communities to address chronic needs, such as diabetes.
- Offer more patient education programs on disease management.

Mental Health

Mental health was a major concern among community members and intersects with many areas of public health, such as addiction, cancer, cardiovascular disease, and HIV/AIDS. Integrated treatment is critical for treating people with co-occurring disorders and can lead to better health outcomes at reduced cost. Increasing awareness and building capacity in service systems are important in helping identify and treat co-occurring disorders. SEMC should adopt patient-centered services, integrating patient's goals and desired treatment strategies (MDPH, 2017). Residents noted that mental health needs, especially those of youth, have been exacerbated by COVID.

Community wide recommendations

- Provide programs that help bring residents together and establish a sense of community within neighborhoods.
- Strengthen outreach to immigrant and minority populations.
- Focus on bringing mental health support services to hard-to-reach youth, such as those in public housing.
- Create an online portal or anonymous forum to allow teenagers space to discuss mental health issues.
- Target teenagers and those at school with messaging about resources available to help with mental health.

Health system recommendations

- Support existing community work and strengthen strategic partnerships with community organizations, rather than creating new programs.
- Increase the diversity of available mental health providers, including providers who are more racially and culturally diverse.
- Train providers to be culturally competent and prioritize hiring diverse providers that can relate to the struggles and lived experiences in the community.
- Connect resources across community lines to improve the referral system and make resources easier to access.

Substance Use Disorder

People with mental health disorders are more likely to experience a substance use disorder, as the two are cooccurring disorders. Often, people receive treatment for one disorder while the other disorder remains untreated. Undiagnosed, untreated, or undertreated co-occurring disorders can lead to a higher likelihood of experiencing negative outcomes, such as homelessness, incarceration, medical illnesses, suicide, or even early death (SAMHSA, 2020). SEMC hopes to work with these populations to ensure that substance use disorders are detected and recognized.

Community wide recommendations

- Help establish community partnership between social workers, nurses, counselors, and other mental health workers to have a better understanding of substance use and behavioral health issues in the community.
- Consider those with a substance use disorder as an at-risk population group that should be considered when providing community outreach.
- Provide resources and seminars to the community on how to cope with stressors and isolation brought on by the pandemic.

Health system recommendations

- Ensure that providers do not impose their own views on those with substance use disorders but are a nonjudgmental source of care.

Obesity

Obesity is a largely preventable chronic illness defined as having a body mass index over 30. Obesity is considered a key risk factor for cardiovascular disease, diabetes mellitus, and certain cancers. The main risk factors for obesity are physical inactivity and poor diet. Independent of all other demographic factors, lower socio-economic status is strongly correlated with higher rates of obesity (UHF, 2019). This is often believed to be due to unfavorable environmental conditions (both physical and societal) such as the presence of food deserts and a lack of opportunity to engage in physical activity.

Community wide recommendations

- Improve access to fresh and healthy foods. This is especially important for busy parents who may not have the time or resources to make healthy choices.
- Increase opportunities for healthy living in the community, such as walking paths.
- Increase access to and awareness of parks and green spaces available.
- Coordinate physical fitness events that help residents engage in exercise and movement.

Health system recommendations

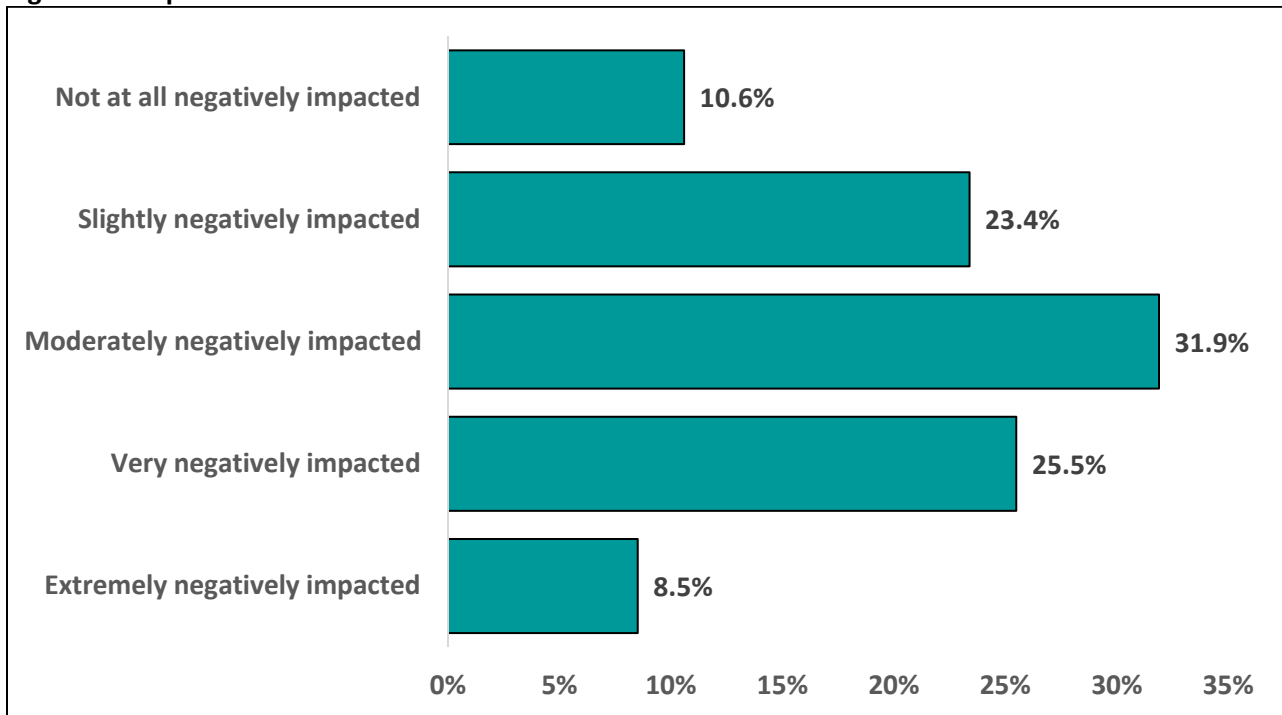
- Collaborate with food security initiatives to help residents access healthy foods.

COVID-19

COVID-19 was responsible for more than 300,000 deaths in the US and more than 10,000 deaths in Massachusetts in 2020 (National Center for Health Statistics, 2021). Certain racial and age groups were more susceptible to both having COVID-19 and dying from the disease. Despite accounting for 14.4% of cases, adults over the age of 65 accounted for 81% of all deaths (National Center for Health Statistics, 2021). While these trends were not as drastic when examined by race, it is still important to note that when including all age groups Asian, Black and White individuals had higher rates of death compared to rates of cases (National Center for Health Statistics, 2021). However, when looking at individuals under the age of 65 the rates of death for Black and Hispanic/Latino individuals far exceed the rate of cases (National Center for Health Statistics, 2021).

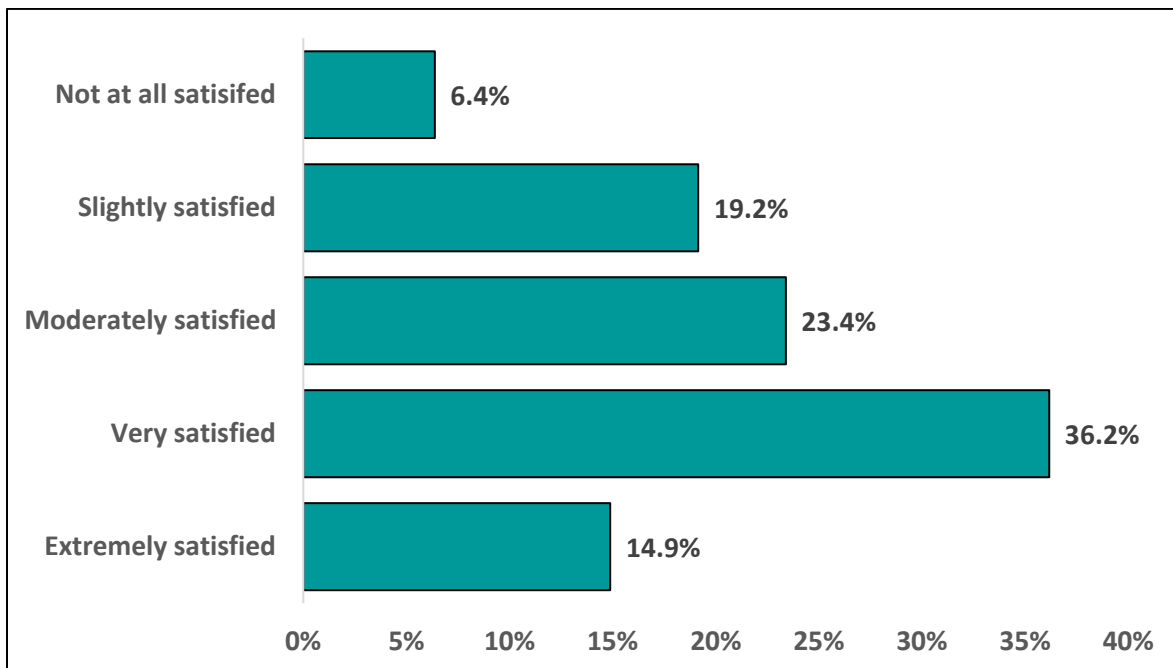
Of health professionals surveyed, 34% indicated their mental health was very or extremely negatively impacted by COVID-19, 31.9% indicated their mental health was moderately negatively impacted, and 34% indicate either no negative impacts or only a slight negative impact (Figure 37).

Figure 37: Impact of COVID-19 on Mental Health of Health Professionals



With regards to SEMC’s response to COVID-19, just over half (51.1%) of health professionals surveyed were very or extremely satisfied with SEMC’s engagement with the community to provide COVID education (Figure 38). Nearly a quarter (23.4%) were moderately satisfied, and the remainder were either slightly satisfied (19.6%) or not at all satisfied (6.4%).

Figure 38: Health Professionals Satisfaction with SEMC COVID-19 Education



Community wide recommendations

- Distribute the vaccines to vulnerable areas.
- Aid those who have encountered financial difficulties as a result of the pandemic.
- Provide online social gatherings for individuals, especially young adults, who feel isolated.
- Offer transportation services for those unable to use public transport due to health concerns.

Health system recommendations

- Offer mobile clinics in the community that offer COVID-19 testing and vaccines.
- Partner with community organizations to increase access to mental health services.
- Provide assistance to elderly residents who may struggle with telehealth.

Access and Involvement

Several social obstacles stand in the way of community members achieving better health outcomes. Within focus groups, the most frequently discussed need was centralized and coordinated services. For example, participants discussed the need to have a hub where residents could look for health resources and emphasized the role SEMC could play in bringing together, rather than reinventing, these resources. Many proposed SEMC as a central hub for connecting community resources. Additionally, those in at-risk groups, such as immigrants, minority populations, those with substance use disorders, and homeless individuals encounter several barriers to care. For many of these populations, culture, language, and transportation make it difficult to receive care in a timely manner. For example, participants discussed how many undocumented immigrants may be afraid to seek medical care, including receiving the COVID vaccine. SEMC should leverage relationships and resources to identify the needs of underserved populations. Whenever possible, informational and/or educational materials should be translated.

Community wide recommendations

- Publicize community programs and resources; these programs can be offered in additional languages to Spanish and Russian.
- Improve transportation services, especially for elderly, disabled, and low-income residents.
- Provide a centralized location where resident can learn about health resources and get connected with community programs.

Health system recommendations

- Create an intermediary to improve communication between the hospital and community, allowing residents to have their concerns and problems raised.

- Engage with underserved residents, such as low-income individuals, immigrants, and minorities to identify needs and priorities for improved health outreach.
- Provide aid to residents seeking to apply for public health insurance.
- Provide assistance to residents seeking a primary care provider.

Other Suggestions

Community wide recommendations

- Provide unaccompanied immigrant minors with resources.
- Develop financial literacy programs to help residents improve their understanding of budgeting and personal financing.
- Provide more opportunities for affordable housing, helping connect residents with information needed to apply for section 8 vouchers.
- Refurbish old buildings and housing to provide shelter for homeless individuals.

Health system recommendations

- Provide more education for youth around safe sex, STDs, and contraceptives.
- Create an on-site social worker at SEMC to help connect the unhoused population to homelessness services.

Limitations



Data collected for analysis was derived from publicly accessible, governmental sources. Some data sources lacked information on certain towns. Data presented in this report is the most recently available at the time of the creation of this report. As such, some of the relative changes, though classified as increases or decreases, are qualitative valuations relative to state values. Though it would have been preferable to have more recent data with statistical evaluation for significance (p value) and correlation (r value), we were limited to currently available datasets. In previous versions of this CHNA, data had been collected through use of the Massachusetts Community Health Information Profile (MassCHIP). However, at the time of data collection, this resource was unavailable to researchers. Researchers instead relied on datasets provided by the Accreditation Coordinator/Director MassCHIP, Office of the Commissioner, Massachusetts Department of Public Health and guidance provided by the same in order to collect data used to compile this CHNA.

Although the community focus group provide valuable information, serving as important tools for data collection and community engagement, there are some limitations to consider. Focus group data is qualitative in nature and reflect only the views and opinions of a small sample. Focus groups are limited to the views and opinions of the participants and are not all-inclusive of the various perspectives of the larger populations: they do not constitute complete data for the communities in which focus groups were held. Furthermore, all five focus groups were

conducted within the same Boston neighborhood. It would have been advantageous to have conducted focus groups in different communities to engage a larger segment of the population within the hospital service area, as this may have garnered more diversified data unique to other communities.

Though the intent of this project was to capture the views and opinions of a broad range of health and human service providers within the SEMC service area, there were also limitations to the survey distribution methodology for the survey. The survey was distributed via email some providers may have been excluded due to a lack of access to computer-based technology. It is reasonable to assume that some providers had a longer period of time to access and respond to the survey as the survey distribution was ultimately at the control and discretion of the SEMC staff. Furthermore, the survey was distributed to service providers within the SEMC email database. In total, 85 health service providers responded to the Health Provider Survey, this number is likely not to provide a representative sample of service providers in the service area.

References



AHA. (2021). American Heart Association "Heart disease #1 cause of death rank likely to be impacted by COVID-19 for years to come," American Heart Association Report – Annual Statistical Update, 27 01 2021.

- ACS. (2019). American Cancer Society, "Cancer Facts & Figures 2020," 2019. [Online]. Available: <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2020/cancer-facts-and-figures-2020.pdf>. [Accessed 20 02 2021].
- ACS. (2020). American Cancer Society, "Massachusetts at a Glance," 2020. [Online]. Available: <https://cancerstatisticscenter.cancer.org/#!/state/Massachusetts>. [Accessed 20 02 2021].
- CDC, "About Heart Disease," 13 01 2021. [Online]. Available: <https://www.cdc.gov/heartdisease/about.htm>. [Accessed 19 02 2021]
- CDC, "Drug Overdose Deaths," 19 03 2020. [Online]. Available: <https://www.cdc.gov/drugoverdose/data/statedeaths.html>. [Accessed 19 02 2021]
- CDC National Center for Health Statistics, "Stats of the States - Massachusetts," 21 04 2020. [Online]. Available: <https://www.cdc.gov/nchs/pressroom/states/massachusetts/ma.htm>. [Accessed 19 02 2021].
- CDC, "Overweight & Obesity Data & Statistics," 2019. [Online]. Available: <https://www.cdc.gov/obesity/data/index.html>. [Accessed 20 02 2021].
- CDC Wonder, "Underlying Cause of Death, 1999-2019 Results," 12 01 2021. [Online]. Available: <https://wonder.cdc.gov/controller/datarequest/D76;jsessionid=7AEA14777275593C21414779E53D>. [Accessed 19 02 2021].
- Data USA. (2019). Suffolk County, MA. (2019). Retrieved March 17, 2021, from <https://datausa.io/profile/geo/suffolk-county-ma#about>
- Data USA. (2019). Data Middlesex County, MA. Data USA. Retrieved 02 24, 2021, from <https://datausa.io/profile/geo/middlesex-county-ma>
- Data USA. (2019). Data Norfolk County, MA. (2019). Retrieved March 18, 2021, from <https://datausa.io/profile/geo/norfolk-county-ma>
- Fight Chronic Disease, "The Growing Crisis of Chronic Disease in the United States," 1 1 2006. [Online]. Available:
- Georgetown University Health Policy Institute. (2021). <https://hpi.georgetown.edu/cultural/>. Accessed on 3/4/2021
- HRSA. (2021). What is Shortage Designation. <https://bhw.hrsa.gov/workforce-shortage-areas/shortage-designation>. Accessed on 3/4/2021
- K. D. Kochanek, J. Xu and E. Arias, "Mortality in the United States, 2019," NCHS Data Brief, vol. 395, pp. 1-8.
- MA DUA. (2021). MA Department of Unemployment Assistance, "Labor Force and Unemployment Data," [Online]. Available: <https://lmi.dua.eol.mass.gov/LMI/LaborForceAndUnemployment/LURResults?A=01&GA=000025&TF=2&Y=&Sopt=Y&Dopt=TEXT>.

- Massachusetts DPH, "Number of Opioid-Related Overdose Deaths, All Intent by City/Town 2015-2019," 11 2020. [Online]. Available: <https://archives.lib.state.ma.us/bitstream/handle/2452/837607/ocn989738372-2020-11.pdf?sequence=1&isAllowed=y>. [Accessed 02 2021].
- Massachusetts DPH, "MA Opioid-Related EMS Incidents 2013-2019," 06 2020. [Online]. Available: <https://www.mass.gov/doc/emergency-medical-services-data-june-2020/download>. [Accessed 02 2021].
- MDPH. (2017). "2017 State Health Assessment," Available: <https://www.mass.gov/service-details/2017-state-health-assessment>. [Accessed 03 11 2017].
- NCCDPHP, "Health and Economic Costs of Chronic Diseases," 12 01 2021. [Online]. Available: <https://www.cdc.gov/chronicdisease/about/costs/index.htm>. [Accessed 19 02 2021].
- NCHS. (2020). "Early Release of Selected Mental Health Estimates Based on Data from the January–June 2019 National Health Interview Survey," National Health Interview Survey Early Release Program.
- RWJF. (2020). Robert Wood Johnson Foundation, County Health Rankings and Road Maps - Massachusetts.<https://www.countyhealthrankings.org/app/massachusetts/2020/overview>. Accessed on 3 3 2021
- SAMHSA. (2019). "Key Substance Use and Mental Health Indicators in the United States: Results from the 2018 National Survey on Drug Use and Health," NSDUH, 08 2019
- Syed, S. T., Gerber, B. S., & Sharp, L. K. (2013). Traveling towards disease: transportation barriers to healthcare access. *Journal of community health*, 38(5), 976–993. <https://doi.org/10.1007/s10900-013-9681-1>
- Talk Poverty. (2020). "Massachusetts 2020 Report," 2020. [Online]. Available: <https://talkpoverty.org/state-year-report/massachusetts-2020-report/>.
- UMass Dartmouth. (2019). UMass Dartmouth Policy Center. Community Health Needs Assessment, 2019. https://www.southcoast.org/wp-content/uploads/2019/10/Southcoast-Health-CHNA-2019-Final_PPC.pdf. Accessed on 3/4/2021
- UHF. (2019). United Health Foundation, "America's Health Rankings, Annual Report," [Online]. Available: <https://www.americashealthrankings.org/explore/annual/state/MA>. [Accessed 20 02 2021]
- US Census. (2019). SELECTED ECONOMIC CHARACTERISTICS. Retrieved March 30, 2021, from <https://data.census.gov/cedsci/table?q=DP03+norfolk&g=05000000US25021&tid=ACSDP1Y2019.DP03&moe=false&hidePreview=true>

US Census. (2019). POVERTY STATUS IN THE PAST 12 MONTHS OF FAMILIES. Retrieved March 30, 2021, from <https://data.census.gov/cedsci/table?q=ACSST1Y2019.S1702&g=0500000US25017%2C25021%2C25025&tid=ACSST1Y2019.S1702&moe=false&hidePreview=true>

Appendix A: Key Informant Interview Questions

1. In your opinion, what are the top three health and wellness issues within the community?
2. What are some strategies that could address these issues and how could the hospital partner in these strategies
3. What kinds of health and community services do you feel are missing and would be beneficial in the community?
4. What segments of the population endure the most health inequities or are more likely to have the worse health outcomes?
5. What do you feel are the biggest obstacles to good health in general? (e.g., housing, transportation, employment/workforce, poverty)
6. What do you believe to be the cause of poor health that you see in your community?
7. The COVID-19 pandemic has had profound impacts on community health. What needs do you see in the community that must be met for successful COVID recovery and resiliency?

Appendix B: Focus Group Questions

1. Is there a sense of community where you live? Why or why not?
2. What do you envision when you think of a healthy community?
3. In your view, are there specific health concerns within your community?
4. What are some strategies that could address concerns, if any?
5. What groups of people would you consider have less access to services and support in your community?
6. What do you believe to be the biggest challenges to healthy living in your community?
7. What services do you see as being most needed in your community?
8. The COVID-19 pandemic has had a huge impact on community health & wellness. What support do you view as necessary for your community to recover from the impact of the pandemic?
9. In what ways is St. Elizabeth's Medical Center serving the community well?
10. In what ways could St. Elizabeth's Medical Center serve the community better?

Appendix C: Health Professionals Survey

Appendix D: Note on Data Accuracy

We reported the data as it appears in the resources provided by St. Elizabeth's Medical Center. This report is accurate insofar as the data provided was accurate. In one case, we noticed a discrepancy in the data, with county poverty rates coming from different census estimates and being incomplete and corrected it using the source from which state data came from (Figure 28).