

# Saint Anne's Hospital

A STEWARD FAMILY HOSPITAL



## Saint Anne's Hospital Community Health Needs Assessment 2018

**Public Policy Center**  
UMass Dartmouth

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The mission of the Public Policy Center (PPC) at UMass Dartmouth is to:

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- Improve public understanding of critical policy issues.
- Provide educational and research opportunities to our faculty and students.
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## Report Authors

David R. Borges, MPA, Director of Research & Administration  
James DeArruda, MPP, Graduate Research Assistant  
Michael McCarthy, MPP, Research Associate



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## **About Saint Anne's Hospital**

Founded by the Dominican Sisters of the Presentation in 1906, Saint Anne's Hospital in Fall River, Massachusetts, is an acute care Catholic hospital with 211 beds and satellites in Attleboro, Swansea, Dartmouth, New Bedford, and Stoughton, Massachusetts.

Steward Health Care, the largest private, for-profit hospital operator in the United States, is a physician-led health care services organization committed to providing the highest quality of care in the communities where patients live. Headquartered in Dallas, Texas, Steward operates 38 community hospitals in the United States and the country of Malta, that regularly receive top awards for quality and safety. The company employs approximately 40,000 health care professionals. The Steward network includes more than 25 urgent care centers, 42 preferred skilled nursing facilities, substantial behavioral health services, over 7,300 beds under management, and approximately 1.5 million full risk covered lives through the company's managed care and health insurance services. The total number of paneled lives within Steward's integrated care network is projected to reach 3 million in 2018.



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## EXECUTIVE SUMMARY

Founded by the Dominican Sisters of the Presentation in 1906, Saint Anne's Hospital in Fall River, Massachusetts, a Steward Family Hospital, is a full-service, acute care Catholic hospital with 211 beds and satellites in Attleboro, Swansea, Dartmouth, New Bedford, and Stoughton, Massachusetts. In addition to Saint Anne's comprehensive diagnostic, medical, surgical, and emergency services, specialty services include its Joint Commission-certified Center for Orthopedic Excellence; Saint Anne's Hospital Regional Cancer Center in Fall River and Dartmouth; the Center for Pain Management in Swansea; and inpatient geriatric psychiatry services at centers in Fall River and Stoughton.

Saint Anne's Hospital's Community Benefits Advisory Committee (CBAC) conducts a Community Health Needs Assessment (CHNA) every three years that identifies the most important health-related issues in the South Coast region. The information that follows documents the major demographic, socioeconomic, and health trends among South Coast residents, with a focus on health access, substance use disorder, wellness and chronic disease, maternal, infant, and child health, environmental health, and health disparities. The analysis is enhanced by qualitative data gathered through focus groups and an online survey of the region's key informants. The goal of the assessment is to inform data-driven objectives and strategies that can be used to improve the overall health of South Coast residents.

### Key Findings

#### Healthy Equity and the Social Determinants of Health

Income, education, race, and other socioeconomic indicators are factors that affect health outcomes and are among the best predictors of health status and health equity. Fall River and New Bedford continue to lag behind the region as a whole in most socioeconomic metrics, with lower levels of educational attainment, higher poverty levels, and higher unemployment rates. However, many of the region's towns also struggle with these issues, particularly in comparison to state averages. Consequently, the region overall has poorer health outcomes in comparison to other, more affluent areas of Massachusetts.

A key theme that arose from the qualitative activities undertaken in this effort is that many South Coast residents face a myriad of challenges that make it difficult to maintain overall health and to adopt healthy habits that help to prevent or manage disease. For many residents, health and wellness fit within a larger framework of day-to-day obligations, ranging from issues such as housing, finances, and childcare, to transportation, employment, immigration, and safety. As one key informant noted about several of her clients, "people are primarily concerned with providing the basics for their families, and their own health needs come second, if at all."

The key findings that follow provide a more detailed look at various health issues in the South Coast, including both hard data and themes drawn from conversations with residents and key informants.

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### Substance Use Disorder

As noted, qualitative activities undertaken for this project clearly confirm that the opioid crisis is the top health issue among key informants, along with comorbid issues such as mental health, housing, education, and poverty. During the five-year span ranging from 2013 to 2017, most South Coast communities experienced an increase in the number of opioid-related overdose deaths; 163 opioid-related deaths were confirmed in the region in 2017 (based on the residence of the decedent), which is more than double the number in 2013. The number of opioid deaths in Fall River and New Bedford in 2017 (n=100) is about proportionate to their share of the region's population; the cities' share of the region's population is 54 percent, while the number of opioid deaths among residences of these cities accounts for 61 percent of the region's total.

Substance abuse is also an issue for teens. Data from the Durfee High School (Fall River) *Brief Community Survey* show that, in 2016, the percentage of students who reported that they consumed alcohol sometime in their lifetime was 45.7 percent. Additionally, 40.7 percent of students reported they tried marijuana, 6.5 percent used pain medications that were not intended for them, and 1.2 percent used heroin. Results are fairly similar between males and females, although a higher percentage of females reports alcohol use.

### Behavioral Health

In many ways, behavioral health is an issue that connects many of the priority health issues presented in this report. This is especially true of individuals with substance use disorder, as evidenced by a growing population of patients with dual diagnosis, that is, individuals who experience a substance use issue along with a mental health issue. This patient population presents a new set of challenges to health care systems, which are often not equipped to effectively care for these patients both in terms of adequate staff training or the health care settings themselves. This patient population is also prone to chronic medical conditions due to, and exacerbated by, the chronic neglect of self-care such as COPD, lung cancer, hepatitis, malnutrition, Type 2 diabetes, obesity, and cancer. Key informants and focus group members confirmed the link between substance abuse and mental health, noting that it is difficult to treat patients effectively if these issues are not addressed simultaneously.

To address this issue, Saint Anne's Hospital opened a new dedicated Emergency Department Behavioral Health Suite in February 2018 with six private rooms, demonstrating increased commitment to the unique needs of patients with behavioral health disorders. This new area has been designed in response to the nationwide growth in the number of behavioral health patients being cared for in Emergency Departments, and the longer stays these patients experience awaiting a bed in an appropriate treatment facility. Its calming, safe, and secure design includes built-in TVs and in-room emergency equipment, such as medical gases and other equipment, secured behind a rolling protective door. The goal remains to transfer the patient to the appropriate care setting for treatment. In 2017, the number of behavioral health evaluations completed by licensed social workers (Behavioral Health Navigators) based in Saint Anne's Hospital Emergency Department increased by 64 percent over the prior year. The numbers in 2018 continue to trend upward.

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### Mental Health

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Mental health issues were cited by key informants as a primary health challenge in the region, particularly since mental health is so closely linked with many of the other health and community issues faced by residents. This is supported by available data, which show that a greater percentage of Fall River (18.2%) and New Bedford (18.3%) residents report having greater than 14 days per year with poor mental and physical health in comparison to the national average (11.6%). (Data for Massachusetts is not available).

Having days of poor mental health can put individuals at a greater risk for developing negative, and possibly suicidal, thoughts. This is true for both adults and youth. The National Institute of Mental Health reports that suicide is the third leading cause of death in 15 to 24 year olds and the strongest risk factors for attempted suicide in youth are depression, substance abuse, and aggressive or disruptive behaviors. In 2016, more than 1 in every 10 Durfee High School students surveyed (11.1%) reported that they seriously considered attempting suicide within the previous 12 months and 3.3 percent actually attempted suicide. The percentage of females (14.8%) that considered attempting suicide is more than double that of males (7.1%).

### Wellness and Chronic Disease

*Health and wellness compete with more immediate day-to-day priorities for many South Coast residents, and consequently, health and wellness indicators for the region are often below state and national averages.*

Although chronic conditions can be genetic, poor nutrition, lack of physical activity, and tobacco use can elevate the risk of contracting diseases such as cancer, diabetes, respiratory disease, and cardiovascular disease. As noted, health and wellness compete with more immediate day-to-day priorities for many South Coast residents. Consequently, health and wellness indicators for the region are often below state and national averages. For example, in most cases, disease prevalence is much higher in the South Coast, in Fall River, and in New Bedford in comparison to state and national averages. This includes higher rates of stroke, diabetes, coronary heart disease, chronic kidney disease, chronic pulmonary disease, cancer, asthma, and arthritis.

These rates are partly affected by unhealthy behaviors. For example, the smoking prevalence in Fall River and New Bedford remains higher than that of the state and country as a whole; 26.9 percent of Fall River residents and 25.9 percent of New Bedford residents report that they smoke, compared to 14.3 percent of Massachusetts residents and 16.8 percent of residents nationwide. In addition, 35.8 percent of Fall River's residents and 36.4 percent of New Bedford's report they have not engaged in any form of physical activity in the past 30 days, which is greater than both the statewide (26.0%) and national (25.2%) percentages.

### Maternal, Infant, and Child Health

Women who have access to adequate resources and information are more likely to have healthy infants and be able to successfully care for their children immediately following birth, as well as later on in their child's life. In addition, the nutrition, health, and well-being of a child are all affected by maternal care at the earliest stages of infancy. Factors such as race, ethnic background, and economic status can determine the resources to which mothers and children have access, which can affect outcomes related to a child's health.

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In both Greater Fall River and Greater New Bedford, levels of neonatal care and neonatal outcomes are generally less favorable to Massachusetts as a whole. For example, while the percentage of mothers receiving prenatal care is higher in both Fall River (84.9%) and New Bedford (87.8%) in comparison to the statewide average (78.1%), the percentage of babies born with a low birthweight (defined as being born before 37 weeks gestation) is slightly higher in both Fall River (8.3%) and New Bedford (8.4%) in comparison to the statewide average (7.8%), with these percentages having increased since 2010. In addition, the prevalence of gestational diabetes in both Fall River (9.2%) and New Bedford (6.4%) is higher in comparison to the statewide average (6.0%) and these percentages have also increased since 2010.

There have been positive developments in the health outcomes of children in the region, but some challenges remain. For instance, the number of reported lead poisoning cases among children 9 to 47 months of age dropped in both Fall River and New Bedford from 2010 to 2017. Conversely, a higher percentage of Fall River (46.7%) and New Bedford (43.1%) public school students are overweight or obese in comparison to the state average (32.2%). Lastly, the teen birth rate declined in both Fall River (44.6 to 29.1) and New Bedford (47.4 to 30.3) from 2010 to 2015, although the 2015 percentage is still higher than the statewide percentage (9.4%).

### Environmental Health

A person's physical environment can profoundly affect health outcomes. Environmental factors that affect health outcomes include, but are not limited to access to healthy food, air quality, water quality, and environmental contamination. In particular, exposure to contaminants through pathways from the air, water, soil, and food can lead to extreme health issues.

Data for the region show that Saint Anne's Hospital's service region includes many low-income areas (as defined by Census Tract) that do not have a supermarket within easy walking distance, which can have a negative effect on one's nutrition. Also, while walking has the potential to confer beneficial effects for health, both Fall River and New Bedford have been identified as only "somewhat walkable" based on each community's walkscore.

Environmental contamination can also lead to poor health outcomes, and the South Coast is home to 4 of the state's 31 Superfund sites and 57 of the state's 1,012 brownfield sites. Twelve of these are located in Fall River and 28 are located in New Bedford. On a per square mile and per 1,000 population basis, these cities have higher ratios of brownfield sites compared to the state.

Key informants also noted that many residents live and work in environments that are unsafe, which can actually contribute to developing poor health outcomes such as cancer and asthma. In some cases, key informants point out that a solution can be fairly simple; for example, asthma can be addressed by installing air conditioners or air filtration systems, and teaching clients the importance of keeping their homes free of dust and mold.

*Key informants noted that many residents live and work in environments that are unsafe, which can profoundly affect health outcomes.*

## 1 OVERVIEW

Saint Anne's Hospital conducts a Community Needs Assessment (CHNA) every three years to identify the most important health-related issues in the South Coast region. The CHNA documents the major demographic, socioeconomic, and health trends among South Coast residents, with a focus on health access, environmental health, substance use disorder, wellness and chronic disease, and health disparities. The analysis is enhanced by qualitative data gathered through focus groups and an online survey of the region's health care providers. The goal of the assessment is to inform data-driven objectives and strategies that can be used to improve the overall health of South Coast residents. The CHNA includes four primary components that will provide a foundation for further analysis and activity that will aid Saint Anne's in its future community health-oriented goals:

1. **Demographic and Economic Profile:** Understanding the community by examining the region's people in terms of population, race, education, income, poverty, wages, and employment.
2. **Health Equity and Social Determinants of Health:** Highlighting disparities among community members in terms of income, education, and race, all of which are factors that affect health outcomes and are among the best predictors of health status.
3. **Health Assessment:** Identifying major health issues and needs by analyzing a variety of health indicators.
4. **Focus Groups and Surveys:** Engaging key service providers and community members to obtain qualitative analysis that yields context and validation to the health data.

### 1.1 METHODS

The CHNA presents data on a variety of health indicators. The analysis, however, goes a step further, where possible, by presenting these data in the context of social determinants of health and by highlighting disparities in terms of income, education, and race, all of which are factors that affect health outcomes. The combination of highlighting disparities and identifying census tracts with vulnerable populations allows Saint Anne's Hospital to direct policies and programs to the areas in which they are most needed. The assessment also provides context and validation to the health data through key informant interviews and focus groups.

#### Study Area Definition

The CHNA includes an analysis of the major demographic, socioeconomic, and health trends in the region. Five geographic areas are included where data are available:

- South Coast Massachusetts
- Cities of Fall River and New Bedford
- Community Health Network Area 25: Partners for a Healthier Community (Fall River, Somerset, Swansea, Westport)

- Community Health Network Area 26: Greater New Bedford Allies for Health & Wellness (Acushnet, Dartmouth, Fairhaven, Freetown, Marion, Mattapoisett, New Bedford, Rochester, Wareham)
- State of Massachusetts

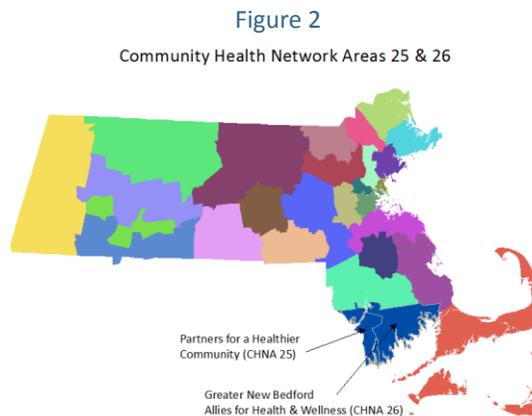
The geographic definition of the South Coast region for this report is defined as Community Health Network Areas 25 and 26 (see Figure 2). A Community Health Network Area is a local coalition of public, non-profit, and private sector groups that work together to build healthier communities in Massachusetts through community-based prevention planning and health promotion. To enhance readability of this report, Community Health Network Area 25 is typically referred to as “Greater Fall River,” while Community Health Network Area 26 is referred to as “Greater New Bedford.”

Partners for a Healthier Community (CHNA 25):

Fall River, Somerset, Swansea, Westport

Greater New Bedford Allies for Health & Wellness (CHNA 26):

Acushnet, Dartmouth, Fairhaven, Freetown, Marion, Mattapoisett, New Bedford, Rochester, Wareham



#### Data Sources

Data for the CHNA are derived from several sources. Where available, confidence intervals are included to address the levels of sampling error.<sup>1</sup> Data sources include:

- Centers for Disease Control and Prevention, 500 Cities Project
- Massachusetts Bureau of Substance Abuse Services
- Massachusetts Center for Health Information and Analysis
- Massachusetts Department of Elementary and Secondary Education
- Massachusetts Department of Public Health, Bureau of Environmental Health

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<sup>1</sup> The Massachusetts Department of Public Health is currently developing a Population Health Information Tool (PHIT), which will be a portal for Massachusetts health data. The tool will provide various health data for each community, but importantly, will also include community-specific health data framed by social determinants of health. The tool is currently in development and was not available at the time of this needs assessment.

- Massachusetts Department of Public Health, Environmental Public Health Tracking
- Massachusetts Executive Office of Energy and Environmental Affairs
- Massachusetts Executive Office of Labor and Workforce Development
- Massachusetts Health Insurance Survey
- Saint Anne’s Hospital
- U.S. Census Bureau and U.S. Census Bureau American Community Survey

**Focus Groups and Survey**

Saint Anne’s Hospital staff, with involvement from the Greater Fall River Partners for a Healthier Community (CHNA25), the United Way of Greater Fall River, and United Interfaith Action (UIA), conducted five focus groups between May 2018 and August 2018 to assess the health needs of Greater Fall River’s residents (see Table 1).<sup>2</sup> Each focus group team included a leader and two recorders and was conducted in the native language of the group (i.e., English, Portuguese, or Spanish). Participants were given the option to complete a survey after the focus group to ascertain more specific information regarding the health needs of residents. A total of 84 surveys were completed.<sup>3</sup>

**Table 1**  
**Focus Groups**

<b>Date</b>	<b>Description</b>
5/3/2018	Group consisted of 35 Fall River residents of the South End Neighborhood Group. The mixed population group was convened by State Representative Alan Silvia.
6/2/2018	Group consisted of approximately 25 Brazilian community members composed of primarily females who were middle-aged and older (conducted in Portuguese).
6/10/2018	Group consisted of local Hispanic community members of mixed-population (conducted in Spanish).
7/12/2018	Group consisted of a mixed-population group of 15 males and 2 females who were in short-term recovery.
8/7/2018	Group consisted of DCF-involved parents who are attending court-ordered parenting classes as a requirement to gain custody of their children.

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<sup>2</sup> Key findings from the focus groups and survey are included throughout this report to support the secondary data. See Appendix A for the focus group script, questions, and a summary of the analysis.

<sup>3</sup> The survey questionnaire is included in Appendix B. Surveys were available in English, Portuguese, and Spanish.

Key Informant Online Survey

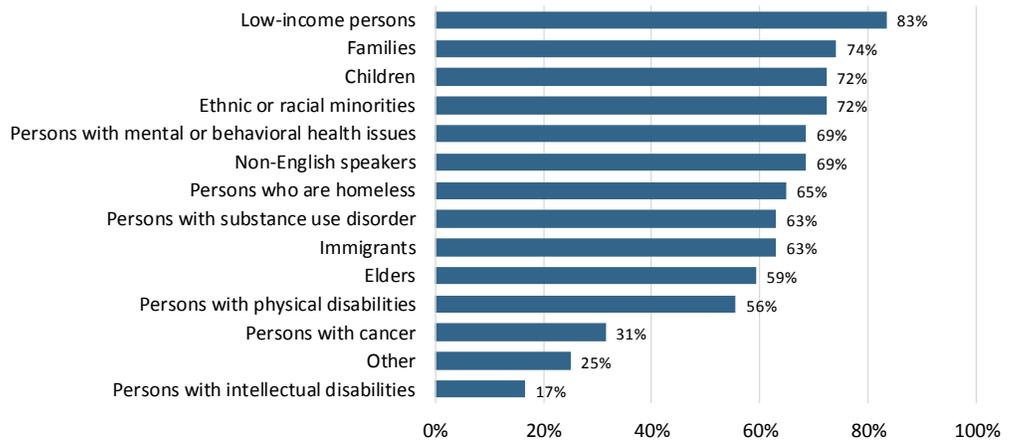
As part of the Community Needs Assessment, Saint Anne’s Hospital conducted an online survey of 54 key informants in order to further identify and understand the region’s primary health issues and challenges.<sup>4</sup> Most survey respondents were either a non-profit organization or social service agency (see Table 2). The types of people these organizations serve are wide-ranging (see Figure 3).<sup>5</sup>

Table 2  
Key Informant Survey Respondent Type

Type of Organization	Percent of Respondents
Non-profit/social service agency	40.7%
Health care provider	37.0%
Government	14.8%
Other	5.6%
Religious organization	1.9%

Source: Saint Anne’s Hospital Community Health Assessment Survey, 2018.

Figure 3  
Communities that Key Informants Serve



Source: Saint Anne’s Hospital Community Health Assessment Survey, 2018.

<sup>4</sup> The survey questionnaire is included in Appendix C.

<sup>5</sup> “Other” includes businesses, children/families impacted by trauma, survivors of sexual assault, and faith based congregations.

## 2 DEMOGRAPHIC AND ECONOMIC PROFILE OF THE REGION

The demographic and economic profile presents a snapshot of the region's people in terms of population, race, education, income, poverty, wages, and employment. Where applicable, data are presented by region and individual communities, by CHNA 25 (Partners for a Healthier Community) and CHNA 26 (Greater New Bedford Community Health Network), and by the state averages.

Overall, the population of the South Coast increased slightly since 2000. Most of this growth has been concentrated in the region's towns. Fall River and New Bedford have seen shifts in their demographics as the share of minority residents increased. Additionally, the cities, as they have been for decades, are centers for immigrants arriving in the region, and are home to a younger population than the region's. These trends are discussed in more detail in the sections below.

### 2.1 POPULATION TRENDS

Overall, the South Coast's population increased by 2.8 percent since the beginning of the century and by 12.2 percent since 1970, both of which lag behind the statewide population growth rates for those periods (see Table 3). This gap appears to be mostly driven by long-term population declines in Fall River and New Bedford, although recently the population of New Bedford has slightly increased.

*Overall, the South Coast's population increased by 2.8 percent since the beginning of the century and by 12.2 percent since 1970, which lags behind the population growth rates statewide.*

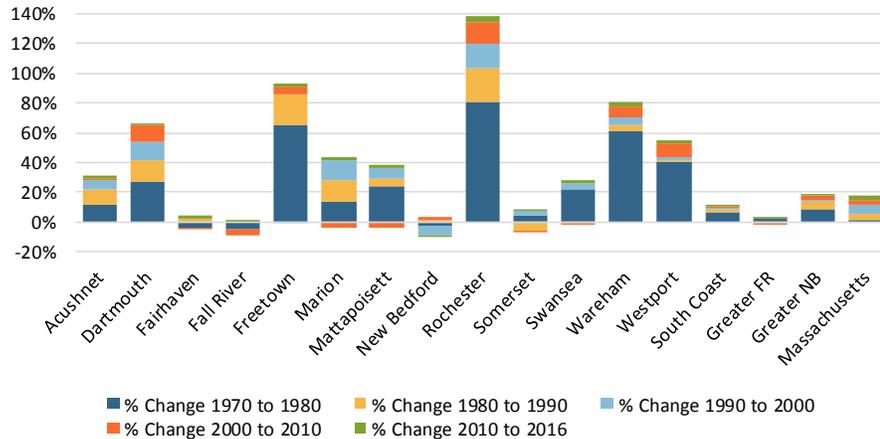
Table 3  
Historical Population of the South Coast by Decade, 1970–2017

Municipality	1970	1980	1990	2000	2010	2017	% Change 1970–2017	% Change 2000–2017
Acushnet	7,767	8,704	9,554	10,161	10,303	10,544	35.8%	3.8%
Dartmouth	18,800	23,966	27,244	30,666	34,032	34,336	82.6%	12.0%
Fairhaven	16,332	15,759	16,132	16,159	15,873	16,055	-1.7%	-0.6%
Fall River	96,898	92,574	92,703	91,938	88,857	89,420	-7.7%	-2.7%
Freetown	4,270	7,058	8,522	8,472	8,870	9,339	118.7%	10.2%
Marion	3,466	3,932	4,496	5,123	4,907	5,107	47.3%	-0.3%
Mattapoisett	4,500	5,597	5,850	6,268	6,045	6,330	40.7%	1.0%
New Bedford	101,777	98,478	99,922	93,768	95,072	95,120	-6.5%	1.4%
Rochester	1,770	3,205	3,921	4,581	5,232	5,575	215.0%	21.7%
Somerset	18,088	18,813	17,655	18,234	18,165	18,176	0.5%	-0.3%
Swansea	12,640	15,461	15,411	15,901	15,865	16,528	30.8%	3.9%
Wareham	11,492	18,457	19,232	20,335	21,822	22,640	97.0%	11.3%
Westport	9,791	13,763	13,852	14,183	15,532	15,910	62.5%	12.2%
<b>South Coast</b>	<b>307,591</b>	<b>325,767</b>	<b>334,494</b>	<b>335,789</b>	<b>340,575</b>	<b>345,080</b>	<b>12.2%</b>	<b>2.8%</b>
<b>Greater Fall River</b>	<b>137,417</b>	<b>140,611</b>	<b>139,621</b>	<b>140,256</b>	<b>138,419</b>	<b>140,034</b>	<b>1.9%</b>	<b>-0.2%</b>
<b>Greater NB</b>	<b>170,174</b>	<b>185,156</b>	<b>194,873</b>	<b>195,533</b>	<b>202,156</b>	<b>205,046</b>	<b>20.5%</b>	<b>4.9%</b>
<b>Massachusetts</b>	<b>5,689,170</b>	<b>5,737,093</b>	<b>6,016,425</b>	<b>6,349,097</b>	<b>6,547,629</b>	<b>6,742,143</b>	<b>18.5%</b>	<b>6.2%</b>

Source: 1970 through 2010, U.S. Census STF3 file, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2017 U.S. Census Bureau, Population Division; May 2018.

Figure 4 displays the population change in each South Coast community and the region by decade. Rural suburban communities such as Rochester, Freetown, Wareham, and Westport have seen the greatest overall population growth by percentage. In part, this growth is driven by the conversion of land from agricultural to residential use. In terms of absolute population growth, Dartmouth (+3,889), Wareham (+2,137), Westport (+1,570), and New Bedford (+1,220) have added the most residents since 2000.

Figure 4  
Percent Population Change by Decade, 1970–2016



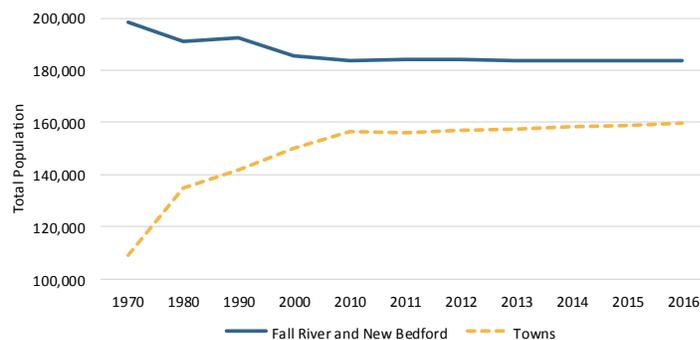
Source: 1970 through 2010, U.S. Decennial Census STF 3 File, 2011–2014, ACS 5-Year Estimates (2007–2011, 2008–2012, 2009–2013, 2010–2014, & 2012–2016, Table DP05).

The total population in the cities of Fall River and New Bedford declined by 7.4 percent (-14,785 residents) between 1970 and 2016, while the South Coast's suburban towns experienced population growth of 46.5 percent during the same period (+50,664 residents).

## 2.2 POPULATION GROWTH AND DEVELOPMENT

Population growth and residential development have been uneven within the region. The total population in the cities of Fall River and New Bedford declined by 7.4 percent (-14,785 residents) between 1970 and 2016, while the South Coast's suburban towns experienced population growth of 46.5 percent during the same period (+50,664 residents). Since 2010, the population's proportions have remained relatively constant, although the suburban towns continue to add residents, albeit at a much slower pace (see Figure 5).

Figure 5  
Population Trends: Cities versus Towns, 2016

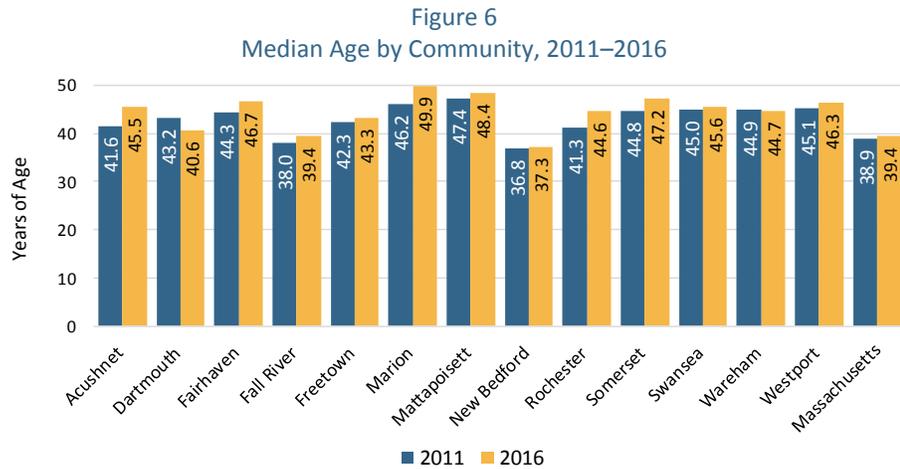


Source: 1970 through 2010, U.S. Decennial Census STF 3 File, 2012–2016, ACS 5-Year Estimates (2007–2011, 2008–2012, 2009–2013, 2010–2014, & 2012–2016, Table DP05).

2.3 MEDIAN AGE AND AGE COHORT

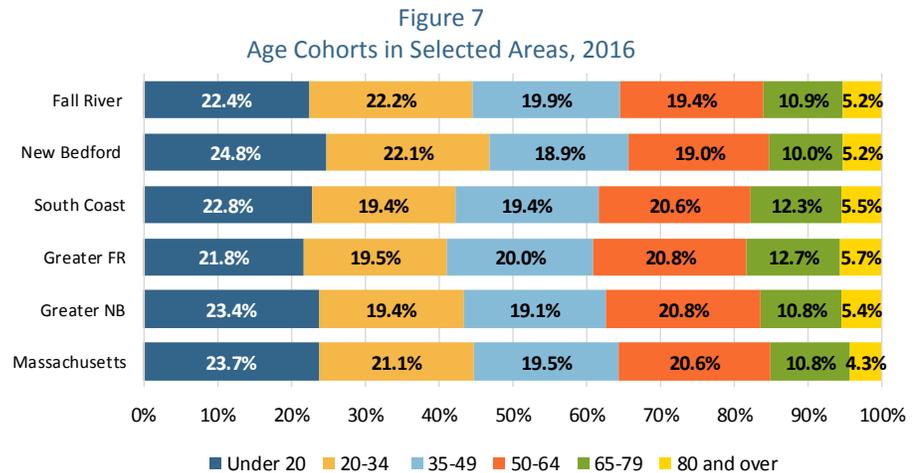
The nation’s population is aging and this trend is occurring in the South Coast as well.<sup>6</sup> All South Coast towns, other than Dartmouth and Wareham, experienced an increase in the median age from 2001 to 2016 (see Figure 6). There are health care implications inherent in this trend, particularly in terms of how health care systems manage chronic conditions such as cancer, dementia, falls, obesity, and diabetes.

All South Coast towns other than Dartmouth and Wareham experienced an increase in the median age from 2001 to 2016.



Source: 2010–2014 & 2012–2016 ACS 5-Year Estimates, Table B01002.

The age cohorts in the South Coast generally reflect their counterparts at the state level. The region, however, has a slightly higher share of residents 65 years of age or older (17.8%) when compared to Massachusetts (15.1%). The region’s cities also have larger shares of residents under the age of 35 when compared to their suburban neighbors; 44.6 percent in Fall River and 46.9 percent in New Bedford (see Figure 7).



Source: 2012–2016 ACS 5-Year Estimates, Table S010.

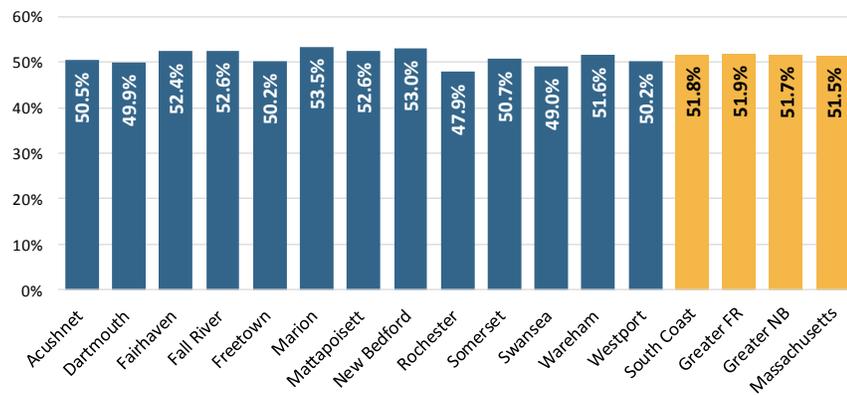
<sup>6</sup> For more information on the increase in the national median age, see: <https://www.census.gov/newsroom/press-releases/2018/popest-characteristics.html>.

2.4 SEX

Women play an essential role in maintaining family health, and are more likely than men to access the health care systems for their needs and the needs of their children. In addition to the unique health care needs of women related to childbirth and care, their longer life expectancies mean that women are more affected by long-term and elder care issues than are men.<sup>7</sup> Across the South Coast, women account for 51.8 percent of the population, compared with 51.5 percent of the population statewide (see Figure 8). The town of Marion and the region’s cities have the highest shares of women. Only in the towns of Dartmouth, Rochester, and Swansea do women make up less than half of the total population.

Across the South Coast, women account for 51.8 percent of the population, compared with 51.5 percent of the population statewide.

Figure 8  
Proportion of Women, 2016



Source: ACS Survey 5-Year Estimates, Table DP05, 2012–2016.

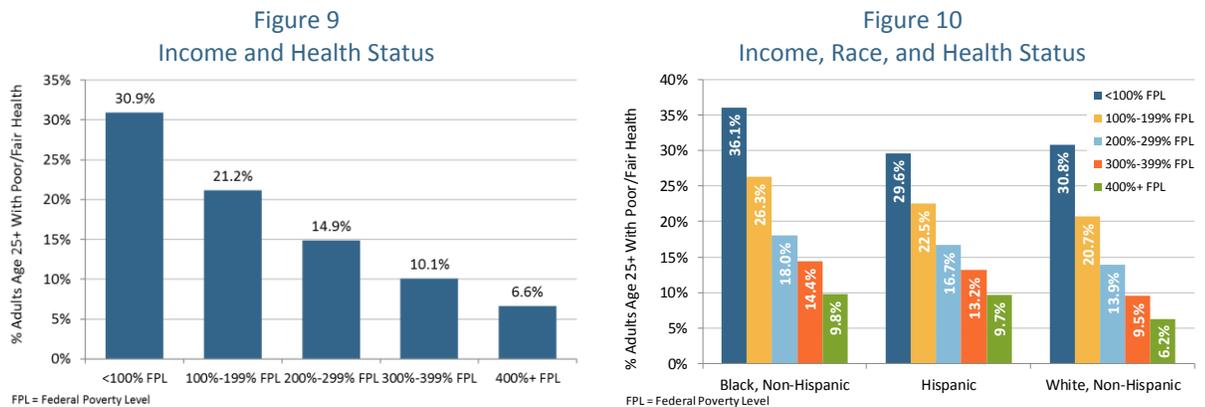
<sup>7</sup> Wheeler, J.B.; Foreman, M.; & Rueschhoff, A. (2013) “Improving Women’s Health: Health Challenges, Access and Prevention” *Improving Women’s Health Series Brief No. 3*. National Conference of State Legislatures, Washington D.C.

### 3 HEALTH EQUITY AND SOCIAL DETERMINANTS OF HEALTH

*On average, individuals who are poor, less educated, and a minority have lower levels of health than those with higher incomes, higher levels of education, or who are White.*

This section highlights disparities among community members in terms of various socioeconomic indicators, including income, education, and race, all of which are factors that affect health outcomes and are among the best predictors of health status and health equity. Social determinants of health, which are described as “the conditions in which people are born, grow, work, live, age, and the wider set of forces and systems shaping the conditions of daily life,”<sup>8</sup> are responsible for most health inequalities. On average, individuals who are poor, less educated, and a minority have lower levels of health than those with higher incomes, higher levels of education, or who are White. These factors place unique stresses on health systems, particularly those operating in urban areas.<sup>9</sup>

For example, the Robert Wood Johnson (RWJ) Foundation’s Commission to Build a Healthier America notes that health status improves as income rises (see Figure 9). This pattern holds true for African Americans, Hispanics, and Whites (see Figure 10). While adults who are poor are most likely to report being in poor or fair health, the report notes that “even adults with middle class incomes are less healthy than those with higher incomes.” This pattern is known as the socioeconomic gradient in health.<sup>10</sup>



Source: RWJ Foundation Commission to Build a Healthier America, 2009.

Behaviors are often cited as primary factors in explaining the socioeconomic gradient. For example, poor people are more likely to engage in risky behaviors such as binge drinking and smoking, have poorer diets, and exercise less.<sup>11</sup> However, others highlight that quality of care and access to care are equally important factors that affect health. Racial and ethnic minorities, the poor, and the less educated often face more barriers to care and receive poorer quality of care when accessible. The National Healthcare Disparities Report from the Agency for Healthcare Research and Methodology (mandated annually by

<sup>8</sup> World Health Organization. Social determinants of health. 2018. Accessed at [www.who.int/social\\_determinants](http://www.who.int/social_determinants) on November 9, 2018.

<sup>9</sup> Fox, C., Morford, T. G., Fine, A., & Gibbons, C. (2004). The Johns Hopkins Urban Health Institute: a collaborative response to urban health issues. *Academic Medicine*. 79:1169–1174.

<sup>10</sup> Robert Wood Johnson Foundation. (April 2009). *Issue brief 5: race and socioeconomic factors*. Commission to Build a Healthier America.

<sup>11</sup> North Carolina Institute of Medicine. (February 2013). *Prevention for the health of North Carolina: prevention action plan*. Healthy North Carolina 2020.

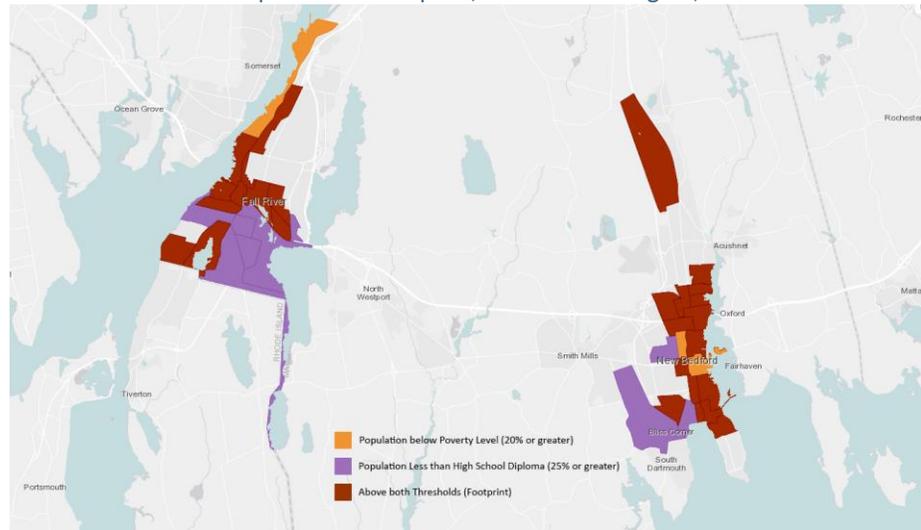
Congress), concludes that while quality of care is improving, issues regarding access to care are increasing. The report states that “these disparities may be due to differences in access to care, provider biases, poor provider-patient communication, or poor health literacy.”<sup>12</sup> In addition, a growing body of research indicates that living and working conditions, including housing quality, exposure to pollution, worksite safety, access to healthy and affordable foods, and proximity to safe places to exercise, have a significant effect on health, more so than risky behaviors.<sup>13</sup>

### 3.1 GEOGRAPHIC ANALYSIS OF NEED

Figure 11 identifies the region’s census tracts with high rates of poverty (20%+ below poverty level) and low educational attainment (25%+ less than high school diploma), the two indicators demonstrated to be the primary social determinants of population health. The region’s vulnerable populations reside exclusively in the cities of Fall River and New Bedford.

*Research indicates that living and working conditions, including housing quality, exposure to pollution, worksite safety, access to healthy and affordable foods, and proximity to safe places to exercise, have a significant effect on health.*

Figure 11  
Vulnerable Populations’ Footprint, South Coast Region, 2012–2016



Source: United States Census American Community Survey, 2012–2016 Estimates. Mapped from Community Commons<sup>14</sup>

<sup>12</sup> Agency for Healthcare Research and Quality. (2012). *National healthcare disparities report*. Publication # 13-0003.

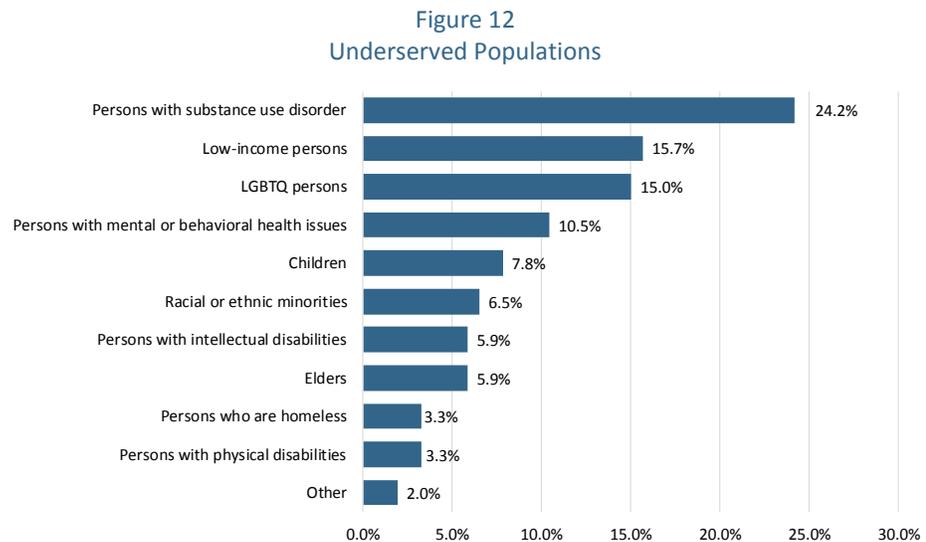
<sup>13</sup> National Research Council of the National Academies (2012) *Improving health in the U.S.: the role of health impact assessment*. Washington, D.C.; The National Academies Press.

<sup>14</sup> See <https://assessment.communitycommons.org/Footprint/>.

### 3.2 SOCIAL DETERMINANTS OF HEALTH IN THE SOUTH COAST

Examining health outcomes in a socioeconomic context and identifying areas with vulnerable populations allows the Saint Anne’s Hospital staff to direct policies and programs where they are most needed. Fall River and New Bedford continue to lag behind the region as a whole in most socioeconomic metrics, with lower levels of educational attainment, higher poverty levels, and higher unemployment. However, many of the region’s towns also struggle with these issues, particularly in comparison to state averages.

Residents throughout Greater Fall River have varying needs based on their specific situations and characteristics. The key informant survey asked respondents to identify the populations in the region that are most underserved. The top three choices were persons with substance use disorder (24.2%), low-income populations (15.7%), and LGBTQ individuals (15.0%), respectively (Figure 12).



Source: Saint Anne’s Hospital Community Health Assessment Survey, 2018.

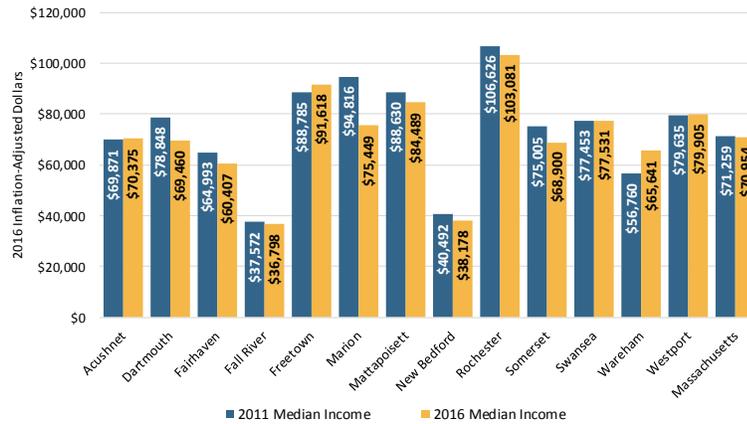
#### Median Household Income

From 2011 to 2016, the median household income in most South Coast communities either declined or remained flat, with Freetown and Wareham being the only exceptions (see Figure 13). Even the statewide median household income declined by nearly \$1,000 from 2011 to 2016. Therefore, it not very surprising that incomes in Fall River and New Bedford continue to lag behind the state median, as they have historically.

Seven South Coast communities have median incomes that are below the state average. Median incomes are particularly low in Fall River (\$34,798, 6<sup>th</sup> lowest in Massachusetts) and New Bedford (\$38,178, 7<sup>th</sup> lowest in Massachusetts). Acushnet, Dartmouth, Fairhaven, Somerset, and Wareham also have median incomes below the state average.

Median incomes are particularly low in Fall River (\$34,798, 6<sup>th</sup> lowest in Massachusetts) and New Bedford (\$38,178, 7<sup>th</sup> lowest in Massachusetts).

Figure 13  
Inflation-Adjusted Median Household Income by Community, 2011–2016<sup>15</sup>



Source: ACS 5-Year Estimates, Table S1903, 2007–2011 & 2012–2016.

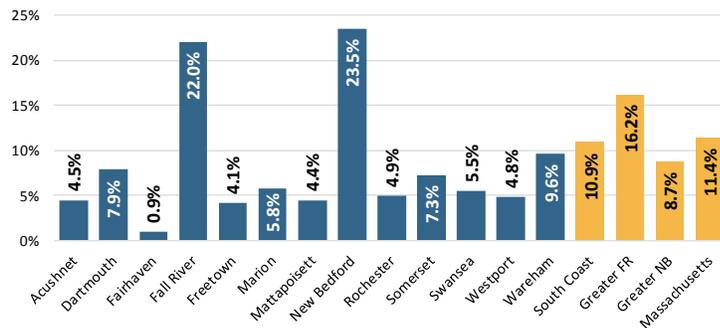
### Poverty

Poverty is a major social determinant of health. Those in poverty often have less opportunity and less access to resources that can assist in improving and maintaining one’s health. Resources that contribute to educational attainment, employment, housing status, health care opportunities, and social activities are all less accessible to those living in poverty.

While the South Coast has a higher share of people living in poverty than the state, the region’s cities are home to disproportionate shares of people in poverty. Twenty-two percent (22.0%) of all people in Fall River and 23.5 percent of people in New Bedford live in households with annual incomes below the poverty level (see Figure 14). This translates to 41,170 individuals living in poverty in just the cities of the South Coast alone.

22.0% percent of all people in Fall River and 23.5 percent of people in New Bedford live in households with annual incomes below the poverty level.

Figure 14  
Share of the Population in Selected Areas Living Below the Poverty Level, 2016



Source: ACS 5-Year Estimates 2012–2016, Table S1701.

<sup>15</sup> It is not possible to calculate a median household income for the South Coast without raw data for every household in the region.

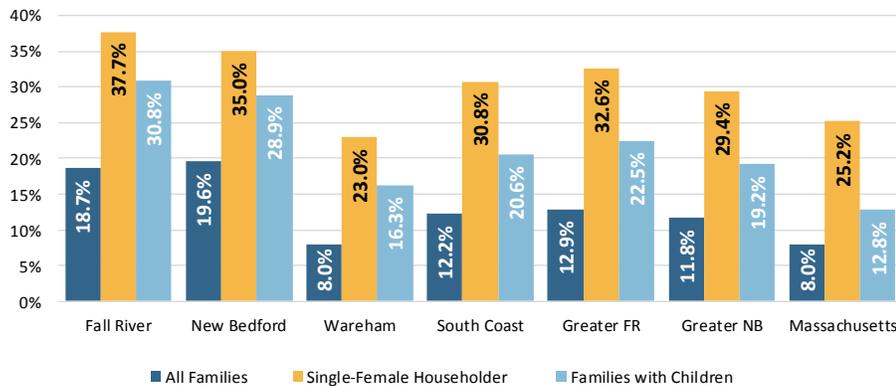
Family Poverty

The children of families living in poverty are more likely to have negative health outcomes. For instance, research has demonstrated a relationship between the proximity of a family’s income to the poverty line and an increase in occurrences of childhood asthma, severe migraines, and ear infections.<sup>16</sup> Figure 15 outlines the poverty rates for all families, those led by a female with no spouse, and those with children. Similar to the individual measure of poverty, the South Coast region has higher poverty rates for all categories. Across all the areas examined, single-female led families are the most likely to be in poverty when compared to other families.

In Fall River and New Bedford, these measures of poverty are higher than the remainder of the region and the state as a whole. For example, less than 10 percent of all families statewide live in poverty (8.0%), compared with 12.2 percent of all families in the South Coast and approximately 18.7 percent of families in Fall River and 19.6 percent of families in New Bedford. In addition, the percentage of families with children living in poverty in Fall River and New Bedford is more than double the statewide percentage (see Figure 15).

*The percentage of families with children living in poverty in Fall River and New Bedford is more than double the statewide percentage.*

Figure 15  
Family Poverty in Selected Areas, 2016



Source: ACS 5-Year Estimates, Table S1702, 2012–2016.

Student Poverty

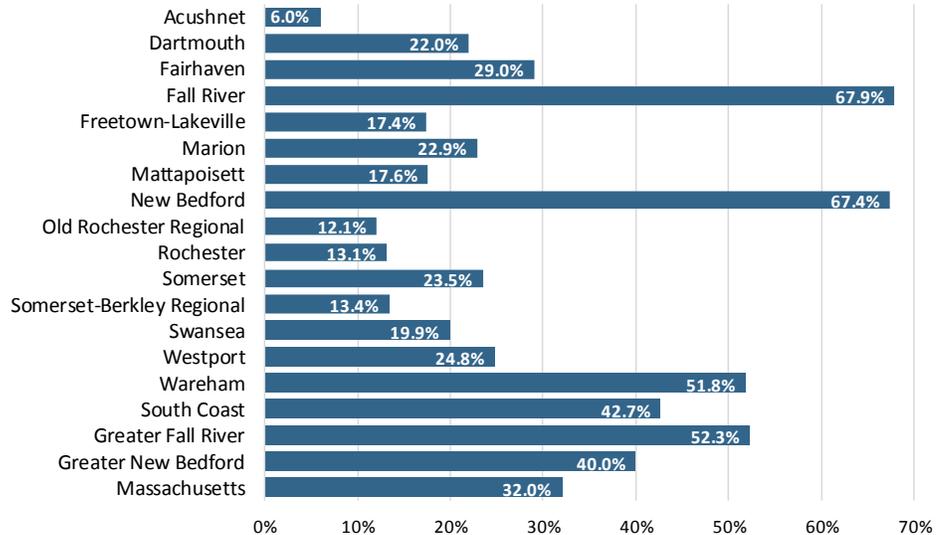
About two-fifths (42.7%) of the public school students in the South Coast are classified as economically disadvantaged by the Department of Elementary and Secondary Education (DESE) in the 2017-2018 school year (see Figure 16).<sup>17</sup> Much like other poverty measures, the share in the South Coast exceeds that of the state, where 32.0 percent of all students are considered economically-disadvantaged. This difference is driven primarily by the

<sup>16</sup> Victorino, C. & Gauthier, A. (2009). “The social determinants of child health: variations across health outcomes – a population-based cross-sectional analysis.” BMC Pediatrics 9: 53. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2734529/>.

<sup>17</sup> Economically disadvantaged students are defined as those who participate in one or more of the following state-administered programs: the Supplemental Nutrition Assistance Program (SNAP); the Transitional Assistance for Families with Dependent Children (TAFDC); the Department of Children and Families’ (DCF) foster care program; and MassHealth (Medicaid).

larger number of economically-disadvantaged students in Fall River (67.9% or 6,879 students) and New Bedford (67.4%, or 8,509 students).

Figure 16  
Students Classified as Economically Disadvantaged Students, 2017–2018 School Year



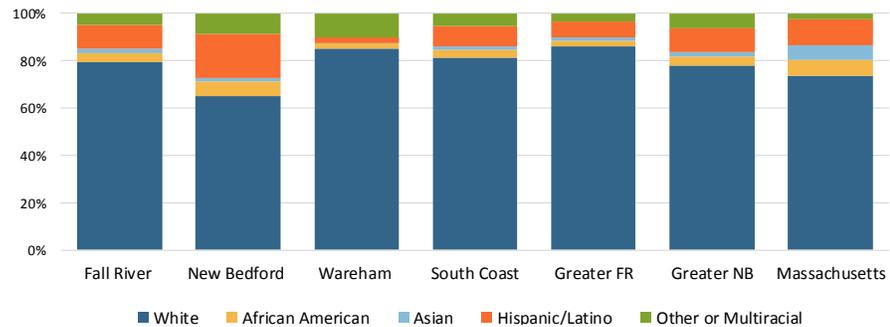
Source: Massachusetts Department of Elementary and Secondary Education, 2017–2018.

42.7% of the public school students in the South Coast are classified as economically-disadvantaged.

Race

People of color face significant disparities in access to and utilization of care. Health care providers in the South Coast need to ensure that they are attuned to the needs of different racial groups as the region's population grows increasingly more diverse. African-Americans in particular fare worse than Whites with regard to most health outcomes, which is partly a result of increased barriers to accessing care and lower utilization of care. As a region, the South Coast has a less diverse population than the Commonwealth; 81.4 percent of South Coast residents are White, compared with 73.7 percent of residents in Massachusetts (see Figure 17).

Figure 17  
Race and Ethnicity of the Population in Selected Areas, 2016

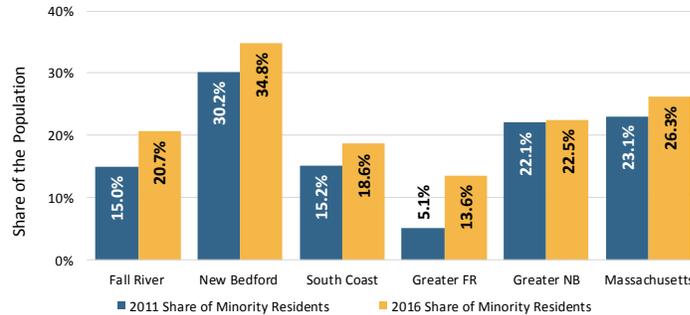


Source: American Community Survey 5-Year Estimates, Table DP05, 2012–2016.

Since 2011, communities throughout the South Coast have become more diverse.

A notable exception in the region is New Bedford, where non-white residents account for more than one-third (34.8%) of the city’s population. Since 2011, communities throughout the South Coast have become more diverse. From 2011 to 2016, the minority population in the region increased by 3.5 percent (12,362 people). Fairhaven experienced the largest percentage increase in its minority population (5.8%, or 939 people), while Fall River saw the largest nominal increase (5,020 people, or 5.7%) (see Figure 18).

Figure 18  
Change in Minority Population in Selected Areas, 2011–2016



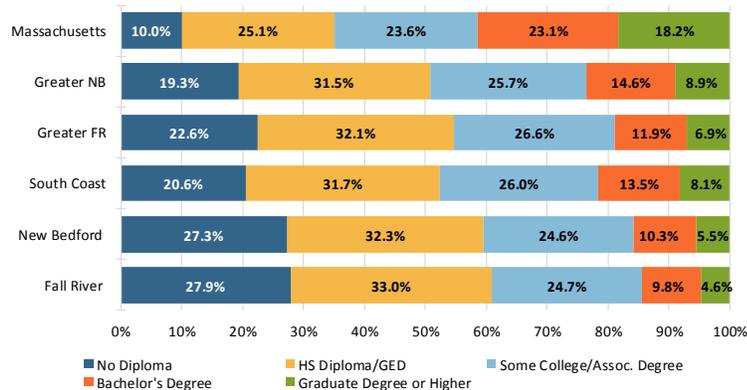
Source: ACS 5-Year Estimates, Table DP04, 2010–2014 & 2012–2016.

### Educational Attainment

The South Coast has long struggled with low levels of educational attainment. Within the region, Fall River and New Bedford have particularly low levels of educational attainment. In both cities, the majority of the population 25 years of age or older has never attended a college or university (see Figure 19). Additionally, when compared to the adult population statewide, both Fall River and New Bedford have nearly three times the percentage of adults who have not completed high school (27.9% and 27.3%, respectively), compared to 10.0 percent across the Commonwealth.

*In both South Coast cities, the majority of the population 25 years of age or older has never attended a college or university.*

Figure 19  
Educational Attainment for the Population 25 Years of Age and Older in Selected Areas<sup>18</sup>, 2016



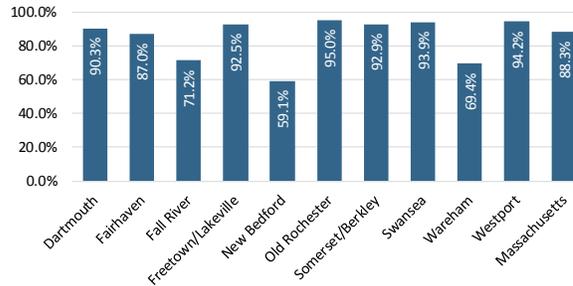
Source: American Community Survey 5-Year Estimates, Table S1501, 2012–2016.

<sup>18</sup> Data do not always add to 100 percent due to rounding.

High School Graduation Rate

The high school graduation rate measures the percentage of students who attain a high school diploma within a four-year or five-year period. Graduation rates for most of the region’s communities are above the state average. Fall River (71.2%), New Bedford (59.1%), and Wareham (69.4%), however, have graduation rates well below the state average (see Figure 20).

Figure 20  
High School Graduation Rate By District, 2017-2018 School Year



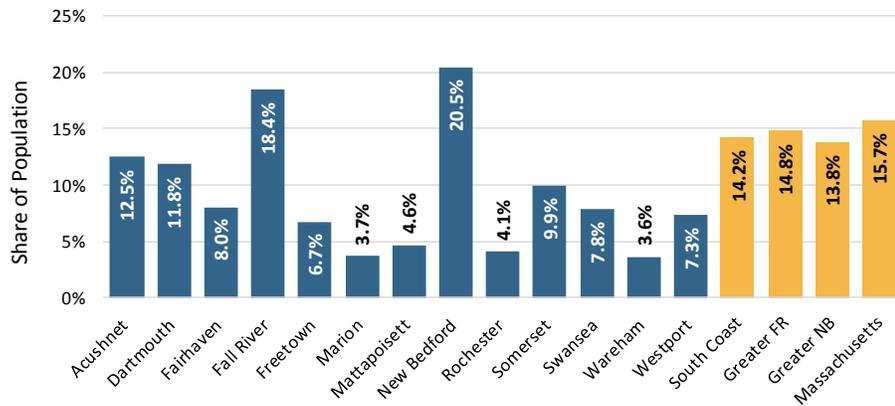
Source: Massachusetts Department of Elementary and Secondary Education.

Foreign-Born Population

The South Coast has long been an attractive place to settle for immigrants, as evidenced by foreign-born residents representing 14.2 percent of the region’s population (see Figure 21). As Gateway Cities, New Bedford and Fall River have been traditional destinations for new arrivals to America since the late 18th century. As of 2016, nearly 1 in 5 people in Fall River (18.4%) and over one-fifth of New Bedford’s population (20.5%) were born outside of the country. In both cities, Portuguese immigrants make up the majority of the foreign-born residents. However, as emigration from Europe to the U.S. has slowed, Latin American and Asian immigrants make up increasing shares of the populations in New Bedford and Fall River.

*18.4% of people in Fall River and 20.5% of people in New Bedford were born outside of the country.*

Figure 21  
Foreign-Born Share of the Population, 2016



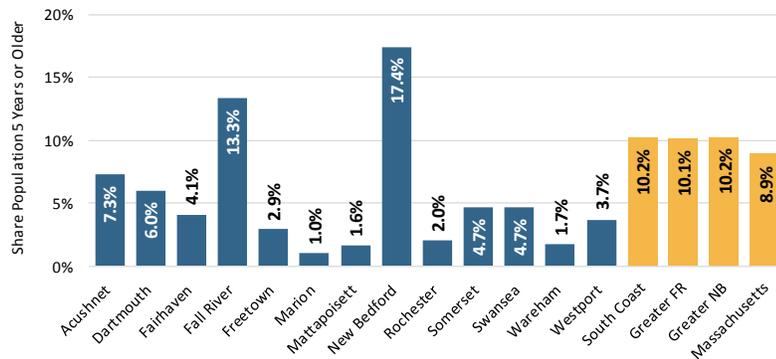
Source: American Community Survey 5-Year Estimates, Table B05012, 2012–2016.

A changing immigrant population can create challenges for service providers. Perhaps the largest obstacle is the language barrier, which was cited by several focus group members as a major health equity issue. As the foreign-born population in the region begins to shift away from Lusophone countries of origin, health care providers will need to employ staff who can both engage with new arrivals in their native languages and understand cultural barriers to care.

*New Bedford and Fall River have the highest shares of residents reporting limited English proficiency.*

Figure 22 demonstrates the share of the population over five years of age in each community with limited English proficiency. As major destinations for the region’s newly arrived immigrants, New Bedford and Fall River have the highest shares of residents reporting limited English proficiency, 17.4 percent and 13.3 percent, respectively.

Figure 22  
Share of Population 5 Years and Over with Limited English Proficiency, 2016



Source: American Community Survey 5-Year Estimates, Table S1601, 2012–2016.

### COMMUNITY ACTIONS AND RESOURCES

The SER-Jobs for Progress’ “Socialization and Informational Group for Immigrant Seniors” program serves at least 25 non-English-speaking retirement-age immigrants in the Greater Fall River area who live alone and have no outside contact. They come together to share their talents (knitting and needle work) and knowledge, and contribute their completed work to those in need. The program also provides participants with information regarding retirement, social security benefits, nutrition, security, housing, and health issues.

In addition, SER-Jobs for Progress’ “Evening Bi-Lingual Program for Children” program sponsors an on-site classroom and computer-based tutoring center designed for between 24 and 30 school-aged children whose non-English-speaking parents attend SER evening programs. The classroom aims to improve and develop the children’s academic performance and English language literacy. Each child attends two evenings a week while their parents are attending SER classes.

## Housing and Homelessness

While not directly a health issue, housing stability and quality can have a great effect on health outcomes. Housing issues identified by key informants center primarily around quality, affordability, and availability. A report conducted by the Public Policy Center in 2017 concluded that Fall River's existing housing stock consists largely of units occupied by renters in multifamily buildings constructed prior to 1940.<sup>19</sup> Stakeholder interviews revealed that older multifamily units in low-income neighborhoods were perceived to be deficient, and that a lack of code enforcement and low property values provide little incentive for landlords to meet the Commonwealth's minimum housing standards, which creates substandard living conditions for tenants.

In addition, while rents and home prices in Fall River are relatively affordable compared to statewide median housing costs, many households in the city still struggle to find affordable housing. In order to secure housing, some households have to rent or buy at costs that are above their means, increasing the cost-of-living burden on low-income households. Some key informants and focus group members identified homelessness as a significant issue in the region, which is partly a result of a shortage of affordable housing. Mental health and substance abuse issues, which are highly prevalent among the homeless population, are also key factors in the homelessness equation.<sup>20</sup>

Fall River has participated in the U.S. Department of Housing and Urban Development's (HUD) Point in Time (PIT) Counts for more than 20 years. This is a count of sheltered and unsheltered homeless persons on a single night in January.<sup>21</sup> Fall River's annual homelessness report, *Strategy to End Homelessness*, notes that there was a fairly consistent count of homeless individuals in Fall River between 2012 and 2016, with a significant decrease between 2016 and 2017. In addition, the number of families experiencing homelessness has been consistent over the past three PIT counts (2015-2017). The report notes that historically, the larger share of people experiencing homelessness has been identified as having a serious mental illness or chronic substance use.<sup>22</sup>

HUD reports that the Massachusetts PIT Count increased by 14.2 percent (+2,503 individuals) from 2017 to 2018, and by 32.7 percent (+4,941 individuals) from 2007 to 2018.<sup>23</sup> In absolute terms, the increase in the number of homeless from 2017 to 2018 in Massachusetts was the largest increase among all U.S. states and a significant portion are families with children. In 2018, more than half of the nation's homeless people in families with children were in four states: New York, California, Massachusetts, and Florida.

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<sup>19</sup> The report can be accessed at <http://publicpolicycenter.org/wp/wp-content/uploads/2016/11/Towards-an-Evidence-Based-Housing-Policy-in-Fall-River-Massachusetts.pdf>.

<sup>20</sup> See <https://www.nationalhomeless.org/factsheets/addiction.pdf>. Retrieved December 17, 2018.

<sup>21</sup> The report notes that while the PIT counts can provide insight into homelessness in Fall River, it is important to recognize the limitations and variations of each count, including weather conditions, volunteer capacity, and statistical relevance.

<sup>22</sup> City of Fall River (2018). *City of Fall River Strategy to End Homelessness*. Fall River, MA.

<sup>23</sup> The U.S. Department of Housing and Urban Development, Office of Community Planning and Development (2018). *The 2018 Annual Homeless Assessment Report (AHAR) to Congress*. Washington, DC.

Homeless advocates cite rising home prices and rents and the shortage of subsidized affordable housing as drivers of this trend in Massachusetts. Accordingly, expanding on existing collaborative strategies and goals to further address the region's homelessness issues will be addressed in Saint Anne's Hospital's 2019 Community Benefits Implementation Strategy.

### **COMMUNITY ACTIONS AND RESOURCES**

Throughout 2017, Saint Anne's Hospital in collaboration with Medical Legal Partnership Boston (MLPB) and the Justice Center of Southeastern Massachusetts Medical-Legal Partnership program assisted 15 different Saint Anne's Hospital (SAH) patients with 18 different legal issues. While these SAH patients faced a variety of challenges, housing and homelessness remained the dominant legal need. About half of the needs raised were successfully addressed through the sharing of information with SAH providers, such as providing information about eligibility requirements for Social Security Disability Insurance (SSDI) benefits. Nine patients were referred for legal intake, resulting in nine open legal matters. Each of these patients received personalized legal advice or full legal representation in an official proceeding. The Medical-Legal Partnership was continued in 2018, marking seven years in affiliation. While housing remained a pressing issue, income support became the dominant legal need, which is consistent with issues rooted in maintaining stable housing.

In addition to individualized patient-centered consultations, the MLP program developed and delivered two trainings on "A Strengths-Based Approach to Screening Individuals/Families for Health-Related Social Needs" with the long range goal of moving away from deficit-based interventions to healing-centered engagement rooted in positive psychology. Based on the finding of the 2018 Community Health Needs Assessment, additional social determinants of health themed trainings will be planned for 2019.

Employment and Wages

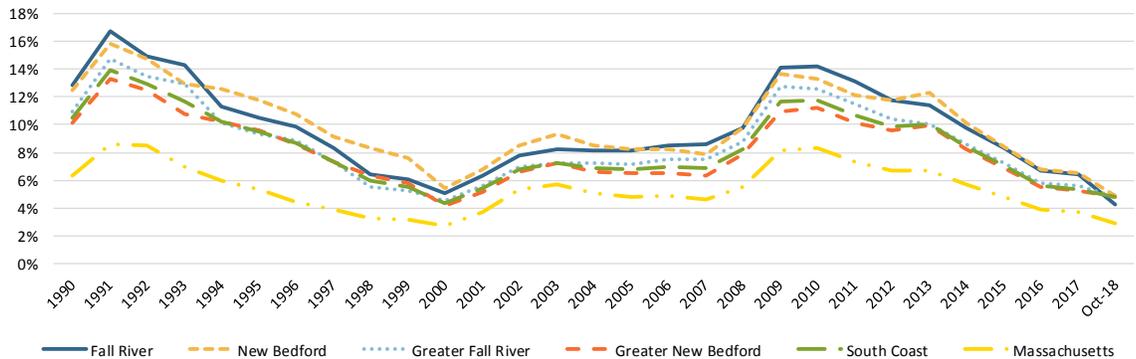
Having a job and earning a living wage can be critical for maintaining health. Apart from the fact that many individuals and families receive health insurance through their employer, a job makes it easier for individuals and families to live in healthier neighborhoods, send their children to better schools, and buy more nutritious food, all of which contribute to living a more healthy lifestyle. Conversely, not having a job leads to more economic stresses that contribute to negative health, including higher rates of depression and stress-related conditions such as stroke and heart disease.<sup>24</sup>

*The South Coast continues to have an unemployment rate above that of the Commonwealth.*

Unemployment

Although unemployment rates across the state have declined from their 2009 peaks, the South Coast continues to have unemployment rates above that of the Commonwealth (see Figure 23). The South Coast’s historic trend is driven by the higher unemployment rates in Fall River and New Bedford, which had unemployment rates of 6.4 percent and 6.5 percent in 2017, respectively. The South Coast had an unemployment rate of 5.4 percent in 2017, while Massachusetts had a 3.7 percent rate. The latest unemployment rates available for this report show that in October 2018, the unemployment rate in Fall River was 4.3 percent, compared to 4.9 percent in New Bedford and 2.9 percent statewide.

Figure 23  
Unemployment Rate 1990–August 2018



Source: Massachusetts Executive Office of Labor and Workforce Development LAUS Reports (Not Seasonally Adjusted).

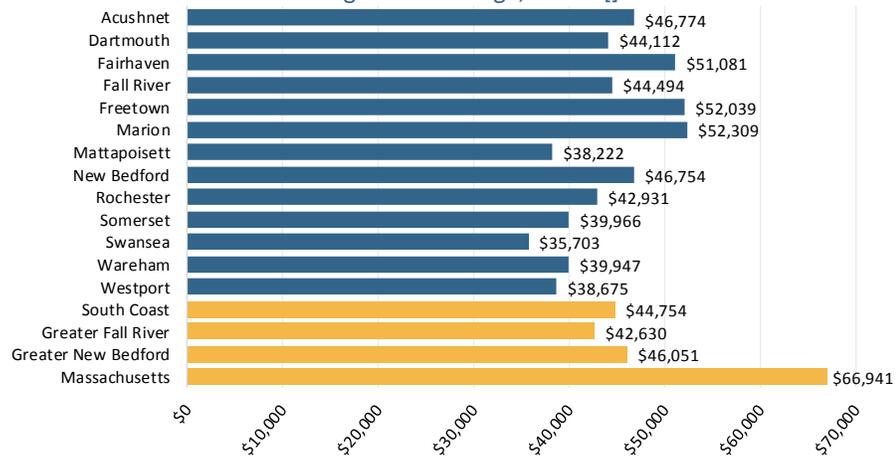
<sup>24</sup> Robert Wood Johnson Foundation. See <https://www.rwjf.org/en/library/research/2012/12/how-does-employment--or-unemployment--affect-health-.html>.

Wages

Average annual wages in the South Coast range from a low of \$35,703 for workers employed in Swansea to a high of \$52,309 for employees of Marion businesses (see Figure 24). The South Coast region lags in average annual wage (\$44,754) when compared to the state as a whole (\$66,941).

*The gap between the state and South Coast average wage has been persistent for decades, and has only decreased by 8.8 percentage points in the past 25 years.*

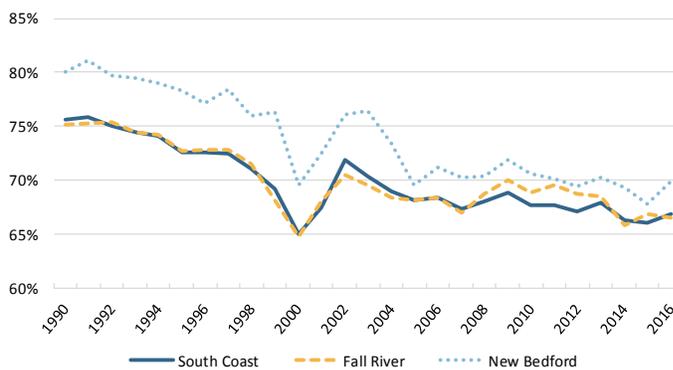
Figure 24  
Average Annual Wage, 2016<sup>25</sup>



Source: Massachusetts Executive Office of Labor and Workforce Development ES-202 Data, 2016.

As Figure 25 demonstrates, the gap between the state and South Coast average wage has been persistent for decades, and has only decreased by 8.8 percentage points in the past 25 years. Over this same time period, New Bedford and Fall River saw similar declines in the wage gap.

Figure 25  
Annual Average Wage in Selected Areas as a Percentage of State Average, 1990–2016



Source: Authors’ Calculations from Massachusetts Executive Office of Labor and Workforce Development ES-202 Data, 1990–2016.

<sup>25</sup> Although averages provide some insight into the economic conditions in the region and the state, they are subject to the effect of outliers and should be interpreted with caution.



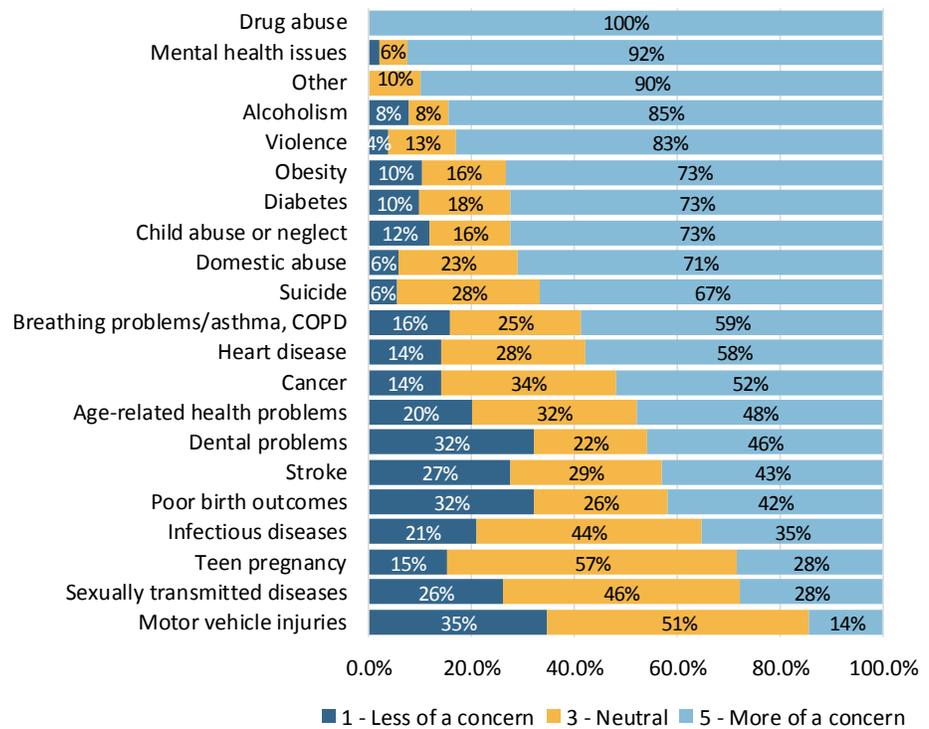


Prioritizing Health Issues

To further prioritize the major health issues in the Greater Fall River region, key informants were asked to rank health issues on a scale of 1 to 5, with a rating of 1 being less of a concern, 3 being neutral, and 5 being more of a concern. All respondents indicated that drug abuse is more of a concern, followed by mental health issues, other issues, and alcoholism.<sup>26</sup> Issues that were less of a concern include motor vehicle injuries, sexually transmitted diseases, and teen pregnancy, although it is important to note that a majority of respondents rated these issues as neutral or higher (see Figure 29).

Figure 29  
Regarding The Conditions In The Community You Serve, Please Rank Each Of The Health Issues On A Scale Of 1 To 5, With 1 Being Less Of A Concern And 5 Being More Of A Concern.

*All respondents classified drug abuse as the top concern in the community.*

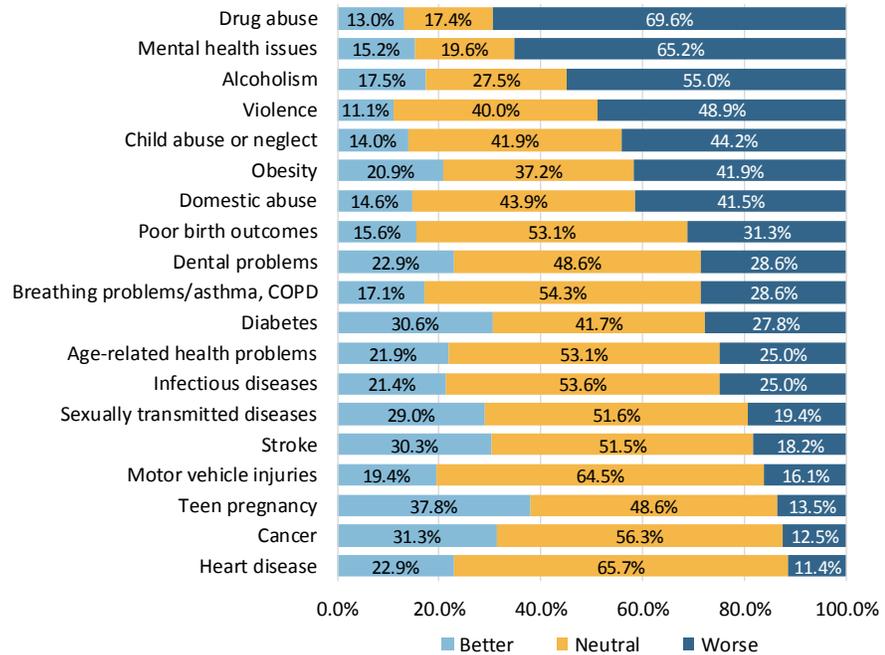


Source: Saint Anne’s Hospital Key Informant Survey, 2018.

Not only did all key informants indicate that drug abuse is the top concern throughout the region, they also rated drug abuse as the top issue in terms of it worsening over the past three years. In fact, many of the top health issues presented in the previous chart were also identified as getting worse in the past three years, including mental health issues, alcoholism, violence, child abuse or neglect, and obesity (see Figure 30).

<sup>26</sup> “Other” issues include sexual assault/violence, high blood pressure, chronic trauma and stress, immigrant access to care, lack of physical activity, and tobacco use.

Figure 30  
In the Last Three Years, How Would You Say the Issues Facing the Greater Fall River Area Have Changed?



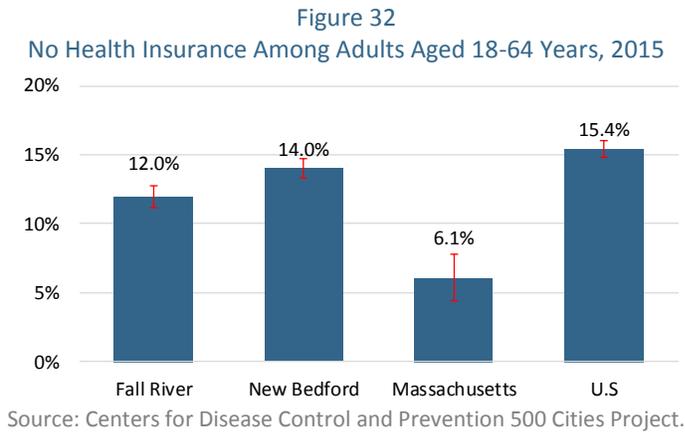
Source: Saint Anne's Hospital Key Informant Survey, 2018.

Not only did all respondents indicate that drug abuse is a severe problem throughout the region, they also classified drug abuse as the top issue in terms of it worsening over the past three years.



of health insurance was cited by focus group participants as one of the primary reasons that keeps them or their family from seeing a doctor. Participants also noted that access to health insurance is hindered primarily by language barriers, lack of information regarding rights for immigrants, and the cost of health insurance. High costs are particularly a hardship for working individuals and families who do not earn high wages. One focus group member lamented that “some get everything for nothing, while others pay everything they earn towards [health care] expenses.” Another noted “I have to pay a lot of money for my EpiPen, yet people can get Narcan for free.”

The health care system can be confusing even for those with health insurance, particularly newer immigrant groups who have little background in dealing with large, complex health systems. Lastly, the hours that health care providers are open are not convenient for the working population, as many of the region's poorest residents work long hours at more than one job.



#### COMMUNITY ACTIONS AND RESOURCES

Saint Anne's Hospital provides health insurance education and offers enrollment assistance to both patients and community members. One-on-one assistance to community members is provided by a SAH financial counselor and is provided in the person's first, requested language.

Enrollment assistance is offered for both annual and immediate coverage types. In 2017, health insurance screening and enrollment assistance were provided to 2,650 patients and community members, with 714 gaining immediate access to coverage through presumptive eligibility applications. The numbers are similar in 2018. SAH maintains a greater than 90 percent success rate in completing Medicaid applications for otherwise uninsured or self-pay patients. Based upon the findings in this report, assistance with access to health insurance will remain a priority focus in 2019.

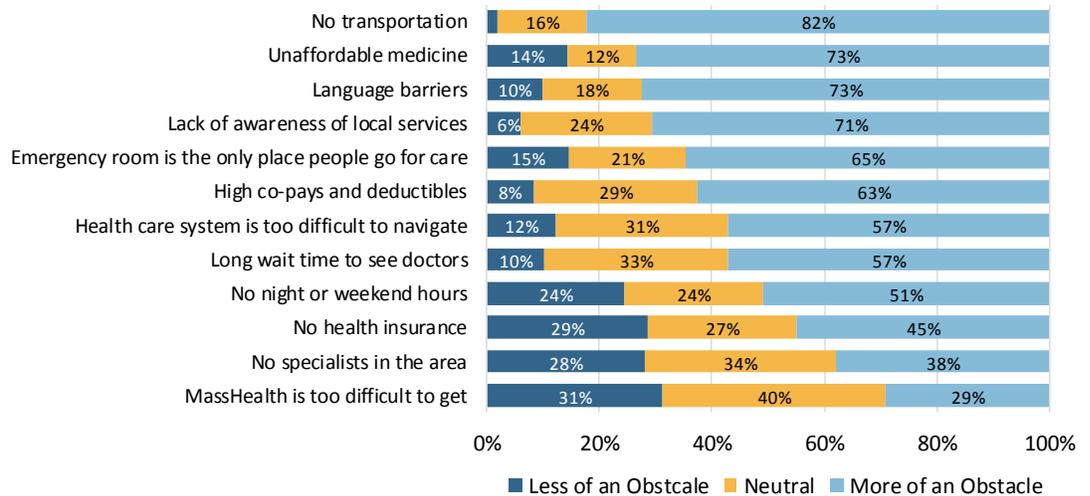
5.2 OBSTACLES TO OBTAINING HEALTH SERVICES

*Key informants reported lack of transportation (82%) as the most common obstacle to receiving proper healthcare.*

As part of the key informant survey, the region’s key informants were asked to rank the obstacles that might prevent individuals from obtaining health services. Respondents reported lack of transportation (82.0%) as the most common barrier to receiving proper health services, followed by unaffordable medicine (74.0%) and language barriers (73.0%) (see Figure 33).

Many of the region’s residents, particularly those who are elderly or reside in the cities, rely heavily on public transportation. As a result, individuals often cannot get to appointments even when they have the desire to seek out preventative care or when they require treatment for various health issues. Focus group participants have mixed feelings about public transportation in the region; some find their experience with public transportation to be positive, while others find it difficult to get to surrounding municipalities. Some participants also noted the need for public transportation specifically targeted to children attending after-school programs.

Figure 33  
Obstacle to Obtaining Health Care Services



Source: Saint Anne’s Hospital Key Informant Survey, 2018.

**COMMUNITY ACTIONS AND RESOURCES**

The Southeastern Regional Planning and Economic Development District (SRPEDD) is updating the region’s Coordinated Human Service Transportation Plan, which identifies the transportation needs of older adults, persons with disabilities, and low income individuals. The plan is also used to inform the Community Transit Grant Program, as well as regional planning efforts. As part of the update, SRPEDD and the South East Regional Coordinating Council on Transportation conducted an *Unmet Transportation Needs Survey*. The report identifies three service gaps that are consistently identified by stakeholders and which validate the issues brought forward in interviews conducted for this report: 1) extended service hours (evenings and weekends), 2) better connections between transit areas, and 3) long distance medical transportation.

**5.3 PREVENTATIVE CARE**

Regularly seeing a health practitioner and undergoing routine screenings can identify health issues before they start or worsen. Annual checkups also allow health practitioners to screen for social determinants of health that may present barriers to good health. As one focus group member noted, it is difficult to adequately meet an individual’s health needs if they are unaware of their daily struggles, for example, that they do not have enough food or that their electricity was disconnected.

Slightly more than three-quarters (76.4%) of Fall River residents and 76.6 percent of New Bedford residents report they had an annual check-up in the past 12 months, which is slightly below the state average, but above the national average. The percentage of women in these cities who have undergone a Pap smear screening is below the state average, but above the national average, while the percentage who have had a mammogram is above the U.S. average (statewide data on this screen was unavailable). The percentage of adults aged 50 to 75 who have had a colonoscopy or fecal blood test is similar to the national average, while the percentage having a cholesterol screening is below the state and national averages (see Table 4).

Table 4  
Annual Checkups and Screenings, 2015

	Fall River	New Bedford	MA	U.S.
Annual Check-up (18+ years)	76.4% (CI +/- 0.3%)	76.6% (CI +/- 0.3%)	77.4% (CI +/- 2.5%)	68.9% (CI +/- 0.6%)
*Pap Smear (21–65 years)	82.9% (CI +/- 1.0%)	83.1% (CI +/- 0.8%)	87.9% (CI +/- 3.1%)	80.6% (CI +/- 1.0%)
Mammography (50–74 years)	82.9% (CI +/- 1.3%)	82.9% (CI +/- 1.1%)	Data not available	75.5% (CI +/- 0.8%)
Colonoscopy or Fecal Blood Tests (50-75 years)	64.4% (CI +/- 1.6%)	64.0% (CI +/- 1.3%)	Data not available	64.0% (CI +/- 1.0%)
Cholesterol Screenings (18+ years)	74.1% (CI +/- 0.9%)	73.7% (CI +/- 0.7%)	85.0% (CI +/- 2.3%)	75.2% (CI +/- 0.6%)

Source: Centers for Disease Control and Prevention 500 Cities Project. \*2014 Data.

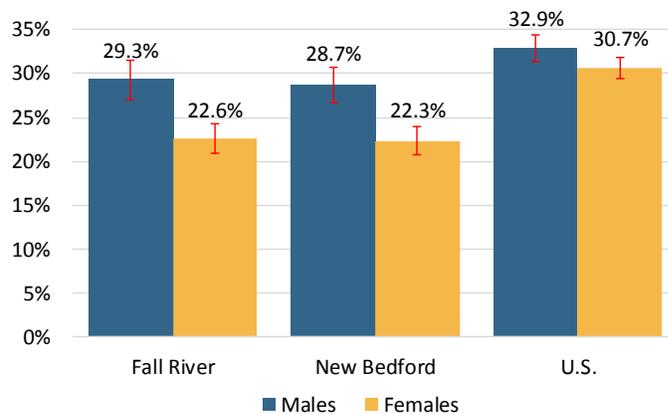
#### 5.4 SENIOR CARE

*Fall River and New Bedford seniors lag behind the share of seniors nationally who are up to date on preventative services.*

Fall River and New Bedford seniors lag behind the share of seniors nationally who are up to date on preventative services (see Figure 34). The CDC’s criteria for being up to date with clinical preventative services includes having a flu shot within the past year, having a PPV shot within one’s lifetime, and having a colorectal screening. Notably, the percentage of senior-aged females who are up to date with these services is lower than their male counterparts at both the city and national level. This may be due to the fact that women are less likely to have a colorectal screening.

Focus group participants noted that services for elderly veterans are generally not available locally, with VA facilities available to this population located in New Bedford, Brockton, and Providence. One participant suggested that developing a stronger partnership between Veterans Affairs and local hospitals will make it easier for veterans to receive services.

Figure 34  
Percentage of Senior-Aged Residents Who Are Up to Date on the Core Set of Preventative Services, 2014



Source: Centers for Disease Control and Prevention 500 Cities Project.

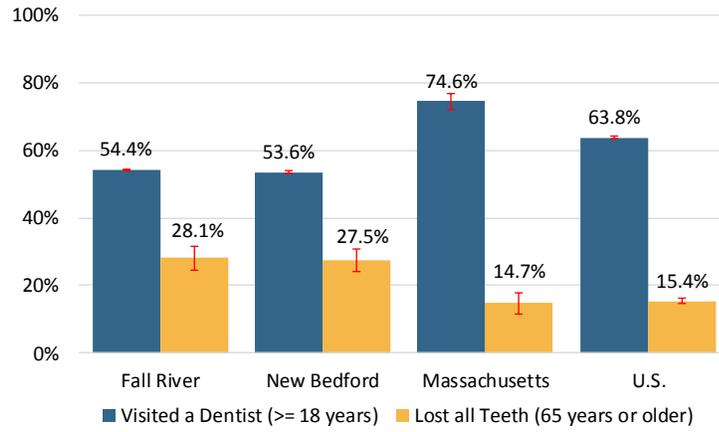
*Several focus group participants noted that affordable dental care is one of the region’s most critical health issues.*

#### 5.5 ORAL HEALTH

Poor dental health, and gum disease in particular, is linked to negative health outcomes such as diabetes, heart disease, and stroke. Additionally, maternal dental health can affect neonatal outcomes.<sup>28</sup> The percentage of residents 18 years of age and older who visited a dentist in the past year is significantly lower than that of the state or nation. Not surprisingly, the percentage of senior-aged residents who have lost all of their teeth is also much higher than the share of U.S. or Massachusetts seniors (see Figure 35). Several focus group participants noted that affordable dental care is one of the region’s most critical health issues.

<sup>28</sup> The relationship between neonatal outcomes and maternal oral health is further explored here: <http://www.healthypeople.gov/2020/LHI/oralHealth.aspx>.

Figure 35  
Visited a Dentist in the Past Year, 2014



Source: Centers for Disease Control and Prevention 500 Cities Project.

## 6 SUBSTANCE USE DISORDER

There is a critical and growing drug abuse and addiction problem throughout much of the United States. In Massachusetts alone, there were 1,928 confirmed cases of opioid-related deaths in 2017 and the number of confirmed opioid-related overdose deaths increased by 246 percent from 2010 to 2017. For the first nine months of 2018, there were 1,233 confirmed opioid-related overdose deaths statewide, and DPH estimates that there will be an additional 252 to 318 deaths by the end of the year.<sup>29</sup>

The economic consequences of opioid use are also dire. The Massachusetts Taxpayers Foundation estimates that the opioid epidemic cost Massachusetts \$15.2 billion in 2017. The Foundation reports that lost productivity alone cost the state and its employers more than \$2.5 billion, while excess health care costs related to opioid usage are estimated to exceed \$2.0 billion.<sup>30</sup>

It is also crucial to consider the ripple effect that the opioid crisis has on families. It is estimated that one in eight children in the United States lives in a household where at least one parent struggles with substance use disorder.<sup>31</sup> Children growing up with a parent who has substance use disorder tend to have higher needs than other children. They are more likely to be of lower socioeconomic status, struggle in school, face challenges socially, and have higher rates of mental and behavioral disorders compared to children with parents who do not have a substance use disorder.<sup>32</sup>

Parental opioid use disorder, in particular, has far-reaching effects on children. From the start of their lives, children with parents who have opioid use disorder are prone to poor birth outcomes due to prenatal opioid exposure, are more likely to accidentally ingest opioids at a young age, and the daily trauma (e.g., neglect, abuse, domestic violence, parental incarceration) they may face puts them at higher risk of developing behavioral and psychosocial problems later in life.<sup>33</sup> Additionally, the rise in opioid-related deaths has coincided with an increase in children entering foster care. As of 2014, nearly one-third of all children entering foster care in the U.S. had parental opioid use cited as a factor, an increase of 10 percent from 2005. Identifying and connecting these children to services as they move through foster care poses an additional challenge for behavioral health providers.<sup>34</sup>

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<sup>29</sup> Data Brief: Opioid-Related Overdose Deaths among Massachusetts Residents. Massachusetts Department of Public Health. November, 2018.

<sup>30</sup> The Massachusetts Opioid Epidemic. An Issue of Substance. Massachusetts Taxpayers Foundation. 2018.

<sup>31</sup> Lipari, R. & Van Horn, S. (2017). "Children Living with Parents Who Have a Substance Use Disorder." *The CBHSQ Report*. SAMHSA. August 24, 2017.

<sup>32</sup> Peleg-Oren, N. & Teichman, M. (2008). "Young Children of Parents with Substance Use Disorders (SUD): A Review of the Literature and Implications for Social Work Practice." *Journal of Social Work Practice in the Addictions*, 6:1-2, 49-61.

<sup>33</sup> Normile, B.; Hanlon, C.; & Eichner, H. (2018). "State Strategies to Meet the Needs of Young Children and Families Affected by the Opioid Crisis." National Academy for Stat Health Policy. September 2018.

<sup>34</sup> Collier, L. (2018). "Young victims of the opioid crisis." *Monitor on Psychology*. 49:1. Retrieved from: <https://www.apa.org/monitor/2018/01/opioid-crisis.aspx>.

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*For the first nine months of 2018, the Massachusetts Department of Public Health reports that there were 1,233 confirmed opioid-related overdose deaths in Massachusetts.*

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## 6.1 OPIOID-RELATED DEATHS

During the five-year span ranging from 2013–2017, most South Coast communities experienced an increase in the number of opioid-related overdose deaths (see Table 5). In total, 163 opioid-related deaths in the region's communities were confirmed in 2017, which is more than double the number in 2013. The number of opioid deaths in Fall River and New Bedford in 2017 (n=100) is about proportionate to their share of the region's population; the cities' share of the region's population is 54 percent, while the number of opioid deaths among residences of these cities is 61 percent. Table 6 compares data among similarly sized cities.

Table 5  
Number of Opioid-Related Overdose Deaths By South Coast Communities, 2013–2017

	2013	2014	2015	2016	2017	% Change	# Change
*Acushnet	0	1	4	4	7	600%	+7
Dartmouth	2	7	2	9	6	200%	+4
Fairhaven	4	2	7	4	8	100%	+4
Fall River	29	38	40	64	55	90%	+26
*Freetown	0	2	3	3	6	200%	+6
*Marion	0	1	1	1	1	0%	+1
**Mattapoisett	0	0	2	2	1	-50%	+1
New Bedford	29	28	53	57	45	55%	+16
*Rochester	0	1	0	0	2	100%	+2
Somerset	1	2	4	5	5	400%	+4
Swansea	4	5	0	1	5	25%	+1
Wareham	9	10	7	15	16	78%	+7
Westport	2	4	2	4	6	200%	+4
<b>Greater Fall River</b>	36	49	46	74	71	97%	+35
<b>Greater New Bedford</b>	44	52	79	95	92	109%	+48
<b>Massachusetts</b>	961	1362	1704	2096	1938	102%	+977

Source: Massachusetts Department of Public Health, Current Opioid Statistics.

Data represents deaths by city/town of residence for the decedent.

\* % change calculated from 2014. \*\* % change calculated from 2015.

Table 6  
Number of Opioid-Related Overdose Deaths By Selected Communities, 2013–2017

	2013	2014	2015	2016	2017	% Change	# Change	Population
Brockton	39	46	84	69	71	82%	+32	95,161
Fall River	29	38	40	64	55	90%	+26	89,258
Lowell	25	39	62	68	52	108%	27	110,964
Lynn	25	42	47	46	61	144%	36	93,069
New Bedford	29	28	53	57	45	55%	+16	95,125
Quincy	26	38	47	45	40	54%	14	93,824

Source: Massachusetts Department of Public Health, Current Opioid Statistics.

Data represents deaths by city/town of residence for the decedent.

163 opioid-related deaths were confirmed in the region's communities in 2017, which is more than double the number in 2013.

**COMMUNITY ACTIONS AND RESOURCES**

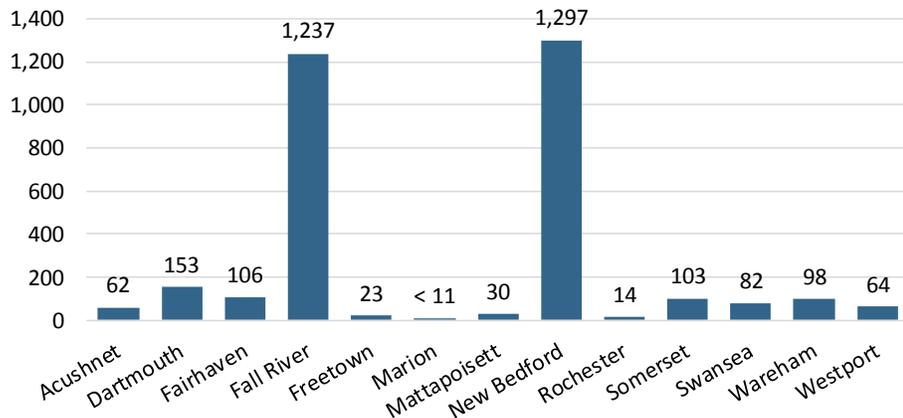
In January 2018, Saint Anne’s Hospital, in collaboration with Steppingstone Peer2Peer Project, launched the Recovery Coach Pilot Program. The program provides patients with substance use disorder with access to a recovery coach while they are in the hospital. Results have been encouraging. Since the program’s launch, over 80 patients have been referred to the program, with most going to treatment after discharge for acute medical conditions. Availability of and wait time for treatment beds are still barriers to recovery.

*New Bedford and Fall River rank fourth and fifth, respectively in Massachusetts in terms of having the highest number of opioid-related hospital discharges.*

**6.2 OPIOID-RELATED HOSPITAL UTILIZATION**

Figure 37 presents the number of opioid-related hospital discharges for South Coast communities (see Figure 37).<sup>35,36</sup> Of all communities statewide, New Bedford and Fall River rank fourth and fifth, respectively in terms of the number of opioid-related hospital discharges. The three cities with higher discharge numbers are Boston, Worcester and Brockton (see Figure 38).

Figure 37  
Number of Opioid-Related Hospital Discharges

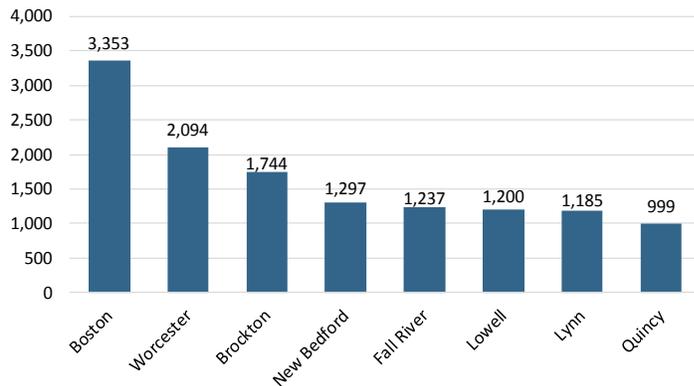


Source: HPC Analysis - CHIA Hospital Inpatient Discharge Database and Emergency Department Database, 2014.

<sup>35</sup> Opioid Use Disorder in Massachusetts: An Analysis of its Impact of the Health Care System, Availability of Pharmacologic Treatment, and Recommendations for Payment and Care Delivery Reform, 2016. Commonwealth of Massachusetts Health Policy Commission.

<sup>36</sup> Hospital discharges include both ED discharges and inpatient discharges and are based on a resident’s ZIP code, not hospital address.

Figure 38  
Number of Opioid-Related Hospital Discharges By Selected Cities



Source: HPC Analysis - CHIA Hospital Inpatient Discharge Database and Emergency Department Database, 2014.

### 6.3 YOUTH ALCOHOL AND DRUG USE

Using drugs and alcohol at any age presents health risks; however using these substances at a younger age can cause more severe negative health outcomes. Data from the Durfee High School (Fall River) *Brief Community Survey* show that, in 2016, the percentage of students who reported that they consumed alcohol sometime in their lifetime was 45.8 percent. Additionally, 40.7 percent of students reported they tried marijuana, 6.5 percent used pain medications that were not intended for them, and 1.2 percent have used heroin. Percentages are fairly similar between males and females, although a higher percentage of females reports alcohol and marijuana use (see Table 7).

Table 7  
Alcohol and Drug Use Among Durfee High School Students  
(Lifetime Prevalence), 2016

	Male	Female	Total
Alcohol	40.9%	49.6%	45.8%
Marijuana	38.6%	42.1%	40.7%
Pain Medications	7.4%	5.5%	6.5%
Heroin	1.6%	0.5%	1.2%

Source: Durfee High School 2016 Brief Community Survey.<sup>37</sup>

<sup>37</sup> The Brief Community Survey (BCS) is conducted for the Massachusetts Department of Public Health (MDPH) Bureau of Substance Abuse Services as part of the Partnerships for Success (PFS) initiative – a federally funded discretionary grant from the Center for Substance Abuse Prevention within the Substance Abuse and Mental Health Services Administration. 1,376 Durfee students completed the BCS in October, 2016.

## Vaping

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*It is estimated that in 2018, more than 3.6 million U.S. youth, including 1 in 5 high school students and 1 in 20 middle school students, use e-cigarettes. Use among high school students increased 78 percent during the past year.*

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Vaping is generally defined as inhaling and exhaling aerosol that is produced by an electronic cigarette or similar device.<sup>38</sup> People may use vaping devices to vape liquids containing nicotine, tetrahydrocannabinol (THC), and other synthetic drugs. There is no local data available on the prevalence of vaping. However, since first being introduced to consumers in 2007, vaping has rapidly grown in popularity.<sup>39</sup> It is estimated that in 2018, more than 3.6 million U.S. youth, including 1 in 5 high school students and 1 in 20 middle school students, use e-cigarettes. Use among high school students increased 78 percent during the past year, from 11.7 percent in 2017 to 20.8 percent in 2018.<sup>40</sup> This represents the largest one-year percentage increase of all substance use in the 43-year history of the Monitoring the Future survey.<sup>41</sup>

Although vaping does not involve inhaling smoke, there are several health concerns associated with vaping liquids. One of the primary concerns with vaping involves the added nicotine that is found in many of the products. Nicotine is a drug that produces both physical and mood-altering effects in the brain that may seem temporarily pleasing. These euphoric effects may encourage first-time users to continue using nicotine products; however several users experience extremely unpleasant withdrawal symptoms, such as irritability and anxiety, when they try to quit.<sup>42</sup> Furthermore, studies suggest that both nicotine and THC can have adverse effects on adolescent, developing brains.<sup>43</sup>

### COMMUNITY ACTIONS AND RESOURCES

The Children's Advocacy Center of Bristol County partnered with the National Association for Children of Addiction to offer training sessions for youth-serving professionals and other community members who interact with children whose parents have substance use disorder. The sessions trained attendees on how to recognize the signs of trauma and adverse childhood experiences, to understand effective strategies to meet the needs of children whose parents have substance use disorder, and to help adults struggling with trauma from substance use become healthier parents.

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<sup>38</sup> Richter, Linda. (2018). "What is vaping?" Center on Addiction. Retrieved from: <https://www.centeronaddiction.org/e-cigarettes/recreational-vaping/what-vaping>.

<sup>39</sup> Cullen KA, Ambrose BK, Gentzke AS, Apelberg BJ, Jamal A, King BA. *Notes from the Field: Increase in use of electronic cigarettes and any tobacco product among middle and high school students – United States, 2011-2018*. MMWR.

<sup>40</sup> Ibid.

<sup>41</sup> For more information on the survey see <http://www.monitoringthefuture.org/>.

<sup>42</sup> Mayo Clinic: Retrieved from <https://www.mayoclinic.org/diseases-conditions/nicotine-dependence/symptoms-causes/syc-20351584>.

<sup>43</sup> Yuan, Menglu. (2015). "Nicotine and the adolescent brain." *The Journal of Physiology*. London.

6.4 NEONATAL ABSTINENCE SYNDROME (NAS)

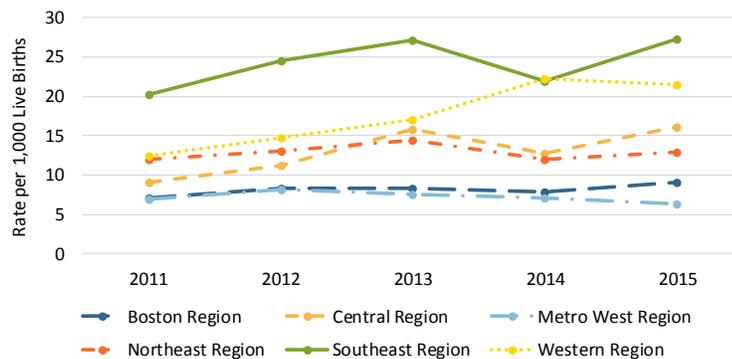
Neonatal abstinence syndrome (NAS) is a group of conditions that babies experience after being exposed to narcotics in the womb. While some drugs are more likely to cause NAS than others, nearly all narcotics have some effect on the infant. Infants born with NAS can have low birth weight, respiratory distress, feeding difficulty, tremors, increased irritability, diarrhea, and occasionally seizures.

NAS is highly prevalent in Massachusetts compared to the nation. Although data are not available at the local level, it is clear that the opioid crisis is impacting newborns in Southeast Massachusetts at a greater rate than elsewhere in the state. As of 2015, the region had the highest rate of infants diagnosed with NAS, with 27.3 babies per 1,000 live births suffering from the syndrome.<sup>44</sup> Comparatively, 14.5 infants per 1,000 births were diagnosed with NAS statewide in 2015. Moreover, these rates are on the rise. Southeast Massachusetts saw a rate of 20.2 NAS diagnoses per 1,000 infants in 2011, indicating a 35 percent increase over this period (see Figure 39).

The cost of treating an infant affected by NAS is estimated to be three times that of treating an otherwise healthy newborn.<sup>45</sup> However, all infants diagnosed with NAS are able to receive Early Intervention (EI) services, which come with no out-of-pocket costs. Unfortunately, only 36.7 percent of infants diagnosed with NAS in Massachusetts were enrolled in an EI program. Southeast Massachusetts had slightly better enrollment in comparison to the state as a whole in 2015, with 39 percent of all infants diagnosed with NAS enrolled in the EI program (see Figure 40).

As of 2015, the region had the highest rate of infants diagnosed with neonatal abstinence syndrome, with 27.3 babies per 1,000 live birth suffering from the syndrome.

Figure 39  
Number of Infant Diagnosed with NAS per 1,000 Live Births By Region, 2015

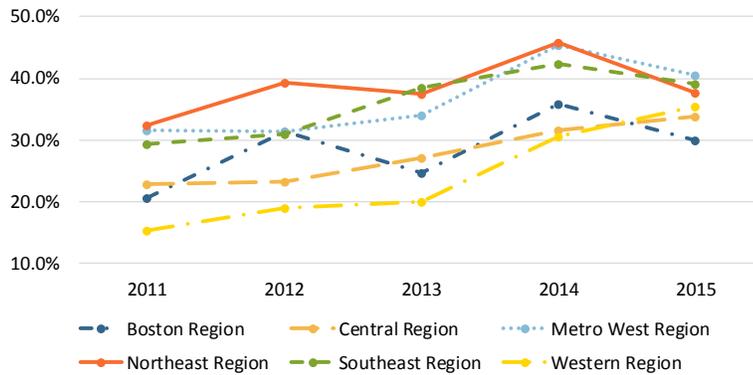


Source: Pregnancy to Early Life Longitudinal Data System (PELL). Retrieved from the Neonatal Abstinence Syndrome Dashboard. Report generated with the latest available data on May 18, 2018.

<sup>44</sup> The Southeast region includes the counties of Bristol, Plymouth, Dukes, Barnstable, and Nantucket. Refer to the Neonatal Abstinence Syndrome Dashboard for more data at <https://cognos10.hhs.state.ma.us/cv10pub/cgi-bin/cognos.cgi/repository/sid/cm/rid/i52F1713856BF460093E5C97D64EA10C4/oid/default/content/mht/content>.

<sup>45</sup> Corr, T. & Hollenbeak, C. (2017). “The economic burden of neonatal abstinence syndrome in the United States.” *Addiction*. 112(9). Retrieved from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/add.13842>.

Figure 40  
Percent of Infants with NAS Enrolled in an  
Early Intervention Program Within 1 Year After Birth, 2015



Source: Pregnancy to Early Life Longitudinal Data System (PELL). Retrieved from the Neonatal Abstinence Syndrome Dashboard. Report generated with the latest available data on May 18, 2018.

**COMMUNITY ACTIONS AND RESOURCES**

In an effort to address the unmet mental health needs of infants and young children, Saint Anne’s Hospital’s Youth Trauma Program (YTP) expanded its age range to now offer clinical services to children from birth to three years old, as well as to their caregivers. YTP now serves children from birth to age 21 who have been impacted by crime related trauma, such as abuse and neglect. In 2017, YTP also brought together providers who work with the birth to five years of age population to increase awareness of infant mental health needs. The Southeastern Massachusetts Infant Mental Health Task Force was also established, which is currently developing a resource guide for parents and providers.

**COMMUNITY ACTIONS AND RESOURCES**

In December 2018, community members came together for a training opportunity to educate professionals on the multi-disciplinary approaches that can be used when working with Drug Endangered Children (DEC). The two-day training gave community members background on the risks and trauma these children face and explained how to collaborate with DEC allies who fall under the umbrella of the National Alliance for Drug Endangered Children.

## 6.5 SUBSTANCE USE DISORDER AND BEHAVIORAL HEALTH

There is a growing population of patients with dual diagnosis, that is, individuals who experience a substance use issue along with a mental health issue. This is often the result of an individual with a mental health issue self-medicating with alcohol or drugs in an effort to improve their mental health symptoms. This patient population presents a new set of challenges to health care systems, which are often not equipped to effectively care for these patients both in terms of adequate staff training or the health care settings themselves. This patient population is also prone to chronic medical conditions due to, and exacerbated by, the chronic neglect of self-care such as COPD, lung cancer, hepatitis, malnutrition, Type 2 diabetes, obesity, and cancer.

In fiscal year 2016, 52 percent of treatment admissions reported to the Massachusetts Department of Public Health Bureau of Substance Addiction Services (BSAS) had a history of mental health treatment.<sup>46</sup> Key informants and focus group members confirmed the link between substance abuse and mental health, noting that it is difficult to treat patients effectively if these issues are not addressed simultaneously. One focus group member also noted that the courts are not working with individuals to distinguish between substance use disorder, mental health issues, and dual diagnosis. Consequently, individuals are not sent to facilities that can provide treatment for their specific condition.

Another focus group member noted that while an individual might be sent to a detox facility, they do not receive the next level of care once they leave the facility. Additionally, an observation was made that recovery is challenging for people who work third shift jobs but want to continue their treatment or to attend support meetings. For example, while the Amazon Fulfillment Center in Fall River has job vacancies, many are for the night shift.

As a whole, patients with comorbid behavioral health conditions also are at higher than average risk of readmission. An analysis by the Massachusetts Center for Health Information and Analysis (CHIA) found that there is a high prevalence of behavioral health comorbidities among hospitalized adults in Massachusetts acute care hospitals and that readmission rates for patients with behavioral health comorbidities were substantially higher than for patients without any behavioral health comorbidity.<sup>47</sup>

For example, the analysis notes that 40 percent of hospitalized patients in acute care hospitals had at least one comorbid behavioral health condition within the one-year study period. This percentage rises to 61 percent for hospitalized Medicaid patients. Hospitalized patients with any behavioral health comorbidity were nearly twice as likely to be readmitted than those without behavioral health comorbidity (20.2% vs. 11.4%), with these rates are higher for Medicaid patients (26.6% vs. 9.0%). The analysis also finds that adults age 18 to 44 with a behavioral health comorbidity were nearly three times more likely to be readmitted (18.0% vs. 6.5%).

Readmission rates for Fall River are similar to the statewide percentages. For Fall River, 27.0 percent of acute hospital readmissions were for patients with co-occurring

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*In fiscal year 2016, 52 percent of treatment admissions reported to the Massachusetts Department of Public Health Bureau of Substance Addiction Services had a history of mental health treatment.*

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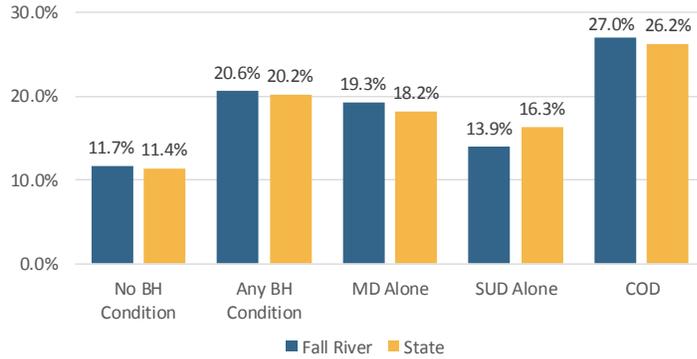
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<sup>46</sup> Massachusetts Department of Public Health. *Massachusetts State Health Assessment*. Boston, MA; October 2017.

<sup>47</sup> Behavioral Health & Readmissions in Massachusetts Acute Care Hospitals. August 2016. Center for Health Information and Analysis (CHIA).

mental/substance abuse disorders, which compares to 26.2 percent statewide. These percentages are more than twice the percentage of hospital readmissions for patients with no behavioral health condition (11.7% and 11.4% respectively) (see Figure 41).

Figure 41  
Statewide Prevalence of Behavioral Health Comorbidity and Readmission Rates among Patients in Acute Care Hospitals



Source: Massachusetts Hospital Inpatient Discharge Database, July 2013 - June 2014. Analysis by Massachusetts CHIA. Analyses include discharges for adults with any payer, excluding discharges for obstetric. BH=Behavioral Health, MD=Mental disorders, SUD=Substance use disorders, COD=Co-occurring mental/substance use disorders.

**COMMUNITY ACTIONS AND RESOURCES**

In February 2018, Saint Anne’s Hospital opened a new dedicated Emergency Department Behavioral Health Suite with six private rooms, demonstrating increased commitment to the unique needs of patients with behavioral health disorders. This new area has been designed in response to the nationwide growth in the number of behavioral health patients being cared for in Emergency Departments, and the longer stays these patients experience awaiting a bed in an appropriate treatment facility. Its calming, safe, and secure design includes built-in TVs and in-room emergency equipment, such as medical gases and other equipment, secured behind a rolling protective door. The goal remains to transfer the patient to the appropriate care setting for treatment. In 2017, the number of behavioral health evaluations completed by licensed social workers (Behavioral Health Navigators) based in Saint Anne’s Hospital Emergency Department increased by 64 percent over the prior year. The numbers in 2018 continue to trend upward.

## 7 WELLNESS AND CHRONIC DISEASE

In Massachusetts, chronic disease contributes to 56 percent of overall mortality and accounts for approximately \$30.9 billion in health care expenditures alone.<sup>48</sup> While some chronic conditions are genetic, social and environmental factors can elevate the risk of contracting chronic diseases such as cancer, diabetes, respiratory disease, and cardiovascular disease. Many unhealthy behaviors that contribute to chronic disease are more prevalent among people of lower socioeconomic status. For instance, the percentage of people who smoke cigarettes, which has been identified as a contributor to numerous chronic health conditions, is roughly double among people below the federal poverty level in comparison to people in higher income brackets.<sup>49</sup>

As demonstrated earlier in Section 3 of this report, the region served by Saint Anne's Hospital exhibits many health inequities as a result of the social determinants of health, including much higher poverty rates and lower levels of education in comparison to the state overall. Key informant interviews and focus groups brought these issues into greater focus by highlighting the challenges faced by residents of low socioeconomic status in the region. Therefore, it is not surprising that the following health outcomes related to chronic disease and wellness are generally poor when compared to state and national averages. Indeed, turning these health trends around will require more than just offering treatment and preventive care; it will also require addressing the social environment that contributes to health inequities.

### 7.1 ALCOHOL AND TOBACCO USE

Simply put, unhealthy behaviors lead to poor health outcomes. Binge drinking, defined by the CDC as drinking five or more drinks on an occasion for adult men or four or more drinks on an occasion for adult women, is associated with an increased risk of many health problems, such as liver disease, stroke, cancer, and unintentional injuries. Unlike most of the health indicators included in this report, binge drinking is actually more common among people with household incomes of \$75,000 or more and higher educational levels. However, more binge drinks are consumed per year among binge drinkers with lower incomes and educational levels.<sup>50</sup>

The harmful effects of smoking are well known. Nearly one in five deaths can be linked to smoking. In addition, the CDC reports that:

- Smoking causes about 90 percent of all lung cancer deaths.
- Smoking causes about 80 percent of all deaths from chronic obstructive pulmonary disease (COPD).
- Cigarette smoking increases risk for death from all causes in men and women.

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<sup>48</sup> Massachusetts Department of Public Health. *Massachusetts State Health Assessment*. Boston, MA; October 2017.

<sup>49</sup> Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion. "Cigarette Smoking and Tobacco Use Among People of Low Socioeconomic Status." August 21, 2018.

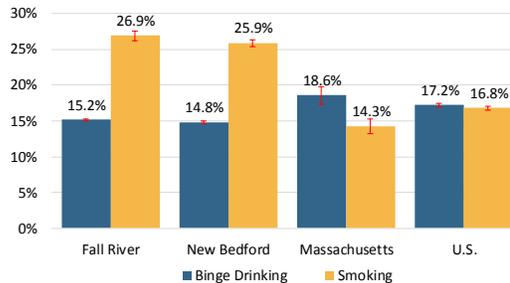
<sup>50</sup> Kanny D, Naimi TS, Liu Y, Lu H, Brewer RD. Annual Total Binge Drinks Consumed by U.S. Adults, 2015. *Am J Prev Med* 2018;54:486–496.

- The risk of dying from cigarette smoking has increased over the last 50 years in the U.S.<sup>51</sup>

The percentage of adults in Fall River (15.2%) and New Bedford (14.8%) who report binge drinking is lower than the state (18.6%) and national percentages (17.2%). Conversely, smoking prevalence in Fall River (26.9%) and New Bedford (25.9%) remains higher than that of the state (14.3%) and country as a whole (16.8%) (see Figure 42).

*The percentage of Fall River and New Bedford adults who smoke remains higher than the percentages statewide and nationally.*

Figure 42  
Share of Individuals Reporting Binge Drinking or Smoking, 2015



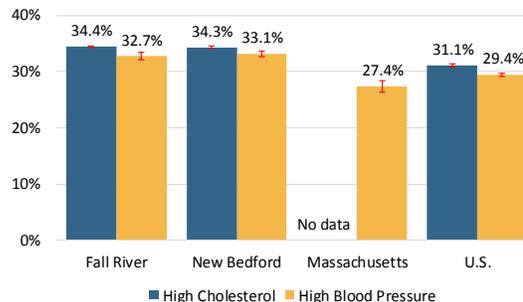
Source: Centers for Disease Control and Prevention 500 Cities Project.

## 7.2 HIGH CHOLESTEROL AND HIGH BLOOD PRESSURE

High blood pressure and cholesterol are strongly linked to other negative health outcomes such as heart disease. Several focus group respondents emphasized the importance of implementing educational programs to inform residents about proper nutrition and healthy lifestyle choices in order to prevent these dangerous conditions and diseases. The percentage of individuals with high cholesterol is generally similar in Fall River (34.4%), New Bedford (34.3%), and the United States (31.1%) (Massachusetts data not available). Additionally, the percentage of adults reporting having high blood pressure is slightly higher in the South Coast’s cities than the state and nation as a whole (see Figure 43).

*35.7% of Fall River’s adults and 36.4% of New Bedford’s adults have not engaged in any form of leisure time physical activity in the past month.*

Figure 43  
Adults Report having High Blood Pressure or High Cholesterol, 2015



Source: Centers for Disease Control and Prevention 500 Cities Project.

<sup>51</sup> U.S. Department of Health and Human Services. (2014). *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*. Atlanta.

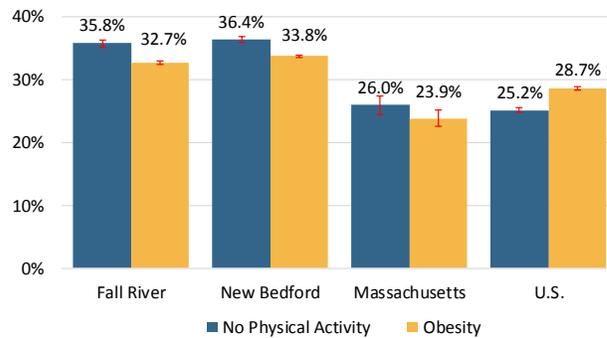
7.3 PHYSICAL ACTIVITY AND OBESITY

35.8 percent of Fall River’s adults and 36.4 percent of New Bedford’s adults have not engaged in any form of leisure time physical activity in the past month.

Along with a poor diet, a lack of physical activity can lead to a person being overweight or obese. Individuals who are obese are at a higher risk for a variety of health factors including high blood pressure, coronary heart disease, stroke, sleep apnea, and some cancers.<sup>52</sup> Obesity can also be a factor in higher rates of mental illness such as clinical depression, anxiety, and other mental disorders.<sup>53 54</sup>

Relative to the state and nation, a comparatively large proportion of residents living in the South Coast’s cities report they have not been physically active during their leisure time in the past month. More than 35 percent (35.8%) of Fall River’s adults and 36.4 percent of New Bedford’s adults have not engaged in any form of leisure time physical activity in the past month, which is greater than both the statewide (26.0%) and national percentages (25.2%). Not surprisingly, obesity rates are also much higher; 32.7 percent of Fall River adults and 33.8 percent of New Bedford adults are obese, which compares to 23.9 percent of Massachusetts residents and 28.7 percent of adults nationally (see Figure 44).

Figure 44  
Physical Activity and Obesity, 2015



Source: Centers for Disease Control and Prevention 500 Cities Project.

32.7 percent of Fall River adults and 33.8 percent of New Bedford adults are obese, which compares to 23.9 percent of Massachusetts residents and 28.7 percent of adults nationally.

Childhood Obesity

Childhood obesity can result in both near- and long-term health issues. Chronic disease has been found to be more likely among children with obesity. These include asthma, sleep apnea, diabetes, and heart disease. There are mental health concerns as well, since children with obesity are bullied more than their peers and are more likely to suffer from low self-esteem and depression. Additionally, childhood obesity is a predictor of adult obesity and higher risk for associated health issues.<sup>55</sup>

<sup>52</sup> NHLBI. 2013. Managing Overweight and Obesity in Adults: Systematic Evidence Review from the Obesity Expert Panel.

<sup>53</sup> Kasen, Stephanie, et al. “Obesity and psychopathology in women: a three decade prospective study.” International Journal of Obesity 32.3 (2008): 558-566.

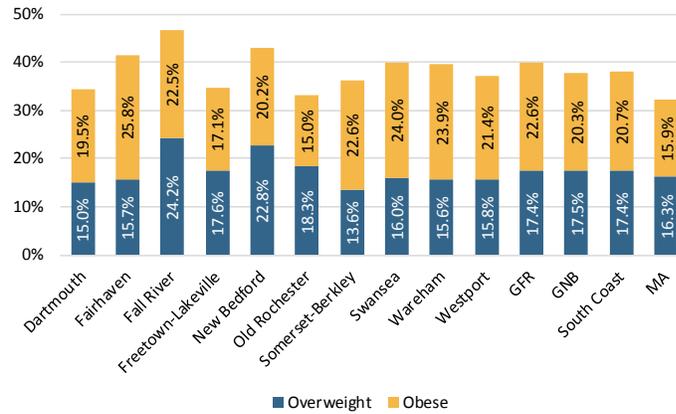
<sup>54</sup> Luppino, Floriana S., et al. “Overweight, obesity, and depression: a systematic review and meta-analysis of longitudinal studies.” Archives of general psychiatry 67.3 (2010): 220-229.

<sup>55</sup> Refer to the CDC’s Childhood Obesity Facts at <https://www.cdc.gov/healthyschools/obesity/facts.htm>.

Nationally, instances of childhood obesity have more than tripled since the 1970s, with obesity being prevalent among 18.5 percent of school age children.<sup>56</sup> Statewide, nearly one-third (32.2%) of all public school students are either overweight (16.3%) or obese (15.9%) (see Figure 45).<sup>57</sup> The percentage of overweight or obese public school children in most South Coast school districts is above the state average.

*The percentage of overweight or obese public school children in most South Coast school districts is above the state average.*

Figure 45  
BMI Readings By School District, 2014-2015 School Year<sup>58</sup>



Source: BMI Data Tables, via Massachusetts Department of Public Health.

Although many factors contribute to childhood obesity, such as genetics and environment, energy imbalance, or consuming more energy from foods than the body uses for healthy functioning over the course of the day, is seen as the single greatest influence of obesity worldwide and nationally. While community health care providers, parents, and other adults may not be able to change the genetic and the built environment, they can be influential by providing healthy food options and encouraging a minimum of 60 minutes of daily physical activity. Beginning these habits early in life can be beneficial in preventing obesity in adulthood.<sup>59</sup>

<sup>56</sup> Hales, C. et al. (2017). “Prevalence of Obesity Among Adults and Youth: United States 2015-2016,” *NCHS Data Brief No. 288*. CDC. October 2017. Retrieved from: <https://www.cdc.gov/nchs/data/databriefs/db288.pdf>.

<sup>57</sup> “Results from the Body Mass Index Screening in Massachusetts Public School Districts, 2014” August 2015. Data for Acushnet was reported only for the sum of overweight/obese (30.2%).

<sup>58</sup> BMI is measured as follows: <18.5 = underweight; 18.5 to 24.9 = healthy; 25 to 29.9 = overweight; >30 = obese.

<sup>59</sup> Hales, et al. (2017). *Prevalence of Obesity Among Adults and Youth: United States, 2015–2016*. U.S. Department of Health and Human Services.

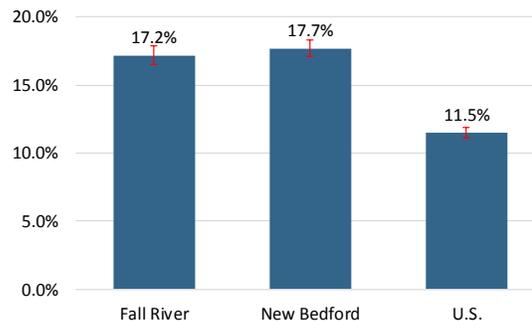
#### COMMUNITY ACTIONS AND RESOURCES

The Fall River YMCA's "Active Science" program is an innovative, grass roots, and evidence-based initiative that provides a practical solution to successfully promote three important and interrelated national priorities: Improving/increasing physical activity, combating childhood obesity, and addressing the educational achievement of school-age children. In Active Science, children wear activity devices to monitor their own exercise data.

#### 7.4 POOR PHYSICAL HEALTH

With a higher percentage of Fall River and New Bedford residents who smoke, are less physically active, and are obese, it is not surprising that a higher percentage of these residents report having more than 14 days per year with poor physical health in comparison to the national average (data for Massachusetts not available) (see Figure 46).

Figure 46  
Adults Reporting Poor Physical Health for at Least 14 Days, 2015



Source: Centers for Disease Control and Prevention 500 Cities Project.

#### 7.5 DISEASE PREVALENCE

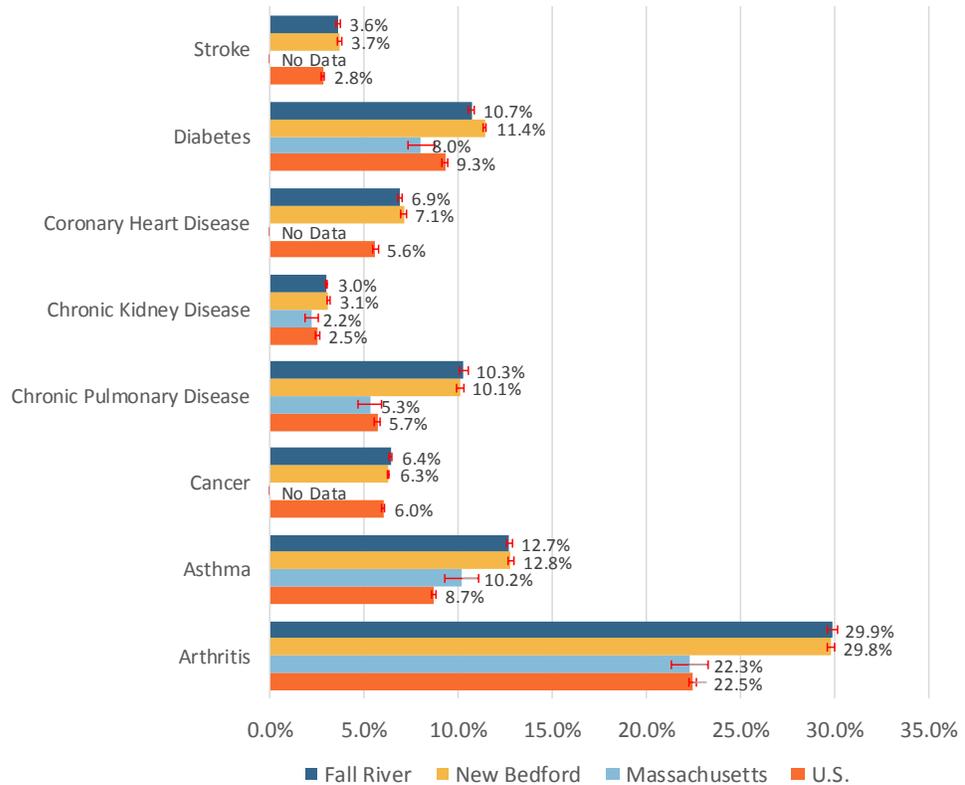
Figure 47 compares disease prevalence for eight types of diseases. In each instance, the disease prevalence is higher for Fall River and New Bedford in comparison to the state and national averages. Most notably, the share of individuals who have chronic obstructive pulmonary disease in Fall River (10.3%) and New Bedford (10.1%) is nearly double that of the state (5.3%) and nation (5.7%). Higher rates of disease prevalence can be linked to many of the unhealthy behaviors presented in the previous sections, including higher rates of smoking, poor nutrition, lack of exercise, and environmental factors.

As discussed earlier, New Bedford and Fall River have higher shares of low-income residents and lower levels of educational attainment compared to the state. Given what we understand about the social determinants of health, it is expected that health

inequities exist in the cities and these expectations are confirmed by the higher prevalence of chronic diseases relative to the state and the nation. Again, these disparities speak not only to the need for preventative care and treatment of chronic diseases, but also addresses the social determinants that contribute health inequities in the region.

A key theme from the focus groups and key informant survey is that many South Coast residents face a myriad of challenges in terms of maintaining overall health and adopting healthy habits that help to prevent or manage disease. A primary factor is that for many residents, health and wellness fit within a larger framework of day to day obligations, ranging from issues such as housing, finances, and childcare, to transportation, employment, immigration, and safety. These themes are common and have been echoed in other health efforts undertaken in the region. As one focus group member noted, "residents are primarily concerned with providing for their families and their health needs come second, if at all."

Figure 47  
Disease Prevalence, 2015



*Disease prevalence is higher for Fall River and New Bedford in comparison to the state and national averages.*

Source: Centers for Disease Control and Prevention 500 Cities Project.

## 7.6 MENTAL HEALTH

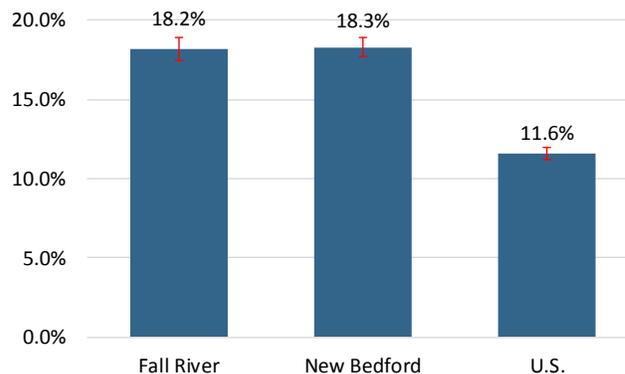
*Mental health issues were cited by key informants as a primary health challenge in the region.*

The importance of remedying the health inequities in the region by addressing the social determinants of health has been discussed throughout this report, and mental health care is no exception. Indeed, social inequities have been associated with increased risk of common mental health disorders, and the stigma associated with seeking treatment for mental and behavioral health issues often prevents those in need of care from seeking it.<sup>60</sup> In a region with low levels of educational attainment and high levels of poverty, there are many social factors that influence not only mental health but community perceptions on receiving treatment.<sup>61</sup> Moreover, addressing mental health needs is an important undertaking for local health care providers because evidence shows that common mental health disorders, such as depression, are associated with an increased risk of poor physical health and chronic illness.<sup>62</sup>

In addition, as noted earlier, there is a growing population of patients in Massachusetts who experience a substance use issue along with a mental health issue. A primary goal of the Massachusetts Department of Public Health and health systems across the state is to address this issue by improving coordination between substance use disorder and mental health issues.

In the South Coast, data show that a greater percentage of Fall River (18.2%) and New Bedford (18.3%) residents report having more than 14 days per year with poor mental health in comparison to the national average (11.6%) (data for Massachusetts not available) (see Figure 48).

Figure 48  
Adults Reporting Poor Mental Health for at Least 14 Days, 2015



Source: Centers for Disease Control and Prevention 500 Cities Project.

<sup>60</sup> World Health Organization & Calouste Gulbenkian Foundation. (2014). *Social determinants of mental health*. Geneva, WHO.

<sup>61</sup> Mechanic, D. & McAlpine, D. (2002). "The Influence of Social Factors on Mental Health." *Principles and Practice of Geriatric Psychiatry*.

<sup>62</sup> Refer to the Office of Disease Prevention and Health Promotion's Healthy People 2020 resources on mental health at <https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Mental-Health>.

**COMMUNITY ACTIONS AND RESOURCES**

The Fellowship Health Resource’s (FHR) “Wellness Workouts Supporting Mental Health Recovery” program works with persons in Fall River with mental illness and drug addiction disorders. FHR would use funds from the United Way of Greater Fall River to fund discounted YMCA membership for people served in Fall River in programs including the FHR’s vocational-based Clubhouse in Fall River.

*In 2016, more than 1 in every 10 Durfee High School students surveyed reported that they seriously considered attempting suicide within the previous 12 months.*

Having days of poor mental health can put individuals at a greater risk for developing negative, and possibly suicidal, thoughts. This is true for both adults and youth. The National Institute of Mental Health reports that suicide is the third leading cause of death in 15 to 24 year olds and the strongest risk factors for attempted suicide in youth are depression, substance abuse, and aggressive or disruptive behaviors.

Data from the Durfee High School *Brief Community Survey* highlights how mental issues can affect youth. In 2016, more than 1 in every 10 Durfee High School students surveyed (11.1%) reported that they seriously considered attempting suicide within the previous 12 months, while 3.3 percent actually attempted suicide. The percentage of females (14.8%) that considered attempting suicide is more than double the percentage for males (7.1%) (see Table 8).

Table 8  
% of Durfee High School Students Who Have Seriously Considered or Attempted Suicide, 2016

	Male	Female	Total
Seriously considered attempting suicide during past 12 months	7.1%	14.8%	11.1%
Actually attempted suicide	2.4%	3.9%	3.3%

Source: Durfee High School 2016 Brief Community Survey.

Additionally, mental health issues can cause individuals to inflict harm upon themselves without necessarily attempting suicide. In 2016, 14.7 percent of the surveyed students at Durfee High School indicated that they had injured themselves at least one time without wanting to die (see Table 9). Focus group participants noted that one solution to address mental health is for schools to sponsor mental health awareness programs for youth and their families. Doing so would help community members to gain a better understanding of mental illness, the stigma attached to mental illness, and the resources available in the community.

Table 9  
 % of Durfee High School Students Who Have  
 Injured themselves on Purpose without Wanting to Die, 2016

	Count	0 Times	1 Time	2-3 Times	4-5 Times	6+ Times	N/A
<b>All Cases</b>	1376	84.2%	4.9%	5.5%	1.2%	3.1%	1.2%

Source: Durfee High School 2016 Brief Community Survey.

**COMMUNITY ACTIONS AND RESOURCES**

Conceived and developed by Greater Fall River Partners for a Healthier Community, United Neighbors of Fall River and Greater Fall River Recreation, along with administrative staff from Henry Lord Community School, the TRUCE (The Respectful, Understanding, Community Engagement) Center is a free, afterschool program that provides academic support, enrichment activities and social interaction for at-risk students in Grades 5 through 8 in the underserved south end of Fall River.

## 8 MATERNAL, INFANT, AND CHILD HEALTH

Women who have access to adequate health resources and health information are more likely to have healthy infants and be able to successfully care for their children immediately following birth as well as later on in their child’s life. Family planning centers or doctors’ offices for women and infants are important community resources for women to have access to before, during, and after their pregnancy. The nutrition, health, and well-being of a child are all affected by maternal care in utero and at the earliest stages of infancy. For example, health care providers in the region are increasingly treating infants with neonatal abstinence syndrome (NAS), as these infants will often face significant health problems in the early years of their lives.<sup>63</sup>

Infant and maternal mortality rates can highlight disparities among regions that have high or low social, economic, and environmental factors within them that might affect the health and safety of mothers and infants. In Massachusetts, factors such as race, ethnic background, and economic status play a role in determining to which resources mothers and their children will have access. This can lead to increased or decreased success in the child’s opportunities to remain healthy and to practice healthy behaviors.

### 8.1 NEONATAL OUTCOMES

In both Fall River and New Bedford, levels of neonatal care and neonatal outcomes are less favorable in comparison to Massachusetts as a whole.

- The percentage of mothers receiving prenatal care is higher in both Fall River (84.9%) and New Bedford (87.8%) in comparison to the statewide average (78.1%).
- The percentage of babies born with a low birth weight (defined as being born before 37 weeks gestation) is higher in both Fall River (8.3%) and New Bedford (8.4%) in comparison to the statewide average (7.8%) and these percentages have increased since 2010.
- The prevalence of gestational diabetes in both Fall River (9.2%) and New Bedford is higher (6.4%) in comparison to the statewide average (6.0%) and these percentages have increased since 2010 (see Table 10).

Table 10  
Neonatal Outcomes, 2010–2015

	Adequate Prenatal Care		Low Birthrate (<2,500 g)		Gestational Diabetes	
	2010	2015	2010	2015	2010	2015
Fall River	86.4%	84.9%	8.8%	8.3%	7.5%	9.2%
New Bedford	86.8%	87.8%	7.6%	8.4%	4.9%	6.4%
Massachusetts	81.1%	78.1%	7.8%	7.8%	4.7%	6.0%

Source: Massachusetts Birth Report, via Massachusetts Perinatal Quality Collaborative.

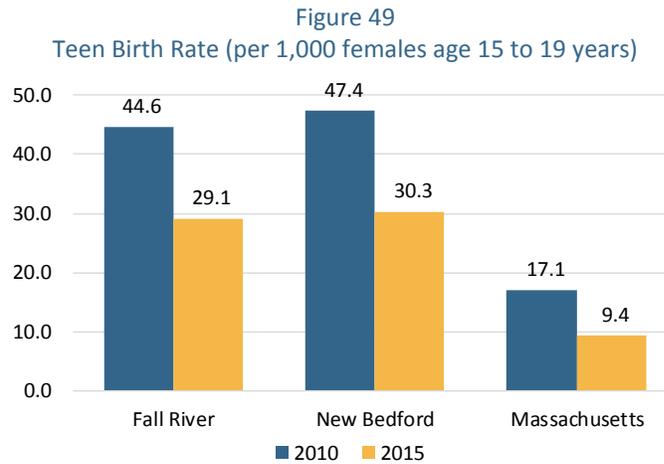
*In both Fall River and New Bedford, levels of neonatal care and outcomes are less favorable in comparison to Massachusetts as a whole.*

<sup>63</sup> More information about NAS can be found in Section 7.4.

## 8.2 TEEN BIRTHS

The teen birth rate declined in both Fall River and New Bedford from 2010 to 2015, although the rate is still significantly higher than the statewide rate (see Figure 49).<sup>64</sup> While data are not available at the local level, disparities are evident at the state level, with Hispanic teen birth rate more than seven times that of White, non-Hispanic teens.<sup>65</sup>

*The teen birth rate declined in both Fall River and New Bedford from 2010 to 2015, although the rate is still significantly higher than the statewide rate.*



Source: Massachusetts Birth Report, via Massachusetts Perinatal Quality Collaborative.

## 8.3 LEAD EXPOSURE

Massachusetts lead regulation (105 CMR 460.050) requires that all children be tested for blood lead between the ages of nine and twelve months, and again at ages two and three. Additionally, it is recommended that children should be tested again at age four if they live in a high-risk community. Table 11 presents childhood lead screening percentages, prevalence by blood lead levels, and prevalence for estimated confirmed and confirmed blood lead levels. The number of reported lead poisoning cases among children aged nine to forty-seven months of age dropped in both Fall River and New Bedford from 2010 to 2017. However, the share of children tested during this period also declined in both cities (see Table 10).

<sup>64</sup> Rates are per 1,000 females ages 15-19 per city/town. MADPH calculates city/town birth rates using DPH’s Race Allocated Census 2010 Estimates. Importantly, if the population of a community increased from 2010 to 2015, the rates listed may overestimate the actual rate. If the population in your community declined from 2010 to 2015, the rates given in the publication may underestimate the actual rate.

<sup>65</sup> *Massachusetts Births, 2015*. Massachusetts Department of Public Health. March 2017.

Table 11  
Number of Children 9-47 Months of Age Diagnosed with Lead Poisoning, 2010–2017

		2010	2011	2012	2013	2014	2015	2016	2017
Fall River	Number <sup>66</sup>	25	14	10	9	9	10	14	14
	% Screened <sup>67</sup>	78.0%	75.0%	75.0%	71.0%	70.0%	77.0%	78.0%	75.0%
New Bedford	Number	48	29	32	33	26	26	33	33
	% Screened	89.0%	90.0%	88.0%	88.0%	86.0%	85.0%	84.0%	80.0%

Source: Childhood Lead Poisoning Prevention Program, via Massachusetts Bureau of Environmental Health.

*The number of reported lead poisoning cases among children aged 9 to 47 months of age dropped in both Fall River and New Bedford from 2010 to 2017.*

**COMMUNITY ACTIONS AND RESOURCES**

Child & Family Services, Inc., along with United Neighbors, hosts the “Parent Café 2.0” program helping parents develop the skills and support needed to keep their families strong by bringing parents together to connect with each other, develop a network of support, and discuss challenges in a non-threatening environment. Parent Cafés build parental skills focused on parenting a child in a safe way, aid in the prevention of child abuse and neglect, and provide parents with resources to help them take care of themselves.

<sup>66</sup> The Childhood Lead Poisoning Prevention Program defines lead poisoning as a blood lead level  $\geq 10 \mu\text{g/dL}$ .

<sup>67</sup> The percentage of children 9 to 47 months of age who were screened for lead poisoning in the given calendar year.

## 9 ENVIRONMENTAL HEALTH

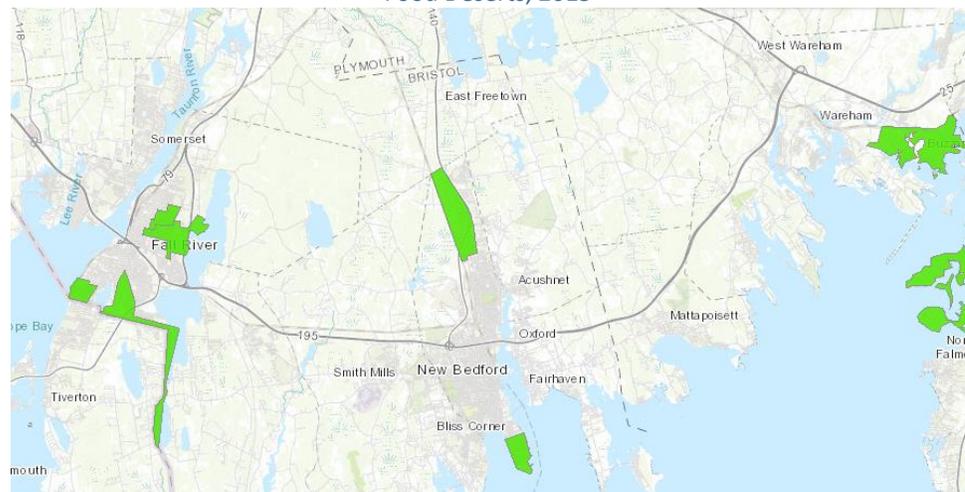
A person's physical environment can profoundly affect health outcomes. Environmental factors that affect health outcomes include, but are not limited to, access to healthy food, air quality, water quality, and environmental contamination. In particular, exposure to contaminants through pathways from the air, water, soil, and food can lead to extreme health issues.

### 9.1 FOOD DESERTS

A person's nutrition can affect other many health outcomes such as oral health, obesity, cholesterol, and blood pressure. Generally, people who have less access to healthy food options have higher levels of negative health outcomes within these categories. Access is also exacerbated by a lack of education related to nutrition. Multiple focus group participants mentioned that the Greater Fall River region would benefit from offering residents more educational programs related to nutrition.

Food deserts, as defined by the American Nutrition Association, are areas that lack fresh fruits, vegetables, and other wholesome foods.<sup>68</sup> More specifically, supermarkets and grocery stores are typically not located within food deserts. Instead, these areas tend to have more convenience stores, which generally offer more expensive and unhealthy food options. Areas highlighted in green in Figure 50 display low-income census tracts where a significant number or share of residents is more than one mile (urban) or ten miles (rural) from the nearest supermarket.

Figure 50  
Food Deserts, 2015



Source: United States Department of Agriculture, Economic Research Service, Low Income and Low Access, 2015

<sup>68</sup> For more information on food deserts see: <http://americannutritionassociation.org/newsletter/usda-defines-food-deserts>.

## 9.2 WALK SCORE

Walking has the potential to confer beneficial effects for health, personal finances, the environment, and more. Walkable communities may also allow residents to reduce or even eliminate their use of automobiles, typically the second largest household expense in the U.S. Both also convey immediate benefits to the environment since, unlike motorized transportation, walking produces no pollutants.

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*Both Fall River and New Bedford are characterized as “somewhat walkable” cities.*

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The Public Policy Center uses the U.S. Department of Transportation's definition of walkability, which is: “A walkable community is one where it is easy and safe to walk to goods and services (i.e., grocery stores, post offices, health clinics, etc.). Walkable communities encourage pedestrian activity, expand transportation options, and have safe and inviting streets that serve people with different ranges of mobility.” Walkability is based on the *Walk Score* of a city and its neighborhoods. The website WalkScore.com has developed algorithms to score the walkability of a city, zip code, or even a specific address based on various factors, and it is increasingly being used as a standard of measurement. A location's Walk Score is based on the following scale:

- 90-100: “Walker's Paradise” – Daily errands do not require a car
- 70-89: “Very walkable” – Most errands can be accomplished on foot
- 50-69: “Somewhat walkable” – Some amenities within walking distance
- 25-49: “Car-dependent” – A few amenities within walking distance
- 0-24: “Car-dependent” – Almost all errands require a car

In Fall River, the average city-wide WalkScore is 65 out of a possible score of 100, which is characterized as “somewhat walkable.” In New Bedford, the average city-wide WalkScore is 66 out of a possible score of 100, which is also characterized as “somewhat walkable.”

### COMMUNITY ACTIONS AND RESOURCES

Fall River's Quequechan River Rail Trail was one of five finalists for the Urban Land Institute's Urban Open Space Award. The Quequechan River Rail Trail provides approximately 2.5 miles of trails to pedestrians and bicyclists, running through three low-income neighborhoods. A health impact assessment revealed a 66 percent increase in walking and biking as a direct result of the rail trail.

### 9.3 ENVIRONMENTAL EXPOSURES

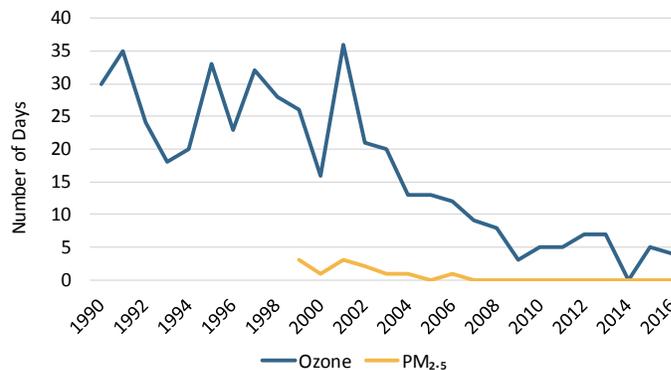
#### Air Quality

Air quality is directly linked to respiratory and cardiac health. It can also influence the prevalence of asthma, bronchitis, nervous system and organ damage, cancer, and other cardiovascular issues. In particular, high concentrations of air pollutants can trigger heart attacks and/or aggravate asthma and other respiratory issues.

Air quality is measured using ozone levels and particulate matter in the air (PM<sub>2.5</sub>). Limits are established by the Environmental Protection Agency (EPA) and are known as National Ambient Air Quality Standards (NAAQS).<sup>69</sup> When air pollutant concentrations are greater than the NAAQS, human health can be compromised. Figure 51 displays the number of days per year in which each type of pollutant had exceeded their allowable concentrations in Bristol County. The number of days exceeding EPA standards has been falling since 2001, which can be partly attributed to the continued decline of the region’s traditional manufacturing base and the closing of the Montaup and Brayton Point power plants, which were responsible for the majority of airborne chemical releases.

*Air quality can influence the prevalence of asthma, bronchitis, nervous system and organ damage, cancer, and other cardiovascular issues.*

Figure 51  
Number of Days over NAAQS, Bristol County, 1990–2016



Source: Massachusetts Department of Public Health, Bureau of Environmental Health, Outdoor Air Quality, 1990–2016.

#### Drinking Water Quality

The Massachusetts Department of Public Health’s Bureau of Environmental Health (BEH) tracks nine different contaminants in public community water sources, although lead and trihalomethane (THM) have been the only two sources of violations from 2000 to 2014.<sup>70</sup> Exposure to lead is particularly harmful to unborn babies and young children, while THMs

<sup>69</sup> For ozone levels, the standard demands that the measurements cannot exceed 0.070 parts per million every eight hours and particle pollution (PM<sub>2.5</sub>) cannot exceed 35 micrograms/meter<sup>3</sup> every 24 hours. If a pollutant exceeds their allowance, it is recorded as a day in which the national standards were not met. See Massachusetts Department of Public Health, Bureau of Environmental Health, EPHT website at <https://matracking.ehs.state.ma.us/Environmental-Data/Air-Quality/index.html>.

<sup>70</sup> The BEH tests for arsenic, atrazine, DEHP, disinfection byproducts, lead, nitrates, PCE (tetrachloroethylene), TCE (trichloroethylene), and uranium.

have been associated with harmful health effects such as cancer and negative reproductive outcomes. Between 2000 and 2014 in Bristol County, 15 lead violations were reported and only 1 trihalomethane violation was reported.

#### 9.4 ENVIRONMENTAL CONTAMINATION

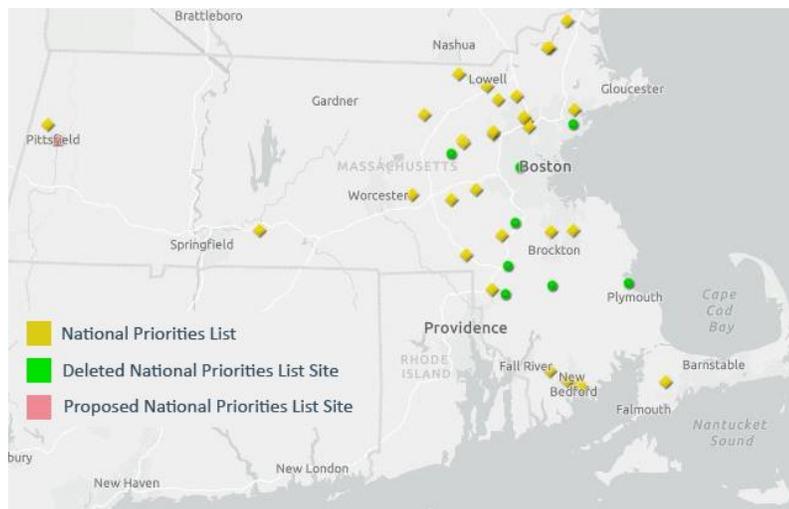
Exposure to environmental contamination can have an adverse effect on public health, including from pollutants in the air, soil, or water. Environmental contamination is often linked with health disparities, since many polluted sites are located in poorer communities. Pregnant women, children, and the elderly are at particular risk.

##### Superfund Sites

Superfund sites are brownfield sites that have been determined to contain enough contamination and risk that they qualify to receive federal cleanup funds. The South Coast is home to 4 of the state's 31 Superfund sites<sup>71</sup> (see Figure 52).

*The South Coast is home to 4 of the state's 31 Superfund sites.*

Figure 52  
Superfund Sites



Source: United States Environmental Protection Agency.

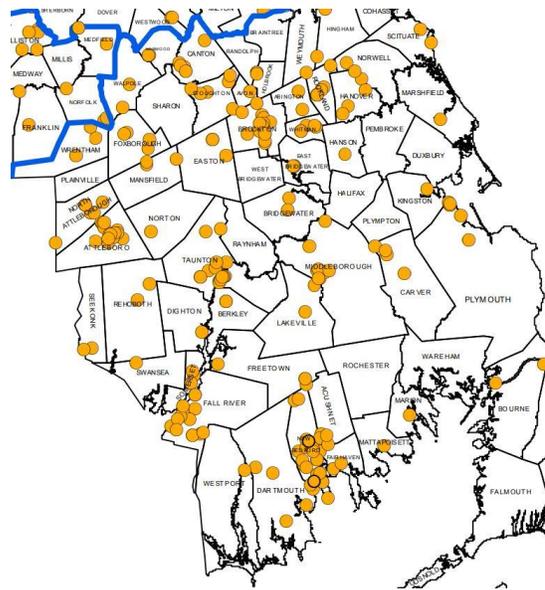
<sup>71</sup> The South Coast's superfund sites are located in Dartmouth (1), Fairhaven (1), New Bedford (2).

Brownfield Sites

The Massachusetts Department of Environmental Protection (DEP) tracks the number of brownfield sites, which are sites that contain contamination but pose less overall risk than Superfund Sites. The South Coast is home to 57 of the state’s 1,012 brownfield sites. Twelve of these are located in Fall River and 28 are located in New Bedford (see Figure 53). On a per square mile and per 1,000 population basis, these cities have higher ratios of brownfield sites compared to the state (see Table 12).

*The South Coast is home to 57 of the state’s 1,012 brownfield sites. Twelve of these are located in Fall River and 28 are located in New Bedford.*

Figure 53  
Brownfield Sites in Southeastern Massachusetts



Source: Massachusetts Department of Environmental Protection.

Table 12  
Prevalence of Brownfield Sites, As of May 2017

	# of Sites	# of Sites per Sq. Mi.	# of Sites per 1,000 Population <sup>72</sup>
Fall River	12	0.3	0.13
New Bedford	28	1.2	2.94
Massachusetts	1,012	0.1	0.15

Source: Massachusetts Department of Environmental Protection Brownfields Sites Tool.

<sup>72</sup> ACS 1-year Estimates are used for the population figures.

## APPENDIX A – FOCUS GROUP DISCUSSION GUIDE AND QUESTIONS

Saint Anne's Hospital staff, with involvement from the Greater Fall River Partners for a Healthier Community (CHNA25), the United Way of Greater Fall River, and United Interfaith Action (UIA), conducted five focus groups between May 2018 and August 2018 to further assess the health needs of Greater Fall River's residents (see Table 13). Each focus group team included a leader and two recorders. Participants were given the option to complete a survey after the focus group to ascertain more specific information regarding the health needs of residents. A total of 84 surveys were completed (see Appendix B). Focus group questions were grouped under five categories: general community questions, identifying top issues, addressing top health issues, barriers and challenges, and opportunities.

Table 13  
Focus Groups

Date	Description
5/3/2018	Group consisted of 35 Fall River residents of the South End Neighborhood Group. The mixed population group was convened by State Representative Alan Silvia.
6/2/2018	Group consisted of approximately 25 Brazilian community members comprised primarily of females who were middle-aged and older (conducted in Portuguese).
6/10/2018	Group consisted of local Hispanic community members of mixed-population (conducted in Spanish).
7/12/2018	Group consisted of a mixed-population group of 15 males and 2 females who were in short-term recovery.
8/7/2018	Group consisted of DCF-involved parents who are attending court-ordered parenting classes as a requirement to gain custody of their children.

The themes that emerged from the focus group discussions have been integrated into the report narrative, and major findings are summarized here. Each focus group session opened with general community questions, which provided participants the opportunity to speak broadly about what characteristics they feel contribute to a healthy community as well as the types of organizations, community members, and activities that play an important role in maintaining a healthy community. Participants also provided their opinions on contributors to good health that might not typically be considered.

Across all focus groups, participants came to similar conclusions about the factors influencing the health of their community. For example, providing more access to health-related programs, such as nutritional education and substance abuse treatment, emerged as top factors in increasing the overall health and well-being of the community. When asked what barriers prevent residents from being healthy, participants repeatedly indicated that the two largest obstacles facing the community are financial hardship and health care costs.

Substance abuse, mental health care, and access to quality housing emerged as the top concerns among focus group participants. Notably, substance use was also the largest concern among participants of both the Focus Group and the Service Provider Survey, where 44 percent and 100 percent of the participants indicated that substance use is a major concern throughout the Greater Fall River region, respectively. This indicates that community members and service providers are highly aware of the impact of rising rates of substance abuse has on Greater Fall River.

Most focus group survey respondents feel that the quality of life in their community has slightly increased in recent years. The majority of the respondents (56.7%) stated that their community has become a better place to live, or at least remained stable, in the past three years. This suggests that the region may be taking the correct steps in

improving the quality of living. Some credited these improvements to Fall River being a cleaner city, while others give credit to the increase in job opportunities and economic growth.

Focus group participants were asked questions specifically designed to gauge their understanding of the factors that contribute to healthy communities. When asked what resources and organizations make people healthy, many of the responses were focused on providing access to proper health care for those in need. Other answers emphasized the importance of public transportation and expressed that placing value on family and community-based programs, such as churches, can make a community healthier

## **Focus Group Discussion Guide and Questions**

### **Facilitator Opening<sup>73</sup>**

Hello and welcome to today's focus group. The goal of our discussion is to get your input on various health issues that our community is addressing as well as your thoughts and perceptions about the health of your community. This is part of an effort by Saint Anne's Hospital to understand the health-related needs of the community and to plan programs and services that address those needs. My name is (name), and I will serve as the facilitator of today's discussion. My role is to introduce our topics and ask questions. I will try to make sure all the issues are touched on as fully as possible within our time frame and that everyone gets a chance to participate and express their opinion.

### **Discussion Guidelines**

1. I will ask general questions, and ask for your opinions and ideas. Please remember that there are no right or wrong answers. Everything you tell us is valuable. I know you will have a lot of information and experiences to offer, so on occasion I may have to change the direction of the discussion so we can cover everything in the time we have together.
2. I want to emphasize that the discussion today will remain absolutely confidential. It's possible that some people will share personal stories or opinions. We ask all of you to refrain from sharing information from our discussion with others outside of the group. Any reports that come out of this discussion will focus on themes and ideas. Your name will not be shared or linked with anything that you say in today's focus group.
3. Today's session will go from (time of session) and we will be sure to end on time. You should also feel free to get up and stretch, go to the bathroom, or help yourself to refreshments. Are there any questions before we begin?

---

<sup>73</sup> This section adapted from [http://www.pphnh.org/images/contentPages/FINAL\\_LAKES\\_FOCUS\\_GROUP\\_RESULTS.pdf](http://www.pphnh.org/images/contentPages/FINAL_LAKES_FOCUS_GROUP_RESULTS.pdf)

### I. GENERAL COMMUNITY QUESTIONS

Our first few questions ask for your thoughts on the strengths or resources in your community that help support or enhance individual, family, and community health. The term “community” can mean something different for everyone - it could mean your town or region, your friends, your ethnic group, people you work with, or however you think of your community.

1. What makes a community healthy?
2. When you think of people, places or events in your community that promote health, what comes to mind?

Probe: Are there any strengths or resources that contribute to good health in your community that people may not typically think of?

3. What specific organizations play a lead role in making people healthy in your community?

### II. IDENTIFYING TOP ISSUES

Now I'd like to ask you about some of the top issues in your community.

4. What do you believe are the 2-3 most important issues that must be addressed to improve health and quality of life in your community?

Probe: Are housing, chronic diseases or conditions, mental health, substance abuse, violence, access to healthy food, child abuse/neglect, suicide, domestic violence, access to health care access top issues for your community?

5. How have the top health issues that were mentioned affected your community?

Probe: How has this changed in recent years? If so, what has changed?

6. Are some people or populations more affected by these health issues than others? In what way?

### III. ADDRESSING TOP HEALTH ISSUES

7. Thinking about the top health issues you mentioned, what is currently being done to address those issues for the community?

8. What programs or services are available or organizations are working on the top health issues facing your community?

IV. BARRIERS AND CHALLENGES

9. Are there significant barriers to being healthy or making healthy choices in your community? What are those barriers?
10. What keeps you (your family, your children) from going to the doctor or from caring for your health?  
  
[Prompts] i. Are there any cost issues that keep you from caring for your health? (such as co-pays or high-deductible insurance plans) ii. If you are uninsured, do you experience any barriers to becoming insured?
11. What programs, services or policies are missing in your community that would support health or make it easier to be healthy? [THIS QUESTION MAY HAVE ALREADY BEEN ANSWERED]
12. Where do you get the information you need related to your (your family's, your children's) health?

V. OPPORTUNITIES

13. What programs, services or policies are missing in your community that would support health or make it easier to be healthy?
14. What else do you (your family, your children) need to maintain or improve your health?
15. Thinking about the future, if you could do one thing to improve the health of people in your community, what would it be?

Probe: What organizations are/who is already leading this effort?

VI. ENDING QUESTION

16. Is there anything else related to the topics we discussed today that you think I should know that I didn't ask or that you have not yet shared?

## APPENDIX B – FOCUS GROUP PARTICIPANT SURVEY

Hello, thank you for participating in our survey. Your opinion about the health of your community will help Saint Anne's Hospital understand the health-related needs of our region and plan programs and services that address those needs. Please remember that there are no right or wrong answers. Everything you tell us is valuable. The responses you provide us today will be kept anonymous.

---

1. What is your ZIP code? \_\_\_\_\_

2. What is your gender?

- Female
- Male
- Other \_\_\_\_\_

3. Which race or ethnicity best describes you?

- Asian
- Black or African American
- Hispanic or Latino
- Multiracial
- Native American
- White
- Other \_\_\_\_\_

4. What is your age? \_\_\_\_\_

5. What language do you primarily speak at home?

- Brazilian Portuguese
- Cape Verdean Creole
- English
- Khmer
- Portuguese
- Spanish
- Other \_\_\_\_\_

6. What is your highest level of education?

- Less than high school
- High school diploma or GED
- Associate's degree or certificate
- Bachelor's degree or higher
- Other \_\_\_\_\_

7. What is your annual household income?

- Less than \$20,000
- \$20,000 to \$39,999
- \$40,000 to \$59,999
- \$60,000 to \$79,999
- \$80,000 to \$99,999
- Over \$100,000

8. How do you pay for your health care?

- MassHealth
- Medicare
- Private Insurance
- VA-Veteran's
- Pay cash (no insurance)
- Don't know

9. Where do you and your family receive primary health care services?

- Doctor's office
- Urgent care facility
- Free health care clinic
- School-based health care center
- Emergency department
- Other \_\_\_\_\_

10. How would you rate the overall health of your community?

- Excellent
- Good
- Fair
- Poor
- Very poor

**11. What are the *three* biggest health problems in your community?**

- Age-related health problems (arthritis, Alzheimer's)
- Alcoholism
- Breathing problems/asthma, COPD
- Cancer
- Child abuse or neglect
- Dental problems
- Diabetes
- Domestic violence/abuse
- Drug abuse
- Heart disease
- Infectious diseases (hepatitis or TB)
- Mental health issues (depression)
- Obesity
- Poor birth outcomes (baby underweight, substance exposed)
- Sexually transmitted diseases
- Suicide
- Violence (gang fights, murders)
- Other \_\_\_\_\_

**12. What prevents people in our community from getting the health care services they need?**

- It is not hard to get health care
- Cost of health insurance too high
- Emergency room is the only place people go for care
- Health insurance is too difficult to get
- Health care system too difficult to navigate
- High co-pays and deductibles
- Immigration status
- Language barriers
- Medications are too expensive
- No health insurance
- No night or weekend hours
- No specialists in the area
- No transportation
- Not aware of local services
- Other \_\_\_\_\_

**13. What are the *three* most important issues that must be addressed to improve health and quality of life in your community?**

- Affordable housing
- Child abuse/neglect
- Childcare
- Chronic diseases (diabetes, heart disease, stroke, cancer)
- Crime and vandalism
- Domestic violence/abuse
- Food choices
- Affordable Health care
- Health care services
- Jobs and economic opportunities
- Litter and abandoned properties
- Mental health services (counseling, group therapy, etc.)
- Public space
- Public transportation
- Racial or cultural discrimination
- School system
- Senior services
- Substance abuse services
- Violence/gang behaviors
- Other \_\_\_\_\_

**14. In the last three years, how has the quality of life in your community changed?**

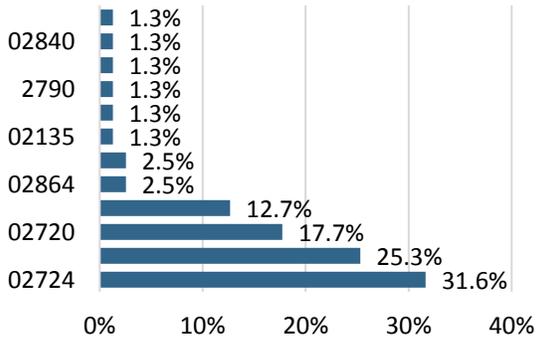
- Much better
- Slightly better
- Stayed the same
- Slightly worse
- Much worse
- Don't know

Why? \_\_\_\_\_  
\_\_\_\_\_

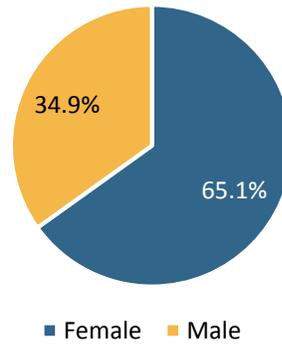
**15. What *single* action would you like to see taken to improve the health of your community?**

Focus Group Participant Survey Results

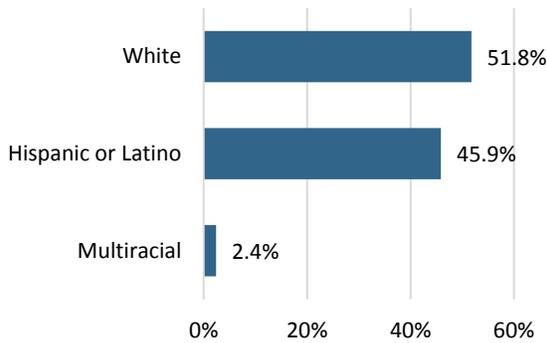
Question 1  
What is your zip code?



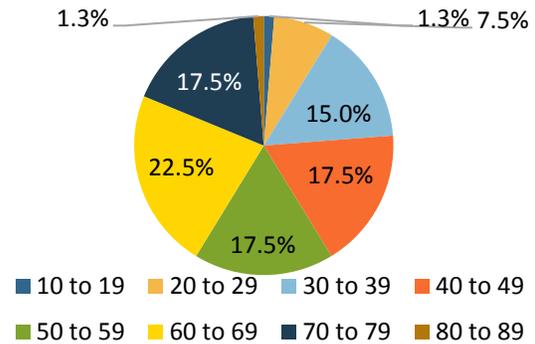
Question 2  
What is your gender?



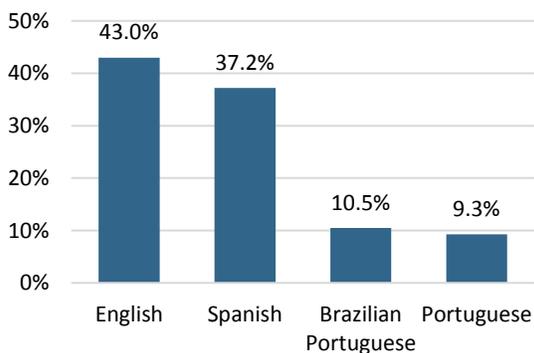
Question 3  
What best describes your ethnicity?



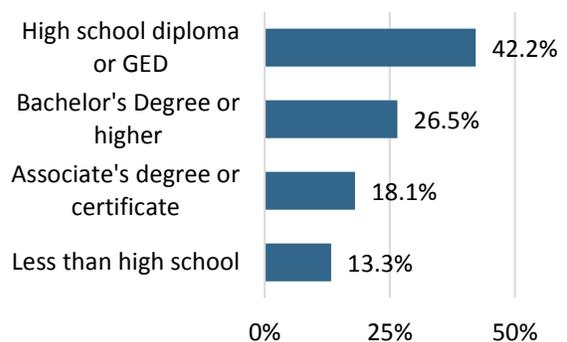
Question 4  
What is your age?

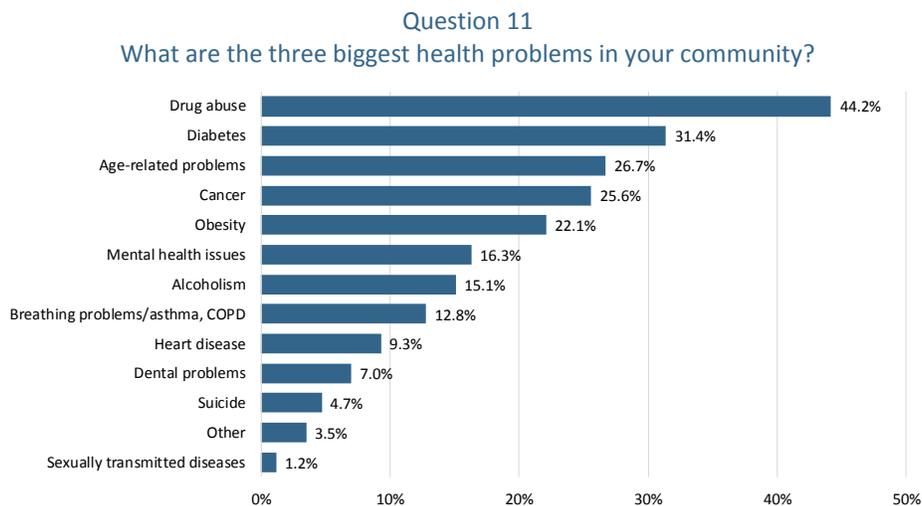
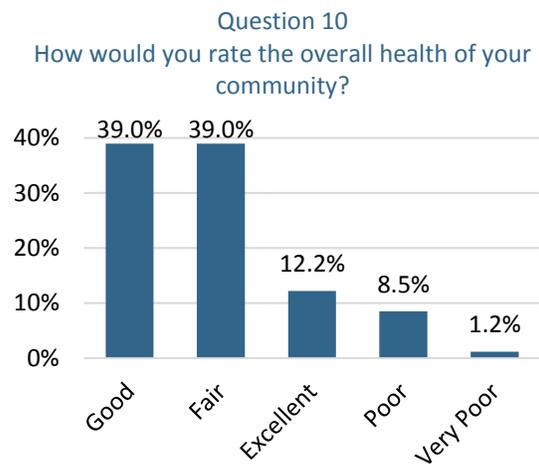
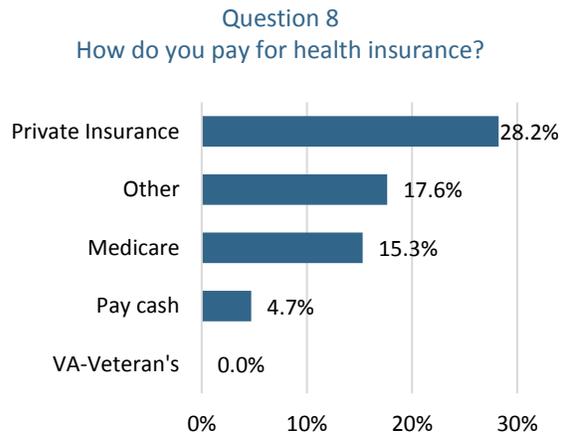
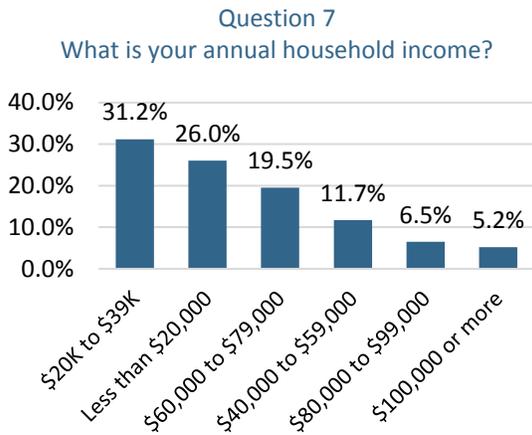


Question 5  
What language do you primarily speak at home?



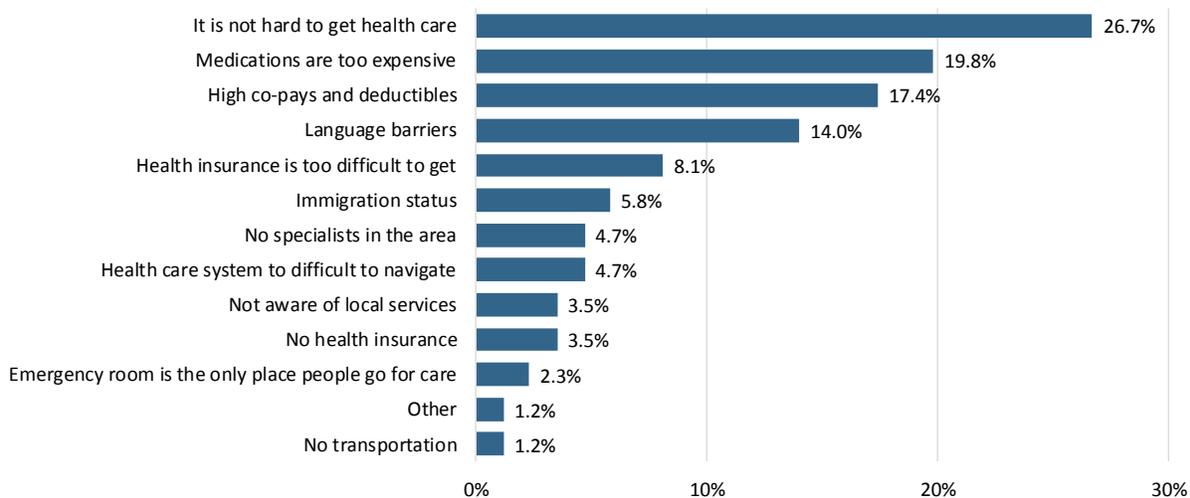
Question 6  
What is your highest level of education?





Question 12

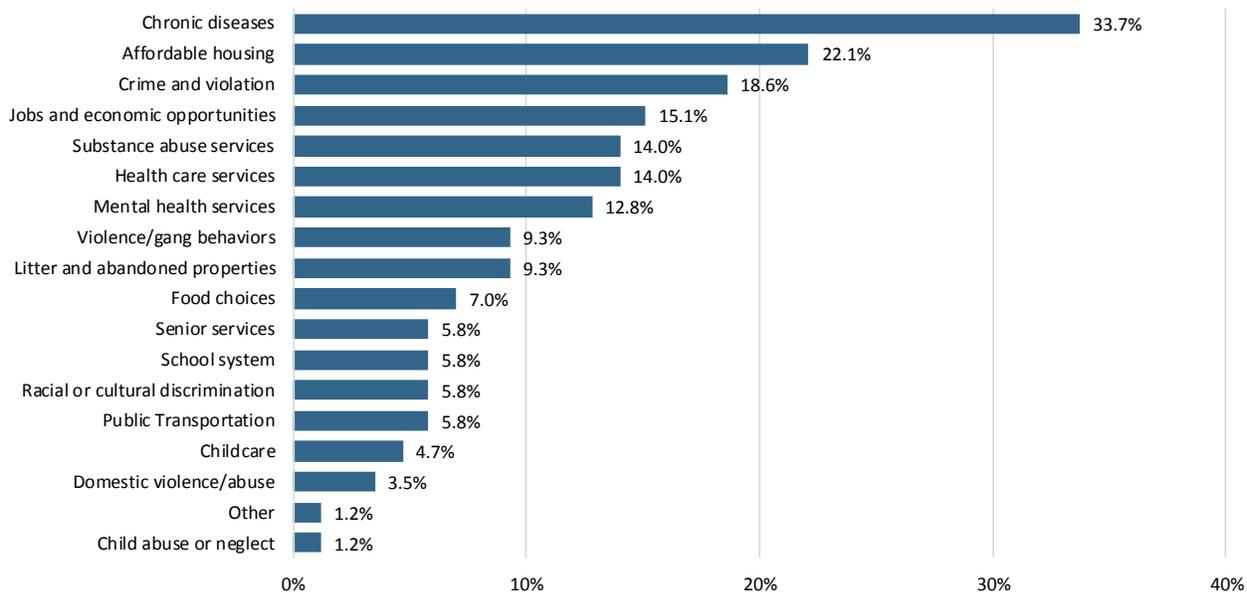
What prevents people in our community from getting the health care services they need? (Check all that apply)



\*Other: Finding the time to receive health care services.

Question 13

What are the three most important issues that must be addressed to improve health and the quality of life in your community?





## APPENDIX C – KEY INFORMANT ONLINE SURVEY

Thank you for choosing to participate in this survey. As part of Saint Anne's Hospital's community health needs assessment, we are conducting a survey of key informants in collaboration with the Public Policy Center at UMass Dartmouth. The results will be used to identify community health issues in the Greater Fall River area and to help us plan programs and services. We would like to assure you that all responses will be confidential. Once we have completed the process, we will share the results of our work with you and other partners in the community. Thank you for your time and participation!

---

**1. How would you describe the organization that you work for?**

- Health care provider (i.e., hospital, clinic, physician)
- Government (i.e., state/local agencies, police/fire department, schools)
- Non-profit organization or social service agency
- Religious organization
- Other \_\_\_\_\_

**2. What do you think are the best features of the Greater Fall River area?**

**3. How would you identify the community that you and your organization serve? (select all that apply)**

- Elders
- Ethnic or racial minorities
- Children
- Families
- Non-English speakers
- Low-income persons
- Persons who are homeless
- Immigrants
- Persons with substance use disorder
- Persons with mental or behavioral health issues
- Persons with cancer
- Persons with physical disabilities
- Persons with intellectual disabilities
- Other \_\_\_\_\_

**4. What are the top three areas of general concern for the community that you serve, not necessarily related to health?**

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

**5. For the community you serve, what programs or services are most needed in the Greater Fall River area?**

**6. Regarding the conditions in the community you serve, please rank each of the health issues on a scale of 1 to 5, with 1 being less of a concern and 5 being more of a concern:**

	Less of a concern				More of a concern
	1	2	3	4	5
Age-related health problems	<input type="radio"/>				
Cancer	<input type="radio"/>				
Dental problems	<input type="radio"/>				
Heart disease	<input type="radio"/>				
Infectious diseases (e.g., hepatitis or TB)	<input type="radio"/>				
Mental health issues (e.g., depression)	<input type="radio"/>				
Motor vehicle injuries (incl. pedestrians & cyclists)	<input type="radio"/>				
Poor birth outcomes (e.g., baby underweight)	<input type="radio"/>				
Breathing problems/asthma, COPD	<input type="radio"/>				
Drug abuse	<input type="radio"/>				
Sexually transmitted diseases	<input type="radio"/>				
Violence	<input type="radio"/>				
Domestic abuse	<input type="radio"/>				
Stroke	<input type="radio"/>				
Teen pregnancy	<input type="radio"/>				
Suicide	<input type="radio"/>				
Alcoholism	<input type="radio"/>				
Diabetes	<input type="radio"/>				
Child abuse or neglect	<input type="radio"/>				
Obesity	<input type="radio"/>				
Other	<input type="radio"/>				

**7. In the last three years, how would you say the issues facing the Greater Fall River area have changed? Please rate each issue area on a scale of 1 to 5, with 1 being much worse and 5 being much better:**

	<b>Much Worse</b>				<b>Much Better</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Age-related health problems	<input type="radio"/>				
Cancer	<input type="radio"/>				
Dental problems	<input type="radio"/>				
Heart disease	<input type="radio"/>				
Infectious diseases (e.g., hepatitis or TB)	<input type="radio"/>				
Mental health issues (e.g., depression)	<input type="radio"/>				
Motor vehicle injuries (incl. pedestrians & cyclists)	<input type="radio"/>				
Poor birth outcomes (e.g., baby underweight)	<input type="radio"/>				
Breathing problems/asthma, COPD	<input type="radio"/>				
Drug abuse	<input type="radio"/>				
Sexually transmitted diseases	<input type="radio"/>				
Violence	<input type="radio"/>				
Domestic abuse	<input type="radio"/>				
Stroke	<input type="radio"/>				
Teen pregnancy	<input type="radio"/>				
Suicide	<input type="radio"/>				
Alcoholism	<input type="radio"/>				
Diabetes	<input type="radio"/>				
Child abuse or neglect	<input type="radio"/>				
Obesity	<input type="radio"/>				
Other	<input type="radio"/>				

**8. Regarding the existing obstacles to accessing health care in the community you serve, please rank the following on a scale of 1 to 5, with 1 being less of an obstacle and 5 being more of an obstacle:**

	Less of an Obstacle				More of an Obstacle
	1	2	3	4	5
No health insurance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MassHealth is too difficult to get	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No night or weekend hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ER is the only place people go for care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unaffordable medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High co-pays and deductibles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Language barriers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long wait time to see doctors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health care system is too difficult to navigate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of awareness of local services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No specialists in the area	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**9. What are the top three populations that are most underserved in the community?**

- Elders
- Children
- Racial or ethnic minorities
- Persons with physical disabilities
- Persons with intellectual disabilities
- LGBTQ persons
- Persons with substance use disorder
- Persons with mental or behavioral health issues
- Low-income persons
- Persons who are homeless
- Other \_\_\_\_\_

**10. What three improvements, programs, or services should be offered to make Greater Fall River a healthier community? You do not have to limit your answers to actions that would only be taken by health care organizations.**

1 \_\_\_\_\_

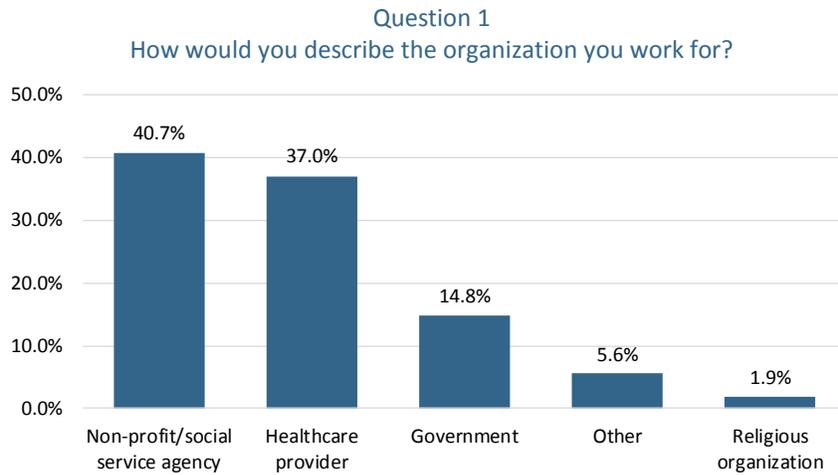
2 \_\_\_\_\_

3 \_\_\_\_\_

**11. In what ways is Saint Anne's Hospital serving the community well?**

**12. What actions can Saint Anne's Hospital take to improve the health and well-being of the community?**

Key Informant Survey Results



\*Other: Financial and community behavioral health.

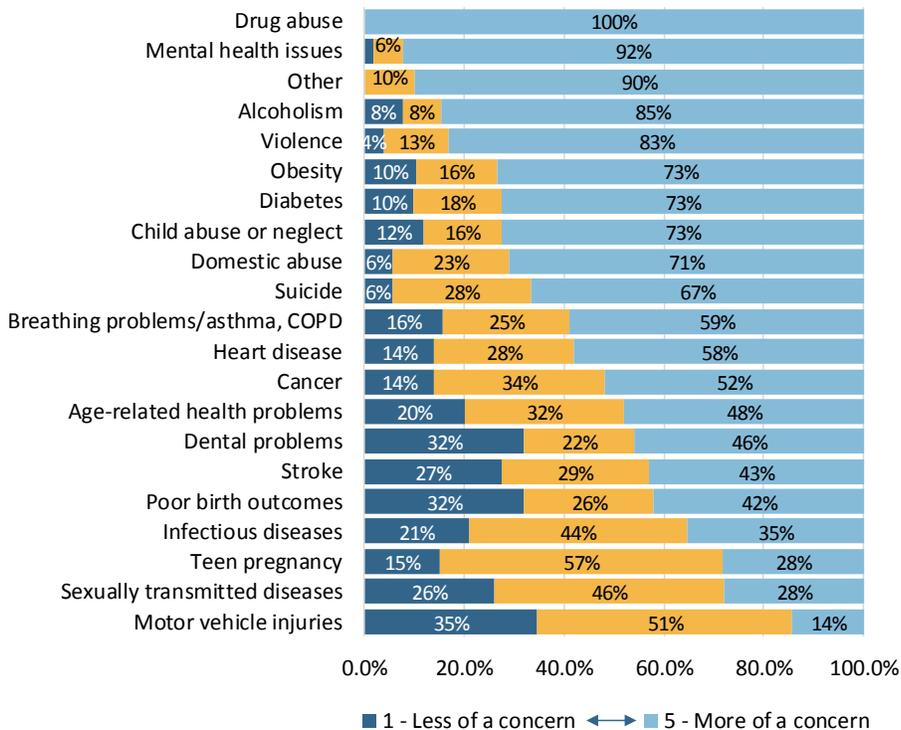
Question 2  
What are the best features of the Greater Fall River area?





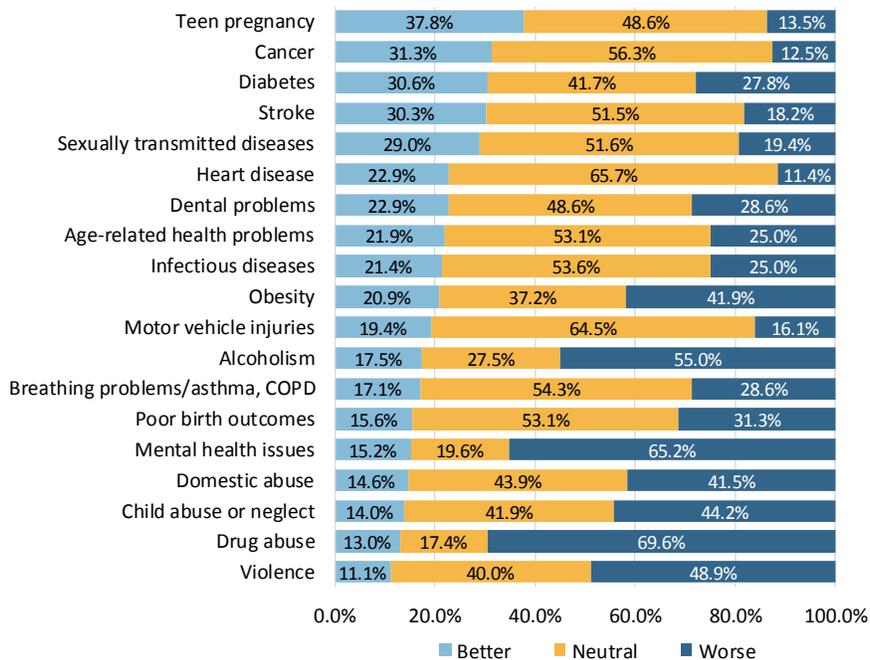
Question 6

Regarding the community you serve, please rank each following health issue.



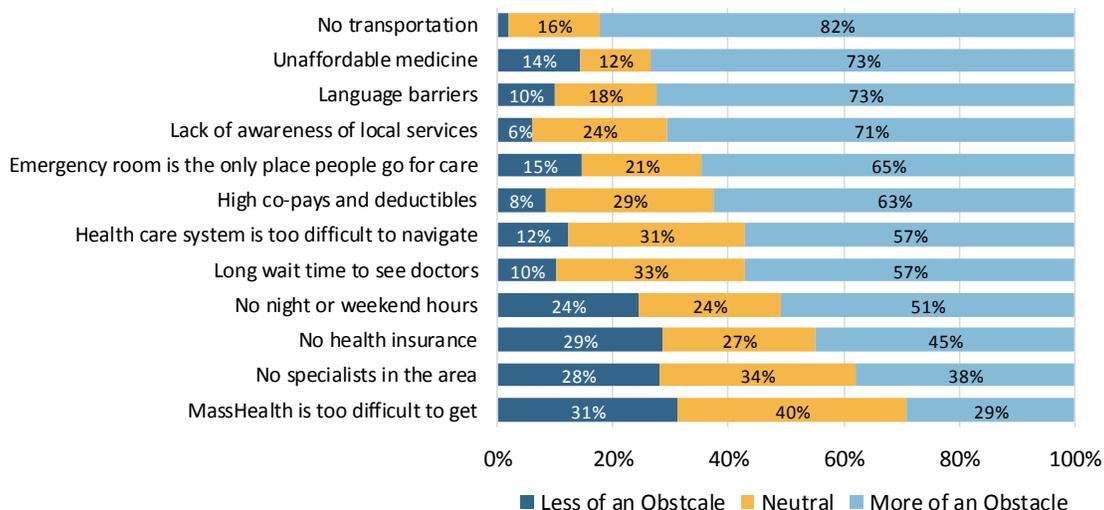
Question 7

In the last three years, how have the issues changed?



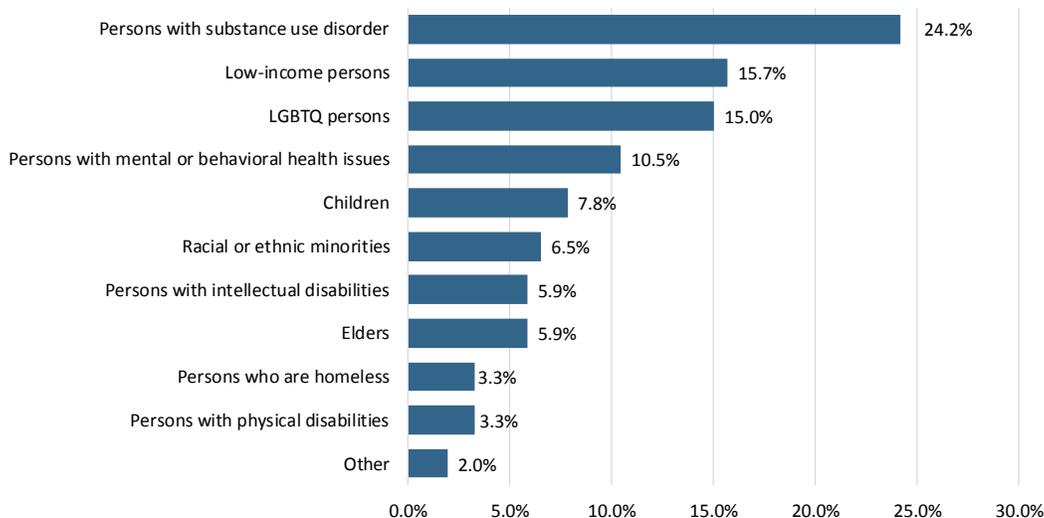
Question 8

Regarding the existing obstacles to accessing health care in the community you serve, please rank the following on a scale of 1 to 5, with 1 being less of an obstacle and 5 being more of an obstacle



Question 9

What are the top three most underserved populations in the community you serve?



\*Other: Non-English speakers, smokers, the deaf, those with a traumatic head injury.



**Saint Anne's Hospital**

A STEWARD FAMILY HOSPITAL



**Public Policy Center**

UMass Dartmouth