Southcoast® Health

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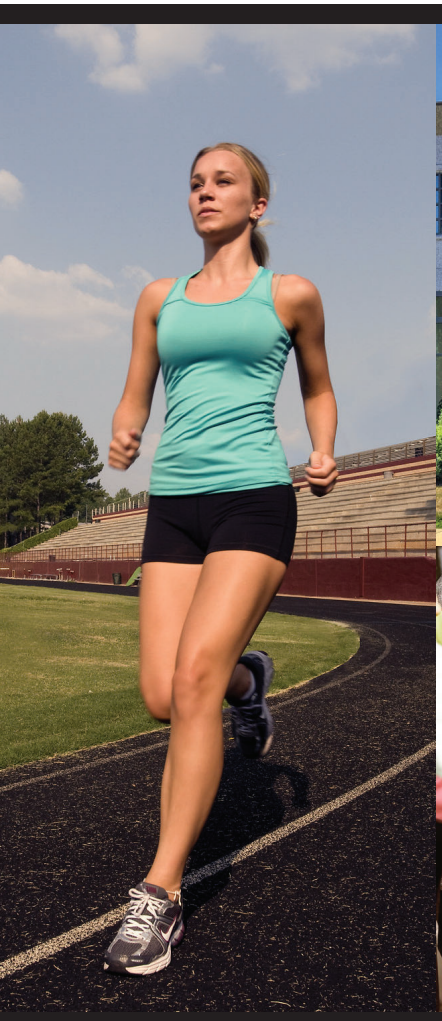
2019



Community Health Needs Assessment

Public Policy Center
UMass Dartmouth

Public Policy Center
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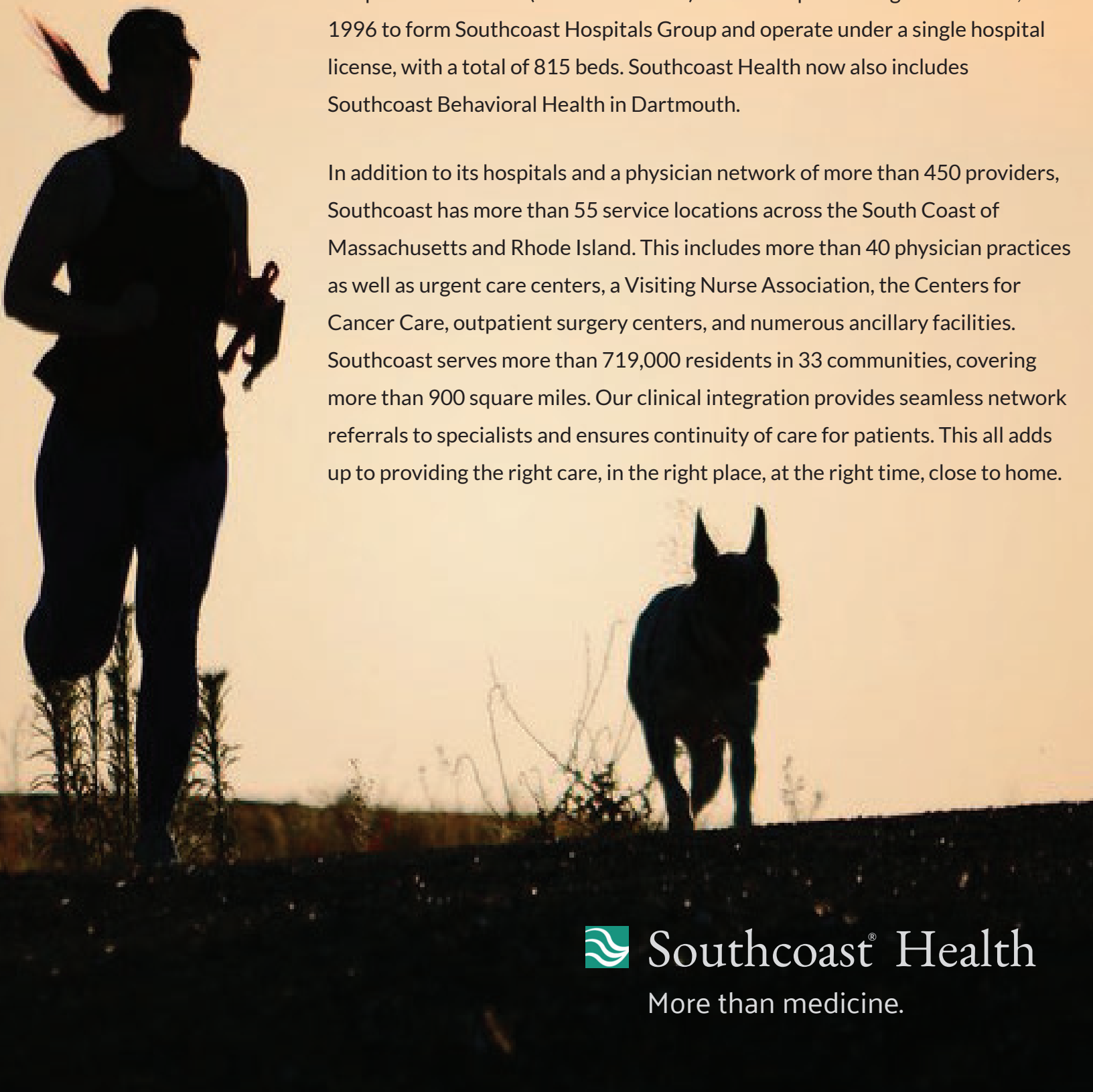
About Southcoast Health System

Southcoast Health is a not-for-profit, community-based health system with multiple access points, offering an integrated continuum of health services throughout southeastern Massachusetts and Rhode Island. Our system includes four hospitals — Charlton Memorial Hospital in Fall River (founded in 1885), St. Luke's Hospital in New Bedford (founded in 1884) and Tobey Hospital in Wareham (founded in 1938). These hospitals merged on June 9, 1996 to form Southcoast Hospitals Group and operate under a single hospital license, with a total of 815 beds. Southcoast Health now also includes Southcoast Behavioral Health in Dartmouth.

In addition to its hospitals and a physician network of more than 450 providers, Southcoast has more than 55 service locations across the South Coast of Massachusetts and Rhode Island. This includes more than 40 physician practices as well as urgent care centers, a Visiting Nurse Association, the Centers for Cancer Care, outpatient surgery centers, and numerous ancillary facilities. Southcoast serves more than 719,000 residents in 33 communities, covering more than 900 square miles. Our clinical integration provides seamless network referrals to specialists and ensures continuity of care for patients. This all adds up to providing the right care, in the right place, at the right time, close to home.



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EXECUTIVE SUMMARY

Southcoast Health is a not-for-profit, community-based health system with multiple access points, offering an integrated continuum of health services including four hospitals — Charlton Memorial Hospital in Fall River (founded in 1885), St. Luke's Hospital in New Bedford (founded in 1884) and Tobey Hospital in Wareham (founded in 1938). These hospitals merged on June 9, 1996 to form Southcoast Hospitals Group and operate under a single hospital license, with a total of 815 beds. Southcoast Health now also includes Southcoast Behavioral Health in Dartmouth.

Southcoast Health'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 communities of Swansea, Somerset, Fall River, Westport, Dartmouth, New Bedford, Acushnet, Freetown, Fairhaven, Mattapoisett, Marion, Rochester, and Wareham). 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 stakeholder interviews, focus groups, and an online survey of the region's service 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.

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 and the state in most socioeconomic metrics. The median household income in the cities is considerably lower than the statewide median and below the other communities of the South Coast. The poverty rate in the cities is more than double the statewide rate and often four to five times higher than the surrounding towns, and in the cities, families—particularly those led by a single mother—earn incomes well below the federal poverty level. Additionally, while educational attainment in the region has improved in recent years, the overall degree attainment in the region lags behind that of the state.

One stakeholder put it succinctly, stating that healthier people are "of high socioeconomic status, white people or people with white privilege, and educated."

A major theme that emerged from the interviews and focus groups is that income and education were the primary contributing factors to health disparities. One stakeholder put it succinctly, stating that healthier people are "of high socioeconomic status, white people or people with white privilege, and educated." This view, to varying degrees, was echoed by numerous stakeholders, who often cited low educational attainment and incomes in Fall River and New Bedford as major obstacles to better health outcomes in the cities.

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 community stakeholders.

Community Perceptions of Health

Overall, the qualitative activities undertaken for this project highlight four salient issue areas: the influence of socioeconomic status on health, substance use disorder, mental and behavioral health, and housing affordability and homelessness.

Overall, the fieldwork undertaken for this project highlight four salient issue areas: the influence of socioeconomic status on health, substance use disorder, mental and behavioral health, and housing affordability and homelessness. During interviews and focus groups, some community members spoke of the intersection of these issues, but the most commonly cited issue impacting the region was the prevalence of substance use disorder and its ripple effects on family cohesion, the economy, and people's housing stability.

Another major theme that emerged from the qualitative work is that there is a drastic need improve and increase mental and behavioral health services in the region. Many stakeholders said that there was a need to better address trauma in the community, particularly in educating people on healthy ways to address the stress of life's challenges and mental health issues. Notably, service providers surveyed are most concerned about mental/behavioral health issues and substance use disorder over physical health issues. When asked specifically to identify the health issues they were most concerned about in the community, more than three-quarters (76%) of service providers said they were "very concerned" about "mental health disorders" and nearly as many (71%) selected "drug abuse/addiction" as "very concerning"

What are the determinants that affect
the largest number of people in your community?

Source: Southcoast Health Community Stakeholder Interviews, 2019.

Housing and Homelessness

Throughout the needs assessment, housing emerged as a distinct area of concern for interviewees, focus group participants, and survey respondents. During interviews, stakeholders consistently identified housing as a social determinant that affects the largest number of residents in their community. Based on interviews and focus groups, housing is perceived as a multifaceted issue. Affordability, homelessness, substandard housing, and an inadequate supply of transitional housing are all related, but unique concerns that arose.

Housing affordability is an issue nationwide, and one that Massachusetts has been grappling with for some time. Despite being one of the most "affordable" regions relative to the state and high-cost areas like the Boston metro, many households in the South Coast struggle with housing costs. For instance, nearly half of all renter household in the region (45.2%) are housing burdened, meaning that their monthly housing costs are greater than 30 percent of their household income. When households are burdened by housing costs, they have less money to allocate to other necessities, such as a health care, food, and transportation. Moreover, many of the communities in the region have a housing gap, meaning that the median income is not enough to affordably cover the median cost of housing.

One stakeholder asked, "If you don't have a home, how can you be physically well? And mentally well?"

Stakeholders and focus group participants often discussed the lack of affordable housing and homelessness as linked issues, and they also felt that the lack of resources for treatment of mental health issues and substance use disorder, which are highly prevalent among the homeless population, contribute to homelessness in the region. As one stakeholder asked, "If you don't have a home, how can you be physically well? And mentally well?"

During the 2018 point-in time count, there were a total of 377 homeless individuals in Fall River and 409 homeless individuals in New Bedford. The majority were in an emergency shelter during the count. The number of homeless patients being treated at Southcoast Health emergency departments increased by 36 percent from 2016 to 2018. In 2018, Southcoast Health treated 1,006 unique homeless patients, which is more than even the HUD point-in-time estimate included. St. Luke's Hospital treats the greatest number of homeless patients, with 560 unique patients in 2018

Health Systems and Health Care Access

People who do not have access to health care are at a greater risk of having poor overall health and negative health outcomes. Both Fall River (11.2%) and New Bedford (12.9%) have a higher percentage of residents aged 18-64 years who lack health insurance in comparison to the state average (5.7%), with New Bedford also being above the national average (11.6%). Slightly more than three-quarters (78.0%) of Fall River residents and 78.1 percent of New Bedford residents report they had an annual check-up in the past 12 months, which is above the national average and slightly below the state.

Community stakeholders identified many barriers to accessing health care services in the region. Primarily, answers to this question revolved around the transportation challenges South Coast residents can encounter when trying to reach a service provider. Specifically, stakeholder said these challenge include not being able to afford the cost of public transportation to travel within the region, constraints related to the hours of bus service in the region, and not being able to consistently reach appointments with specialists outside of the region. In addition to transportation, interviewees discussed the general lack of certain services in the region, the limited availability of healthy foods in certain parts of the region, and the perceived decline of physical education in public schools as barriers to maintaining and improving health.

Substance Use Disorder

For the first six months of 2019, there were 611 confirmed opioid-related overdose deaths statewide — more than three deaths per day, every day.
As one stakeholder said, "No one is untouched by the opioid epidemic."

In Massachusetts alone, there were 1,981 confirmed cases of opioid-related deaths in 2018 and the number of confirmed opioid-related overdose deaths increased by 262 percent from 2010 to 2018. For the first six months of 2019, there were 611 confirmed opioid-related overdose deaths statewide — more than three deaths per day, every day — and DPH estimates that there are likely an additional 363 unconfirmed deaths for this period. During the six-year span ranging from 2013–2018, most South Coast communities experienced an increase in the number of opioid-related overdose deaths. In total, 165 opioid-related deaths in the region's communities were confirmed in 2017, which is more than double the number in 2013.

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. Although data are not available at the local level, it is clear that the opioid crisis is affecting 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. 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.

Within the Southcoast hospital system, NAS discharges are on the decline both numerically and as a share of all births. As of the last full fiscal year, newborns with NAS accounted for 4.6 percent of all births. In terms of the community of residence, 10 percent of all babies born to mother from Wareham were diagnosed with NAS in FY18, which is the highest for communities in Southcoast's service region.

Results from the stakeholder interviews revealed that the opioid crisis is viewed as a critical issue affecting the health of the area. Every interview touched on the topic in some capacity. Indeed, as one stakeholder said, "No one is untouched by the opioid epidemic." The links between substance use disorder, other mental health issues, poverty, and homelessness was also a common interview theme. Many stakeholders felt that the epidemic is worse in the region than elsewhere in the state and that providers are not properly trained on how to counsel patients or refer them to treatment services.

Mental and Behavioral Health

Stakeholders repeatedly made a connection between during interviews between substance use disorder and mental health.

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. In a region with low levels of educational attainment and high levels of poverty, many social factors influence not only mental health but also community perceptions on receiving treatment. 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 (11.7%)

Stakeholders repeatedly made a connection during interviews between substance use disorder and mental health. Indeed, in Fall River and New Bedford approximately 27 percent of people readmitted to an acute care hospital were diagnosed with a co-occurring mental disorder and substance use disorder. At Southcoast's hospitals, many of the behavioral health emergency department visits resulted in diagnoses that are related to substance use disorder. Together the diagnoses of substance abuse, overdose, and alcohol abuse accounted for 11.4 percent of the total emergency department visits in FY18.

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. Similarly, in 2017, 10.4 percent of New Bedford High School students reported that they had seriously considered suicide at some point in the last year.

Wellness and Chronic Disease

The region served by Southcoast Health 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. Stakeholder interviews and focus groups brought these issues into greater focus by highlighting the challenges faced by residents of low socioeconomic status in the region. Particularly, community stakeholders expressed concern that people of lower socioeconomic status do not regularly engage in preventative care, and as a result, are not educated on the potential outcomes of unhealthy lifestyle choices. Overall, approximately 17 percent of all adults in Fall River

Community stakeholders expressed concern that people of lower socioeconomic status do not regularly engage in preventative care, and as a result, are not educated on the potential outcomes of unhealthy lifestyle choices.

and New Bedford reported having 14 days or more of poor physical health in 2015, compared with 12.1 percent nationwide.

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; 27.2 percent of Fall River residents and 26.6 percent of New Bedford residents report that they smoke, compared to 13.6 percent of Massachusetts residents and 16.4 percent of residents nationwide. Regarding smoking among the Southcoast Health patient population, data on patients in various settings reveals that nearly half of all patients are current or former smokers.

Despite showing declines in the prevalence of most diseases from 2014 to 2016, the disease prevalence is higher for Fall River and New Bedford in comparison to the state and national averages in all categories. Most notably, the share of individuals who have chronic obstructive pulmonary disease in Fall River (10.6%) and New Bedford (10.4%) is nearly double that of the state (5.4%).

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.

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

In both Fall River and 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 increased since 2010 when gestational diabetes was present in 7.5 percent of births in Fall River and 4.9 percent in New Bedford.

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%).

The prevalence of pediatric asthma has also increased in from 2009 to 2017 in Fall River (16.0 to 17.7), New Bedford (14.9 to 18.2), and Dartmouth (14.1 to 17.5) among others. 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.

During interviews and focus groups, community members discussed the twin issues of food insecurity: access and affordability. Data for the region show that Southcoast Health'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. Additionally, Bristol County has the highest rate of food insecurity in southeastern Massachusetts, with 10.3 percent of all residents lacking access, at times, to enough food for an active, healthy life.

Some stakeholder pointed to positive developments, such as bringing mobile farm stands in city neighborhood and the ability to use SNAP benefits at farmers markets. Still, these programs do not solve the affordability issue; one stakeholder said, "Even at South Coast farmers' markets, a container of strawberries is $5, which could buy a meal for several people at a fast food chain."

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. Per square mile and per 1,000 people, these cities have higher ratios of brownfield sites compared to the state.

Next Steps

Our fieldwork revealed that community members are keenly aware of the problems facing the region. All of the health outcomes and social determinants outlined above were discussed in detail throughout stakeholder interviews and focus groups sessions. Despite these challenges, many of the community members who provided their input as part of this needs assessment maintained a positive outlook on the future of the region. Regarding needs in the region, the major themes that emerged include improving the access and availability of mental health services; increasing services for people who are at risk of becoming or who are currently homeless; educating residents on the healthcare services available in the region; and creating more ways to bring healthcare services to underserved communities, particularly low-income neighborhoods. Importantly, community members view Southcoast Health as a leader in the region and some stakeholders called on the organization to advocate at the state level for the resources needed to meet the healthcare needs of all the residents of the region, and to convene community partnerships with the aim of increasing collaborative, coordinated efforts to address the challenges identified here.

Importantly, community members view Southcoast Health as a leader in the region.

1 OVERVIEW

Southcoast Health System conducts a Community Health 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 care access, the physical environment, health behaviors, children's health, and health disparities. The analysis is enhanced by qualitative data gathered through stakeholder interviews, focus groups, and surveys of community members and service 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 form the basis for future analysis and that will aid Southcoast Health in prioritizing community health 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. Community Perceptions of Health: Engaging service providers and community members to obtain qualitative analysis that contextualizes the health data, and defines the health priorities of the community.

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 assessment also provides context and validation to the health data through stakeholder interviews, focus groups, and surveys of service providers and community members.

The South Coast—Study Area Definition

The geographic definition of the South Coast region for this report is defined as Community Health Network Areas 25 and 26 (see Figure 1). 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." Also note that the "South Coast" as a region is referred to as such, while references to the health system are written as "Southcoast."

Partners for a Healthier Community (CHNA 25):

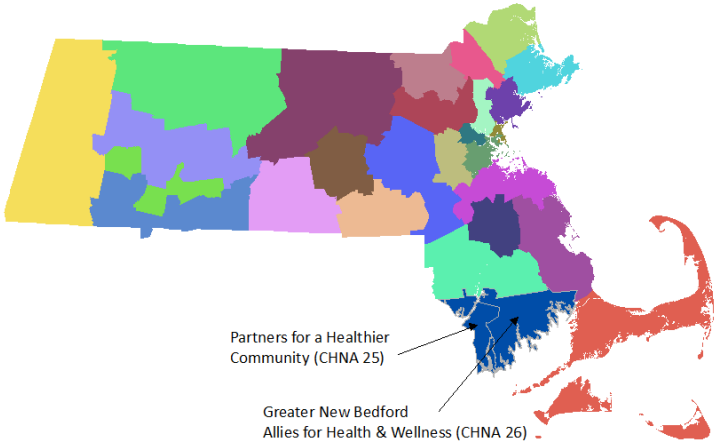
Fall River, Somerset, Swansea, Westport

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

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

Figure 1

Community Health Network Areas 25 & 26



Data is reported for five geographic areas where data are available:

- The South Coast region
- Cities of Fall River and New Bedford
- Greater Fall River (Fall River, Somerset, Swansea, Westport)
- Greater New Bedford (Acushnet, Dartmouth, Fairhaven, Freetown, Marion, Mattapoisett, New Bedford, Rochester, Wareham)
- State of Massachusetts

Data Sources

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

- Southcoast Health System
- 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
- 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
- U.S. Census Bureau and U.S. Census Bureau American Community Survey
- U.S. Department of Housing and Urban Development, CoC Homeless Populations and Subpopulations Reports

How to Read the Data in This Report

The PPC and Southcoast Health made every effort to ensure that the data presented here is the up-to-date available. However, due to data lag, the most recent years for many of the health indicators are 2014 or 2015, and this is noted where appropriate.

Additionally, the demographic and economic profile in Section 2 and the social determinants of health in Section 3 rely heavily on data from the Census Bureau's American Community Survey five-year estimates. In order to produce estimates that are accurate for smaller geographies, like the towns of the South Coast, the Census Bureau pools five years' worth of survey data. These multiyear estimates describe the population and characteristics of an area for the 5-year period, not for any specific day, period, or year within the multiyear time period.[2] Therefore, when these estimates are discussed in the text, they are referred to in terms of the period of the estimates, which in most cases is 2013–2017.

[1] 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.

[2] More information on multiyear estimates can be found here: https://www.census.gov/content/dam/Census/library/publications/2018/acs/acs_general_handbook_2018_ch03.pdf.

FOCUS GROUPS AND SURVEY

In order to add context to the primary patient data from Southcoast Health and the secondary data, the research team conducted 31 stakeholder interviews with community partners and service providers and 6 focus groups across Southcoast Health's service area.[3] These conversations with community members assisted the research team in determining which social disparities to focus on and allowed us to add context to the themes that emerged from the quantitative data analysis. In addition, Southcoast Health distributed both a survey to service providers, which was completed by 142 people working in a variety of healthcare settings and professions, and a community member survey, which was completed by 430 residents of the South Coast and its neighboring communities.

Focus Groups

Table 1 below provides a brief description of each focus group conducted as part of the CHNA. Overall, the focus groups were well attended and each provided unique insights on the community perceptions of health, major health issues facing the region, and barriers to accessing care.[4]

Table 1
Focus Groups

Date	Description
6/26/2018	Group consisted of Wareham-based service providers representing a wide range of care settings and healthcare professions.
6/18/2019	Support group for cancer survivors and their family members from across the region. Scheduled as part of a regular meeting of the group at Southcoast Cancer Center in Fairhaven.
6/25/2019	Conducted as part of the Mental Health Providers Network's regular meeting. Members include mental health professionals working in a variety of settings throughout the Greater New Bedford region.
7/18/2019	Primarily Spanish-speaking residents of the North end of New Bedford. Convened by the Community Economic Development Center of New Bedford
8/15/2019	Group consisted families who have engaged with programming provided by the United Way of Greater New Bedford's Family Resource & Development Center. The group was very racially and ethnically diverse and multigenerational.
8/29/2019	Group consisted of community members and service providers working in Greater Fall River. Convened by Representative Carole Fiola as part of her regular "Coffee with Carole" event.

[3] A list of all stakeholder interviews and the interview guide are included in Appendix A.

[4] The focus group questionnaire is included in Appendix B.

Providers Survey

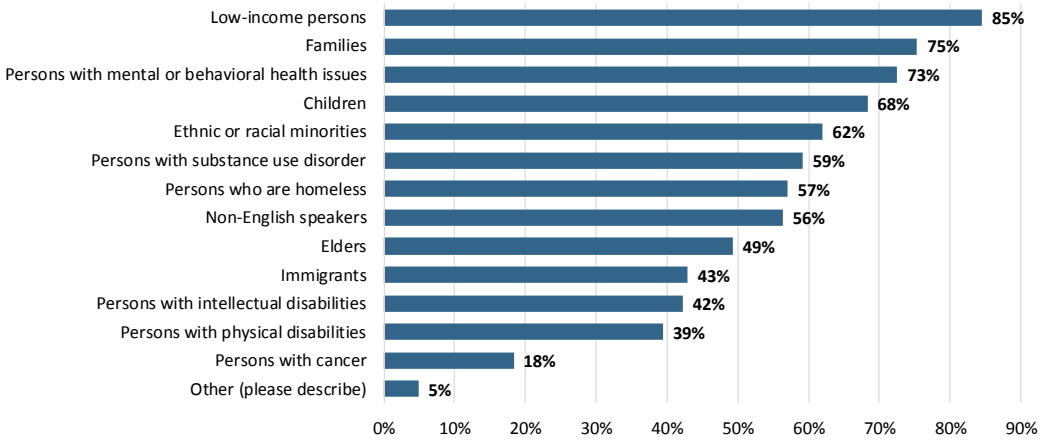
As part of the Community Needs Assessment, Southcoast Health conducted an online survey of 142 healthcare service providers in order to further identify and understand the region's primary health issues and challenges.[5] Most survey respondents were either a non-profit organization or social service agency (see Table 2). The types of people these organizations serve are wide-ranging (see Figure 2).

Table 2
Provider Survey Respondent Type

Type of Organization	Percent of Respondents
Non-profit/social service agency	59 %
Government	24%
Health care provider	12%
Religious organization	4%
Other	1%

Source: Southcoast Health Providers Survey, 2019.

Figure 2
Communities that Providers Serve



Source: Southcoast Health Providers Survey, 2019.

Community Survey

Through its own social media and local media outlets, Southcoast Health shared a brief survey with community members to assess how they engage with health care, their perceptions of the health of their community, health issues that concern them, and obstacles they have encountered in receiving care. Although this survey reached 430 residents, a profile of the respondents indicates that the results are not representative of the region, and therefore major conclusions will not be drawn from the community survey at this time. However, it is referenced at times in this report to further contextualize trends observed in other aspects of the qualitative analysis.[6]

[5] The providers survey questionnaire is included in Appendix C.

[6] More than three-quarters (79%) of the respondents were female, 90.9 percent were white, and the majority possess a Bachelor's degree or higher. The community survey questionnaire is included in Appendix D.

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 from 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 as a whole. 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, which lags behind the population growth rates statewide.

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 the population of New Bedford has increased slightly since 2010.

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

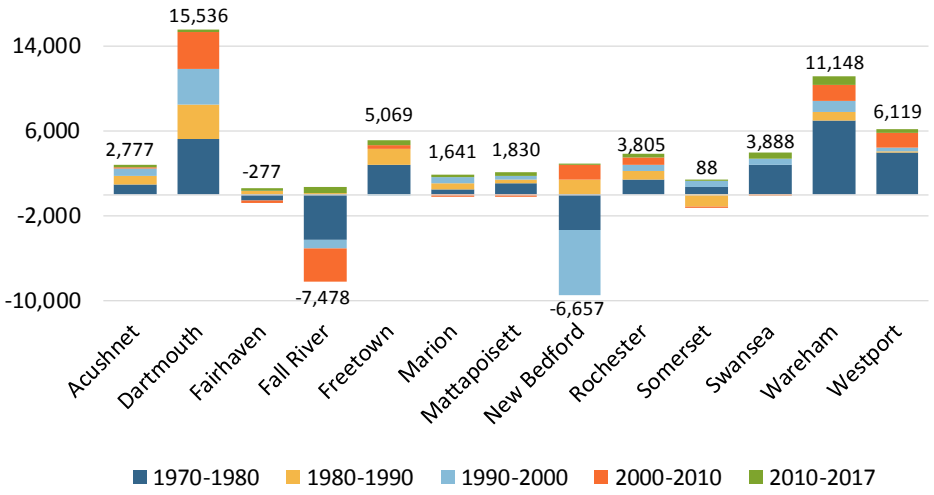
Municipality	1970	1980	1990	2000	2010	2017	% Change 1970–2017	% Change 2000–2017
Acushnet	7,767	8,704	9,554	10,161	10,303	10,544	35.8%	3.8%
Dartmouth	18,800	23,966	27,244	30,666	34,032	34,336	82.6%	12.0%
Fairhaven	16,332	15,759	16,132	16,159	15,873	16,055	-1.7%	-0.6%
Fall River	96,898	92,574	92,703	91,938	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%
South Coast	307,591	325,767	334,494	335,789	340,575	345,080	12.2%	2.8%
Greater FR	137,417	140,611	139,621	140,256	138,419	140,034	1.9%	-0.2%
Greater NB	170,174	185,156	194,873	195,533	202,156	205,046	20.5%	4.9%
Massachusetts	5,689,170	5,737,093	6,016,425	6,349,097	6,547,629	6,742,143	18.5%	6.2%

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.

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).

Figure 3 displays the population change in each South Coast community by decade. Suburban communities such as Dartmouth (+15,536 residents), Wareham (+11,148 residents), Westport (+6,119 residents), and Freetown (+5,069 residents) have gained the most residents.

Figure 3
Absolute Population Change by Decade, 1970–2017

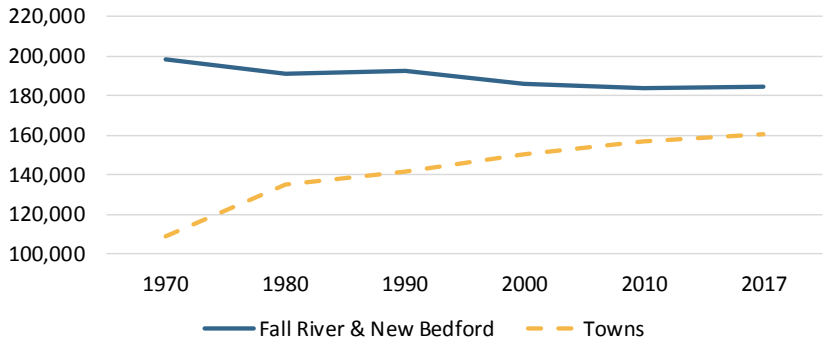


Source: 1970 through 2010, U.S. Census STF3 file, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2017 U.S. Census Bureau, Population Division; May 2018.

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 7.1 percent (-14,292 residents) between 1970 and 2017, while the South Coast's suburban towns experienced population growth of 47.4 percent during the same period (+50,785 residents). Since 2010, the population proportions have remained relatively constant, although the suburban towns continue to add residents, albeit at a much slower pace (see Figure 4).

Figure 4
Population Trends: Cities versus Towns



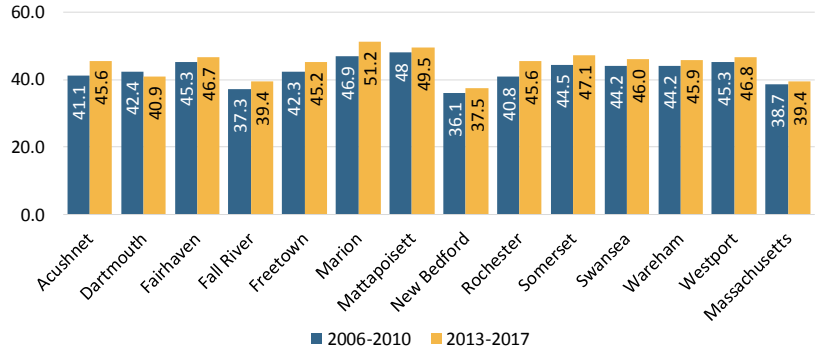
Source: 1970 through 2010, U.S. Decennial Census STF 3 File, 2012–2016, ACS 5-Year Estimates (2007–2011, 2008–2012, 2009–2013, 2010–2014, & 2012–2017, Table DP05).

2.3 MEDIAN AGE AND AGE COHORTS

All South Coast towns except for Dartmouth experienced an increase in the median age from 2006-2010 to 2013-2017.

The nation's population is aging and this trend is occurring in the South Coast as well.[7] All South Coast towns, except for Dartmouth, experienced an increase in the median age between the 2006-2010 and 2013-2017 time periods, while the statewide median age also increased over this period (see Figure 5). There are health care implications inherent in an aging population, particularly in terms of how health care systems manage chronic conditions such as cancer, dementia, falls, obesity, and diabetes. Notably, the median age of residents in Fall River and New Bedford are considerably lower than most of the other South Coast communities.

Figure 5
Median Age by Community, 2010–2014 & 2013–2017

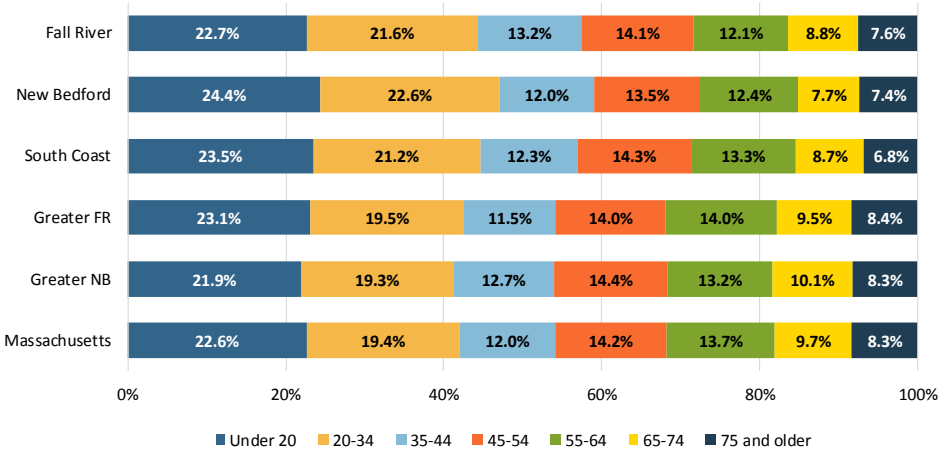


Source: 2010–2014 & 2013–2017 ACS 5-Year Estimates, Table B01002.

[7] For more information on the increase in the national median age, see: https://www.census.gov/newsroom/press-releases/2018/popest-characteristics.html.

The age cohorts in the South Coast generally reflect their counterparts at the state level. New Bedford, however, has a slightly higher share of residents under the age of 35 in comparison to other areas (see Figure 6).

Figure 6
Age Cohorts in Selected Areas, 2013–2017



Source: ACS 5-Year Estimates, Table S010, 2013–2017.

During interviews, stakeholders frequently identified the elderly and children as groups in the region that have unmet needs. When discussing the elderly, stakeholders cited as major concerns insufficient transportation networks, particularly in rural communities; the challenge of buying food and medicine on a fixed income; and the potential for undiagnosed substance use disorder. Additionally, some interviewees remarked that the current demand for elderly services will increase as the Baby Boomer generation ages, which will put a greater strain on what interviewees characterized as the limited resources in the region.

When discussing children, most stakeholders focused on the need for programming outside of the school day. This approach was cited by various interviewees as a way to help combat youth violence and gang activity in the region, which were both cited frequently as major health concerns. Continuing on the theme of violence in the community, many stakeholders expressed a need for youth mental health services in order to address the trauma experienced by children in the region, particularly in the cities.

Additionally, the topic of childhood obesity emerged as a theme from some interviews. Stakeholders expressed concern over the lack of physical activities during the school day, with some specifically noting a decrease in recess and physical education. Others commented on the lack of healthy food options, both in the schools and in some neighborhoods. These stakeholders felt that improving access and affordability to healthy foods would help combat childhood obesity.

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.[8] Across the South Coast, women account for 51.8 percent of the population, compared with 51.5 percent of the population statewide (see Figure 7). The town of Marion and the region's cities have the highest shares of women. Only in the towns of Rochester, Swansea, and Westport 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 7
Proportion of Women, 2013–2017

Source: ACS Survey 5-Year Estimates, Table DP05, 2013–2017.

During interviews, community stakeholders pointed to the unique health challenges facing women in the region. Particularly, stakeholders expressed concern about women who are the victims of domestic violence, and pregnant women and new mothers struggling with substance use. As one stakeholder said, "The highest death among mothers with substance use disorder in the first year postpartum." This assertion is confirmed with data in Section 7 and highlights how stakeholders felt about the need to improve supports for women in getting treatment for mental health issues and substance use disorder in particular.

Additionally, although not exclusively a women's issue, family focus group participants discussed the difficulties low-income or homeless parents experience in finding childcare when they have to go to a doctor's appointment or work outside of school hours. Many of those who expressed frustration with not being able to bring young children and babies with them into examinations were single mothers who lacked a family support system. Focus group participants felt that more services should be available to help single parents secure low-cost childcare while they are at work or school.

[8] 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 communities 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,"[9] 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.[10]

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 8). This pattern holds true for African Americans, Hispanics, and Whites (see Figure 9). 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.[11]

Figure 8
Income and Health Status

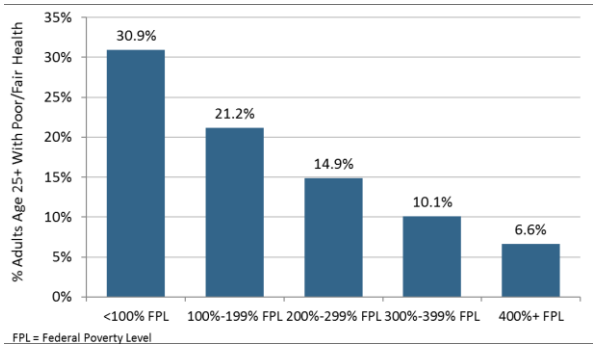
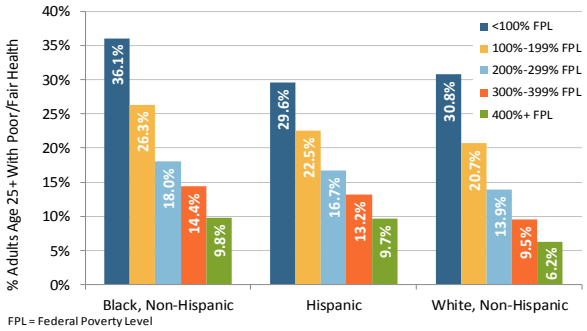


Figure 9
Income, Race, and Health Status



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.[12] 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

[9] World Health Organization. Social determinants of health. 2018. Accessed at www.who.int/social_determinants on November 9, 2018.

[10] 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.

[11] Robert Wood Johnson Foundation. (April 2009*). Issue brief 5: race and socioeconomic factors.* Commission to Build a Healthier America.

[12] North Carolina Institute of Medicine. (February 2013). *Prevention for the health of North Carolina: prevention action plan*. Healthy North Carolina 2020.

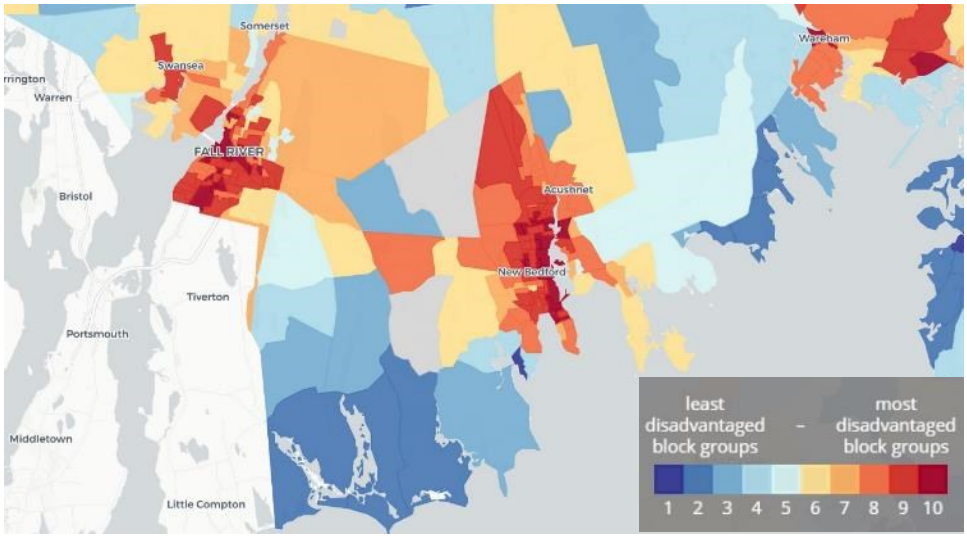
Congress), concludes that while quality of care is improving, issues regarding access to care are increasing. The report states that "these disparities may be due to differences in access to care, provider biases, poor provider-patient communication, or poor health literacy."[13] In addition, a growing 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.[14]

3.1 GEOGRAPHIC ANALYSIS OF NEED: AREA DEPRIVATION INDEX

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.

The Area Deprivation Index (ADI) is based on a measure created by the U.S. Health Resources and Services Administration. Combining seventeen indicators, the ADI measures social vulnerability (e.g., income, employment, education, and housing conditions) and has been linked to poorer health outcomes.[15,16] Figure 10 shows the Census blocks in which the South Coast's most vulnerable residents reside.

Figure 10
South Coast Region ADI



Source: Neighborhood Atlas.[17]

[13] Agency for Healthcare Research and Quality. (2012). *National healthcare disparities report*. Publication # 13-0003.

[14] 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.

[15] Singh, G. K., Williams, S. D., Siahpush, M., & Mulhollen, A. (2011). Socioeconomic, Rural-Urban, and Racial Inequalities in US Cancer Mortality: Part I—All Cancers and Lung Cancer and Part II—Colorectal, Prostate, Breast, and Cervical Cancers. Journal of Cancer Epidemiology, 2011, 1–27.

[16] Singh, G. K., Azuine, R. E., Siahpush, M., & Kogan, M. D. (2012). All-Cause and Cause-Specific Mortality among US Youth: Socioeconomic and Rural–Urban Disparities and International Patterns. Journal of Urban Health, 90(3), 388–405.

[17] University of Wisconsin School of Medicine Public Health. 2015 Area Deprivation Index v2.0. Downloaded from https://www.neighborhoodatlas.medicine.wisc.edu/ July 17, 2019.

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 Southcoast Health 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.

During interviews, stakeholders were asked what conditions they felt contributed to health disparities in the region. Nearly every interviewee stated that income and education were the major contributing factors to health disparities. One stakeholder put it succinctly, stating that healthier people are "of high socioeconomic status, white people or people with white privilege, and educated." This view, to varying degrees, was echoed by numerous stakeholders, who often cited low educational attainment and incomes in Fall River and New Bedford as major obstacles to better health outcomes in the cities.

When asked what specific social determinants of health impact the largest number of people in their community, interviewees most often cited housing, transportation, violence, poverty, and educational attainment (see Figure 11). As with most socioeconomic indicators, these issues are interconnected, and during probing interviewees often noted that affordability (particularly of housing, transportation, and education), and poverty were the issues, which if addressed, would have the largest downstream impacts.

Figure 11
What are the determinants that affect the largest number of people in your community?

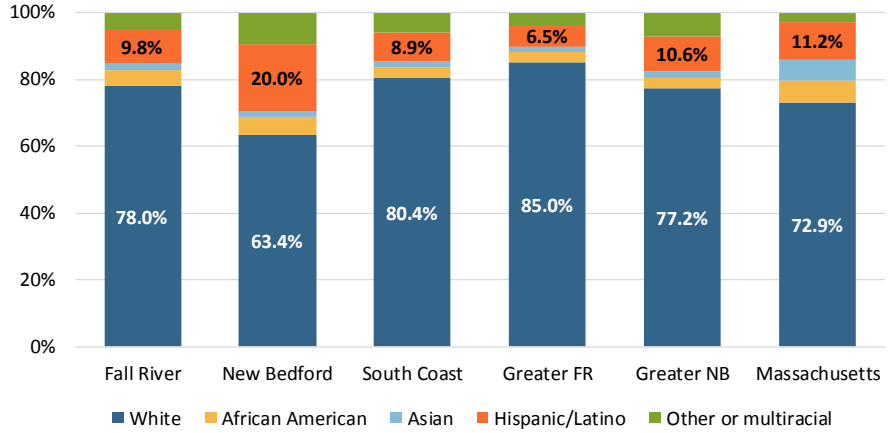
Source: Southcoast Health Community Stakeholder Interviews, 2019.

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.[18] As a region, the South Coast has a less diverse population than the Commonwealth; 80.4 percent of South Coast residents are White, compared with 72.9 percent of residents in Massachusetts. A notable exception in the region is New Bedford, where non-White residents account for 36.6 percent of the city's population (see Figure 12).

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

Figure 12
Race and Ethnicity of the Population in Selected Areas, 2011–2017

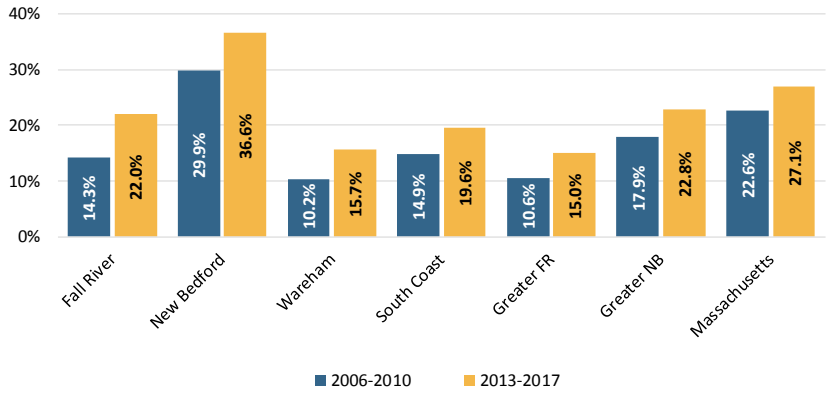


Source: American Community Survey 5-Year Estimates, Table DP05, 2013–2017.

[18] Artiga, S. et al. (2016). "Key Facts on Health and Health Care by Race and Ethnicity," Kasier Family Foundation. Retrieved from: https://www.kff.org/disparities-policy/report/key-facts-on-health-and-health-care-by-race-and-ethnicity/

However, communities throughout the South Coast are becoming more diverse. Between the 2006-2010 and 2013-2017 periods, the minority population in the region increased by 4.7 percent (16,945 people) (see Figure 13). Fall River experienced the largest percentage increase in its minority population (7.7% or 6,895 residents), followed by New Bedford (6.7% or 6,433 residents), Fairhaven (6.6% or 1,056 residents), and Wareham (5.4% or 1,329 residents).

Figure 13
Change in Minority Population in Selected Areas, 2006–2010 & 2013–2017

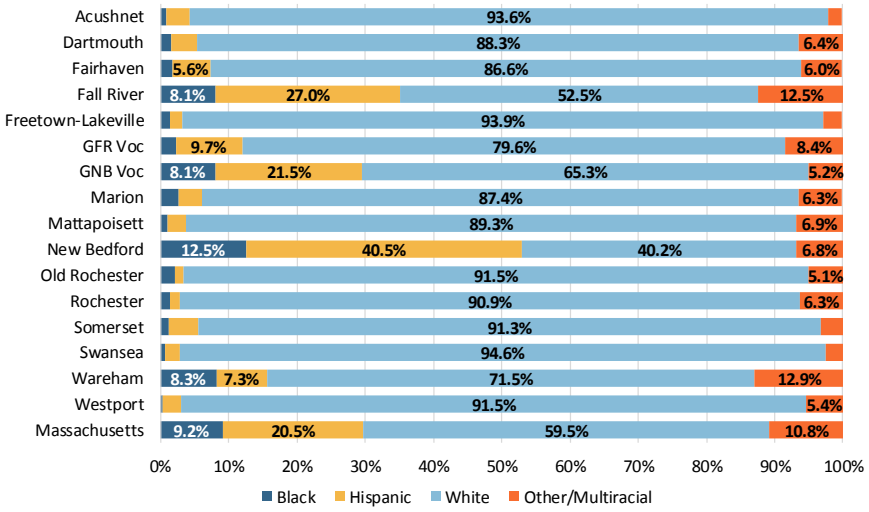


Source: ACS 5-Year Estimates, Table DP04, 2006–2010 & 2013–2017.

The schools of the South Coast are often more diverse than the communities as a whole. For example, New Bedford's public schools are now majority non-white with Hispanic and Black students representing 40.5 and 12.5 percent of the total student population, respectively (see Figure 14). The higher share of minorities in the school system compared to the community is, in part, a product of the national trend of minority births exceeding white births.[19] As this trend continues, the student population in the region will only grow more diverse.

New Bedford's public schools are now majority non-white with Hispanic and Black students representing 40.5 and 12.5 percent of the total student population, respectively.

Figure 14
Student Race and Ethnicity by District, 2018–2019 School Year



Source: DESE Class Size by Race and Ethnicity, 2018–2019.

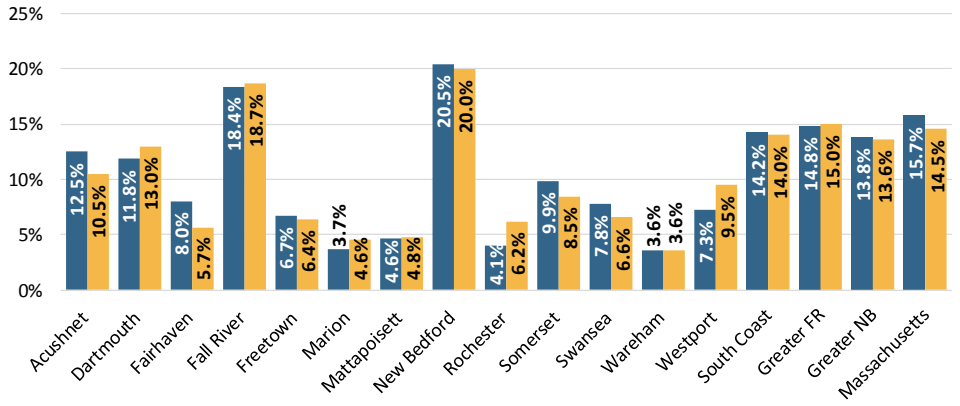
[19] Cohn, D. (2016). "It's official: Minority babies are the majority among the nation's infants, but only just." Pew Research Center *Fact Tank*. June 23, 2016. Retrieved from: https://www.pewresearch.org/fact-tank/2016/06/23/its-official-minority-babies-are-the-majority-among-the-nations-infants-but-only-just/.

Foreign-Born Population

The South Coast has long been an attractive place to settle for immigrants, as evidenced by foreign-born residents representing 14.5 percent of the region's population (see Figure 15). As Gateway Cities, New Bedford and Fall River have been traditional destinations for new arrivals to America since the late 18th century. During the 2013–2017 period, 18.7 percent of residents in Fall River and 20.0 percent of residents in New Bedford 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.

During the 2013–2017 period, 18.7% of people in Fall River and 20.0% of people in New Bedford were born outside of the country.

Figure 15
Foreign-Born Share of the Population, 2006–2010 & 2013–2017



Source: American Community Survey 5-Year Estimates, Table B05012, 2006–2010 & 2013–2017.

Community stakeholders expressed concern regarding the underserved needs of the immigrant populations. Nearly all stakeholders named non-English speakers as one of the primary groups with unmet needs in the region. Stakeholders felt that language was a major barrier for the South Coast's foreign-born residents, and multiple stakeholders mentioned that even if immigrants had adjusted to day-to-day life in the region, their unfamiliarity with the U.S. healthcare system and medical terminology still created a barrier to access. In particular, stakeholders referred to immigrants whose languages have not yet been adopted by local service providers, such as Cape Verdean Creole, Arabic, or Cambodian.

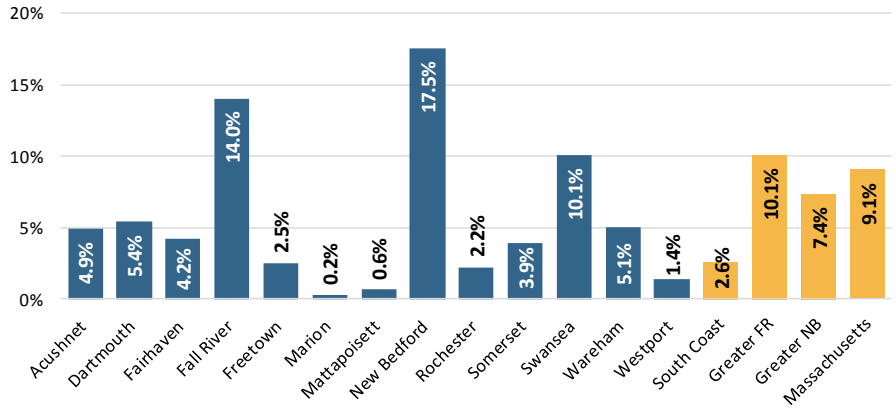
Furthermore, stakeholders who work with undocumented immigrants and new arrivals discussed how a learned distrust of institutions in their country of origin prevents immigrants from accessing the healthcare system once they arrive in the U.S. As a means to overcoming these issues, it was suggested by one stakeholder that the local religious organizations could offer entrée into underserved immigrant communities.

As discussed by stakeholders, the changing immigrant population creates challenges for service providers. Perhaps the largest obstacle is the language barrier, which was cited as a major health equity issue. The foreign-born population in the region has shifted away from Lusophone countries of origin, and health care providers need to employ staff who can both engage with new arrivals in their native languages and understand cultural barriers to care.

Figure 16 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, 14.0 percent and 17.5 percent, respectively.

As discussed by stakeholders, the changing immigrant population creates challenges for service providers. Perhaps the largest obstacle is the language barrier, which was cited as a major health equity issue.

Figure 16
Share of Population 5 Years and Over with Limited English Proficiency, 2013–2017



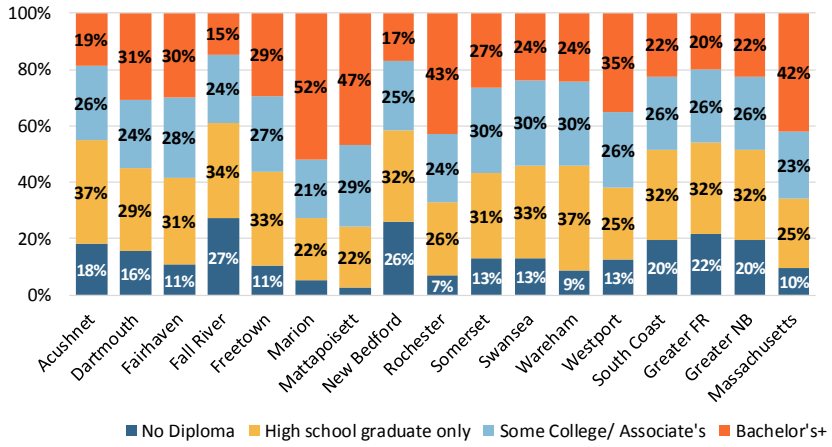
Source: American Community Survey 5-Year Estimates, Table S1601, 2013–2017.

Educational Attainment

As a region, the South Coast has long struggled with low levels of educational attainment. Although the regional average is primarily driven by the low levels of educational attainment in Fall River and New Bedford, many of the region's towns also lag behind the state in educational attainment of post-secondary degrees (see Figure 17). In both cities, the majority of the population 25 years of age or older has never attended a college or university. 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 the Commonwealth (9.7%).

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

Figure 17
Educational Attainment for the Population
25 Years of Age and Older, 2013–2017[20]



Source: American Community Survey 5-Year Estimates, Table S1501, 2013–2017.

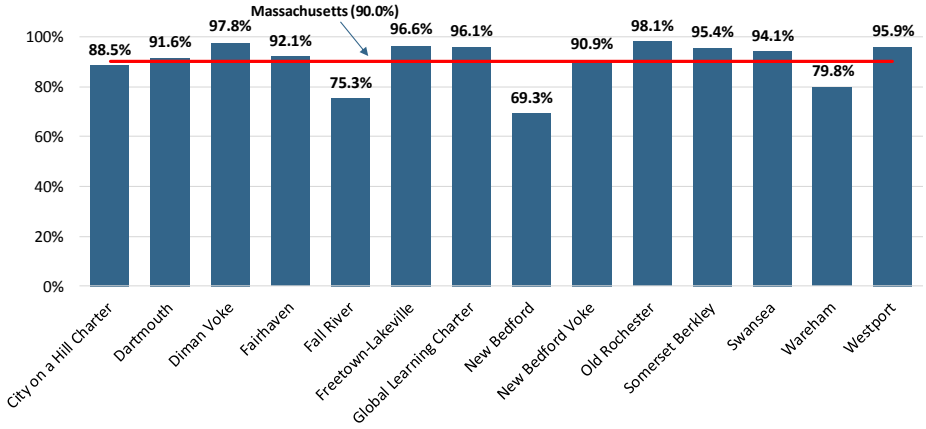
During stakeholder interviews and focus groups, participants identified low levels of education as a barrier to healthcare access in their community. Moreover, the interviewees consistently linked higher educational attainment to better health outcomes. Stakeholders felt that having a higher education, typically cited as a Bachelor's or Master's degree, increased earnings, which in turn allowed a person or a household to access a better quality of care and to engage in more preventive care. Interviewees felt this was particularly true in the cities. For instance, one stakeholder from New Bedford remarked that, along with income, education was the "deciding factor" for who is healthy in the city. Stakeholders frequently discussed the strong connection between income and education, noting that city residents from high-income households are often the ones who can afford to attend college and equip themselves with the well-paying job that helps them maintain their health through adulthood, while in low-income households generational poverty compounds poor health outcomes.

[20] Data do not always add to 100 percent due to rounding.

Five-Year Adjusted High School Graduation Rate

High school graduation rates, particularly in the region's cities, must increase to improve economic opportunity for residents, which in turn, helps to positively address many of the social determinants of health. The five-year adjusted graduation rate measures the percentage of students who graduate with a regular high school diploma within five years.[21] Graduation rates for most of the region's communities are above the state average. Fall River (75.3%), New Bedford (69.3%), Wareham (79.8%), and City on a Hill Charter school have graduation rates below the state average (see Figure 18).

Figure 18
5-Year Adjusted Graduation Rate by District, 2016-2017 School Year



Source: Massachusetts Department of Elementary and Secondary Education.

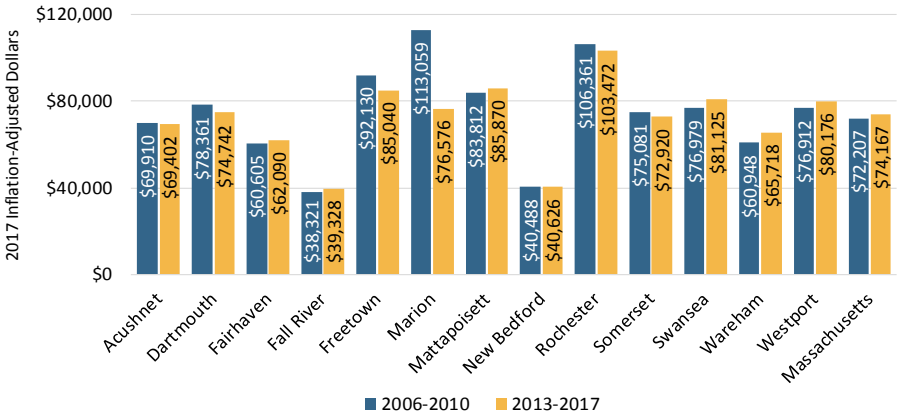
[21] The adjusted graduation rate does not include the transfers into the district.

Median Household Income

Median incomes are particularly low in Fall River (4th lowest in Massachusetts) and New Bedford (7th lowest in Massachusetts).

Inflation-adjusted median household income increased in seven South Coast communities from the 2006–2010 to the 2013–2017 periods (see Figure 13). Seven South Coast communities have median incomes that are above the state average. Median incomes are particularly low in Fall River (4th lowest in Massachusetts) and New Bedford (7th lowest in Massachusetts). Acushnet, Fairhaven, Somerset, and Wareham also have median incomes below the state average.

Figure 19
Inflation-Adjusted Median Household Income by Community, 2010–2017[22]



Source: ACS 5-Year Estimates, Table S1903, 2006–2010 & 2013–2017.

[22] It is not possible to calculate a median household income for the South Coast without raw data for every household in the region.

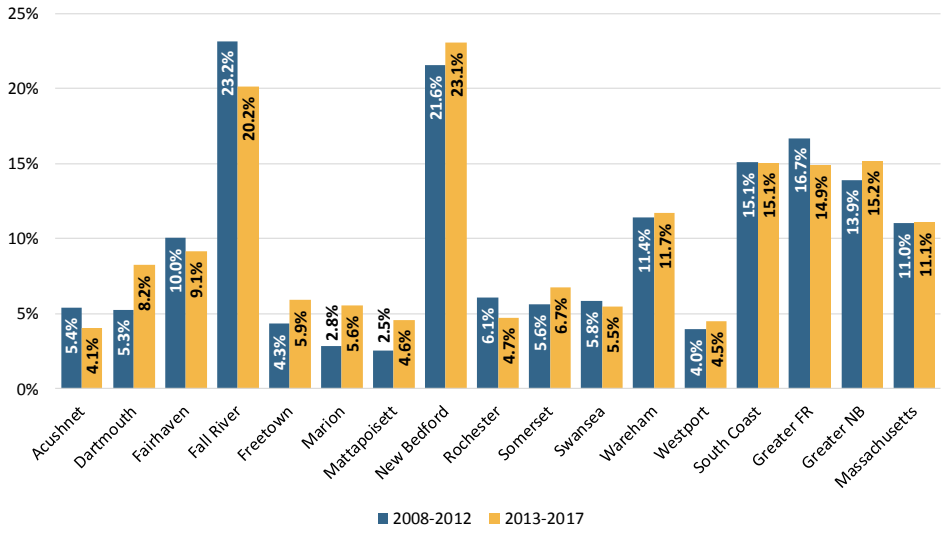
Poverty

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.

Over twenty percent (20.2%) of all people in Fall River and 23.1 percent of people in New Bedford live in households with annual incomes below the poverty level.

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. Over 20 percent (20.2%) of all people in Fall River and 23.1 percent of people in New Bedford live in households with annual incomes below the poverty level (see Figure 20). This translates to 39,247 individuals living in poverty in just the cities of the South Coast alone. Poverty rates decreased in five South Coast communities between the 2008–2012 and 2013–2017 periods, while rates increased in eight communities.

Figure 20
Share of the Population in Selected Areas Living Below the Poverty Level, 2008–2012 & 2013–2017



Source: ACS 5-Year Estimates, Table S1701, 2008–2012 & 2013–2017.

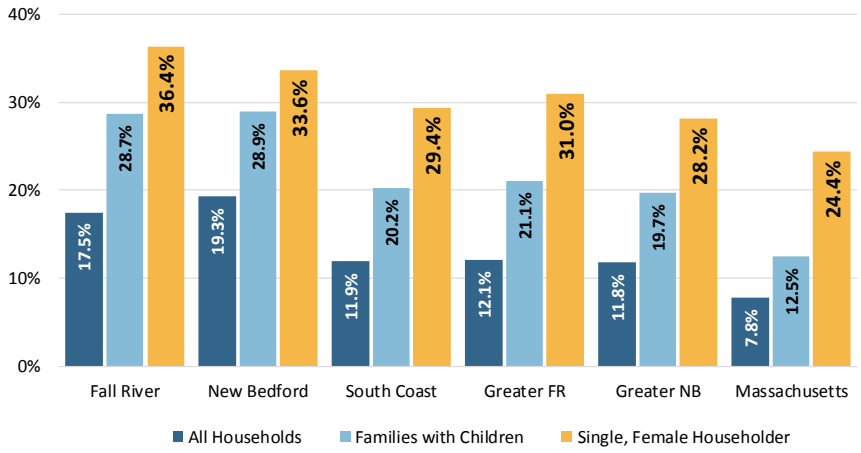
Family Poverty

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.[23] Figure 21 presents the poverty rates for all families, families with children, and families led by a female with no spouse in selected areas. 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 region and the state as a whole. For example, less than 10 percent of all families statewide live in poverty (7.8%), compared with 11.9 percent of all families in the South Coast and 17.5 percent of families in Fall River and 19.3 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.

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

Figure 21
Family Poverty in Selected Areas, 2012–2016



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

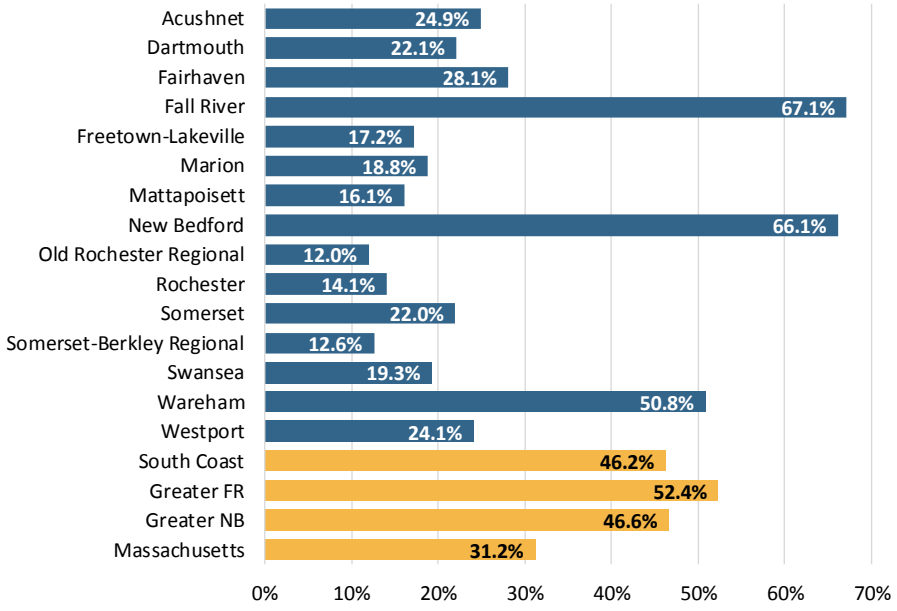
[23] Victorino, C. & Gauthier, A. (2009). "The social determinants of child health: variations across health outcomes – a population-based cross-sectional analysis." BMC Pediatrics 9: 53. Retrieved from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2734529/.

Student Poverty

Over 46 percent (46.2%) of the public school students in the South Coast are classified as economically disadvantaged by the Department of Elementary and Secondary Education (DESE) (see Figure 22).[24] Much like other poverty measures, the share in the South Coast exceeds that of the state, where 31.2 percent of all students are considered economically-disadvantaged. This difference is driven primarily by the larger number of economically-disadvantaged students in Fall River (67.1% or 6,885 students), New Bedford (66.1%, or 8,567 students), and Wareham (50.8% or 1,107 students).

Over 46 percent of the public school students in the South Coast are classified as economically-disadvantaged.

Figure 22
Students Classified as Economically Disadvantaged Students, 2018–2019 School Year



Source: Massachusetts Department of Elementary and Secondary Education, 2018–2019.

[24] 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).

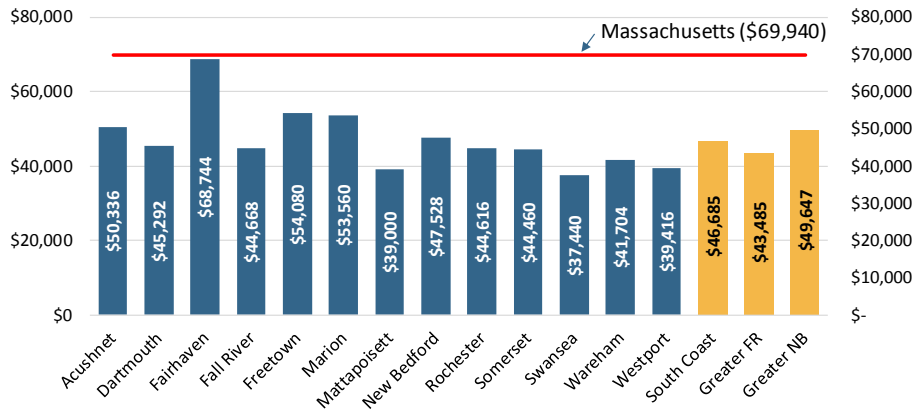
Employment and Wages

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.[25]

Average annual wages in the South Coast range from a low of $37,440 for workers employed in Swansea to a high of $68,744 for employees of Marion businesses (see Figure 23). The South Coast region lags in average annual wage ($46,685) when compared to the state as a whole ($69,940). Importantly, this data measures the annual wages of workers employed in each community and not the annual wages of the residents of each town.

The South Coast region lags in average annual wage ($46,685) when compared to the state as a whole ($69,940).

Figure 23
Average Annual Wage, 2017[26]



Source: Massachusetts Executive Office of Labor and Workforce Development ES-202 Data, 2017.

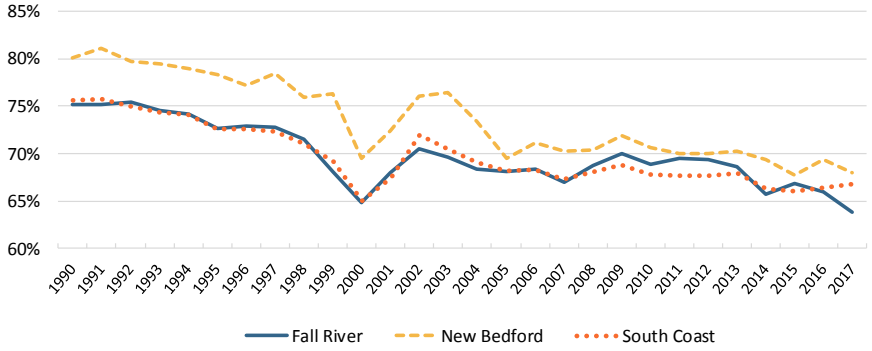
[25] Robert Wood Johnson Foundation. See https://www.rwjf.org/en/library/research/2012/12/how-does-employment--or-unemployment--affect-health-.html.

[26] 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.

As Figure 24 demonstrates, the gap between the state and South Coast average wage has been persistent for decades, and it continues to widen. Region-wide, annual average wages are only 66.8 percent of the state average, while annual wages are 63.9 percent and 68.0 percent of the statewide average in Fall River and New Bedford respectively.

Many stakeholders brought up the difficulty that South Coast residents experience in affording healthcare, particularly preventative care and specialists, on the prevailing regional wage.

Figure 24
Annual Average Wage in Selected Areas as a Percentage of State Average, 1990–2017



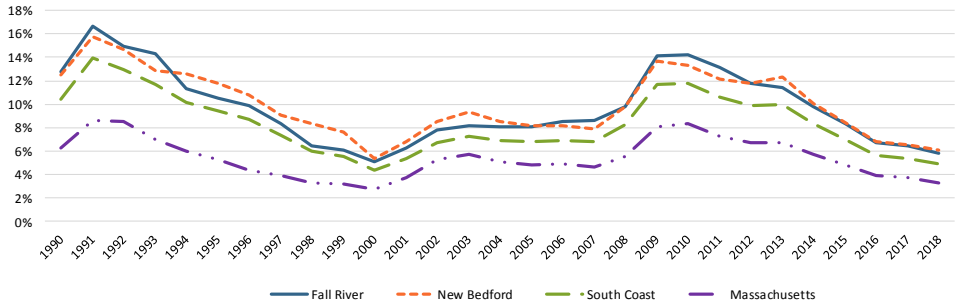
Source: Authors' Calculations from Massachusetts Executive Office of Labor and Workforce Development ES-202 Data, 1990–2017.

As discussed earlier, the majority community stakeholders interviewed felt that health outcomes in the region are a function of income. When describing the obstacles to healthcare and the socioeconomic determinants of health, many stakeholders brought up the difficulty that South Coast residents experience in affording healthcare, particularly preventative care and specialists, on the prevailing regional wage. During a focus group, mental health providers focused on the challenges that face families trying to survive on a minimum wage income and how this situation contributes to stress in both parents and children. Furthermore, at a family focus group, participants named the cost of prescriptions as a top health concern, with many group members remarking that routine prescriptions, such as insulin, can be difficult to factor into low-wage budgets that also include childcare, housing, food, and transportation.

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

Unemployment rates across the state have declined from their 2009 peaks. Yet, the South Coast continues to have unemployment rates above that of the Commonwealth (see Figure 25). The South Coast's historic trend is driven by the higher unemployment rates in Fall River and New Bedford, which had average unemployment rates of 5.8 percent and 6.1 percent in 2018, respectively. The South Coast had an unemployment rate of 4.9 percent in 2017, while Massachusetts had a 3.3 percent rate. The latest unemployment rates available for this report show that in May 2019, the unemployment rate in Fall River was 5.2 percent, compared to 5.2 percent in New Bedford and 3.1 percent statewide.

Figure 25
Unemployment Rate 1990–2018



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

When discussing the history of the region, a subset of stakeholders referenced the decline of manufacturing jobs. There was a consensus among this group that these jobs provided a route to a sustainable middle-class life, and that the region's workers have yet to recover from the gradual decline in manufacturing employment. Many stakeholders discussed the fishing industry in similar terms, that is, that it offers a way for people who do not have a post-secondary or even a high school education to earn a higher wage. However, there were concerns about the sustainability of this way of life. Stakeholders talked about the larger impacts of climate change on the fisheries and the physical stamina of workers, who are often exiting middle age with occupation-related physical health issues and skills that do not transfer to other industries.

4 HOUSING AND HOMELESSNESS

Throughout the needs assessment, housing emerged as a distinct area of concern for interviewees, focus group participants, and survey respondents. During interviews, stakeholders consistently identified housing as a social determinant that affects the largest number of residents in their community. Based on interviews and focus groups, housing is perceived as a multifaceted issue. Affordability, homelessness, substandard housing, and an inadequate supply of transitional housing are all related, but unique concerns that arose.

Primarily, stakeholders focused on the lack of affordable, quality housing for low-income families in the region. Despite having some of the lowest median rents in the state, apartments in Fall River and New Bedford remain unaffordable for many households and the age of the most affordable units often means that they are substandard, as the PPC concluded in a housing analysis for Fall River in 2017.[27] This dynamic results in many households paying housing costs (rent or mortgage payments) that are above their means, which in turn leaves less household income available for healthcare. The community perception of health are discussed in detail in Section 5, and as the results of the Providers Survey reveal there, respondents selected "access to affordable housing" as the single greatest concern in the community they serve.

Homelessness emerged as a theme related to housing affordability. Many stakeholders spoke about the challenges homeless residents face in trying to secure affordable housing and health care without a permanent mailing address. Stakeholders and focus group participants noted that homeless residents frequently use the emergency department as their primary source of health care. Some stakeholders felt that this meant that homeless people in the region are only able to engage with the healthcare system when they are experiencing a health crisis, and were concerned not only that these individuals did not receive preventative care, but also that they did not receive adequate follow-up on their health issues.

The connections between homelessness, mental health, and substance use disorder, which are highly prevalent among the homeless population,[28] were also discussed by interviewees and focus group participants. Some expressed concern that because homeless individuals more likely to experience mental health issues, they are often treated with hostility by emergency department staff and other healthcare professionals. It was also noted that experiencing homelessness in combination with these issues might create challenges for entering shelters and transitional housing.

Community members are right to be concerned about homelessness. The U.S. Department of Housing and Urban Development's (HUD) reports that the Massachusetts Point in Time (PIT) Count increased by 14.2 percent (+2,503 individuals) from 2017 to

[27] 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.

[28] See https://www.nationalhomeless.org/factsheets/addiction.pdf. Retrieved December 17, 2018.

2018 and by 32.7 percent (+ 4,941 individuals) from 2007 to 2018.[29] In absolute terms, the increase in the number of homeless individuals 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. 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 Southcoast Health's 2019 Community Benefits Implementation Strategy.

[29] 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.

4.1 HOUSING AFFORDABILITY

Housing affordability was an issue that arose often during focus groups. Particularly, participants in a service providers' focus group in Wareham remarked about how the increase in seasonal homeownership in town has contributed to the shortage of affordable year-round units, since property owners can make more renting short-term in the summer than they would be able to on the year-round rental market. Additionally, at a family focus group in New Bedford, participants lamented the requirements for staying on the waiting list for affordable housing, such as remaining in a city where they were already struggling to find housing. They also touched on the "cliff effect" of housing subsidies and how slight earning increases can put them in danger of losing the assistance that their family depends on to survive.

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. During the 2013–2017 period, over 47 percent of renters (47.2%) and 23.1 percent of homeowners in New Bedford were housing cost burdened (see Figure 26). HUD defines cost-burdened families as those "who pay more than 30 percent of their income for housing" and "may have difficulty affording necessities such as food, clothing, transportation, and medical care."[30]

Figure 26
Housing Cost Burdened Households, 2013–2017

Source: 2013–2017 American Community Survey 5-Year Estimates, Table DP04.

[30] See https://www.huduser.gov/portal/pdredge/pdr_edge_featd_article_092214.html. Retrieved June 11, 2019.

Housing Cost Gap Analysis

A housing cost gap analysis demonstrates where disparities may exist between the median cost of housing and what the median annual household income can "affordably" purchase, which means that the household spends no more than 30 percent of their income on housing costs. For example, the median annual income for a renter household in New Bedford is $27,627, and in order to purchase housing affordably, this household would not spend more than 30 percent of its income on rent, meaning that they should not exceed paying $8,302 per year in rent.

Yet, the median annual cost for a rental unit in New Bedford is $9,624, which results in a housing cost gap of -$1,322. Not only does this mean that it is likely that many households in city struggle to rent affordably, but also, it highlights the difficulty that many of these rental households are likely to experience if they wish to transition into ownership. Table 4 below further demonstrates that even in communities with the lowest housing costs in the region, Fall River and New Bedford, significant gaps still exist between the affordable purchase price at the median household income and the median cost of housing.

Table 4
Rental and Ownership Housing Cost Gaps, 2017

	Rental Cost Gap		**Ownership Cost Gap**	
	Median Annual Cost	Gap	Median Annual Cost	Gap
Acushnet	$9,516	$1,637	$19,644	$1,177
Dartmouth	$11,268	-$2,625	$22,944	-$521
Fairhaven	$10,632	-$2,090	$20,376	-$1,749
Fall River	$9,084	-$593	$19,632	-$7,834
Freetown	$15,000	-$1,108	$25,176	$336
Marion	$12,936	-$3,216	$28,524	-$5,551
Mattapoisett	$13,704	$2,032	$26,844	-$1,083
New Bedford	$9,624	-$1,322	$18,912	-$6,724
Rochester	$11,940	$7,679	$26,676	$4,366
Somerset	$12,192	$3,628	$21,552	$324
Swansea	$10,728	$4,754	$21,036	$3,302
Wareham	$12,792	-$3,602	$20,112	-$397
Westport	$12,936	-$2,231	$21,744	$2,309
Massachusetts	$14,076	-$1,848	$25,224	-$2,974

Source: 2013–2017 ACS Tables S1903, B25119, B25088, & B25064.

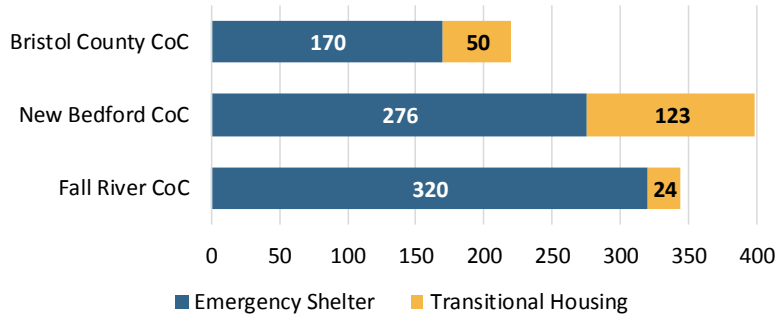
4.2 HOMELESSNESS

Stakeholders and focus group participants discussed homelessness and the lack of affordable housing as linked issues, and they also felt that the lack of resources for treatment of mental health issues and substance use disorder, which are highly prevalent among the homeless population, contribute to homelessness in the region.[31] As one stakeholder asked, "If you don't have a home, how can you be physically well? And mentally well?"

U.S. Department of Housing and Urban Development's (HUD) organizes Point in Time (PIT) Counts to assess the number of homeless individuals in a given service area, called a Continuum of Care (CoC). The PIT count occurs on a single night in January in CoCs throughout the country.[32] Funding for homeless assistance and transitional housing is awarded to CoCs based on the level of need demonstrated in the PIT counts. In the region, New Bedford and Fall River are the only single-community CoCs, with the remainder of Bristol County consolidated into the Attleboro/Taunton/Bristol County CoC.[33]

As of 2018, the majority of year-round beds available in New Bedford and Fall River were classified as "emergency shelter" beds. Compared to New Bedford, Fall River has considerably fewer beds in transitional housing, which provides temporary long-term housing to individuals and families transitioning from emergency shelter to permanent housing (see Figure 27). Focus group participants in New Bedford praised the work being done, but felt strongly that the shelter and transitional housing system in the region needed to add capacity, particular for families in need of transitional housing, as many emergency shelters have rules about housing minors and men in the same setting.

Figure 27
Point-in-Time Count & Number of Beds, 2018



Source: HUD Annual Homeless Assessment Report, 2007 – 2018 Point-in-Time Estimates by CoC.

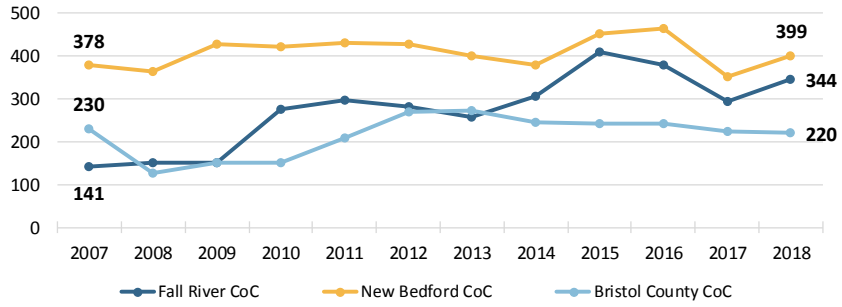
[31] See https://www.nationalhomeless.org/factsheets/addiction.pdf. Retrieved December 17, 2018.

[32] 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.

[33] Similarly, all of Plymouth County is consolidated into one continuum, the majority of which includes communities that are not part of Southcoast Health's service area, and therefore this CoC is excluded from the following analysis.

In both Fall River and New Bedford, the number of year-round homeless shelter beds have risen over the past 11 years, with Fall River's bed count rising from 141 in 2007 to 344 in 2018. However, both cities are only just beginning to recover from a recent loss of year-round shelter beds over the past one or two years (see Figure 28).

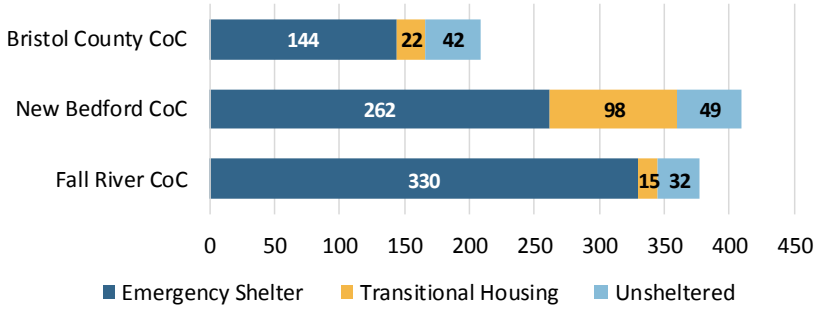
Figure 28
Total Year-Round Homeless Shelter Beds by Location



Source: HUD Annual Homeless Assessment Report, 2007 – 2018 Point-in-Time Estimates by CoC.

There were 377 homeless individuals in Fall River and 409 homeless individuals in New Bedford counted during the 2018 point-in time count. The majority were in an emergency shelter during the count (see Figure 29). The majority of homeless individuals were in emergency shelters at the time of the 2018 PIT count, which is typically defined as temporary shelter for the general homeless population or specific subpopulation, such as women with children.

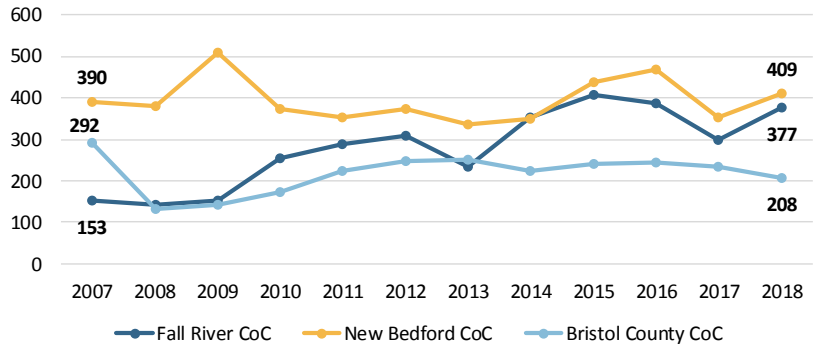
Figure 29
Homeless Population by Point-in-Time Shelter Type, 2018



Source: HUD Annual Homeless Assessment Report, 2007 – 2018 Point-in-Time Estimates by CoC.

Both Fall River and New Bedford have seen increases in the homeless population after a one-year decline between 2016 and 2017, while Attleboro/Taunton/Bristol County has seen slight decline over the past two years (see Figure 30). Some stakeholders felt that the fluctuation in the homeless population might be attributable to individuals leaving the region to receive services elsewhere. During a focus group in Fall River, service providers and business owners who have worked in the same area of the city for years remarked that the homeless population has become more transient, and though they were unsure exactly why this was occurring, it was suggested that people were relocating more frequently in search of available services and program openings. Still, other stakeholders expressed concern that locating too many service providers in Fall River or New Bedford would lead to an increase in those in need, and in turn, overwhelm the capacity and efficacy of the local service network.

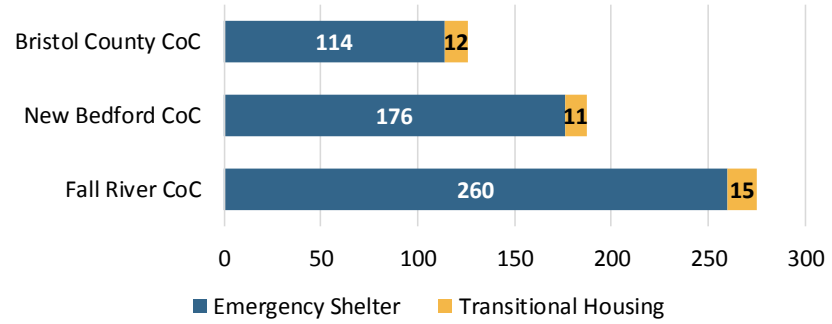
Figure 30
Homeless Population by Location, 2007–2018



Source: HUD Annual Homeless Assessment Report, 2007 – 2018 Point-in-Time Estimates by CoC.

Figure 31 shows the number of people who live in families that are homeless by shelter type. All homeless families are in a homeless shelter. Fall River has the highest population in homeless families, with 260 people. The vast majority of homeless families are in an emergency shelter rather than transitional housing. Focus group participants in New Bedford felt that the region is greatly in need of more transitional housing for families. They supported this assertion by discussing the ways in which they had been prevent from accessing transitional housing, or even emergency shelters because of their family make up. In particular, single-fathers reported barriers to staying with their children, as many shelters that allow women and children do not allow men.

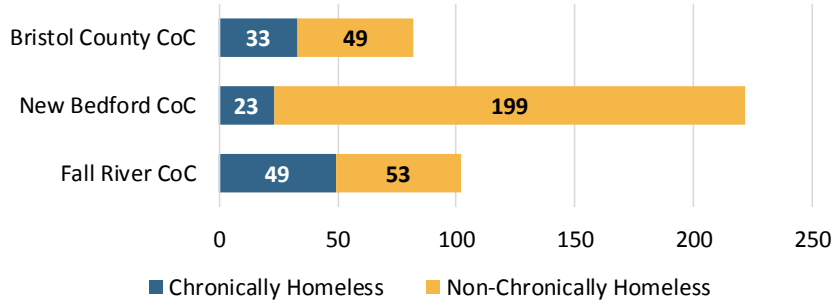
Figure 31
Point-in-Time Count of Population in Homeless Families by Shelter Type, 2018



Source: HUD Annual Homeless Assessment Report, 2007 – 2018 Point-in-Time Estimates by CoC.

The number of individuals experiencing homelessness (outside of a family unit), is highest in New Bedford, which has 222 homeless individuals, while Fall River only has 102. A person experiencing chronic homelessness is defined as a person with disabilities who has either experienced homelessness for at least one continuous year, or has experienced four or more incidents of homelessness over the last three years totaling at least twelve months.[34] Chronically homeless individuals are not part of a homeless family unit. The population of chronically homeless individuals is highest in Fall River (49) and lowest in New Bedford (23). Accordingly, only 10 percent of the homeless population in New Bedford is considered chronically homeless individuals. In Fall River, chronically homeless individuals make up 48 percent of the homeless population (see Figure 32).

Figure 32
Point-in-Time Count of Homeless Individuals, Chronic versus Non-chronic, 2018



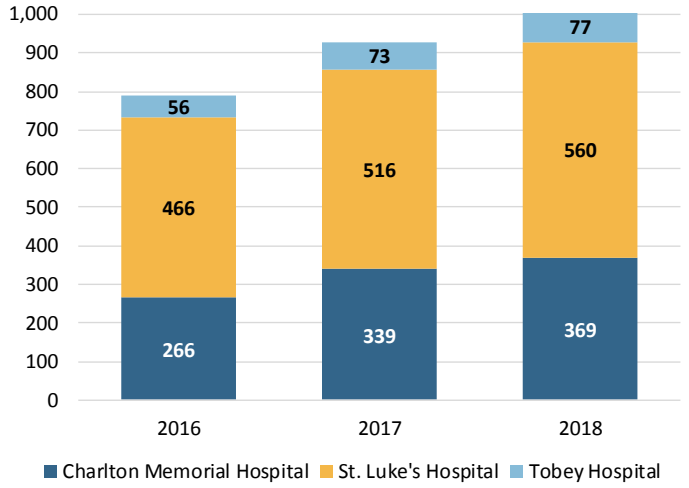
Source: HUD Annual Homeless Assessment Report, 2007 – 2018 Point-in-Time Estimates by CoC.

[34] The 2018 Annual Homeless Assessment Report (AHAR) to Congress. Retrieved from: https://files.hudexchange.info/resources/documents/2018-AHAR-Part-1.pdf.

Homeless Patients

When discussing homelessness, stakeholders and focus group participants acknowledged that the use of the emergency department by homeless individuals is often their primary means of accessing health care. One stakeholder stated that there was "high misuse of the emergency department" at Charlton Memorial Hospital and attributed this to "lack of access and adherence to care and high rates of homelessness." The number of patients being treated at Southcoast Health emergency departments has increased by 36 percent since 2016. In 2018, Southcoast Health treated 1006 unique homeless patients, which is more than even the HUD point-in-time estimate included. St. Luke's Hospital treats the most homeless patients, with 560 unique patients in 2018 (see Figure 33).

Figure 33
Total Emergency Department Unique Homeless Patients by Hospital, 2016–2018



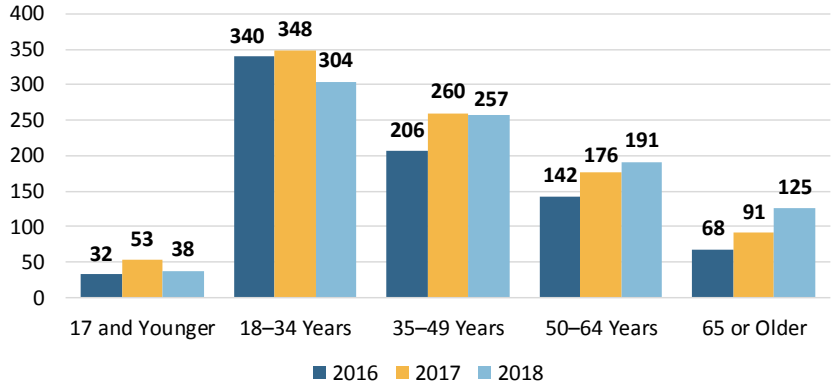
Source: Southcoast Health.

Interviews and focus groups revealed that a stigma exists in the community regarding the presence of homeless people in the emergency department, particularly at St. Luke's and Charlton. Some community members expressed reservations about using the emergency department themselves, because of negative interactions with people who they assumed were homeless. The descriptions of these experiences further highlight the intersection of homelessness, behavioral health issues, and substance use disorder. Conversely, focus group participants who have experienced homelessness themselves said that they felt discriminated against by hospital staff if they were frequent users of the emergency department, and that they found it challenging to access the healthcare system when they were suffering from a mental health issue.

Unique Visits

The age range with the largest number of unique homeless patients — that is, individuals who may or may not make more than one visit to the emergency department — is 18-34, though the number of patients in this category decreased from 340 to 304 between 2016 and 2018. The older age ranges, 50–64 and 65 and older, have seen large increases in the number of patients being treated in the ED. The 50–64 age range has seen an increase from 142 to 191 patients (34%) from 2016 to 2018, while the 65+ group of unique homeless ED patients has increased from 68 to 125, an increase of 83 percent (see Figure 34).

Figure 34
Emergency Department Unique Homeless Patients by Age Range, 2016–2018

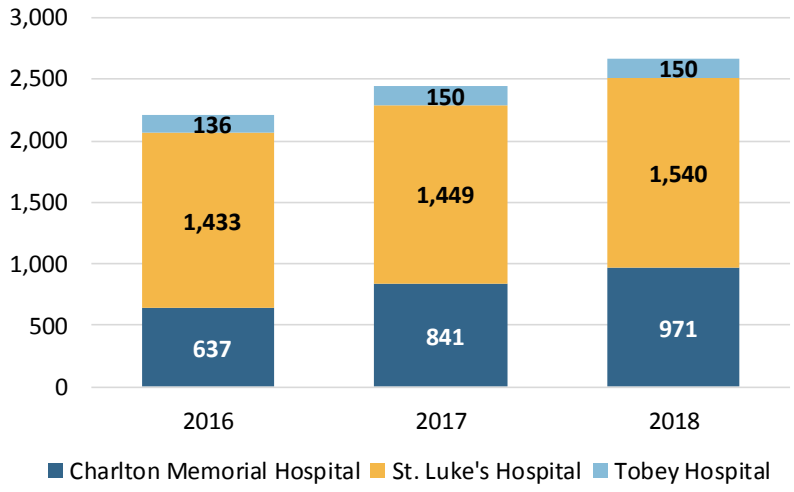


Source: Southcoast Health.

Total Visits

The total number of emergency department visits has also increased since 2016, increasing from 2,206 visits to 2,661 in 2018 (20% growth) for Southcoast Health overall. This indicates that, in 2018, each unique homeless patient visited the emergency department an average of 2.6 times. However, these totals do not reflect unique patients, just the total volume of visits. Stakeholders who work with the homeless or in emergency settings discussed the "frequent fliers," who make repeated visits to the emergency department throughout the year as their primary way to receive health care.

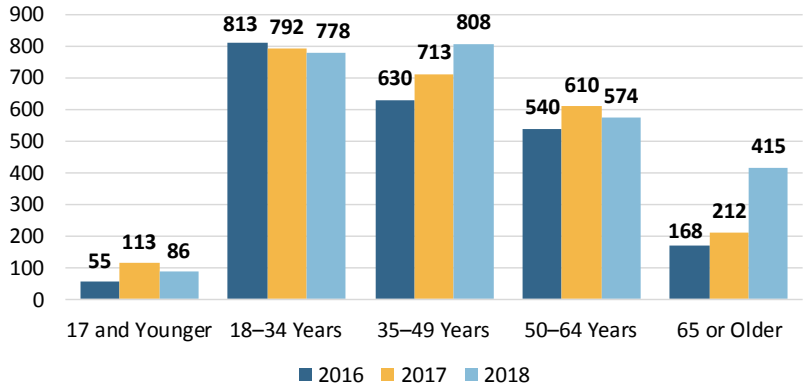
Figure 35
Total Emergency Department Homeless Visits by Hospital, 2016–2018



Source: Southcoast Health.

Most ED visits from those experiencing homelessness come from the 18–34 or 35–49 age range. However, between 2016 and 2018, the 18–34 age range has seen a slight decline in visits, while the 35–49 range has seen an increase in visits, from 630 visits in 2016 to 808 in 2018 (28% increase). In addition, the 65 and over age range has seen an even larger increase in visits, going from 168 visits in 2016 to 415 visits in 2018, an increase of 147% (see Figure 36).

Figure 36
Total Emergency Department Homeless Visits by Age Range, 2016–2018

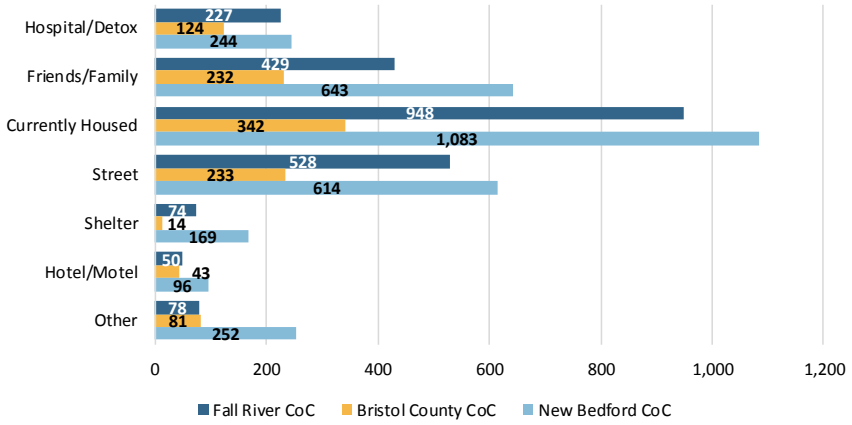


Source: Southcoast Health.

Special Focus — The CALL Hotline

For people who are experiencing homelessness or who are at risk of losing their housing, Catholic Social Services has coordinated with homeless care providers networks in each of the South Coast's CoCs to create the Coordinated Access to Local Links (CALL) Hotline, which standardized access, assessment, and a referral process for emergency shelter, permanent supportive housing programs and other services across agencies. When a person calls the hotline, they are screened to determine their level of need and connected service providers with openings. The largest number of calls come from currently housed homeless (2,373), followed by calls from those living on the street (1,375) and from friends or family of the person experiencing homelessness (1,304). Very few calls come from hotels/motels and homeless shelters (see Figure 37).

Figure 37
Origin of Calls to the CALL Hotline, 2018



Source: Coordinated Access to Local Links.

5 COMMUNITY PERCEPTIONS OF HEALTH

The most commonly cited issue impacting the region was the prevalence of substance use disorder and its ripple effects on family cohesion, the economy, and people's housing stability.

The health data in this report are supplemented with qualitative data from focus groups and surveys to further identify the health-related needs of the region. This section highlights data collected from these efforts as they relate to the overall health and well-being of the region.

Overall, the qualitative activities undertaken for this project highlight four salient issue areas: the influence of socioeconomic status on health, substance use disorder, mental and behavioral health, and housing affordability and homelessness. During interviews and focus groups, some community members spoke of the intersection of these issues, but the most commonly cited issue affecting the region was the prevalence of substance use disorder and its ripple effects on family cohesion, the economy, and people's housing stability.

Another major theme that emerged from the qualitative work is that there is a drastic need to improve and increase mental and behavioral health services in the region. In past CHNAs, interviewees often discussed the need to address the stigma around receiving mental healthcare, but in this year's interviews, stakeholders appeared to be more concerned with opening up the availability of services. The more mental health services are needed, stakeholders felt, to better address trauma in the community, particularly in educating people on healthy ways to address the stress of life's challenges. Stakeholders also felt that more and better access to mental health services is needed for the homeless community, both in terms of outreach and follow-ups on crises.

During interviews, community stakeholders were asked if they felt there were some people or segments of the community who are healthier than others are and why. Here, nearly every stakeholder interviewed commented that they felt that higher incomes lead to better health outcomes. Particularly, stakeholders mentioned that a higher household income often means that household members can engage in preventative care, purchase nutritious foods, participate in healthy leisure activities, and afford the transportation required to access all these positive health influencers. The major underlying theme was education, as stakeholders frequently connected a higher socioeconomic status with higher education attainment.

In addition to this connection, there was a sense among interviewees that the "haves" in the region, as one stakeholder put it, have the time learn about and participate in healthy lifestyle choices, whereas lower-income people were perceived to not. Stakeholders often referred to the root of this issue as a lack of awareness about what is available in the region and how the challenges of supporting a household on one or two minimum wage jobs can leave one with a lack of resources to improve, or maintain, one's health. As one stakeholder said, healthier people are "those with support have awareness of importance to be healthy, and know and to use their resources."

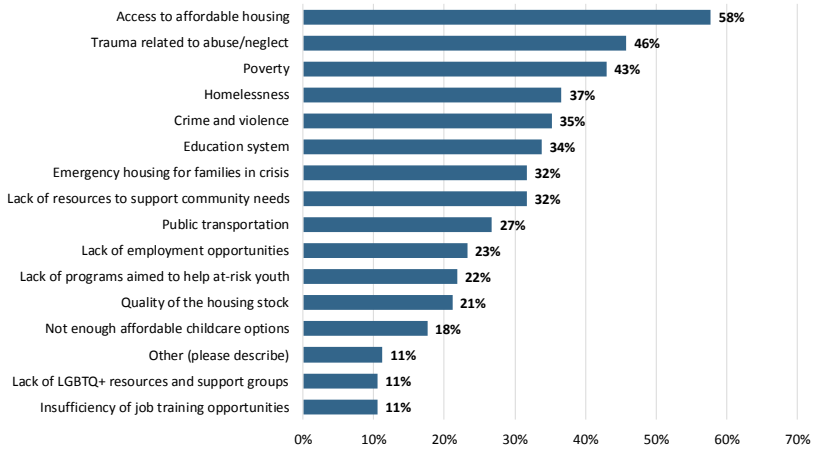
Encouragingly, stakeholders maintain a positive outlook in the face of the myriad of challenges they described. For example, those who completed the online survey were asked what they feel are the best features of the region. The word cloud in Figure 38 illustrates that some of the best features noted by respondents include community, the ability to easily access natural resources, collaboration, and cultural diversity, all of which will be essential elements if the region is to address its major health issues effectively.

Figure 38
What do you think are the best features of the South Coast region?

Source: Southcoast Health Providers Survey, 2019.

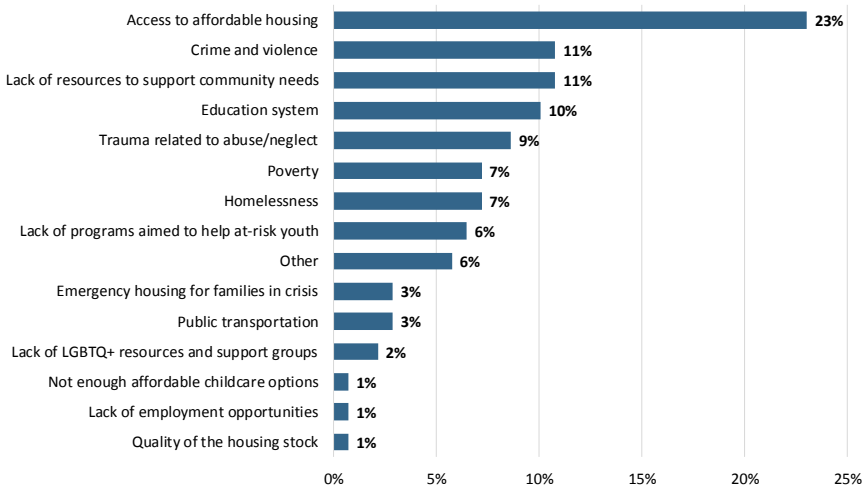
Figure 39 below demonstrates how healthcare providers ranked issues of general concern in their community. When asked to select three top issues, the majority of respondents (58%) selected "access to affordable housing" as a major concern. Moreover, as a follow-up question, respondents were asked to select the single greatest concern from their three choices, and here housing emerged as the single most important issues (see Figure 40). As discussed in the previous section, housing insecurity emerged as a major theme during stakeholder interviews and community focus groups. There was a general sense during all of these activities that community members felt that access to affordable, safe housing was a major foundation towards building better health outcomes in the region.

Figure 39
What are the top three areas of general concern for the community that you serve, not necessarily related to health?



Source: Southcoast Health Providers Survey, 2019.

Figure 40
Please select the one issue that concerns you the most.



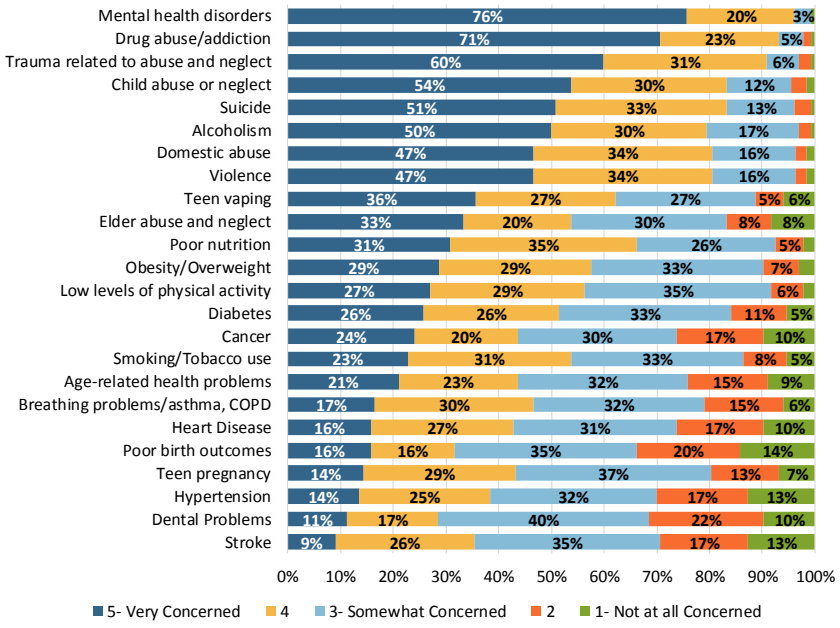
Source: Southcoast Health Providers Survey, 2019.

5.1 PRIORITIZING HEALTH ISSUES

Service providers were also asked specifically which **health** issues impact the community they serve. Notably, service providers are most concerned about mental/behavioral health issues and substance use disorder over physical health issues. When asked specifically to identify the health issues they were most concerned about in the community, more than three-quarters (76%) of service providers said they were "very concerned" about "mental health disorders" and nearly as many (71%) selected "drug abuse/addiction" as "very concerning" (see Figure 41). When asked in a follow-up question to select their single greatest concern from the issues they were "very concerned" about, one-third of providers selected "mental health disorders" (see Figure 42).

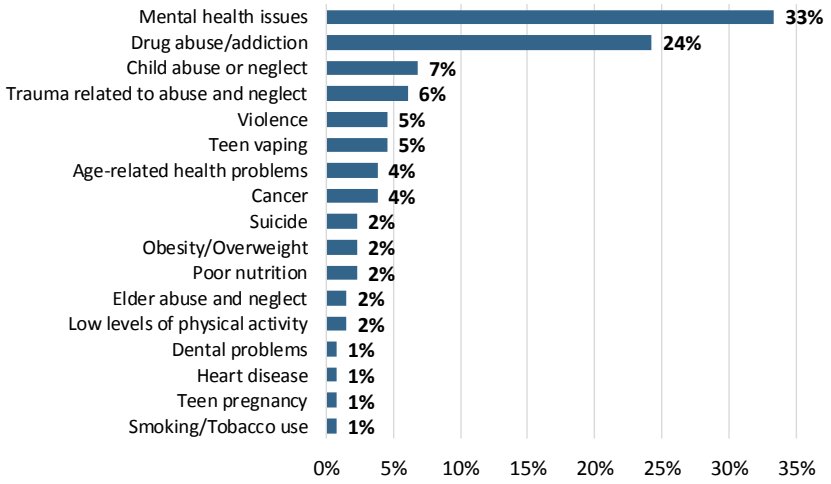
Notably, service providers are most concerned about mental/behavioral health issues and substance use disorder over physical health issues in the communities they serve.

Figure 41
Regarding the conditions in the community you serve, please rank each of the following health issues on a scale of 1 to 5.



Source: Southcoast Health Providers Survey, 2019.

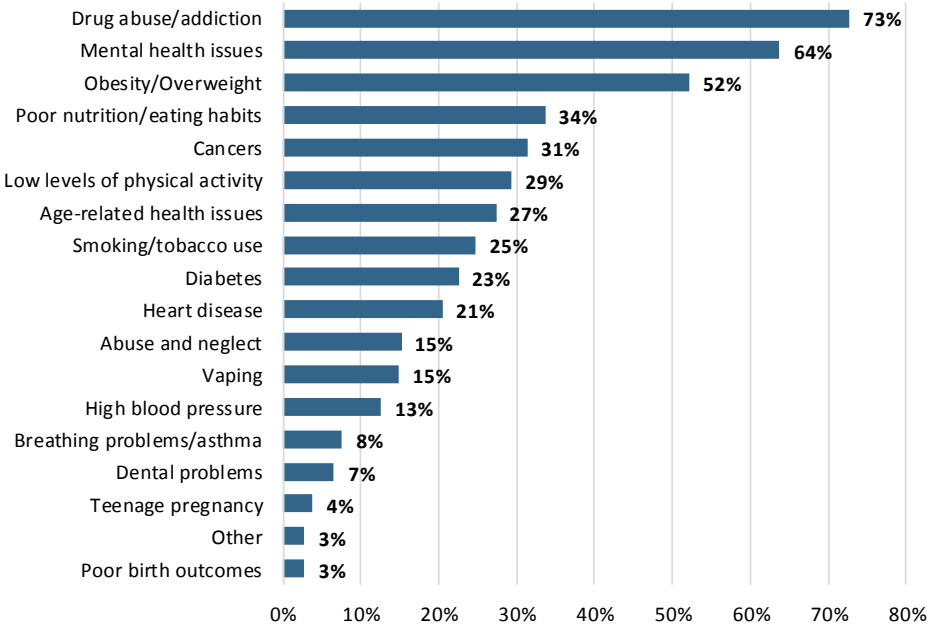
Figure 42
Please select the one issue that concerns you the most.



Source: Southcoast Health Providers Survey, 2019.

Although not entirely representative of the population of the South Coast, the community member survey yielded similar results when respondents were asked to select the top five health issues in their community. As Figure 43 below demonstrates, the majority of community members surveyed selected "drug abuse/addiction" (73%) and "mental health issues" (64%) as the top issues, along with "obesity/overweight" (52%).

Figure 43
What do you consider to be the five major health issues in your community?



Source: Southcoast Health Community Member Survey, 2019.

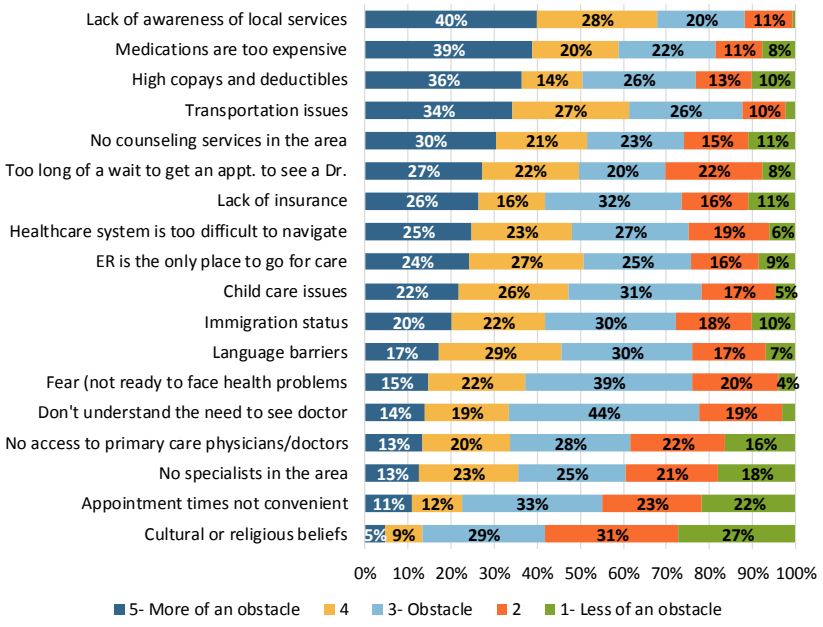
Obstacles to Accessing Health Care

Providers ranked obstacles related to costs and awareness as major barriers to accessing health care among the community members they serve, with "lack of awareness of local services" selected as "more of an obstacle" by 40 percent of respondents (see Figure 44). Similarly, lack of awareness emerged as a major theme during stakeholder interviews and focus groups. In particular, the issue of awareness came up frequently when discussing mental health services, which highlights the need to not only increase the number of mental health services in the region but also to educate the community about how and where to access these services.

Additionally, as discussed in Section 3, stakeholders are concerned about obstacles relating to the cost of screenings, visits, and treatments. While many providers and community stakeholders identified financial issues relating to insurance and medication costs, they also highlighted the difficulty transportation can impose on patients struggling to afford healthcare services.

The issue of awareness came up frequently when discussing mental health services, which highlights the need to not only increase the number of mental health services in the region but also to educate the community about how and where to access these services.

Figure 44
Regarding the existing obstacles to accessing health care among the community members you serve, please rank the following on a scale of 1 to 5.

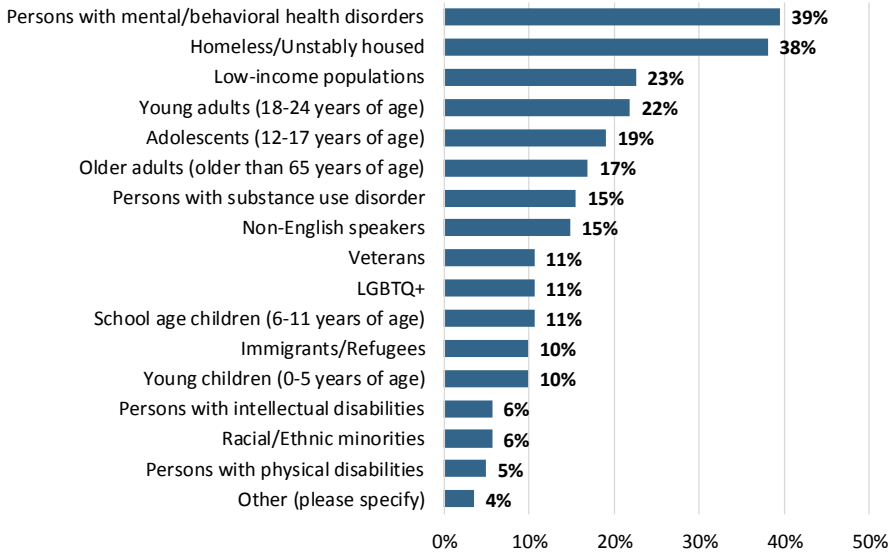


Source: Southcoast Health Providers Survey, 2019.

Most Underserved Populations

The responses of service providers continued to align with previous answers and themes from other qualitative activities when they were asked to select the top three populations that they felt were most underserved in the community. With nearly 40 percent of respondents selecting "persons with mental/behavioral health disorders" (39%) and "homeless/unstably housed" (38%), service providers in the region affirmed that the issues of mental health and housing insecurity are major challenges (see Figure 45).

Figure 45
Please choose the top three populations that you feel are most underserved in your community.



Source: Southcoast Health Providers Survey, 2019.

Stakeholder interviews yielded similar results when community members were asked about what types of people they felt were at risk or had unmet needs. However, as the Figure 46 below demonstrates, they did feel more strongly that non-English speakers were underserved in the region. Again, interviewees often associated the unmet needs of this group with a lack of awareness, along with a lack of materials that explain services and the local healthcare system in their native language.

Figure 46
What types of people are at greatest risk or have the greatest unmet needs?

Source: Southcoast Health Community Stakeholder Interviews, 2019.

During interviews, stakeholders were asked what actions they felt Southcoast Health should take in order to improve the health of the region. Figure 47 below is word cloud generated from their responses, and it demonstrates how focused stakeholders were on the need to increase mental health services and community outreach and education efforts. Additionally, the responses to this question also revealed that stakeholders view Southcoast Health as a leader in the region and some stakeholders called on the organization to advocate on the state level more for the healthcare needs of residents, and to convene community partnerships with the aim of increasing collaborative, coordinated efforts to address the challenges identified here.

Figure 47

What are the top three things that Southcoast Health could do in the next three years that would have the biggest impact in improving the overall health of the community?

Source: Southcoast Health Community Stakeholder Interviews, 2019.

6 HEALTH SYSTEMS AND HEALTH CARE ACCESS

People who do not have access to health care are at a greater risk of having poor overall health and negative health outcomes. This includes access to a wide variety of health services such as preventative care, dental care, mental health services, and emergency services. Regular access to health services is essential in managing health conditions, preventing new conditions from arising, and promoting and maintaining overall good health.

Community stakeholders identified many barriers to accessing health care services in the region (see Figure 48). Primarily, answers to this question revolved around the transportation challenges South Coast residents can encounter when trying to reach a service provider. Specifically, stakeholders said these challenges include not being able to afford the cost of public transportation to travel within the region, constraints related to the hours of bus service in the region, and not being able to consistently reach appointments with specialists outside of the region. In addition to transportation, interviewees discussed the general lack of certain services in the region, the limited availability of healthy foods in certain parts of the region, and the perceived decline of physical education in public schools as barriers to maintaining and improving health.

Figure 48
What do you feel are the biggest barriers preventing residents in your community from accessing and making good use of healthcare services that will help them maintain or improve their health?

Source: Southcoast Health Key Informant Interviews, 2019.

6.1 HEALTH INSURANCE COVERAGE

One stakeholder said, the "working poor get stuck in the middle of the system. They don't qualify for MassHealth, but the insurance they have has co-pays that are too high and they can't pay to go to the doctor."

Both Fall River (11.2%) and New Bedford (12.9%) have a higher percentage of residents aged 18-64 years who lack health insurance in comparison to the state average (5.7%), with New Bedford also being above the national average (11.6%) (see Table 5). Lack 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. Stakeholders and focus group participants often discussed how difficult navigating the insurance system can be, with some stakeholders remarking that is particularly difficult for immigrants who do not have materials available in their native language.

Other insurance-related challenges related to affordability. Stakeholders noted that there is a cliff effect present in the current insurance regime in Massachusetts. As one stakeholder said, the "working poor get stuck in the middle of the system. They don't qualify for MassHealth, but the insurance they have has co-pays that are too high and they can't pay to go to the doctor." The affordability barrier also came up during focus groups as an obstacle to keeping up with preventative care. Participants felt that it was logical that people with limited finances would only engage with the health care system in the event of an emergency.

Table 5
No Health Insurance Among Adults Aged 18-64 Years, 2015

	Fall River	New Bedford	MA	U.S
Share of Adults without Health Insurance	11.2% (+0.3/-0.5%)	12.9% (+/- 0.3%)	5.7% (+/- 0.8%)	11.6% (+0.2%/-0.3%)

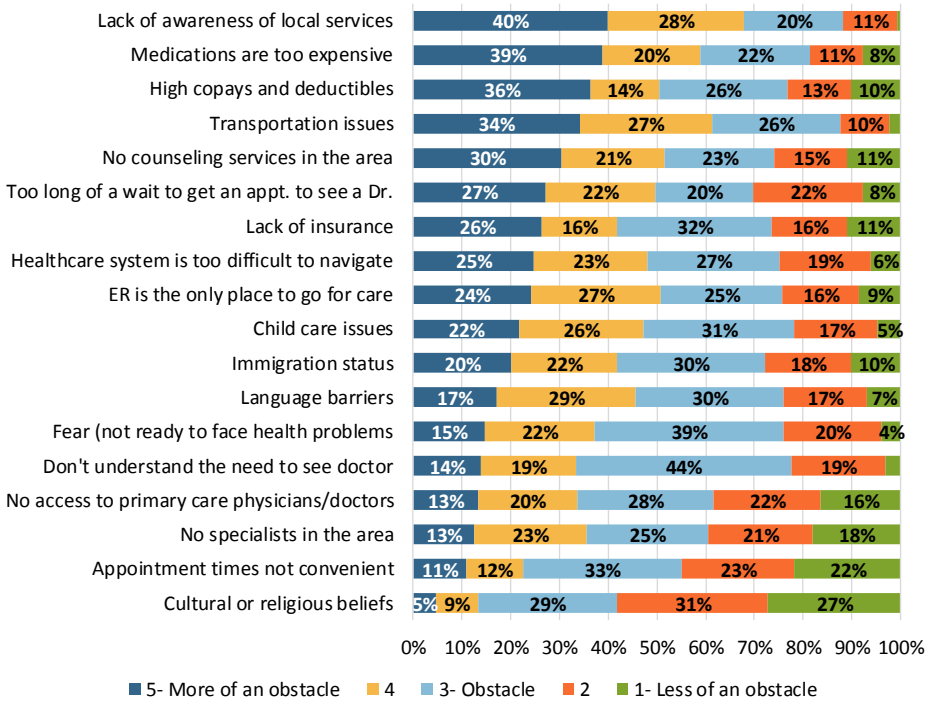
Source: Centers for Disease Control and Prevention 500 Cities Project.

6.2 OBSTACLES TO OBTAINING HEALTH SERVICES

Providers ranked obstacles related to costs and awareness as major barriers to accessing health care among the community members they serve, with "lack of awareness of local services" selected as "more of an obstacle" by 40 percent of respondents (see Figure 49). Similarly, lack of awareness emerged as a major theme during stakeholder interviews and focus groups. In particular, the issue of awareness came up frequently when discussing mental health services, which highlights the need to not only increase the number of mental health services in the region, but also to educate the community about how and when to access these services.

Maintaining the theme of affordability, service providers rates "medications are too expensive" and "high copays and deductibles" as the second and third major obstacles to accessing health care. During a focus group one participant discussed how the high cost of insulin, which he needed on a regular basis, was a constant financial burden he had to carry outside of other health care and insurance costs.

Figure 49
Regarding the existing obstacles to accessing health care among the community members you serve, please rank the following on a scale of 1 to 5.



Source: Southcoast Health Providers Survey, 2019.

6.3 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. However, many determinants are also barriers to accessing health care, as one stakeholder noted, "Poverty is the lynchpin of all this. The more affluent are more likely to seek preventative care. They are not worried about a copay." Low-income households not having the resources to engage in preventative care, whether they are time, money, childcare, or transportation was a major theme during stakeholder interviews as well.

Despite this perception, slightly more than three-quarters (78.0%) of Fall River residents and 78.1 percent of New Bedford residents report they had an annual check-up in the past 12 months, which is above the national average and slightly below the state (see Table 6). Moreover the share of adults going for annual checkups has increase in cities since 2014, when 76.4 percent of adults in Fall River and 76.6 percent in New Bedford reported going for a checkup.

Many determinants are also barriers to accessing health care, as one stakeholder noted, "Poverty is the lynchpin of all this. The more affluent are more likely to seek preventative care. They are not worried about a copay."

Table 6
Annual Checkup in the Last Year among Adults Ages 18 Years or Older, 2016

	Fall River	New Bedford	MA	U.S.
Annual Check-up	78.0% (+/- 0.2%)	78.1% (+0.3%/- 0.1%)	78.7% (+1.2%/- 1.3%)	71.2% (+0.3%/-0.2%)

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

Just under three-quarters of New Bedford (74.1%) and Fall River (74.1%) adults report that they have had a cholesterol screening, which compares to 86.2 percent of adults statewide and 77.0 percent of adults nationally (see Table 7).

Table 7
Cholesterol Screening among
Adults Aged 18 Years or Older, 2015

	Fall River	New Bedford	MA	U.S.
Cholesterol Screening	74.8% (+0.4/-0.5%)	74.1% (+/-0.4%)	86.2% (+/-1.1%)	77% (+/-0.3%)

Source: CDC 500 Cities Project, from BRFSS data.

Over 82 percent (82.5%) of New Bedford women aged 50 to 74 report that they have had a mammogram within the past two years, which is below the Massachusetts average (86.3%) but above the national average (75.2%). The percentage of women aged 21 to 65 in New Bedford (82.9%) who report that they have had a Pap smear screening is similar with the state (84.1%) and national (79.5%) averages (see Table 8).

Table 8
Women Aged 50-74 Who Have Had a Mammogram in the Past Two Years and Women Aged 21 to 65 Who Have Had a Pap Smear in the Past Three years, 2016

	Fall River	New Bedford	MA	U.S.
Mammogram	82.5% (+0.6/-4.6%)	82.5% (+0.5/-4.8%)	86.3% (+/-2.2%)	75.2% (+0.2/-0.5%)
Pap Smear	82.5% (+/-0.5%)	82.9% (+0.4/-0.5%)	84.1% (+1.0/-2.1%)	79.5% (+0.6/-3.8%)

Source: CDC 500 Cities Project, from BRFSS data.

The percentage of New Bedford and Fall River residents aged 50 to 75 who report that they have had a colonoscopy or fecal blood test (66.0%) is similar to the national average (65.2%), but below the Massachusetts average (76.3%) (see Table 9).

Table 9
Fecal Occult Blood Test, Sigmoidoscopy, or Colonoscopy among Adults Aged 50–75 Years, 2016

	Fall River	New Bedford	MA	U.S.
Share Reporting Testing	66.6% (+/-0.8%)	66.0% (+0.7%/-0.8%)	76.3% (+2.1%/-2.2%)	65.2% (+0.5%/-0.4)

Source: CDC 500 Cities Project, from BRFSS data.

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

New Bedford seniors lag behind the share of seniors nationally who are up to date on preventative services (see Table 10). 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.

Table 10
Percentage of Seniors (65 Years or Older) Who Are up to Date on the Core Set of Preventative Services, 2016

	Fall River	New Bedford	MA	U.S.
Males	31.4% (+/-1.3%)	30.8% (+/- 1.1%)	Data Not Available	34.7% (+/-0.8%)
Females	22.9% (+1.1/-0.9%)	22.7% (+0.9/-1.0%)	Data Not Available	31.7% (+0.6/-0.7%)

Source: CDC 500 Cities Project, from BRFSS data.

6.5 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.[35] 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 Table 11).

Table 11
Oral Health, 2016

	Fall River	New Bedford	MA	U.S.
Visited a Dentist In Last Year(>= 18 years)	58.6% (+0.9/-0.8%)	57.6% (+/-0.7%)	73.3% (+1.7/-1.0%)	65.7% (+/-0.3%)
Lost all Teeth (65 years or older)	27% (+1.9/-2.0%)	26.7% (+1.7/-1.5%)	16.3% (+/-2.5%)	14.5% (+/-0.4%)

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

[35] The relationship between neonatal outcomes and maternal oral health is further explored here: http://www.healthypeople.gov/2020/LHI/oralHealth.aspx.

7 SUBSTANCE USE DISORDER

There is a critical and growing substance use problem throughout much of the United States. In Massachusetts alone, there were 1,981 confirmed cases of opioid-related deaths in 2018 and the number of confirmed opioid-related overdose deaths increased by 262 percent from 2010 to 2018. For the first six months of 2019, there were 611 confirmed opioid-related overdose deaths statewide — more than three deaths per day, every day — and DPH estimates that there are likely an additional 363 unconfirmed deaths for this period.[36]

For the first six months of 2019, there were 611 confirmed opioid-related overdose deaths statewide — more than three deaths per day, every day.

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.[37]

Results from the stakeholder interviews revealed that the opioid crisis is viewed as a critical issue affecting the health of the area (see Figure 50). Every interview touched on a topic in some capacity. Indeed, as one stakeholder said, "No one is untouched by the opioid epidemic." The links between substance use disorder, other mental health issues, poverty, and homelessness was also a common interview theme. Many stakeholders felt that the epidemic is worse in South Coast than elsewhere in the state and that providers are not properly trained in how to counsel patients or refer them to treatment services.

Figure 50

What do you feel are the top health problems facing residents?

Source: Southcoast Health Community Stakeholder Interviews, 2019.

[36] Data Brief: Opioid-Related Overdose Deaths among Massachusetts Residents. Massachusetts Department of Public Health. August, 2019.

[37] The Massachusetts Opioid Epidemic. An Issue of Substance. Massachusetts Taxpayers Foundation. 2018.

7.1 OPIOID-RELATED DEATHS

From 2013 to 2018, most South Coast communities experienced an increase in the number of opioid-related overdose deaths (see Table 12). In total, 165 opioid-related deaths in the region's communities were confirmed in 2018, which is more than double the number in 2013. In 2018, Fall River and New Bedford accounted for 66 percent of the region's opioid deaths. Comparatively, the cities are home to 54 percent of the region's population. Table 13 compares data among similarly sized cities and demonstrates that as community members frequently suggested the cities of the South Coast are seeing higher numbers of overdoses than their fellow Gateway Cities.

Table 12
Number of Opioid-Related Overdose Deaths by South Coast Communities, 2013–2018

	2013	2014	2015	2016	2017	2018	% Change	# Change
*Acushnet	0	1	4	4	7	2	100%	+7
Dartmouth	2	7	2	9	6	4	100%	+4
Fairhaven	4	2	7	4	8	4	0%	+4
Fall River	29	38	40	64	55	55	90%	+26
*Freetown	0	2	3	3	6	4	100%	+6
*Marion	0	1	1	1	1	1	0%	+1
**Mattapoisett	0	0	2	2	1	5	150%	+1
New Bedford	29	28	53	57	45	54	86%	+16
*Rochester	0	1	0	0	2	1	0%	+2
Somerset	1	2	4	5	5	5	400%	+4
Swansea	4	5	0	1	5	7	75%	+1
Wareham	9	10	7	15	16	15	67%	+7
Westport	2	4	2	4	6	8	300%	+4
South Coast	80	101	125	169	164	165	106%	
Greater Fall River	36	49	46	74	71	75	108%	+35
Greater New Bedford	44	52	79	95	92	90	105%	+48
Massachusetts	961	1351	1723	2094	1981	1995	108%	+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 13
Number of Opioid-Related Overdose Deaths by Selected Communities, 2013–2018

	2013	2014	2015	2016	2017	2018	% Change	# Change	Pop.
Brockton	39	25	52	43	49	35	-10%	-4	95,161
Fall River	29	38	40	64	55	55	90%	+26	89,258
Lynn	25	42	47	46	63	51	104%	+26	93,069
New Bedford	29	28	53	57	45	54	89%	+26	95,125
Quincy	26	38	47	45	40	39	50%	+13	93,824

Source: Massachusetts Department of Public Health, Current Opioid Statistics.
Data represents deaths by city/town of residence for the decedent.

According to the Massachusetts Health Policy Commission, the number of opioid-related hospital discharges grew in nearly every ZIP code throughout the state from 2011 to 2015.[38] In the South Coast, the percent change in discharges exceeds the statewide rate. Table 14 presents the number of opioid-related hospital discharges for New Bedford, Fall River, and Wareham in 2011 and 2015 by ZIP code, as well as the overall number of discharges for Massachusetts (more recent data not available).[39] Out of these communities, Wareham saw the greatest percent increase in opioid-related discharges (127.4%), while New Bedford and Fall River saw similar percent and numerical increases of 689 and 680 discharges, respectively.

Table 14
Number of Opioid-Related Hospital Discharges,
Selected Communities 2011–2015

	2011	2015	% Change
New Bedford ZIPs			
02745	160	269	68.1%
02746	127	238	87.4%
02740	551	904	64.1%
02744	100	216	116.0%
New Bedford Total	938	1,627	73.5%
Fall River ZIPs			
02720	324	517	59.6%
02723	116	242	108.6%
02721	285	519	82.1%
02724	149	276	85.2%
Fall River Total	874	1,554	77.8%
Wareham ZIPs			
02576	20	41	105.0%
02571	71	161	126.7%
02538	33	80	142.4%
Wareham Total	124	282	127.4%
Massachusetts	40,994	64,084	56.3%

Source: HPC Analysis - CHIA Hospital Inpatient Discharge Database and Emergency Department Database, 2015.

[38] Seltz, D. (2017). "HPC Finds Drastic Increase in Opioid-Related Hospital Discharges." Massachusetts Health Police Center. Retrieved from: https://www.mass.gov/news/hpc-finds-drastic-increase-in-opioid-related-hospital-discharges

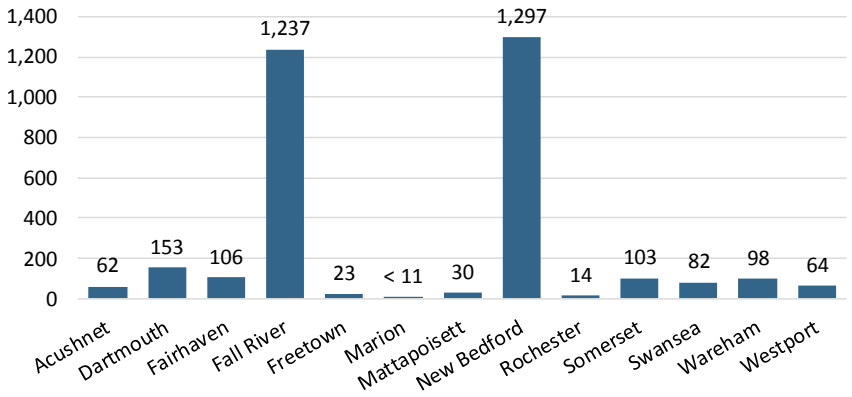
[39] Hospital discharges include both ED discharges and inpatient discharges and are based on a resident's ZIP code, not hospital address.

7.2 OPIOID-RELATED HOSPITAL UTILIZATION

Figure 51 presents the number of opioid-related hospital discharges for South Coast communities (see Figure 51).[40,41] 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 52).

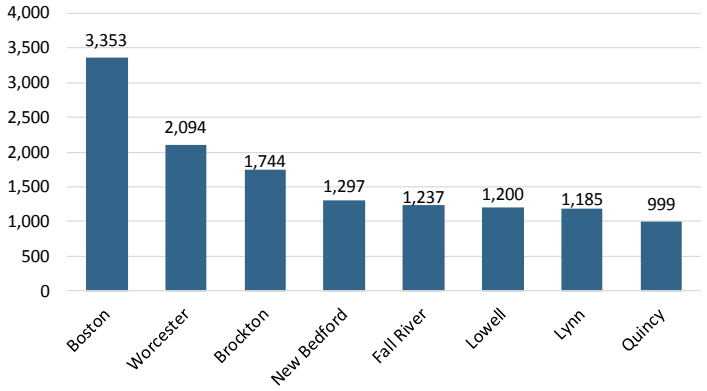
New Bedford and Fall River rank fourth and fifth, respectively in Massachusetts in terms of having the highest number of opioid-related hospital discharges.

Figure 51
Number of Opioid-Related Hospital Discharges



Source: HPC Analysis - CHIA Hospital Inpatient Discharge Database and Emergency Department Database, 2014 (most recent year available).

Figure 52
Number of Opioid-Related Hospital Discharges by Selected Cities



Source: HPC Analysis - CHIA Hospital Inpatient Discharge Database and Emergency Department Database, 2014 (most recent year available).

[40] 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.

[41] Hospital discharges include both ED discharges and inpatient discharges and are based on a resident's ZIP code, not hospital address.

7.3 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 15).

Table 15
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.[42]

New Bedford schools do not participate in the statewide *Brief Community Survey*, and instead administer their own survey, the *Youth Health Survey*, through the City's health department. Because these two surveys use different methodology, their results are not comparable. Among New Bedford High School students, 35.6 percent report having used marijuana, 4.5 percent have taken over-the-counter medication to get high, and 2.1 percent have used heroin.[43]

[42] 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.

[43] 2017 New Bedford High School Youth Health Survey

Vaping

Vaping is generally defined as inhaling and exhaling aerosol that is produced by an electronic cigarette or similar device.[44] 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.[45] 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.[46] This represents the largest one-year percentage increase of all substance use in the 43-year history of the Monitoring the Future survey.[47]

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.

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 is 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.[48] Furthermore, studies suggest that both nicotine and THC can have adverse effects on adolescent, developing brains.[49]

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

[45] 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.

[46] Ibid.

[47] For more information on the survey see http://www.monitoringthefuture.org/.

[48] Mayo Clinic: Retrieved from https://www.mayoclinic.org/diseases-conditions/nicotine-dependence/symptoms-causes/syc-20351584.

[49] Yuan, Menglu. (2015). "Nicotine and the adolescent brain." The Journal of Physiology. London.

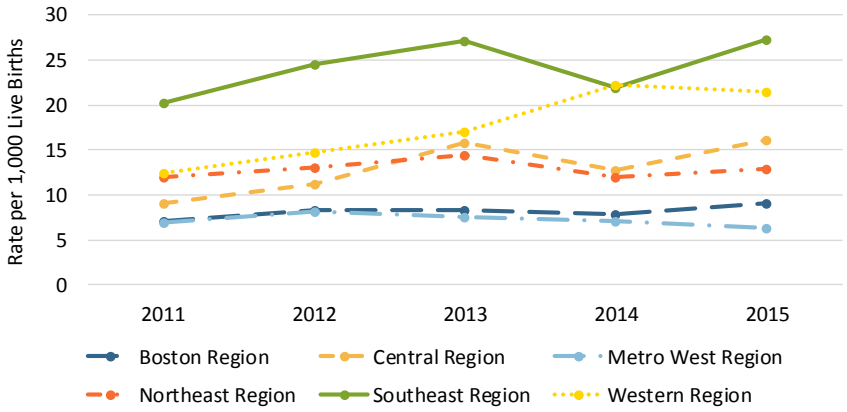
7.4 NEONATAL ABSTINENCE SYNDROME (NAS)

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.

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.

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 (more recent data not available).[50] 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 53).

Figure 53
Number of Infant Diagnosed with NAS per 1,000 Live Births by Region, 2015

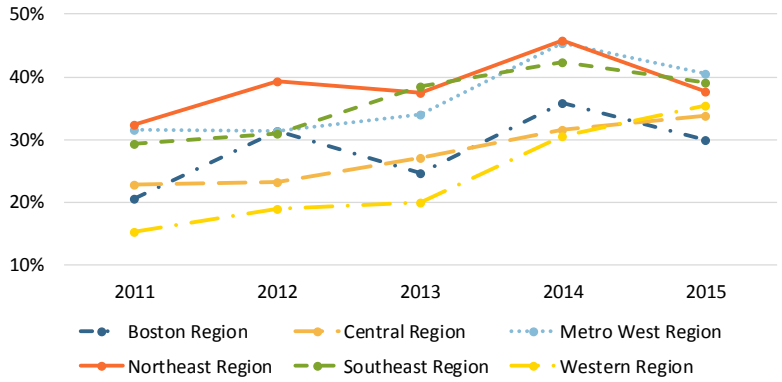


Source: Pregnancy to Early Life Longitudinal Data System (PELL).
Retrieved from the Neonatal Abstinence Syndrome Dashboard. Report generated with the latest available data on May 18, 2018.

[50] 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.

The cost of treating an infant affected by NAS is estimated to be three times that of treating an otherwise healthy newborn.[51] 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 54).

Figure 54
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.

[51] 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.

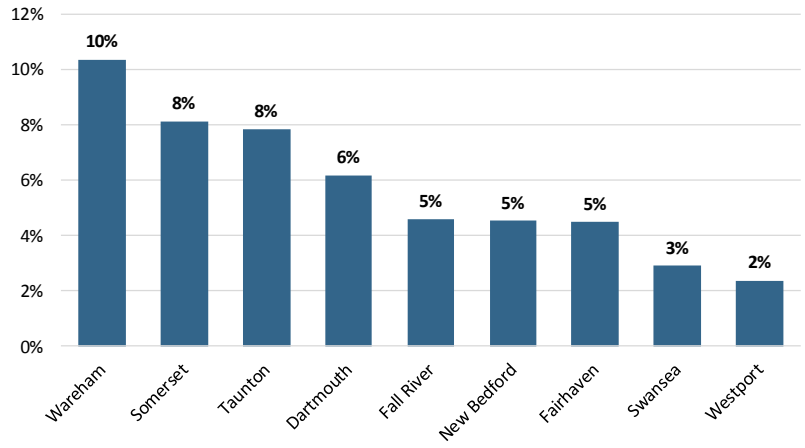
Within the Southcoast hospital system, NAS discharges are on the decline both numerically and as a share of all births (see Table 16). As of the last full fiscal year, newborns with NAS accounted for 4.6 percent of all births. In terms of the community of residence, 10 percent of all babies born to mother from Wareham were diagnosed with NAS in FY18, which is the highest for communities in Southcoast's service region (see Figure 55).

Table 16
NAS Discharges Southcoast Hospitals as Share of All Births, FY16–18

Fiscal Year	All Births	NAS Discharges	NAS Share
2016	3314	178	5.4%
2017	3385	169	5.0%
2018	3267	151	4.6%

Source: Southcoast Health.

Figure 55
NAS Diagnoses as a Share of All Births at Southcoast Hospitals, by Residence of Mother, FY18



Source: Southcoast Health.

Not only are NAS and overdose rates higher in southeastern Massachusetts than elsewhere in the state, but tragically, the rate of postpartum overdoses is the highest in this region. As of 2014, there were 6.5 overdoses per 1,000 deliveries in the Southeast region, compared with a rate of 5.7 in the Central region and 4.2 in the Boston region.[52]

[52] Massachusetts Department of Public Health. (2019). "Stimulants, health disparities, and the impact of the opioid epidemic on maternal health and high risk populations." Data Brief. March 2019.

7.5 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 in terms of both adequate staff training and 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 had a history of mental health treatment.

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 and approximately 25 percent of people 11 years of age or older with MassHealth have been diagnosed with a serious mental illness.[53] Stakeholders and focus group participants who work in recovery and mental health treatment 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 and that in general there is a lack of a resources and services available in the area, which leads to long wait times. One stakeholder explained that the dearth of services in the area was due to the low pay offered for mental health workers and social workers. Indeed, one focus group participant remarked that the mental health and recovery industries are "driven by tremendous need and a small amount of money."

At other focus groups, community members related issues they encountered in seeking mental health treatment. Many participants spoke about the stigma they had to overcome in order to enter treatment for a mental health issue or substance use disorder. There was consensus among participants in focus groups in New Bedford, Fall River, and Wareham that the region does not have enough mental health care providers. But also, focus group participants often noted that there was a lack of awareness in the community of what mental health services are available in the region and where, and how to get a referral for treatment.

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.[54]

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.

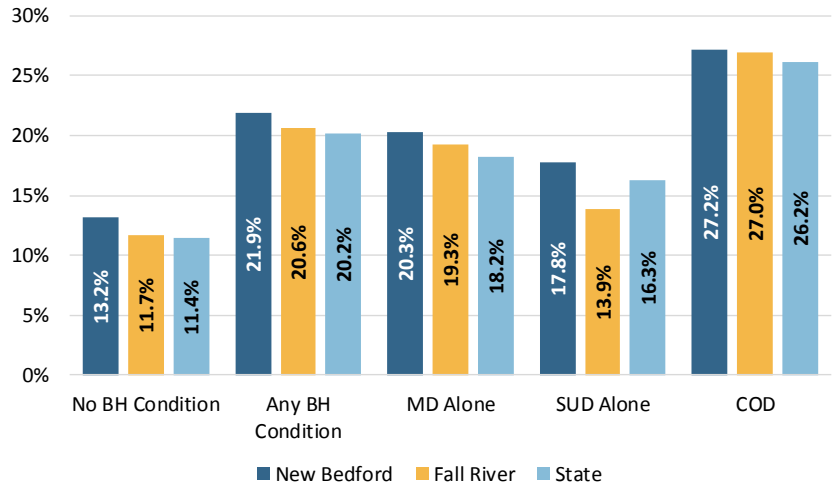
[53] Massachusetts Department of Public Health. *2017 Massachusetts State Health Assessment.* Boston, MA; October 2017.

[54] Behavioral Health & Readmissions in Massachusetts Acute Care Hospitals. August 2016. Center for Health Information and Analysis (CHIA).

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 being 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 in New Bedford and Fall River are similar to the statewide percentages. For acute hospital readmissions for patients with co-occurring 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 56).

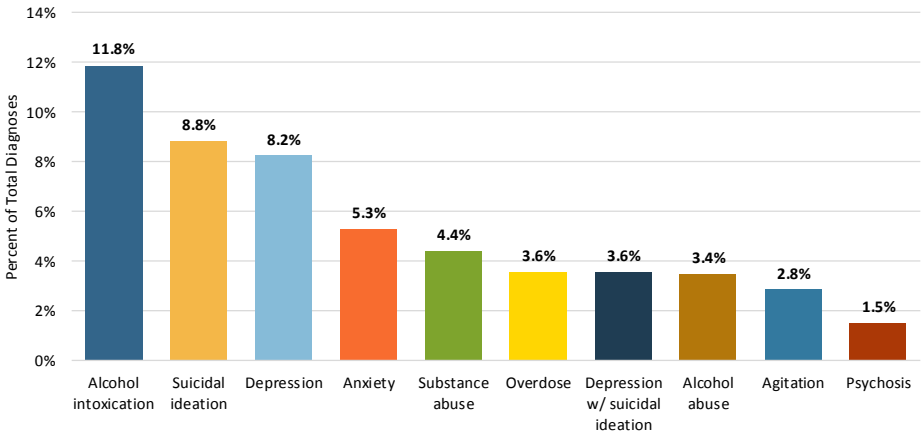
Figure 56
Statewide Prevalence of Behavioral Health Comorbidity and Readmission Rates among Patients in Acute Care Hospitals



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.

Figure 57 below breaks out visits to all Southcoast Health emergency departments related to behavioral health by the eventual primary diagnosis. Many of these diagnoses are related to substance use disorder, and together the diagnoses of substance abuse, overdose, and alcohol abuse accounted for 11.4 percent of the total emergency department visits in FY18.

Figure 57
Top Ten Diagnoses for Southcoast Behavioral Health ED Visits, FY18



Source: Southcoast Health.

8 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.[55] 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.[56]

As demonstrated earlier in Section 3 of this report, the region served by Southcoast Health 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. Stakeholder interviews and focus groups brought these issues into greater focus by highlighting the challenges faced by residents of low socioeconomic status in the region. Particularly, community stakeholders expressed concern that people of lower socioeconomic status do not regularly engage in preventative care, and as a result, are not educated on the potential outcomes of unhealthy lifestyle choices. 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.

When discussing the impacts of substance use disorder on the region, some stakeholders felt as if the opioid crisis has overshadowed the prevalence of alcoholism, which they viewed as an equally important and often ignored health issue.

8.1 ALCOHOL AND TOBACCO USE

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.[57] When discussing the impacts of substance use disorder on the region, some stakeholders felt as if the opioid crisis has overshadowed the prevalence of alcoholism, which they viewed as an equally important and often ignored health issue.

[55] Massachusetts Department of Public Health. *Massachusetts State Health Assessment.* Boston, MA; October 2017.

[56] 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.

[57] Kanny D, Naimi TS, Liu Y, Lu H, Brewer RD. "Annual Total Binge Drinks Consumed by U.S. Adults, 2015." *American Journal of Preventive Medicine* 2018;54:486–496.

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

The percentage of adults in Fall River (16.4%) and New Bedford (15.9%) who report binge drinking is lower than the state (17.8%) and national percentages (16.9%). Conversely, smoking prevalence in Fall River (27.2%) and New Bedford (26.6%) remains higher than that of the state (13.6%) and country as a whole (16.4%) (see Table 17).

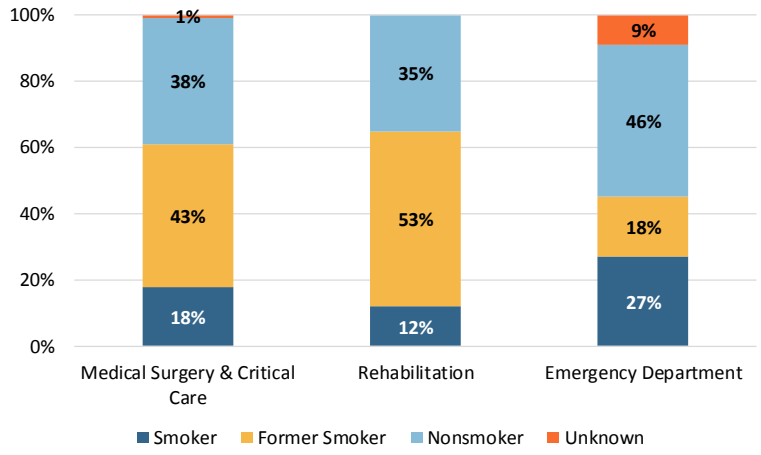
Table 17
Share of Individuals Reporting Binge Drinking or Smoking, 2016

	Fall River	New Bedford	MA	U.S.
Binge Drinking	16.4% (+0.2/-0.1%)	15.9% (+/-0.1%)	17.8% (+/-1.2%)	16.9% (+0.3/-0.2%)
Smoking	27.2% (+0.7/-0.6%)	26.6% (+/-0.6%)	13.6% (+1.1/-1.0%)	16.4% (+/-0.2%)

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

Regarding smoking among the Southcoast Health patient population, data on patients in various settings reveals that nearly half of all patients are current or former smokers (see Figure 58). Only among emergency department patients are smokers or former smokers in the minority.

Figure 58
Prevalence of Smoking among Southcoast Health Patients, FY18



Source: Southcoast Health.

8.2 HIGH CHOLESTEROL AND HIGH BLOOD PRESSURE

Several stakeholders spoke about how regional cultures influence unhealthy diets and 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.

High blood pressure and cholesterol are strongly linked to other negative health outcomes such as heart disease. Several stakeholders spoke about how regional cultures influence unhealthy diets and 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 (39.6%), New Bedford (39.4%), and slightly higher than the state (34.5%) the United States (37.1%). 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 Table 18).

Table 18
Adults Report having High Blood Pressure or High Cholesterol, 2015

	Fall River	New Bedford	MA	U.S.
High Blood Pressure	34.3% (+0.3/-0.2%)	34.5% (+0.3/-0.2%)	29.6% (+1.3/-1.2%)	31.9% (+/-0.3%)
High Cholesterol	39.6% (+/-0.3%)	39.4% (+0.3/-0.2%)	34.5% (+/-1.4%)	37.1% (+/-0.3%)

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

8.3 PHYSICAL ACTIVITY AND OBESITY

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.[58] Obesity can also be a factor in higher rates of mental illness such as clinical depression, anxiety, and other mental disorders.[59] [60]

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 30 percent (30.6%) of Fall River's adults and 31.3 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 (20.0%) and national percentages (24.2%). Not surprisingly, obesity rates are also much higher; 30.6 percent of Fall River adults and 31.6 percent of New Bedford adults are obese, which compares to 23.6 percent of Massachusetts residents and 29.6 percent of adults nationally (see Table 19).

More than 30 percent (30.6%) of Fall River's adults and 31.3 percent of New Bedford's adults have not engaged in any form of leisure time physical activity in the past month.

Table 19
Physical Activity and Obesity, 2016

	Fall River	New Bedford	MA	U.S.
No Physical Activity (>=18 years)	30.6% (+/-0.6%)	31.3% (+/-0.5%)	20.0% (+1.2/-1.3%)	24.2% (+0.3/-0.2%)
Obesity (>=18 years)	30.6% (+0.2/-0.3%)	31.6% (+/-0.2%)	23.6% (+/-1.3%)	29.6% (+0.2/-0.3%)

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

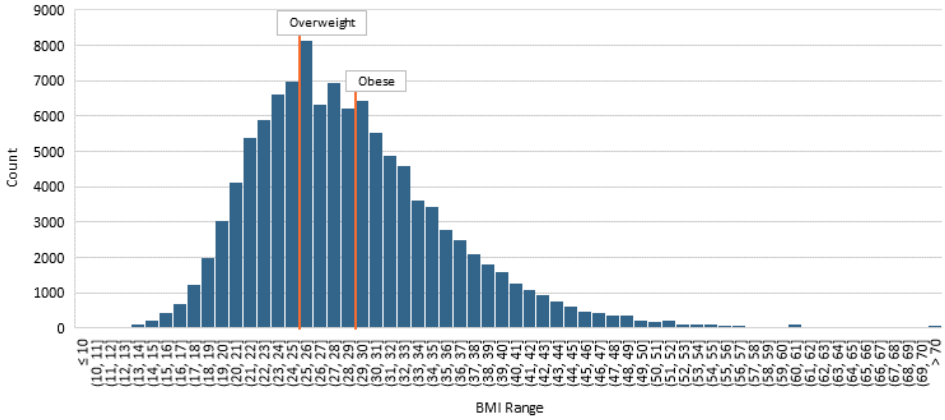
[58] NHLBI. 2013. Managing Overweight and Obesity in Adults: Systematic Evidence Review from the Obesity Expert Panel.

[59] Kasen, Stephanie, et al. "Obesity and psychopathology in women: a three decade prospective study." International Journal of Obesity 32.3 (2008): 558-566.

[60] 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.

Figure 59 below organizes the Southcoast Health emergency department patients from FY18 by BMI. The median BMI of these patients is 27.46, which means that over 50 percent of emergency department visitors are overweight.

Figure 59
BMI of Emergency Department Patients, FY18



Source: Southcoast Health.

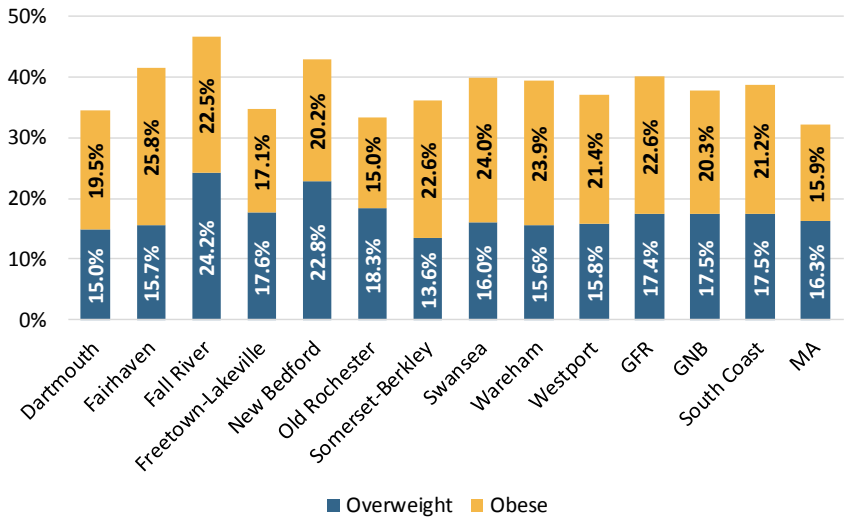
Childhood Obesity

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 are 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.[61]

Nationally, instances of childhood obesity have more than tripled since the 1970s, with obesity being prevalent among 18.5 percent of school age children.[62] Statewide, nearly one-third (32.2%) of all public school students are either overweight (16.3%) or obese (15.9%) (see Figure 60).[63] 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 60
BMI Readings By School District, 2014-2015 School Year[64]



Source: BMI Data Tables, via Massachusetts Department of Public Health (most recent year available).

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,

[61] Refer to the CDC's Childhood Obesity Facts at https://www.cdc.gov/healthyschools/obesity/facts.htm.

[62] 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.

[63] "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%).

[64] BMI is measured as follows: <18.5 = underweight; 18.5 to 24.9 = healthy; 25 to 29.9 = overweight; >30 = obese.

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.[65]

Community stakeholders and focus group participants had a number of thoughts on childhood obesity. In Fall River and New Bedford, some focus group participants suggested that violence and criminal activity in the communities created a climate of fear and prevented parents from allowing their children to play outside. One focus group participant in Fall River remarked on how there are no safe places for children to gather over the summer and play outside, and noting that during a free lunch program at a park in the city, children were exposed to a person overdosing, she said, "Who would want to drop their kids off there?"

Other stakeholders placed blame on the school systems, where they claimed that time for physical education and recess had been decreased recently, lunches were of poor nutritional value, and that the quality of the school provided lunch was so poor that many students threw it away rather than eating. Another frequent stakeholder perspective was that many neighborhoods in the cities are food deserts, where families lack easy access to healthy food options, and that in these communities, it is often more economical and efficient for a parent in a low-income household to opt for fast food take-out over a home cooked meal. Despite the number of factors they said were contributors to childhood obesity, stakeholders and participants cited positive developments such as the ability to use SNAP at farmers markets as ways to help educate families on how they can bring healthy foods into the home.

8.4 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 (see Table 20).

Table 20
Adults Reporting Poor Physical Health for at Least 14 Days, 2016

	Fall River	New Bedford	MA	U.S.
Physical Health not good for >= 14 days	16.5% (+0.4/-0.3%)	16.9% (+/-0.3%)	14.1% (+1.1/-1.0%)	12.1% (+0.1/-0.2%)

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

[65] Hales, et al. (2017). Prevalence of Obesity Among Adults and Youth: United States, 2015–2016. U.S. Department of Health and Human Services.

8.5 DISEASE PREVALENCE

Table 21 compares disease prevalence for eight types of diseases. Despite showing declines in the prevalence of most diseases from 2014 to 2016, the disease prevalence is higher for Fall River and New Bedford in comparison to the state and national averages in all categories. Most notably, the share of individuals who have chronic obstructive pulmonary disease in Fall River (10.6%) and New Bedford (10.4%) is nearly double that of the state (5.4%). 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 stakeholder interviews 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, stakeholders felt, 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. Focus groups with families in New Bedford confirmed these challenges, with participants discussing the difficulty faced in keeping appointments while working an irregular schedule and not having reliable, affordable childcare or their own transportation.

Table 21
Disease Prevalence, 2014 & 2016

	2014	2016	Low Conf. Limit	High Conf.	Low Conf. Limit	High Conf.
Arthritis among adults aged >=18 Years						
Fall River	32.7%	31.3%	32.4%	33.0%	31.0%	31.6%
New Bedford	32.4%	31.0%	32.1%	32.6%	30.7%	31.2%
Massachusetts	27.3%	25.2%	26.3%	28.4%	24.0%	26.5%
U.S.	25.6%	25.4%	25.4%	25.9%	25.1%	25.6%
Cancer (excluding skin cancer) among adults aged >=18 Years						
Fall River	7.3%	7.1%	7.2%	7.4%	7.1%	7.2%
New Bedford	7.1%	7.0%	7.0%	7.2%	6.9%	7.1%
Massachusetts	7.6%	6.8%	7.0%	8.1%	6.1%	7.5%
U.S.	6.4%	6.6%	6.3%	6.6%	6.4%	6.7%
Chronic kidney disease among adults aged >=18 Years						
Fall River	3.3%	3.4%	3.3%	3.4%	3.3%	3.4%
New Bedford	3.5%	3.5%	3.4%	3.5%	3.4%	3.5%
Massachusetts	3.1%	2.4%	2.7%	3.6%	2.0%	2.9%
U.S.	2.8%	2.9%	2.7%	2.9%	2.9%	3.0%
Chronic obstructive pulmonary disease among adults aged >=18 Years						
Fall River	11.6%	10.6%	11.2%	11.9%	10.3%	10.9%
New Bedford	11.3%	10.4%	11.0%	11.5%	10.1%	10.6%
Massachusetts	6.5%	5.4%	5.9%	7.1%	4.7%	6.0%
U.S.	6.6%	6.5%	6.5%	6.7%	6.4%	6.6%
Coronary heart disease among adults aged >=18 Years						
Fall River	8.4%	8.1%	8.2%	8.5%	7.9%	8.3%
New Bedford	8.4%	8.1%	8.2%	8.6%	8.0%	8.3%
Massachusetts	No data	No data	No data	No data	No data	No data
U.S.	6.7%	6.6%	6.5%	6.8%	6.5%	6.7%
Current asthma among adults aged >=18 Years						
Fall River	14.6%	13.0%	14.3%	14.8%	12.8%	13.2%
New Bedford	14.6%	13.0%	14.4%	14.7%	12.9%	13.2%
Massachusetts	12.0%	10.3%	11.1%	12.8%	9.4%	11.2%
U.S.	8.9%	8.9%	8.7%	9.1%	8.7%	9.0%
Diagnosed diabetes among adults aged >=18 Years						
Fall River	12.4%	11.2%	12.2%	12.6%	11.0%	11.4%
New Bedford	13.1%	11.8%	12.9%	13.2%	11.6%	11.9%
Massachusetts	9.7%	9.3%	9.0%	10.4%	8.5%	10.1%
U.S.	10.5%	10.8%	10.3%	10.7%	10.6%	10.9%
Stroke among adults aged >=18 Years						
Fall River	3.8%	4.1%	3.7%	3.9%	4.0%	4.2%
New Bedford	3.9%	4.2%	3.8%	4.0%	4.1%	4.3%
Massachusetts	No data	No data	No data	No data	No data	No data
U.S.	3.1%	3.2%	3.0%	3.2%	3.1%	3.3%

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

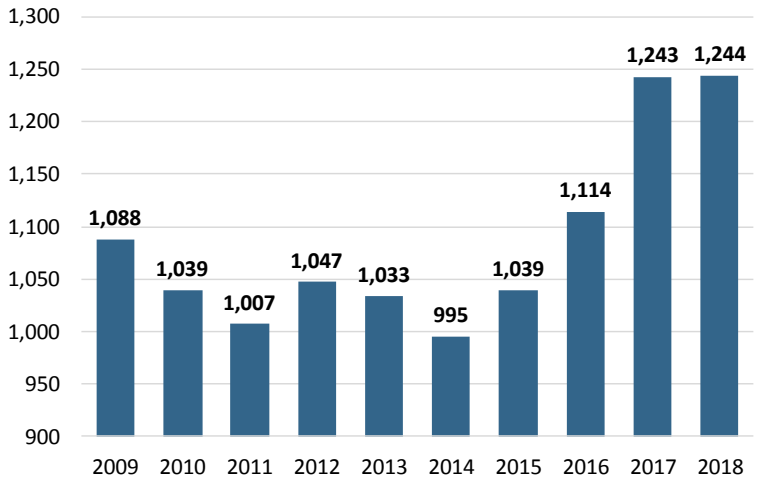
Disease prevalence is higher for Fall River and New Bedford in comparison to the state and national averages.

Cancer Prevalence

According to the American Cancer Society, 42 percent of all cancers in the United States could be prevented through healthy lifestyle choices, which include avoiding smoking, cutting out high fats, and increasing physical activity. They also suggest that many types of cancer, particularly colorectal and cervical cancers, could be successfully treated if caught early through regular screenings. Some stakeholders and focus group participants felt that recently occurrences of cancer in younger people have increased. When discussing ways to improve health outcomes, one stakeholder, noting that early screenings were key to identifying treatable cancers, said that it would be helpful if Southcoast Health could do outreach in the form of preventative screenings in the community for common types of cancer.

Data from Southcoast Heath on cancer among their patients reveals an increase in annual diagnoses from 2014 to 2018, with 1,244 new cases seen in 2018 (see Figure 61). However, without more analysis, it is not possible to know whether this is the result of more occurrences of cancer among the population served by Southcoast Health, the availability of better and more frequent screenings, or more people choosing Southcoast Health as their care provider.

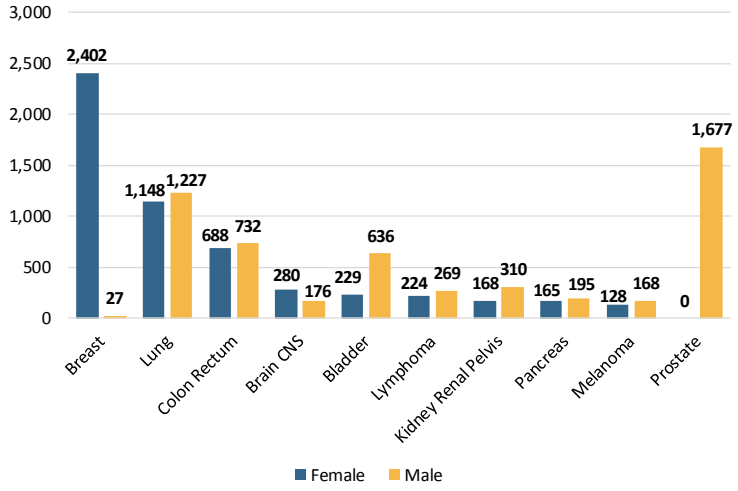
Figure 61
Total New Cancer Diagnoses among Southcoast Health Patients, 2009–2018



Source: Southcoast Health.

Nationally, the most common types of cancer are of the breast, prostate, and lung. In terms of Southcoast Health's patient population, breast cancer is the most prevalent form. As Figure 62 demonstrates, with the exception of breast cancer, there are a higher number of cancer cases among men than women in the Southcoast patient population.

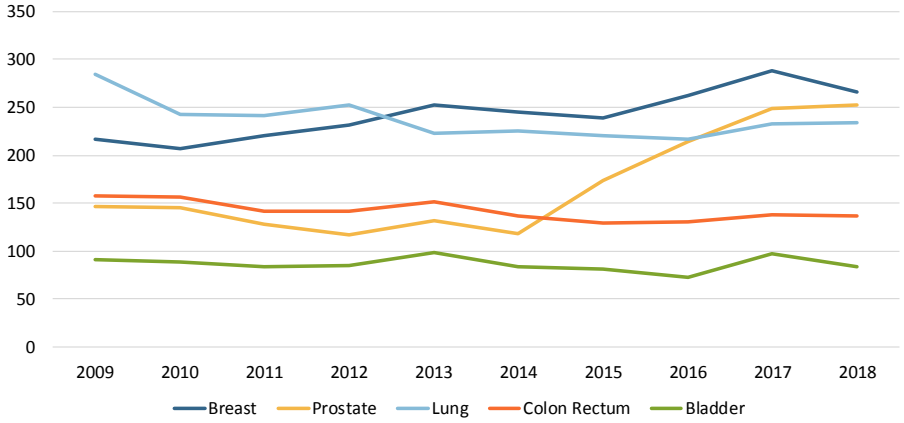
Figure 62
Cancer Prevalence by Gender, Southcoast Patients, All Cases 2009–2018



Source: Southcoast Health.

Examining the history of the most prevalent cancers seen at Southcoast Health reveals that lung, breast, prostate, and bladder cancer have long been the most common forms of the disease, and that within the last decade, the number of breast and prostate cancer cases overtook lung cancer cases to become most frequently seen types of cancer among Southcoast patients (see Figure 63).

Figure 63
2018's Five Most Prevalent Cancers among Southcoast Patients, 2009 – 2018



Source: Southcoast Health.

8.6 MENTAL HEALTH

Mental health issues were cited by stakeholders 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.[66] In a region with low levels of educational attainment and high levels of poverty, many social factors influence not only mental health, but also community perceptions on receiving treatment.[67] 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.[68]

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. Stakeholders repeatedly made this connection during interviews. Many also added that mental health issues are highly prevalent among the homeless population, where services and outreach are perhaps more lacking than elsewhere. As one stakeholder said, "Eliminating homelessness will help with the severity of [behavioral] cases as these folks have a hard time getting proper diagnosis and proper care."

[66] World Health Organization & Calouste Gulbenkian Foundation. (2014). *Social determinants of mental health.* Geneva, WHO.

[67] Mechanic, D. & McAlpine, D. (2002). "The Influence of Social Factors on Mental Health." *Principles and Practice of Geriatric Psychiatry*.

[68] 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.

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 (11.7%) (see Table 22).

Table 22
Adults Reporting Poor Mental Health for at Least 14 Days, 2015

	Fall River	New Bedford	U.S.
Mental Health not good for >= 14 days	18.2% (+0.3/-0.4%)	18.3% (+0.2/0.3%)	11.7% (+/-0.2%)

Source: Centers for Disease Control and Prevention 500 Cities Project.
Data for Massachusetts 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 one in every ten Durfee High School students surveyed reported that they seriously considered attempting suicide within the previous 12 months.

Data from the Durfee High School *Brief Community* Survey highlights how mental issues can affect youth. In 2016, more than one in every ten 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 23).

Table 23
% 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%

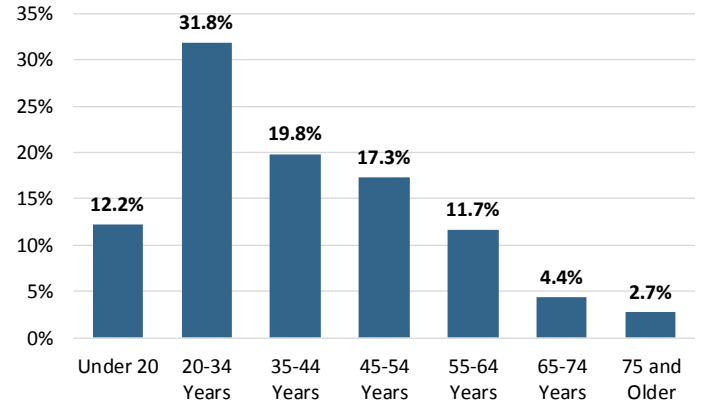
Source: Durfee High School 2016 Brief Community Survey.

Although the New Bedford Health Department uses different methodology on their student survey, New Bedford's *Youth Health Survey* showed similar results, with 10.4 percent of students reporting that they had seriously considered suicide within the last year.[69]

[69] 2017 New Bedford High School Youth Health Survey

There is no doubt that the youth of the region face a number of challenges, but as attested to in stakeholder interviews, trauma and mental health issues are carried throughout people's lives. Indeed, according the data on emergency department visits throughout 2018 to Southcoast Health's hospitals, the median age of patients coming in for behavioral health issues is 37 years, and as Figure 64 below demonstrates, the majority of patients (55.9%) are 35 years of age or older. As discussed in the previous section, substance use factors into a considerable share of behavioral health emergency department visits, but 8.8 percent of these visits are solely for suicidal ideation, an additional 3.6 percent are for depression with suicidal ideation, and another 8.8 percent are for depression alone. Stakeholders also felt that untreated depression and other mental health issues prevented people in the region from reaching their full potential.

Figure 64
Age Cohorts of Behavioral Health Emergency Department Patients, 2018



Source: Southcoast Health.

9 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.[70]

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.

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

9.1 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 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. However, in both cities, the share of women receiving adequate prenatal care has consistently been above the state average and increased in New Bedford from 2010 to 2015 (see Table 24).

Table 24
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.

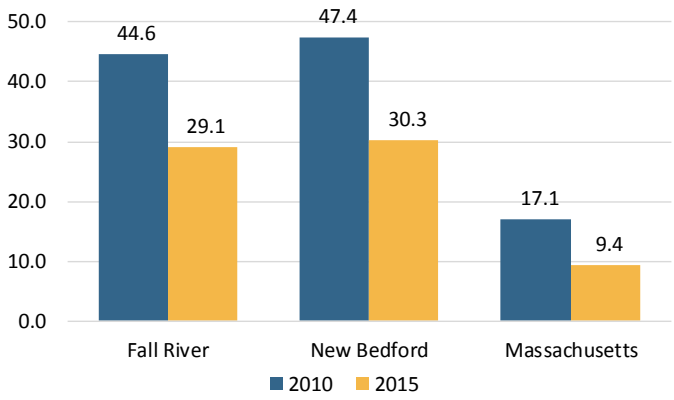
[70] More information about NAS can be found in Section 7.4.

9.2 TEEN BIRTHS

Overall, 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 65).[71] 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.[72]

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.

Figure 65
Teen Birth Rate (per 1,000 females, age 15 to 19 years)



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

[71] 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.

[72] *Massachusetts Births, 2015.* Massachusetts Department of Public Health. March 2017.

9.3 LEAD EXPOSURE

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.

Massachusetts lead regulation requires that all children be tested for blood lead between 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 25 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.

Table 25
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[73]	25	14	10	9	9	10	14	14
	% Screened	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.

[73] The Childhood Lead Poisoning Prevention Program defines lead poisoning as a blood lead level ≥10 µg/dL.

9.4 PEDIATRIC ASTHMA

Pediatric asthma is not curable and it costs an estimated $1,000 per child annually, but it can be managed to prevent serious complications.[74] Overall, the CDC reports that cases and serious attacks related to childhood asthma have decline since 2001, bust still 50 percent of children with asthma reportedly had an attack in 2016.[74] In Massachusetts, one in eight kindergarten through eighth grade students have pediatric asthma. Table 26 below displays the prevalence of pediatric asthma per 100 students for the public school districts of the South Coast. A number of communities in the region have rates that exceed the prevalence statewide. In the most recent school year, 1,787 students in Fall River and 2,104 students in New Bedford had asthma as reported by school nurses.

Table 26
Prevalence of Pediatric Asthma per 100 K-8 Students, 2009–2017 School Years

	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Acushnet	10.3	9.8	9.6	10.3	9.4	11.8	12.1	11.7
Dartmouth	14.1	16.6	16.7	16.2	15.8	14.9	16.6	17.5
Fairhaven	11.5	11.7	12.2	13.7	14.3	12.2	14.4	12
Fall River	16	15.2	17.9	17.8	17.3	18.2	18.9	17.7
Freetown	8.2	6.6	6.3	5.4	6.1	7.1	8.8	8
Marion	10.8	8.8	8.9	13.6	12.8	11.2	11.1	12.3
Mattapoisett	8.4	5.6	8.9	6.9	7.9	8.1	6.9	7
New Bedford	14.9	13.6	15.1	14.6	15.5	16.8	18.4	18.2
Rochester	9.9	9.1	9.6	8.4	9.4	11.8	8.7	11.8
Somerset	12.1	13.6	12.9	11.1	12	10.4	12.3	14.1
Swansea	11.9	13.1	13.1	16	16.4	17.1	16.9	16.8
Wareham	7.5	9.3	8.8	10.8	10.5	8.6	8.9	9.9
Westport	11.5	10.5	12	12.7	13.1	17.4	13.7	14.9
Massachusetts	11.5	11.7	11.9	12.9	12.4	12.2	12.4	12.1

Source: Population Health Information Tool (PHIT) 2009–2017

[74] Centers for Disease Control and Prevention (2019). "Asthma in children." Retrieved from: https://www.cdc.gov/vitalsigns/childhood-asthma/index.html.

10 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.

10.1 FOOD INSECURITY

A person's nutrition can affect many other 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. Stakeholders consistently referenced food insecurity as a challenge faced by families in the region. Interviews revealed two major themes related to food insecurity. First, stakeholders remarked on the affordability of food for low-income families. Interviewees felt that even if people are educated about how to make healthy meal choices, they may lack the means to do so. As one stakeholder said, "Even at South Coast farmers' markets, a container of strawberries is $5, which could buy a meal for several people at a fast food chain." Many stakeholders described scenarios where someone on a tight budget had to decide between putting food on their table and renewing an essential prescription, such as insulin.

Bristol County has the highest rate of food insecurity in southeastern Massachusetts, with 10.3 percent of all county residents lacking access, at times, to enough food for an active, healthy life.

Although the share of households struggling with food insecurity has declined in recent years, as of 2016 the USDA estimates that 9.3 percent of all Massachusetts households struggled with food insecurity.[75] Additionally, recent research on meal gaps in America found that "Massachusetts ranks fifth highest in the country for weekly food budget shortfall and average meal cost" and that Bristol County has the highest rate of food insecurity in southeastern Massachusetts, with 10.3 percent of all county residents lacking access, at times, to enough food for an active, healthy life.[76]

Delving deeper on food insecurity, community members often talked about the lack of conveniently located grocery stores, supermarkets, and farmers markets, particularly in low-income, densely populated neighborhoods in Fall River and New Bedford. Some stakeholders noted that recent efforts to bring mobile farmers markets into neighborhoods and allow people to use SNAP benefits at farmers markets has improved access in the cities' food deserts. Food deserts, as defined by the American Nutrition Association, are areas that lack fresh fruits, vegetables, and other wholesome foods.[77] More specifically, supermarkets and grocery stores are typically not located within food

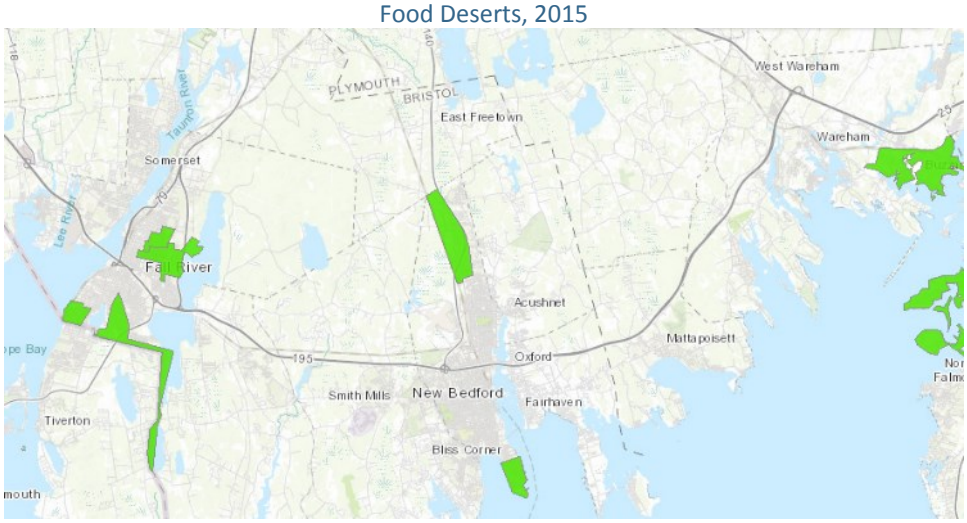
[75] Coleman-Jensen, A. et al. (2019). *Household Food Security in the United States in 2018*. USDA Economic Research Service. Retrieved from: https://www.ers.usda.gov/webdocs/publications/94849/err-270.pdf?v=963.1.

[76] Saragoni, J. (2018). "New Data Shows Hungry Residents Across Eastern Massachusetts Are Not Eligible For Federal Nutrition Assistance." Greater Boston Food Bank. Retrieved from: https://www.gbfb.org/news/press-releases/new-data-shows-hungry-residents-across-eastern-massachusetts-not-eligible-federal-nutrition-assistance/.

[77] For more information on food deserts see: http://americannutritionassociation.org/newsletter/usda-defines-food-deserts.

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 66 display low-income census tracts where a significant number or share of residents are more than one mile (urban) or ten miles (rural) from the nearest supermarket.

Figure 66
Food Deserts, 2015



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

10.2 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.

Both Fall River and New Bedford are characterized as "somewhat walkable" cities.

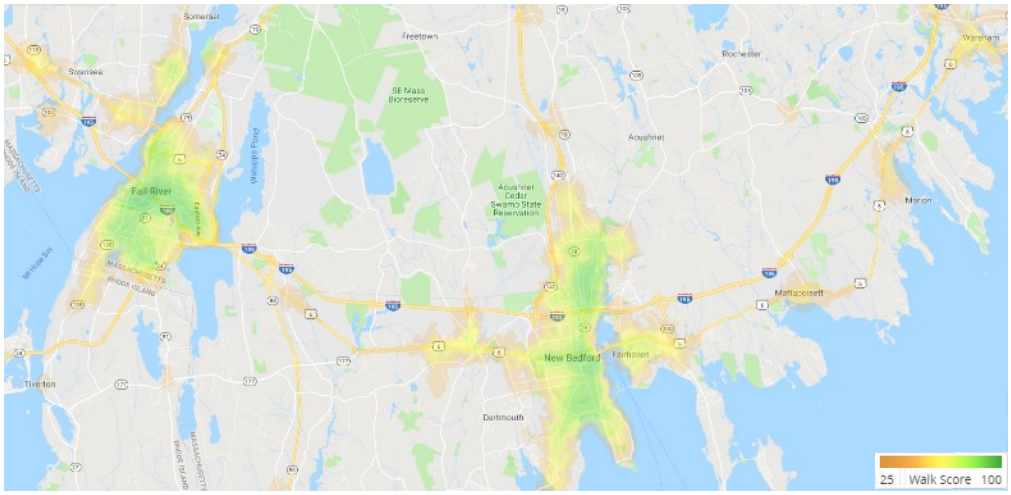
The Public Policy Center uses the U.S. Department of Transportation's definition of walkability, which is: "A walkable community is one where it is easy and safe to walk to goods and services (i.e., grocery stores, post offices, health clinics, etc.). Walkable communities encourage pedestrian activity, 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 citywide 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." Wareham, being more rural, is much less walkable and scores a "car-dependent" WalkScore average of 48. Figure 67 below demonstrates the WalkScores for the more ubranized areas of the region in a heat map.

Figure 67
WalkScore Heat Map



Source: Redfin.

10.3 ENVIRONMENTAL EXPOSURES

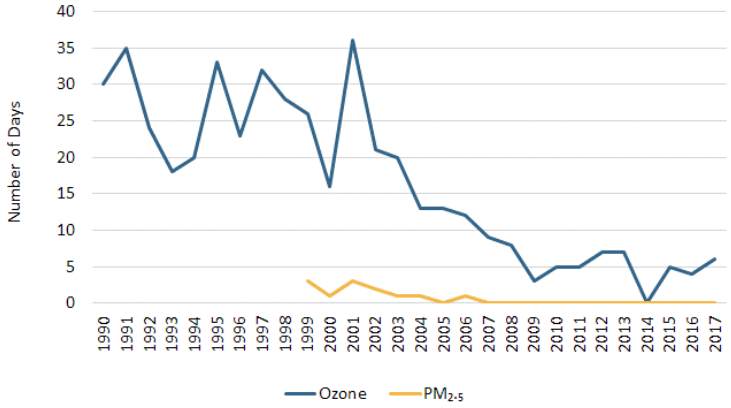
Air Quality

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

Air quality is measured using ozone levels and particulate matter in the air (PM_{2-5}). Limits are established by the Environmental Protection Agency (EPA) and are known as National Ambient Air Quality Standards (NAAQS).[78] When air pollutant concentrations are greater than the NAAQS, human health can be compromised. Figure 68 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.

Figure 68
Number of Days over NAAQS, Bristol County, 1990–2017



Source: Massachusetts Department of Public Health, Bureau of Environmental Health, Outdoor Air Quality, 1990–2017.

[78] For ozone levels, the standard demands that the measurements cannot exceed 0.070 parts per million every eight hours and particle pollution ($PM_{2.5}$) cannot exceed 35 micrograms/meter^3 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.

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.[79] Exposure to lead is particularly harmful to unborn babies and young children, while THMs 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, with the most recent being in Westport in 2010, and only 1 trihalomethane violation was reported, which was in Somerset in 2014.[80]

10.4 ENVIRONMENTAL CONTAMINATION

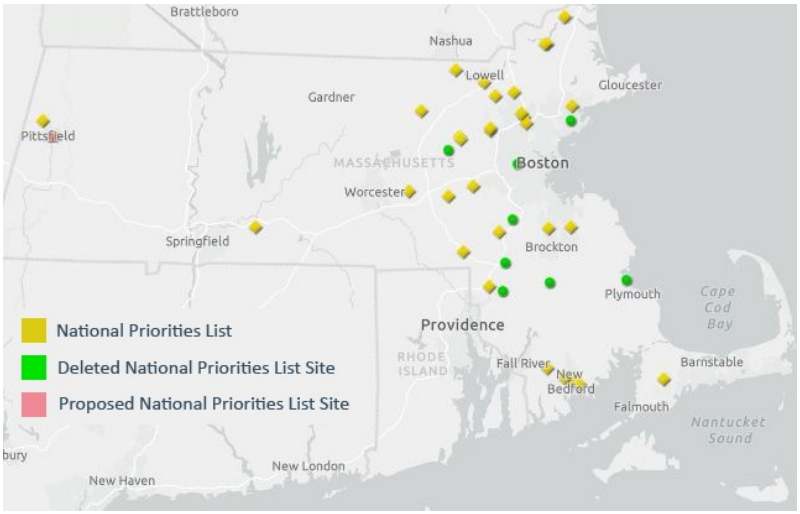
Exposure to environmental contamination can have an adverse effect on public health, including from pollutants in the air, soil, or water. Environmental contamination is often linked with health disparities, since many polluted sites are located in poorer communities. Pregnant women, children, and the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

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

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[81] (see Figure 69).

Figure 69
Superfund Sites



Source: United States Environmental Protection Agency.

[79] The BEH tests for arsenic, atrazine, DEHP, disinfection byproducts, lead, nitrates, PCE (tetrachloroethylene), TCE (trichloroethylene), and uranium.

[80] 2014 is the most recent year available.

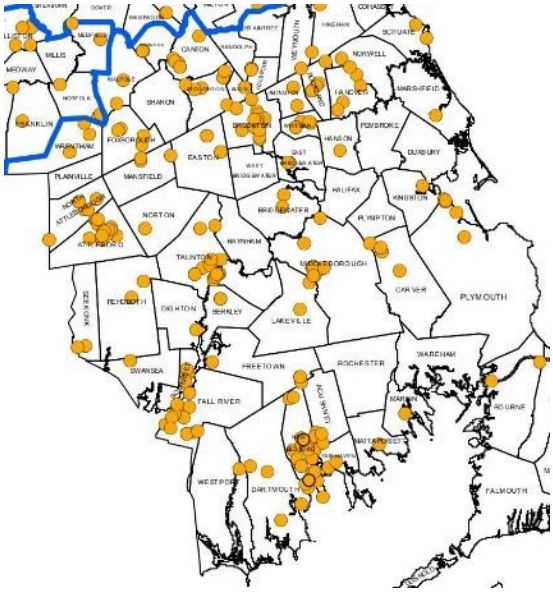
[81] The South Coast's superfund sites are located in Dartmouth (1), Fairhaven (1), New Bedford (2).

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 70). 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 27).

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 70
Brownfield Sites in Southeastern Massachusetts



Source: Massachusetts Department of Environmental Protection.

Table 27
Prevalence of Brownfield Sites, As of May 2017

	# of Sites	# of Sites per Sq. Mi.	# of Sites per 1,000 Population[82]
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.

[82] ACS 1-year Estimates are used for the population figures.

11 CONCLUSION

As documented throughout this needs assessment, the region served by Southcoast Health faces a number of challenges. Census data demonstrate that residents of the South Coast earn incomes below the statewide median. Poverty, a major social determinant of health, affects 15 percent of the residents of the region and is much more prevalent in Fall River and New Bedford, and even more so among city families with children, particularly those led by a single parent. Indeed, two-thirds of the public school students in these cities are classified as economically disadvantaged.

Income is not the only challenge. For years, the unemployment rate in the region has regularly exceed that of the state. As the local economy has moved away from manufacturing, opportunities for employment are limited for many residents due to low levels of educational attainment and skills that are not readily transferable to the new economy. Across the region, the majority of adults have never attended college, with only 22 percent of all adults having earned a Bachelor's degree or higher.

Additionally, the South Coast is not immune to the housing crisis facing the state. Although the costs of housing in this region seem affordable compared to Metro Boston, nearly half of all renters and quarter of all homeowners in the region are financially burdened by their housing costs, which indicates that a smaller, but still substantial, share of households are at risk of becoming homeless. Data on homelessness in the region suggests that shelters and transitional housing programs are overwhelmed. In both Fall River and New Bedford's most recent point-in-time counts, the number of homeless individuals exceeded the number of available beds.

As discussed throughout this report, socioeconomic conditions have been shown to influence health outcomes. Compared with the statewide population, adults in the South Coast do not participate in preventative screenings as often. Residents of Fall River and New Bedford also have higher rates of high cholesterol, high blood pressure, and obesity compared to the state and the nation. Additionally, Fall River and New Bedford adults report smoking at nearly twice the national and statewide rates. It is not surprising then that chronic diseases such as pediatric asthma, COPD, cancer, kidney disease, diabetes, and coronary heart disease are more prevalent in Fall River and New Bedford than they are across the state and nation.

The region's poor health outcomes are not limited to physical health. Nearly one in five adults in New Bedford and Fall River reported having 14 or more days of poor mental health, which is almost double the national rate. Importantly, data on admissions for behavioral and mental health issues demonstrate that patients often have a substance use disorder co-occurring with another mental health disorder. Indeed, slightly more than 25 percent of mental health patients admitted in the region and throughout Massachusetts were also diagnosed with a substance use disorder.

The impact of substance use disorder on the region is substantial. From 2013 to 2018, over 800 people in the South Coast region have died from an opioid overdose, with the majority being from Fall River and New Bedford. Over the same period, the number of opioid-related deaths and discharges across the region has increased dramatically. The southeast region, of which Southcoast Health's service area is a part, leads the state in discharges for neonatal abstinence syndrome and postpartum overdose deaths.

Our fieldwork revealed that community members are keenly aware of the problems facing the region. All of the health outcomes and social determinants outlined above were discussed in detail throughout stakeholder interviews and focus groups sessions. Despite these challenges, many of the community members who provided their input as part of this needs assessment maintained a positive outlook on the future of the region. Regarding needs in the region, the major themes that emerged include improving the access and availability of mental health services; increasing services for people who are at risk of becoming or who are currently homeless; educating residents on the healthcare services available in the region; and creating more ways to bring healthcare services to underserved communities, particularly low-income neighborhoods. Importantly, community members view Southcoast Health as a leader in the region and some stakeholders called on the organization to advocate at the state level for the resources needed to meet the healthcare needs of all the residents of the region, and to convene community partnerships with the aim of increasing collaborative, coordinated efforts to address the challenges identified here.

APPENDIX A – STAKEHOLDER INTERVIEWS

The following list includes all 31 interviews conducted as part of the Southcoast Health CHNA. These structured interviews were conducted by interns for Southcoast Health's Community Benefits Office using the interview guide on the next page. Interview notes were coded and analyzed by the PPC.

Name	Organization
Beth Faunce	Fall River EMS
Beth Perdue	GateHouse Media New England
Bridget Lehane & Chris Everett	Father Bill's and Mainspring
Chief Paul Coderre	New Bedford Fire Department
Chief Joseph Cordeiro	New Bedford Police Department
Chief John Walcek	Wareham Police Department
Corinn Williams	Community Economic Development Center
Deb Kelsey	New Bedford Fishing Partnership
Den Desmarinis	Commission for Citizens with Disabilities; Southcoast Health PFAC & CBAC
Deneen Rose	Cape Verdean Association
Doug White	Old Rochester Regional School District
Edward Jacoubs	Plymouth County District Attorney's Office
Heather Sylvia	Acushnet Council on Aging
Jamie Berberena	Community Health Consultant
Jeff Pelletier	Junior Achievement of Southern Massachusetts
Ken Eugenio	St. Luke's Hospital
Laura Washington	Steppingstone, Inc.
Lisa Alves	Fall River WIC
Mary Vieira & Susan Simonin-Kelley	St. Luke's Hospital
Michele Rodrigues-Belong	St. Luke's Hospital
Michelle Loranger	Children's Advocacy Center
Marianne Valley, Claudette Laffan, Katelyn Caton	New Beginnings, Southcoast Health
Pam Opheim-Newhall	St. Luke's Hospital
Patty Vandenberghe & Michelle Murray	Southcoast Health
Rev. David Lima	Interchurch Council of Greater New Bedford
Rob Mendes	Boys and Girls Club of New Bedford and Wareham
Seanna Zimmerman	Charlton Memorial Hospital
Cheryl Bartlett	Greater New Bedford Community Health Center
Wendy Garf-Lipp	United Neighbors of Fall River

COMMUNITY NEEDS ASSESSMENT 2019 - STAKEHOLDER INTERVIEW GUIDE

The purpose of our discussion is to get your input on health and social issues that you feel are most important to the overall wellness of our community. This is part of an effort by Southcoast Health to understand the health-related needs of the community and to plan programs and services that address those needs. 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. The discussion today will remain absolutely confidential. 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 interview.

Before we begin, I am going to ask you a few questions about your work in the community.

- In a sentence, please describe your organization's role in the community.
- Which South Coast community does your organization serve?
- How would you identify the populations that you work with?

Now, we are going to talk about your overall impressions of the health care needs of your community.

1. Tell me your thoughts about the general health of residents in your community overall. Do you feel like people in your community are healthy or unhealthy?
    a. Why or why not?
2. Many factors combine to affect the health of individuals and communities. Though health care is essential to health, research demonstrates that a broad range of social, economic and environmental factors shape an individual's opportunities and barriers to engage in healthy behaviors. Social determinants of health are "the structural determinants and conditions in which people are born, grow, live, work and age." They include factors like socioeconomic status, education, the physical environment, employment and social support networks, as well as access to health care.

    Social determinants are resources that are necessary to maintain health. For instance, individuals living in a community that is economically depressed may have less access to healthy food options, opportunities for physical activity and may experience more stress in their daily lives. There are significant differences in the distribution of these resources, and there is a significant association between these resources and health outcomes.

    The next group of questions will help us assess the impact of the social determinants of health on the overall health of residents on the South Coast.

    a. Are some people healthier than other people in this community?
        i. Why or why not?
    b. Does the history of this community influence the health of the community?
        i. How?
    c. Do the values of the community influence the health of the community?
        i. How?
    d. What are the assets of this community?
    e. What are the obstacles in this community?
    f. What is the relationship of this community to surrounding communities?
    g. How do social or economic conditions influence health in the community?
    h. What determinants affect the largest number of people in your community? (*Probe: housing, transportation, violence, educational attainment, etc.)*
        i. Which of these determinants are easier to change?
        ii. What are the barriers to addressing these determinants?
        iii. Are there resources available to address these determinants? (Probe: Please describe)
        iv. Do you think community partners are willing to work together to change the determinants identified?
3. Next, I would like to address your feelings about some specific health issues facing our communities.

a. What do you feel are the top health problems facing residents?
(Probe: if 'big problem': Why do you feel these are the top health problems facing residents?)
   i. Healthy eating habits (including obesity, proper nutrition, diet)
   ii. Getting adequate exercise
   iii. STD's, AIDs
   iv. Violence
   v. Family planning and teen pregnancy
   vi. Prenatal care, child development services (including services for child abuse and trauma)
   vii. Alcohol or drug use or addiction
   viii. Cigarette smoking, other tobacco products
   ix. Behavioral/mental health
   x. Access to adequate primary care resources
   xi. Access to adequate emergency care resources
   xii. Access to dental care resources
   xiii. Heart problems
   xiv. Cancer
   xv. Chronic disease, such as diabetes or asthma

4. What do you feel are the biggest barriers preventing residents in you community from accessing and making good use of health care services that will help them maintain or improve their health?
(Probe if <u>not mentioned</u>, not enough health care providers or facilities in general, lack of providers for BH, lack of SA services, health care is not affordable, lack of health insurance, lack of health edu programs for adults and kids in school, lack of knowledge and understanding about how to mange chronic disease, language or cultural barriers, lack of transportation, educational opportunities)
   a. Why?
   b. How would you rate the following aspects of community life?
      i. Safety of neighborhoods
      ii. Availability of safe and clean parks
      iii. Access to healthy foods in restaurants and supermarkets
      iv. Conveniently located food stores/supermarkets/farmers markets
      v. Affordability of food
      vi. Sidewalks and streets in good enough shape for bike riding, walking or jogging
      vii. Recess/physical education in schools
5. Of the following, what types of people are at greatest risk or have the greatest unmet needs?
(Probe: Why do you feel these populations are at greatest risk?)
   a. Elderly
   b. Children or Youth
   c. Non-English speaking
   d. Poor
   e. Specific racial or ethnic groups
   f. People with BH or SA issues
   g. Veterans
   h. Homeless residents
6. Many organizations in the area are working to improve the physical and mental health of people in the community. From your experience or what you have heard please describe:
   a. How well do those organizations work together?
   b. What happens to people that they are serving when they don't work well together?
   c. How could they be more effective at working together?
7. In what ways do you think Southcoast Health could become more involved in affecting community health?
8. What are the top three things that Southcoast Health could do in the next three years that would have the biggest impact in improving the overall health of the community?

APPENDIX B – FOCUS GROUP QUESTIONAIRE

SOUTHCOAST HEALTH FOCUS GROUP QUESTIONS AND RESPONSES

Facilitator Opening (5 mins)

Hello and welcome to our discussion group today. Thank you for taking the time to participate. The purpose of our discussion is to get your input on health and social issues that matter most to you. This is part of an effort by Southcoast Health to understand the health-related needs of the community and to plan programs and services that address those needs. My name is <insert here>, 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?

Introductions

1. To begin, why don't we go around the table and introduce ourselves. State your name and (if you feel comfortable) your association with the Cancer Center.

I. GENERAL COMMUNITY QUESTIONS (10)

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 something in your community that promotes health, what comes to mind?

   Prompts: Are there any other resources that people may not typically think of? Such as parks, economic and educational opportunities, social groups?

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

II. IDENTIFYING TOP ISSUES (15 MINS)

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 societal concerns that must be addressed to improve health and quality of life in your community?

   Prompts: Are housing, chronic diseases or conditions, mental health, substance use, violence, access to healthy food, child abuse/neglect, suicide, domestic violence, health care, additional social concerns for your community?

5. How have these top concerns affected your community?

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

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

III. ADDRESSING TOP HEALTH ISSUES (10 MINS)

7. Thinking about the top concerns you mentioned, what is currently being done to address those issues for the community? What are the most useful programs or services available for these concerns?

8. What concerns are not being addressed adequately?

IV. BARRIERS (10 MINS)

9. Are there significant barriers to being healthy or making healthy choices in your community? What are those barriers?

   Prompts: Access to healthy food, safe, walkable streets, transportation, etc.

10. What keeps you (your family, your children) from going to the doctor or 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, transportation, income, etc.)

    ii. If you are uninsured, is anything making it difficult to obtain health insurance?

12. Where do you get the information you need related to your (your family's, your children's) health?

V. IMPROVEMENT QUESTIONS (10 MINS)

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 keep up or improve your health and wellness?

15 Thinking about the future, if you could do one thing to improve the health and wellness of people in your community, what would it be?

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

VI. ENDING QUESTION (5 MINS)

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 C – PROVIDERS SURVEY QUESTIONAIRE

Thank you for choosing to participate in this survey. As part of Southcoast Health's Community Health Needs Assessment, we are conducting a survey of key community members in collaboration with the Public Policy Center at UMass Dartmouth. The results will be used to identify community health issues in the Southcoast region 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!

I. BACKGROUND

1. How would you best describe the organization for which your work?

○ 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 Southcoast region?

_____

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 _____

II. COMMUNITY CONDITIONS

4. What are the top FIVE areas of general concern for the community that you serve, not necessarily related to health? Please choose no more than five.

☐ Quality of the housing stock

- ☐ Lack of employment opportunities
- ☐ Insufficient resources to support community needs
- ☐ Public transportation
- ☐ Crime and violence
- ☐ Homelessness
- ☐ Poverty
- ☐ Trauma related to abuse/neglect
- ☐ Education system
- ☐ Access to affordable housing
- ☐ Emergency housing for families in crisis
- ☐ Insufficiency of job training opportunities
- ☐ Not enough affordable childcare options
- ☐ Lack of programs aimed to help at-risk youth
- ☐ Lack of LGBTQ+ resources and support groups
- ☐ Other _____

5. Of the issues you selected in the previous question, please select the <u>one</u> issue that concerns you the most.

- ☐ Quality of the housing stock
- ☐ Lack of employment opportunities
- ☐ Insufficient resources to support community needs
- ☐ Public transportation
- ☐ Crime and violence
- ☐ Homelessness
- ☐ Poverty
- ☐ Trauma related to abuse/neglect
- ☐ Education system
- ☐ Access to affordable housing
- ☐ Emergency housing for families in crisis
- ☐ Insufficiency of job training opportunities
- ☐ Not enough affordable childcare options
- ☐ Lack of programs aimed to help at-risk youth
- ☐ Lack of LGBTQ+ resources and support groups
- ☐ Other _____

III. MAJOR HEALTH ISSUES IN THE COMMUNITY YOU SERVE

6. Regarding the conditions in the community you serve, please rank each of the following health issues on a scale of 1 to 5, with 1 being not at all concerned and 5 being very concerned.

	Not at all Concerned 1	2	Somewhat Concerned 3	4	Very Concerned 5
Age-related health problems (e.g., arthritis, Alzheimer's, injuries due to falls)	○	○	○	○	○
Cancer	○	○	○	○	○
Dental problems	○	○	○	○	○
Heart disease	○	○	○	○	○
Hypertension	○	○	○	○	○
Mental health disorders	○	○	○	○	○
Poor birth outcomes (e.g., baby underweight)	○	○	○	○	○
Breathing problems/asthma, COPD	○	○	○	○	○
Drug abuse/addiction	○	○	○	○	○
Violence	○	○	○	○	○
Domestic abuse	○	○	○	○	○
Stroke	○	○	○	○	○
Teen pregnancy	○	○	○	○	○
Suicide	○	○	○	○	○
Alcoholism	○	○	○	○	○
Diabetes	○	○	○	○	○
Child abuse or neglect	○	○	○	○	○
Obesity/Overweight	○	○	○	○	○
Elder abuse and neglect	○	○	○	○	○
Smoking/Tobacco use	○	○	○	○	○
Teen vaping	○	○	○	○	○
Trauma related to abuse and neglect	○	○	○	○	○
Low levels of physical activity	○	○	○	○	○
Poor nutrition	○	○	○	○	○

7. Any other health issues you would rank as a concern that are not mentioned above?

_____

8. Of the health issues you selected as concern more of a concern in Question 6, please select the one issue that concerns you the most.

- ☐ Age-related health problems (e.g., arthritis, Alzheimer's, injuries due to falls)
- ☐ Cancer
- ☐ Dental problems
- ☐ Heart disease
- ☐ Hypertension
- ☐ Mental health disorders
- ☐ Poor birth outcomes (e.g., baby underweight)
- ☐ Breathing problems/asthma, COPD
- ☐ Drug abuse/addiction
- ☐ Violence
- ☐ Domestic abuse
- ☐ Stroke
- ☐ Teen pregnancy
- ☐ Suicide
- ☐ Alcoholism
- ☐ Diabetes
- ☐ Child abuse or neglect
- ☐ Obesity/Overweight
- ☐ Elder abuse and neglect
- ☐ Smoking/Tobacco use
- ☐ Teen vaping
- ☐ Trauma related to abuse and neglect
- ☐ Low levels of physical activity
- ☐ Poor nutrition

IV. ACCESS

9. Regarding the existing obstacles to accessing health care among the community members 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 1	2	Obstacle 3	4	More of an Obstacle 5
Appointment time not convenient	○	○	○	○	○
Medications are too expensive	○	○	○	○	○
Language barriers	○	○	○	○	○
Immigration status	○	○	○	○	○
ER is the only place people go for care	○	○	○	○	○

Lack of awareness of local services	○	○	○	○	○
Lack of insurance	○	○	○	○	○
High copays and deductibles	○	○	○	○	○
	○	○	○	○	○
Cultural or religious beliefs	○	○	○	○	○
Fear (not ready to face health problem)	○	○	○	○	○
Don't understand the need to see doctor	○	○	○	○	○
Transportation issues	○	○	○	○	○
Child care issues	○	○	○	○	○
Too long of a wait to get an appointment to see doctor	○	○	○	○	○
No access to primary care physicians/doctors	○	○	○	○	○
No specialists in the area	○	○	○	○	○
Healthcare system is too difficult to navigate	○	○	○	○	○
No counseling services in the area	○	○	○	○	○
Other (please specify) _____	○	○	○	○	○

V. UNDERSERVED POPULATIONS

11. Please choose the top three populations that you feel are most underserved in your community.

- ☐ Young children (0-5 years of age)
- ☐ School age children (6-11 years of age)
- ☐ Adolescents (12-17 years of age)
- ☐ Young adults (18-24 years of age)
- ☐ Older adults (older than 65 years of age)
- ☐ Homeless/Unstably housed
- ☐ Low-income populations
- ☐ LGBTQ+
- ☐ Immigrants/Refugees
- ☐ Racial/Ethnic minorities
- ☐ Non-English speakers
- ☐ Persons with physical disabilities
- ☐ Persons with substance use disorder
- ☐ Persons with mental or behavioral health issues
- ☐ Persons with intellectual disabilities
- ☐ Veterans
- ☐ Other (please specify) _____

12. Do you have any other comments?_____

APPENDIX D – COMMUNITY SURVEY QUESTIONAIRE

Hello and thank you for participating in our survey. Your opinion about the health and wellness of your community will help Southcoast Health to understand the 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 survey is being conducted with our partner, the Public Policy Center at UMass Dartmouth. The responses you provide us today will be kept anonymous; we do not ask any personal information such as your name or your address. **I. First, we would like to ask just a few questions about your background.What is your ZIP code?** _____

1. What is your gender?

- ☐ Female
- ☐ Male
- ☐ Other

2. What ethnic group do you most closely identify with?

- ☐ Asian
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Multiracial
- ☐ Native American
- ☐ White/Caucasian
- ☐ Other (please specify) _____

3. What is your age?

- ☐ 18 to 24
- ☐ 25 to 34
- ☐ 35 to 44
- ☐ 45 to 54
- ☐ 55 to 64
- ☐ 65 to 74
- ☐ 74 and older

4. What language do you primarily speak at home?

- ☐ English
- ☐ Spanish
- ☐ European Portuguese
- ☐ Brazilian Portuguese
- ☐ Cape Verdean Creole
- ☐ Haitian Creole
- ☐ K'iche'
- ☐ Khmer
- ☐ Vietnamese
- ☐ Other (please specify) _____

II. THE next set of questions pertain to your OVERALL HEALTH AND HEALTH BEHAVIORS.

5. Where do you and your family receive your primary health care services? Primary health care includes seeing health professionals to help you maintain good health, with regular health checks, health advice when you have concerns, and support for ongoing care. Please choose all that apply.

- ☐ Doctor's office
- ☐ Urgent care facility

- ☐ Free health care clinic
- ☐ School-based health care center
- ☐ Emergency department
- ☐ Other (please specify) _____

6. How would you rate your health? Would you say that in general your health is…

- ☐ Very poor
- ☐ Poor
- ☐ Good
- ☐ Fair
- ☐ Excellent

7. How do you learn about health-related issues and ways to take better care of yourself and your family? Please choose all that apply.

- ☐ Health care professional (e.g., doctor/nurse/pharmacist)
- ☐ Family members
- ☐ Friends
- ☐ Newspaper/magazines
- ☐ Internet
- ☐ Social media (e.g. Facebook, Twitter)
- ☐ Public health department
- ☐ Religious organization
- ☐ School
- ☐ Health fairs
- ☐ Library
- ☐ Other (please specify) _____

8. How often do you do the following?

	Never 1	Sometimes, but not as often as I should 2	Regularly, as recommended 3	Not applicable 4
Go to the dentist for a cleaning	○	○	○	○
Get a physical	○	○	○	○
Get a flu shot	○	○	○	○
Get vaccinations (tetanus, measles, diphtheria, etc.)	○	○	○	○
Get cancer screenings if your doctor recommends them (mammogram, prostate exam, colonoscopy, etc.)	○	○	○	○
Get your blood pressure checked	○	○	○	○
Get an exam	○	○	○	○
Eat at least 5 servings of fruits and vegetables each day	○	○	○	○
Exercise 2.5 hours or more per week	○	○	○	○
Wear a seatbelt when in a car	○	○	○	○
Wear a helmet when riding a bike	○	○	○	○
Get a good night's sleep	○	○	○	○

III. The next set of questions pertain to the HEALTH OF YOUR COMMUNITY.

9. What do you feel are the THREE greatest features of a healthy community? Please choose no more than three.

- ☐ Good place to raise children
- ☐ Strong family life
- ☐ Low crime/safe neighborhoods
- ☐ Good schools
- ☐ Access to healthy foods
- ☐ Opportunities for physical activity (youth sports, walking trails, fitness centers, etc.)
- ☐ Access to healthcare (e.g. family doctors, emergency services, specialists)
- ☐ Quality maternal care
- ☐ Clean environment
- ☐ Religious or spiritual values
- ☐ Affordable housing
- ☐ Emergency preparedness
- ☐ A vibrant arts and culture scene
- ☐ Excellent race/ethnic relations
- ☐ Strong community support groups
- ☐ Good jobs and a healthy economy
- ☐ Lots of activities for youth (sports, arts, after school clubs, etc.)
- ☐ Good public transportation system
- ☐ Well maintained public infrastructure (e.g., bike lanes, sidewalks, parks)
- ☐ Other (please specify)

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

- ☐ Very unhealthy
- ☐ Somewhat unhealthy
- ☐ Somewhat healthy
- ☐ Very healthy

11. Please indicate how much you agree or disagree with the following statements.

	Strongly Disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly Agree 5
I am satisfied with the quality of life in my community.	○	○	○	○	○
I am satisfied with the healthcare system in the community.	○	○	○	○	○
My community is a good place to raise children.	○	○	○	○	○
My community is a good place to grow old.	○	○	○	○	○
There is economic opportunity in my community. (e.g., opportunities to develop skills through job training & higher education, to find good-paying and stable jobs, to start new businesses, to afford a home, etc.)	○	○	○	○	○
My community is a safe place to live.	○	○	○	○	○
There are networks of support for individuals and families during times of stress and need in my community.	○	○	○	○	○
There is an active sense of civic responsibility and engagement, and of civic pride in shared accomplishments in my community.	○	○	○	○	○

IV. The next set of questions pertain to the MAJOR HEALTH ISSUES in your community.

12. What do you consider to be the FIVE most pressing health issues in your community? Please choose no more than five.

- ☐ Abuse and neglect
- ☐ Age-related health issues (e.g., arthritis, Alzheimer's, injuries due to falls)
- ☐ High blood pressure
- ☐ Breathing problems/asthma
- ☐ Cancers
- ☐ Dental problems
- ☐ Diabetes
- ☐ Drug abuse/addiction
- ☐ Heart disease
- ☐ Mental health issues (e.g. depression, anxiety, bipolar disorder, PTSD, schizophrenia, OCD)
- ☐ Obesity/overweight
- ☐ Poor birth outcomes (baby underweight, substance exposed)
- ☐ Low levels of physical activity
- ☐ Poor nutrition/eating habits
- ☐ Vaping
- ☐ Smoking/tobacco use
- ☐ Alcohol abuse
- ☐ Teenage pregnancy
- ☐ Other (please specify) _____

13. [Only if they choose abuse and neglect above] How significant or insignificant are the following health issues related to abuse and neglect? Scale: Very Significant, Somewhat significant, Neither, Not very significant, Not significant at all.

- o Child abuse/neglect
- o Elder abuse/neglect
- o Domestic abuse/violence
- o Human trafficking

14. [Only if they choose age-related issues above] How significant or insignificant are the following age-related health issues? Scale: Scale: Very Significant, Somewhat significant, Neither, Not very significant, Not significant at all.

- o Arthritis
- o Alzheimer's/Dementia
- o Injuries due to falls

15. [Only if they choose drug abuse/addiction above] How significant or insignificant are the following health issues related to drug abuse and addiction Scale: Very Significant, Somewhat significant, Neither, Not very significant, Not significant at all.

- o Alcohol abuse
- o Marijuana abuse
- o Prescription medication abuse
- o Opioid use (heroin, fentanyl)
- o Other illegal/street drug use

V. The next set of questions pertain to issues related to access to health care.

16. Have any of these issues ever made it more difficult for you to get the health care that you needed? Please choose all that apply.

- ☐ You have never experienced any difficulties getting care
- ☐ Lack of transportation
- ☐ Fear of health check-up
- ☐ no regular source of health care
- ☐ Don't know what types of services are available
- ☐ Cost of health care, including prescriptions

- ☐ No available provider near you
- ☐ Lack of evening and weekend services
- ☐ Long waits for appointments
- ☐ Insurance problems/lack of coverage
- ☐ Confidentiality concerns
- ☐ Language problems/could not communicate with provider or office staff
- ☐ Discrimination/unfriendliness of provider or office staff
- ☐ No primary care provider
- ☐ difficulty navigating the healthcare system
- ☐ Other (please specify):_____

17. Have you experienced any of the following over the past year? Please choose all that apply.

- ☐ Don't feel safe in your home or neighborhood
- ☐ trouble paying your rent or mortgage
- ☐ No steady place to live
- ☐ trouble paying your heating or electric bills
- ☐ Difficulty obtaining childcare
- ☐ skipping meals because you cannot afford to buy enough food
- ☐ No reliable transportation
- ☐ No close friends or family you can talk to
- ☐ Rationing medication (i.e., you do not take your medication as prescribed so it lasts longer)
- ☐ Other_____

18. Please think about the availability of the health, medical, and social services in your community. Which of the following health, medical, and social services do you feel <u>ARE NOT</u> sufficiently available in your community? Please choose all that apply.

- ☐ Health or medical services specifically for seniors (65+)
- ☐ Health or medical services specifically for youth
- ☐ Reproductive health services specifically for youth (birth control, etc.)
- ☐ Programs or service to help people quit smoking
- ☐ Social services (e.g. WIC, SNAP offices, MassHealth enrollment, emergency housing, etc.)
- ☐ Public transportation to area health services
- ☐ Urgent care (e.g. immediate care centers, Minute Clinics)
- ☐ Primary care (e.g. family, general practice, internal medicine physicians)
- ☐ Home health services
- ☐ Treatment for mental health disorders
- ☐ Treatment for substance use disorders
- ☐ General sexual and reproductive health services (e.g. STD screening, birth control, ob/gyn, midwives, maternity care, lactation consultants, etc.)
- ☐ Physical therapy or occupational therapy
- ☐ Specialist services (e.g. cardiology, dermatology, oncology, endocrinology)
- ☐ Multilingual health care providers
- ☐ LGBTQ+ resources and support services
- ☐ Diabetes education services
- ☐ Other _____

VI. Just a few more questions about yourself.

19. 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 (please specify) _____

20. What is your annual household income?

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

21. Do you have children under the age of 18?

- ○ Yes
- ○ No

22. Which of the following categories best describes your employment status?

- ☐ Employed, working full-time
- ☐ Employed, working part-time
- ☐ Employed, working multiple part-time jobs
- ☐ Not employed, looking for work
- ☐ Not employed, NOT looking for work
- ☐ Retired
- ☐ Disabled, not able to work

23. Is there anything we have not asked you about that you feel is important?

_____