Norwood Hospital

A STEWARD FAMILY HOSPITAL

Steward

Norwood Hospital Community Health Needs Assessment 2021

SPRINGLINE RESEARCH GROUP

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About Norwood Hospital

Norwood Hospital, part of the Steward network, was founded in 1919 and at one time was a full-service, 215-bed acute care community hospital located in Norwood, Massachusetts. The hospital's major clinical services included advanced surgical services, obstetrics, cardiology, neurology, orthopedics, gastroenterology, behavioral health, cancer care, and pediatrics. Norwood Hospital, including its Emergency Department, temporarily closed on June 28, 2020 due to flash flooding from severe storms that inundated parts of the facility and caused widespread damage. The hospital continues to offer services to the community at its existing satellites located in Foxboro and Norwood. The hospital plans to demolish the existing structure and rebuild in the same location, although the date to begin construction has not been determined.

About Steward Health Care System

Nearly a decade ago, Steward Health Care System emerged as a different kind of health care company designed to usher in a new era of wellness. One that provides our patients better, more proactive care at a sustainable cost, our providers unrivaled coordination of care, and our communities greater prosperity and stability.

As the country's largest physician-led, tax paying, integrated health care system, our doctors can be certain that we share their interests and those of their patients. Together we are on a mission to revolutionize the way health care is delivered - creating healthier lives, thriving communities and a better world.

Steward is among the nation's largest and most successful accountable care organizations (ACO), with more than 5,500 providers and 43,000 health care professionals who care for 12.3 million patients a year through a closely integrated network of hospitals, multispecialty medical groups, urgent care centers, skilled nursing facilities and behavioral health centers.

Based in Dallas, Steward currently operates 39 hospitals across Arizona, Arkansas, Florida, Louisiana, Massachusetts, Ohio, Pennsylvania, Texas and Utah.

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About Springline Research Group

Springline Research Group is a multidisciplinary applied research firm that utilizes the tools of the social scientist and the policy analyst to answer strategic questions that support evidence-based decision making on critical economic, workforce, social, and policy issues. Collectively, our team has over 30 years of experience assisting public, private, and nonprofit organizations with research, technical assistance, and analytical services designed to help make our state, region, and communities better places to live, work, and do business.

We specialize in projects that contribute to economic development, workforce development, public health, and community-building. Springline's foundation is built on our experience conducting research in an academic setting, thus rigorous and replicable methods, transparency, objectivity, and the presentation of clear and actionable results are the ethos of our company. Ultimately, we are a data-driven research team focused on providing clients the information and tools they need to make decisions, set goals, monitor progress, and solve problems.

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Executive Summary

Norwood Hospital conducts a Community Health Needs Assessment (CHNA) every three years that identifies the key health issues and unmet community needs in its service area. The 2021 CHNA represents a collaborative community-wide approach that incorporates socioeconomic and health data along with community input to identify the region's top health priorities. The overarching goal of this effort is to inform data-driven goals, objectives, and strategies that can be implemented by Norwood Hospital to improve the health of residents, particularly among the region's most vulnerable at-risk populations.

Key Findings

Health 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. The communities in Norwood Hospital's Service Area generally exhibit better socioeconomic outcomes in comparison to the state as a whole, including relatively low poverty levels, higher educational attainment, and lower unemployment; only one of its twenty-one communities have a median income below the Massachusetts median (Attleboro). With relatively high-income levels, it is not unexpected that the service area as a whole exhibits low levels of poverty in comparison to the state average (5.0% and 10.3% respectively). Poverty rates are highest in Attleboro (8.6%) and North Attleborough (8.3%), although these rates are still below the statewide average. Overall, Norwood Hospital's Service Area has a highly educated population; sixteen of the area's twenty-one communities exceed the state average in terms of adults 25 years of age and older with at least a Bachelor's degree or higher.

Despite positive socioeconomic metrics as a whole, some neighborhoods in Norwood Hospital's Service Area have relatively high poverty levels and low educational attainment. A key theme that arose from the qualitative activities undertaken in this effort is that despite the area's relative affluence, some residents struggle with a myriad of challenges that make it difficult to maintain overall health and to adopt healthy habits that help to prevent or manage disease. For some 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. Improving the health outcomes of these individuals and families requires that Norwood Hospital and local providers focus efforts where they are needed most and develop strategies and goals that address socioeconomic conditions.

Priority Health Issues

Residents and service providers remain concerned about many of the same health priority areas identified in the 2018 CHNA, including behavioral health, chronic disease and prevention, and housing. In addition to these longstanding issues, the effects of the COVID-19 pandemic have exposed the degree to which many individuals and households struggle to obtain basic necessities, as evidenced by housing and food insecurity becoming much more prominent issues since the 2018 assessment. Access to services is also a top concern among community leaders, and accessibility and equity issues were mentioned in nearly every key informant interview. Accordingly, four priority health issues were identified from our analysis (see Table 1).

Table 1
Priority Health Issues

Priority Issue	Sub-Categories
Behavioral Health	Mental Health, Substance Use Disorder
Wellness & Chronic Disease	Unhealthy Behaviors, Health Conditions, Health Outcomes, Food Insecurity, Nutrition
Housing	Affordability, Stability, Homelessness
Health Access	Underserved Populations, Obstacles to Care, Health Literacy

Priority Issue 1: Behavioral Health

Throughout this project, mental health and substance use disorder emerged as the two most prominent behavioral health issues. Stakeholders clearly articulated that mental health is the most pressing health issue in the service area overall, particularly as the effects of COVID-19 on mental health are becoming more evident; 93% of respondents to the key informant survey report that mental and behavioral health issues are a concern in the area, followed by alcohol use disorder (92%) and opioid use disorder (82%). Key findings include:

- Nearly all key informants identified the acute shortage of mental health professionals as a major challenge, particularly the need for outpatient mental health workers. The shortage of mental health clinicians has created long waitlists or deterred people from seeking treatment.
- The shortage of mental health workers is compounded by providers shifting away from working with MassHealth patients to working with patients with private insurance or who are willing to pay cash. Part of the problem, providers argue, is that "reimbursement rates are poor for many services, but especially mental health services. Providers would just rather go with private pay patients because it is more lucrative."

"Mental health issues are on the rise and it doesn't discriminate. Mental health issues are affecting people from all economic backgrounds." – Key Informant

- The broader mental health system can be a roadblock for patients who are willing to enter treatment, but cannot do so because beds are not available. This issue is particularly troublesome for patients with acute mental health disorders who are best served by a "warm handoff." The ongoing shortage has led to a behavioral health boarding crisis where patients wait in emergency departments for beds to open or do not seek help at all.
- Key informants note that mental health issues among youth are growing exponentially, which is compounded by the shortage of mental health workers and outpatient beds for adolescents. "This problem of is not going away and the pandemic has made it worse. Youth anxiety is off the charts." A key informant noted that many youth are dealing with mental health issues by turning to marijuana, particularly through vaping.
- Some community members also noted a systemic issue with how mental health issues are covered or not covered by health insurance, with one community member noting that there is a "systemic separation between physical and mental health care, when they should be treated the same."

"I see a huge increase in mental health issues and long waitlists for mental health providers. Mental health issues will continue to increase, while it doesn't seem like the number of clinicians can be expanded to meet the demand."– Key Informant

- Stakeholders commented that providers outside the mental health system are often not properly trained to counsel patients or refer them to treatment services, such as primary care physicians, who are often the gatekeepers for referrals to mental health treatment. As one key informant noted, "I'd like to see more health care providers and primary care doctors trained in mental health, especially in identifying mental health issues with their patients. PCPs shouldn't miss an opportunity to talk about mental health issues when their patients are in the office, regardless of the reason for the visit."

Priority Issue 2: Wellness and Chronic Disease

While health outcomes for much of the Norwood Hospital Service Area are on par with or better than the Massachusetts and U.S. averages, there are Census tracts in the region that have poorer outcomes. Higher disease prevalence in these tracts coincides with areas that have the highest levels of vulnerable populations (as defined by low-income and low educational levels). However, wellness and chronic disease is also a high priority issue for residents with higher levels of income and education, although their needs are generally focused on access to services, such as transportation (e.g., getting to appointments) and the availability of specialist health services within a short drive. Key findings include:

"Many of the health problems I see are a result of people not taking care of themselves. The pandemic has only made that worse, many times worse." – Key Informant

- In the communities for which data are available, self-reported smoking prevalence ranges from a high of 17.2% in Attleboro to a low of 9.2% in Needham. This compares to 12.0% in Massachusetts and 16.0% nationwide. However, Smoking prevalence in the majority of the service area's Census tracts are similar or below the statewide prevalence.
- High percentages of adults in many areas of Norwood Hospital's service area are not physically active. Among communities with available data, lack of physical activity ranges from a high of 29.1% in Attleboro to a low of 21.9% in Needham. This compares to 26.4% statewide and 26.3% nationally.

"Even though programs exist to assist with food insecurity, reaching those in need can be more difficult outside of walkable urban areas or regions with limited public transportation."– Key Informant

- Among communities with available data, self-reported obesity prevalence ranges from a high of 30.5% in Attleboro to a low of 20.4% in Needham, which compares to 25.2% statewide and 32.4% nationally. Most Census tracts in the service area have obesity prevalence rates that are similar or below the statewide prevalence.
- In the Norwood Hospital Service Area, 31,904 residents received Supplemental Nutrition Assistance Program (SNAP) benefits in August 2021, which is an increase of 41.9% from February 2020 (pre-pandemic). The number of SNAP recipients increased by 17.8% in just two months from before the pandemic (February 2020) to the time when many of the COVID-19 related restrictions were in place in April 2020.
- Despite the significant number of residents utilizing SNAP, it is estimated that 30,747 residents in the service area are likely eligible for SNAP benefits but are not enrolled.
- Stakeholders reiterated that nutrition is a key prevention mechanism to addressing many of the region's comparatively poor chronic health outcomes. Moreover, they cautioned that the community lacks a significant level of nutrition-focused education necessary to raise awareness of nutrition-related health outcomes as well as how to maintain a healthy diet and lifestyle.

"Even in the best of times we spend a lot of time connecting seniors to various services, especially when it comes to providing meals. The pandemic showed us just how isolated some seniors are, even those that live in our neighborhoods. – Key Informant

PRIORITY ISSUE 3: HOUSING AFFORDABILITY, STABILITY, AND HOMELESSNESS

The community survey and stakeholder interviews clearly indicate that housing is a top issue of concern in the region. Nearly every person interviewed for this report spoke at length about urgent housing challenges and ways in which housing affects other basic needs, including the ways in which a lack of affordable housing contributes to housing instability and homelessness, both of which are strong predictors of health outcomes. Overall, stakeholders are clear that housing challenges have been made worse by COVID-19, although the pandemic primarily intensified existing housing issues. Key findings include:

- The housing issue in the Norwood Hospital Service Area is primarily two-pronged; the focus in many of the area's larger communities is on rising rents and its effect on the working poor and seniors. Conversely, the issue in many of the area's more affluent and suburban communities is focused on the significant increase in single-family home prices. This dynamic is creating issues for seniors who want to remain in their homes but who are "house rich, cash poor," meaning that they have more equity locked in their home than cash assets.
- The Norwood Hospital Service Area is primarily a homeowner market; 76% of the service area's households are owner-occupied, which compares to 62% of households statewide. Norwood is the only community in which the percentage of renter-occupied households is higher than the state average (43% versus 39%).
- Among owner-occupied households, only five communities in the Norwood Hospital Service Area have median monthly housing costs below the state median $2,225 (Attleboro, North Attleborough, Norwood, Norton, and Stoughton).

"You might think it's a good thing when you own your home and home prices continue to rise, but that just means your property tax bill gets higher too. It puts a lot of pressure on seniors to consider selling, even though they'd rather stay where they are."– Survey Respondent

- Median monthly housing costs for renter-occupied households ranges from a low of $1,044 in North Attleborough to $2,181 in Dover, with only 7 of the service area's twenty-one communities having a median monthly housing cost for renter-occupied households below the state median of $1,282.
- More than a quarter (25.9%) of owner-occupied households and 49% of renter-occupied households in the Norwood Hospital Service Area were housing cost burdened in 2019.
- Rising home prices are also a roadblock for current renters who would like to purchase homes in the area but cannot afford to do so. Many homeowners are also concerned that their children will not be able to afford to live in the area.
- Key informants suggest that rising rent and home prices drive people out of the area and that this "churn" is a threat to maintaining a balanced demographic and socioeconomic population mix.
- While many seniors are looking to sell their homes and downsize, there are not many options in the region. Having to move out-of-region or to more remote areas impacts access to care for seniors, since moving further away from hospitals and care facilities can be difficult for those without transportation.
- Key informants identified homelessness as an issue in certain areas of the region, including Norwood, which is partly the result of a shortage of affordable housing. Mental health and substance abuse issues, which are highly prevalent among the homeless population, are also key factors in the homelessness equation.

"Families who are renting want to stay in the region, especially for the quality of the schools and the general quality of life, but often they just can't afford to purchase a home. Their frustration leads them to leave the region for cheaper housing." - Survey Respondent

PRIORITY AREA 4: HEALTH CARE ACCESS

Regular access to health services is essential in managing health conditions, preventing new conditions from arising, and promoting and maintaining overall good health. This includes access to a wide variety of health services such as preventive care, mental health services, and emergency services. Access to care is a top concern among community leaders, and accessibility and equity issues were mentioned in nearly every key informant interview. Stakeholders were clear that equity and access issues prevalent in the health care system increased due to the pandemic. As one community leader explained, "COVID shed light on disparities we already knew existed." Key findings include:

"Many of the clients I serve come from countries that essentially have no health care system as we know it. Our system is difficult for even those who know the ropes." – Key Informant

- Respondents to the key informant survey identified persons with mental or behavioral health issues (47%), Limited English Proficient individuals (30%), and elders (30%) as the three most underserved populations in the region.
- As part of the key informant survey, respondents were asked to rank the obstacles that might prevent individuals from obtaining health services. The top obstacle reported by respondents is transportation issues (88% more of an obstacle), followed by the expense of medication (85% more of an obstacle), and insurance issues (83% more of an obstacle).
- Transportation remains an area of concern, particularly the availability of transportation services to get patients to and from appointments. While some organizations such as the various Councils on Aging offer ride services, there are still gaps in the transportation equation, leaving some unable to conveniently access care facilities.
- Telehealth is one alternative that can address transportation issues, although telehealth presents challenges for individuals with difficulty accessing or using technology. In addition, routine screenings and other procedures obviously cannot be done remotely.
- As a result of the growing diversity in the region, some service providers highlighted the need to better adapt to the needs of different populations, especially in providing information and care in languages other than English. Stakeholders note that providing culturally competent care will result in more people seeking care when they need it and the care itself will be more effective.

"I love where I live, but it isn't close to anything and I try not to drive if I can help it. It's often a struggle for me to find rides to appointments and I don't like to keep asking family members to drive me." – Survey Respondent

- While most all residents in the service area have health insurance, key informants note that a more concerning issue is the cost of insurance (including medication, and copays) and the types of services covered. "Not all insurance is created equal," one stakeholder remarked.
- Navigating the system can be difficult even for those who have health insurance and can afford the premiums, copays, and medication. Even accessing basic health services can be difficult for someone who does not speak English or who has little experience accessing the health system.
- Stakeholders emphasized the need for more health education among all groups, highlighting two central pieces to the health education equation: learning how to be healthy in general (e.g., diet, exercise, preventative services) and knowing the resources that are available to achieve those goals (including enrolling for basic insurance).

1 Overview

Steward Health Care is the largest physician-owned private for-profit health care network in the United States. Its system operates 39 community hospitals across nine states and 5 internationally, serving over 800 communities with 5,500 providers and 43,000 health care professionals caring for 12.3 million patients annually. Norwood Hospital, part of the Steward network, was founded in 1919 and at one time was a full-service, 215-bed acute care community hospital located in Norwood, Massachusetts. The hospital's major clinical services included advanced surgical services, obstetrics, cardiology, neurology, orthopedics, gastroenterology, behavioral health, cancer care, and pediatrics.

Norwood Hospital, including its Emergency Department, temporarily closed on June 28, 2020 due to excessive water damage from severe storms that inundated parts of the facility and caused widespread damage. The hospital continues to offer services to the community at its existing satellites located in Foxboro and Norwood. The hospital plans to demolish the existing outpatient structure and rebuild in the same location. Construction will begin in 2022.

In accordance with the Massachusetts Attorney General's Community Benefits Guidelines, Norwood Hospital conducts a Community Health Needs Assessment (CHNA) every three years that identifies the key health issues and unmet community needs in its service region, particularly among the region's most vulnerable populations. The overarching goal of this effort is to inform data-driven goals, objectives, and strategies that can be implemented by Norwood Hospital to improve the health of the people it serves.

The 2021 CHNA represents a collaborative community-wide approach that incorporates socioeconomic and health data along with community input to identify the region's top health priorities (see Figure 1). The major components of this analysis include:

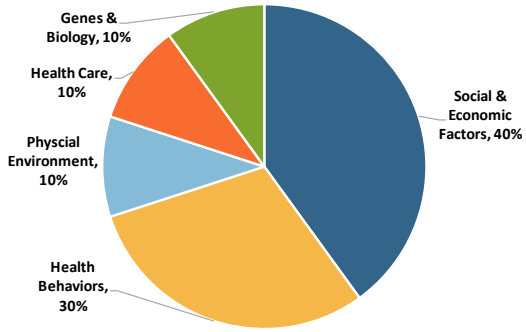
- **Socioeconomic Profile:** Understanding the community by describing its residents in terms of population, age, gender, and other demographic indicators. The analysis strives, where possible, to present these data in the context of social determinants of health by highlighting disparities in terms of income, education, and race, all of which are factors that affect health outcomes.
- **Health Data Assessment:** Identifying major health issues and needs by presenting a variety of health indicators from sources such as the Massachusetts Department of Public Health, U.S. Centers for Disease Control and Prevention, and Norwood Hospital.
- **Qualitative Activities:** Engaging key informants and community members through surveys, interviews, and focus groups to add context to the health data and refine our understanding of the region's primary health issues and challenges.

Figure 1
Identifying the Health Priority Issues Includes Five Main Components

Utilizing a Social Determinants of Health Framework

Social determinants of health, which can be 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,"[1] are responsible for most health inequities (see Figure 2). For example, socioeconomic factors such as income, education, race, and housing are the best predictors of health status and health equity. Accordingly, addressing the social determinants of health is a crucial approach to achieving health equity. In order to focus its efforts where they are needed most, it is essential that Norwood Hospital and its partners examine health outcomes through a socioeconomic framework and identify and focus on populations and neighborhoods with negative socioeconomic factors (see Figure 3).[2]

Figure 2
Social Determinants of Health Influence Health Outcomes the Most



Source: University of Wisconsin Public Health Institute's County Health Rankings Model

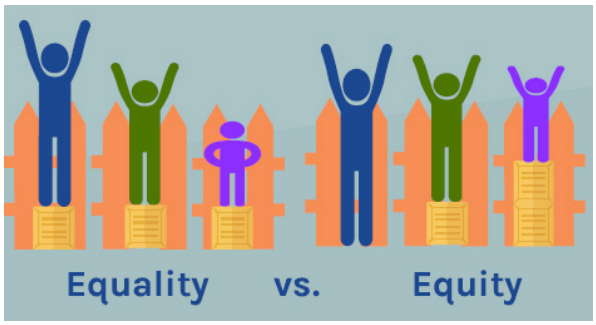
Figure 3
Social Determinants of Health

Source: Healthy People 2030

Adopting a Health Equity Lens

Health equity can be defined in many ways, but is essentially a condition in which all people have the opportunity to be as healthy as possible and that no one is "disadvantaged from achieving this potential because of their social position or other socially determined circumstance."[3] Importantly, equity is not the same as equality. To equalize opportunities, those with worse health and fewer resources need more efforts expended to improve their health (see Figure 4). That is, while understanding the impact of social determinants of health within a community, it is also crucial to understand how underserved populations are disproportionately affected by social determinants.

Figure 4
Equality Versus Equity



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

[2] Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved [date graphic was accessed], from https://health.gov/healthypeople/objectives-and-data/social-determinants-health.

[3] Braveman, P.A., *Monitoring equity in health and health care: a conceptual framework*. Journal of health, population, and nutrition, 2003.

Conducting a Community Health Needs Assessment During the COVID-19 Pandemic

While the COVID-19 pandemic has obvious health consequences for people infected with the virus, first responders, and other front-line workers, social distancing mandates and the subsequent economic fallout placed extreme burdens on our most economically vulnerable populations in acute ways that most could not predict. Across the country, the COVID-19 pandemic exposed and exacerbated racial and ethnic disparities as they relate to access, health, and economic well-being. The issue is addressed by the Massachusetts Attorney General's Office in its health equity assessment report, which notes that "In general, residents of color are less healthy and die younger than white residents" and that "These disparities are long-lasting and pervasive." The report concludes that COVID-19 has further exacerbated these inequities.[4]

Members of these communities are more likely to have low-income levels, to suffer from food insecurity, to be housing-cost burdened, and are often unable to meet the day-to-day financial needs of their families. Consequently, this report, to the degree possible, explores the effects of COVID-19 in each of the priority health issues in terms of health and socioeconomic background.

Methods

Socioeconomic Profile

Socioeconomic data are derived from several sources. Where available, confidence intervals are included to address the levels of sampling error. The demographic profile in Section 2 and the social determinants of health in Section 3 rely heavily on data from the U.S. Census Bureau's American Community Survey five-year estimates. In order to produce estimates that are accurate for smaller geographies, the Census Bureau pools five years' worth of survey data. When these estimates are discussed in the text, they are referred to in terms of the last year of the five-year period, for example, the period 2015-2019 is referred to as 2019.

Health Data

Health data from national, state, and local sources are presented throughout this report and the authors made every effort to ensure that the data presented is the latest available. However, due to data lag, the most recent years for many of the health indicators represent 2018 or 2019 data. In addition, many of these data are only available for the service area's larger communities.

Comparing results based on social determinants of health categories such as race and income is not possible for many health indicators because the data are only reported for the population as a whole. Also, the available data may underrepresent certain populations. This is particularly true for underserved populations such as the homeless, veterans, LGBTQ+ persons, and those with disabilities. In these cases, the data are supplemented to the degree possible with information gathered through the key informant interviews and surveys. Also, some of the health data are survey-based and respondents can often underreport, overreport, or simply not recall certain experiences when responding to questions.

Focus Groups

One methodological consequence of the pandemic is the difficulty in hosting in-person focus groups. While virtual meetings were popular alternatives throughout the pandemic, we discovered early on in this project that many community members were experiencing "Zoom overload" as the pandemic lingered and the Delta variant began to take hold. In addition, many community members, particularly those in low-income target groups, did not have access to technology or the will to be part of an online focus group. To overcome this issue, we conducted key informant interviews with stakeholders who represent many of these groups.

[4] Wolitzsky, Sandra et al. 2020. *Toward Racial Justice and Equity in Health: A Call to Action.* Massachusetts Office of the Attorney General. Boston, MA.

KEY INFORMANT SURVEY

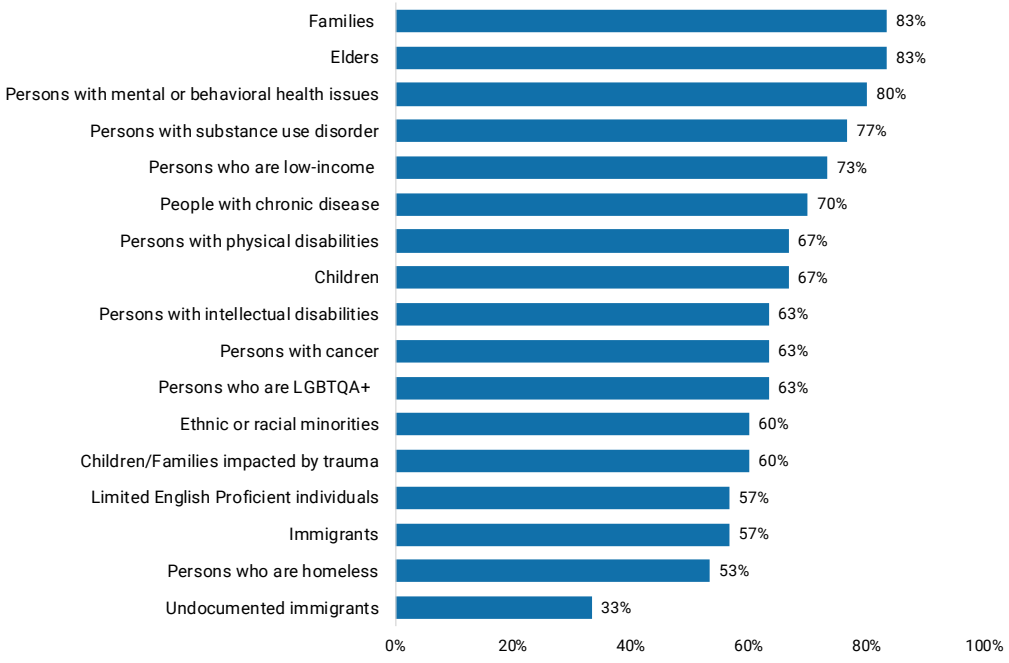
A key informant survey was administered online to further identify and understand the region's primary health issues and challenges.[5] A total of 30 surveys were completed. The majority of respondents work for either government (45.2%) or a health care provider (32.3%) (see Table 2).[6] The communities of people these organizations serve are wide-ranging (see Figure 5).[7]

Table 2
Key Informant Survey Respondent Type

Type of Organization	Percent
Non-profit/social service agency	19.4%
Health care provider	32.3%
Government	45.2%
Private/Business Community	3.2%

Source: Norwood Hospital Key Informant Survey, 2021

Figure 5
Communities that Key Stakeholders Serve



Source: Norwood Hospital Key Informant Survey, 2021

[5] The survey questionnaire is included in Appendix A.

[6] The majority of the respondents that represent government are from local boards of health, Councils on Aging, and public schools.

[7] "Other" includes businesses, children/families impacted by trauma, survivors of sexual assault, and faith-based congregations.

Community Survey

Through its patient relationship management system, social media, and local media outlets, Norwood Hospital shared a survey with community members to assess how they engage with health care, their perceptions of the health of their community, the health issues that most concern them, and obstacles they have encountered in receiving care. Although this survey was completed by 207 residents, a profile of the respondents indicates that the results are not representative of the region, and therefore major conclusions were not drawn from the results. However, it is referenced at times in this report to further contextualize trends observed in other aspects of the qualitative analysis.[8]

Key Informant Interviews

Fourteen in-depth interviews with key informants were conducted to further understand the challenges and opportunities that residents face. The interviews represent a cross-section of areas, including elder care, behavioral health, food insecurity, health access, youth, trauma, housing, and transportation.

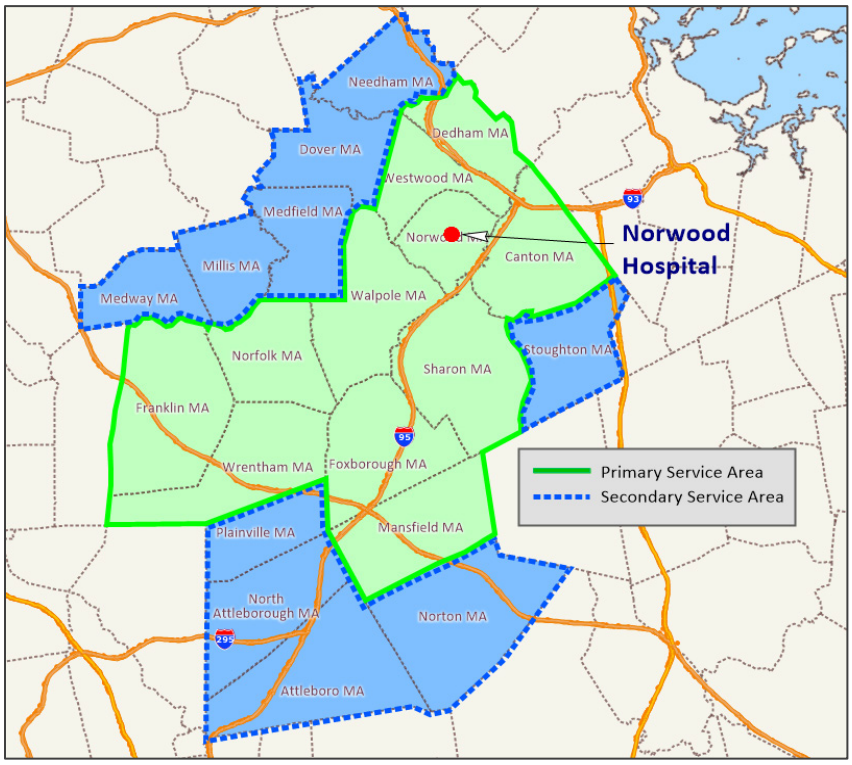
[8] For example, more than three-quarters (79%) of the respondents were female, 90.9 percent were white, and the majority possess a Bachelor's degree or higher. The community survey questionnaire is included in Appendix B.

2 Overview of Norwood Hospital Service Area

Norwood Hospital is located less than 30 miles from the center of Boston in the town off Norwood, Massachusetts. In total, there are 21 cities and towns in the Hospital's service area spanning from Attleboro in the south to Needham in the north. Of the 21 municipalities in the region, 11 are in the primary service area (PSA) and 10 are in the secondary service area (SSA) (see Figure 6).[9]

The region spans two counties–Norfolk (17 communities) and Bristol (4 communities)–and six Community Health Network Areas.[10] In Fiscal Year 2019, the last full fiscal year prior to Norwood Hospital's catastrophic weather event that caused flooding, the Hospital provided services to 126,497 patients. The majority of the Hospital's patients resided in Norwood, followed by Walpole, Canton, Foxborough, Wrentham and Sharon.

Figure 6
Norwood Hospital Service Area



Source: Springline Research Group

[9] The primary/secondary service area designations coincide with the geographic definition used in the 2018 CHNA, with the addition of Needham and Plainville.

[10] A Community Health Network is a local coalition of public, non-profit, and private sectors working together to build healthier communities in Massachusetts through community-based prevention planning and health promotion.

POPULATION

There are 450,259 residents living in the Norwood Hospital Service Area, with 242,148 residing in the primary service area and 208,111 residing in the secondary service area. The area's population increased by 7.5% from 2010 to 2020, which compares to 7.4% population growth statewide. Plainville (20.3%) and Canton (13.0%) experienced the largest percentage population gains over this period, while Needham (+3,205) and Norwood (+3,009) added the most residents (see Table 3).

Table 3
Population Summary by Community

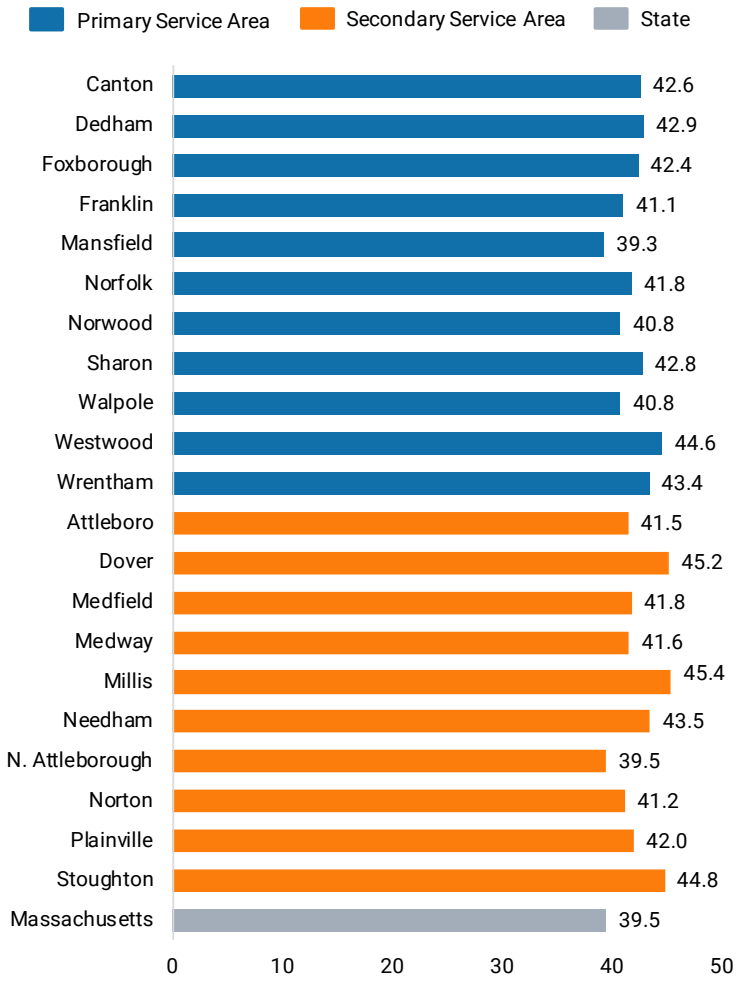
Municipality	Decennial 2010	Decennial 2020	# Change 2010-2020	% Change 2010-2020
Primary Service Area:				
Canton	21,561	24,370	2,809	13.0%
Dedham	24,729	25,364	635	2.6%
Foxborough	16,865	18,618	1,753	10.4%
Franklin	31,635	33,261	1,626	5.1%
Mansfield	23,184	23,860	676	2.9%
Norfolk	11,227	11,662	435	3.9%
Norwood	28,602	31,611	3,009	10.5%
Sharon	17,612	18,575	963	5.5%
Walpole	24,070	26,383	2,313	9.6%
Westwood	14,618	16,266	1,648	11.3%
Wrentham	10,955	12,178	1,223	11.2%
Secondary Service Area:				
Attleboro	43,593	46,461	2,868	6.6%
Dover	5,589	5,923	334	6.0%
Medfield	12,024	12,799	775	6.4%
Medway	12,752	13,115	363	2.8%
Millis	7,891	8,460	569	7.2%
Needham	28,886	32,091	3,205	11.1%
N. Attleborough	28,712	30,834	2,122	7.4%
Norton	19,031	19,202	171	0.9%
Plainville	8,264	9,945	1,681	20.3%
Stoughton	26,962	29,281	2,319	8.6%
Total Primary	**225,058**	**242,148**	**17,090**	**7.6%**
Total Secondary	**193,704**	**208,111**	**14,407**	**7.4%**
Total Service Area	**418,762**	**450,259**	**31,497**	**7.5%**
Massachusetts	**6,547,629**	**7,029,917**	**482,288**	**7.4%**

Source: US Census Bureau, Decennial Census

Median Age

With the exception of Mansfield and North Attleborough, the median age in each community is above the Massachusetts median of 39.5 years. Median age ranged from a low of 39.3 years in Mansfield to a high of 45.4 years in Millis (see Figure 7). Between 2014 and 2019, the median age increased in thirteen of the region's twenty-one communities, with the towns of Millis (+3.1 years) and Franklin (+2.5 years) experiencing the greatest increase.

Figure 7
Median Age by Community, 2019



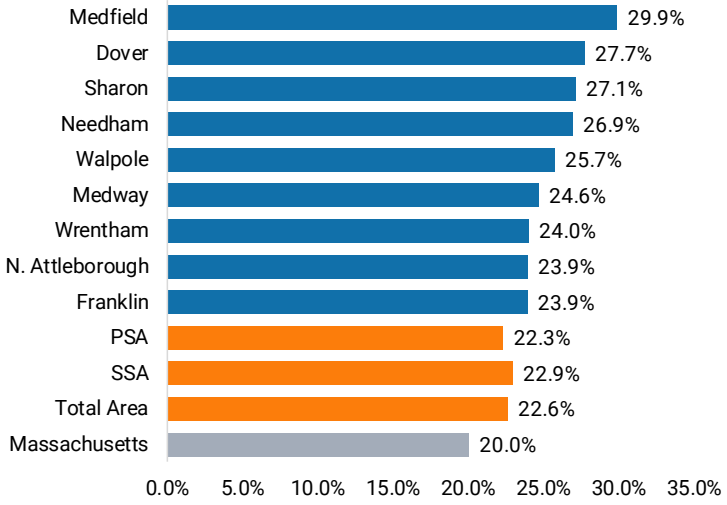
Source: American Community Survey 5-Year estimates, 2015–2019 Table DP05[11]

[11] Median cannot be calculated for the service region areas.

VULNERABLE AGE GROUPS

Individuals under the age of 18 and those above the age of 65 have unique health needs. For older residents, the ways in which health care systems manage chronic conditions such as cancer, dementia, falls, obesity, and diabetes are particularly important. The percentage of the population under the age of 18 in Norwood Hospital's Service Area is higher than the state (22.6% versus 20.0% respectively). The under 18 population ranges from a low of 17.6% in Westwood to a high of 29.9% in Medfield and is slightly higher in the secondary service area (SSA) in comparison to the primary service area (PSA) (see Figure 8).

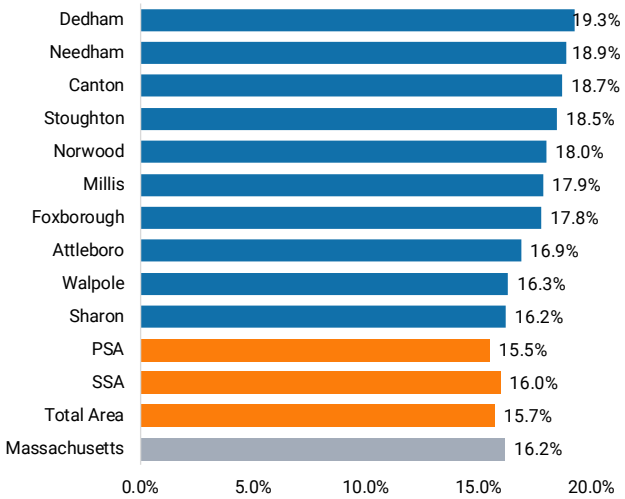
Figure 8
Population Under the Age of Eighteen, 2019



Source: American Community Survey 5-Year estimates, 2015–2019 Table DP05
Figure includes only those communities whose percentage equals or exceeds that of Norwood Hospital's Service Area

The population age 65 and older in Norwood Hospital's Service Area is lower than the 65 and older population statewide (15.7% versus 16.2% respectively). The population 65 years of age and older ranges from a low of 10.4% in Westwood to a high of 19.3% in Dedham and is slightly higher in the secondary service area (SSA) in comparison to the primary service area (PSA). (see Figure 9).

Figure 9
Population Age 65 and Older, 2019



Source: American Community Survey 5-Year estimates, 2015–2019 Table DP05
Figure includes only those communities whose percentage equals or exceeds that of Norwood Hospital's Service Area

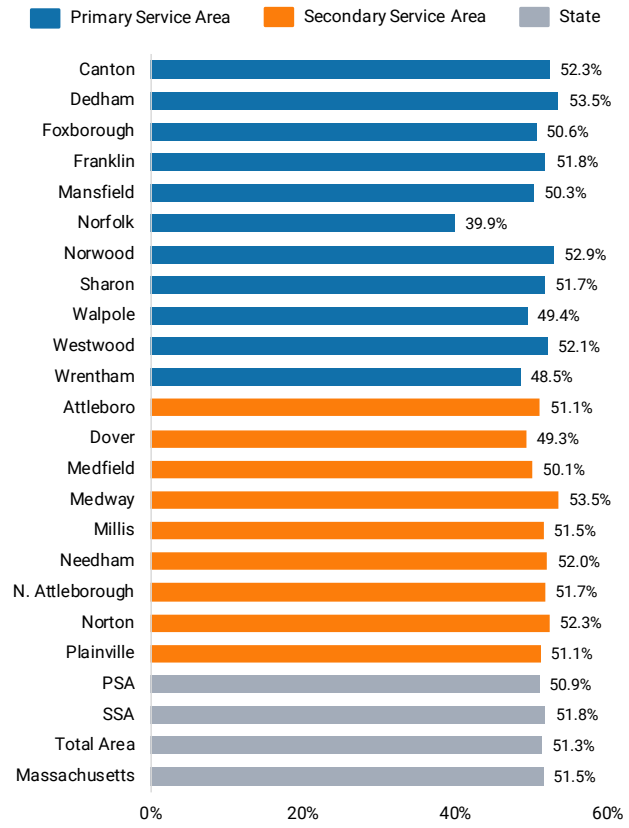
Percentage of the Population Female

Women play an essential role in maintaining family health, and are more likely than men to access the health care system 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.[12]

Women were also more likely to bear the brunt of the social and economic consequences of the pandemic in comparison to men, particularly since they are more likely to be employed in the types of lower wage occupations that experienced higher levels of layoffs during the economic shutdown. Women are also more likely than men to work in frontline positions that have few options for remote work (e.g., nurses, teachers, home health aides). The availability of childcare also became scarcer during the economic shutdown and many working mothers–particularly frontline workers–were forced to stay home to care for their children.[13]

The percentage of the female population across the Norwood Hospital Service Area is similar to the state as a whole; women account for 51.3% percent of the population in the service area, compared with 51.5% of the population statewide. Only in the towns of Norfolk, Walpole, and Dover do women make up less than half of the total population (see Figure 10).

Figure 10
Percentage of the Population Female, 2019



Source: American Community Survey 5-Year estimates, 2015–2019 Table DP05

[12] 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.

[13] It is estimated that one out of four women who reported becoming unemployed during the pandemic reported that it was due to childcare. See: Modestino, Alicia Sasser. "Coronavirus child-care crisis will set women back a generation." Washingtonpost.com, July 29, 2020, https://www.washingtonpost.com/us-policy/2020/07/29/childcare-remote-learning-women-employment/. Accessed October 1, 2021.

3 Examining the Social Determinants of Health in the Norwood Region

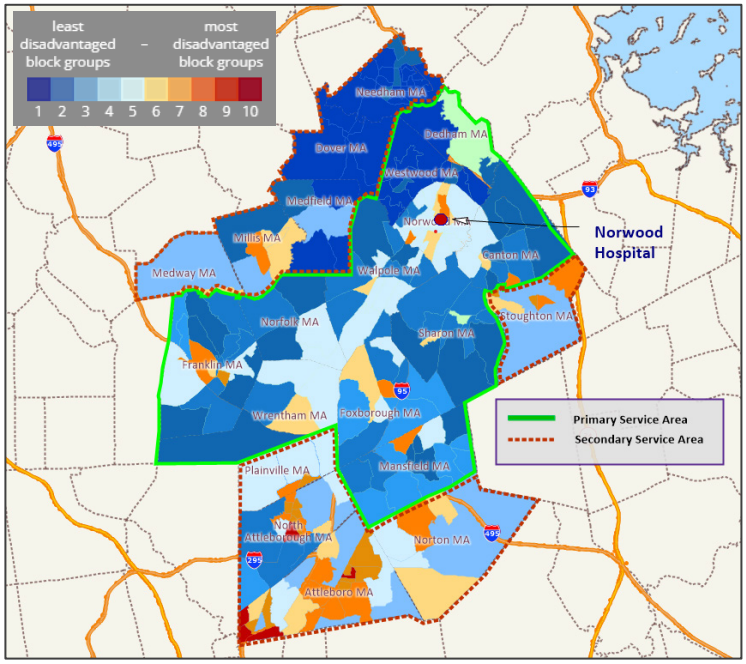
The communities in Norwood Hospital's Service Area generally exhibit better socioeconomic outcomes in comparison to the state as a whole, including relatively low poverty levels, higher educational attainment, and lower unemployment. However, there are pockets within the area that struggle with these issues. This section highlights socioeconomic disparities among communities, including income, education, and race, all of which are strong predictors of health status and health equity. Notably, while most of the secondary data presented in this section were collected prior to the pandemic, key informants and survey respondents make it clear that COVID-19 has intensified the economic instability that afflicts many of the area's individuals and families.

Poverty Tends to Be Concentrated in Specific Neighborhoods

Poverty is a key social determinant of health and is interconnected with most other social determinants that affect a person's economic stability. Poverty and its interconnected conditions tend to be concentrated in specific neighborhoods. As noted by the Opportunity Atlas, while neighborhood is not destiny, the place where one grows up has a profound effect on future economic stability and, in turn, health outcomes.[14] Consequently, addressing health outcomes in the Norwood Hospital Service Area means addressing the social determinants of health that are pervasive in these areas.

Figure 11 maps the Area Deprivation Index (ADI) in the Norwood region, a measure of socioeconomic disadvantage used to inform health policy, including factors such as income, employment, education, and housing. Areas in blue represent the least disadvantaged Census block groups, while those in red are most disadvantaged. While much of the service area ranks in the least disadvantaged categories, there are Census blocks throughout the area that have ADI scores at seven and above, particularly in Attleboro and North Attleborough. Notably, Norwood Hospital is located amidst several block groups that score six through eight on the ADI index.

Figure 11
Area Deprivation Index by Census Block Group



Source: American Community Survey 5-Year estimates, 2015–2019 Estimates
Mapped from Neighborhood Atlas Data, University of Wisconsin[15]

[14] See https://www.opportunityatlas.org/. ADI scores for Massachusetts as a whole are ranked from lowest to highest and then divided into deciles (1-10).

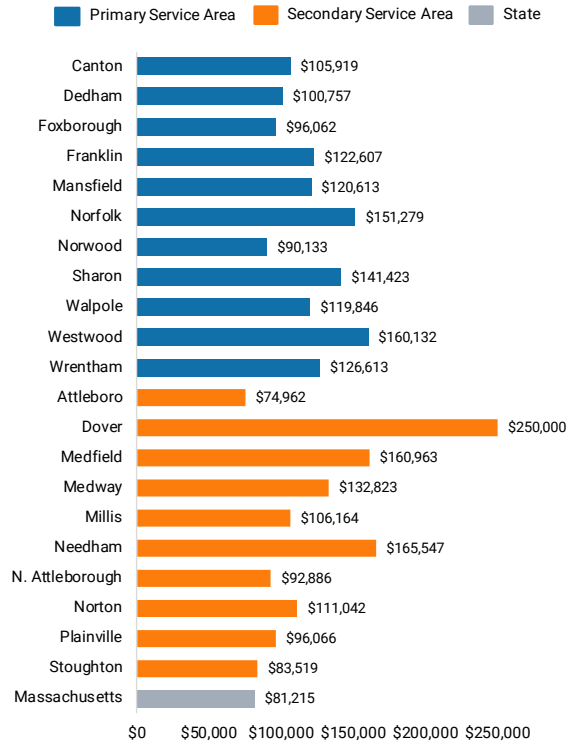
[15] https://www.neighborhoodatlas.medicine.wisc.edu

Income Levels are Generally Well Above State Averages, While Poverty Levels are Low

Median Household Income

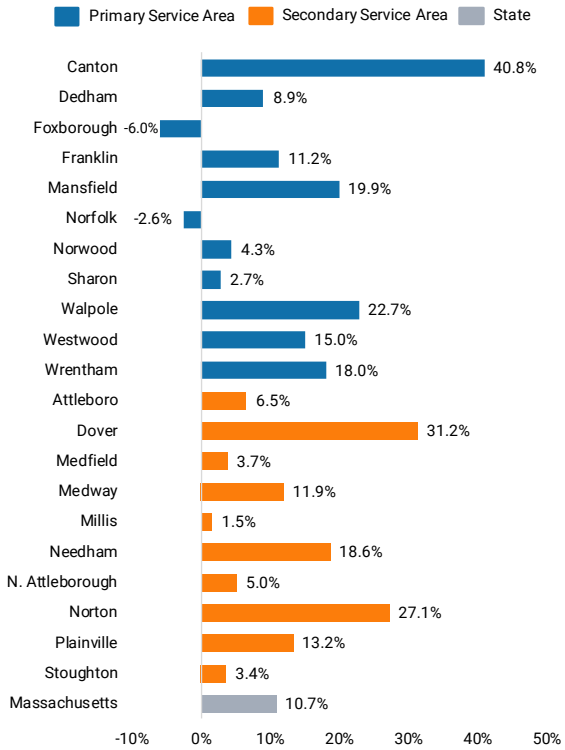
Norwood Hospital's Service Area is relatively affluent compared to the state, with only one of its twenty-one communities having a median income below the Massachusetts median (Attleboro). Dover ($250,000), Needham ($165,547), and Westwood ($160,132) have the highest median incomes in the service area (see Figure 12). Inflation-adjusted median incomes increased in all communities from 2014 to 2019 except for Foxborough (-6.0%) and Norfolk (-2.6%). Median incomes increased most in Canton (+40.8%), Dover (+31.2%), Norton (27.1%), and Walpole (+22.7%) (see Figure 13).

Figure 12
Median Household Income by Community, 2019[16]



Source: ACS 5-Year Estimates, Table S1903, 2015–2019, Inflation adjusted to 2019

Figure 13
Inflation-Adjusted Median Household Income by Community, 2014–2019



Source: ACS 5-Year Estimates, Table S1903, 2007–2011 & 2015–2019, Inflation adjusted to 2019

[16] It is not possible to calculate a median household income for the Primary and Secondary Service Areas without raw data for every household in the region.

POVERTY

With relatively high-income levels, it is not unexpected that the service area as a whole exhibits low levels of poverty in comparison to the state average (5.0% and 10.3% respectively). The poverty rate for individuals is lowest in Dover (0.9%), followed by Norfolk (1.1%), Millis (1.5%), and Sharon (1.5%). Poverty rates are highest in Attleboro (8.6%) and North Attleborough (8.3%), although these rates are below the statewide average (see Figure 14). Notably, while the COVID-19 stimulus payments were helpful in assisting people to weather the storm during the pandemic, the long-term effect of these payments on poverty levels is likely minimal.[17]

Poverty rates for families living in the service area are also below the Massachusetts average (3.4% and 7.0% respectively). The family poverty rate is lowest in Dover (0.0%), followed by Millis (0.5%) and Norfolk (0.5%). Family poverty rates are highest in Norwood (6.5%) and North Attleborough (6.5%), although these rates are below the statewide average (see Figure 15).

Figure 14
Share of the Population Living Below the Poverty Level, 2019

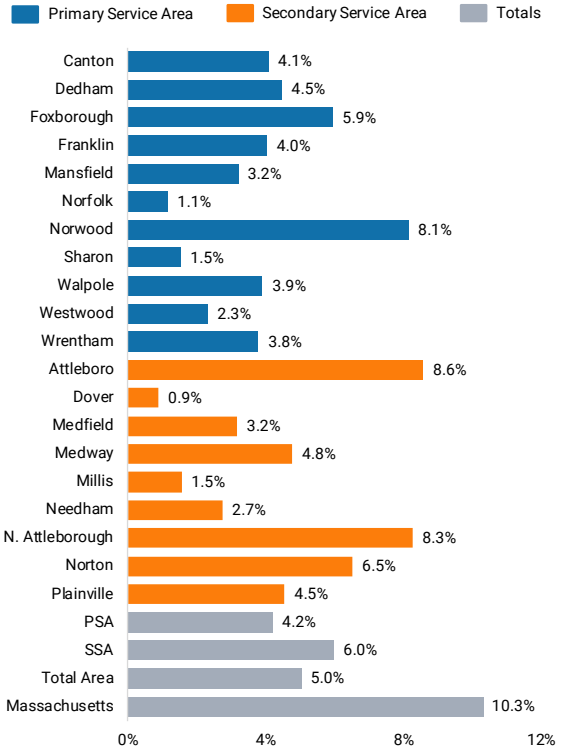
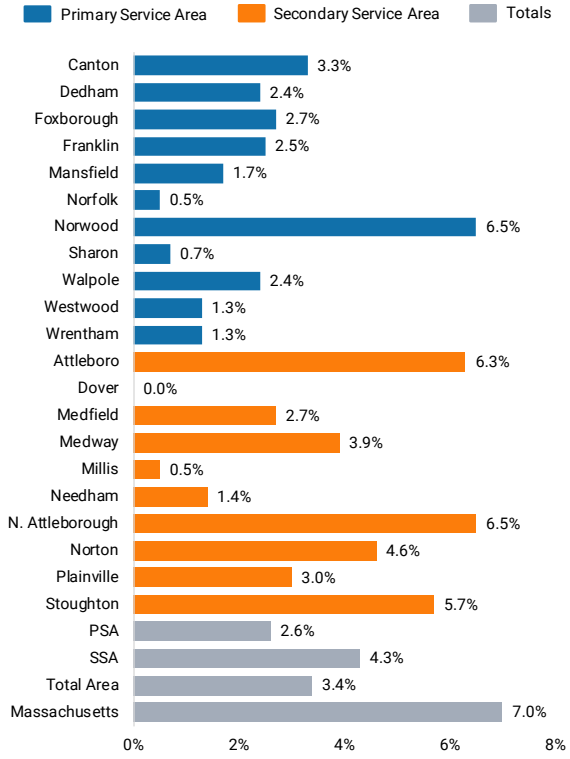


Figure 15
Share of Families Living Below the Poverty Level, 2019



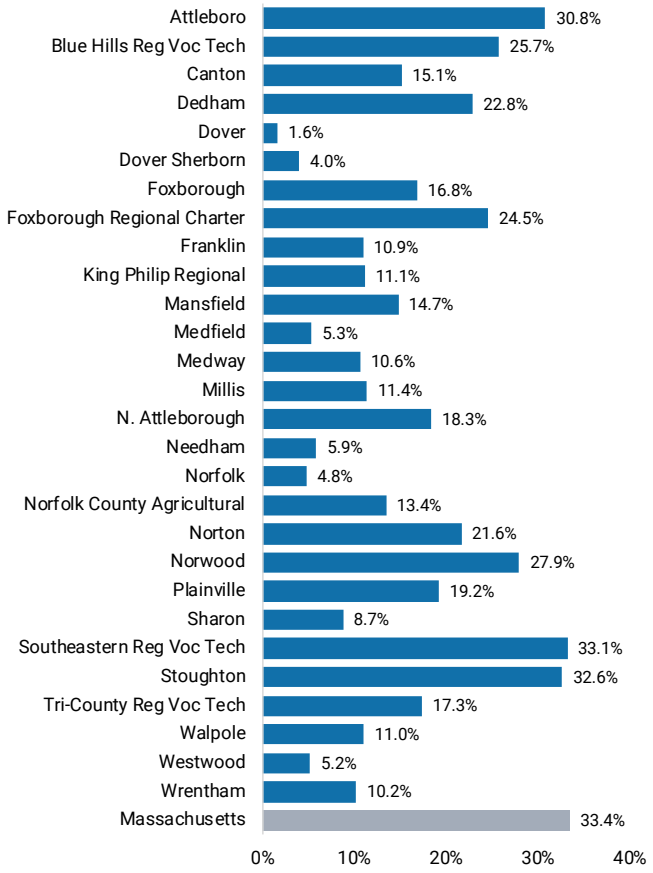
Source: ACS 5-Year Estimates, Table S1702, 2015–2019

[17] Data for poverty level by various age groups or ethnic and racial categories are very large, thus the data are not included in this analysis.

A Comparatively Low Percentage of the Service Area's Students are Economically Disadvantaged

Students are often the socioeconomic bellwether of a community's future. Each of the service area's public school districts enroll a lower percentage of students classified as economically disadvantaged by the Department of Elementary and Secondary Education (DESE).[18] The percentage of students classified as economically disadvantaged is highest at Southeastern Regional Vocational Technical (33.1%), Stoughton (32.6%), and Attleboro (30.8%) (see Figure 16).

Figure 16
Students Classified as Economically Disadvantaged, 2019–2020 School Year



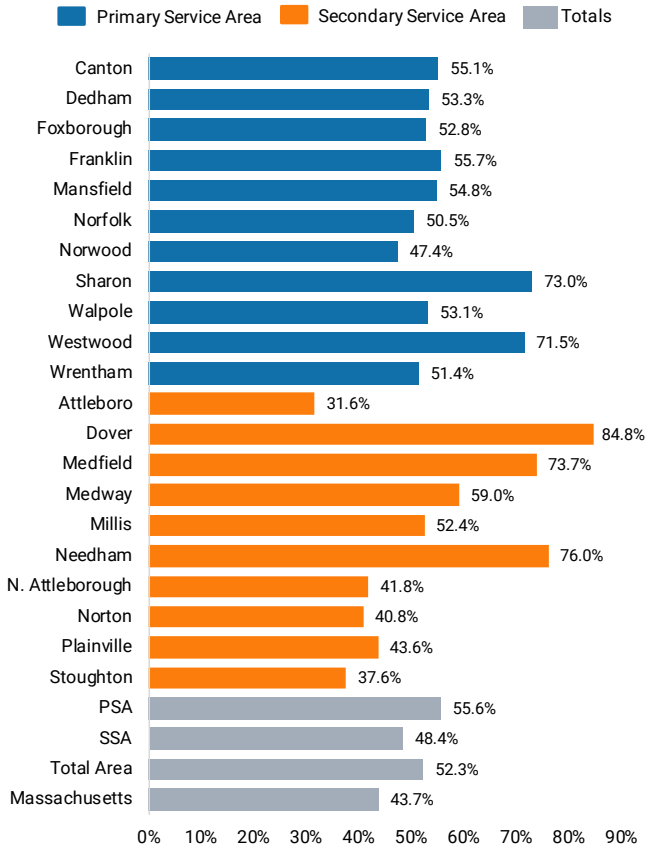
Source: Massachusetts Department of Elementary and Secondary Education, 2019–2020

[18] 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).

Educational Attainment Levels are Well Above the State Average

Income is inexorably linked with education and the opportunities that an education affords. Massachusetts has the second most highly educated population in the country and one of the most well-educated populations in the world. Overall, Norwood Hospital's Service Area contains a highly educated population; 16 of the area's 21 communities exceed the state average in terms of adults 25 years of age and older with at least a Bachelor's degree or higher. The percentage of adults 25 and older with a Bachelor's degree ranges from a low of 31.6% in Attleboro to a high of 84.8% in Dover (see Figure 17).

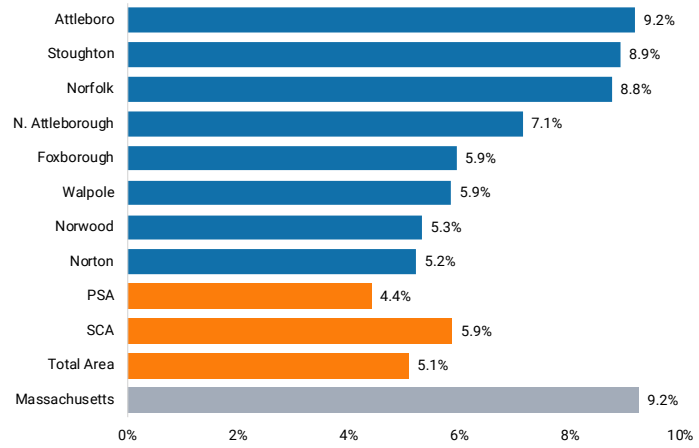
Figure 17
Population Age 25 and Older with a Bachelor's Degree or Higher



Source: American Community Survey 5-Year Estimates, Table S1501, 2015–2019

No communities in the service area have a population 25 years of age and older without a high school diploma that falls above 10%. Figure 18 presents the communities where the percentage of the population with less than a high school diploma is higher than the service area as a whole. Attleboro (9.2%) has the highest percentage of residents age 25 and older without a high school diploma, followed by Stoughton (8.9%) and Norfolk (8.8%). Dover (1.0%) and Medfield (1.2%) have the lowest percentage of residents age 25 years and older without at least a high school diploma.

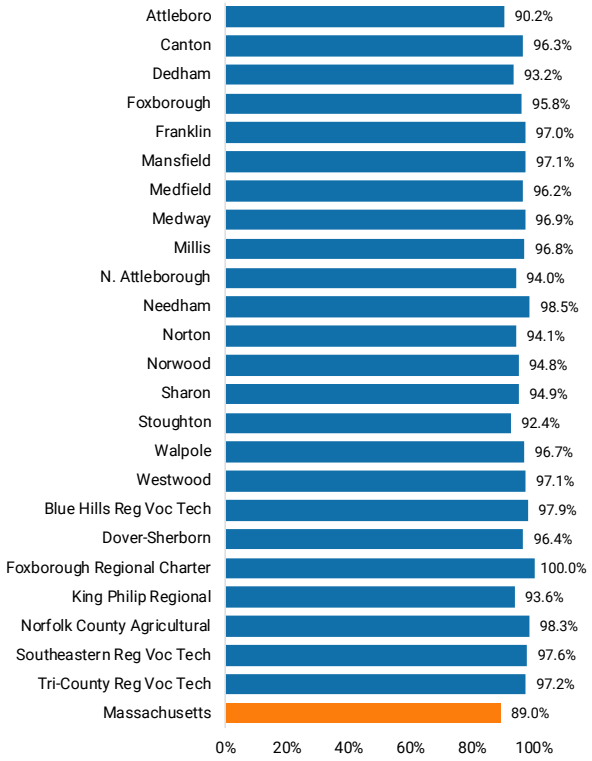
Figure 18
Population Age 25 and Older with No High School Diploma or Equivalent



Source: American Community Survey 5-Year Estimates, Table S1501, 2015–2019[19]
Figure includes only those communities whose percentage equals or exceeds that of Norwood Hospital's Service Area

With relatively high levels of educational attainment, it is not unexpected that high school graduation rates in the service area are generally above the statewide average.[20] Four-year high school graduation rates range from a low of 90.2% in Attleboro to a high of 100.0% at the Foxborough Regional Charter (see Figure 19).

Figure 19
4-Year High School Graduation Rate By District, Class of 2020



Source: Massachusetts Department of Elementary and Secondary Education

[19] While educational attainment data for some races are available by individual community, the margins of error are extremely high and therefore are not included in this report.

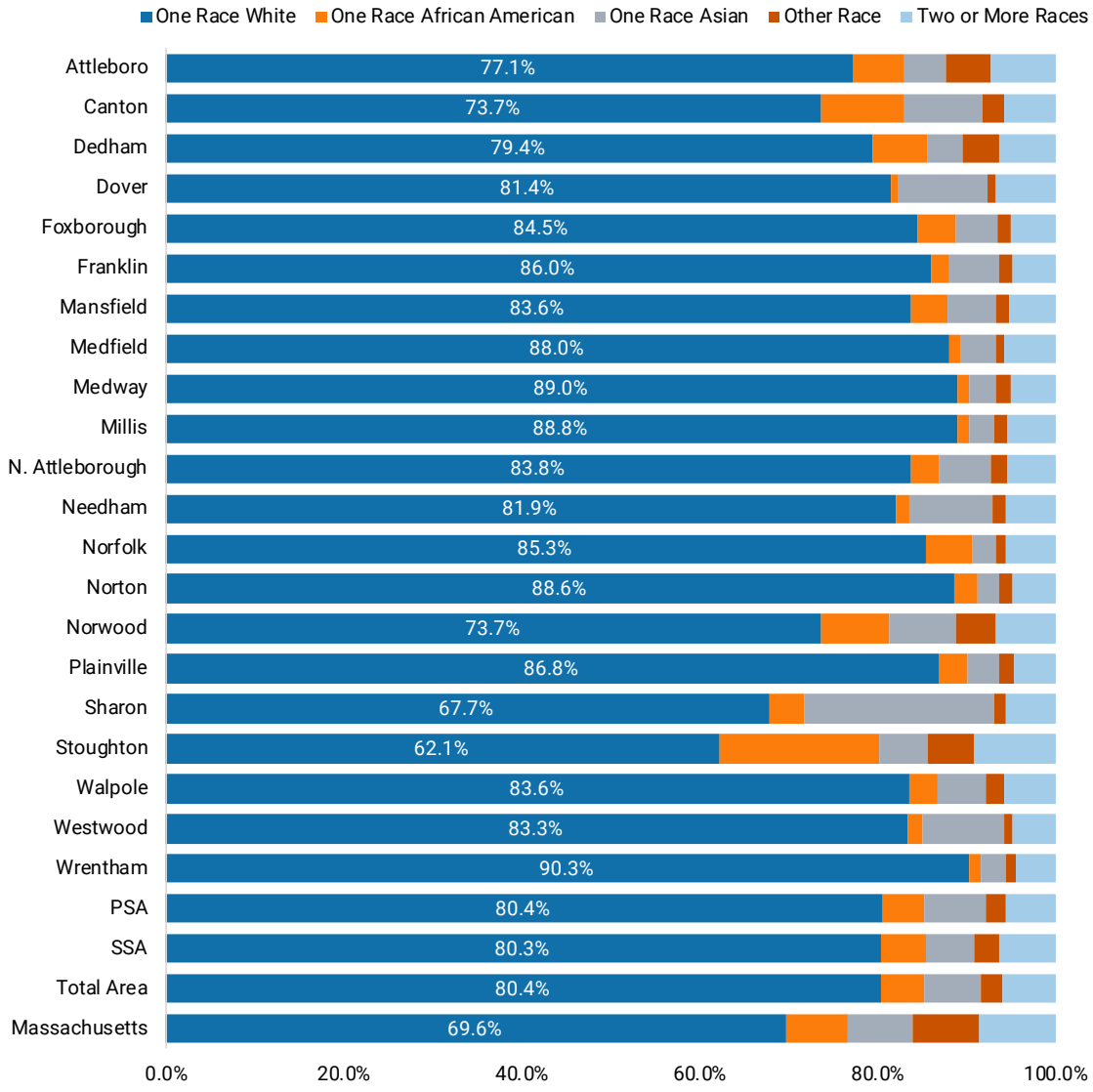
[20] The high school graduation rate measures the percentage of students who attain a high school diploma within a four-year period.

The Service Area Is Less Racially Diverse Than the State as a Whole

People of color face significant disparities in access to and utilization of care. It is imperative that health care providers in the Norwood Hospital Service Area are attuned to the needs of different racial and ethnic groups, particularly as the region's population grows increasingly more diverse.

Overall, Norwood Hospital's Service Area has a less diverse population than the Commonwealth; 80.4% of the service area's residents are White, compared with 69.6% of residents statewide. Just under five percent of the area's population (4.9%) is African American (compared to 7.0% statewide), 6.2% is Asian (compared to 7.2% statewide), 2.5% is some other race (compared to 7.4% statewide), and 6.0% are two or more races (compared to 8.7% statewide) (see Figure 20).

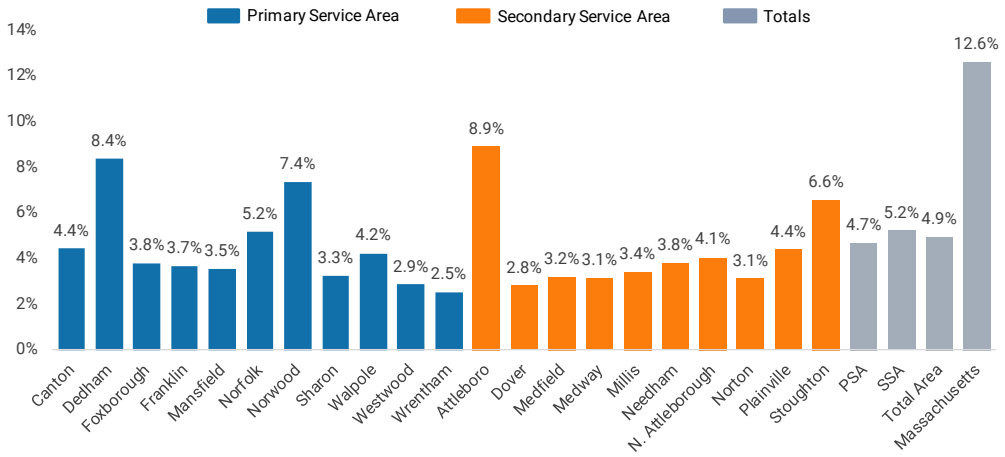
Figure 20
Race and Ethnicity, 2020



Source: U.S. Census 2020

Importantly, persons who identify as Hispanic can be of any race and these individuals are accounted for in the various categories in Figure 20 above. However, the 2020 Census also allowed persons of Hispanic origin to self-report as Hispanic (see Figure 21). The percentage of residents who identify as Hispanic is lower in all the service area communities in comparison to the state (12.6%). The highest percentages of Hispanics reside in Attleboro (8.9%), Dedham (8.4%), and Norwood (7.4%).

Figure 21
Hispanic Population

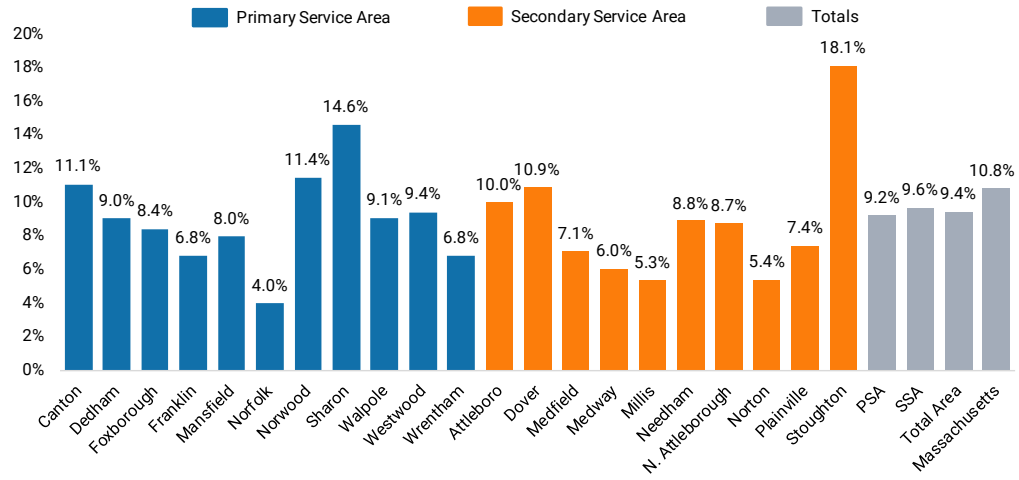


Source: U.S. Census 2020

The Service Area is Becoming More Racially Diverse

The racial makeup of the service area is changing, albeit at a slightly slower rate in comparison to the state as a whole. The percentage of the service area's population who identified as Black/African American, Asian, two or more races, or some other race increased by 9.4% from 2010 to 2020, which compares to an increase of 10.8% statewide. The greatest increases were experienced in the communities of Stoughton (+18.1%), Sharon (14.6%), Norwood (11.4%), and Canton (11.1%). The smallest increases were in the communities of Norfolk (4.0%), Millis (5.3%), and Norton (5.4%) (see Figure 22).

Figure 22
Change in Non-White Population, 2010–2020[21]

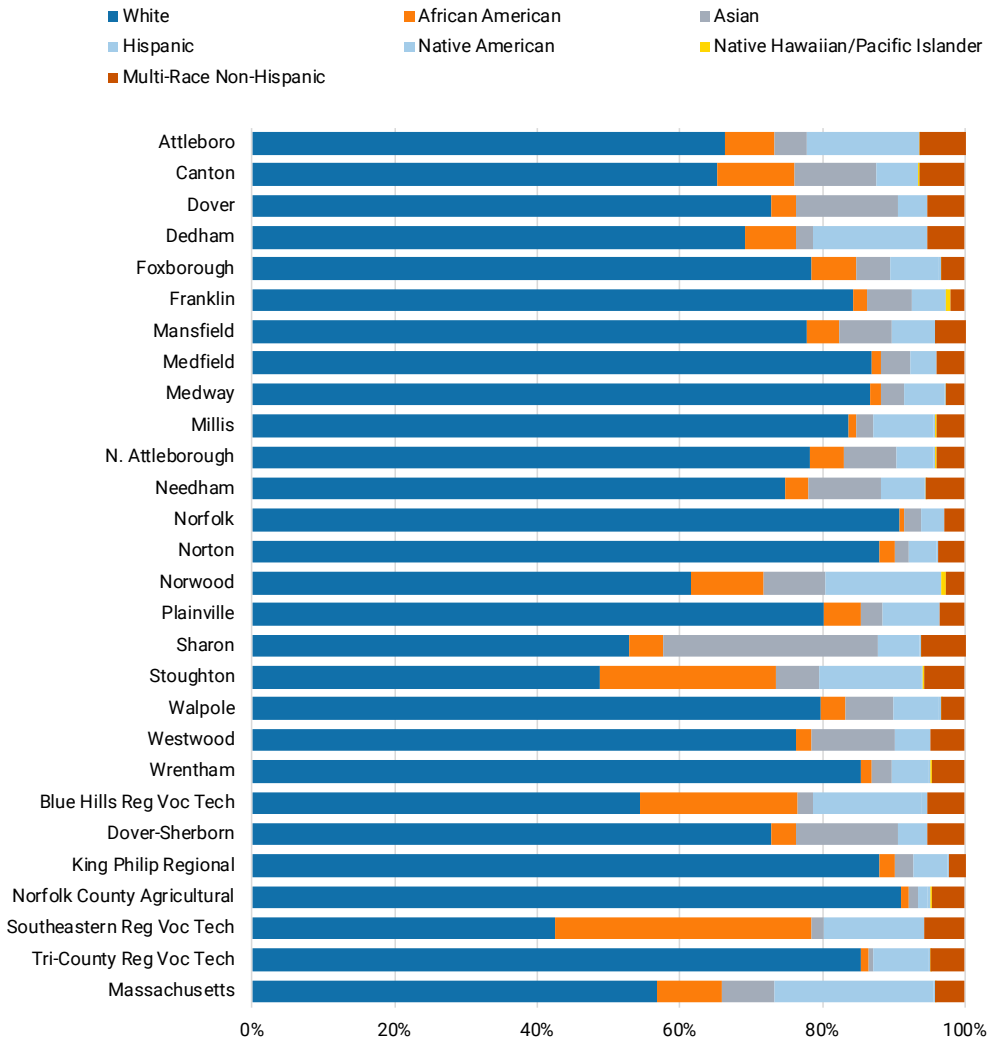


Source: U.S. Census Decennial 2010 & 2020

[21] Non-White population defined as individuals who define their race as other than "White Alone."

Notably, the school-aged population is more diverse than the service area's population as a whole. Although still predominately White, there are significant pockets of African American, Asian, and Hispanic students in many of the area's schools (see Figure 23).[22]

Figure 23
Race/Ethnicity in Public Schools, 2020-2021



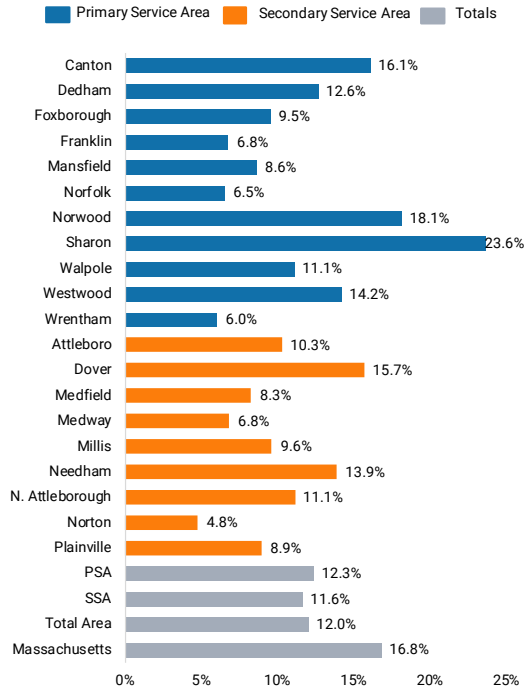
Source: Massachusetts Department of Elementary and Secondary Education (DESE), October 1, 2021 Enrollment Report
Figure does not include charter schools

[22] Unlike the Census race categories, DESE includes Hispanic as a racial category along with the other race categories.

The Foreign-Born Comprise About Twelve Percent of the Area's Population

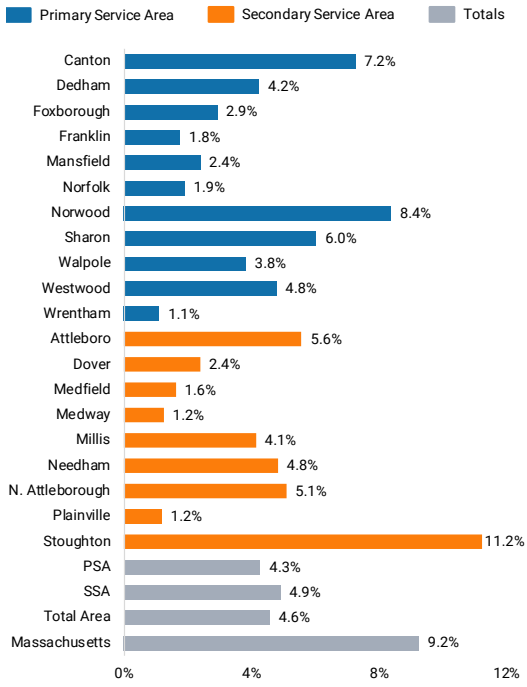
Twelve percent of the area's population is foreign-born, which compares to 16.8% of residents statewide. Norton (4.8%) and Wrentham (6.0%) have the lowest percentage of foreign-born residents, while Sharon (23.6%) and Norwood (18.1%) have the highest percentage of foreign-born residents (see Figure 24). A large share of foreign-born residents can create challenges for service providers. Perhaps the largest obstacle is the language barrier, which was cited by key informants as a major health equity issue. Health care providers will need to employ staff who can both engage with new arrivals in their native languages and understand cultural barriers to care. Figure 25 displays the share of the population over five years of age in each community with limited English proficiency. The percentages range from a low of 1.1% of limited English proficiency in Wrentham to a high of 11.2% in Stoughton.

Figure 24
Foreign-Born Share of the Population, 2019



Source: ACS 5-Year Estimates, Table B05012, 2015–2019

Figure 25
Share of Population 5 Years and Over with Limited English Proficiency, 2015-2019



Source: ACS 5-Year Estimates, Table S1601, 2015–2019; residents 5-years of age and older

Affordable Quality Housing is Becoming an Increasingly Critical Issue for the Region

The availability of affordable, quality, and stable housing is a social determinant of health because housing stability and quality can have a great effect on health outcomes. Key informants and survey respondents identified housing as a social determinant that affects a large number of residents in their community because it is such a multifaceted issue. As one key community stakeholder noted, "How can you focus on your health when all your efforts are focused on paying the rent," while another commented that "Putting a roof over your head comes before all else." This issue is explored in greater detail in Section 4.

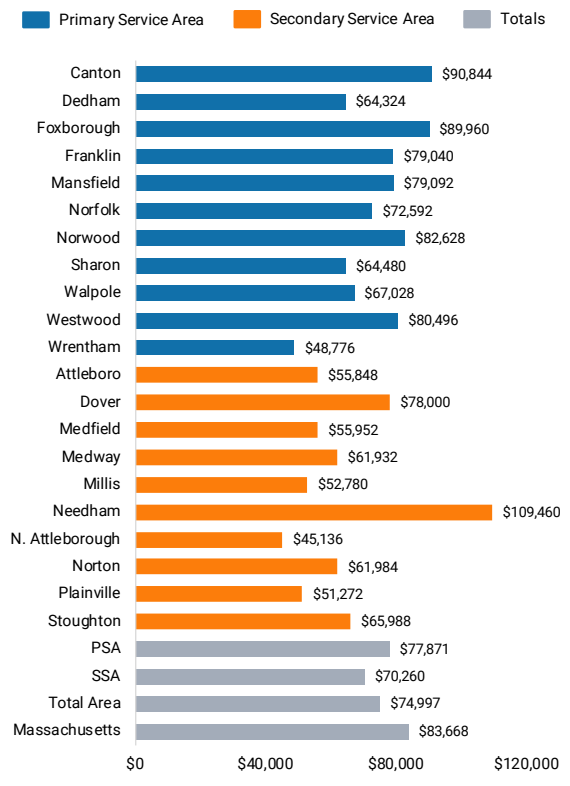
Average Annual Wages Vary, Unemployment Is Lower

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 healthier lifestyle. Conversely, not having a job increases economic stresses that contribute to negative health, including higher rates of depression and stress-related conditions such as stroke and heart disease.[23]

Average annual wages in the service area are generally below the statewide average, ranging from a low of $48,776 in Wrentham to $109,460 in Needham (see Figure 26). Importantly, the data represent the average wages for jobs located within a community, not the wages of the residents who live there. In many of the service area's communities, residents commute to Boston to high paying jobs, while the jobs located in the community might include many lower-paying service jobs. Wrentham provides a good example; a sizeable portion of the jobs are in the Retail sector, which explains why annual wages are the lowest of any service area community. However, the town has median incomes well above the statewide average, which is likely the result of residents commuting to higher-paying jobs elsewhere.

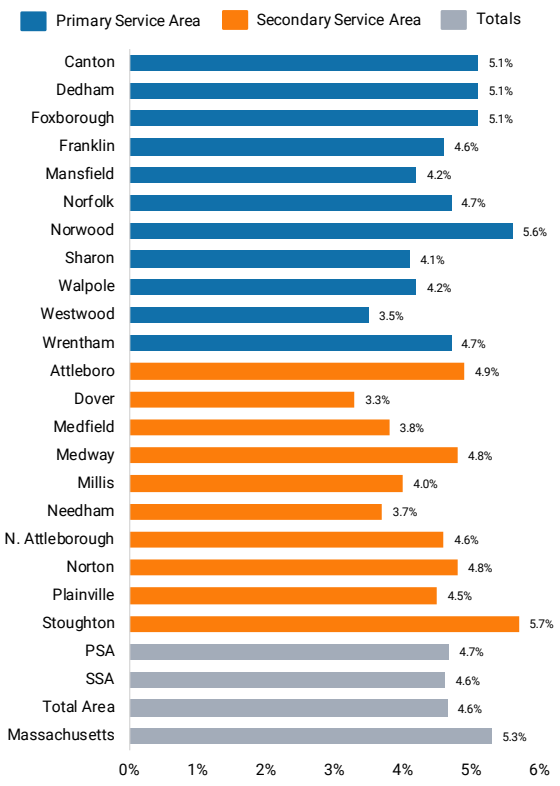
Unemployment rates for most of the service area's communities are below the statewide average. The latest unemployment rates available for this report show that in September 2021, the unemployment rates ranged from a low of 3.3% in Dover to a high of 5.7% in Stoughton (not seasonally adjusted) (see Figure 27).

Figure 26
Average Annual Wage, 2020



Source: Massachusetts Office of Labor and Workforce Development, ES202 dataset

Figure 27
Unemployment Rate, September 2021



Source: Massachusetts Office of Labor and Workforce Development, LAUS dataset

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

The Service Area is Home to Some Neighborhoods that Meet Environmental Justice Criteria

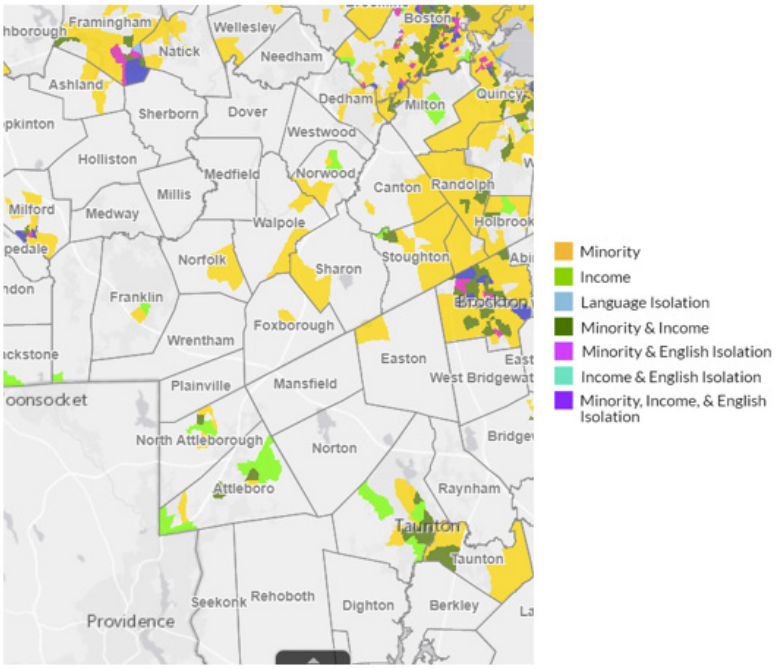
Communities of color and low-income communities bear unequal environmental and economic burdens such as poor air and water quality, limited access to healthy food, substandard housing, and environmental contamination. The principle of environmental justice (EJ) states that all people, regardless of income or race, have the right to fair treatment and equal involvement in environmental issues, and the right to live in environmentally healthy neighborhoods.[24]

The Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) defines EJ neighborhoods as Census block groups where at least one of the following is true: 1) median annual household income at or below 65% of the statewide median; 2) 25% or more of the residents are a minority; or 3) 25% or more of the residents are not fluent in the English language. By these criteria, 19.3% of the service area's residents live in an EJ neighborhood, or 86,772 residents (see Table 4). These areas are mapped in Figure 28).

Table 4
Environmental Justice Populations, 2020

	EJ Criteria	Pop. in EJ Block Groups	% of Pop. in EJ Block Groups
Primary Service Area:			
Canton	M	4,360	18.7%
Dedham	M	8,188	32.4%
Foxborough	M	1,889	10.7%
Franklin	M, I	2,930	8.8%
Norfolk	M	3,121	26.5%
Norwood	M, I	11,164	38.1%
Sharon	M	2,238	12.1%
Walpole	M	5,143	20.5%
Secondary Service Area:			
Attleboro	M, I	17,801	39.7%
N. Attleborough	M, I	11,028	37.8%
Stoughton	M, I	18,910	66.0%

Figure 28
Environmental Justice Populations, 2020



Source: Massachusetts Executive Office of Energy and Environmental Affairs
(EJ Criteria: E=English Isolation, I=Income and M=Minority)

[24] Massachusetts Department of Public Health - Bureau of Environmental Health. Massachusetts Environmental Public Health Tracking. See: www.mass.gov/dph/matracking.

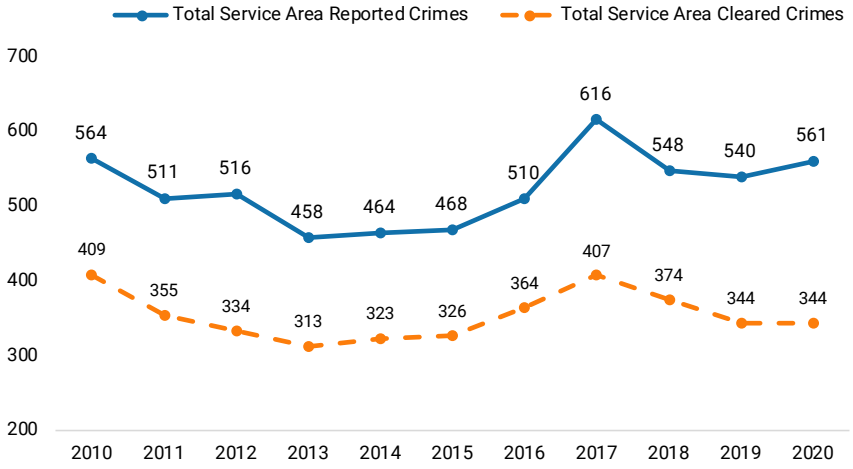
Violent Crime Is Declining

Crime and violence is an important public health issue that has serious short- and long-term effects on a community's health and well-being. While violence can affect people of all socioeconomic backgrounds, the risk of exposure to violent activity is greatest for people in the most socioeconomically disadvantaged groups and communities.[25] For example, the homicide rate among young African American men, boys and girls between the ages of 10 and 25 years old is nearly 20 times higher than the rate among white men and children in the same age group. Other historically marginalized groups such as women, persons who identify as LGBTQ+, veterans, those with a disability, and immigrants are also at a higher risk for being victims of certain kinds of violence.[26]

Apart from being directly harmed by violent acts, the health of those indirectly affected can be compromised. For example, people who live in violent neighborhoods may be more impacted by stress and mental health issues, or physical issues, because people are more apt to stay indoors and not exercise. People living in violent neighborhoods are also more likely to keep to themselves, which negatively impacts the social structure of the neighborhood and the ability to connect positively with neighbors.

The number of reported violent crimes declined by 0.5% (n=3) in the service area from 2010 to 2020, while the number of cleared violent crimes declined by 15.9% (n=65) over this period (see Figure 29).[27]

Figure 29
Number of Violent Crimes in the Norwood Hospital Service Area, 2009-2019[28]



Source: FBI Crime Data Explorer

[25] Egerton, Susan et al. 2011. *Issue Brief: Exploring the Social Determinants of Health Violence, Social Disadvantage and Health.* University of California, San Francisco Center on Disparities in Health.

[26] American Public Health Association Policy Statement. 2018. Violence is a Public Health Issue: Public Health is Essential to Understanding and Treating Violence in the U.S. Washington DC.

[27] Cleared crimes are crimes that result in an arrest.

[28] Violent crime is composed of four offenses: homicide (murder and nonnegligent manslaughter), rape, robbery, and aggravated assault. Violent crimes involve force or threat of force. Note that crimes may be cleared in a different year than they are reported.

4 Identifying Priority Health Issues

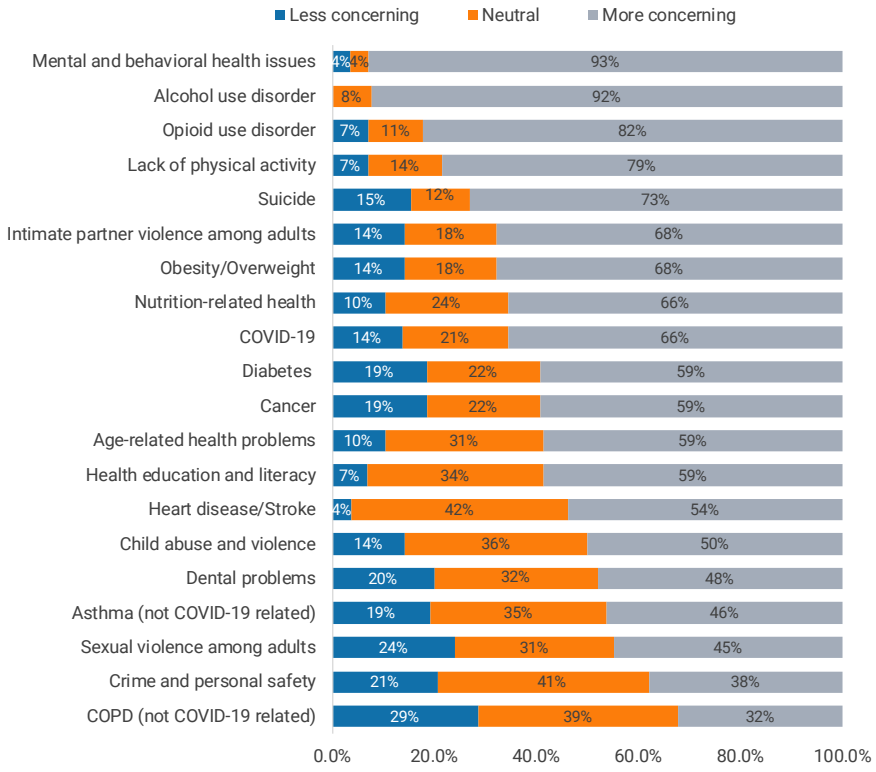
The primary goal of the CHNA is to prioritize the region's health issues through a holistic approach that analyzes health data, leverages the expertise of key informants, and incorporates the views of the community. These activities are employed to prioritize health issues based on the following criteria:

- The health issue impacts a large number or high percentage of people, particularly the region's most vulnerable at-risk populations,
- There is existing momentum to build upon and community programs are already in place,
- Addressing the health issue will substantially address health disparities or inequities, and
- Short- and long-term outcomes can be measured and tracked.

Results of the key informant survey show that issues related to mental and behavioral health are among the top priorities; 93% or respondents report that mental and behavioral health issues are the most concerning issues, followed by alcohol use disorder (92%) and opioid use disorder (82%). High percentages of respondents also reported suicide (73%) and intimate partner violence (68%) as highly concerning issues (see Figure 30). These results are strongly supported by open-end survey comments and key informant interviews, with key informants cautioning that mental and behavioral health issues are likely to worsen as the economic and health fallout of the COVID-19 pandemic continues to be addressed.

Figure 30
Key Informant Survey

"Regarding the health and societal conditions among the people and groups you serve, please rank each of the following issues on a scale of 1 to 5, with 1 being less of a concern and 5 being more of a concern."

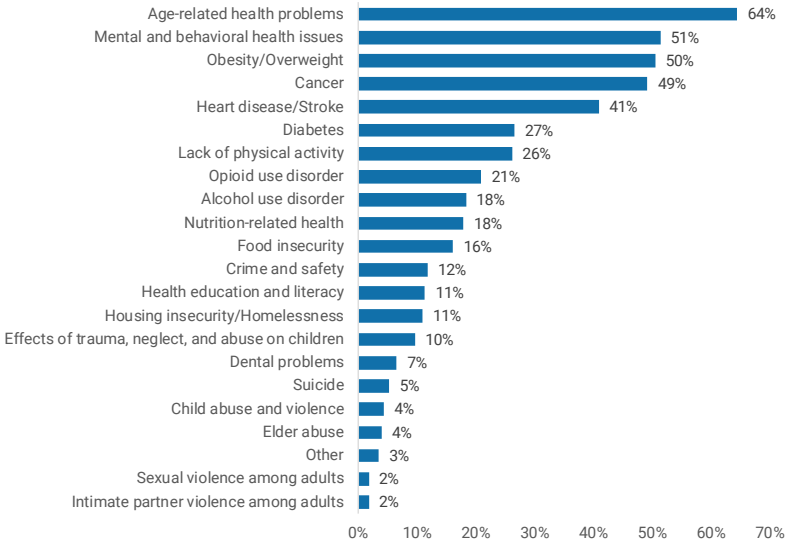


Source: Norwood Hospital Key Informant Survey, 2021

Results of the community survey also show that mental and behavioral health is a priority, with 51% choosing mental and behavioral health as one of the most important issues. Respondents chose age-related health problems as the top health issue overall, with 64% of respondents selecting it as one of their top five issues. Other health issues linked to aging were also identified

by respondents, particularly those related to chronic disease such as obesity/overweight (50%), cancer (49%), and heart disease/stroke (41%) (see Figure 31). The relatively high ranking of these choices related to chronic disease is partly the result of older residents being over-represented in the survey results. However, these results, coupled with the available health data, indicate that age-related health issues experienced by older residents are indeed a priority in the service region.

Figure 31
Community Survey
"Excluding COVID-19, what do you consider to be the FIVE most important health issues in your community?"



Source: Norwood Hospital Community Survey, 2021

In addition to the primary issues of behavioral health and age-related health issues identified above, key informants identified other concerning issues in open-end survey comments and during interviews. One evident issue for key informants and community members is housing, particularly with regard to housing affordability (see the word cloud in Figure 32).This is also supported by open-end survey comments provided by community members (see the word cloud Figure 33). As one community member noted, "I don't know how my kids are going to be able to afford to live here."

Figure 32

"What do you think are the greatest issues and concerns for the people or groups your organization serves, not necessarily related to health?"

Source: Key Informant Survey, 2021

SPRINGLINE RESEARCH GROUP

Figure 33
"What do you feel are the most important attributes that make up a healthy community?"

Source: Norwood Hospital Community Survey, 2021

Applying the four criteria described at the beginning of this section to the results of the qualitative activities undertaken for this project results in four health priority issues: Behavioral Health (which encompasses mental health and substance use disorder), Wellness and Chronic Disease, Housing Stability, and Health Access and Equity. Overall, these four areas represent issues where Norwood Hospital can make a positive impact because the hospital is already addressing these issues and has existing partnerships and collaborations with local service providers (see Table 5).

Table 5
Priority Health Issues

Priority Issue	Sub-Categories
Behavioral Health	Mental Health, Substance Use Disorder
Wellness & Chronic Disease	Unhealthy Behaviors, Health Conditions, Health Outcomes, Food Insecurity, Nutrition
Housing	Affordability, Stability, Homelessness
Health Access	Underserved Populations, Obstacles to Care, Health Literacy

Priority Issue 1: Behavioral Health

Behavioral health examines how a person's habits affect their mental and physical well-being. This includes behaviors related to nutrition, exercise, smoking, sleep, and stress. Behavioral health is also a blanket term that includes mental health and substance use disorder. For example, people who have mental health or substance use issues may benefit from changes in their behaviors to better cope with their struggles.

Throughout this project, mental health and substance use disorder emerged as the two most prominent behavioral health issues, and perhaps the two primary health issues in the region. In fact, results of the key informant survey show that respondents are more concerned with issues related to mental health and substance use disorder than physical health issues and conditions. This result is also supported by interviews with key informants, who strongly emphasize the connection between mental health and substance use disorder. As one might expect, COVID-19 intensified mental health and substance use issues significantly.

Key takeaways:

- Behavioral health encompasses a wide variety of health issues and is the top concern cited by key informants and community members. Over 93% of key informant survey respondents and 57% of community survey respondents cited behavioral health as the top health priority.
- Key informants and community members clearly articulated that mental health is the most pressing health issue in the region, particularly as the effects of COVID-19 on mental health are becoming more evident. Service providers noted an increase in the rates of depression and anxiety, with many pandemic-related measures affecting the mental health of people across diverse populations.
- Key informants and community members identify the acute shortage of mental health professionals as the primary mental health issue in Norwood Hospital's service area. Results of the key informant survey show that 47% of respondents believe that mental health services are not sufficiently available in their community, which is the top choice among respondents.
- The shortage of outpatient beds can be a roadblock for patients who are willing to enter treatment but cannot do so because beds are not available. This issue is particularly troublesome for patients with acute mental health disorders who are best served by a "warm handoff."
- Survey results and key informant interviews highlight factors that contribute most greatly to mental health inequities, including language and cultural barriers for immigrant communities, lack of insurance, high out-of-pocket costs for mental health services, and lack of awareness of services.
- While much of the discussion around substance use disorder focuses on opioid abuse, alcohol use disorder remains a concern among stakeholders.
- Key stakeholders note that many people are hesitant to seek care due to the stigma associated with mental health. This issue extends to residents of all socioeconomic backgrounds.
- Stakeholders point out that joblessness and isolation have led to an increase in the incidence of substance use disorder and a decline in mental health, particularly among vulnerable groups.
- While the substance use disorder issue in the service area is primarily related to opioids and alcohol, youth are primarily turning to marijuana, especially through vaping.

MENTAL HEALTH

The 2018 Norwood Hospital Needs Assessment identified mental health as an increasingly salient issue and our work for this report confirms that mental health issues have been amplified by the pandemic. As one stakeholder commented, "It seems like health care generally is in crisis and seems to have become worse since COVID. It's especially difficult for the providers of mental health services and is having a direct impact on those who need their services." Another noted that, "Mental health issues are on the rise and it doesn't discriminate - mental health issues are affecting people from all economic backgrounds."

There are three primary mental health issues stressed by stakeholders:

1) the shortage of mental health professionals,
2) the overall mental health system, particularly the shortage of beds, and
3) equity issues related to mental health.

Shortage of Mental Health Professionals

Many key informants and community members identify the acute shortage of mental health professionals as the primary health issue in Norwood Hospital's service area:

- Results of the key informant survey show that 47% of respondents believe that mental health services are not sufficiently available in their community, which is the top choice among respondents.
- Similarly, 27% of respondents from the community survey report that "treatment for mental health disorders" is not sufficiently available in the community, which is second only to emergency medical services.[29]

The shortage of mental health clinicians has created long waitlists or deterred people from seeking treatment. As one community survey respondent lamented, "I have been trying to find a mental health provider for a particular topic for four months without success. [Most are] not accepting new patients." As noted above, the pandemic is increasing the strain on this already overburdened system, with one key informant noting, "I see a huge increase in mental health issues and long waitlists for mental health providers. Mental health issues will continue to increase, while it doesn't seem like the number of clinicians can be expanded to meet the demand."

Key informants also noted that many providers have shifted from taking patients with MassHealth to working with patients with private insurance or who are willing to pay cash. Part of the problem, they argue, is that "reimbursement rates are poor for many services, but especially mental health services. Providers would just rather go with private pay patients because it is more lucrative." One key informant also noted that some providers are reluctant to accept high needs patients such as those with a substance use disorder.

A survey respondent noted that mental health issues among youth are increasing exponentially and that "this problem of is not going away and the pandemic has made it worse. Youth anxiety is off the charts." Another noted, "Youth who were struggling with their mental health before the pandemic are having an even more difficult time now, and some youth have developed mental health problems as a result of the pandemic and the isolation that came with it." Still another noted that the lack of mental health services for youth "is a crisis" and that "suicide ideation is on the rise."

[29] 30% reported emergency medical services as the top insufficient service, which is primarily the result of Norwood Hospital being closed during the administration of the survey.

The Mental Health System

Key Informants noted that it has been challenging to find outpatient beds for patients. The shortage of outpatient beds can be a roadblock for patients who are willing to enter treatment but cannot do so because beds are not available. This issue is particularly troublesome for patients with acute mental health disorders who are best served by a "warm handoff." In addition, while key informants note that mental health issues among our youth are growing exponentially, there are very few beds available for these individuals, even across the state.

The ongoing shortage is a crisis. Patients in need of specialized in-patient care wait in hospital emergency departments for beds to open or do not seek help at all. Key informants note that the issue is particularly acute at the pediatric and adolescent level, although adding beds does little to improve treatment outcomes if there continues to be a staffing shortage. As one stakeholder commented, "Many residents have gone without mental health counseling and intervention since the closure of the hospital and its psychiatric unit. We really have nowhere to refer people to right now."

Some community members also noted a systemic issue with how mental health issues are covered or not covered by health insurance, with one community member noting that there is a "systemic separation between physical and mental health care, when they should be treated the same." Another community member noted that, "We need to see that mental health is just as important as physical health. We need to overcome the stigma that prevents many of our residents from seeking care, but also push for insurers to cover mental health services to the same level that they cover physical issues."

One key informant suggested that stigma and lack of awareness can be partly overcome by better targeting their audience. "Tailor the message to the audience. For example, use social media to get the message out to young people." Another community member commented, "We need to find ways to offer mental health support without making people feel pathological. [Needing] help to manage the circumstantial emotional and cognitive burdens may not be the same as mental illness, yet it tends to become grouped together such that people do not seek out 'light' support for fear of being labeled or thought to be incapable of managing stress."

Stakeholders also noted that providers outside the mental health system are often not properly trained to counsel patients or refer them to treatment services. This is especially true of primary care physicians, who are often the gatekeepers for referrals to mental health treatment. As one key informant noted, "I'd like to see more health care providers and primary care doctors trained in mental health, especially in identifying mental health issues with their patients. PCPs shouldn't miss an opportunity to talk about mental health issues when their patients are in the office, regardless of the reason for the visit. This is especially true since the data shows that people are most likely to talk to their primary care doctor first about mental health issues." Beyond the health care system, key informants noted that the police are often the first responders to someone in crisis. In these situations, their options and training are often limited, and officers typically have to admit the individual to a hospital, which can create a revolving door because there often is not appropriate care or follow up.

Lastly, a key informant noted issues with policing and mental health. They explained that after officers get to a mental health related call, "Their options are often limited, and they typically have to admit the individual to a hospital, which can create a revolving door because there often isn't appropriate care or follow up."

Equity Issues 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. The degree to which the pandemic has affected the mental health of marginalized groups has yet to be fully understood, yet 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. The Centers for Disease Control and Prevention notes that racial and ethnic minority groups reported higher rates of mental health concerns during the pandemic, particularly among Hispanics.[30]

Key informants and survey respondents highlighted many factors that contribute to these disparities, including language and cultural barriers, lack of insurance, high out-of-pocket costs for mental health services, or simply because people are unaware that their insurance covers mental health treatment. It was noted that many people are also generally more reactive than proactive in engaging the health care system, or as one stakeholder described, "I can't get my patients to come in for a flu shot, never mind for a mental health issue and all the stigma that comes with it."

A key informant noted that while there are not enough clinicians in general, the lack of mental health clinicians is especially dire for non-English speakers. While translation services are available, more than one key informant highlighted difficulty with translation in a medical setting, noting that many professional interpreters they encounter speak more than one language, while failing to speak any one language adequately. Also, while family members are often called on to translate, many do not have the medical knowledge or vocabulary to adequately interpret for the doctor or health practitioner, especially since some are children.

Key informants also note that a cultural stigma exists among immigrant communities and many communities of color. Lack of trust of the medical system, particularly among immigrants, was also cited as an issue that affects people seeking help to address mental health issues. One key informant notes that "Lack of trust is a barrier that isn't discussed often, especially in immigrant communities." Trust and fear is a common theme throughout the interviews: fear of addressing the issue, fear of doctor visits, fear that patients will not be able to afford treatment, and fear in general of navigating a health care system about which they know very little. As a result, many only visit the doctor when issues get worse, and even then many will wait until life becomes unbearable, all the while hoping that eventually the symptoms will disappear. This applies not only to mental health, but health conditions in general.

Lastly, there was concern expressed for veterans, with one service provider noting that "Elderly veterans do not want to leave their home. [They are] completely isolated, which in turn, affects their mental health. We need to find ways to reach these people."

Effect of COVID-19 on Mental Health

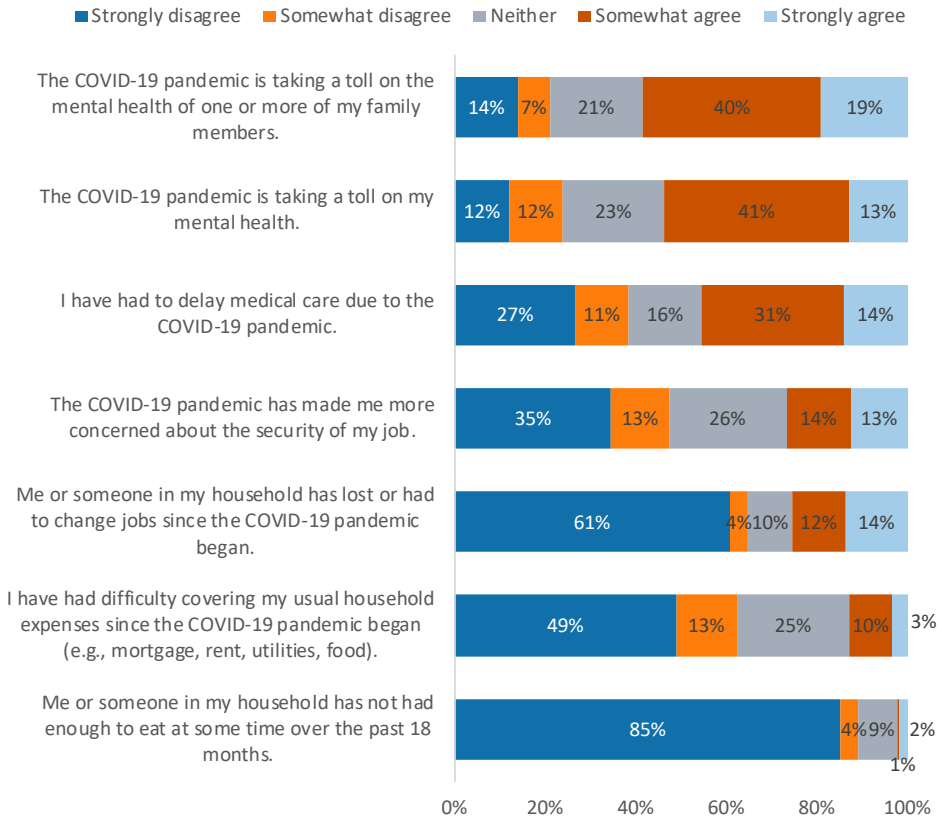
Key informants were explicit that mental health issues affect people from all demographic and socioeconomic backgrounds. As one key informant noted, "The pandemic spotlighted mental health issues and exposed huge cracks in the system." Several key informants noted that COVID-19 affected adolescents' mental health significantly, but there are not enough clinicians to meet the need. Key informants noted that many youth are increasingly turning to marijuana, particularly through vaping and that "vaping is definitely getting worse. Kids are finding their own ways to deal with the way they are feeling, and increasingly that means turning to marijuana use."

Stakeholders warn that the mental health crisis will not abate when the pandemic winds down. A key informant noted that many residents "continue to struggle with isolation and other pandemic-related issues" even as things return to normal. Indeed, results of the community survey show that mental health issues related to the pandemic are top of mind among

[30] McKnight-Eily LR, Okoro CA, Strine TW, et al. Racial and Ethnic Disparities in the Prevalence of Stress and Worry, Mental Health Conditions, and Increased Substance Use Among Adults During the COVID-19 Pandemic — United States, April and May 2020. MMWR Morb Mortal Wkly Rep 2021;70:162–166.

respondents; 59% agree that the pandemic "is taking a toll on the mental health of one or more of my family members," while 54% agree that "the COVID-19 pandemic is taking a toll on my mental health" (see Figure 34).[31]

Figure 34
Community Survey
"How strongly do you agree or disagree with the following statements?"



Source: Norwood Hospital Community Survey, 2021

[31] The survey was administered in the Summer of 2021, which was a period when COVID-19 rates and hospitalizations were relatively low.

Substance Use Disorder

Substance use disorder (SUD) continues to be identified as a major challenge in the service area. While much of the focus is on opioid abuse, stakeholders recognize that this issue extends beyond opioids to other substances. For example, although 23% of community survey respondents report that the opioid use disorder is a concern, 20% also report that alcohol use disorder is a concern.

Eighty-two opioid-related deaths in the service area's communities were confirmed in 2020, which is eight more than in 2013 and eleven more than in 2019 (see Table 6). The number of opioid deaths was highest in Stoughton (n=18) and Attleboro (n=10). All communities except Westwood and Dover had a least one opioid death in 2020.

Table 6
Number of Opioid-Related Overdose Deaths by Community, 2013–2020

	2015	2016	2017	2018	2019	2020	Total '13-'20
Primary Service Area:							
Canton	6	6	9	4	0	3	28
Dedham	5	11	3	5	3	7	34
Foxborough	0	7	2	4	4	2	19
Franklin	7	7	2	7	5	3	24
Mansfield	3	8	8	3	4	3	29
Norfolk	2	3	0	2	0	2	9
Norwood	7	6	8	6	5	5	37
Sharon	1	1	2	0	2	1	7
Walpole	4	7	4	10	5	1	31
Westwood	1	5	0	0	0	0	6
Wrentham	2	5	5	1	0	3	16
Secondary Service Area:							
Attleboro	10	18	26	11	21	10	96
Dover	0	0	1	0	1	0	2
Medfield	0	1	0	2	0	1	4
Medway	1	3	0	3	0	1	8
Millis	1	4	1	2	1	2	11
Needham	1	1	1	2	1	2	8
N. Attleborough	8	8	9	5	4	8	42
Norton	1	7	5	4	7	5	29
Plainville	0	3	5	0	2	5	15
Stoughton	14	11	7	15	6	18	71
Totals:							
Primary Service Area	38	66	43	35	28	30	240
Secondary Service Area	36	56	55	44	43	52	286
Total Service Area	74	122	98	79	71	82	526
Massachusetts	1,741	2,106	1,999	2,005	2,002	2,035	11,888

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

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. Key informants and focus group members remarked about the difficulty in treating patients effectively if these issues cannot be addressed simultaneously. As one survey respondent noted, "Opioid dependence is difficult to resolve. The ability to access medications like methadone and suboxone has improved. However, recovering from long term substance use disorder usually very often demands major lifestyle changes, which requires intensive mental health and behavioral intervention/support. Access to impatient treatment remains difficult to access, made worse by COVID restrictions."

Patients with comorbid behavioral health conditions are also at higher-than-average risk of readmission. For example, hospitalized patients in the Norwood/Attleboro region with any behavioral health comorbidity were nearly twice as likely to be readmitted than those without a behavioral health condition (21.6% versus 10.9%) and those with a co-occurring mental and substance use disorder were nearly three times as likely to be readmitted (29.1% vs. 10.9%) (see Table 7).

Table 7
Behavioral Health Readmission Rates, FY 2018

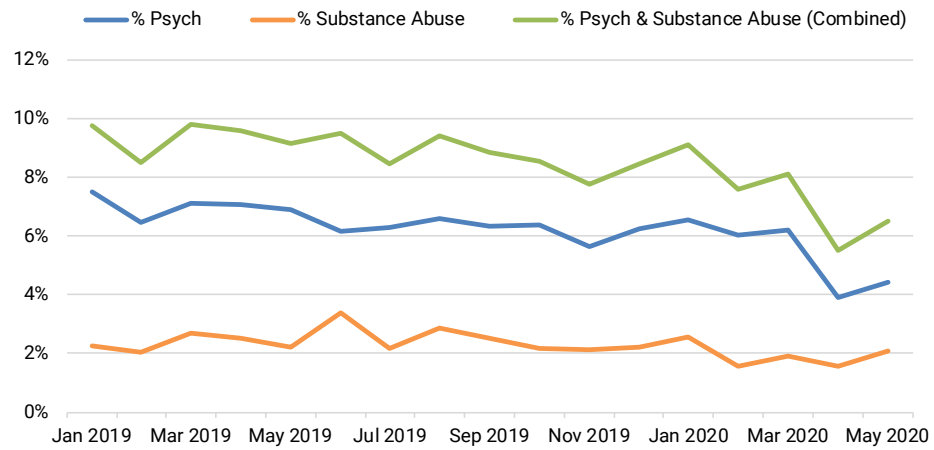
	No BH Condition	Any BH Condition	Mental Disorder Alone	SUD Alone	Co-Occurring Mental/SUD
Norwood/Attleboro Region	10.9%	21.6%	19.0%	18.5%	29.1%
State	10.5%	20.4%	18.0%	15.2%	26.8%

Source: Center for Health Information and Analysis, *Behavioral Health & Readmissions in Massachusetts Acute Care Hospitals*

Norwood Hospital Emergency Department Data

Emergency Department (ED) data from Norwood Hospital shows that visits for a behavioral health issue (either psychological or substance use disorder related) fluctuated between 5.5% and 9.8% of all ED visits from January 2019 to May 2020 (see Figure 35). Psychological issues accounted for a higher percentage of behavioral health visits over this period in comparison to substance use disorder. Not surprisingly, visits were lowest in spring of 2020 when the pandemic began to ramp up and isolation orders were instituted. During this period, visits to the emergency room were likely more related to extreme physical issues such as heart attack, injury, or COVID rather than mental health issues. Notably, a higher number of males visit the emergency department to address behavioral health issues in comparison to females for both psychological and substance use disorder issues.

Figure 35
Psychiatric and Substance Use Disorder Diagnoses, Norwood Hospital
Percentage of Total Emergency Room Visits, Jan 2020–July 2021



Source: Norwood Hospital/Steward Health Care

YOUTH MENTAL HEALTH

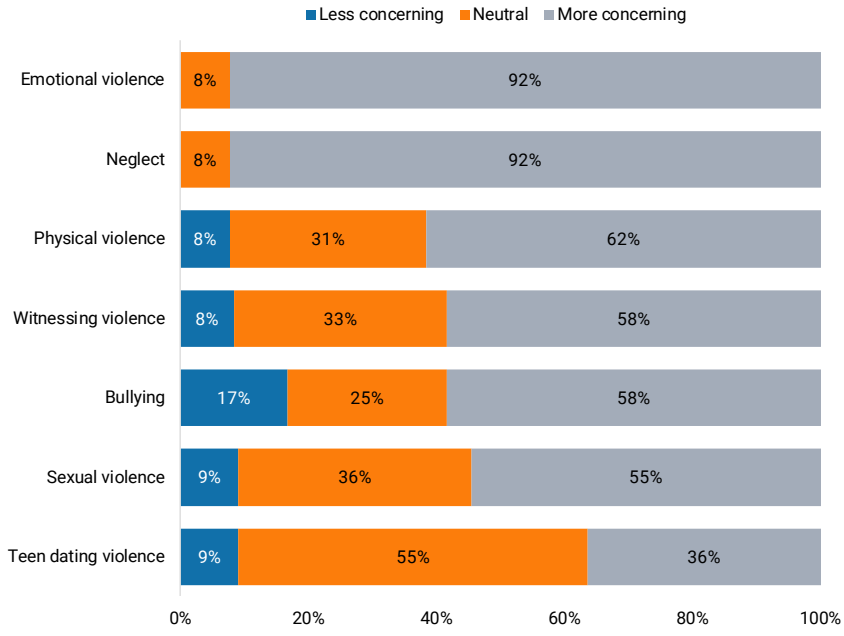
Youth mental health continues to be a pervasive and growing public health issue. Key informants noted that there are few places to send youth with severe mental health issues, with one key informant noting, "There is no place to send kids when there is a crisis. Historically, mental health has been an adult problem and therefore mental health resources for kids are minimal." The youth mental health crisis is partly driven by trauma related to child abuse and violence and partly to issues that developed as a result of the pandemic. It was noted by many key stakeholders that COVID-19 exacerbated many of the negative mental health trends among youth. The lack of mental health providers, as discussed in other areas of this report, means that many children and families will not receive the services they require to maintain emotional and mental stability.

In addition, key informants note that many youth experiencing trauma and mental health issues are turning to drugs. One key informant noted that "there's need to be more education about adolescent substance abuse among health care workers. For example, some sort of educational platform for staff to address the knowledge gap and understanding of adolescent substance abuse, including the severity of issue, how to identify substance use, best practices, resources, and how to overcome stigma." As described earlier, one key informant noted that while the adult substance use disorder problem in the service area is primarily related to narcotics, youth are primarily turning to marijuana, especially through vaping. Consequently, strategies for youth tend to focus on treatment for marijuana abuse.

Respondents to the key informant survey who rated child abuse and violence as a concerning issue were asked a follow-up question related to specific youth violence issues (see Figure 36). The most concerning issues among respondents is "Neglect" and "Emotional violence," with 92% of respondents rating those issues as more concerning.

Figure 36
Child Violence Issues

"Please rank each of the following Child Violence issues on a scale of 1 to 5, with 1 being less of a concern and 5 being more of a concern."



Source: Norwood Hospital Key Informant Survey, 2021
Results should be interpreted with caution due to the low number of respondents to this question

Priority Issue 2: Wellness and Chronic Disease

As demonstrated in Section 3, there are areas of the Norwood Hospital Service Area that exhibit socioeconomic inequities. Comments gleaned from key informant interviews and surveys highlight the day-to-day challenges faced by residents who reside in these communities. For many, health and wellness fit within a larger framework of day-to-day obligations, ranging from issues such as housing, finances, and childcare, to transportation, employment, immigration, and safety. These obligations make it difficult to maintain overall health and to adopt healthy habits necessary to prevent or manage disease. Indeed, improving health outcomes will require more than just offering treatment and preventive care; it will also require addressing the social environment that contributes to health inequities.

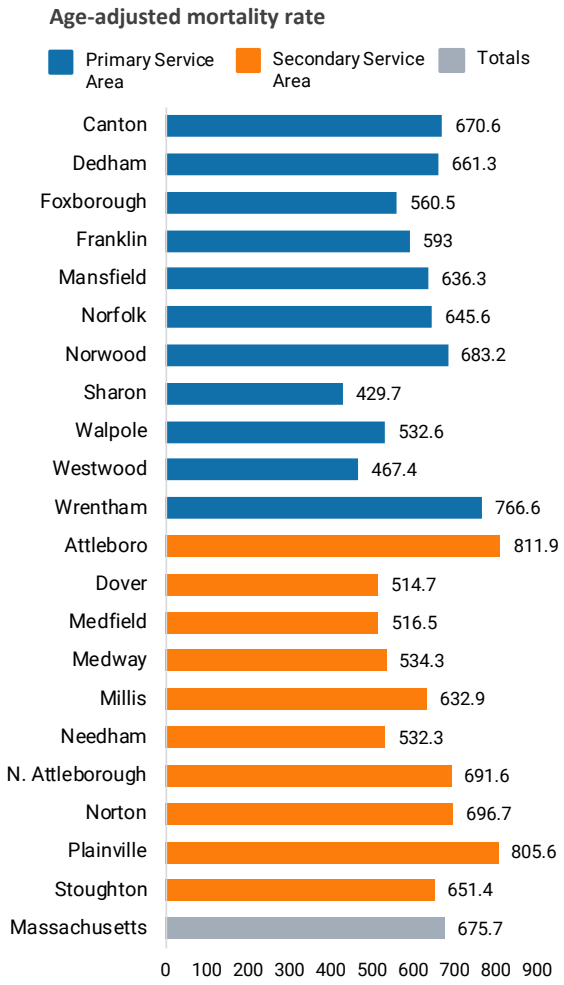
Key takeaways include:

- Wellness and chronic disease is also a high priority issue for residents with higher levels of income and education, although their needs are generally more focused on access to services, such as transportation (e.g., getting to appointments) and the availability of specialist health services within a short drive.
- Just over half of respondents to the community survey rate their health as excellent (11%) or very good (40%). Thirty-five percent (35%) rate their health as good, while 11% rate their health as fair and 2% as poor.
- While health outcomes for much of the Norwood Hospital Service Area on par with or better than the Massachusetts and U.S. averages, there are Census tracts in the region that have poorer outcomes. Higher disease prevalence in these tracts coincides with areas that have the highest levels of vulnerable populations (as defined by low-income and low educational levels).
- In the communities for which data are available, self-reported smoking prevalence ranges from a high of 17.2% in Attleboro to a low of 9.2% in Needham. This compares to 12.0% in Massachusetts and 16.0% nationwide.
- Among communities with available data, self-reported obesity prevalence ranges from a high of 30.5% in Attleboro to a low of 20.4% in Needham, which compares to 25.2% statewide and 32.4% nationally. Most Census tracts in the service area have obesity prevalence rates that are similar or below the statewide prevalence.
- The number of breast and lung cancer incidences at Norwood Hospital has declined fairly steadily since 2009.
- In the Norwood Hospital Service Area, 31,904 residents received Supplemental Nutrition Assistance Program (SNAP) benefits in August 2021, which is an increase of 41.9% from February 2020 (pre-pandemic). The number of SNAP recipients increased by 17.8% in just two months from February 2020 to April 2020, the time when many of the COVID-19 related restrictions were in place.
- In 2019, an estimated 566,930 Massachusetts residents were food insecure, or about 1 in 12 residents. Norfolk County, which includes Norwood and its surrounding towns, has one of the lowest percentages of food insecurity among Massachusetts counties; an estimated 4.6% of residents were food insecure in 2019 (pre-pandemic), although this percentage increased to 12.5% in 2020 (during the economic shutdown).

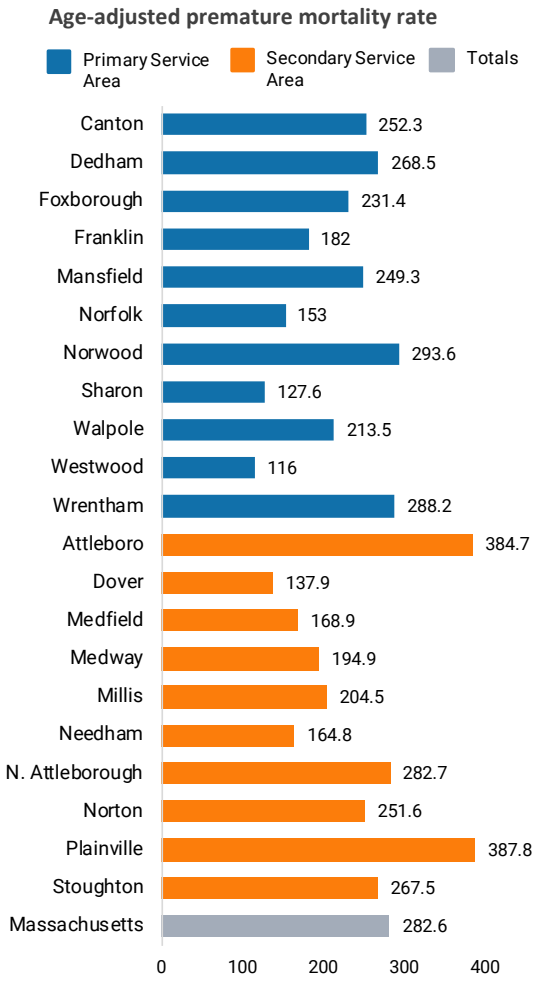
Age-Adjusted Mortality Rate

The age-adjusted all-cause mortality rate statewide was 675.5 deaths per 100,000 people in 2017. Mortality rates in the Norwood Hospital Service Area ranged from a low of 429.7 in Sharon to 811.9 in Attleboro. The premature mortality rate statewide was 282.6 per 100,000 in 2017. The premature mortality rate ranged from a low 116.0 in Westwood to a high of 387.8 in Plainville (see Figure 37).

Figure 37
Mortality Rate and Premature Mortality Rate



Source: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2017
Rates are age-adjusted per 100,000 residents



Source: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2017
Rates are age-adjusted to the 2000 US standard population for persons ages 0-74 years

UNHEALTHY BEHAVIORS

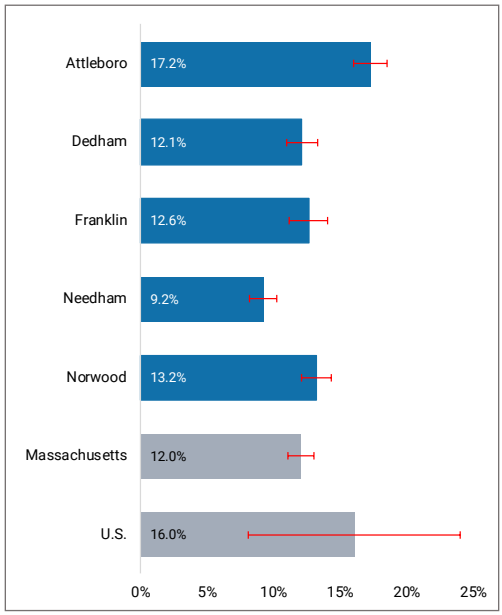
Simply put, unhealthy behaviors lead to poor health outcomes. Tobacco use, physical inactivity, and poor nutrition contribute to over 56% of all mortality in Massachusetts and 53% of all health care expenditures.[32] These behaviors contribute to preventable chronic diseases such as diabetes, cancer, heart disease, and lung disease. While some chronic conditions are a result of behavior or genetics, social and environmental factors can also elevate the risk of contracting chronic diseases. As one key informant noted, "Many of the health problems I see are a result of people not taking care of themselves. The pandemic has only made that worse, many times worse."

Smoking Prevalence

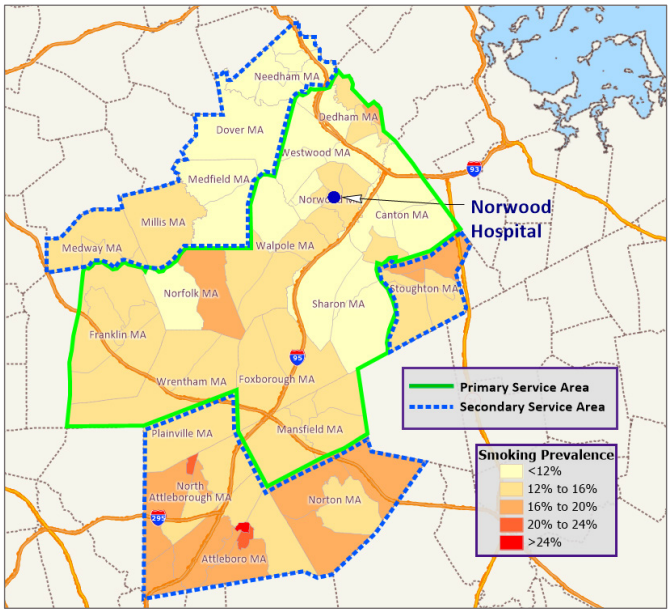
Figure 38 presents self-reported smoking prevalence by community and by Census tract for Norwood Hospital's service area (data by community is only available for five of the twenty-one service area communities). Smoking prevalence ranges from a high of 17.2% in Attleboro to a low of 9.2% in Needham. This compares to 12.0% in Massachusetts and 16.0% nationwide.[33] Smoking prevalence in most of the service area's Census tracts are similar or below the statewide prevalence. However, there are several tracts where the prevalence is above the statewide and U.S. averages, with these tracts generally concentrated in areas with the highest levels of vulnerable populations (as defined by low-income and low educational levels).

Figure 38
Self-Reported Smoking Prevalence, 2019

Smoking Prevalence by Community



Smoking Prevalence by Census Tract



Source: PLACES Project, Centers for Disease Control and Prevention (based on BRFSS data), crude prevalence adults 18 and older
CDC PLACES data for communities as a whole are only available for five of the twenty-one communities in Norwood Hospital's service area.
Red bars equal margin of error.

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

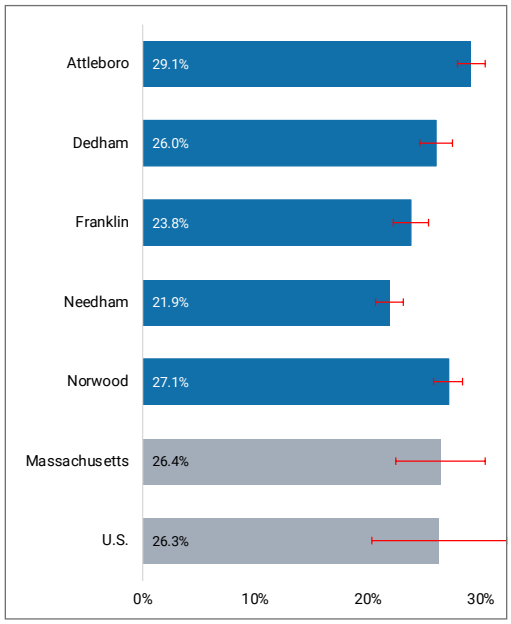
[33] Note that differences based on BRFSS data included throughout this section are often within the margin of error.

Lack of Physical Activity

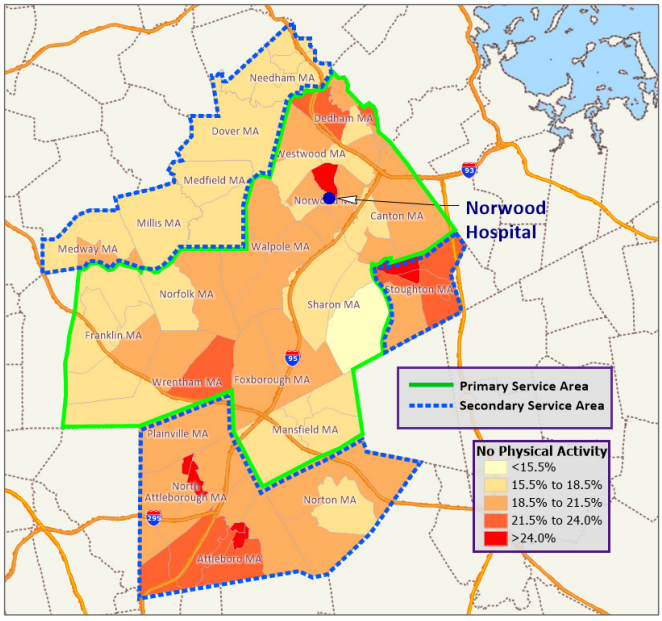
High percentages of adults in many areas of Norwood Hospital's service area are not physically active. Among communities with available data, lack of physical activity ranges from a high of 29.1% in Attleboro to a low of 21.9% in Needham. This compares to 26.4% statewide and 26.3% nationally. Exercise prevalence in most of the service area's Census tracts are similar to or below the statewide prevalence, although there are tracts with higher levels of inactivity, including the Census tract just north of Norwood Hospital, where 28.2% of adults reported not engaging in any form of leisure time physical activity in the past month (see Figure 39).

Figure 39
Self-Reported No Leisure-Time Physical Activity Among Adults Aged >=18 Years in Past Month, 2019

No Leisure-Time Physical Activity by Community



No Leisure-Time Physical Activity by Census Tract



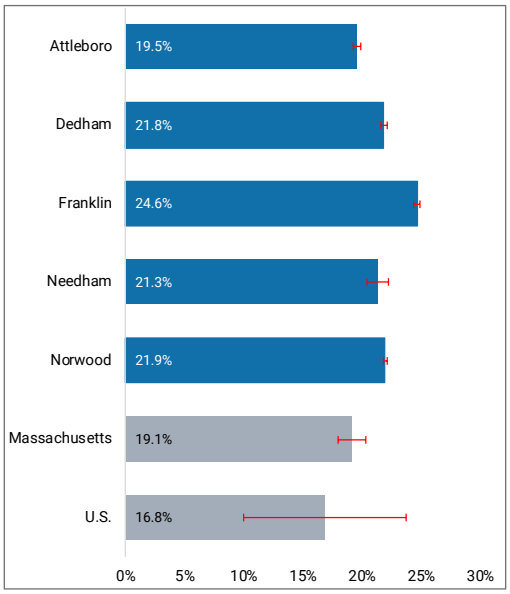
Source: PLACES Project, Centers for Disease Control and Prevention (based on BRFSS data), crude prevalence, adults 18 and older
CDC PLACES data for communities as a whole are only available for five of the twenty-one communities in Norwood Hospital's service area.
Red bars equal margin of error.

Binge Drinking

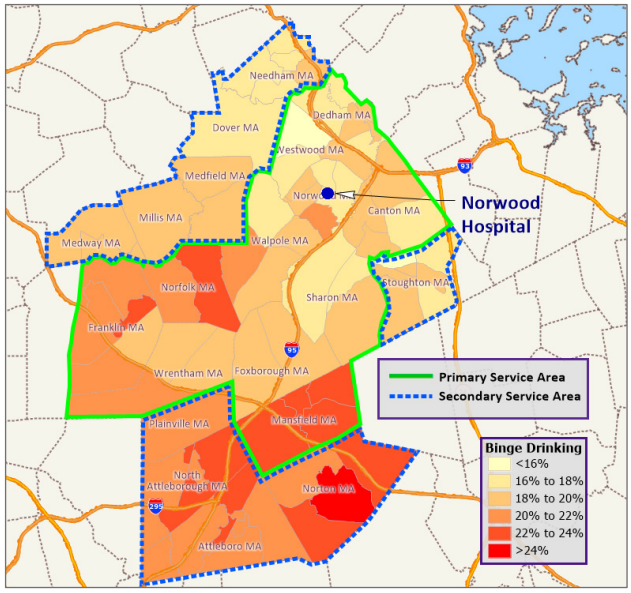
As noted earlier, stakeholders cautioned that the region's health and service providers need to continue to focus on alcohol abuse. As one survey respondent remarked, "Alcohol abuse causes many more problems in our region compared to other substances, especially when it comes to domestic violence." Among communities with available data, binge drinking ranges from a high of 24.6% in Franklin to a low of 19.5% in Attleboro. [34] This compares to 19.1% statewide and 16.9% nationally. Comparatively, binge drinking prevalence by Census tract varies throughout the service area, although it is most prevalent in the southern portion of the region (see Figure 40).

Figure 40
Self-Reported Binge Drinking Prevalence Among Adults, 2019

Binge Drinking Prevalence by Community



Binge Drinking Prevalence by Census Tract



Source: PLACES Project, Centers for Disease Control and Prevention (based on BRFSS data), crude prevalence adults 18 and older
CDC PLACES data for communities as a whole are only available for five of the twenty-one communities in Norwood Hospital's service area.
Red bars equal margin of error.

NUTRITION

It is nearly impossible to maintain good health without a nutritious diet, even with abundant exercise. Stakeholders cautioned that the community needs more nutrition-focused education to raise awareness of nutrition-related health outcomes and how to maintain a healthy diet. One key informant noted that patients are often referred to a dietician by their primary care physician, but that the patient does not always show up for the appointment. It was suggested that patient follow-ups should be conducted to determine why they miss appointments so that new strategies can be developed to increase attendance. Currently, it is thought that insurance coverage, transportation, and stigma are the primary culprits, but as one provider noted, "No one knows for sure, although many times it's insurance-related. I'd like to be able to refer people for nutrition-related services, but often the patient doesn't know what's covered or their insurance doesn't cover these types of services at all."

COVID-19 certainly exacerbated issues related to food and nutrition, although the region responded by expanding food pantries and making home deliveries. Nutrition is discussed in further detail in this section.

[34] 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.

HEALTH OUTCOMES

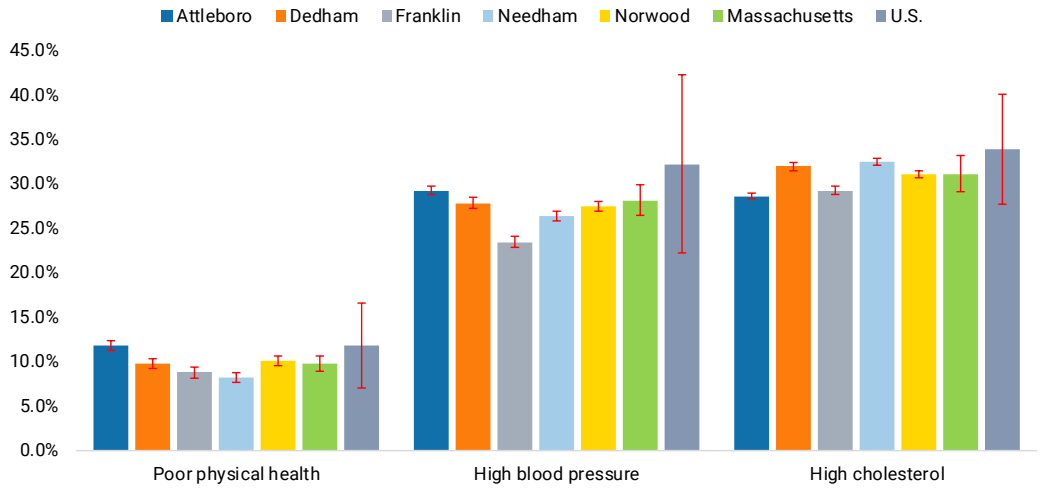
Unhealthy behaviors lead to poor health outcomes. However, it is important to recognize that unhealthy behaviors are only part of the equation, because not everyone has the means and opportunity to make healthy decisions. Consequently, addressing health behaviors requires that health professionals and policy makers develop strategies to encourage residents to live healthy lives, while also addressing barriers that prevent many people from accessing the supports and resources necessary to be healthy.

While health outcomes for much of the Norwood Hospital Service Area are on par with or better than the Massachusetts and U.S. averages, there are areas in the region that have poorer outcomes. Similar to unhealthy behaviors, higher prevalence in some Census tracts coincides with areas that have the highest levels of vulnerable populations, as defined by low-income and low educational levels.

Health Conditions

Figure 41 presents self-reported data on three health conditions for the five communities for which data are available, as well as the Massachusetts and U.S. averages. Most differences in prevalence between communities are within the margin of error, but are generally below the Massachusetts and U.S. prevalence.

Figure 41
Self-Reported Health Conditions by Community



Source: PLACES Project, Centers for Disease Control and Prevention (based on BRFSS data), crude prevalence adults 18 and older
Data for communities as a whole are only available for five of the twenty-one communities in Norwood Hospital's service area.
Red bars represent margin of error.

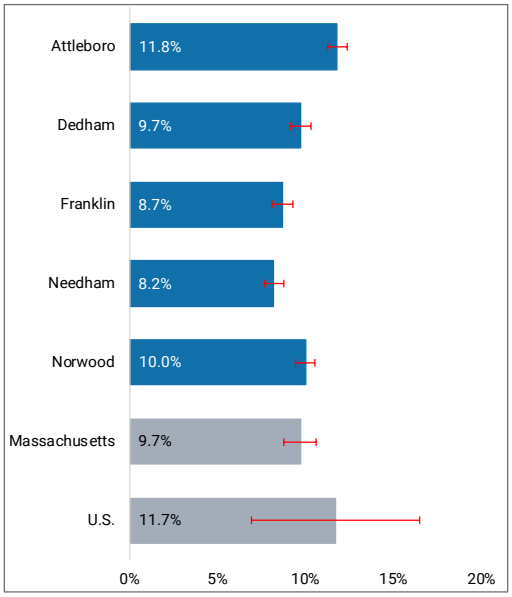
The next three figures break out the health outcome data from Figure 41 by community and by Census tract.

Self-reported poor physical health

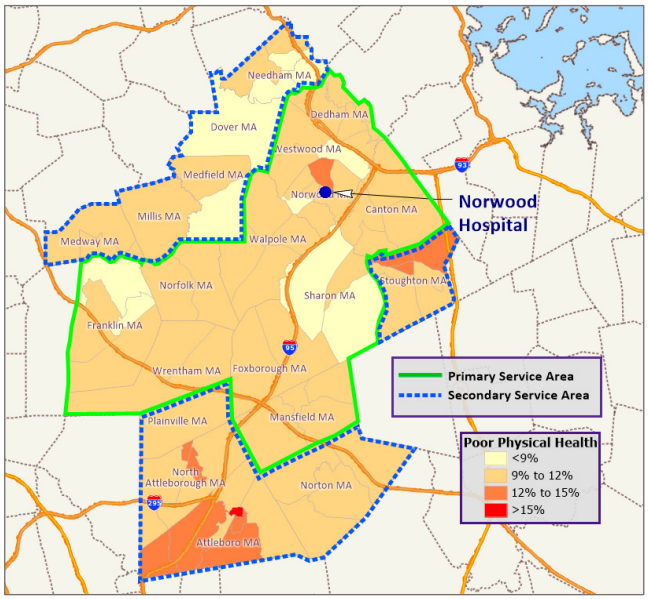
Among communities with available data, the prevalence of poor physical health ranges from a high of 11.8% in Attleboro to a low of 8.2% in Needham. This compares to 9.7% statewide and 11.7% nationally. Most Census tracts in the service area have a prevalence that is similar to or below the statewide prevalence, although there are several tracts where the prevalence is above the Massachusetts and U.S. average, including the Census tract just north of Norwood Hospital (see Figure 42).

Figure 42
Self-Reported Poor Physical Health for 14 Days or More, 2019

Poor Physical Health Prevalence by Community



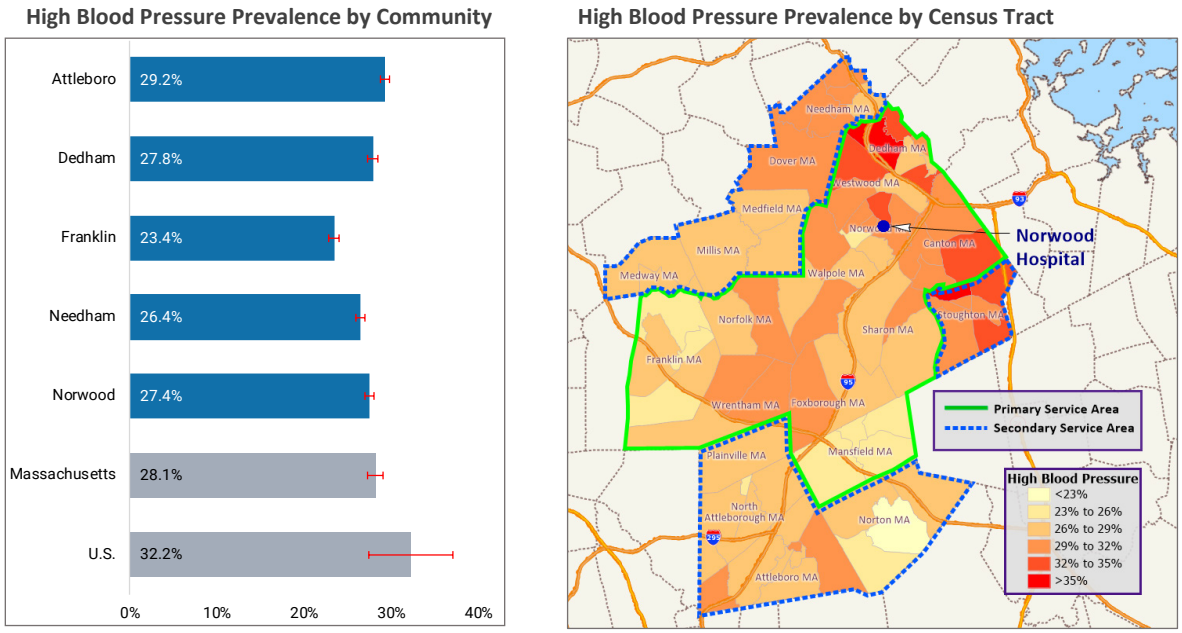
Poor Physical Health Prevalence by Census Tract



Source: PLACES Project, Centers for Disease Control and Prevention (based on BRFSS data), crude prevalence adults 18 and older
Data for communities as a whole are only available for five of the twenty-one communities in Norwood Hospital's service area.
Red bars represent margin of error.

Figure 43 presents self-reported prevalence for high blood pressure. Among communities with available data, the high blood pressure prevalence ranges from a high of 29.2% in Attleboro to a low of 23.4% in Franklin, which compares to 28.1% statewide and 32.2% nationally. Most Census tracts in the service area have a prevalence that is similar to or below the statewide prevalence, although there are several tracts with higher prevalence, including areas north of Norwood Hospital (see Figure 43).

Figure 43
Self-Reported High Blood Pressure, 2019

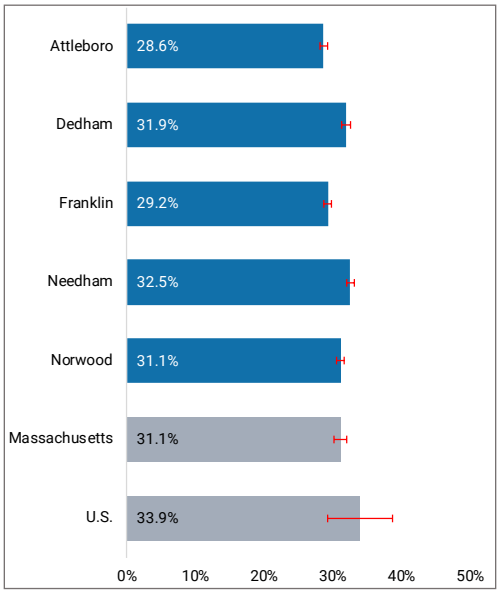


Source: PLACES Project, Centers for Disease Control and Prevention (based on BRFSS data), crude prevalence adults 18 and older
Data for communities as a whole are only available for five of the twenty-one communities in Norwood Hospital's service area.
Red bars represent margin of error.

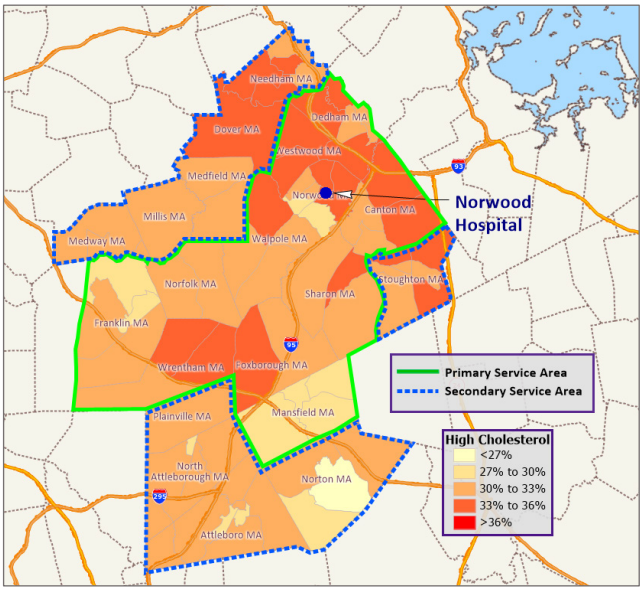
Figure 44 presents self-reported prevalence for high cholesterol. Among communities with available data, the prevalence of high cholesterol ranges from a high of 32.5% in Needham to a low of 28.6% in Attleboro, which compares to 31.1% statewide and 33.9% nationally. Most Census tracts in the service area have a prevalence similar to or below the statewide prevalence, although there are several tracts where the prevalence is above the Massachusetts and U.S. average, including many of the tracts surrounding Norwood Hospital.

Figure 44
Self-Reported High Cholesterol Prevalence, 2019

High Cholesterol Prevalence by Community



High Cholesterol Prevalence by Census Tract



Source: PLACES Project, Centers for Disease Control and Prevention (based on BRFSS data), crude prevalence adults 18 and older
Data for communities as a whole are only available for five of the twenty-one communities in Norwood Hospital's service area.
Red bars represent margin of error.

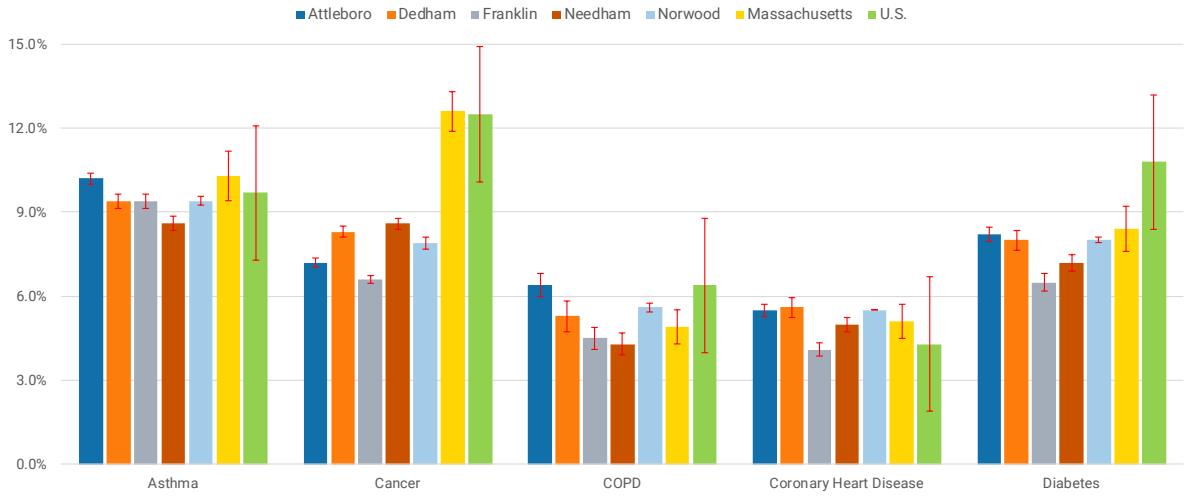
Disease Prevalence

Although chronic conditions can be genetic, poor disease outcomes are partly the result of unhealthy behaviors. However, the social determinants of health identified throughout this analysis are often large contributors to health inequities. Thus, effectively remedying high disease prevalence and poor health outcomes requires addressing the social environment that contributes to health inequities.

Figure 45 compares self-reported disease prevalence for five common diseases. Prevalence varies for each disease among the five communities for which data are available, although disease prevalence among the communities is generally lower than the statewide and national averages (although in some cases the differences are within the margin of error). Higher 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. Given what we understand about the social determinants of health, one could conclude that socioeconomic inequities have resulted in a higher prevalence of chronic diseases in some areas of the region. Again, these disparities speak not only to the need for preventative care and treatment of chronic diseases, but also to address the social determinants that contribute health inequities in the region.[35]

[35] This dataset is available for the state and nation for 2019, but not individual communities.

Figure 45
Self-Reported Disease Prevalence, 2019



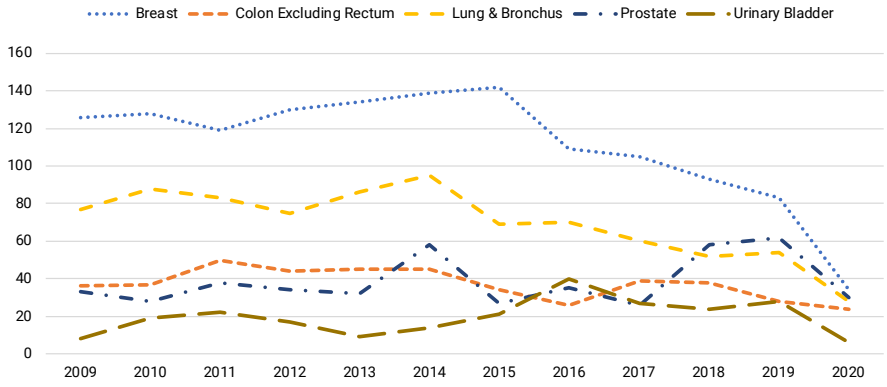
Source: PLACES Project, Centers for Disease Control and Prevention (based on BRFSS data), crude prevalence adults 18 and older
Data for communities as a whole are only available for five of the twenty-one communities in Norwood Hospital's service area.
Red bars represent margin of error.

Norwood Hospital Cancer Data

Concerns have been raised that the pandemic would delay the diagnosis and treatment of some cancers, with potentially serious consequences. Delays in screening, the experts warned, could mean that the "missed" cancers might be larger and more advanced when they were ultimately detected.[36]

Figure 46 displays the top five types of cancers treated at Norwood Hospital from 2009 to 2020. The number of incidences by type varies from year-to-year, although the lowest number of incidences was in 2020, which is primarily attributable to the hospital closing in June of that year. Notably, the number of breast cancer incidences increased from 2010 to 2015 but has declined steadily since 2015, which may be partly attributable to residents going to Boston-area hospitals for screening and treatment.[37]

Figure 46
Top Types of Cancer by First Year Diagnosed, Norwood Hospital, 2009–2020



Source: Norwood Hospital

[36] Bakouny Z, Paciotti M, Schmidt AL, Lipsitz SR, Choueiri TK, Trinh Q. Cancer Screening Tests and Cancer Diagnoses During the COVID-19 Pandemic. JAMA Oncol. 2021;7(3):458–460. doi:10.1001/jamaoncol.2020.7600.

[37] Conclusion should be made with caution because an increasing or decreasing number of incidences might be attributable to factors such as additional screening or new programs. Thus, higher incidences do not always equate to higher rates of cancer in the community.

WOMEN'S HEALTH

Women play an essential role in maintaining family health and have unique health care needs related to childbirth and care. 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 and later on in their child's life.

- The percentage of low-birthweight babies born from mothers who reside in the Norwood Hospital Service Area is lower (6.8%) in comparison to the state (7.4%) (see Table 8).
- The percentage of preterm babies born from mothers who reside in the Norwood Hospital Service Area is lower (8.1%) in comparison to the state (8.9%) (see Table 8).

Table 8
Neonatal outcomes, 2017

	Number of Births by Community	^ % Low Birthweight	* % Preterm
Primary Service Area:			
Canton	228	7.0%	10.1%
Dedham	271	7.0%	9.2%
Foxborough	178	7.3%	9.6%
Franklin	275	7.3%	8.7%
Mansfield	209	5.7%	7.2%
Norfolk	115	4.3%	4.3%
Norwood	385	8.3%	9.9%
Sharon	151	9.3%	7.9%
Walpole	243	3.3%	8.6%
Westwood	121	7.4%	9.9%
Wrentham	121	4.1%	Conf.
Secondary Service Area:			
Attleboro	515	9.9%	9.1%
Dover	33	Conf.	15.2%
Medfield	92	Conf.	5.4%
Medway	113	6.2%	Conf.
Millis	84	Conf.	8.3%
Needham	249	4.4%	6.4%
N. Attleborough	260	6.5%	7.3%
Norton	181	6.6%	8.8%
Plainville	95	Conf.	9.5%
Stoughton	292	11.6%	9.2%
Primary Total	2,297	6.7%	8.4%
Secondary Total	1,914	6.9%	7.9%
Primary/Secondary Total	4,211	6.8%	8.1%
Massachusetts	70,704	7.4%	8.9%

Source: Massachusetts Birth Report (births to mothers who report their place of residence)
Conf: due to small numbers (n=1-4), exact count not provided
^ < 2,500 grams (5.5 lbs.); * < 37 weeks gestation

FOOD INSECURITY

The U.S. Department of Agriculture (USDA) defines food insecurity as a lack of consistent access to enough food for an active, healthy life.[38] In 2018, an estimated 1 in 9 Americans were food insecure, equating to over 37 million Americans, including more than 11 million children.[39] People who are food insecure are at an increased risk for a variety of negative health outcomes, including obesity and other chronic diseases. Food insecurity often overlaps with many of the social determinants of health discussed throughout this report such as income, housing, race, and education. Consequently, strategies to address food insecurity must be undertaken in a social determinant context.

While food insecurity is closely linked to poverty, people above the poverty line can experience food insecurity, which was especially evident during the COVID-19 pandemic. Many stakeholders noted that demand increased sharply at the outset of the pandemic and many pantries and food banks were serving people they'd never seen before. Indeed, a survey conducted by The Greater Boston Food Bank during the pandemic reports that 30% of Massachusetts residents who used a food pantry during the pandemic did so for the first time.[40]

Throughout the pandemic, a number of municipal departments and community organizations throughout the Norwood Hospital Service Area provided meal delivery services to those in need, including those who could not physically visit a food pantry or other distribution site. Local Councils on Aging were deeply involved in providing meals to seniors and connecting them to other organizations and resources during the pandemic. An issue echoed by many stakeholders is related to access and the relative isolation of some seniors. As one key informant noted, "Even in the best of times we spend a lot of time connecting seniors to various services, especially when it comes to providing meals. The pandemic showed us just how isolated some seniors are, even those that live in our neighborhoods. There just aren't many transportation options for these folks, especially those who don't have immediate family in the area." Another commented that, "Even though programs exist to assist with food insecurity, reaching those in need can be more difficult outside of walkable urban areas or regions with limited public transportation." Additional food resources became available during the pandemic and outreach efforts by a number of organizations increased. However, there is concern among some that "there are still many individuals in our communities who are unaware of what may be available."

Percentage of Food Insecure Persons

In 2019, an estimated 566,930 Massachusetts residents were food insecure, or about 1 in 12 residents. This number increased by an estimated 47.1% to 834,100 residents during the COVID-19 pandemic, including over 214,000 children. In the height of the pandemic, the Census Bureau Household Pulse Survey noted that 19.6% of Massachusetts households were unsure of where they would get their next meal.[41] Norfolk County, which includes Norwood and its surrounding towns, has one of the lowest percentages of food insecurity among counties that are part of the service area; an estimated 4.6% of residents were food insecure in 2019, although this percentage increased to 12.5% in 2020 (see Figure 47)

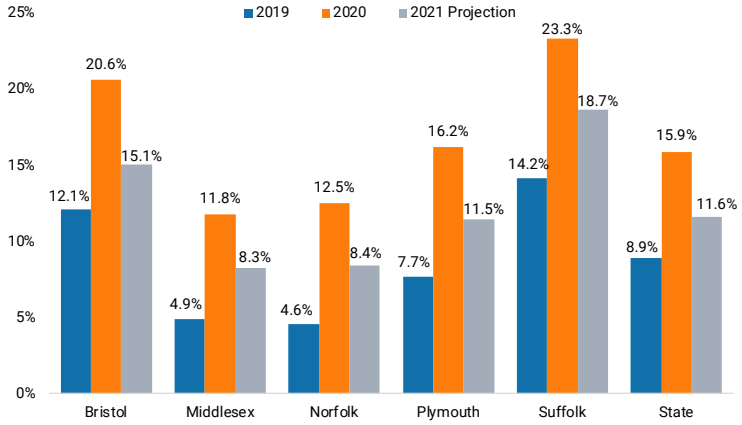
[38] US Department of Agriculture, (2019). Definitions of Food Security. Available online at: https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx

[39] Coleman-Jensen, A., et al. (2019). Household Food Security in the United States in 2018. U.S. Department of Agriculture Economic Research Service. Available online at: https://www.ers.usda.gov/webdocs/publications/94849/err-270.pdf?v=963.1

[40] The Greater Boston Food Bank. May 2021. Gaps in Food Access During the COVID-19 Pandemic in Massachusetts. Boston, MA.

41 Household Pulse Survey Public Use File. https://www.census.gov/programs-surveys/household-pulse-survey/datasets.html. Accessed July 15, 2021.

Figure 47
Percentage of Persons in Food Insecure Households by Norfolk County and Surrounding Counties

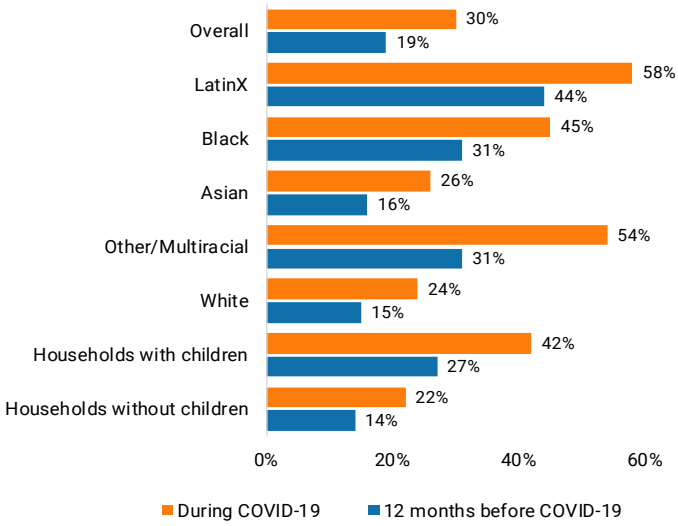


Source: Feeding America[42]

Food insecurity is not experienced by all groups equally. A survey conducted by The Greater Boston Food Bank in 2021 estimates that food insecurity rates among adults during the pandemic were highest among people of color and adults with children: 58% of Latinx adults, 45% of Black adults, and 26% of Asian adults. This compares to 24% of White adults (see Figure 48).[43] Among households with children, 42% reported being food insecure.

As noted earlier, organizations ramped up during the pandemic to meet the increase need for food and meals, from providing drive thru prepackaged groceries and brown bag lunches to full frozen or prepared meals. Key informants praised the ability of various organizations to marshal resources during the pandemic, and noted that one positive outcome of the pandemic is that food insecurity became a top priority and that strategies and programs developed to address it will continue into the future.

Figure 48
Food Insecurity Rates among Massachusetts Adults



Source: The Greater Boston Food Bank

42 Gundersen, C., M. Hake, A. Dewey, E. Engelhard (2021). The Impact of the Coronavirus on Food Insecurity in 2020 & 2021, Update March 2021 [Data file and FAQ]. Available from feedingamerica.org/.

[43] The Greater Boston Food Bank. May 2021. Gaps in Food Access During the COVID-19 Pandemic in Massachusetts. Boston, MA.

Supplemental Nutrition Assistance Program (SNAP)

The federally-funded Supplemental Nutrition Assistance Program (SNAP) is the most utilized nutrition assistance program in the nation and provides low-income households funds to purchase food. In the Norwood Hospital Service Area, 31,904 residents received SNAP benefits in August 2021, which is an increase of 41.9% from February 2020 (pre-pandemic). In fact, the number of SNAP recipients increased by 17.8% in just two months from before the pandemic (February 2020) to the time when many of the COVID-19 related restrictions were in place in April 2020 (see Table 9).

Table 9
Recipients Receiving SNAP Benefits by Service Area Community

	February 2020	April 2020	August 2021	Increase Feb 20 - April 20	Increase Feb 20 - Aug 20
Primary Service Area					
Canton	1,187	1,342	1,734	13.1%	46.1%
Dedham	1,443	1,711	2,087	18.6%	44.6%
Foxborough	894	1,059	1,283	18.5%	43.5%
Franklin	1,231	1,388	1,654	12.8%	34.4%
Mansfield	1,099	1,349	1,673	22.7%	52.2%
Norfolk	163	217	240	33.1%	47.2%
Norwood	2,130	2,544	3,106	19.4%	45.8%
Sharon	542	620	893	14.4%	64.8%
Walpole	810	955	1,137	17.9%	40.4%
Westwood	216	248	349	14.8%	61.6%
Wrentham	335	436	605	30.1%	80.6%
Secondary Service Area					
Attleboro	4,857	5,614	6,313	15.6%	30.0%
Dover	18	22	39	22.2%	116.7%
Medfield	207	244	260	17.9%	25.6%
Medway	368	433	511	17.7%	38.9%
Millis	305	365	417	19.7%	36.7%
Needham	655	767	907	17.1%	38.5%
N. Attleborough	1,674	1,968	2,356	17.6%	40.7%
Norton	1,275	1,441	1,715	13.0%	34.5%
Plainville	615	746	877	21.3%	42.6%
Stoughton	2,455	3,014	3,748	22.8%	52.7%
Primary Service Area	10,050	11,869	14,761	18.1%	46.9%
Secondary Service Area	12,429	14,614	17,143	17.6%	37.9%
Total Service Area	22,479	26,483	31,904	17.8%	41.9%
Massachusetts	786,749	860,204	963,158	9.3%	22.4%

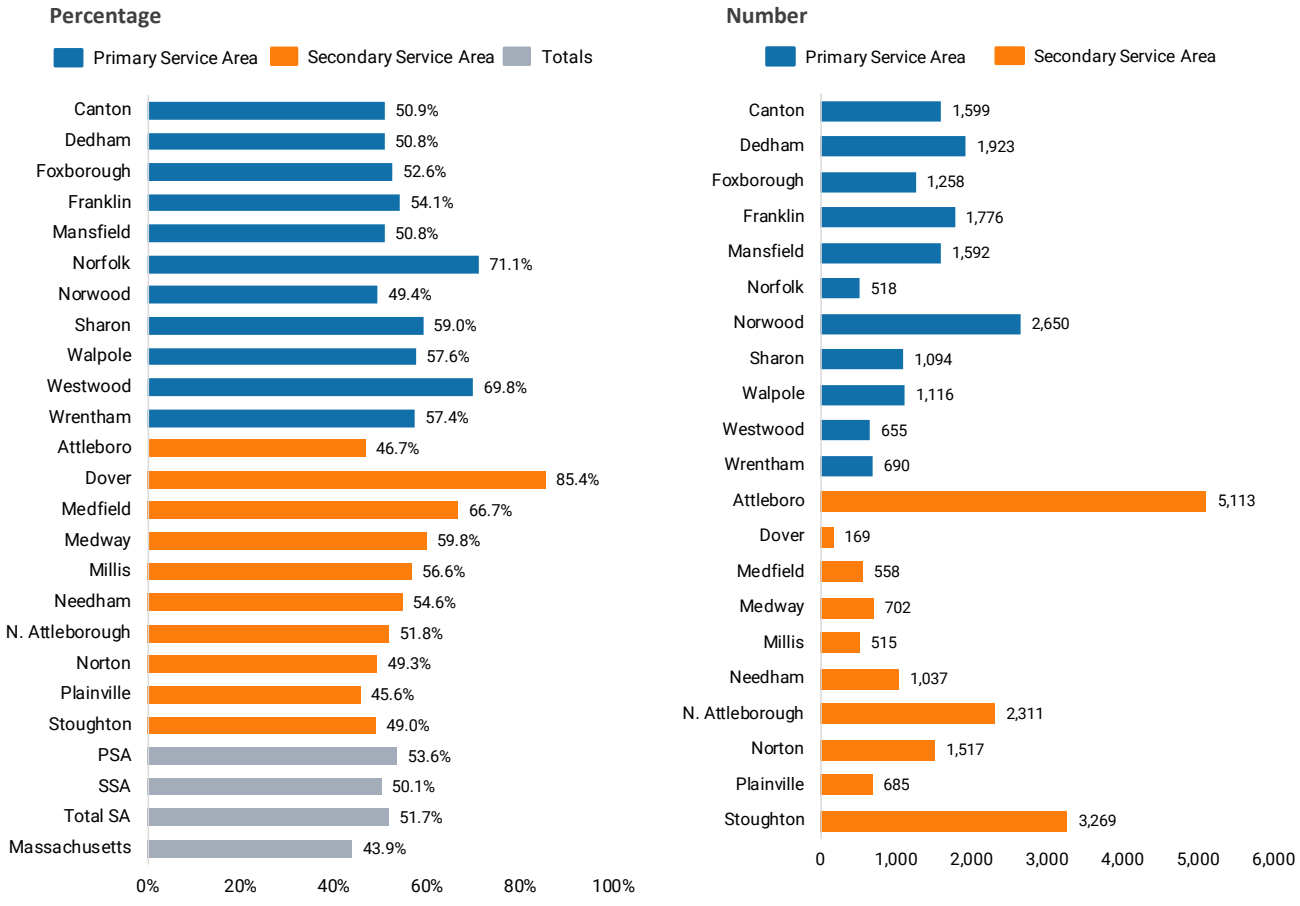
Source: Massachusetts Department of Transitional Assistance, Monthly Zip Code Catchment Reports

SNAP Gap

The SNAP Gap is defined as the difference between the number of low-income Massachusetts residents receiving MassHealth who are likely SNAP eligible and the number of people enrolled in the program. Despite the significant number of residents utilizing SNAP, it is estimated that over 650,000 Massachusetts residents are likely eligible for SNAP benefits but are not enrolled. A survey conducted by the MassINC Polling Group of over 10,000 K-12 parents and guardians in selected Massachusetts public school districts concluded that under half of respondents making $25,000 or less–most all of who likely qualified for SNAP–received SNAP benefits during the pandemic. In addition, 53% of households making less than $15,000, and 43% of households making between $15,000 and $25,000, reported not knowing how to apply for SNAP.[44] Self-reliance, misinformation, computer access, stigma, application difficulties, and lack of awareness are some of the barriers to enrolling.[45] All of these issues are in some way related to health equity and access.

Figure 49 displays the SNAP Gap by community in the Norwood Hospital Service Area. Dover has the highest SNAP Gap rate, although that percentage represents only 169 individuals. Attleboro (5,113 residents), Stoughton (3,269 residents), and Norwood (2,650 residents) have the highest number of residents who may be eligible for SNAP but are not enrolled.

Figure 49
SNAP Gap % By Community



Source: The Food Bank of Western Massachusetts, via Tableau, Updated April 8, 2021

[44] MassINC Polling Group. July 2021. Lessons from P-EBT to increase SNAP access A survey of public-school parents in targeted Mass. Boston, MA.

[45] Project Bread. July 2021. *Barriers to SNAP.* Data calculated using MassHealth and Department of Transitional Assistance data, March 2021. See https://www.projectbread.org/blog/close-the-snap-gap-read-our-testimony. Accessed October 12, 2021.

Healthy Incentives Program (HIP) Benefits

Food insecurity is not just about the availability of food. Of significant importance are the availability of nutritious foods and a basic understanding of nutrition. Several key informants and survey respondents noted that nutrition education in the region is lacking and that "people don't know even the basics about nutrition." Another key informant noted that many of her clients who are referred to a dietician do not show up for the appointment or simply do not "follow through on the dietician's advice."

The Healthy Incentives Program (HIP) puts money back on a SNAP recipient's EBT card when they use SNAP to buy healthy, local fruits and vegetables from HIP farm vendors.[46] However, the Massachusetts Department of Transitional Assistance reports that only 6% of SNAP recipients in Norfolk County used HIP benefits in August 2021 (see Table 9). A key informant noted that many SNAP recipients are not aware that they can use their HIP benefits at farmers markets and similar locations such as community supported agriculture (CSA) and farm stands. However, one stakeholder noted that farmers markets can be expensive and that SNAP benefits "can be stretched farther at the usual outlets like a grocery store. My clients don't necessarily care about fresh foods – they want to stretch their benefits."

Table 10
HIP Household Usage by County
November 2021

County	Household Usage
Bristol County	2%
Middlesex County	6%
Norfolk County	6%
Plymouth County	2%
Suffolk County	7%

Source: Massachusetts Department of Transitional Assistance

[46] Up to a monthly cap of $40, $60, or $80.

Priority Issue 3: Housing Affordability, Stability, and Homelessness

The community survey and stakeholder interviews clearly indicate that housing is a top issue of concern in the region. Nearly every person interviewed for this report spoke at length about urgent housing challenges and ways in which housing affects other basic needs, including the ways in which a lack of affordable housing contributes to housing instability and homelessness, both of which are strong predictors of health outcomes. Overall, stakeholders are clear that housing challenges have been made worse by COVID-19, although the pandemic primarily worsened existing housing issues.

The housing issue in the Norwood Hospital Service Area is primarily two-pronged; the focus in many of the area's larger communities is on rising rents and its effect on the working poor and seniors. Conversely, the issue in many of the area's more affluent and suburban communities is focused on the significant increase in single-family home prices. This dynamic is creating issues for seniors who want to remain in their homes but who are "house rich, cash poor."

Key takeaways:

- Rising home prices are also a roadblock for current renters who would like to purchase homes in the area but cannot afford to do so. Many homeowners are also concerned that their children will be unable to afford to live in the area.
- Key informants suggest that rising rents and home prices drive people out of the area and that this "churn" is a threat to maintaining a balanced demographic and socioeconomic population mix.
- While many seniors are looking to sell their homes and downsize, there are not many options in the region. Having to move out-of-region or to more remote areas impacts access to care for seniors, since moving further away from hospitals, care facilities, and social supports can be difficult for those without transportation.
- The Norwood service area is primarily a homeowner market; 76% of the service area's households are owner-occupied, which compares to 62% of households statewide. Norwood is the only community in which the percentage of renter-occupied households is higher than the state average (43% versus 39%).
- Among owner-occupied households, only five communities in the Norwood Hospital Service Area have median monthly housing costs below the state median $2,225 (Attleboro, North Attleborough, Norwood, Norton, and Stoughton).
- Median monthly housing costs for renter-occupied households ranges from a low of $1,044 in North Attleborough to $2,181 in Dover, with only seven of the service area's twenty-one communities having a median monthly housing cost below the state median of $1,282.
- More than a quarter (25.9%) of owner-occupied households and 49% of renter-occupied households in the Norwood Hospital Service Area were housing cost burdened in 2019. Households in nine of the service area's twenty-one communities have a severe rent burden, which is defined as paying more than 50 percent of one's income on rent.

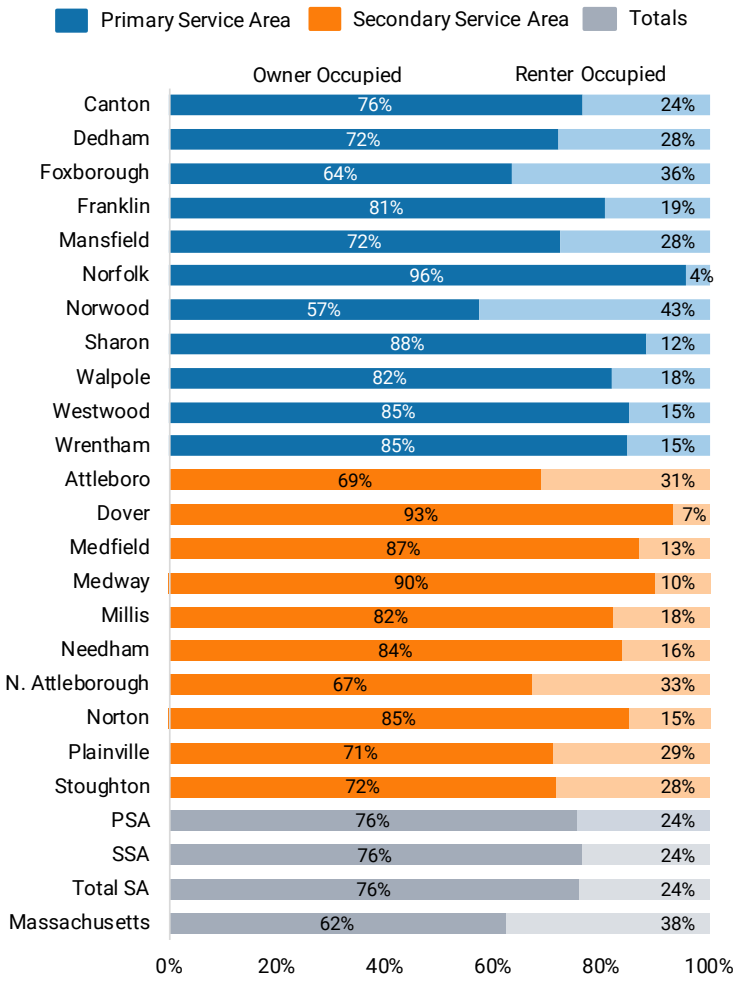
Housing Affordability

Key informants were clear that there is a need for a "more vibrant affordable housing stock," since "many residents are getting priced out of the market and are forced to leave the area to find housing that meets their needs and budget." While housing affordability issues were salient before the pandemic, one stakeholder noted that, "access to resources has become much more limited during these pandemic times for those who are living on the margins, including the working poor." Another commented, "Even if we increase the supply of rentals in the region, most of these units will likely be clustered near commuter rail and will be very expensive. It doesn't solve the affordability equation for the clients I work with."

Renter-Occupied versus Owner-Occupied

The Norwood service area is primarily a homeowner market; 76% of the service area's households are owner-occupied, which compares to 62% of households statewide. Accordingly, affordability issues are primarily related to homeownership rather than rentals for most communities in the Norwood service area. Norwood is the only community in which the percentage of renter-occupied households is higher than the state average (43% versus 39%) (see Figure 50). The total number of number of housing units increased by 4.3% in the service area from 2014 to 2019, which compares to 2.9% statewide.

Figure 50
Percentage of Owner-Occupied and Renter-Occupied Housing

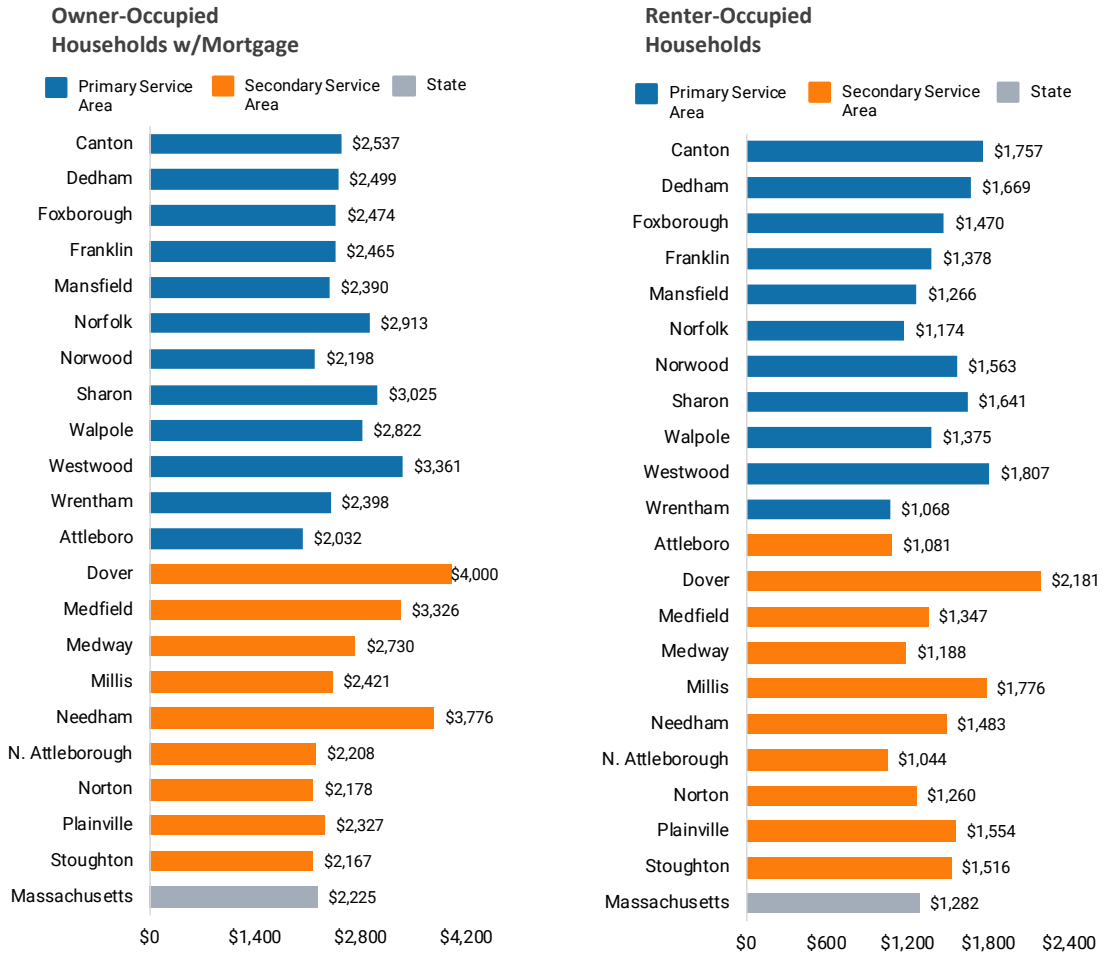


Source: ACS 5-Year Estimates, Table DP04, 2015–2019

Median Monthly Housing Costs

Only five communities in the Norwood Hospital Service Area have median monthly housing costs below the state median $2,225 (Attleboro, North Attleborough, Norwood, Norton, and Stoughton). Monthly housing costs range from a low of $2,032 in Attleboro to a high of $4,000+ in Dover (see Figure 51).[47] Median monthly housing costs for renter-occupied households ranges from a low of $1,044 in North Attleborough to $2,181 in Dover, with seven communities having a median monthly housing cost below the state median of $1,282.

Figure 51
Monthly Housing Costs, 2019

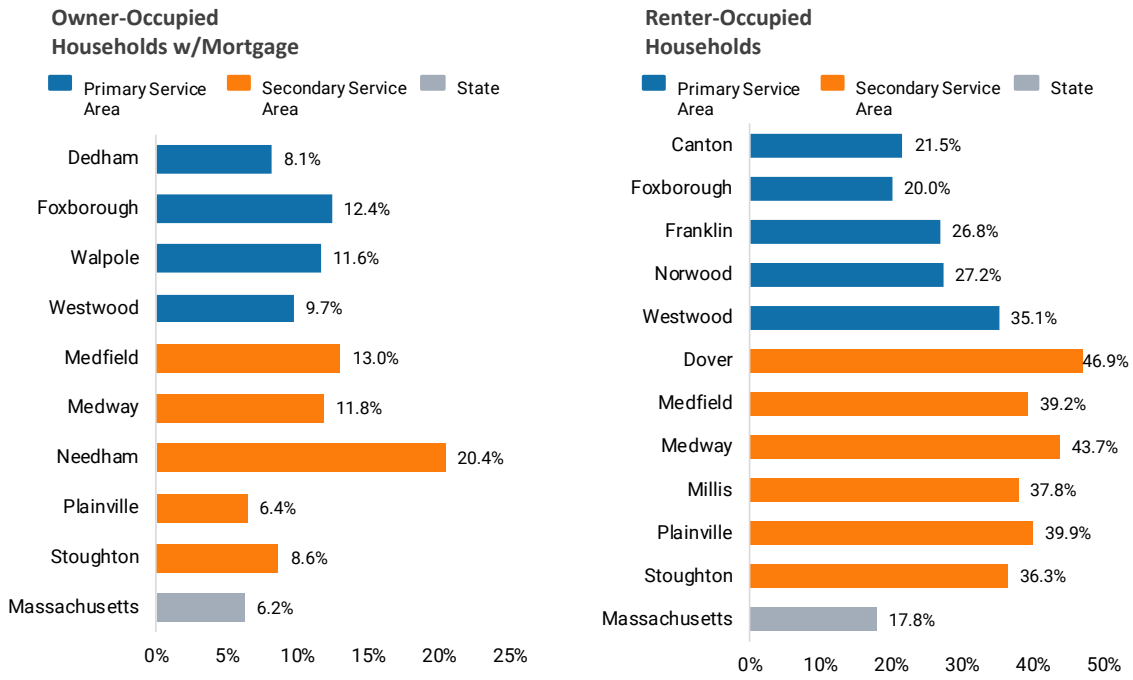


Source: ACS 5-Year Estimates, Table DP04, 2015–2019

[47] The exact median for Dover is not reported by the U.S. Census, i.e., the value is reported as "$4000+".

Figure 52 presents the change in monthly housing costs from 2014 to 2019 for owner-occupied and renter-occupied households in communities where the change is above the state average. Change in monthly housing costs for owner-occupied households range from a low of 6.4% in Plainville to a high of 20.4% in Needham. Notably, monthly housing costs have increased more significantly for renter-occupied households; change in monthly housing costs among renter-occupied households range from a low of 20.0% in Foxborough to a high of 46.9% in Dover. As one key informant noted, "Renters in many communities are more likely to be blue collar families just trying to make ends meet. And at the end of the day they have no equity to fall back on."

Figure 52
Change in Monthly Housing Costs, 2014–2019



Source: ACS 5-Year Estimates, Table DP04, 2015–2019
Data are not inflation-adjusted

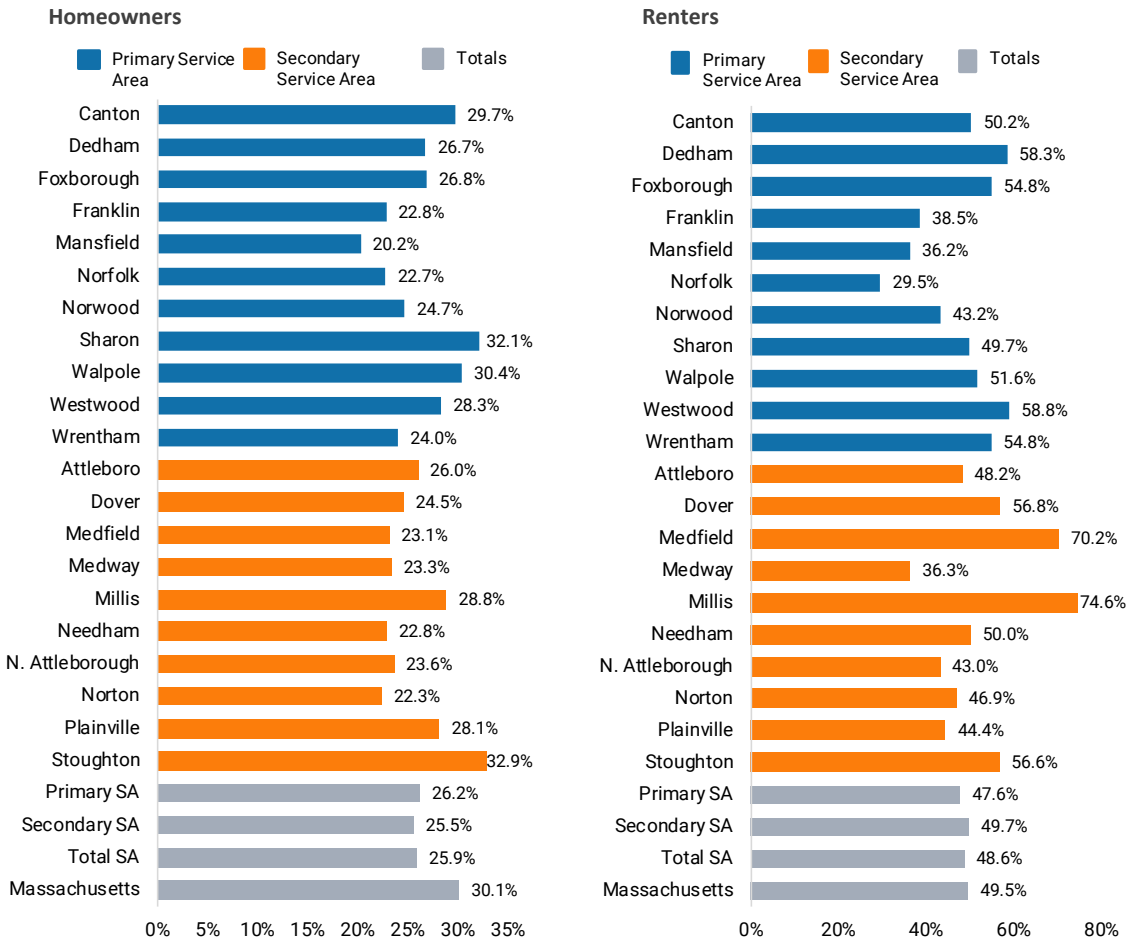
Housing Cost Burden

Housing affordability is an issue that Massachusetts has been grappling with for some time. Despite the Norwood Hospital Service Area as a whole having high-income levels, many households are spending a sizeable portion of their incomes on housing. This dynamic results in many households with rent or mortgage payments that are above their means, which in turn leaves less household income available for health care or to meet other basic needs.

One key informant noted that many of the region's seniors on fixed income are "house rich, cash poor," meaning that they have more equity locked in their home than cash assets. While many seniors would like to remain in their homes, one key informant noted that "one disaster such as a high medical bill, costly home repair, or some other unforeseen issue can put a lot of stress on seniors." Another noted, "It often affects their [seniors] quality of life because here they are in a beautiful home, yet they can't afford some of life's basic necessities." Another noted, "You might think it's a good thing when you own your home and home prices continue to rise, but that just means your property tax bill gets higher too. It puts a lot of pressure on seniors to consider selling, even though they'd rather stay where they are." Stakeholders also noted that there are few housing options in the region for seniors who would like to downsize.

During the 2015–2019 period, 25.9% of homeowners and 48.6% of renters in the Norwood Hospital Service Area were housing cost burdened (see Figure 53).[48] The number of housing cost burdened households is likely to increase if current trends persist.

Figure 53
Housing Cost Burdened Households, 2019



Source: ACS 5-Year Estimates, Table DP04, 2015–2019

[48] The U.S. Department of Housing and Urban Development 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.

Other Factors in the Rental Affordability Equation

Rising rents and rising costs for basic needs are burdening many households in the Norwood Hospital Service Area. However, there are other costs that are driving affordability issues for many renter households. For example, a stakeholder noted that some property owners are requiring tenants to bear upfront rental costs, which might include first, last, and security deposit, application fees, and CORI check fees.[49] Landlords are also performing credit checks and pulling eviction history records on prospective tenants.[50] A key informant noted that while these factors may not seem burdensome to the majority of the service area's residents, there are many areas with large percentages of lower-income residents who do in fact have trouble meeting these expenses. "This is particularly true of the working poor who do not qualify for any assistance."[51] Another lamented, "They are even charging application fees for veterans who get charged regardless of whether or not they get the apartment."

For families who are renting, the high cost of single-family homes does not often permit the natural transition of renters eventually purchasing homes in the region as their economic situations improve. As one stakeholder noted, "This forces many young and talented individuals and families to leave the region for places with lower housing costs, such as the Southcoast." Another noted, "Families who are renting want to stay in the region, especially for the quality of the schools and the general quality of life, but often they just can't afford to purchase a home. Their frustration leads them to leave the region for cheaper housing." A survey respondent noted that many of the most affordable rental options "are the furthest away from public transportation. Finding reasonable rent near a train station is impossible."

HOMELESSNESS

Key informants identified homelessness as a significant issue in certain areas of the region, which is partly the result of a shortage of affordable housing. Mental health and substance abuse issues, which are highly prevalent among the homeless population, are also key factors in the homelessness equation. Often, experiencing homelessness in combination with these issues creates challenges for entering shelters and transitional housing. Stakeholders noted that more resources and more people are needed to support and maintain a consistent engagement with homeless individuals who are experiencing mental health or substance abuse issues. This includes having resources available in the shelters, such as recovery coaches who can "provide a warm handoff to the appropriate services and who deeply understand the needs of this population."

One survey respondent commented that the pandemic has created additional issues among the homeless population because there are fewer options for housing due to health concerns with communal living. While the pandemic has subsided to a degree, one survey respondent noted, "There's still a reluctance among some to stay at a homeless shelter because they are worried about being infected. They'd rather take their chances with other options, even if it means living in their car." This comment leads to another issue highlighted by a stakeholder, which is the concern that many do not believe the region has a homeless problems because "you don't see many homeless on the street like you would in some larger communities. Many sleep in their cars or are doubling or even tripling up with family members or friends. These are the 'unseen' homeless that are prevalent in our region."[52]

EFFECTS OF COVID-19 ON HOUSING

Housing was cited as one of the top issues in Norwood Hospital's 2018 CHNA and COVID-19 has simply exacerbated this issue. One of the primary issues brought about by the pandemic is the consequence of the eviction moratorium. While the moratorium was an important and necessary tool to protect public health and support economic stability, many households

[49] It should be noted that in Massachusetts, it is illegal for landlords to charge for anything other than first and last month's rent, security, and changing locks.

[50] In Massachusetts, evictions court records are public and free.

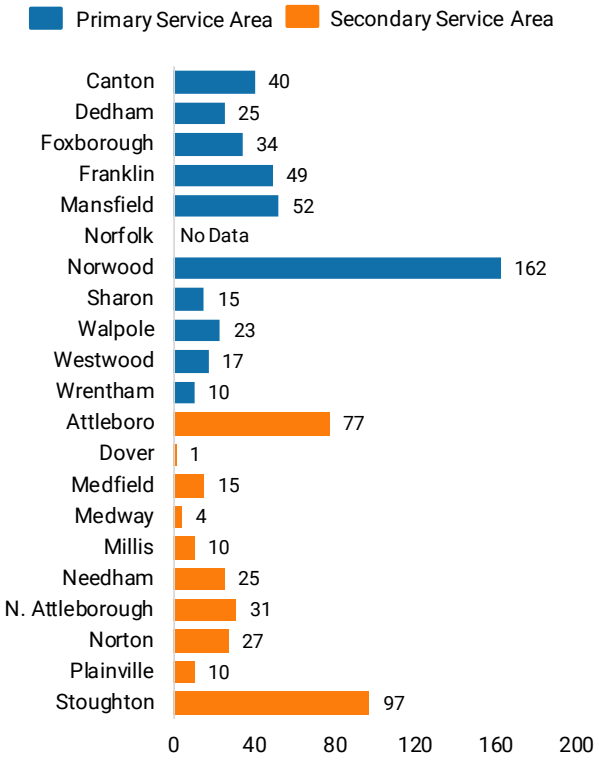
[51] The report authors heard similar accounts in other areas of the state.

[52] The U.S. Department of Housing and Urban Development's Point-in-Time (PIT) Count is a count of sheltered and unsheltered homeless persons on a single night in January in a given service area, called a Continuum of Care (CoC). However, Norwood Hospital's Service Area overlaps with several CoC areas, thus, PIT homeless data are not included in this report.

now find themselves in significant rent arrears. As a result, many in the region are predicting severe challenges for some residents as landlords file additional eviction notices now that the moratorium ended on August 26, 2021.

Since the eviction moratorium ended on August 26, the number of residential eviction cases posted for non-payment of rent post-moratorium is highest in Norwood (n=162), followed by Stoughton (n=97) and Attleboro (n=77) (see Figure 54). Note that eviction cases is different from eviction executions; the execution is the judge's eviction order; the landlord cannot physically evict someone without this paper. The eviction case is the first step in that process.

Figure 54
Eviction Cases by Housing Court Region[53]



Source: Data from the Massachusetts Trial Court, Department of Research and Planning

Ideally, households will have been supported throughout the pandemic through the state's rental assistance program, Rental Assistance for Families in Transition (RAFT). Additional assistance is also provided through the federal Emergency Solutions Grant (ESG) program, although each of these programs only meets a portion of the need. However, stakeholders noted that payments through these programs are taking four to six weeks to process. In addition, ESG can pay only six months of arrears. RAFT can be used to "fill in" a portion of the remainder, but only until the eviction moratorium lifts. Unfortunately, there is a significant backlog in the RAFT program and in any case, landlords were beginning the eviction process early knowing that the moratorium is coming to an end. In addition, stakeholders statewide note that federal housing funds have strict guidelines and that distributing COVID-related housing funds is burdensome due to bureaucracy.

Furthermore, those who are evicted will have a difficult time renting in the future even if their economic outlook improves due to their eviction history. Landlords, on the other hand, cannot on the whole be blamed for acting in their economic self-interest, especially since the tax, utility, mortgage, insurance and other expenses need to be paid. In many cases, it is likely that many landlords will experience negative economic consequences, including paying legal fees.

[53] Data reflects executions, a court order that allows a landlord to evict a tenant, issued on residential cases for non-payment of rent. All cases shown here were filed after Massachusetts' state moratorium on evictions expired.

Priority Area 4: Health Care Access and Equity

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, 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.

Access to care is a top concern among community leaders, and accessibility and equity issues were mentioned in nearly every key informant interview. Stakeholders were clear that equity and access issues prevalent in the health care system intensified due to the pandemic. As one community leader explained, "COVID shed light on disparities we already knew existed."

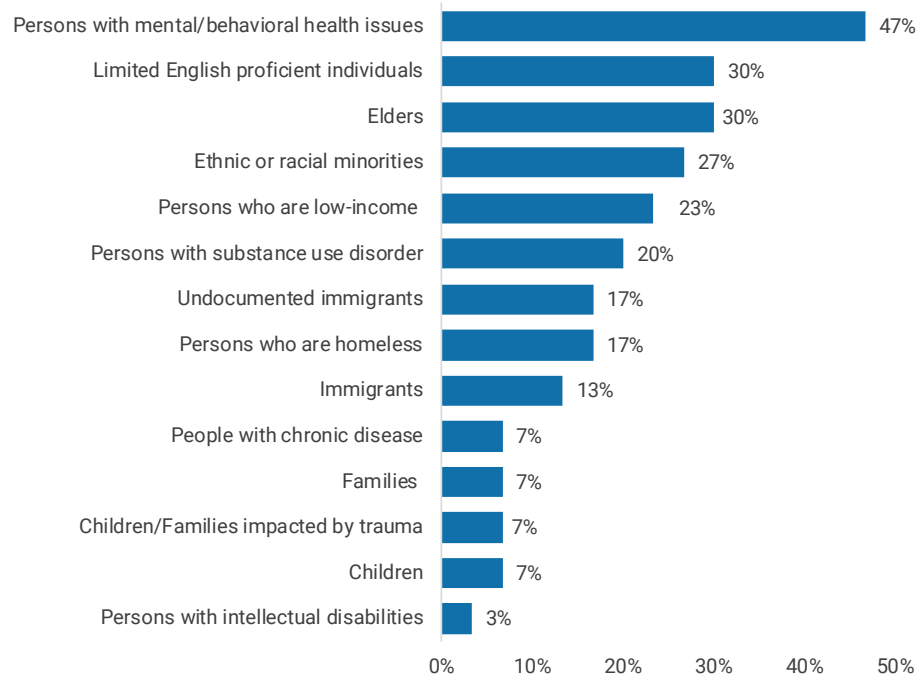
Key takeaways:

- Transportation remains an area of concern, particularly the availability of transportation services to get patients to and from appointments. While some organizations such as the various Councils on Aging offer ride services, there are still gaps in the transportation equation, leaving some unable to conveniently access care facilities.
- Telehealth is one alternative that can address transportation issues, although telehealth presents challenges for individuals with difficulty accessing or using technology. In addition, routine screenings and other procedures obviously cannot be done remotely.
- As a result of the growing diversity in the region, some service providers highlighted the need to better adapt to the needs of different populations, especially providing information and care in languages other than English. Stakeholders note that providing culturally competent care will result in more people seeking care when they need it and the care itself will be more effective.
- Respondents to the key informant survey identified persons with mental or behavioral health issues (47%), Limited English Proficient individuals (30%), and elders (30%) as the three most underserved populations in the region.
- The top obstacles identified by providers that prevent individuals from obtaining health services are transportation issues (88%), the expense of medication (85%), and insurance issues (83%).
- While most residents in the service area have health insurance, key informants note that a more concerning issue is the cost of insurance (including medication, and copays) and the types of services covered. "Not all insurance is created equal," one stakeholder remarked.
- Navigating the system can be difficult even for those who have health insurance and can afford the premiums, copays, and medication. Even accessing basic health services can be difficult for someone who does not speak English or who has little experience accessing the health system.
- Stakeholders emphasized the need for more health education among all groups, highlighting two central pieces to the health education equation: learning how to be healthy in general (e.g., diet, exercise, preventative services) and knowing the resources that are available to achieve those goals (including enrolling for basic insurance).

MOST UNDERSERVED POPULATIONS

Residents throughout the service area have varying needs based on their specific situations and characteristics. The key informant survey asked respondents to identify the populations in the region that are most underserved. The top three choices were persons with mental or behavioral health issues (47%), Limited English Proficient individuals (30%), and elders (30%) (see Figure 55). One stakeholder noted that a primary reasons elders are underserved is due to the closure of Norwood Hospital.

Figure 55
"What do you believe are the top three populations that are most underserved in the community?"

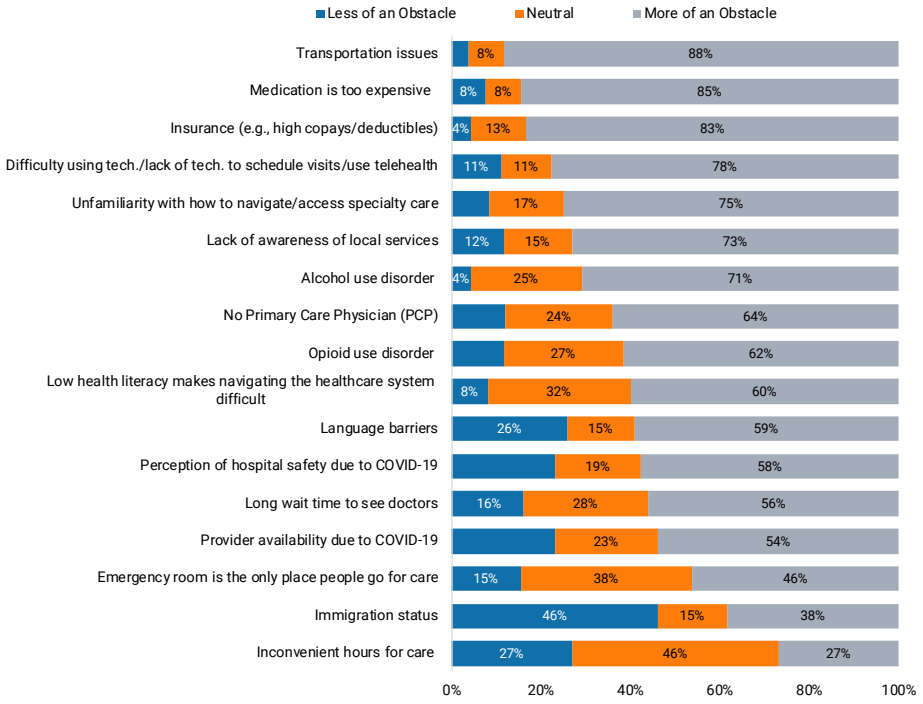


Source: Norwood Hospital Key Informant Survey, 2021

Primary Obstacles to Obtaining Health Services

As part of the key informant survey, respondents were asked to rank the obstacles that might prevent individuals from obtaining health services. The top obstacle reported by respondents is transportation issues (88% more of an obstacle), followed by the expense of medication (85% more of an obstacle), and insurance issues (83% more of an obstacle) (see Figure 56).

Figure 56
"Regarding the existing obstacles to accessing health care in the community you serve, please rank the following on a scale of 1 to 5, with 1 being less of an obstacle and 5 being more of an obstacle."[54]



Source: Norwood Hospital Key Informant Survey, 2021

Health Literacy

Health literacy can be defined as the degree to which individuals have the capacity to obtain, process, and understand basic health information needed to make appropriate health decisions, and services needed to prevent or treat illness.[55] Health literacy is interconnected with the social determinants of health and low health literacy is more prevalent among the poor, minorities, seniors, those with a language barrier, and other marginalized groups. Though health literacy is multifaceted, five issues came to the forefront during our research:

1) Health insurance
2) Health education
3) Navigating the health care system
4) The need for culturally competent care
5) Transportation

[54] Categories 1 and 2 "Less of an obstacle" and 4 and 5 "More of an obstacle" were combined in this chart for readability.

[55] See Health Resources & Services Administration. "Health Literacy." Retrieved October 29, 20201 from: https://www.hrsa.gov/about/organization/bureaus/ohe/health-literacy/index.html.

Stakeholders spoke about the important relationship between health literacy and health access. It was also noted that immigrants, especially those who do not speak English, face unique challenges navigating the health care system and understanding what is important to good health regardless of how long they have been in the country. Stakeholders note that the equity and access issues prevalent in the health care system were exacerbated due to the pandemic. As one community leader explained, "COVID shed light on disparities we already knew existed." Stakeholders were clear that providing culturally competent care will result in more people seeking care when they need it and the care itself will be more effective.

Health Insurance

Most residents in the service area have health insurance. However, key informants note that a more concerning issue is the cost of insurance, medication, and copays for those who have it. Consequently, although most residents have insurance, there are extreme differences in terms of value, coverage, and cost. These factors, in turn, partly affect the degree to which residents will access the health care system, particularly as it relates to preventative care.

In addition, job losses during the pandemic left many workers without employer-sponsored health insurance, which left laid-off workers scrambling to find coverage during an extremely stressful period. The Commonwealth Fund estimates that about 42% of the establishments that laid off workers because of the pandemic continued to pay a portion of health insurance premiums for those workers, but this still resulted in a significant number of laid-off employees with no coverage.[56]

For those who do not have insurance, enrolling in MassHealth or an Affordable Care Act plan are the most salient issues. However, enrollment can be confusing for some and a stakeholder identified a need for more assistance to get people enrolled in either of these programs. Enrolling is particularly difficult for some because the forms must be completed online, which is problematic for people who do not have access to technology or are not tech-savvy.

Health Education

Stakeholders noted that there are two central pieces to the health education equation: learning how to be healthy in general (e.g., diet, exercise, preventative services) and knowing the resources that are available to achieve those goals (including enrolling for basic insurance). One key informant noted, "Most of the people I serve know that they should be eating well and exercising, but many don't take the next step because they don't know what's available in the community or they just have so many other things going on they just don't have the time." Another key informant agreed and added, "Going to the gym is low on many people's list not because they are lazy, but because they are working two jobs and raising a family. Same with meals; it's much easier to pick up fast food than to shop and cook for your family. We need to be realistic in terms of what we are telling people they need to do to remain healthy. For many, small steps are more effective rather than overwhelming them with information."

Navigating the System

Even for those who have health insurance and are not overwhelmed by its cost, out-of-pocket expenses, and finding a primary care physician, navigating the system can be difficult. Even accessing basic health services can be difficult for someone who does not speak English or who has little experience accessing the health system. As one stakeholder noted, "Many of the clients I serve come from countries that essentially have no health care system as we know it. Our system is difficult for even those who know the ropes."

While telehealth is also becoming more prevalent since the pandemic, this option can be particularly difficult for those who are not tech-savvy (particularly seniors) and for those who don't have access to technology (e.g., a laptop or smartphone) or broadband.

[56] The Commonwealth Fund. January 2021. *How Many Americans Have Lost Jobs with Employer Health Coverage During the Pandemic?* See: https://www.commonwealthfund.org/blog/2021/update-how-many-americans-have-lost-jobs-employer-health-coverage-during-pandemic. Accessed October 28, 2021.

Need for Culturally Competent Care

Cultural competence is generally defined as the ability of providers and organizations to effectively deliver health care services that meet the social, cultural, and linguistic needs of patients.[57] Culturally competent care requires an awareness and knowledge of the issues specific to underserved populations and the ability to communicate in a way that is appropriate and effective. Properly delivered, culturally competent care results in more people seeking care when they need it and the care itself being more effective. Examples of culturally competent care include offering health materials in multiple languages, providing interpreter services, improving knowledge among staff about the community they serve, recruiting and training diverse team members, and increasing awareness of the needs and challenges that patients face daily.

Norwood Hospital does engage in a significant number of language encounters with its patients annually, with the majority being conducted in either Spanish or Portuguese (see Table 11).[58] The increase from FY18 to FY19 is primarily due to the addition of bilingual patient navigators in FY19.[59]

Table 11
Norwood Hospital Language Encounters, FY16 to FY20

Language	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
ASL	240	150	203	196	242
Chinese	562	304	328	458	434
Cape Verdean Creole	198	159	177	478	166
Haitian Creole	406	511	639	753	715
Portuguese	2,286	2,555	2,210	3,395	2,396
Russian	1,036	984	1,125	952	670
Spanish	2,054	2,004	2,520	3,567	2,587
Vietnamese	121	93	76	133	160
Other	2,654	3,005	2,519	3,100	1,932
Total	9,557	9,765	9,797	13,032	9,302

Source: Steward Health Care

Importantly, the diversity in a population extends beyond just race, ethnic background, and language. For example, the lesbian, gay, bisexual, transgender or queer/questioning (LGBTQ+) community and the veteran community consist of a cross-cultural range of community members. The health care needs of these groups and others require care and support that is compassionate and reflects an understanding of the unique challenges and needs of these groups. This often requires recruiting and training professionals with a variety of backgrounds or, at a minimum, training current staff to improve cultural awareness and skills.

Transportation Options

While most households in the service region have a car, it does not change the fact that a portion of the service area's residents, particularly those who are elderly, do not have a car or do not drive any longer. As a result, individuals often cannot get to appointments even when they have the desire to seek out preventative care or treatment for health issues.

[57] Betancourt, J. R., Green, A. R., & Carrillo, J. E. 2002. Cultural competence in health care: Emerging frameworks and practical approaches. New York: The Commonwealth Fund.

[58] An encounter represents each time an interpreter interprets for a patient/family member and a staff person/provider.

[59] The decline in FY20 is primarily the result of COVID restrictions and the hospital closing in June of 2020 due to flooding.

Particularly since the closure of Norwood Hospital, services (especially specialist services) are spread throughout the region. As a community survey respondent noted, “I love where I live, but it isn’t close to anything and I try not to drive if I can help it. It’s often a struggle for me to find rides to appointments and I don’t like to keep asking family members to drive me.”

Stakeholders note that public transportation is very inconvenient or nonexistent. There are various organizations that can help arrange rides, such as the area’s various Councils on Aging, but as one community member noted, “It’s just one more obstacle I need to deal with. If you can’t just get in your car and drive it’s always a hassle.”

5 Key Themes and Conclusions

The analysis of secondary data coupled with results from the key informant survey, key informant interviews, and the community survey shows that residents of the Norwood Hospital Service Area remain concerned about many of the same health priority issues identified in the 2018 CHNA, including mental health, substance use disorder, chronic disease, and housing. In addition to these longstanding issues, the effects of the COVID-19 pandemic have exposed the degree to which many individuals and households are struggling to obtain basic necessities, as evidenced by housing and food insecurity becoming much more prominent issues since the 2018 assessment. A primary obstacle impeding better health outcomes is that for many residents, health and wellness fit within a larger framework of day-to-day needs and crises related to the social determinants of health; from housing, childcare, finances, and transportation, to employment, immigration, and safety. As a result, one's health is often addressed after more immediate needs are met, if at all.

However, much of the service area consists of high-income and highly educated households who are not faced with these day-to-day challenges. Nevertheless, stakeholders point out that even these households are not immune to various health issues and new issues that have arisen due to the pandemic, particularly as they relate to mental health and substance abuse. As one stakeholder noted, "Many people think that those with substance use issues and mental health issues are on the lower end of the economic spectrum. But in my experience these issues touch people of all economic backgrounds."

Mental Health

Mental health will continue to be a priority as we emerge from the pandemic. Addressing the issue cannot be done effectively until the capacity of the system is increased, both in terms of the pipeline of mental health professionals and the facilities needed for treatment. Norwood Hospital and the other health and social service providers must be strategic in attracting more individuals to enter the mental health profession, as well as incentivizing current mental health professionals to accept MassHealth patients. However, effectively addressing the shortage of mental health professionals will require state leaders and its largest health care providers to work in concert on the issue. This includes increasing the number of mental health outpatient beds. Unfortunately, this crisis was brewing prior to the pandemic and will not be solved overnight.

Substance Use Disorder

Substance Use Disorder continues to afflict the region. Results from the focus groups and the key informant survey clearly show that the opioid crisis remains a top health issue, along with intertwined issues of mental health and housing. While much of the focus is on opioid abuse, stakeholders recognize that this issue extends beyond opioids to other narcotics and alcohol. In addition, stakeholders continue to discuss the ripple effect that the opioid crisis has on children and families. Thus, treating individuals with substance use disorder is only part of the solution; strategies going forward must continue to take a holistic approach to addressing the disorder and its broader social impact.

Housing

The key informant survey, interviews, and focus groups clearly indicate that housing is a priority in the region. Rent is increasing faster than wages and many long-time residents are faced with existential decisions related to housing, whether that be the desire to age in place, downsize, or to find suitable affordable rental housing. For most, there seems to be a desire to remain in the region to continue to enjoy its high quality of life and proximity to high-paying jobs. Yet, for some, remaining in the region is increasingly less of an option due to rising prices that seem to have no ceiling.

Wellness and Chronic Disease

Health and wellness compete with more immediate day-to-day priorities for many residents. Although chronic conditions can be genetic, poor disease outcomes are partly the result of unhealthy behaviors. However, the social determinants of health identified throughout this analysis are often large contributors to health inequities. Thus, effectively remedying high disease prevalence and poor health outcomes requires addressing the social environment that contributes to health inequities. However, improving economic opportunity for residents and eliminating racial constructs is not a goal that will be solved in

the short-term or by one organization. It will require a collective effort that exceeds even that which was implemented during the pandemic.

Food Insecurity

Not surprisingly, people who have less access to healthy food options have higher levels of negative health outcomes. COVID-19 had a double-edged outcome related to food insecurity. While the pandemic intensified demand, it also focused attention on the region's food system and its ability to not only meet the increase in need, but to reassess how it can best respond to that need. This includes not only focusing on offering food for those in need, but also the quality of the food provided, where the food comes from, and how it is delivered.

Health Access

Being healthy and remaining healthy is challenging enough for those of us accustomed to accessing the health care system, and doing so becomes even more difficult if one must overcome obstacles to do so. While regular access to health services is essential in managing health conditions, preventing new conditions from arising, and promoting and maintaining overall good health, stakeholders described the health gap that continues to afflict some populations in the region, particularly as a result of the social determinants of health. This gap consists of a myriad of access issues such as health literacy, insurance coverage and cost, transportation, and the need for more culturally competent care. In many ways, health access is an umbrella issue that spans many of the other health issues identified in this report. Thus, programs and activities that are implemented to address the region's top health issues will not be effective if certain populations cannot access them, particularly since in many cases those who would most benefit from the services have the lowest levels of access.

Going Forward

Addressing COVID-19

The full effects of COVID-19 on the health and wellness of the region's residents are yet to be understood. In one sense, the pandemic provided an opportunity for the region's health providers, advocates, and other stakeholders to break down walls and work cooperatively with focus and purpose. These collaborative efforts should be continued and expanded to address the priority health issues identified in this report.

Addressing Historically Marginalized Populations

Health equity and the social determinants of health extend to other prevalent groups in the service area. Although not an inclusive list, stakeholders referred to a number of marginalized groups who would benefit from more inclusive approaches to delivering care and a more diverse health care workforce including the LGBTQ+ community, the veteran community, those who are homeless, and the chronically ill and disabled. Although these groups are not homogenous and consist of community members with a range of races, ethnic backgrounds, and socioeconomic statuses, each has unique health care challenges and needs. However, similar to other vulnerable populations, one primary commonality is that meeting the health care needs of these groups requires understanding the challenges each experiences, communicating in a way that is appropriate and effective, and making the health care system a welcoming place for these individuals.

APPENDIX A: NORWOOD HOSPITAL KEY INFORMANT SURVEY

Email Invite:

Subject Line: Want a healthier region? Norwood Hospital Needs Your Input.

Norwood Hospital is conducting a Community Health Needs Assessment to identify and learn more about community health issues in the Norwood Hospital Service Area. The survey will also help us plan and shape our Community Benefits programs and services to help address these health needs.

Your firsthand knowledge of the community is important to help us better understand our community's health issues. We hope you will take time to complete this survey, which should take less than ten minutes. Please be assured that all responses are confidential and will be reported in the aggregate only. We will share the results with respondents in the coming months.

Feel free to reach out to Nikki Poulin, Community Benefits Manager at Norwood Hospital if you have questions or wish further information at (781) 278-6020 or nougesha.poulin@steward.org.

Please complete the survey by April 26. Thank you for your time and participation. You can click on the link below to begin the survey.

Survey Intro Below:

Thank you for choosing to participate in the survey. The results will be used to identify community health issues in the Norwood Hospital Service Area to help us plan programs and services. The Service Area is defined by the map below.

Before continuing, please know that your participation is voluntary. Your completion of the survey implies your consent. You may choose to skip any question or end the survey at any point. We will take all possible steps to protect your privacy and we can use your answers only for statistical research. This means that no individual will be identified in any of the analyses or reports from this study. We plan to share the results with respondents in the coming months.

Thank you for your time and participation!

Key Informant Survey Questionnaire

1. How would you describe the organization for which you 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
- ○ Private industry
- ○ Other (please describe) _____

2. What people or groups does your organization serve? (select all that apply)

- ○ Children
- ○ Children/Families impacted by trauma
- ○ Elders
- ○ Ethnic or racial minorities
- ○ Families
- ○ Immigrants
- ○ Limited English Proficient individuals
- ○ People with chronic disease
- ○ Persons who are homeless
- ○ Persons who are LGBTQA+
- ○ Persons who are low-income
- ○ Persons with cancer
- ○ Persons with intellectual disabilities
- ○ Persons with mental or behavioral health issues
- ○ Persons with physical disabilities
- ○ Persons with substance use disorder
- ○ Undocumented immigrants
- ○ Other (please describe) _____

3. What do you think are the greatest issues and concerns for the people or groups your organization serves, not necessarily related to health?

4. Please provide examples of how you've seen the region's most vulnerable groups affected by the COVID-19 pandemic.

5. Regarding the health and societal conditions among the people and groups you serve, please rank each of the following issues on a scale of 1 to 5, with 1 being less of a concern and 5 being more of a concern.

	Less of a concern 1	2	Neutral 3	4	More of a concern 5	Not Sure
Age-related health problems	O	O	O	O	O	O
Alcohol use disorder	O	O	O	O	O	O
Asthma (not COVID-19 related)	O	O	O	O	O	O
Cancer	O	O	O	O	O	O
Child abuse and violence	O	O	O	O	O	O
COPD (not COVID-19 related)	O	O	O	O	O	O
COVID-19	O	O	O	O	O	O
Crime and personal safety	O	O	O	O	O	O
Dental problems	O	O	O	O	O	O
Diabetes	O	O	O	O	O	O
Health education and literacy	O	O	O	O	O	O
Heart disease/Stroke	O	O	O	O	O	O
Intimate partner violence among adults (e.g., domestic, dating, and partner violence)	O	O	O	O	O	O
Lack of physical activity	O	O	O	O	O	O
Mental and behavioral health issues (e.g., depression)	O	O	O	O	O	O
Nutrition-related health	O	O	O	O	O	O
Obesity/Overweight	O	O	O	O	O	O
Opioid use disorder	O	O	O	O	O	O
Sexual violence among adults (e.g., rape, assault, abuse)	O	O	O	O	O	O
Suicide	O	O	O	O	O	O
Other (please describe)	O	O	O	O	O	O

6. You noted in the previous question that Child Abuse and Violence is a concern. Please rank each of the following Child Violence issues on a scale of 1 to 5, with 1 being less of a concern and 5 being more of a concern.

	Less of a concern 1	2	Neutral 3	4	More of a concern 5	Not Sure
Bullying	O	O	O	O	O	O
Emotional violence	O	O	O	O	O	O
Neglect	O	O	O	O	O	O
Physical violence	O	O	O	O	O	O
Sexual violence	O	O	O	O	O	O
Teen dating violence	O	O	O	O	O	O
Witnessing violence	O	O	O	O	O	O

7. Regarding the existing obstacles to accessing health care for the people and groups 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	Neutral 3	4	More of an obstacle 5	Not Sure
Alcohol use disorder	O	O	O	O	O	O
Difficulty using technology or lack of technology to schedule visits and use telehealth options	O	O	O	O	O	O
Emergency room is the only place people go for care	O	O	O	O	O	O
Immigration status	O	O	O	O	O	O
Inconvenient hours for care	O	O	O	O	O	O
Insurance (e.g., high copays & deductibles, procedures not covered, etc.)	O	O	O	O	O	O
Lack of awareness of local services	O	O	O	O	O	O
Language barriers	O	O	O	O	O	O
Long wait time to see doctors	O	O	O	O	O	O
Low health literacy makes navigating the health care system difficult	O	O	O	O	O	O
Medication is too expensive	O	O	O	O	O	O
No Primary Care Physician (PCP)	O	O	O	O	O	O
Opioid use disorder	O	O	O	O	O	O
Perception of hospital safety due to COVID	O	O	O	O	O	O
Provider availability due to COVID-19	O	O	O	O	O	O
Transportation issues	O	O	O	O	O	O
Unfamiliarity with how to navigate/access specialty care	O	O	O	O	O	O
Other (please describe)	O	O	O	O	O	O

8. What do you think are the <u>top three</u> populations that are most underserved in the community?

- O Children
- O Children/Families impacted by trauma
- O Elders
- O Ethnic or racial minorities
- O Families
- O Immigrants
- O Limited English Proficient individuals
- O People with chronic disease
- O Persons who are homeless
- O Persons who are LGBTQA+
- O Persons who are low-income
- O Persons with cancer
- O Persons with intellectual disabilities
- O Persons with mental or behavioral health issues
- O Persons with physical disabilities
- O Persons with substance use disorder
- O Undocumented immigrants
- O No populations are underserved
- O Other (please describe) _____

9. From what sources do the people you serve primarily get their health care information? (Check all that apply)

- ○ Community health center
- ○ Doctor/Pharmacist/Other health care professional
- ○ Friend/family member
- ○ Health brochures and posters
- ○ Internet
- ○ Newspaper/Magazines
- ○ Radio
- ○ School
- ○ Social media (e.g., Facebook, Twitter, Instagram)
- ○ Telephone helplines
- ○ Word-of-mouth
- ○ Work
- ○ Other (please describe) _____

10. With regard to the lessons learned during the COVID-19 pandemic, what would you recommend going forward to strengthen the community response so that similar situations in the future are addressed effectively?

11. As Norwood Hospital reopens after the flooding in 2020, in what ways can the community and hospital system work together to improve the health of the community?

Key Informant Survey Results

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

	Number	Percent
Local government/School	14	45.2%
Health care provider	10	32.3%
Non-profit/social service agency	6	19.4%
Private /Business Community	1	3.2%
Religious organization	0	0.0%

2. What people or groups does your organization serve?

	Number	Percent
Elders	25	83%
Families	25	83%
Persons with mental or behavioral health issues	24	80%
Persons with substance use disorder	23	77%
Persons who are low-income	22	73%
People with chronic disease	21	70%
Children	20	67%
Persons with physical disabilities	20	67%
Persons who are LGBTQA+	19	63%
Persons with cancer	19	63%
Persons with intellectual disabilities	19	63%
Children/Families impacted by trauma	18	60%
Ethnic or racial minorities	18	60%
Immigrants	17	57%
Limited English Proficient individuals	17	57%
Persons who are homeless	16	53%
Undocumented immigrants	10	33%

3. **What do you think are the greatest issues and concerns for the people or groups your organization serves, not necessarily related to health?**

4. **Please provide examples of how you've seen the region's most vulnerable groups affected by the COVID-19 pandemic.**

5. Regarding the health and societal conditions among the people and groups you serve, please rank each of the following issues on a scale of 1 to 5, with 1 being less of a concern and 5 being more of a concern.

	1 – Less of a concern	2	3 - Neutral	4	5 – More of a concern
Mental and behavioral health issues	0.0%	3.6%	3.6%	14.3%	78.6%
Alcohol use disorder	0.0%	0.0%	7.7%	46.2%	46.2%
Suicide	3.8%	11.5%	11.5%	26.9%	46.2%
Age-related health problems	3.4%	6.9%	31.0%	13.8%	44.8%
Lack of physical activity	3.6%	3.6%	14.3%	35.7%	42.9%
Obesity/Overweight	0.0%	14.3%	17.9%	25.0%	42.9%
Heart disease/Stroke	0.0%	3.8%	42.3%	11.5%	42.3%
COVID-19	10.3%	3.4%	20.7%	24.1%	41.4%
Opioid use disorder	3.6%	3.6%	10.7%	42.9%	39.3%
Cancer	3.7%	14.8%	22.2%	22.2%	37.0%
Nutrition-related health	6.9%	3.4%	24.1%	31.0%	34.5%
Diabetes	7.4%	11.1%	22.2%	33.3%	25.9%
Intimate partner violence among adults	7.1%	7.1%	17.9%	46.4%	21.4%
Health education and literacy	6.9%	0.0%	34.5%	37.9%	20.7%
Asthma (not COVID-19 related)	3.8%	15.4%	34.6%	30.8%	15.4%
Dental problems	0.0%	20.0%	32.0%	36.0%	12.0%
Child abuse and violence	14.3%	0.0%	35.7%	39.3%	10.7%
COPD (not COVID-19 related)	17.9%	10.7%	39.3%	21.4%	10.7%
Sexual violence among adults	10.3%	13.8%	31.0%	34.5%	10.3%
Crime and personal safety	10.3%	10.3%	41.4%	31.0%	6.9%

6. You noted in the previous question that Child Abuse and Violence is a concern. Please rank each of the following Child Violence issues on a scale of 1 to 5, with 1 being less of a concern and 5 being more of a concern.

	1 - Less of a concern	2	3 - Neutral	4	5 - More of a concern
Bullying	0.0%	16.7%	25.0%	25.0%	33.3%
Neglect	0.0%	0.0%	7.7%	61.5%	30.8%
Emotional violence	0.0%	0.0%	7.7%	69.2%	23.1%
Witnessing violence	0.0%	8.3%	33.3%	41.7%	16.7%
Physical violence	0.0%	7.7%	30.8%	46.2%	15.4%
Teen dating violence	9.1%	0.0%	54.5%	27.3%	9.1%
Sexual violence	0.0%	9.1%	36.4%	45.5%	9.1%

7. Regarding the existing obstacles to accessing health care for the people and groups 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.

	1 - Less of an obstacle	2	3 - Neutral	4	5 - More of an obstacle
Difficulty using tech./lack of tech. to use telehealth	3.7%	7.4%	11.1%	25.9%	51.9%
Medication is too expensive	3.8%	3.8%	7.7%	38.5%	46.2%
Transportation issues	0.0%	3.8%	7.7%	50.0%	38.5%
Unfamiliarity with how to navigate/access specialty care	4.2%	4.2%	16.7%	37.5%	37.5%
Alcohol use disorder	4.2%	0.0%	25.0%	37.5%	33.3%
Insurance (e.g., high copays/deductibles)	4.2%	0.0%	12.5%	50.0%	33.3%
Long wait time to see doctors	8.0%	8.0%	28.0%	24.0%	32.0%
Low health literacy makes navigating health care system difficult	0.0%	8.0%	32.0%	28.0%	32.0%
Lack of awareness of local services	3.8%	7.7%	15.4%	42.3%	30.8%
Provider availability due to COVID-19	15.4%	7.7%	23.1%	30.8%	23.1%
Perception of hospital safety due to COVID-19;	19.2%	3.8%	19.2%	34.6%	23.1%
No Primary Care Physician (PCP)	4.0%	8.0%	24.0%	44.0%	20.0%
Immigration status	26.9%	19.2%	15.4%	19.2%	19.2%
Opioid use disorder	7.7%	3.8%	26.9%	42.3%	19.2%
Language barriers	14.8%	11.1%	14.8%	40.7%	18.5%
Emergency room is the only place people go for care	0.0%	15.4%	38.5%	34.6%	11.5%
Inconvenient hours for care	15.4%	11.5%	46.2%	23.1%	3.8%

8. What do you think are the top three populations that are most underserved in the community?

	Number	Percent
Persons with mental/behavioral health issues	14	47%
Elders	9	30%
Limited English proficient individuals	9	30%
Ethnic or racial minorities	8	27%
Persons who are low-income	7	23%
Persons with substance use disorder	6	20%
Persons who are homeless	5	17%
Undocumented immigrants	5	17%
Immigrants	4	13%
Children	2	7%
Children/Families impacted by trauma	2	7%
Families	2	7%
People with chronic disease	2	7%
Persons with intellectual disabilities	1	3%
Persons who are LGBTQA+	0	0%
Persons with cancer	0	0%
Persons with physical disabilities	0	0%
No populations are underserved	0	0%

9. From what sources do the people you serve primarily get their health care information? (Check all that apply)

	Number	Percent
Doctor/Pharmacist/Other health care professional	22	73.3%
Friend/family member	21	70.0%
Word-of-mouth	17	56.7%
Internet	15	50.0%
Social media (e.g., Facebook, Twitter, Instagram)	15	50.0%
Community health center	6	20.0%
School	5	16.7%
Health brochures and posters	4	13.3%
Radio	3	10.0%
Work	3	10.0%
Newspaper/Magazines	2	6.7%
Telephone helplines	1	3.3%

10. With regard to the lessons learned during the COVID-19 pandemic, what would you recommend going forward to strengthen the community response so that similar situations in the future are addressed effectively?

11. As Norwood Hospital reopens after the flooding in 2020, in what ways can the community and hospital system work together to improve the health of the community?

APPENDIX B: COMMUNITY SURVEY

Email Invite:

Subject Line: Want a healthier region? Norwood Hospital Needs Your Input.

Norwood Hospital is conducting a Community Health Needs Assessment to identify and learn more about community health issues in the Norwood Hospital Service Area. The survey will also help us plan and shape our Community Benefits programs and services to help address these health needs.

Your input is important to help us better understand our community's health issues. We hope you will take time to complete this survey, which should take less than ten minutes. Please be assured that all responses are confidential and will be reported in the aggregate only. We will share the results with respondents in the coming months.

You can reach out to Nikki Poulin, Community Benefits Manager at Norwood Hospital if you have questions or wish further information at (781) 278-6020 or nougesha.poulin@steward.org.

A. YOUR BACKGROUND

The following questions will help us to determine if we are reaching a representative sample of respondents.

1. **What is your ZIP code?**

2. **How would you describe your gender?**
   - ○ Male
   - ○ Female
   - ○ Prefer to self-describe as _____ (e.g., non-binary, gender-fluid, agender, please specify)
   - ○ Prefer not to say

3. **What is your age?**
   - ○ Under 18
   - ○ 18-24 years old
   - ○ 25-34 years old
   - ○ 35-49 years old
   - ○ 50-64 years old
   - ○ 65-74 years old
   - ○ 75 years old or older

4. **Which of the following best describes you?**
   - ○ Asian or Pacific Islander
   - ○ Black or African American
   - ○ Hispanic or Latino
   - ○ Native American or Alaskan Native
   - ○ White or Caucasian
   - ○ Multiracial or Biracial
   - ○ A race/ethnicity not listed here

5. What is the highest level of education you have completed?

- ○ Less than high school graduate
- ○ High school diploma or GED
- ○ Associate's degree/some college
- ○ Bachelor's degree
- ○ Graduate or professional degree

B. HEALTHY COMMUNITIES

6. How would you rate the health of your community?

[By healthy community, we mean residents' overall health as well as the environment in which they live, such as safe and clean neighborhoods, access to healthy foods, availability of well-paying jobs, good parks and public spaces, and other opportunities to thrive].

- ○ Very Healthy
- ○ Healthy
- ○ Somewhat Healthy
- ○ Unhealthy
- ○ Very Unhealthy

7. What do you feel are the most important attributes that make up a healthy community?

8. Excluding COVID-19, what do you consider to be the FIVE most important health issues in your community? Please choose no more than five.

- ☐ Age-related health problems
- ☐ Alcohol use disorder
- ☐ Cancer
- ☐ Child abuse and violence
- ☐ Crime and safety
- ☐ Dental problems
- ☐ Diabetes
- ☐ Effects of trauma, neglect, and abuse on children
- ☐ Elder abuse
- ☐ Food insecurity
- ☐ Health education and literacy
- ☐ Heart disease/Stroke
- ☐ Housing insecurity/Homelessness
- ☐ Intimate partner violence among adults (e.g., domestic, dating, and partner violence)
- ☐ Lack of physical activity
- ☐ Mental and behavioral health issues (e.g., depression)
- ☐ Nutrition-related health
- ☐ Obesity/Overweight
- ☐ Opioid use disorder
- ☐ Sexual violence among adults (e.g., rape, assault, abuse)
- ☐ Suicide
- ☐ Other (please describe): _____

C. YOUR HEALTH

9. Would you say your health in general is excellent, very good, good, fair, or poor?

- ○ Excellent
- ○ Very good
- ○ Good
- ○ Fair
- ○ Poor
- ○ Not sure

10. Have any of the following prevented you from getting the health care you need? (Please check all that apply).

- ☐ I have no difficulties receiving care
- ☐ Difficulty using technology or lack of technology to schedule visits and use telehealth options
- ☐ Lack of transportation
- ☐ Insurance (e.g., high copays & deductibles, procedures not covered, etc.)
- ☐ Fear of health check-up
- ☐ No regular source or primary health care
- ☐ Cost of health care/prescriptions
- ☐ Inconvenient hours for care
- ☐ No Primary Care Physician (PCP)
- ☐ Long wait time to see doctors
- ☐ No available provider near you
- ☐ Lack of evening and weekend services
- ☐ Long waits for appointments
- ☐ Insurance problems/lack of coverage
- ☐ Confidentiality concerns
- ☐ No multilingual providers
- ☐ Provider availability due to COVID-19
- ☐ Discrimination by service provider
- ☐ Other: _____

11. Have you ever felt discriminated against because of your: (Choose all that apply)

- ☐ Have not felt any discrimination
- ☐ Age
- ☐ Cultural background
- ☐ Gender identity
- ☐ Income
- ☐ Skin color, race or ethnicity
- ☐ Sexual orientation
- ☐ Other (please describe) _____

D. COVID-19

12. How strongly do you agree or disagree with the following statements?

Scale: Strongly Disagree/Somewhat Disagree/Neither/Somewhat Agree/Strongly Agree

A. The COVID-19 pandemic is taking a toll on my mental health.
B. The COVID-19 pandemic is taking a toll on the mental health of one or more of my family members.
C. The COVID-19 pandemic has made me more concerned about the security of my job.
D. I have had to delay medical care due to the COVID-19 pandemic.
E. I have had difficulty covering my usual household expenses since the COVID-19 pandemic began (e.g., mortgage, rent, utilities, food).
F. Me or someone in my household has not had enough to eat at some time over the past 18 months.
G. Me or someone in my household has lost or had to change jobs since the COVID-19 pandemic began.

E. HEALTH SERVICES

13. 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 ARE NOT sufficiently available in your community? Please choose all that apply.

- ☐ Diabetes education services
- ☐ Emergency medical services (EMS)
- ☐ Home health services
- ☐ LGBTQ+ resources and support services
- ☐ Multilingual health care providers
- ☐ Physical or occupational therapy
- ☐ Primary care
- ☐ Programs to help people quit smoking
- ☐ Public transportation
- ☐ Senior health/medical services
- ☐ Sexual and reproductive health services
- ☐ Social services (WIC, SNAP, housing)
- ☐ Specialty medical services
- ☐ Treatment for mental health disorders
- ☐ Treatment for substance use disorders
- ☐ Urgent care
- ☐ Youth health/medical services
- ☐ Other (please describe) _____

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

- ☐ Church or other religious organization
- ☐ Community health center
- ☐ Family members and friend
- ☐ Health brochures and posters
- ☐ Health care professional (doctor/nurse/pharmacist)
- ☐ Health fairs
- ☐ Internet or social media
- ☐ Newspaper/magazines
- ☐ Public health department
- ☐ Radio
- ☐ School
- ☐ Telephone helplines
- ☐ Word of mouth
- ☐ Work
- ☐ Other (please describe) _____

15. Do you have anything else you'd like to add that will help us to better understand our community's health issues?

Community Survey Results

1. What is your ZIP code?

	Number	Percent
Primary Service Area		
Canton	20	7.8%
Dedham	5	2.0%
Foxborough	21	8.2%
Franklin	11	4.3%
Mansfield	13	5.1%
Norfolk	5	2.0%
Norwood	72	28.1%
Sharon	6	2.3%
Walpole	41	16.0%
Westwood	6	2.3%
Wrentham	9	3.5%
Secondary Service Area		
Attleboro	6	2.3%
Dover	1	0.4%
Medfield	2	0.8%
Medway	1	0.4%
Millis	1	0.4%
Needham	1	0.4%
N. Attleborough	7	2.7%
Norton	5	2.0%
Plainville	9	3.5%
Stoughton	14	5.5%

2. How would you describe your gender?

	Number	Percent
Male	78	29.2%
Female	185	69.3%
Prefer not to say	4	1.5%

3. What is your age?

	Number	Percent
18-24 years old	0	0.0%
25-34 years old	4	1.5%
35-49 years old	22	8.2%
50-64 years old	108	40.3%
65-74 years old	90	33.6%
75 years old or older	44	16.4%

4. Which of the following best describes you?

	Number	Percent
Asian or Pacific Islander	5	1.9%
Black or African American	3	1.1%
Hispanic or Latino	1	0.4%
Native American or Alaskan Native	0	0.0%
White or Caucasian	259	95.9%
Multiracial or Biracial	0	0.0%
A race/ethnicity not listed here	2	0.7%

5. What is the highest level of education you have completed?

	Number	Percent
Less than high school graduate	2	0.7%
High school diploma or GED	50	18.5%
Associate's degree/some college	66	24.4%
Bachelor's degree	80	29.6%
Graduate or professional degree	72	26.7%

6. How would you rate the overall health of your community? [By healthy community, we mean residents' overall health as well as the environment in which they live, such as safe and clean neighborhoods, access to healthy foods, availability of well-paying jobs, good parks and public spaces, and other opportunities to thrive].

	Number	Percent
Very Healthy	35	15.3%
Healthy	120	52.4%
Somewhat Healthy	55	24.0%
Unhealthy	7	3.1%
Very Unhealthy	3	1.3%
Not Sure	9	3.9%

7. What do you feel are the most important attributes that make up a healthy community?

8. **Excluding COVID-19, what do you consider to be the FIVE most important health issues in your community? Please choose no more than five.**

	Number	Percent
Age-related health problems	148	64.3%
Mental and behavioral health issues	118	51.3%
Obesity/Overweight	116	50.4%
Cancer	113	49.1%
Heart disease/Stroke	94	40.9%
Diabetes	61	26.5%
Lack of physical activity	60	26.1%
Opioid use disorder	48	20.9%
Alcohol use disorder	42	18.3%
Nutrition-related health	41	17.8%
Food insecurity	37	16.1%
Crime and safety	27	11.7%
Health education and literacy	26	11.3%
Housing insecurity/Homelessness	25	10.9%
Effects of trauma, neglect, and abuse on children	22	9.6%
Dental problems	15	6.5%
Suicide	12	5.2%
Child abuse and violence	10	4.3%
Elder abuse	9	3.9%
Other	8	3.5%
Intimate partner violence among adults	4	1.7%
Sexual violence among adults	4	1.7%

9. Would you say your health in general is excellent, very good, good, fair, or poor?

	Number	Percent
Excellent	24	11.0%
Very good	87	39.9%
Good	76	34.9%
Fair	25	11.5%
Poor	5	2.6%
Not sure	1	0.5%

10. Have any of the following prevented you from getting the health care you need? (Please check all that apply)

	Number	Percent
Long waits for appointments	35	42.7%
Insurance (e.g., high copays & deductibles)	29	35.4%
Long wait time to see doctors	24	29.3%
Lack of evening and weekend services	23	28.0%
Cost of health care/prescriptions	21	25.6%
Difficulty using/lack tech for telehealth options	15	18.3%
Insurance problems/lack of coverage	15	18.3%
No available provider near you	12	14.6%
Other (please describe)	12	14.6%
Provider availability due to COVID-19	11	13.4%
Lack of transportation	9	11.0%
Inconvenient hours for care	9	11.0%
No Primary Care Physician (PCP)	7	8.5%
No regular source or primary health care	5	6.1%
Fear of health check-up	3	3.7%
Discrimination by service provider	1	1.2%
Confidentiality concerns	0	0.0%
No multilingual providers	0	0.0%

Note: 62.2% of respondents noted that they do not have any issues receiving care. The data above does not include those respondents.

11. Have you ever felt discriminated against because of your: (Choose all that apply)

	Number	Percent
Have not felt any discrimination	170	78.7%
Age	19	8.8%
Cultural background	2	0.9%
Gender identity	9	4.2%
Income	3	1.4%
Skin color, race or ethnicity	5	2.3%
Sexual orientation	2	0.9%
Other (please describe)	6	2.8%

12. How strongly do you agree or disagree with the following statements?

	Strongly Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Strongly Agree
Me or someone in my household has lost or had to change jobs since the COVID-19 pandemic began.	6.9%	0.0%	34.5%	37.9%	20.7%
Me or someone in my household has not had enough to eat at some time over the past 18 months.	3.8%	15.4%	34.6%	30.8%	15.4%
I have had difficulty covering my usual household expenses since the COVID-19 pandemic began (e.g., mortgage, rent, utilities, food).	0.0%	20.0%	32.0%	36.0%	12.0%
The COVID-19 pandemic has made me more concerned about the security of my job.	14.3%	0.0%	35.7%	39.3%	10.7%
I have had to delay medical care due to the COVID-19 pandemic.	17.9%	10.7%	39.3%	21.4%	10.7%
The COVID-19 pandemic is taking a toll on the mental health of one or more of my family members.	10.3%	13.8%	31.0%	34.5%	10.3%
The COVID-19 pandemic is taking a toll on my mental health.	10.3%	10.3%	41.4%	31.0%	6.9%

13. 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 ARE NOT sufficiently available in your community? Please choose all that apply.

	Number	Percent
Emergency medical services (EMS)	63	29.0%
Treatment for mental health disorders	56	25.8%
Public transportation	40	18.4%
Treatment for substance use disorders	36	16.6%
Specialty medical services	35	16.1%
Urgent care	31	14.3%
Senior health/medical services	29	13.4%
Primary care	25	11.5%
Diabetes education services	23	10.6%
Home health services	22	10.1%
Other (please describe)	21	9.7%
Social services (WIC, SNAP, housing)	18	8.3%
LGBTQ+ resources and support services	14	6.5%
Youth health/medical services	12	5.5%
Physical or occupational therapy	9	4.1%
Sexual and reproductive health services	9	4.1%
Programs to help people quit smoking	8	3.7%
Multilingual health care providers	7	3.2%

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

	Number	Percent
Health care professional (doctor/nurse/pharmacist)	165	76%
Internet or social media	112	52%
Family members and friend	92	42%
Word of mouth	61	28%
Newspaper/magazines	53	24%
Health brochures and posters	33	15%
Public health department	23	11%
Work	20	9%
Radio	17	8%
School	13	6%
Church or other religious organization	12	6%
Other (please describe)	11	5%
Community health center	6	3%
Health fairs	4	2%
Telephone helplines	2	1%

15. Do you have anything else you'd like to add that will help us to better understand our community's health issues?

APPENDIX C: NORWOOD HOSPITAL KEY INFORMANT INTERVIEW QUESTIONS

Hello, my name is _____ and I am working with Nikki Poulin, Norwood Hospital's Community Benefits Coordinator, on the hospital's Community Health Needs Assessment (CHNA). The purpose of the CHNA is to identify and learn more about community health issues in the hospital's service area. The information will be used to shape Norwood Hospital's Community Benefits outreach and programming.

We are conducting telephone interviews with community leaders to obtain their firsthand knowledge of the top community health issues. Are you available for a brief (~ 15-30 min) telephone interview to discuss these issues?

I. IDENTIFYING TOP ISSUES

1. **What do you believe are the 2-3 most important issues that must be addressed to improve health and quality of life in your community? These don't necessarily have to be related to health.**

   Probe [Provide some of these example as potential issues if they are not mentioned]: How about housing, economic opportunity, chronic diseases or conditions, mental health, substance abuse, violence, access to healthy food, child abuse/neglect, suicide, domestic violence, access to health care, cost of health care, poverty, stigma, prejudice, racism?

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

   Probe: How has this changed in recent years? Are the issues getting better, worse, or about the same?

   How did COVID affect these issues; were some groups of people affected more than others and why?

II. ADDRESSING TOP HEALTH ISSUES

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

   Probe: For example, any programs or services available to help with these issues.

4. **What programs, services or policies are needed in your community that would support health or make it easier to be healthy? That is, where are some of the gaps in services?**

5. **What do you think are some of the populations that are most underserved in the community?**

III. BARRIERS

6. **Are there significant barriers/obstacles to being healthy or making healthy choices in your community? What are those barriers?**

   Probe: For example, lack of access to healthy foods, feeling unsafe in your neighborhood, lack of transportation option, stigma, prejudice, racism, lack of understanding of needs, trust.

IV. IMPROVING COMMUNITY HEALTH

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

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

8. **With regard to the lessons learned during the COVID-19 pandemic, what would you recommend going forward to strengthen the community response so that similar situations in the future are addressed effectively?**

VI. ENDING QUESTION

9. **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?**

Norwood Hospital
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