Mercy Medical Center
Trinity Health

Community Health Needs Assessment

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Community Health Needs Assessment 2022

PREPARED FOR

Mercy Medical Center
Trinity Health

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PREPARED BY

Public Health Institute of Western Massachusetts
Collaborative for Educational Services
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1. Executive Summary

Background

Founded in 1873, Mercy Medical Center (referred to as Mercy) has been a provider of health care services in Western Massachusetts for over 145 years. Mercy and its affiliates are part of Trinity Health Of New England. Mercy's service area includes the 23 cities in Hampden County and Granby, a city in Hampshire County. Hampden County is home to 467,871 residents spanning a dense urban core that includes Springfield, the third-largest city in Massachusetts, to many smaller and rural towns with populations under 20,000. The service area hosts a wealth of community resources and collaborations; a vibrant arts and culture scene; anchor education, health, and corporate institutions; a strong philanthropic network; and other assets that contribute to the region's status as a destination to live, work, and play.

Mercy is a member of the Coalition of Western MA Hospitals ("the Coalition"), a partnership formed in 2012 that has grown to nine non-profit hospitals, clinics, and insurers in the region to coordinate resources and activities for conducting their Community Health Needs Assessment (CHNA). The federal Patient Protection and Affordable Care Act (PPACA) requires tax-exempt hospitals and insurers to conduct a CHNA every three years. Based on the findings of the CHNA and as required by the law, each hospital develops a health improvement plan to address select prioritized needs. The CHNA data also inform County Health Improvement Plans (CHIPs) as well as many other community-based initiatives to achieve health equity. The Coalition worked with a consultant team led by the Public Health Institute of Western Massachusetts to conduct the CHNA. This assessment focused on Hampden County data and data for select communities as available: Chicopee, Holyoke, Palmer, Springfield, West Springfield, and Westfield.

Guiding Values and Assessment Methods

The Coalition and consultant team fostered an inclusive process to assess health needs. A Regional Advisory Council (RAC) was assembled and met monthly for a year and a half to provide guidance and make decisions that informed the assessment process and the prioritization of health needs. The Coalition members recognize that health equity cannot be achieved unless or until the root causes of inequity are addressed. These root causes include systemic racism and structural poverty, as well as other forms of discrimination. Underlying these root causes are the dominant culture and stories that normalize the perpetuation of inequities. In order to make meaningful progress to address these root causes of poor health, the Coalition and the RAC worked to further incorporate aspects of these values into the CHNA process: community-led change, anti-racism, cultural humility, and social justice.

The 2022 CHNA updates the prioritized community health needs identified in the 2016 and 2019 reports, as they relate to: the social and economic factors or "determinants'' that influence health,

barriers to healthcare access, and health behaviors and outcomes. The 2022 CHNA assessment process included reprioritizing needs if data - including community feedback - indicated changes. The process consisted of: a review of existing assessment reports; survey of public health officials; preliminary analysis of COVID-19's impact on the region; and analysis of quantitative data, with efforts where possible to disaggregate (e.g., by race, ethnicity, gender, age, LGBTQIA+, rural) to understand health disparities. The consultant team also assembled qualitative data from community "chats," key informant interviews, and focus groups conducted throughout the service area and region. The interviews and focus groups were primarily about youth mental health.

During the process, the Coalition and RAC made the decision to (1) assess the impact of COVID-19 on health needs in the region; and (2) lift up the prioritized need of youth mental health as a regional focus area for additional data gathering. Further, Mercy undertook its own prioritization process and chose three of the identified prioritized needs for a deeper dive and additional data gathering: Access to Housing, Food, and Transportation; Limited Availability of Providers and Telehealth; Mental Health and Substance Use Disorder. Mercy chose to place greatest focus on inequities among those who are Latinx and Black. Mercy also prioritized those who experience homelessness or are unhoused, as they face unique health challenges.

Prioritized Health Needs

The Mercy service area of Hampden County, MA continues to experience many of the same prioritized health needs identified in Mercy's 2019 CHNA. The COVID-19 pandemic exacerbated many of the existing inequities related to these needs. Several prioritized needs receive deeper focus as described below. The prioritized health needs for the service area are:

- **Social and economic factors or "determinants'' that influence health:**
  - **Lack of Access and Affordability of Housing, Food, and Transportation (Mercy focus area)**
  - Educational Attainment
  - Employment and Income
  - Violence and Trauma
  - Environmental Exposures and Climate Crisis
- **Barriers to healthcare access**
  - **Availability of Providers and Telehealth (Mercy focus area)**
  - Other Barriers
- **Health behaviors and outcomes:**
  - **Youth Mental Health (regional focus area)**
  - **Mental Health and Substance Use (Mercy focus area)**
  - Chronic Conditions and Other Health Outcomes

COVID-19

It has been three years since the last community health needs assessment, and for two of those years our nation and region have battled a once-in-a-century health pandemic. COVID-19 has taken a

tremendous toll on this service area, and it continues to affect the current status of health in Western MA. The pandemic took the lives of at least 1,951 residents of Hampden County, and up to 27,000 or more were infected. It strained the capacity of the regional health care system, from the doctor's office to the emergency room, causing many people to have to delay care and treatment. Hampden County had lower vaccination rates than other Western MA counties. Barriers to vaccine access and vaccine hesitancy were likely factors.

In addition to impacting health outcomes, access to care, and quality of care, the pandemic undermined the region's economy, causing unemployment rates to rise rapidly and business revenues to fall. Hampden County's unemployment rate shot up to 18% in April 2020. Economic destabilization negatively affected other social factors or "determinants" of health, including housing affordability, food security, education quality, and safety from violence and trauma. It exacerbated existing inequities in many of these prioritized needs, especially for Black and Latinx residents, people who are unhoused or homeless, LBGTQIA+ individuals, people with a disability, older adults, those with limited incomes and other communities. The Massachusetts public health infrastructure, which is highly decentralized, had difficulties providing consistent pandemic response services such as contact tracing and vaccination clinics.

Despite these challenges, many hospitals, health care providers, public health departments, grantmakers, and nonprofit agencies rose to the challenge, adapting and pivoting to provide resources, services, care, and timely, accurate information to residents in the service area.

Mental Health and Substance Use

Before COVID-19 arrived on our shores, the service area saw a rise in opioid deaths. Deaths of despair (due to suicide, drug overdose, and alcohol-related disease) disproportionately affected Latinx residents. Mental health-related hospitalization rates had stabilized, but remained particularly high in some Hampden County communities, including Holyoke and Springfield, and among Black residents. Then COVID-19 undermined mental well-being for almost everyone. The systems of behavioral health care, which were already found to be insufficient in the 2019 CHNA, could not handle the increased demands.

The mental health challenges of youth and young adults (age 12-24) are acute. For example, more than 4 in 10 Springfield eighth graders surveyed in 2021 felt sad or hopeless for two weeks or more in a row. Inequities among some youth populations were already well documented in prior CHNAs. These were brought to the fore during the pandemic, especially for girls, Black and Latinx youth, youth with a disability, LGBTQIA+, rural, and young adults 18-24. Positive signs are that youth are more comfortable talking about mental health challenges, are finding trusting people to talk with, and are expressing openness to receiving care through telemental health, which expanded exponentially during the pandemic. Social media has both negative and positive impacts, undermining mental health, especially for girls, while also normalizing mental health issues and offering peer support. Several factors continue to affect youth mental health and access to care, including: individual and systemic racism; continued stigma among many parents and some youth; provider shortages; and lack of cohesive and culturally

competent mental health services. Proven prevention strategies such as organized sports, afterschool programs, youth drop-in centers, and other extracurricular activities need to be revitalized and expanded post-pandemic and made more affordable and accessible.

Availability of Providers and Telehealth

Many of the barriers that Hampden County residents faced in accessing health care in 2016 and 2019 are still prioritized needs in 2022. Chicopee, Holyoke, and Springfield continue to be classified as areas with health professional shortages. The pandemic created more workforce shortages in the healthcare sector, causing provider access challenges for the whole service area. In a regional survey of health officials, 35% of Hampden County respondents cited the limited availability of providers as the most pressing health issue facing their community. This is especially true for areas of high need, such as mental health. Unhoused or homeless individuals also struggled to receive care, as they often rely on the emergency room for treatment, but hospital ERs were overwhelmed at times with COVID-19 patients, as well as people experiencing mental health crises.

Residents with low incomes, rural residents, Black and Latinx residents, LGBTQIA+ individuals, those with a disability, and others often face additional barriers that can further limit access to providers. These may include lack of income and wealth to purchase insurance or see providers who don't take insurance, unconscious bias among providers, and lack of access to care that is culturally and linguistically appropriate. Telehealth has mostly been a positive development in access to care, but some populations, such as residents with limited means, immigrants, rural communities, and older adults, face barriers to using the internet and other technology.

Lack of Access and Affordability of Housing, Food, and Transportation

Access to and affordability of basic needs such as housing, food, and transportation are key building blocks of health, and they continue to be a prioritized need for many residents in both urban and rural communities in the Mercy service area. Inequities in wealth and income have meant that some groups experience greater impact. For example, the median incomes of Black and Latinx residents have grown at a much slower rate than for White residents, affecting their capacity to meet the rising costs of basic needs. Overcrowded housing and the aging housing stock in the county's urban centers affect health, yet residents often don't have the option to move to healthier environments. Hampden County also continues to have food deserts (lack of nearby grocery stores) in the three largest cities, limiting access to affordable, healthy choices such as fruits and vegetables.

COVID-19 caused high rates of unemployment, further undermining the ability of residents to meet their monthly expenses. It also triggered inflation, raising the cost of many basic needs. In 2021, home prices in Hampden County rose almost 14%. The UMass Donahue Institute projects a housing gap of over 13,000 units in Hampden County by 2025. The pandemic also affected access to food – food insecurity jumped 42% from 2019 to 2020. Beginning in March 2020, the Food Bank of Western MA played a key role, distributing on average 877,000 meals per month to 91,000 clients, peaking at 1.1 million meals in October 2020. People who do not have access to transportation have an even harder time meeting basic needs. Census data show that consistently 14% of Hampden County residents do not have access to a

vehicle. Since the 2013 CHNA, transportation continues to be one of the largest barriers to medical care. Telehealth offers a potential solution to that barrier for some residents, depending on the type of care they need.

Other Prioritized Health Needs

We continue to see inequities in social and economic factors that affect health. Since the 2019 CHNA, overall educational attainment in Hampden County remains relatively unchanged, and racial disparities persist, with lower attainment rates among Black and Latinx residents. Median incomes of Black and Latinx individuals also lag White peoples' incomes. The pandemic affected violence and trauma in ways yet to be understood fully, but people at risk of intimate partner violence or child abuse were more vulnerable during the lockdown and with the shift to remote work and school. Being at home full time also had implications for residents in homes that have elevated lead levels and allergens that contribute to asthma – two conditions that are already at higher levels in the largest cities in the service area. Regarding barriers to care, access to health insurance, affordability of care, and lack of care coordination continue to be a problem. Chronic health conditions remain prioritized needs, especially asthma; emergency department visits rose among Black asthma sufferers relative to other groups. Chronic Obstructive Pulmonary Disease (COPD), cardiovascular disease, and other chronic conditions that are also a risk factor for heart disease— diabetes and obesity— also show disparities, with much higher rates among Black residents. Another chronic condition, Alzheimer's Disease appears to have been affected by COVID-19, with CDC reports that there were 16% more deaths from this and other forms of dementia in 2020 compared to the prior five-year average. The infant mortality rate for the county is 30% higher than the statewide average. Sexually transmitted diseases have been on the rise in the state and Hampden County over the last several years.

Priority Populations

This CHNA identified many inequities in prioritized health needs among Black and Latinx communities, which are Mercy priority populations for the service area. Black and Latinx residents experience lower median income than White people, making it harder for them to afford basic needs and to access quality health care. They also experience fragmentation of care, individual and systemic racism within health care institutions, and lack of care that is culturally and linguistically appropriate.

The pandemic exacerbated existing inequities. The disparate rates of infection and death in Hampden County, and national trends, indicate that communities of color and those with limited means suffered higher rates of both infection and death. Based on national studies, the pandemic-induced upheaval in the economy and the shift to remote schooling disproportionately harmed women of color. Black communities also felt the pandemic's impact on mental health more keenly than other communities, as it coincided with police violence and vigilantism against Black people. Emergency Department admissions for mental health were highest among Black residents in the county. Deaths of despair (suicide, overdose, alcohol-related) in the service area were highest for Latinx residents.

For those who are unhoused or experience homelessness, access to basic needs and to consistent health care are particularly challenging. Unfortunately, the number of unhoused persons in Hampden County

increased three-fold, from 886 people experiencing homelessness in 2010 to 2,443 homeless persons in 2019, while overall population grew less than 1%. Black and Latinx people are disproportionately represented among those who are unhoused, a group that were particularly vulnerable during the pandemic in several ways. They were at higher risk of exposure to the virus if they sought shelter. They had less access to ER services, which are often the only place they can turn for health care, because of stretched hospital capacity. They faced higher costs for basic needs due to inflation caused by the pandemic. For the many unhoused people who have mental health and substance use challenges, they were affected by the reduction in availability of providers. Unhoused children who previously received free or low-cost meals through school may have had to overcome barriers to access meals during the pandemic as well.

Other populations whose health is vulnerable or who experience inequities include children, older adults, LGBTQIA+ youth, people with low incomes, women, people with mental health and substance use disorders, people involved in the criminal legal system, and people living with disabilities. Data throughout the report describe how these populations experience inequities. For example, LGBTQIA+ youth and youth with disabilities experienced higher rates of depression and anxiety during COVID-19 than other groups.

In sum, for so many facets of health and health care, COVID-19 deepened inequities. Virtually every prioritized health need was affected by the pandemic.

2. Introduction

About the Hospital

Founded in 1873, **Mercy Medical Center** (referred to as Mercy) has been a provider of health care services in Western Massachusetts for over 145 years. In 2015, Mercy Medical Center became part of Trinity Health Of New England, an integrated health care delivery system that is a member of Trinity Health, Livonia, Michigan, one of the largest multi-institutional Catholic health care delivery systems in the nation serving communities in 22 states. Mercy Medical Center is a 182-bed acute care hospital in Springfield. Other facilities include Mercy's Rehabilitation Hospital, a comprehensive hospital-based rehabilitation center on the campus of Mercy Medical Center and Brightside for Families and Children, an outpatient service offering counseling and family support programs.

Our Mission - To serve together in the spirit of the Gospel as a compassionate and transforming healing presence within our communities. Guided by our charitable mission and core values, our work extends far beyond hospital or clinic walls. We continually invest resources into our communities to meet the health needs of underserved and vulnerable community members, bringing them healing, comfort, and hope. Through our community benefit initiatives, we help to make our communities healthier places to live.

Our Core Values:

- Reverence - We honor the sacredness and dignity of every person.
- Commitment to Those Who are Poor - We stand with and serve those who are poor, especially those most vulnerable.
- Justice - We foster right relationships to promote the common good, including sustainability of Earth.
- Stewardship - We honor our heritage and hold ourselves accountable for the human, financial, and natural resources entrusted to our care.
- Integrity - We are faithful to who we say we are.

About the Coalition of Western MA Hospitals

Mercy is a member of the **Coalition of Western MA Hospitals** ("the Coalition") a partnership formed in 2012 among eight non-profit hospitals, clinics, and insurers in the region: Baystate Medical Center, Baystate Franklin Medical Center, Baystate Noble Hospital, Baystate Wing Hospital, Cooley Dickinson Hospital, Mercy Medical Center, Shriners Children's New England, and Health New England, a local health insurer whose service areas cover the four counties of Western Massachusetts. In 2022 the Coalition expanded to include the Berkshire Health Systems. The Coalition members share resources and work in partnership to conduct their **Community Health Needs Assessments (CHNA)** and address regional needs, with the goal of improving health and equitable distribution of health outcomes.

To understand current needs, Coalition members collaboratively conducted CHNAs in 2021-2022 to update their 2019 CHNAs. The 2010 Patient Protection and Affordable Care Act (PPACA) requires tax-exempt hospitals and insurers to "conduct a Community Health Needs Assessment [CHNA] every three years and adopt an implementation strategy to meet the community health needs identified through such assessment." Based on the findings of the CHNA and as required by the PPACA, each hospital develops a health improvement plan to address select prioritized needs. The CHNA data also inform County Health Improvement Plans (CHIPs) in all Coalition counties.

The CHNA was conducted by the Coalition in partnership with a **consultant team** led by the Public Health Institute of Western Massachusetts that consisted of: Collaborative for Educational Services, Franklin Regional Council of Governments, and Pioneer Valley Planning Commission. (See Appendix 1 for more about the consultant team.)

Community leaders and residents were also integral to the process. They provided input through the **Regional Advisory Council** (RAC), interviews, focus groups, and Community Chats. The Coalition engaged hundreds of residents across the counties of Western Massachusetts in data collection and outreach about the CHNA.

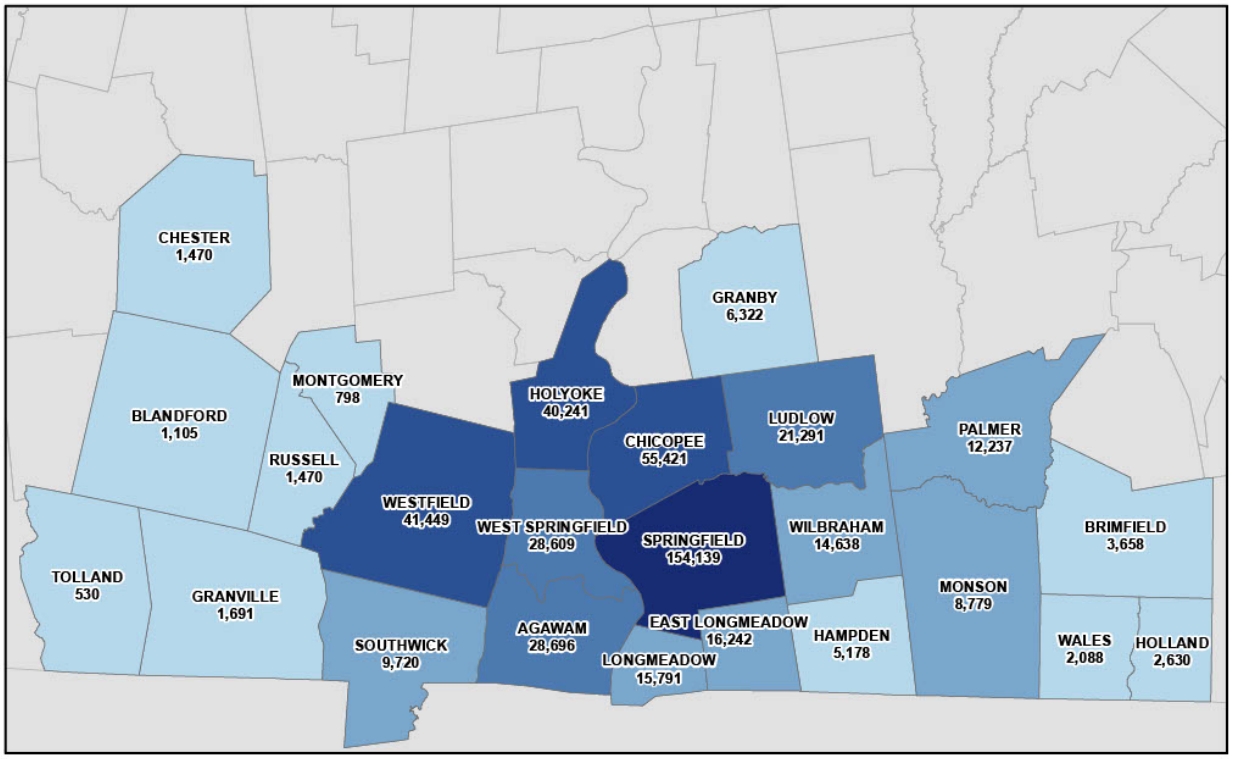
About the Hospital Service Area

For the purposes of this assessment, we used Mercy's Service area, which includes the 23 communities in Hampden County and Granby, a city in Hampshire County. Hampden County is home to 467,871 residents.[1] Springfield is the largest city in the service area and third largest in Massachusetts. Three adjacent cities (Holyoke, Chicopee, and West Springfield) join Springfield to create a densely populated urban core that houses over half of the county population. East and west of this central core are smaller communities, a majority with populations under 20,000 (see Figure 1 and Table 3). The Pioneer Valley Transit Authority, the second largest public transit system in the state, serves 11 communities in the service area, and connects suburban areas to the core cities and services. Spanning the geographically diverse service area, one finds a wealth of community-based organizations, resources and collaborations; a vibrant arts and culture scene; anchor education, health, and corporate institutions; a strong philanthropic network; and other assets that contribute to the region's status as a destination to live, work, and play.

According to Census estimates, the service area has become slightly more diverse since the last CHNA. Hampden County experienced small increases in the proportion of all racial and ethnic groups except White residents, especially in the larger cities. The service area population is now 60% White, 23% Latinx, 8% Black, 5% two or more races, and 3% Asian (See Table 4). The proportion of foreign-born residents in the service area is close to 9%, half the statewide proportion. In Springfield, one in ten residents is foreign born.

FIGURE 1

Communities in Mercy Service Area: 2019 Population Estimates



Source: U.S. Census, ACS 2019 5-Year Estimates Data Profiles, specifically table DP05, Demographic and Housing Estimates

The median age of the county is 39 years and continues to closely mirror the state, while Springfield remains a relatively younger city with a median age of just over 33 years. The county has a higher proportion of residents with a disability (12%) than the state overall (8%), and Springfield's proportion of residents with a disability (16%) is fully double that of the state.[2]

Prior to COVID-19, many of the socioeconomic conditions in Hampden County had not changed much since the 2019 CHNA. As this report describes, income, housing, food security, and many other conditions worsened during the pandemic. COVID-19 caused immense suffering for many residents, who faced dire health outcomes and financial hardship. The county's leading economic engines such as higher education, healthcare services, and manufacturing were severely affected, with impacts on their workforce and the region. This topic is examined more closely in the COVID-19 section and also in other sections on prioritized health needs.

Summary of the Previous CHNA

The 2019 CHNA found that the Mercy service area continued to experience many of the same prioritized health needs identified in Mercy's 2016 CHNA. Social and economic challenges experienced by residents in the service area contributed to the high rates of chronic conditions and other health conditions identified in the needs assessment. These social and economic factors also contributed to the health inequities observed among marginalized

populations, including children, older adults, Latinx residents, Black residents, LGBTQIA+ youth, people with limited incomes, women, people with mental health and substance use disorders, people involved in the criminal legal system, people experiencing homelessness, and people living with disabilities.

The service area population continues to experience barriers that make it difficult to access affordable, quality care, some of which are related to the social and economic conditions in the community, and others which relate to the health care system. Mental health and substance use disorders were consistently identified as top health conditions affecting the community, as well as the inadequacy of the current systems of care to meet individuals' needs. Also prioritized were chronic health outcomes, such as cardiovascular disease, asthma, cancer, and diabetes among others.

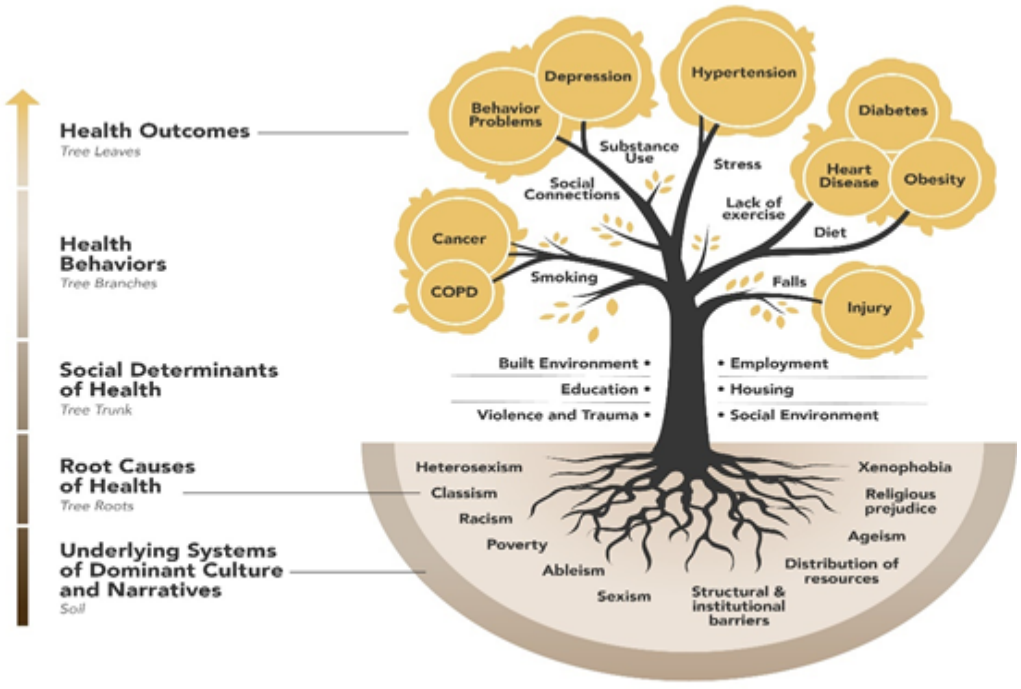
3. Setting Context

Coalition Guiding Principles for 2022 CHNA

The Coalition of Western Massachusetts Hospitals/Insurer was founded on a shared commitment to collaborate toward the common goal of health equity in the region. Health equity means achieving the conditions where everyone has the ability to live to their full health potential. The Coalition also shares an analysis of what prevents health equity, captured visually in the accompanying tree graphic. We acknowledge that the causes of inequity are the deep-rooted, longstanding belief systems and narratives that were historically developed to confer advantage and power to certain groups, in order to disadvantage and disempower other groups. This emphasis on dominant narratives and structural racism has been incorporated by the Massachusetts Department of Public Health (MDPH) into its health equity work, for example in its presentation of data from the COVID-19 Community Impact Survey.

FIGURE 2

Health Tree Model: Understanding Root Causes of Health Behaviors and Outcomes



Source: Health Resources in Action

Historically, advantaged groups that asserted power over others included White people, males, those with wealth and land, cisgender and heterosexual people, and people without disabilities. Groups that were dominated and excluded included women, people without wealth, indigenous tribes, enslaved Africans and their descendants, Latin Americans, Asians and Pacific Islanders, other immigrants, people with disabilities, LGBTQIA+ and religious minorities.

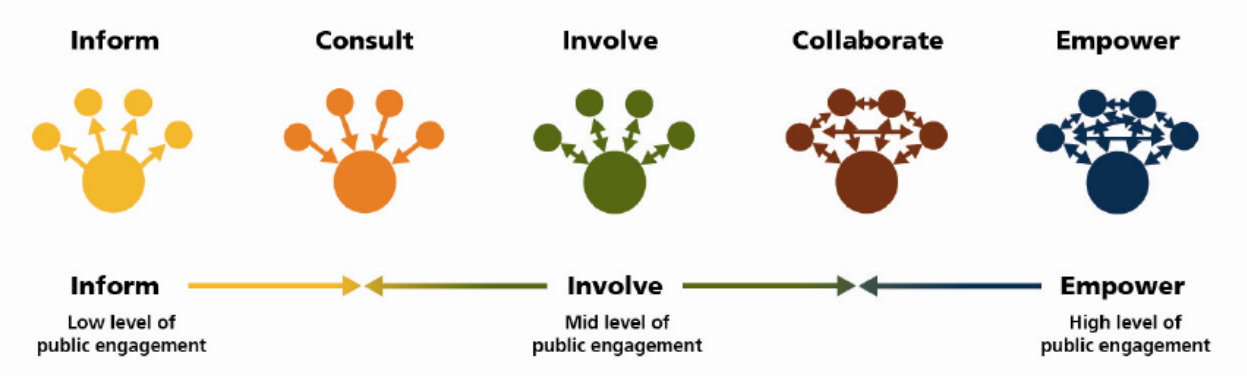
Systemic racism, structural poverty, and the other "isms" in the graphic's tree roots are each a means to perpetuate dominant advantage, and they continue today. They show up in public policies, institutional practices, including in healthcare systems, and individual actions. As a result, race, ethnicity, age, gender, wealth and income, disability status, etc. determine one's ability to receive quality health care, earn a living wage, live in safe, affordable housing, enjoy freedom from violence, receive a good education, and have access to healthy foods and physical activity.

> **"Racism stays through the life of a person."**
> *Age Friendly Coalition Member, Community Chat, Hampden County*

In order to make meaningful progress to address these root causes of poor health, the CHNA process seeks to embody the values of community-led change, anti-racism, cultural humility, and social justice. (See glossary in Appendix 2) The structure of CHNA decision-making shows the commitment to community-led change. The Regional Advisory Council (RAC) is made up of the Coalition hospital/insurer members, residents with lived experience of poverty and discrimination, and people who work in health care and community services. The Coalition Steering Committee also includes community representatives. Our Coalition member institutions and their leaders are each at different points in our journey to become anti-racist and culturally humble. We seek to learn and grow with and from each other and our Regional Advisory Council. Ultimately, we want to share decision-making with those most directly affected by health inequities.

FIGURE 3

Community Engagement Standards for Community Health Planning Guideline



Source: Massachusetts Department of Public Health, "Community Engagement Standards for Community Health Planning Guideline, January 2017, https://www.mass.gov/doc/community-engagement-guidelines-for-community-health-planning-pdf/download

Every three years the Coalition, RAC, and consultants strive to improve the CHNA process and our practice of these values. For 2022, we all engaged in honest and often difficult discussions and decisions that advanced the process from 2019 in at least four meaningful ways:

1. Moved decision-making closer to the community-driven ("Empower") end of the Community Engagement spectrum (see Figure 3).

2. Further refined the equity values of the CHNA process, as described above.
3. Pursued a commitment to collective action around a regional focus area, Youth Mental Health.
4. Strove to make the CHNA reports more accessible – shorter, easier to read, more useful, and actionable.

Finally, it is important to note that by federal mandate (Affordable Care Act), this CHNA is required to provide an accounting of health needs. It also includes information on available resources to address those needs. Yet it does not paint the full picture of the vibrant, culturally diverse, and actively engaged communities that come together across sectors to make change in each service area and the region. The Coalition members honor community endurance and firmly embrace an asset-based lens in our vision for community wellness.

Orientation to this Report

As in previous CHNA reports, this CHNA uses a health equity focus to identify needs. Research shows that less than a third of our health is influenced by our genetics or biology.[3] The Guiding Principles and Health Tree (Figure 2) show that our health is largely determined by social and economic factors that are influenced by practices and policies such as systemic racism and structural poverty, which continue to affect the health of *all* people in Western Massachusetts. In fact, inequality that directly harms some of us ultimately harms all of us. And the converse is true – when we develop targeted solutions to end inequities, everyone benefits.

In describing prioritized health needs for the Mercy service area, this report builds on the 2019 CHNA. In addition to identifying the 2022 prioritized health needs, it provides greater depth on several critical issues identified by community and hospital leaders:

- Two regional priorities: the impact of COVID-19 and the youth mental health crisis.
- Mercy Medical Center's three focus areas for deeper dive:
    - availability of health providers and telehealth;
    - lack of access and affordability of housing, food and transportation; and
    - the intersection of mental health and substance use disorder.
- Mercy Medical Center priority populations for greater focus: Black and Latinx residents, and individuals who are homeless or unhoused.

To ensure the main report is accessible and easy to use, each section is clearly labeled and designed to be easily separated out as its own resource. Prioritized health needs that the Coalition or the hospital did not identify for deeper focus are summarized in fewer pages. We encourage readers to refer back to the 2019 report[4] for richer context and information on many of these issues. Finally, though the needs are separated into sections, we acknowledge the cross-cutting nature of all the health issues and social factors presented, and that people experience many barriers to health and wellness.

As you read this report, please think about how you, your community, and your organization can use it to support your health equity goals. We want to know how Mercy can partner with you in promoting

health and wellness in our service area. We welcome opportunities for discussion and feedback about the CHNA. Here's how you can participate:

- For questions or comments on the CHNA, please contact:
  Regional Director of Community Health and Well Being
  Trinity Health Of New England
  Mercy Medical Center
  271 Carew Street
  Springfield, MA 01104
  Ph: 413-748-9064
- Provide input on the Mercy Strategic Implementation Strategy. For reference, the 2019-2021 strategy document is here: https://www.trinityhealthofne.org/assets/documents/community-benefit/mercy-chip-(part-1).pdf
- Join county initiatives such as the Hampden County Health Improvement Plan (CHIP). For more information, go to: http://www.pvpc.org/HCHIP. The CHIP has five focus areas or domains with active committees:
  - Domain 1: Health Equity and Health Disparities (access to opportunity in housing, employment, and education)
  - Domain 2: Behavioral Health (mental health, substance use/abuse, and treatment)
  - Domain 3: Primary Care, Wellness and Preventative Care (CVD, diabetes, asthma, STIs)
  - Domain 4: Healthy Eating and Active Living (food access and the built environment)
  - Domain 5: Public Safety, Violence, and Injury Prevention (domestic violence, gun violence, childhood trauma)

4. Methodology

Assessment Process and Methods

The 2022 CHNA updates the prioritized community health needs identified in the 2016 and 2019 reports in three areas: the social and economic factors or “determinants'' that influence health, barriers to healthcare access, and health behaviors and outcomes. This CHNA focused on Hampden County-level data and data for select communities as available: Chicopee, Holyoke, Palmer, Springfield, West Springfield, and Westfield. Assessment methods included:

- **Literature Review:** (fall 2021)
    - Review of existing assessment reports published since 2019 that were completed by community and regional agencies serving Hampden County.
- **Quantitative data collection and analysis:** (winter 2021-22)
    - Analysis of COVID-19 Community Impact Survey data from Massachusetts Department of Public Health (MDPH).
    - Analysis of social, economic, and health data from Trinity CARES data hub, MA Department of Public Health, the U.S Census Bureau, the County Health Ranking Reports, Broadstreet, and a variety of other data sources.
- **Qualitative data collection and analysis:**
    - Community Chats conducted by members of the RAC in the service area and regionally. (summer-fall 2021)
    - Survey of public health officials in Hampden County and throughout Western Massachusetts. (fall 2021)
    - Focus groups and interviews with key informants conducted by the consultant team. (winter 2021-2022)

Prioritization Process

The 2022 CHNA used the 2016 and 2019 CHNA priorities as a baseline, then reprioritized needs where quantitative and qualitative data, including community feedback, warranted changes. In previous CHNAs, prioritized health needs were those that had the greatest combined magnitude and severity, or that disproportionately affected populations that have been marginalized in the community. Quantitative, qualitative, and community engagement data confirm that priorities from 2019 continue in 2022.Through this process, the Coalition members agreed that COVID-19 and Youth Mental Health warranted regional attention in the CHNA. Also, Mercy chose a priority in each of three facets of health needs: availability of health providers and telehealth (Barriers to Care); lack of access and affordability of housing, food and transportation (Social Determinants of Health); and the intersection of mental health and substance use disorder (Health Outcomes). The consultant team identified priority populations by disaggregating available data to reveal disparities, which led Mercy to prioritize Latinx and Black

residents. Mercy also prioritized the growing number of people experiencing homelessness or who are unhoused, as they face unique health challenges.

Limitations and Data Gaps

Given the limitations of time, resources and available data, our analysis was not able to examine every health and community issue. Data for this assessment were drawn from many sources. Each source has its own way of reporting data, so it was not possible to maintain consistency in presenting data on every point in this assessment. For example, sources differed by:

- geographic level of data available (town, county, state, region);
- racial and ethnic breakdown available;
- time period of reporting (month, quarter, year, multiple years);
- definitions of diseases (medical codes that are included in counts).

Though not generally a problem when reporting data for larger cities such as Springfield, Holyoke, and Chicopee, we encounter a problem with smaller towns due to small numbers. When the number of cases of a particular characteristic or condition is small, it is usually withheld from public reports to protect confidentiality and because of estimate variability. The availability of data and the problem of small numbers affect the reporting of data by race and ethnicity in this assessment. Statistics for people of color in Hampden County do not begin to reveal the level of detail we would like to know, preventing a better understanding of people who identify with different races and ethnicities. It is also important to consider intersectionality— the overlapping identities of residents. What impact does being young, Black, and gay in Hampden County have on health? Or being transgender and living on an income below the poverty line? We were unable to explore these differences with the quantitative data available and had limited capacity to do so in focus groups. This CHNA process cannot begin to cover the full range of identities present in our community.

Language Used to Describe Demographic Groups

The Coalition and consultant team honor the unique ways that individuals and communities describe and identify themselves. For the purposes of this report, we need to use consistent language when speaking about different groups of people, knowing that terms are always evolving and changing. We use the following descriptors where possible in the text: Black, Latinx, Indigenous, Asian, people/communities of color, White, LGBTQIA+, Transgender. The glossary in Appendix 2 offers further clarification of what we mean by these terms. For any term we use, we know there are community members for whom that term is not their preferred way to be identified. For example, we recognize that there are differences between those who identify as Puerto Rican, Mexican, or Cuban that aren't captured by the term "Latinx," and differences among those who identify as Chinese, Japanese, or Korean that aren't captured by "Asian."

5. The Impact of COVID-19 in our Community

Overview

It has been three years since the last community health needs assessment, and for two of those years our nation and region have battled a once-in-a-century health pandemic. COVID-19 has taken a tremendous toll on this service area, and it continues to affect the current status of health in Western MA. We lost 76 veterans at the Holyoke Soldiers Home[5] and hundreds of other older adults throughout the service area in congregate care settings. We lost family members who were still in their prime but couldn't fight off the virus, often because they already had a chronic disease that compromised their immune system. We lost brave essential workers, many who chose to take the risk and others who had no choice but to keep working despite the risks. While we cannot tell the story of every life lost and every person left grieving, we can provide data that capture the enormity of the impact.

The pandemic very clearly exacerbated existing health inequities. People of color, people with low wages, and people living in densely populated housing were more at risk early on in the pandemic, when less was known about how to effectively treat the virus or reduce its spread. Because systemic racism and structural poverty reduce access to quality jobs and housing and increase the prevalence of chronic disease, people of color and people with limited incomes were more likely to be essential workers and experience other risk factors, such as having higher rates of comorbidities.[6]

Some communities of color experienced disproportionately higher rates of illness, hospitalization, and deaths from COVID-19 across the U.S.[7] For example, since the start of the pandemic, the CDC reports that the greatest age-adjusted death rates have been among Indigenous, Black, and Latinx individuals, at rates more than double those of White individuals.[8] As the pandemic progressed and vaccination became available, inequitable access to vaccines and vaccine hesitancy continued to drive COVID-19 health inequities.

COVID-19 in our Region and Service Area

Since the pandemic began, COVID-19 has been ranked among the top three leading causes of death in the US for most months.[9][10] Though we do not have up-to-date overall death data for the Western MA counties, comparisons to 2017 data (the most recent available) indicate that COVID-19 is likely among the leading causes of death locally as well. Though touching all of us throughout the region, the impacts across our four Western MA counties have varied, with communities that have historically experienced inequities bearing greater impact.

- In Western MA, as of 1/28/22, we have lost 2,809 lives to COVID-19 (see Table 1).
- For the year 2020, the greatest absolute and relative number of lives lost was experienced in Hampden County, with 1,055 people losing their lives to COVID-19. Hampden County's death rate was over 70% greater than each of the other three Western MA Counties and 20% greater than that of the state as a whole.

- Hampden County COVID-19 deaths in 2020 were comparable to the other top causes of death in the MDPH 2017 Death Report (top listed causes: heart disease=1,019, cancer=908). [11]

TABLE 1

Confirmed COVID-19 Cases and Deaths by County as of 1/28/2022

County	Total Cases	Total Cases per 100,000	Total Deaths	Total Deaths per 100,000
Berkshire	20,827	16,315	370	290
Franklin	9,531	13,260	150	209
Hampden	**127,046**	**26,769**	**1914**	**403**
Hampshire	24,396	14,859	375	228
Regional Totals	181,700		2,809	
State	1,493,224	21,434	21,909	314

Source: MDPH COVID-19 Dashboard, https://www.mass.gov/info-details/covid-19-response-reporting.

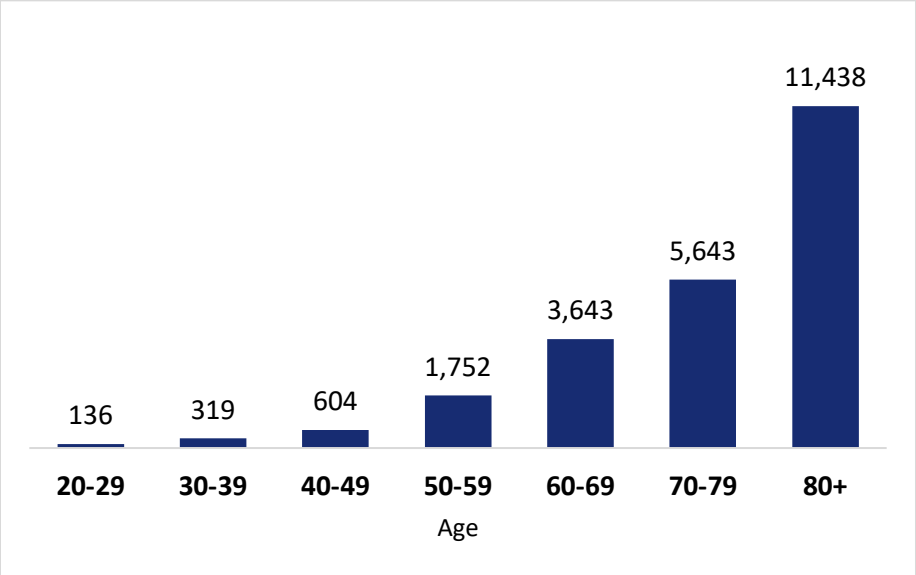
Many more people have tested positive for COVID-19 and experienced illness. The number of confirmed cases in the four counties of Western MA as of 1/29/2022 was 181,800 (Table 1). Hampden County residents have been particularly hard hit by COVID-19 with the greatest cumulative cases per 100,000 population through 1/29/2022 among Western MA counties.

Data disaggregated by race/ethnicity are not available at a county level in MA. State data have limitations because a large percent of cases are classified as "unknown" or "other." However, the disparate rates of infection and death in Hampden County, and national trends, indicate that communities of color and those with limited means suffered higher rates of both infection and death. In addition, we know that older adults have been at high risk for severe illness and death from COVID-19.

- Though we do not have local data, we see trends at the state level that are comparable to those across the country with a median age of death of 75 years.
- Examination of available statewide data from 8/12/20 through 3/1/22 (age-specific death data is only available as of 8/12/20) indicates that 74% of deaths occurred among those who were age 70 and older (see Figure 4).
- Twenty-four percent of deaths have occurred among those residing in an elder care facility in MA. [12]

FIGURE 4

COVID-19 Deaths by Age (20+) in Massachusetts, August 2020- March 2022



Source: MDPH COVID-19 Dashboard, COVID-19 Raw Data - March 28, 2022, https://www.mass.gov/info-details/covid-19-response-reporting.
Note: Includes ages 20 and older; data from 8/12/20 through 3/24/22

Another population at high risk of catching COVID-19 from being in congregate settings were incarcerated individuals, as well as the staff working in prisons. We have state by state comparisons for some mortality and morbidity statistics, but these data were not available for the region or the service area:

- Data collected by the Marshall Project through 6/22/21 estimated that in Massachusetts 2,574 incarcerated individuals (one in three) were infected, and 21 individuals died (one in 379). This was a higher proportion than the national median of one in 493.[13]
- According to the same database, 954 prison staff, or one in five, were infected, but no staff deaths were reported.

On the positive side, Massachusetts has one of the highest COVID-19 vaccination rates in the US, although vaccination rates vary across the Commonwealth.

- 76% of the state's population have been fully vaccinated and 53% of those fully vaccinated have received a booster dose as of 2/24/22.
- By June 2021, 72% of incarcerated individuals in Massachusetts had been vaccinated, and 60% of prison staff.[14] Data on boosters were not available.
- At the county level, the lowest rates as of 2/24/22 were in Hampden (67%) and Hampshire (70%) counties (along with Bristol County in Eastern MA). [15]

Barriers to vaccine access and vaccine hesitancy were likely factors in Hampden County's lower rates. Vaccination barriers include getting time off from work, needing childcare, limited access to transportation, limited physical mobility, and caring for other family members at home. Reluctance to

get vaccinated among people of color has been driven in part by distrust resulting from this country's history of racist experimentation and unethical medical treatment among Black and indigenous populations.[16] The pause in the Johnson & Johnson vaccine distribution, as well as negative feelings among many in the Black community over allegations it marketed cancer-causing talcum powders to them, may have also contributed to hesitancy.[17] These lower vaccination rates have contributed to higher COVID-19 case rates, hospitalizations, and deaths, particularly when the Delta and Omicron variants were spreading. Hospital capacity in Western MA was also extremely limited during the Delta and Omicron phases as a result of high COVID-19 hospitalization rates and hospital staff shortages.

2020 Massachusetts COVID-19 Community Impact Survey (CCIS)

In response to the ongoing COVID-19 pandemic, MDPH conducted the COVID-19 Community Impact Survey in the fall of 2020 to better understand the needs of populations that have been disproportionately affected by the pandemic, including social and economic impacts. MDPH intentionally sought to reach key populations such as people of color, LGBTQIA+ individuals, people with disability, older adults, etc. Throughout this report, we highlight relevant findings for Hampden County and Western MA. Caution should be used when interpreting the survey results; these findings are only representative of those who participated in the survey and may not be representative of the experiences of everyone in Hampden County.

- In Hampden County, there were 2,253 survey respondents.
- Respondents were predominantly female (79%).
- A third identified as a non-white race or ethnicity.
- 12% identified as LGBTQIA+.
- 23% speak a language other than English at home.
- 22% had an income below $35,000.
- 9% live in a rural area.

Other COVID-19-related Impacts and Inequities

Not only has the disease caused illness, hospitalization, and death, but the numerous measures that have been taken to control the pandemic (such as lockdowns and remote learning) have also affected well-being in our communities. These ripple effects of COVID-19 compromised the building blocks of health by causing higher rates of unemployment, food insecurity, and housing instability among those who already experience inequities. The pandemic also led some people to delay preventive, emergency, or urgent care out of concern for risk of exposure to COVID-19, or because of the need for medical facilities to prioritize COVID-19 patients.[18] Some impacts are described below, and others are woven into later sections of this CHNA.

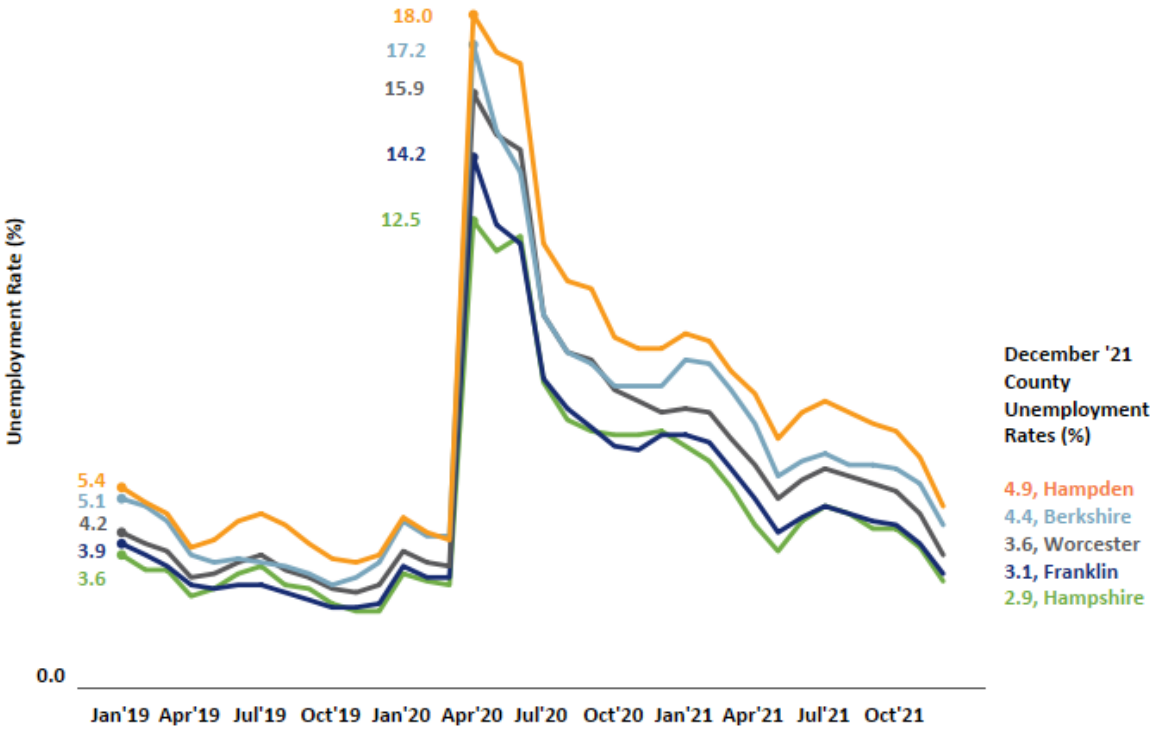
Business, the Economy and Labor Force

In 2020, each of the counties in the region saw substantial decreases in the size of their economies and small business revenues (See Appendix 6). As the pandemic recession took hold, unemployment rates spiked, and had not returned to pre-pandemic levels by the end of 2021 (Figure 5).

- The inflation-adjusted value of goods and services produced (i.e. the Gross Domestic Product or GDP) declined by $1.6 Billion (over 5%) in the Pioneer Valley in 2020.[19]
- Hampden County's GDP shrank by an estimated 5%. Variation between counties in decline of economic activity in part reflects the mix of industries making up the county economy.
- Small business revenues declined steeply in the initial weeks of the COVID-19 shutdowns, down 41% in Hampden County.[20]
- Revenues remained depressed throughout 2020 and into 2021, when Hampden County's small business revenues were 22% below pre-pandemic levels.
- In Hampden County, unemployment peaked at 18% in April 2020. Springfield and Holyoke unemployment rates topped 20%, higher than for any other cities in the region. Chicopee, West Springfield, Palmer, and Ludlow were also in the top ten regionally.[21]

FIGURE 5

County Unemployment Rates, January 2019-January 2022



Source: US Bureau of Labor Statistics, Local Area Unemployment Statistics

Although local unemployment and workforce participation data are not available disaggregated by gender or race/ethnicity, we know based on national studies that women, and especially women of color, were disproportionately harmed by the pandemic-induced upheaval in the economy and the shift to remote schooling.[2223]

These wrenching economic shifts and resulting loss of wages led to challenges with housing, food access, and other basic needs for many residents. Data on these impacts can be found in Section (6) d of this report. The pandemic and its economic and social consequences also had a profound impact on mental health for people of all ages and demographics. Section (6) a of this report looks at mental health and substance use in adults, and Section (6) b explores the youth mental health crisis.

Rural communities have had particular challenges during the pandemic that affected their access to employment, school, and health care, driven by limited access to the internet. CCIS data for three rural geographic clusters that overlap with Hampden County showed a disparity in concern about internet access, with 23% of rural respondents citing this concern, compared to 17% of urban respondents. See more on internet access and telehealth in Section (6) c of this report. Other sections also contain data on rural needs and challenges affected by the pandemic.

Challenges of Statewide Public Health System on Pandemic Response

People's health outcomes are strongly impacted by the quality of local public health protections in each community. Yet in our region, the local public health system is chronically underfunded and understaffed. The state's decentralized structure has led to 351 independent boards of health,[24] each with many responsibilities, including to:

- ensure environmental, water, food, and housing safety;
- enforce compliance with tobacco and lead laws;
- prepare for and respond to public health emergencies;
- investigate infectious diseases and issue guidance and quarantine or isolation orders, including for COVID-19;
- offer local vaccine clinics, wellness clinics, and public education on health hazards.

Most local health departments were already overstretched before the beginning of the pandemic, because Massachusetts does not fund this important local function and has no standards or workforce requirements. This weak system led to vast differences in the pandemic protections offered to residents of our region. If a town did not have a public health nurse, as most did not, no one was available to conduct contact tracing. The Commonwealth invested significant funds in a private non-profit solution, the Community Tracing Collaborative (CTC), so many local communities could fulfill their contact tracing responsibilities during the pandemic. During surges in COVID-19, however, local public health officials reported that the CTC was unable to reach people in a timely fashion due to the extreme demand on their staff, which resulted in significant disparities in COVID-19 contact tracing between towns using the state system and those with local public health nurses.

Assets and Resources

Besides offering COVID-19 testing and vaccination services to the community, Mercy Hospital, as part of the Trinity Health Of New England Health System, was involved in a multifaceted public health awareness media campaign. Communications on COVID-19 prevention, testing and treatment included targeted messaging for diverse communities as well as targeted messaging for children. The Trinity Health "It Starts Here" campaign supported COVID-19 vaccine outreach, education, and clinics by granting subcontracts to local community-based organizations. These included the Public Health Institute of Western MA, Black Springfield COVID-19 Coalition, New North Citizens' Council, Educare Springfield and Open Pantry Community Services, Inc. The communities of focus were communities of color and those who are vulnerable living in Springfield. Actions included:

- providing vaccines to community members and hosting vaccine clinics at community events;
- having bilingual community outreach champions go door-to-door to address concerns around the vaccine;
- engaging local social media influencers and radio stations to promote the "It Starts Here" campaign on the importance of being vaccinated.

This campaign reached over 30,000 people via community COVID-19 outreach and education efforts.

6. Prioritized Health Needs

The Mercy service area of Hampden County, MA continues to experience many of the same prioritized health needs identified in Mercy's 2019 CHNA. The COVID-19 pandemic exacerbated many of the existing inequities related to these needs. Several prioritized needs received deeper focus as noted below. The prioritized health needs for the service area are:

- **Social and economic factors or "determinants'' that influence health:**
  - **Lack of Access and Affordability of Housing, Food, and Transportation (Mercy focus area)**
  - Educational Attainment
  - Employment and Income
  - Violence and Trauma
  - Environmental Exposures and Climate Crisis
- **Barriers to healthcare access**
  - **Availability of Providers and Telehealth (Mercy focus area)**
  - Other Barriers
- **Health behaviors and outcomes:**
  - **Youth Mental Health (regional focus area)**
  - **Mental Health and Substance Use (Mercy focus area)**
  - Chronic Conditions and Other Health Outcomes

a. Deeper Dive: Mental Health and Substance Use

Overview

Though mental health is commonly thought of as the absence of mental illnesses, mental well-being extends beyond the presence or absence of mental disorders. The World Health Organization (WHO) defines mental health as the "state of well-being in which an individual realizes [their] own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to [their] community."[25]

FIGURE 6

Dig Deeper

Source: Alyse Ruriani, website (alyseruriani.com) and instagram (@alyseruriani)

Any discussion of mental health in Western Massachusetts must acknowledge the diversity of lived experience within the region and this service area. Mental health challenges emerge in varied contexts, from rural poverty and isolation to urban disinvestment and discrimination. In both rural and urban communities, residents are resilient, the effects of poverty and discrimination have been passed from one generation to the next, and they continue to experience these harms today. Whether intentional or

not, race and class discrimination in the delivery of care can further contribute to poor mental health, as well as other adverse outcomes.[26]

As Figure 6 so effectively conveys, the systems of care typically used in our society to treat mental health and substance use issues are not generally designed to be able to dig below the surface to unearth and address these root causes. Many providers may seek to understand physical or social environments affecting their client, and desire to approach treatment from a holistic, integrated perspective. Yet the large systems they must operate within are rarely set up to support this approach.

Substance use disorders (SUD) refer to the recurrent use of drugs or alcohol that result in health and social problems, disabilities, and inability to meet responsibilities at work, home, or school. Mental health challenges and substance use are often intertwined and described together as behavioral health. According to the National Institute on Drug Abuse, "Multiple national population surveys have found that about half of those who experience a mental illness during their lives will also experience a substance use disorder and vice versa."[27]

Risk factors for SUD include genetics, age at first exposure, and a history of trauma.[28] Substance use must also be considered in the context of historical and present day rural and urban disinvestment, poverty, racism, and discrimination. Data show that other factors that contribute to SUD, such as economic constraints, social networks, opportunities for substance abuse treatment, and experiences within treatment, are affected not only by class but also by race and ethnicity. [29]

Also, predatory suppliers have heavily marketed both legal and illegal substances in Black neighborhoods and other communities of color for decades, including menthol tobacco products,[30] malt liquor and distilled spirits,[31, 32] crack cocaine and more recently, synthetic opioids.[33] The federal war on drugs and inequitable sentencing for crack vs. powdered cocaine[34] contributed to the mass incarceration of people of color and stigmatized substance use addiction as a crime rather than a treatable health condition. Disparities between Black and White residents in arrests and sentencing for illegal drug use persist today, even though rates of drug use are similar.[35]

The impact of the COVID-19 pandemic on mental health was widespread while also exacerbating disparities. In addition, police violence and vigilantism against people of color, threats to our democracy, and the rise of political hate speech and hate crimes, gun violence, and extreme weather brought on by the human-created climate catastrophe,[36] further affected mental well-being in disparate ways. National weekly Census Bureau surveys taken after the pandemic began found the greatest leaps in anxiety and depression levels were among Black residents, especially after George Floyd's murder by Derek Chauvin.[37] The second most affected group was Asian Americans, whom politicians had been demonizing because the coronavirus started in China, resulting in a rise in hate crimes against this population.

Alarming data and community concern about mental health issues among youth in particular prompted the Coalition and RAC to devote a section of this report to the specific mental health needs of young people aged 12-24. It follows this section, which focuses primarily on adults.

Mental Health

> ***"We have lost so many Mental Health providers – making appointments for patients is a real challenge."***
> *Medical administrator, Community Chat*

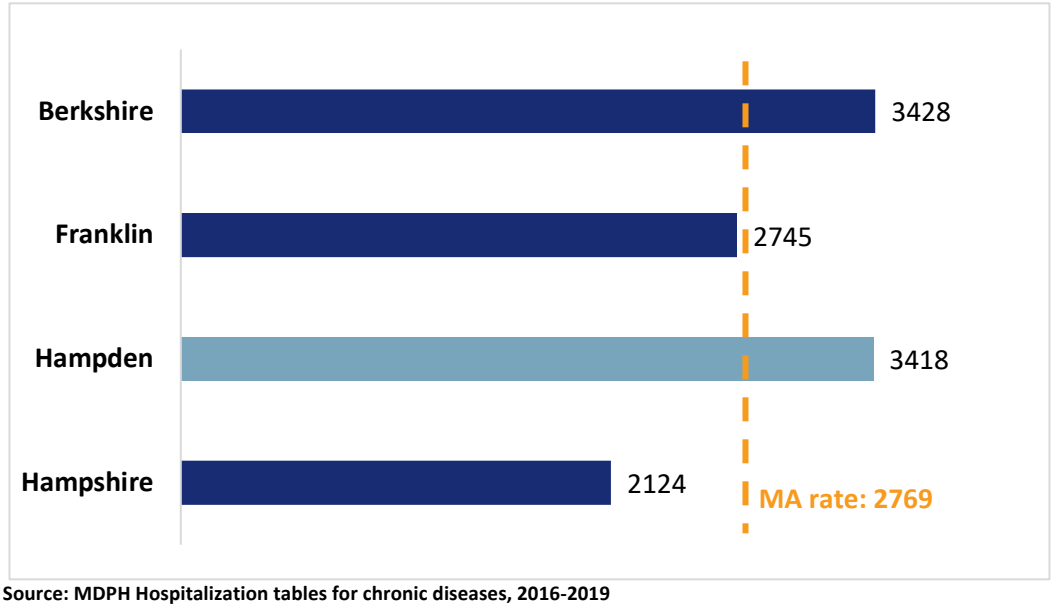
As in the 2019 CHNA, mental health continues to be a prioritized health need, and has been exacerbated by COVID-19. Prior to the pandemic, the need was already acute.

- **Adult Mental Health**: Poor Mental Health is one measure of need. In Hampden County, one in seven adults (15%) reported their mental health was not good for 14 days or more within the prior 30 days. This exceeded the statewide rate of 13%. Further, one in five Hampden County adults (21%) suffer from depression.[38]
- **Emergency Department Visits:** Hampden County had the second highest rate of mental health hospital ED visits compared to other counties in the state (see Figure 7). At the municipal level, Holyoke had the second highest admission rate statewide, and the highest ED visit rate in the county in 2019 (6,023 per 100,000), followed by Springfield (4,791 per 100,000). Longmeadow had the lowest rate in the county at 1,125 per 100,000. [39]

FIGURE 7

Mental Health Emergency Department Visits by County, 2019

Age-adjusted rate per 100,000 residents



Source: MDPH Hospitalization tables for chronic diseases, 2016-2019

- **Racial Disparities:** Emergency Department visits for mental health in Hampden County were highest for Black residents (3,851 per 100,000), and lowest for Asian residents (712 per 100,000). The state did not provide data for those who identify as Latinx (see Figure 34 in Appendix 6).
- **Homelessness:** Federal agencies have documented the prevalence of mental illnesses among people who experience homelessness. The most recent available data for Massachusetts found that 15% of those in emergency shelters and 27% of those in transitional housing had a severe mental illness.[40]

Substance Use

Substance use continues to be a prioritized health need in a county where 18% of adults smoke tobacco, compared to 14% statewide, and the same proportion (18%) engage in binge drinking.[41] An important indicator for both mental health and substance use is "Deaths of Despair," which include deaths due to suicide, drug overdose, and alcohol-related disease (see Appendix 7). These Deaths of Despair were identified and described by economists Anne Case and Angus Deaton because of the marked increase in these causes of death over the past two decades and their impact on the US working class, especially White men.[42]

- Between 2016-2020, deaths of despair in the service area were 65.3 per 100,000, 29% higher than the state rate (50.7 per 100,000).[43]
- These causes of death affected men at three times the rate of women in Hampden County, and the gender gap was more pronounced than at the state level.
- Compared to the state, the service area gap was especially wide for Latinx people, who had the highest rate of all groups, just exceeding the rate for White people at 70.7 per 100,000.[44]
- Three in ten driving deaths in the service area involve alcohol.[45]

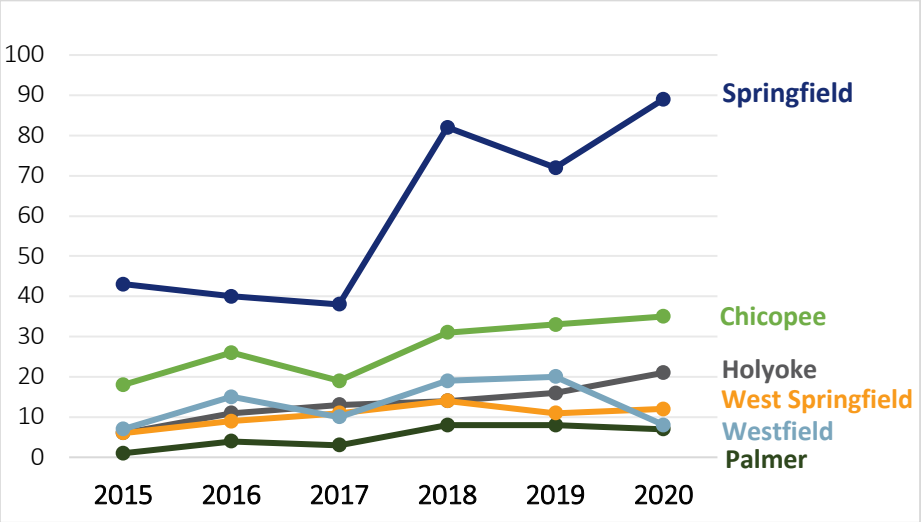
Despite some signs of improvement in 2017, the opioid crisis has grown in the last several years across the region and especially in Hampden County.

- In 2020, Hampden County experienced the highest rate of Emergency Medical Service calls related to opioid overdoses of any county in the state.[46]
- Tragically, the number of people who died from opioid overdose in Hampden County increased by 452% from 2010 to 2020, a higher percentage than in Hampshire and Franklin Counties and the state overall.
- A subset of communities in Hampden County has seen rises in people dying from opioid overdose since the last CHNA, especially Springfield, Chicopee, and Holyoke (see Figure 8).

On the positive side, Westfield saw a decline in opioid-related deaths, and Palmer and West Springfield held steady after an uptick in 2018.

FIGURE 8

Number of Opioid Related Deaths in Select Cities, 2015-2020



Source: MDPH, Number of Opioid-Related Overdose Deaths, All Intents by City/Town, 2015-2020

COVID-19's Impact on Mental Health and Substance Use

The COVID-19 pandemic has acutely affected the mental health of residents as well as the availability of care in the region and service area. Among Hampden County public health officials surveyed in 2021 for this assessment, 41% listed mental health and substance use as the most pressing health issue in their community, and it was the top ranked issue overall. A subset of those respondents also cited a shortage of mental health and substance use services.

> ***"Almost every aspect of health, mental health, and addiction that we look at seems to have been made much worse by COVID-19. It feels like all the systems we rely on are broken. I am worried it will be a long time before we recover from this."***
>
> *Member of a rural substance use coalition, Community Chat*

Data from the statewide COVID-19 Community Impact Survey (CCIS) conducted in 2020 show the negative impacts of the early lockdown phase on mental health as well as substance use.

Depressive Symptoms: In Hampden County, more than one in three respondents (36%) reported 15 or more poor mental health days in the past 30 days. The rate was 37% for respondents that lived in a rural area.[47] Respondents with disabilities and parents of children with special health care needs were disproportionately impacted, with one in two experiencing 15 or more poor mental health days in the

past 30 days. The following subgroups also experienced disparities: younger respondents (age 25 to 64), LGBTQIA+ respondents, lower income respondents, parents in general. (See Appendix 6.)

Signs of PTSD: More than one in four respondents (27%) reported experiencing three or more PTSD-like reactions to the pandemic, which include nightmares, avoidant behaviors, guilt, etc.[48] This was slightly higher (29%) for rural respondents.

Substance Use: Among Hampden County respondents that used any substance in the past 30 days, 41% increased their substance use compared to before the onset of the pandemic. Rates of elevated use were greatest among respondents with less than $35,000 annual household income; LGBTQIA+ respondents; and Black and Latinx respondents. The rate of reported substance use overall in the past 30 days was 57% for rural respondents vs. 48% urban, with a similar disparity in alcohol use in the past 30 days (54% rural, 43% urban).

While the CCIS data did not reveal a severe mental health strain for residents over 65, people at agencies that work with older adults and public health officials expressed concern about their isolation during the pandemic, which was often exacerbated by challenges in using technology to access care or be connected to loved ones.

In addition to increasing mental health needs, COVID-19 strained the system's capacity to meet those needs. It made worse the inequities that already caused barriers to care. The more rural towns in the service area felt the effects of isolation and limited access to care during the pandemic.

In urban areas, residents called for providers that could offer culturally appropriate care. A Blue Cross Blue Shield of Massachusetts (BCBS) summary of focus groups in seven regions, including Springfield/Holyoke, found that structural and interpersonal racism affected access to and quality of mental health care.[49] BCBS focus group participants expressed frustration at the lack of responsiveness of primary care providers to behavioral health needs, as well as dearth of Spanish-speaking providers, providers of color, or those with cultural humility. Focus group participants found that fragmentation of care and lack of person-centered care was especially problematic in mental health care, adding to stress for those who are already most marginalized and resulting in untreated conditions.

> ***"We need culturally responsive people to work with brown and black people, people like us who understand our culture."***
> *Community Health Center advisor, Community Chat*

Resources and Assets

At the writing of this CHNA, the behavioral health systems of care have been changing and continue to be in transition. Public health officials and Chat participants listed local mental health resources as important assets in the county but stressed the need for more of them to meet the rising demand.

- **Trinity Health Of New England Behavioral Health:** This service is designed to meet the unique needs of patients and their families who are seeking treatment for various behavioral health diagnoses. The team of medical and psychiatric professionals work with each patient to create an individualized treatment plan. The team provides assessment and treatment of behavioral health issues, including depression and other mood disorders, anxiety disorders, post-traumatic stress disorders, bereavement issues, thought disorders, substance abuse and addiction, and detoxification.
- **Culturally Appropriate Care Providers:** Several providers are building their capacity to provide more responsive care. For example, Behavioral Health Network has created a Social Justice Director position. The Springfield Youth Mental Health Coalition (YMHC) is working with Wellness for the People and other organizations that are focusing their practice on communities of color.
- **County Behavioral Health Facilities**: Mercy sold Providence Behavioral Health Hospital to Health Partners New England (HPNE), which operates the facility under the name MiraVista Behavioral Health. Services include the Acute Treatment Service (detoxification), Clinical Stabilization Service (post-detoxification), and outpatient services, including the Intensive Outpatient Program, court-ordered services, and the Opioid Treatment Program. Baystate Health made the decision to consolidate behavioral health hospital services in a centralized new facility, which broke ground in March 2022. Once complete, it will replace and augment beds previously available at Baystate's four hospitals in the surrounding area.
- **New Statewide Systems/Models of Care**: The state administration created a Roadmap for Behavioral Health Reform[50] in 2021 that will offer a model to strengthen community-based care through newly designated Community Behavioral Health Centers (CBHCs) that will expand availability of outpatient evaluation and treatment.
- **Support for Veterans**: The federal Veterans Administration has been privatizing mental health services, and it announced in March 2022 that it may close some VA health facilities, including the one in Hampshire County, which would affect health care access for veterans throughout the region.
- **Telehealth**: The pandemic accelerated the use of "telemental health," whereby assessment and services are delivered by phone, video, or online chat. Federal and state changes are easing access to telemental health beyond the pandemic, including treatment of substance use disorders and services provided through Opioid Treatment Programs.[51] (See section (6) c of this report for more on telehealth.)
- **Community Resources**: 413 Cares provides a searchable website with resources related specifically to mental health: https://www.413cares.org/breakthestigma

b. Regional Focus Area: Youth Mental Health

Overview

> ***"Healthy mental health comes when you feel seen and heard, when you feel connected to something bigger than yourself- you belong at school, in your family, faith community, sports team, whatever. Healthy mental health comes when you move, when you get fresh air. Healthy mental health comes when you feel that your gifts align with the world's needs, when you're engaged in things you are passionate about."***
>
> *Youth Mental Health Key Informant Interview*

Youth mental health is about well-being, and it requires collective resources and responsibility to be achieved. Many factors contribute to a sense of mental wellness. Activities described in the quote above create a sense of connection and care and are critical prevention strategies.

Other factors erode any sense of well-being. For some, structural poverty and rural isolation are factors. For youth of color and other marginalized young people, mental well-being has been affected by racism and discrimination in both communities and schools. Key informants speak to the anxiety, stress, and fatigue of youth having to "interface with systems" that are often unsupportive, disrespectful, combative, and traumatizing. One manifestation of systemic bias – school discipline – illuminates the harms of pervasive discrimination for the well-being of youth today. School discipline data reveal the systematic over-discipline and eventual criminalization of Black and Latinx children and youth, especially males, from as early as pre-kindergarten. Black students are expelled three times more than White students. Youth with disabilities experience higher rates of discipline, confinement and restraint than those with no identified disabilities, and even more so if they are also youth of color.[52, 53] LGBTQIA+ youth are also overrepresented in school discipline rates and experiences of victimization at school. [54]

Gender and gender identity are also significant aspects of youth mental health. Over their lifetimes, girls and women suffer twice the rates of anxiety and depression that males do.[55] All students, but especially girls, may feel the pressure to meet social expectations around school performance, beauty and appearance, and getting into college or a career. The rise in use of social media has proven to be a double-edged sword for adolescent and teen girls. Use of some social media platforms is correlated with a rise in poor self-image, depression, and suicidal ideation for girls.[56] Yet social media also provides a source of connection for isolated teens, as well as a means to access mental health resources.[57]

Another facet of this issue is the variety of systemic, cultural, family, and community perceptions and responses to the topic of mental health. Having the language to talk about one's mental well-being, and feeling heard and supported by providers, peers, family members, and caring adults, influences how a young person experiences a mental health challenge.

The Impact of COVID-19 on Youth Mental Health

Past CHNAs found that youth across the region struggled with mental health issues and were increasingly vulnerable to opioid use and overdose.[58] Prior to the pandemic, local leaders recognized that youth mental health was a serious public health issue and sought to address it. For this CHNA, the Coalition decided to make youth mental health a focus area for shared assessment and action.

COVID-19 exacerbated this prioritized health need by increasing mental health challenges, taking away the prevention activities that support wellness, and straining already strapped mental health provider systems. The shift to remote schooling in March 2020 and related lockdown to reduce transmission of COVID-19 had an enormous mental health impact on families. The sustained period of limited in-person interaction, online learning, social distancing, and masking affected children of all ages. This section focuses on youth aged 12-24.

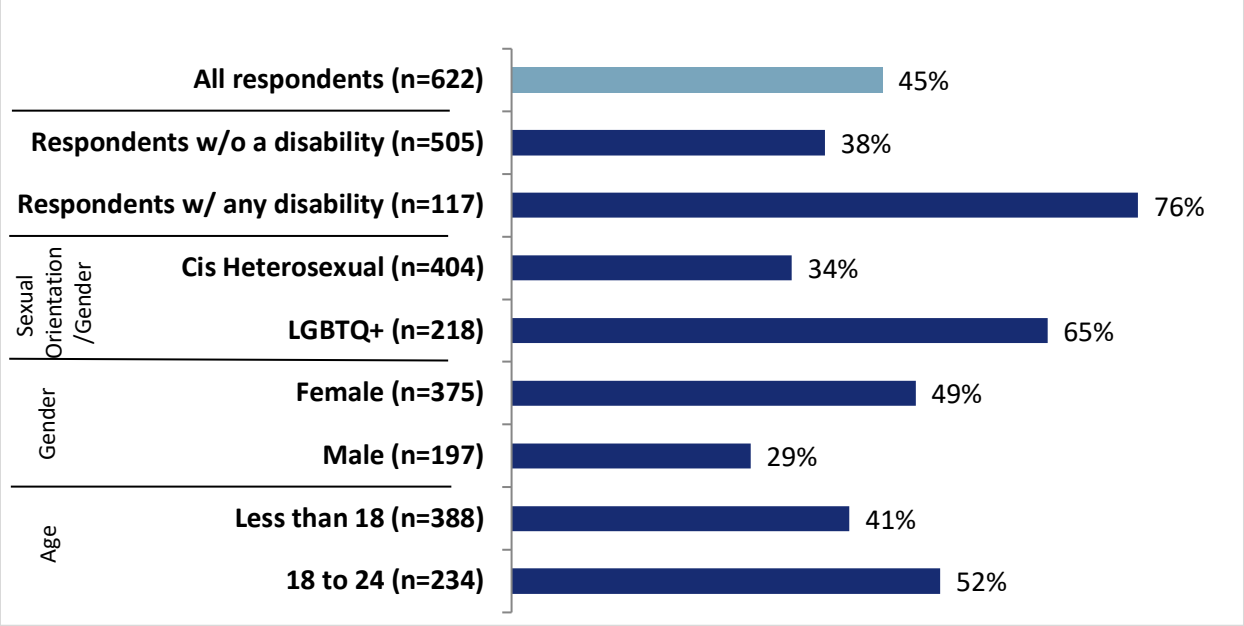
The MDPH COVID-19 Community Impact Survey (CCIS) gave insight into the mental state of hundreds of young people in Western Massachusetts early in the pandemic. The CCIS provides important information that aligns with findings from other youth health surveys from the region. Yet readers should use caution when interpreting these findings, as they reflect perspectives of the 622 survey respondents and not necessarily those of all youth in the region.

- Almost half of youth who responded to the survey (45%) reported feeling so sad or hopeless almost every day for two weeks or more in a row that they stopped doing usual activities (Figure 9). These high rates of depressive symptoms correspond with the high rates seen in youth surveys administered this past Spring across the region.
- In addition, inequities in mental health challenges that preceded the pandemic continued to manifest, especially among youth with a disability, LGBTQIA+, female, rural, and young adults 18-24 (Figure 9).
- Particular inequities of note include: Respondents with a **disability** (n=117) were twice as likely as youth with no disability to show depressive symptoms.
- **LGBTQIA+** youth (n=221) were almost three times more likely than other youth to experience multiple post-traumatic stress disorder (PTSD)-like symptoms due to the pandemic. (See Appendix 6)
- When asked what types of mental health resources would be most helpful, youth expressed the greatest preference for information on how to access a therapist, having an in-person meeting with a therapist, and having the opportunity to use an app for mental health support. (See Appendix 6)

FIGURE 9

Western MA Youth Who Reported Feeling Sad or Hopeless, 2020

Youth up to age 24 who reported feeling so sad or hopeless almost every day for two weeks or more in a row that they stopped doing usual activities



Source: MDPH COVID-19 Community Impact Survey, 2020

Tip for interpreting graph: The percentages shown represent the percent of that particular population that reported feeling sad or hopeless. For example, 49% of females almost every day for two weeks or more in a row that they stopped doing usual activities.

The 2021 Springfield Youth Health Surveys showed continued mental health challenges in this part of the service area as the pandemic wore on. A majority of SPS students are youth of color (including 68% Latinx and 19% Black[59]). The survey data for eighth graders show that many of these youth struggled with mental health issues. See Figures 10 and 11.

- In 2021, more than four in ten surveyed eighth grade survey respondents felt sad or hopeless for two weeks or more.[60]
- Reported feelings of sadness and anxiety were more than twice as high among female and LGBTQIA+ students, continuing disparities found in the 2019 CHNA and affirming data from the 2020 CCIS survey.

SPS eighth grade students with disabilities also experienced continued mental health challenges throughout the pandemic. The Youth Health Survey data show many youth with disabilities struggled with mental health issues, including suicide and self-harm.

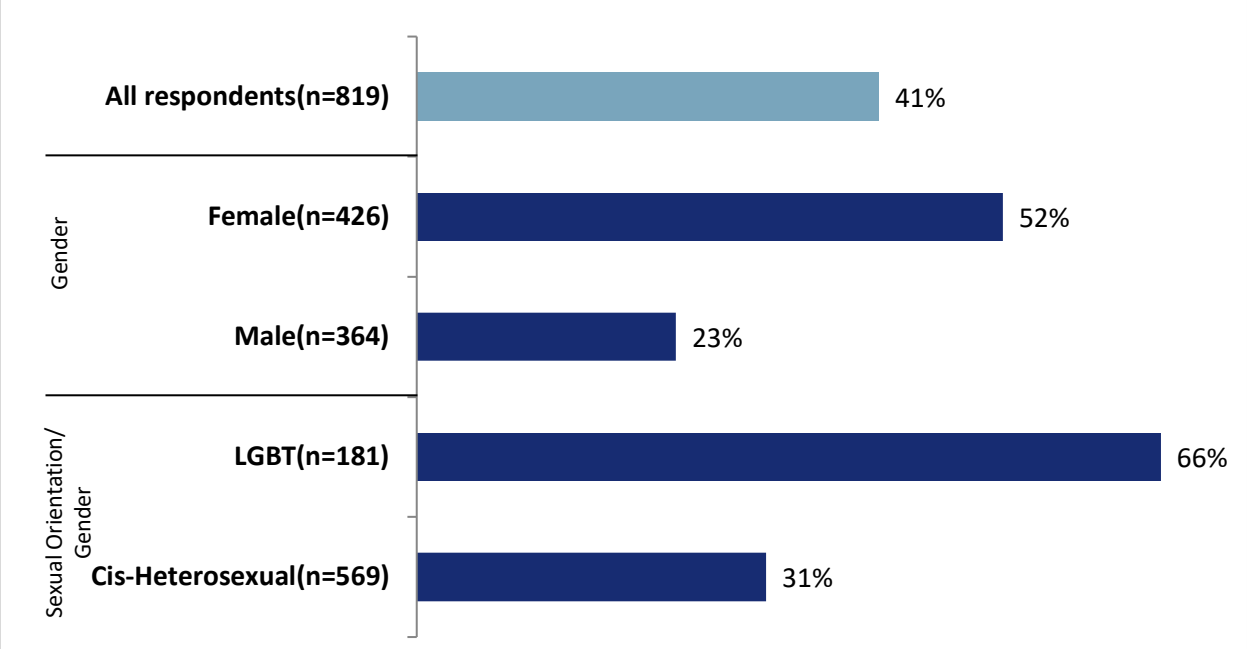
- Reported feelings of sadness or hopelessness almost daily were higher for students with disabilities (56%) than students without disabilities (38%).
- Nearly one in four students with disabilities seriously considered attempting suicide, which is double that of students without disabilities.

- Reported attempts of suicide were higher among students with disabilities. Nearly 12% of students with disabilities reported one suicide attempt within the last year compared to 3% of students without disabilities.
- Reported behaviors of self-harm were two to three times higher in students with disabilities. Almost 9% of students with disabilities reported purposely hurting themselves six or more times within the last year compared to 4% of students without disabilities.

FIGURE 10

Springfield Eighth Grade Students Who Reported Feeling Sad or Hopeless, 2021

Percent of Eighth Grade Students Feeling Sad or Hopeless Every Day for two weeks or more in a row that they stopped doing usual activities



Source: Springfield Youth Health Survey, 2021

> ***"Behavioral health issues among youth have increased following a year of 'homeschooling.' We see increased numbers of youth behavioral health issues and those seeking emergency care and services in the Emergency Department."***
> *Medical Manager, Community Chat*

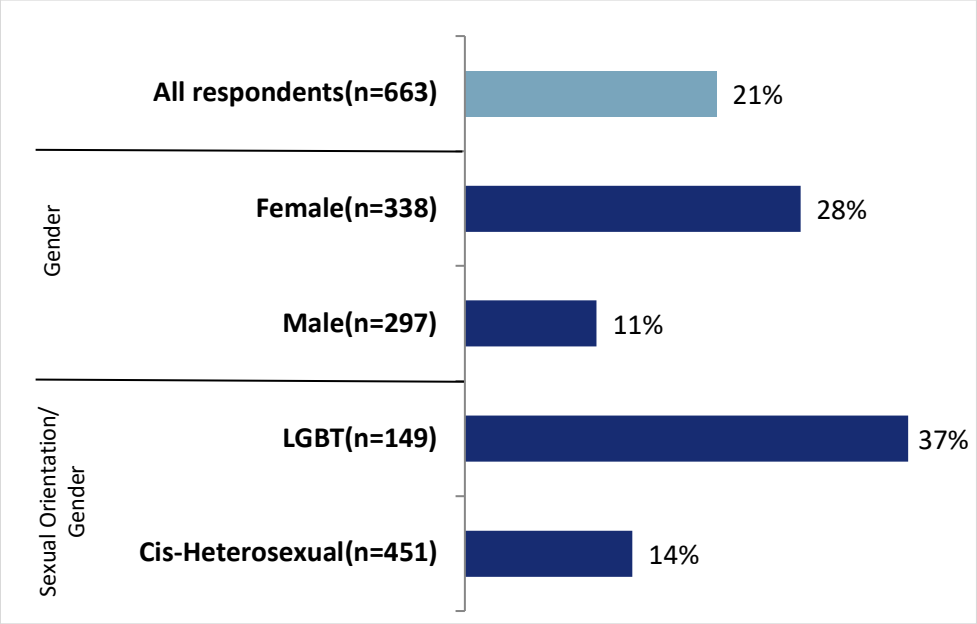
As more youth felt depressed and anxious during the course of the pandemic, a number of factors affected their ability to receive support and care. Based on information collected through community chats, focus groups with youth and caring adults, and key informant interviews with youth mental health providers and youth development professionals, the following insights emerged:

1. **COVID-19 eliminated or weakened the universal prevention strategies and supports (schools, sports, social networks, extra-curriculars, camps, mentoring, etc.) that might typically help young people thrive emotionally.** Youth-serving providers noted that more time on social media, less social interaction, less engagement in activities that give joy, less physical activity, and the challenges of trying to have meaningful interactions with youth while remote, all had a detrimental effect on youth. Trying to re-enter the world has been challenging, and many youth are not ready emotionally to interact in face-to-face environments.
2. **Racism and other forms of discrimination undermine youth mental well-being.** From microaggressions, to teachers that don't understand their lived experience, to structural poverty that limits access to healthy food, recreation, or positive youth development opportunities, youth of color bear the brunt of multi-generational and present-day racism. Echoing the school survey results, LGBTQIA+ youth expressed that they too are harmed by discrimination, including youth who are gender nonconforming and experience trauma when being misgendered by a parent, teacher, care provider, or peer. Stigmatization of people who are overweight/obese also came up as a form of discrimination in which some health care providers reinforce societal stigmas about weight.
3. **Fragmented care, shortages of providers and lack of culturally competent care all pose barriers to receiving treatment.** The pandemic has made access to care an acute problem nationally for all families seeking mental health care. There are simply not enough therapists, social workers and psychiatrists to meet the needs. Local providers have cited low pay, high turnover rates, and burnout as major challenges to providing consistent, coordinated care. Type of insurance, available formal and informal referral networks, and other variables can further affect access to care. Locally, these issues are magnified for youth of color and those whose families have limited financial resources. Several sources discussed the shortage of culturally competent mental health providers, including fluent Spanish-speaking providers, as well as the barriers for people of color to become certified to be a mental health counselor. Some adults that work with LGBTQIA+ youth urged that mental health care for transgender and queer youth be foundational for all providers, rather than treated as specialty care.
4. **Mental health stigma continues to be a challenge, although there are signs it is becoming less so.** Some informants observed that youth today tend to be well versed in the language of mental health and see it as normal to talk about, in part due to its prevalence as a topic on social media. That said, some youth still experience stigma or judgment in disclosing mental health challenges, especially with adult members of their family. Youth and adult focus groups described how generational, gender, and cultural norms can discourage conversations about mental health. Youth, providers, and caregivers observed that this stigma can be more prevalent among Black and Latinx parents than among White parents. Some youth also have had negative experiences in sharing about mental health challenges with peers, resulting in ambivalence about turning to friends when in need. Among a small YMHC survey sample, White youth most frequently reported feeling empowered when talking about mental health issues, and Latinx youth more often reported feeling embarrassed.
5. **Social media has played both positive and negative roles for youth before and during the**

pandemic. Social media platforms, especially TikTok, have helped normalize mental health issues and give youth the language and outlet to talk about them and connect with others facing similar challenges. However, mental health providers blame social media for reducing empathy, "othering" people, and contributing to cyberbullying. It is also addictive, and youth will choose it if not given other structured options. Social media, particularly Instagram, has been associated with increases in poor mental health among adolescent girls.

FIGURE 11

Springfield Eighth Grade Students with Moderate to Severe Anxiety Symptoms, 2021



Source: Springfield Youth Health Survey, 2021

> ***"I've been trying to trust people, but now I kind of like have trust issues because people that I trusted before . . .they just do things. . . people are impulsive and make dumb decisions."***
>
> Youth focus group participant

Despite these very real challenges, youth and adults from focus groups and key informant interviews point to the ability of many youth to find support systems of trusted peers or adults they can talk to, and for being resilient in the face of so many emotional challenges.

Assets, Resources and Solutions

Key informants and focus group participants emphasized the need for better preventive care for mental health to avert crises; culture and language-appropriate mental health care and pipelines for more

diverse providers; more community-based and school-based referral systems and counseling; and building on family and youth resource centers. These informants recommended that youth need to be at the table and have power to influence decisions about their emotional well-being. For any of the following prevention and intervention resources, those supporting youth need to build and expand youth voice and decision-making opportunities.

Healthcare institutions: As noted in the previous section, the systems of care for mental health are in transition as hospitals and federal and state governments make major changes to address the acute mental health care needs of the region. Mercy Hospital operates **Brightside for Families and Children.** The mission of Brightside for Families and Children is to be a healing and transforming presence in the lives of the youth and families that they serve. This is done through individualized services that incorporate the needs, education, and desires of every child and family supported by Brightside. In the community, Brightside helps to build families and support individuals through family outreach and stabilization, psychiatric and medication evaluation and management, special education, and by being there to offer support and encouragement. Their comprehensive Family Support Programs includes the Family Stabilization Team (FST), In-Home Therapy, and Therapeutic Mentoring.

Prevention supports: Several key informants for this assessment stressed the need for restoring and augmenting universal strategies that have eroded during the pandemic. They advocated for structured activities such as organized sports, afterschool programs, youth drop-in centers, and other extracurricular activities. Community-based youth development organizations that cultivate young leadership are important prevention partners. These need to be affordable and accessible and allow youth to pursue their passions, develop skills and confidence, receive mentoring and build trusting, healthy relationships.

Schools: Typically, when there isn't a pandemic, young people spend much of their day in school. Key informants recommended that schools can take a number of steps to support youth mental health: identify partners to support prevention and early intervention, train staff in culturally competent and respectful relationship-building, help identify mental health issues early on, and bring well-being supports into the schools and school-related programs.

Community-based services and programs: BCBS focus group participants pointed to the limited capacity to refer patients for mental health services through community health centers (CHCs), which are an appreciated and critical resource for communities of color in the region. Thus, the state's Roadmap investments in behavioral community health centers may be a welcome model to build on the trust that residents already have in their local CHC.

Telemental Health: The rapid expansion of telehealth and "telemental health" has helped overcome barriers to access presented by the pandemic, and it may also offer longer term options for youth who may have transportation barriers or other challenges with receiving in-person care. Some providers have reported that youth feel comfortable using the technology and receiving care this way. Federal and state rules have been eased to enable ongoing use of telemedicine. See more on this topic in Section (6) c.

State initiatives: In November 2021, the Massachusetts Senate passed the *Mental Health ABC Act 2.0: Addressing Barriers to Care,* which is comprehensive legislation to reform how mental health care is delivered in Massachusetts.[61] The legislation will aid in the development of a tele-behavioral health pilot program for high-school age youth and engage in studying access to culturally competent care.

Local initiatives: Several recent efforts seek to address youth mental health as well as substance use.

- The four-county Young Adult Empowerment Collaborative of Western Massachusetts was formed in 2018 to address youth opioid use. This four-county, evidence-based collaboration works with systems serving emerging adults to prevent opioid misuse, address the needs of young adults currently addicted to opioids, and increase their health outcomes as they transition into adulthood.
- PHIWM worked with local leaders to create the Springfield Youth Mental Health Coalition in 2020 after the community identified it as a priority need prior to the pandemic. The YMHC has a community advisory board and a youth advisory board that guides its direction. The YMHC has identified several areas of focus, including a communications campaign to normalize mental health; identifying a youth Near Peer Mentoring framework; and providing culturally-informed community education and professional development trainings that address youth mental health risk/protective factors - violence prevention, social and racial justice, and well-being. In addition, the YMHC is monitoring policy for a potential universal behavioral health screening, in both schools and community behavioral health centers, to ensure the coalition is poised to assist.
- Estoy Aquí was cited as a successful culturally informed model that highlights the sociocultural factors surrounding suicide in the Latinx and the Black community via training, dialogue, and outreach.
- The Hampden County Health Improvement Plan (CHIP) Violence and Injury Prevention Community Team held a mentoring summit and campaign around the importance of mentoring for Hampden County youth.
- The Hampden CHIP Mental Health and Substance Use Disorder Community Team 2 have been working to make NaloxBoxes (kits that contain doses of Nalaxone to reverse opioid overdose effects) more accessible and provide trainings on how to use them. In some areas of Hampden County, they are teaching high school students how to administer Narcan (brand name of Nalaxone) for friends and family members.

c. Deeper Dive: Availability of Providers and Telehealth

Overview

Lack of access and availability of health care providers continues to be a prioritized need for the Mercy Medical Center service area. A number of factors affect a resident's ability to receive high quality, affordable health care when they need it. These include insurance coverage; availability of health care professionals who may or may not take that insurance; the degree to which providers communicate with each other to coordinate care; mobility needs; and access to transportation. Many of the barriers that Hampden County residents faced in accessing health care in 2016 and 2019 are still prioritized needs in 2022. The limited availability of health care providers was already problematic, but it became acute during the COVID-19 pandemic.

Unfortunately, residents with limited incomes, rural residents, Black and Latinx residents, LGBTQIA+ residents, those with disabilities, and others often face additional barriers that can further limit their access to providers. These may include lack of money to purchase insurance or see providers who don't take insurance, unconscious bias among providers, and lack of access to care that is culturally and linguistically appropriate. Many of these barriers are rooted in health care policies and practices in the US. For example, the inability of the federal government to negotiate pharmaceutical prices with companies has made prescriptions in the US more expensive than in most other countries, putting patients without adequate income or good insurance coverage at a disadvantage.

Key Findings on Availability of Providers

Springfield, Holyoke and Chicopee, and to a lesser extent, the rural northwestern part of the county, continue to experience provider shortages and are designated as Health Professional Shortage Areas (HPSAs)[62] (see Figure 12).

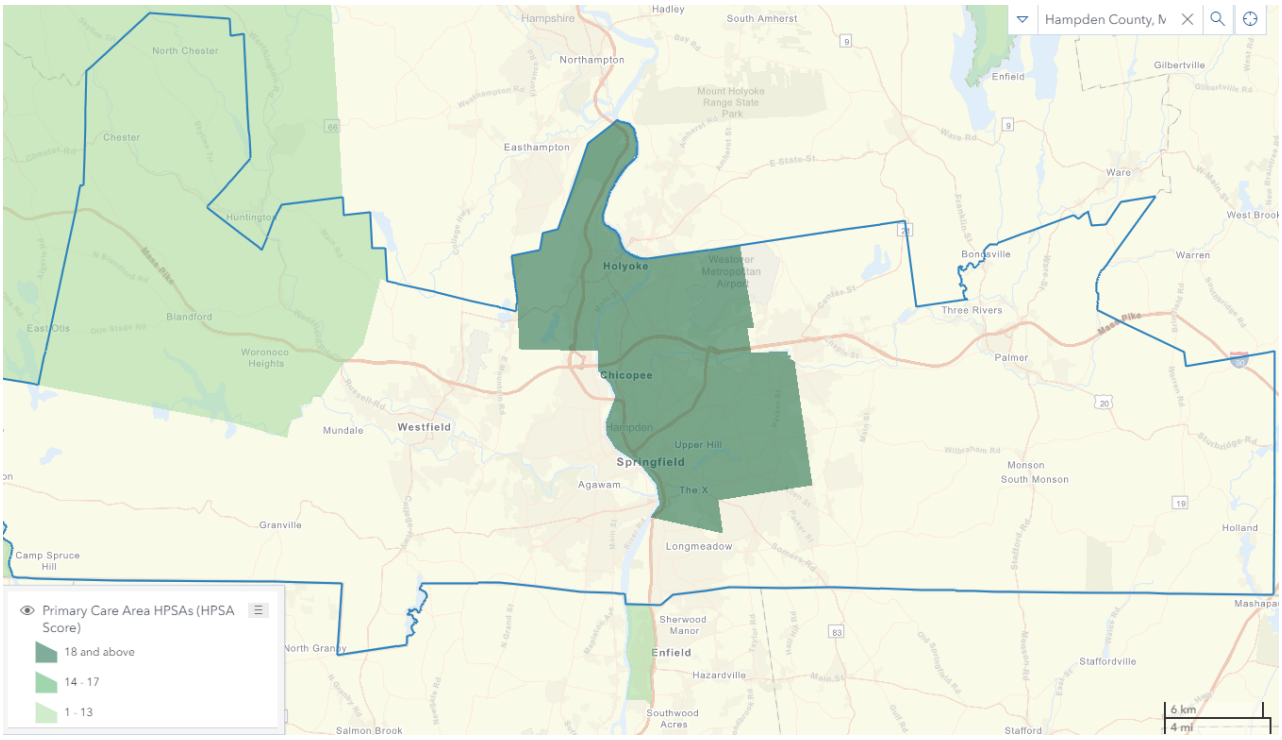
In addition, key informants reported that systemic issues continue to create challenges in accessing certain types of providers.

- **Health insurance** is one major hurdle, with its complexity, cost, and disparities in coverage. For example, many psychiatrists do not accept health insurance--and this may vary whether private, Medicare, or Medicaid,[63] in part because of low reimbursement rates, making access prohibitive for residents who need services.
- **Culturally and linguistically competent providers** are in short supply. BCBS focus group members described patients who feel unheard, dismissed, misunderstood, and ultimately powerless in their interactions with healthcare providers. They believe both frontline health workers as well as administrators and those in power should better reflect the communities being served.

- **Disconnected care systems are hard to navigate.** People experiencing homelessness face unique challenges accessing providers or having a consistent "medical home." This causes many unhoused or homeless patients to seek care in hospital emergency departments,[64] because they have no alternatives. In a Community Chat in Springfield, one participant noted that people cannot attain their health goals if they are experiencing homelessness or housing insecurity. This person praised the role of community health workers (CHWs) as an important asset to the community, and they asked for greater collaboration across agencies to foster healthier populations.

FIGURE 12

Health Professional Shortage Areas in Hampden County for Primary Care, 2020



Source: US Health Resources & Services Administration (https://data.hrsa.gov/maps/map-tool/).
Note: A higher HPSA score indicates greater shortage of providers.

Impact of COVID-19 on Availability and Access to Providers

In a regional survey of health officials, 35% of Hampden County respondents cited the limited availability of providers as the most pressing health issue facing their community. Many other sources consulted for this report expressed concern about the shortage of providers. Several facets of the COVID-19 pandemic affected access to providers. Once the country went into lockdown to reduce transmission, most health care providers temporarily ended all non-emergency care. Many tried to pivot to telehealth, which is described in more detail below, but still had limited capacity as providers scrambled to deal with the fallout of the pandemic on their own lives.

The pandemic also resulted in a phenomenon dubbed the Great Resignation, in which millions of Americans left their jobs and were not easily replaced, resulting in massive labor shortages in some fields. Their top reasons for leaving were not necessarily pay, but toxic work environments, job insecurity, high levels of innovation, failure to recognize performance, and poor response to the pandemic.[65] The Great Resignation placed a strain on frontline health workers in particular, and has caused staffing shortages throughout the medical system. Many sources consulted for this report expressed concern about the shortage of providers.

CCIS data help us better understand the impact of the pandemic on those seeking care in 2020. Barriers reported by respondents included long wait times, appointment cancellations, and potential COVID-19 exposure.

- One in six respondents that sought healthcare during the pandemic reported not receiving care due to barriers presented by COVID-19. The rate was similar among rural respondents.
- More than half of respondents experienced delays in routine care and one in five had delays in urgent care.
- Among respondents that spoke a language other than English at home, almost 30% worried about getting needed medical care and treatment for themselves or their families.

The proportions of respondents that experienced delays in needed health care were higher among subgroups that often experience other healthcare barriers such as accessibility, discrimination and bias: LGBTQIA+ respondents; people with disabilities; parents overall; parents of children with special health care needs.

Advances in Telehealth

Since the last CHNA, telehealth – the provision of care by phone, online chat or video – has emerged as a critical way for patients to access providers. Massachusetts was already experiencing rapid growth in the use of telehealth services before COVID-19, but primarily for female patients in their twenties and thirties seeking psychotherapy.[66] The onset of the pandemic in early 2020 led the Massachusetts legislature to pass legislation (Chapter 260 of the Acts of 2020) to create a framework allowing for telemedicine to be delivered and reimbursed for most public and private plans on par with in-person visits.[67] This led many providers to quickly pivot to offer telehealth services across the board as a safer alternative to in-person care.

These changes led Massachusetts to become a major adopter of telehealth, quickly surpassing other states.

- Based on Medicare claims data, the Commonwealth was one of the top three states where telemedicine was used more than 60% of the time between March 2020 - February 2021.[68]
- During the same time frame, Blue Cross Blue Shield of Massachusetts reported a 9500% increase in use of telehealth from the prior year for all types of visits.[69] As noted in a previous section, 54% of those visits were focused on mental health.

- Between May 2020 and May 2021, Federally Qualified Health Centers (FQHCs) in the state conducted more than a million telemedicine visits, according to their telehealth consortium.[70]

It is difficult to find local telehealth data broken out demographically. The statewide FQHCs reported that close to half of telehealth patients were people of color: 52% were White, 31% were Latinx, 21% were Black, 6% identified as more than one race, 5% were Asian/Pacific Islander, and 1% were Native American.[71]

Barriers persist that may exacerbate disparities in who receives care. Telehealth depends on access to digital technology. Geographic location and cost of internet service are two potential factors affecting ability to use such technology. In a national telehealth study that reviewed claims data and conducted surveys of patients and clinicians, [72] concerns about technology access for patients was the second greatest challenge raised by health providers. More than 70% saw this as a potential barrier to care beyond the pandemic, and more than 60% also raised specific concerns about lack of digital literacy and lack of patient access to broadband internet. These concerns were highest among rural providers. Among CCIS respondents living in rural areas, almost one in four were worried about their internet access.

Cultural and linguistic barriers can also pose access issues for telehealth. The BCBS focus group participants said that having to access health information in written form or through online portals, which may be hard to navigate or access, creates inequities. In the CCIS survey, 24% of respondents who spoke a language other than English worried about their internet access. Respondents of color and those with disabilities also were more likely to be worried about internet access compared to Hampden County respondents overall.

Yet telehealth also helps remove barriers. In the same national study cited above, survey data from patients (which over-represented female responses) showed high ratings for their telehealth experiences. Three-quarters said that telehealth removed transportation as a barrier, 65% appreciated not having to take time off from work, and 67% said telehealth reduced their costs compared to an in-person visit.

Key informants on youth mental health noted that many youth are adept at using online platforms to access care and find it easier than going in person. The FQHC Telehealth Consortium leaders see positive signs in their data that telemedicine is helping reduce health inequities faced by Medicaid patients, especially patients of color. That said, they still see the need to address the digital divide in communities served by FQHCs.

Federal and state policy changes have enabled telehealth to continue beyond the pandemic. A 2021 federal law enables Medicare and Medicaid to pay for mental health visits provided by Rural Health Clinics and Federally Qualified Health Centers via interactive video-based telehealth, including audio-only telephone calls.[73] In Massachusetts, though all of the services that can be appropriately provided

through telemedicine will be required to be covered, some of the telehealth reimbursement parity requirements made during COVID-19 are currently set to expire. Behavioral health services are required to be reimbursed on par with in-person services permanently. However, primary care and chronic disease management telemedicine reimbursement parity is set to expire at the end of 2022. [74]

Resources to Increase Access and Availability of Providers

- Hospitals typically have an online resource and/or office that assists patients with finding the right provider and accessing insurance if needed. **Mercy Medical Center** has a web search feature (https://www.trinityhealthofne.org/find-a-doctor/) to help clients find a doctor, as well as a phone number to receive guidance.
- **Trinity Health Of New England Virtual Care** - this virtual care program has a variety of offerings:
    - An asynchronous platform for urgent care needs, like colds, flu, sinus infections, Urinary Tract Infections, pinkeye, and other minor conditions
    - A synchronous platform, offering video visits for primary care, family medicine and pediatrics. On this platform, multiple people, like other providers and family members, can participate when needed
    - Online, open scheduling of video visits
    - CareConnector, a 24/7 virtual assistant that can help with symptom screening, virtual visits, patient navigation, and getting questions answered.
- Another tool available in Hampden County is **413Cares**, an online database with community resources of all different types. Residents who need help finding a health care provider can go to the 413Cares website (https://413cares.findhelp.com/), and search for “health care” and their zip code.
- There are also many healthcare referral agencies, which are listed in the appendix, as well as agencies that serve individuals who are unhoused and can help them access health care.
- Innovative recent efforts to triage care for Springfield residents without stable housing offer a model to improve access to health providers while reducing the strain on ERs, which have been periodically overwhelmed with COVID-19 cases.

d. Deeper Dive: Lack of affordability and access of housing, food and transportation

Lack of access and resources to meet basic needs continues to be a prioritized need for the Mercy Medical Center service area. Access to and affordability of basic needs such as housing, food, and transportation are key building blocks of health. Taken together, they may account for the majority of one's expenses. People with limited resources often have to make trade-offs in meeting these basic needs that may lead to avoidable health risks that become unavoidable because of inequities in our economic system.

Communities in Hampden County differ in terms of population density and infrastructure. Access to and availability of basic needs varies from rural communities to the urban core. Average income and wealth also vary tremendously across the service area, and even within the same municipality, affecting residents' ability to access and afford housing, food, and transportation. These inequities are partly due to historical factors such as policy choices that discriminated against residents of color, those living in rural poverty and others private disinvestment and more; and present-day forces, including the COVID-19 pandemic.

The impacts of the pandemic on basic needs are discussed throughout this section. Overall, the pandemic spurred major supply shortages across the economy, contributing to the first major rise in inflation in decades. This occurred at a time when many people's jobs became precarious, contributing to economic strains and uncertainties. For example, in Hampden County, unemployment rates jumped to 18% in April 2020.[75] Many of the community leaders that participated in focus groups and chats for this CHNA mentioned concerns about access to and affordability of basic needs. BCBS focus group participants described how these unmet needs perpetuate the cycle of poor health outcomes for communities of color and immigrants.[76] A local CSA (community supported agriculture) noted the inflation of food prices due to COVID-19 and the challenges of the economic fluctuation in our region for food growers, suppliers, and their patrons.

Housing & Homelessness

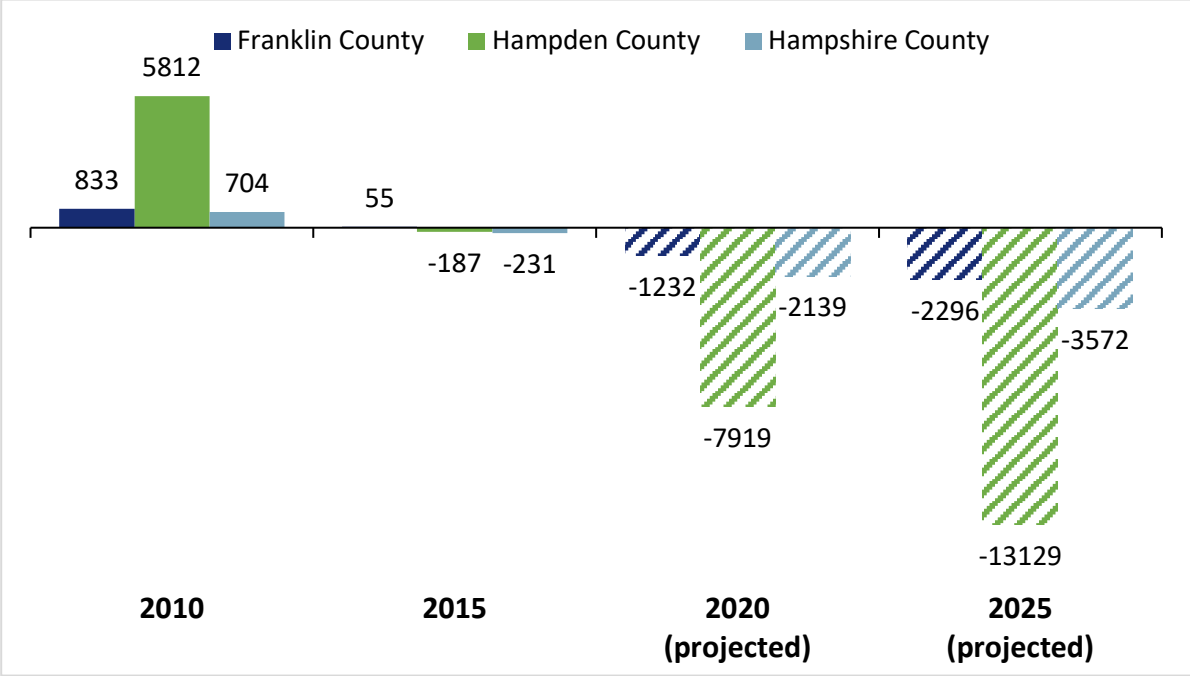
Many of the housing challenges that existed when the last CHNA was written persist today. Thirty-five percent of households in the County qualify as housing-cost burdened, meaning they spend more than 30% of their income on housing.[77] A Greater Springfield Regional Housing Analysis[78] published by the UMass Donahue Institute in 2021 found that housing cost burden was greater for people of color in the Pioneer Valley compared to White people. This is likely due in part to much lower increases in median income among Black and Latinx residents compared to White residents (increase in median income from 2013-2018: White 20%, Black 7%, Latinx 10%). Also, a greater proportion of people of color rent than own. This report also found that foreclosures continue to occur in far greater numbers in Hampden County than in other western Massachusetts counties.

Unaffordable housing correlates with a greater-than-average prevalence of homelessness – a situation that has worsened over the past decade. Between 2010 and 2019, homelessness increased three-fold in Hampden County, according to the same Donahue Institute report–from 843 persons counted in 2010 to 2,443 in 2019. Of those, the majority (2,070) were people in households with adults and children.[79] The U.S. Department of Education reports that 4.2% of public school students in Hampden County are experiencing homelessness – a rate 50% higher than that of the state and nearly four times greater than that of neighboring Hampshire County.[80]

People of color are overrepresented in the Hampden County's unhoused population, according to a point-in-time estimate conducted by local organizations on January 30, 2019.[81] Black people constitute 19% of the unhoused population and 7.7% of the County. Fifty-three percent of people who are without homes in Hampden County identify as Hispanic, versus 26% of the County. White people are proportionately represented among those experiencing homelessness (57% compared to 60% of the Hampden County population). The vast majority of those without homes in Hampden County are sheltered in Springfield. Of the minority who are unsheltered (1.6%), a plurality resides in nearby Holyoke.

FIGURE 13

Projected Housing Unit Gap by County, 2010-2025



Source: Graph created with data from UMass Donahue Institute Housing's Greater Springfield Housing Analysis, based on ACS one-year housing unit estimates (2010-2018) and five-year population estimates (2014-2018). Shaded areas are projections.

The COVID-19 pandemic has contributed to housing challenges. Most directly, the pandemic has correlated with a general increase in housing prices that has moved homeownership – a common

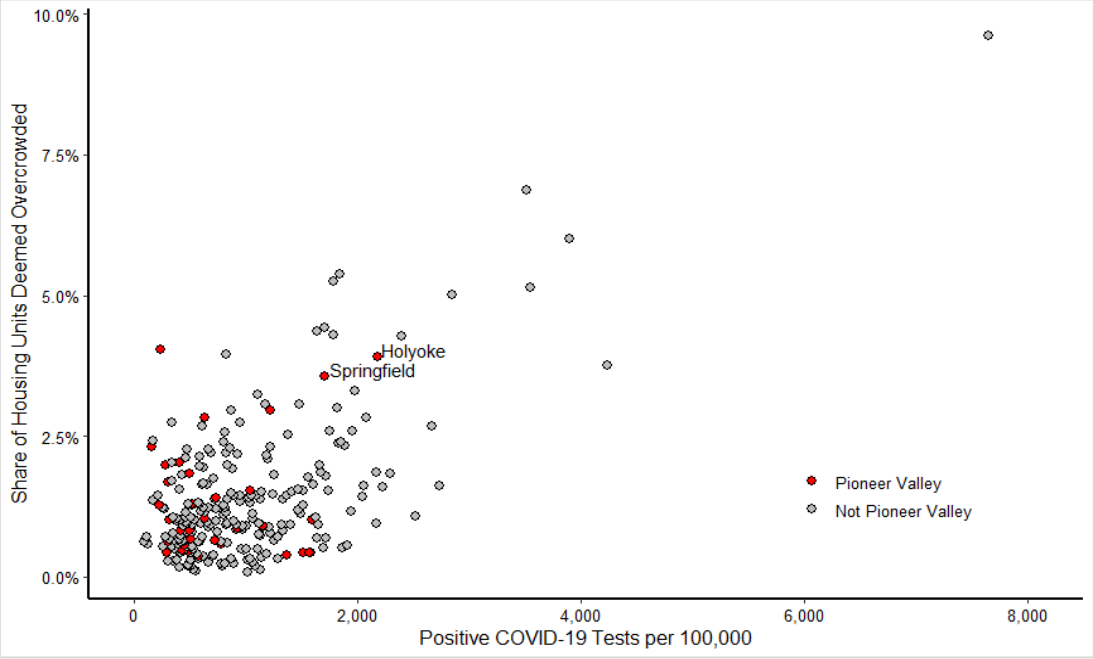
vehicle for wealth-generation – out of reach for many. In 2021, home prices in Hampden County rose almost 14%.[82] Supply was constrained by reluctance to sell during the pandemic and higher home construction costs, and demand grew as the option to work remotely allowed people to live farther from their employer. The UMass Donahue Institute projects a housing gap of over 13,000 units in Hampden County by 2025 (see Figure 13).[83] In addition, the pandemic led to a sharp rise in unemployment and has destabilized many people's finances, affecting their ability to make rent and mortgage payments (see Figure 5).

Half of Hampden County CCIS respondents, and 42% of rural ones, were worried about paying one or more of their upcoming expenses when the survey was administered early in the pandemic. This worry was more common among respondents of color, those with disabilities, those that speak a language other than English at home, parents of children with special healthcare needs, and LGBTQIA+ respondents. Almost 40% of respondents worried specifically about paying their housing related and/or utility expenses, as did 33% of rural respondents.

Overcrowding in housing, which can carry health risks, is often a response to a shortage of affordable units. COVID-19 response reporting from the Massachusetts state government shows a correlation between crowded housing units and COVID-19 case rates in Springfield and Holyoke.[84] Figure 14 shows that within the Pioneer Valley, Springfield and Holyoke, represented by red dots, had almost the highest levels of overcrowding [side axis] as well as the most positive COVID-19 tests per 100,000 (bottom axis]).

FIGURE 14

Overcrowded Housing Units and Positive COVID-19 Tests



Source: UMass Donahue Institute. Greater Springfield Regional Housing Analysis. 2021.

In addition, as noted in previous CHNAs, the housing stock in Hampden County is older. Older housing combined with limited resources for maintenance can lead to problems (e.g. mold, pest/rodent exposure, exposure to lead paint, asbestos, and lead pipes) that affect asthma, other respiratory illnesses, and child development.[85] An estimated 38% of housing in Hampden County was built before 1949.[86] Several communities are also among high-risk communities for childhood lead poisoning, including Holyoke, Springfield, and Westfield, with Holyoke and Springfield having the highest risk in the state. In addition, the rural cluster of Quaboag Valley had elevated prevalence of childhood lead poisoning.[87]

Food Access and Security

Access to healthy, nutritious food continues to be a prioritized need in Hampden County and across the region. Eating nutritious food promotes overall health and helps manage many chronic health conditions. However, not all individuals and communities have equal access to healthy food. Food insecurity, or being without reliable access to sufficient affordable and nutritious food, continues to impact many Hampden County residents (Figure 15).

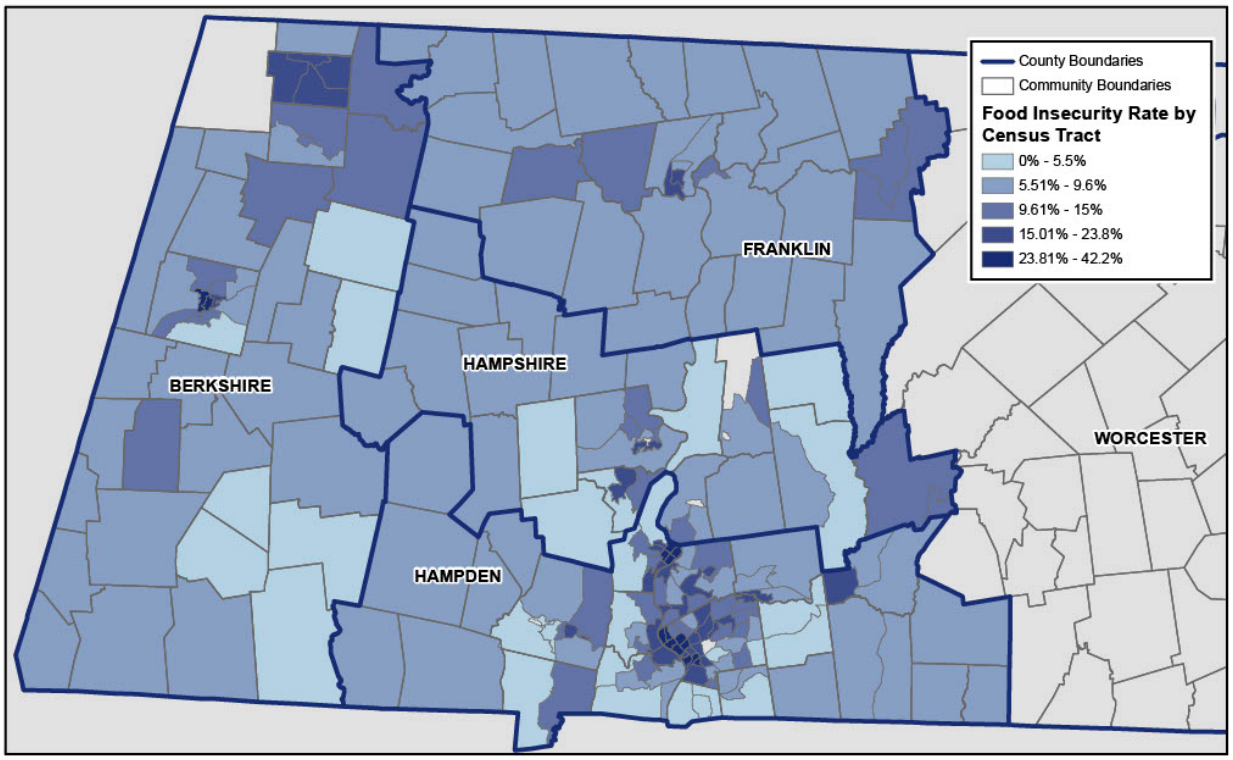
Hampden County also has several food deserts,[88] or areas where grocery stores and other options to purchase healthy foods are far away and difficult to access for people that either do not own a vehicle or where public transportation is limited. People with lower incomes and people of color are more likely to live in food deserts because historical planning decisions created highways that split cities and separated White areas from Black areas.[89] Food costs may be higher for certain types of foods in these neighborhoods.[90] Additionally, marketing of fast food, junk food, sugary drinks, tobacco, and alcohol more often targets communities of color.[91] Although the rate of fast food establishments per capita has fallen between 2013-2019, significant portions of the Mercy service area, particularly in the urbanized sections of Springfield, Holyoke, and Chicopee, and parts of West Springfield and Westfield, are still considered food deserts by the USDA.[92]

State data on consumption of fruits and vegetables and obesity rates show that rural areas of the county have had healthier outcomes than the county as a whole. Though data for rural clusters are not as current as other data sources for this report, this method of characterizing data for rural areas recently implemented by MDPH helps us better understand the needs of rural areas.

- Previous data (2011-2015) from the state show that Hampden County residents consumed fruits and vegetables at a lower rate than the state average, (16% vs. 19% daily consumption), and Hampden County had the second lowest rate of all counties.
- However, people living in rural clusters within Hampden County (North Quabbin, Central Pioneer Valley, and the Hilltowns) consumed fruits and vegetables at rates similar to the state average.
- Previous data (2011-2014) from the state show that while the prevalence of obesity was higher in Hampden County (28.8%) than the state (23.6%), the rural clusters within Hampden County did not exhibit a similar elevated prevalence of obesity.[93]

FIGURE 15

Food Insecurity in Western Massachusetts by Census Tract, 2019

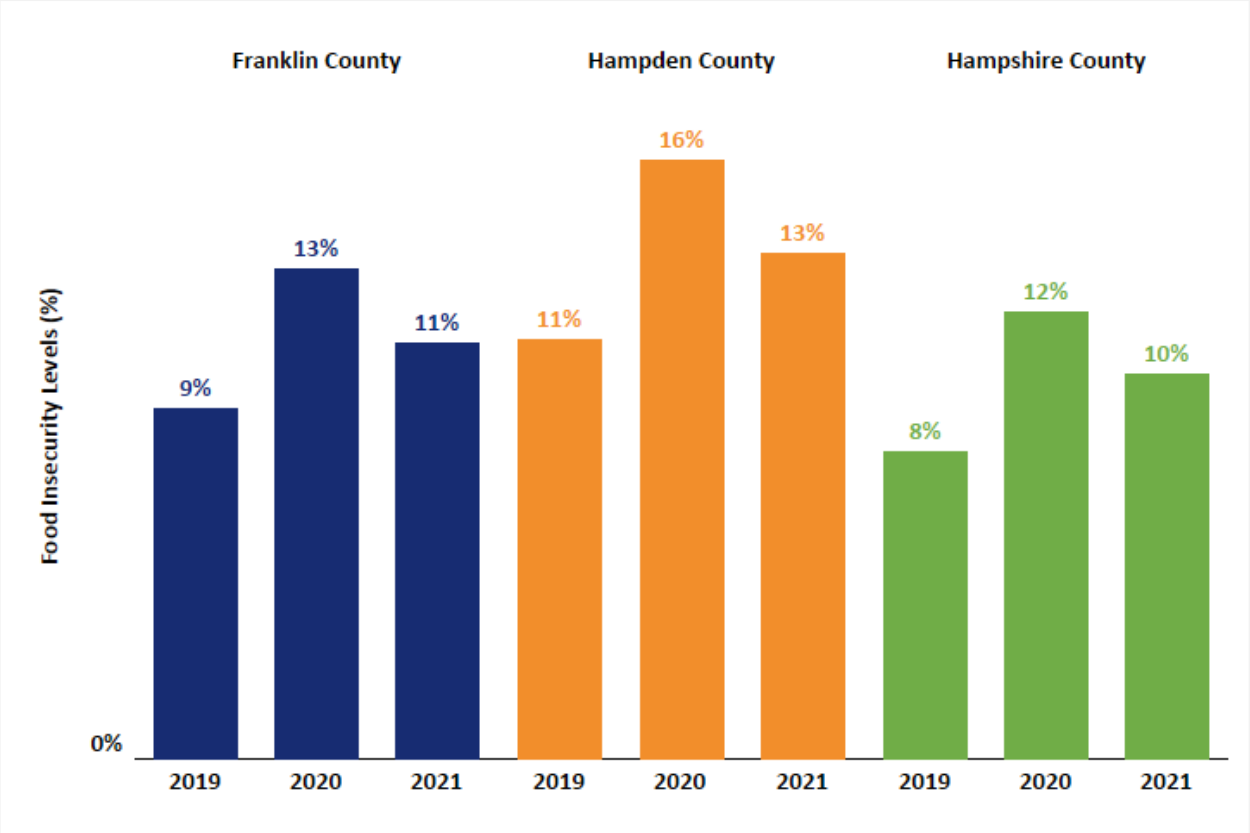


Source: Gundersen, C., Strayer, M., Dewey, A., Hake, M., & Engelhard, E. (2021). Map the Meal Gap 2021: An Analysis of County and Congressional District Food Insecurity and County Food Cost in the United States in 2019. Feeding America. https://map.feedingamerica.org/

Food insecurity rates had declined slightly since the last CHNA, but during the COVID-19 pandemic, the problem got worse. Food insecurity grew in 2020, reflecting the financial hardships faced by families throughout Central and Western Massachusetts. Between 2019 and 2020, Feeding America, a national non-profit organization, estimates that food insecurity (defined as "lacking access to sufficient food because of limited financial resources") increased by 40% in Franklin County, by 42% in Hampden and Berkshire Counties, by 45% in Hampshire County, and by 50% in Worcester County. In 2020, one in seven Hampden County residents were classified as food insecure. By 2021, that figure had fallen, but was still higher than the pre-pandemic level. (See Figure 16). Just under half (48%) of Springfield eighth graders surveyed in the 2021 Youth Health Survey reported that they had not eaten vegetables, and more than a third (36%) had not eaten fruit in the past day.

FIGURE 16

Food Insecurity by County, 2019-2021



Source: Gundersen, C., Strayer, M., Dewey, A., Hake, M., & Engelhard, E. (2021). Map the Meal Gap 2021: An Analysis of County and Congressional District Food Insecurity and County Food Cost in the United States in 2019. Feeding America. https://map.feedingamerica.org/

The disparate impacts of COVID-19 on food access can be found in the CCIS data. In Fall 2020, one in three Hampden County respondents were worried about getting food for themselves and their family. This rate was similar for rural respondents. Almost twice as many respondents of color reported worrying about getting food compared to White respondents (46%, 25% respectively). This concern was also higher among respondents who speak languages other than English at home (47%) and respondents with disabilities (43%).

The Food Bank of Western Massachusetts played a key role distributing food during the COVID-19 pandemic, with significant increases in both the number of people served, and the number of meals served. Across the three counties of the Pioneer Valley, tens of thousands of families have relied on food from food banks to meet their food needs during the COVID-19 pandemic. The Food Bank of Western Massachusetts distributes meals in several cities and towns in the Pioneer Valley. Since March 2020, each month they have provided on average 877,000 meals to 91,000 clients, peaking at 1.1M meals provided in October 2020 (see Figure 17).

FIGURE 17

Food Bank of Western Massachusetts, Clients and Meals Served, 2019-2021

Source: Food Bank of Western Massachusetts

Transportation

Transportation is important for many facets of life, including going to work, going to the doctor, getting groceries, and engaging in social activities. People who do not have access to transportation have a hard time meeting these basic needs. Since the 2013 CHNA, transportation has continued to be identified as one of the largest barriers to medical care. Unfortunately, access to transportation cannot be taken for granted.

As identified in the previous CHNA, unequal access to appropriate transportation options exacerbates racial and ethnic health disparities. Communities of color and those with lower incomes have less access to transportation options compared to majority White and higher income communities.[94] As of the last CHNA, 14% of Hampden County residents did not have access to a vehicle.[95] Based on the most recent census data, this figure had not changed substantially.[96] Public transportation plays a significant role in

filling transportation needs for many of these households. The Pioneer Valley Transit Authority (PVTA), the region's public transportation administrator, reports that 62% of their ridership are people of color.[97] Accordingly, this means people of color are more likely to be affected by underfunding of public transportation, as well as changes to service schedules and fare rates.

The COVID-19 pandemic has undoubtedly exacerbated problems of access to transportation. According to a report by the Bureau of Labor Statistics, the price of used cars increased by 40.5% in the 12 months between January 2021 and January 2022. Fuel costs have increased by 46.5% over the same interval.[98] Thus, reliable transportation has become less affordable for many. Data on regional transportation use during COVID-19 show variations in different areas. In 2020, PVTA ridership declined to:

- 14% of 2019 ridership in the UMass area
- 32% of 2019 ridership in the Northampton area
- 55% of 2019 ridership in the Springfield area.[99]

This highlights the degree to which Springfield residents continued to depend on public transportation. Many of them may have been frontline workers who had to travel to work even during the pandemic. The lower rates in Amherst and Northampton likely reflect the departure or lockdown of thousands of college students as well.

Resources to Increase Access to Housing, Food, Transportation

In addition to the Food Bank and its network of food pantries, expansion of the Supplemental Nutrition Assistance Program (SNAP) and Healthy Incentives Program (HIP), which enables access to CSA shares and farmers markets, have also provided more options for affordable healthy foods while simultaneously helping farmers increase their sustainability.

- Springfield's Go Fresh Mobile Market brings food to housing developments that would otherwise not be able to access fresh produce because they are in a food desert.
- Many CSAs and farmers markets have already or are attempting to expand into the fall and winter months. Food advocates mentioned the Department of Transitional Assistance (DTA) finder for HIP as user friendly and helpful to find what else is available for community members and what is in walking distance.
- Two online databases to look for resources related to basic needs are:
    - 413 Cares – The Food Bank of Western MA is a featured partner. https://www.413cares.org/
    - Find Help – A free service to search and connect to support. Financial assistance, food pantries, medical care, and a multitude of other free or reduced-cost help can be found: https://www.findhelp.org/

e. Other Prioritized Health Needs

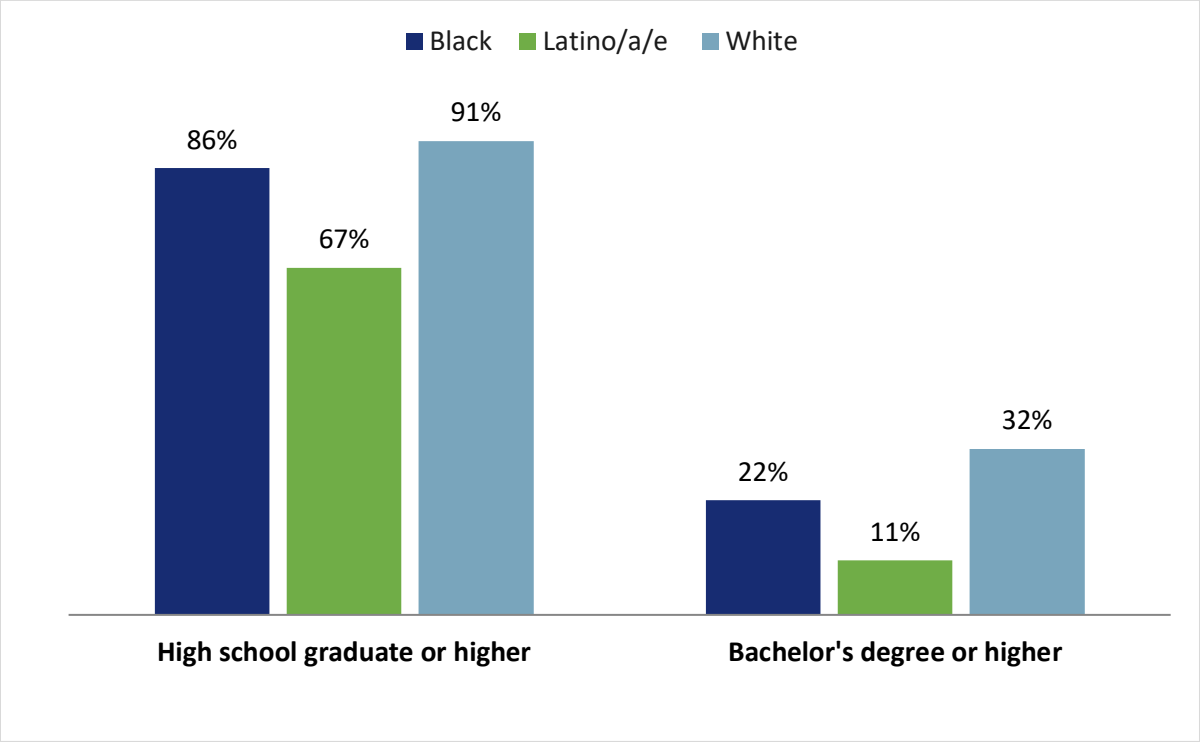
1. Social and Economic Determinants that Impact Health

Educational Attainment

Educational attainment is a building block for health as it contributes to longevity, sufficient resources to meet basic needs, health literacy, and access to jobs that do not endanger one's physically safety. Levels of education are strongly correlated with employment status, the ability to earn a livable wage, and many health outcomes.[100] Communities of color have long faced systemic barriers to education. Historically, Jim Crow laws racially segregated school systems, and schools for Black children were neglected and under-resourced which has documented impacts on health inequities.[101] Inequitable funding for public schools and residential segregation perpetuate educational disparities today. Similar to the 2019 CHNA, Racial inequities continue to persist among Black and Latinx residents, as the rate of White residents with a high school diploma or greater is 24 percentage points higher than rates for residents of Hispanic or Latinx origin (see Figure 18).

FIGURE 18

Educational Attainment by Race/Ethnicity in Hampden County, 2015-2019



Source: U.S. Census, ACS 2019 5-Year Estimates
Notes: Data for White residents is among those reporting White Non-Hispanic, and data for Black residents is among those reporting Black Non-Hispanic.

Rural communities and small towns also experience educational challenges. Declining populations of school age children and high operating and transportation costs have forced many rural school districts to consider cost cutting measures.[102] These may include scaling back education enrichment, closing schools, or merging with other districts.

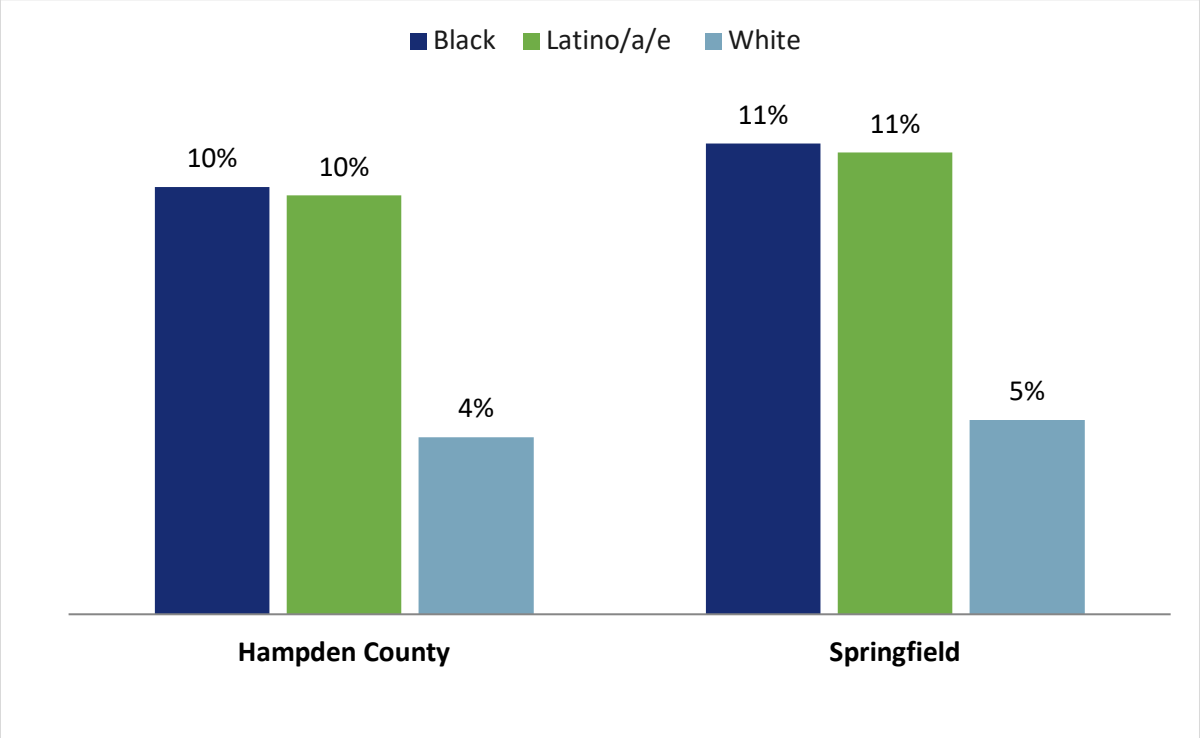
Employment and Income

In Mercy's service area of Hampden County, many residents struggle with money to meet basic needs. Parts of Hampden County have high rates of poverty and low levels of income. The connections between poor health and poverty, low levels of income, and access to fewer resources are well established. People with lower incomes are more likely to be negatively impacted by chronic stress associated with challenges in securing basic necessities that support health, such as housing, food, and access to physical activity.

- As of December 2021, the unemployment rate in Hampden County was 5%, compared to less than 4% in Massachusetts overall.[103]
- The unemployment rate for White populations in Hampden County is 4%, compared to almost 10% for Latinx and Black populations[104] (see Figure 19).
- The median household income for Latinx populations is $40,000 less than the income for White populations in Hampden County (see Table 4 in Appendix 1).

FIGURE 19

Unemployment Rates by Race/Ethnicity in Hampden County and Springfield, 2015-2019

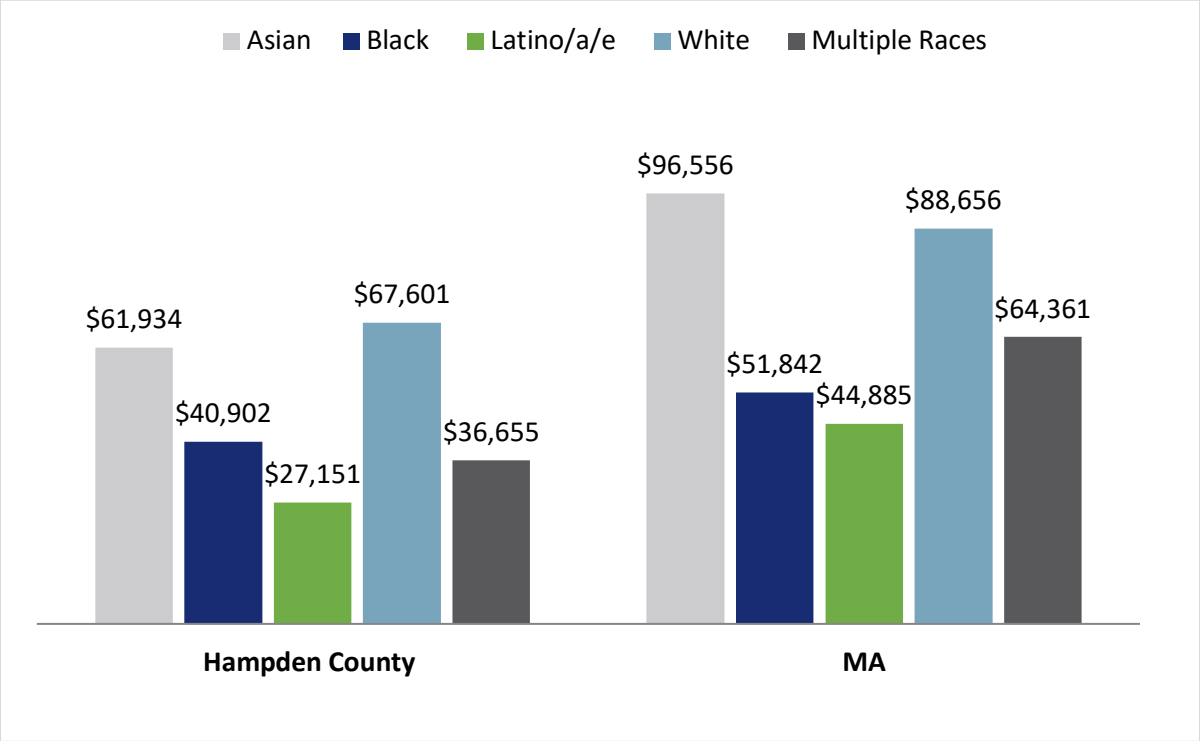


Source: U.S. Census, ACS 2019 5-Year Estimates

Another important consideration when looking at income data is the concept of a living wage – what it actually costs to sustain oneself and one's household. Based on the Massachusetts Institute of Technology (MIT) Living Wage Calculator,[105] a single parent with one child in Hampden County would need to earn $31.30 an hour, or $65,096 a year, in order to meet living expenses. Median income for Black and Latinx households is far below this level (see Figure 20). For comparison, the minimum wage is $14.25 per hour, and poverty-level wage is $8.29 per hour.

FIGURE 20

Median Household Income by Race/Ethnicity of Householder in Hampden County and Massachusetts, 2015-2019



Source: U.S. Census, ACS 2019 5-Year Estimates

Violence and Trauma

Interpersonal and collective violence affects health directly, via death and injury, as well indirectly through the trauma that affects mental health and healthy relationships.[106] Interpersonal violence includes sexual and intimate partner violence, childhood physical and sexual abuse and neglect, and elder abuse and neglect. Collective violence and trauma, such as crime, police brutality, and gun violence, affect the health of communities. Having a safe community free of violence and danger affects whether residents feel safe deciding where and when they will go outside of their homes.

COVID-19 had repercussions for residents dealing with any kind of violence. During the pandemic, being able to leave one's home and spend time outdoors was a welcome opportunity for some families, but a risk for those in communities with high levels of violence. Also, the pandemic affected those at risk of

intimate partner violence, elder abuse, and child abuse, by forcing vulnerable residents to stay indoors with potentially dangerous household members. Based on a review of 12 U.S. studies, domestic violence increased by 8.1% after pandemic related lockdowns.[107] In Hampden County, the annual rate between 2014-2016 for violent crimes, which includes homicide, rape, robbery, and aggravated assault, was more than 55% higher than the statewide rate, at 585.30 compared to 374.40 per 100,000.[108]

Springfield students who responded to the 2021 Springfield Youth Health survey reported their experience with safety and violence:

- One in five Springfield students (one in four for Latinx students) do not consider their neighborhood safe from crime.
- One in four students (25%) have witnessed someone being physically harmed in their neighborhood, for example with a gun, knife, or in a physical fight.
- 83% of students experienced verbal harm from a parent or caregiver (shout, yell, scream, swear).[109]

Environmental Exposures and Climate Crisis

Air pollution is associated with asthma, cardiovascular disease and other illnesses, impacting the health of Hampden County residents. Springfield in particular experiences poor ambient air quality due to development, zoning, and land use decisions. These decisions resulted in multiple mobile and point sources of pollution, including a large inter-state highway, several state highways, railroad lines running through the city and directly through its neighborhoods. Additionally, many cities in Hampden County are in a valley into which air pollution travels from other sources and settles. Exposure to near roadway air pollution has a particularly detrimental impact on health with the highway and heavily trafficked roadways running through or adjacent to neighborhoods.

Asthma is discussed in more detail below under Chronic Conditions, and it remains a major prioritized health need in the service area. Exposure to lead is a well-known health risk, connected to outcomes as varied as decreased academic achievement, lower IQ, and reduced growth in children and decreased kidney function, increased blood pressure, and hypertension in adults.[110] With families spending more time indoors due to the ongoing pandemic, they may be at an increased risk for lead exposure.

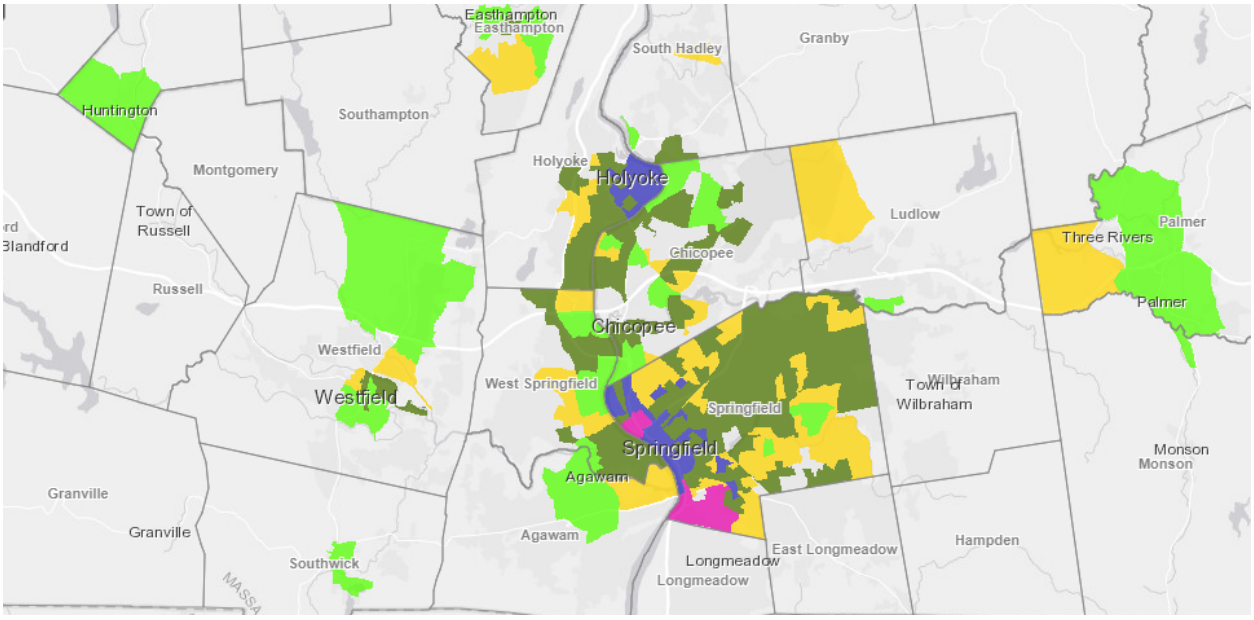
- Springfield, Chicopee, Holyoke, and Westfield were listed as 2020 high-risk communities for lead exposure by the Massachusetts Department of Public Health.[111]
- From 2016-2020, Springfield had an incidence rate of 4.5 per 1,000 children (9 to 47 months) who had blood levels that were considered lead poisoning (≥10 µg/dL), which was 88% higher than the statewide incidence rate of 2.4 per 1,000.[112]

Other environmental hazards in homes include asbestos, carbon monoxide, fire, mold and mildew, pests such as roaches and rodents, radon, and tobacco smoke.[113] Residents with limited incomes and limited access to quality, affordable housing may be at greater risk of exposure to these potentially harmful housing conditions.

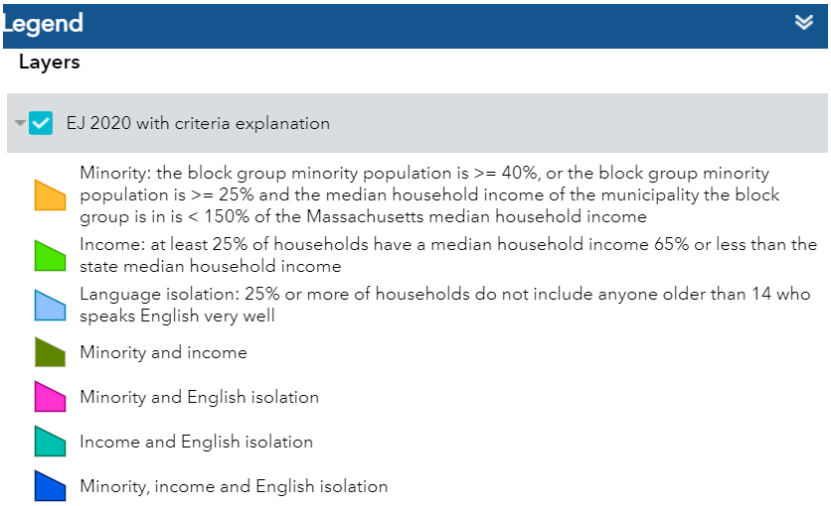
In addition, many parts of Hampden County are designated environmental justice communities. Almost all of Springfield, portions of Holyoke, Chicopee, West Springfield, and Westfield and some block groups in Agawam and Ludlow include environmental justice populations (see Figure 21). Environmental justice communities are those identified as having vulnerable populations that often experience disproportionate exposure to environmental hazards. They are at greater risk of exposure because it has been easier for polluting industries to site their installations in communities of color. The state of Massachusetts' Executive Office of Energy and Environmental Affairs established an Environmental Justice policy that aims to reduce potential added environmental burdens on Environmental Justice Communities in Massachusetts, specifically focusing on neighborhoods that have a large percentage of low-income, people of color, or non-English speaking populations.

FIGURE 21

Massachusetts Environmental Justice Populations, 2020



Source: MA Executive Office of Energy and Environmental Affairs, Environmental Justice Populations in Massachusetts, 2020



The **climate change crisis** is already having impacts including rising temperatures, increased precipitation and flooding, and extreme weather events that will negatively affect the health of a large number of service area residents, including those with asthma, COPD, stroke, hypertension, diabetes, obesity, and depression. Low-income populations, communities of color, older adults, people with disabilities, and immigrants have also been identified as vulnerable to negative impacts of natural disasters and climate change.[114]

Increased heat perhaps represents the greatest threat to public health brought on by climate change. Between 1991 and 2005, Springfield averaged 6.35 days over 90 degrees per year. By 2030, the Massachusetts Department of Public Health projects Springfield will have 18.13 over 90-degree days each year, a sharp increase. Within 20 years, that estimate rises to 29.18 days per year.[115] As days with extreme heat become more commonplace, hospitalizations due to heat stroke may increase. Lower income residents will be most vulnerable as they may not be able to afford air conditioning. The state also anticipates a rise in illness and death due to cardiovascular disease and renal failure as a consequence of increased heat.

Air quality will also suffer. Longer, more extreme, and more frequent periods of extreme heat will beget increases in pollen production, ozone, and particulate matter. These conditions will exacerbate the region's already notable incidence of asthma (see "Health Outcomes" section below) as well as other respiratory conditions.

Along with increased heat, increased precipitation will contribute to declining public health through its effect on the natural environment. Between 1995 and 2001, Springfield experienced an average of 5.76 days annually of rainfall exceeding one inch. By 2050, that amount is projected to increase to 6.95 days on average.[116]

Though not as dramatic as the expected increase in temperature, increased precipitation is a foreboding prospect for the region. A hotter and wetter climate will make the region more hospitable to disease-bearing pests, such as ticks and mosquitos. Greater rainfall exposes residents to not only greater risk of property damage and loss of value due to floods but environmental hazards that accompany water damage, such as mold and contamination.

2. Barriers to Accessing Quality Health Care

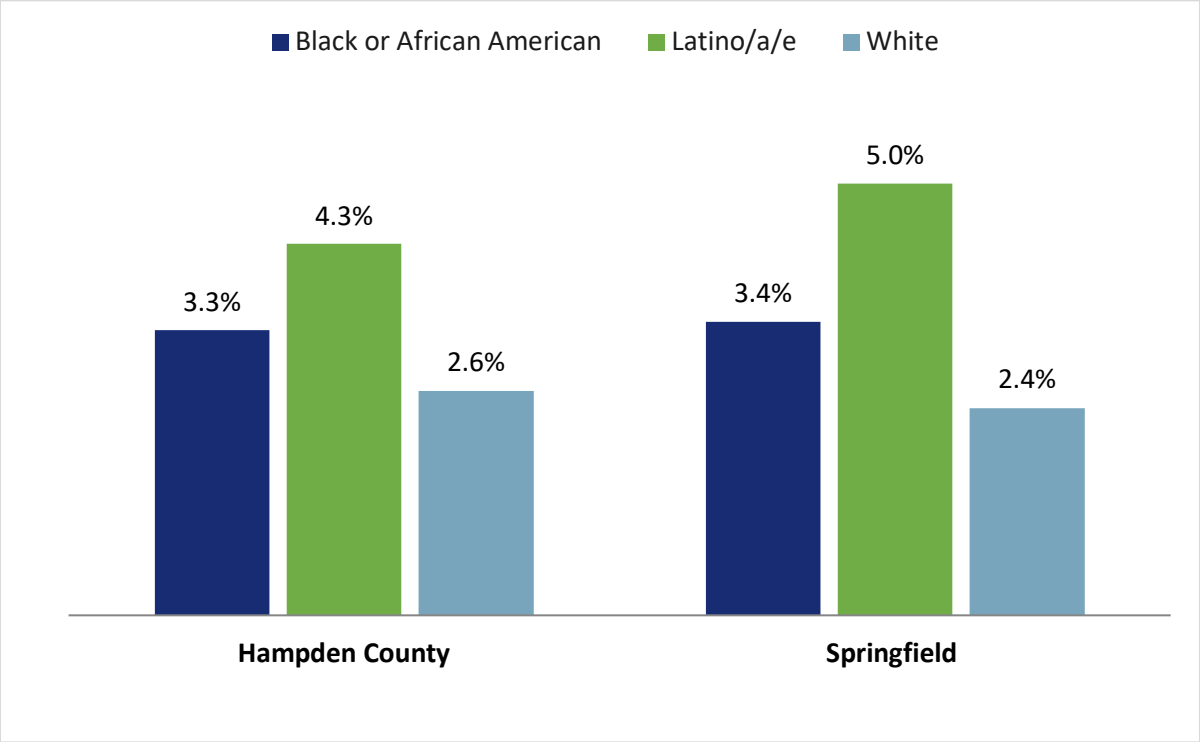
A number of barriers to health care are referenced throughout this report, and they continue to be prioritized health needs. See Section (6)c on the limited availability of providers, which has become an acute crisis in the mental health field, and further exacerbated by the pandemic. Other barriers discussed below include health insurance and need for financial assistance, need for transportation, need for culturally sensitive care, health literacy and language barriers, and lack of care coordination.

Barriers to Accessing Care

- **Insurance:** While 96.5% of Hampden County residents are covered by health insurance,[117] the ability to navigate both what health insurance will cover as well as the medical care systems continue to be barriers to accessing quality health care.
    - 36.16% of the insured population in Hampden County are Medicaid beneficiaries, as compared to the statewide percentage of 23.45%.[118]
    - The percentage of the population that is uninsured in Hampden County is 3.14%, which is 15% higher than the statewide average of 2.72%.[119]
    - As seen in Figure 22, Black and Latinx populations had higher uninsured rates compared to White populations in both Springfield and Hampden County.
- **Financial assistance** was also identified as a need. The 2019 CHNA reported that, despite high rates of residents covered by health insurance, the cost of health care co-pays, deductibles, tests, and medication is a barrier for many to having optimal health, including those who are above the eligibility threshold to receive Medicaid but still make low incomes. Beyond the costs of portions of health care that insurance doesn't cover, additional costs include programs, equipment, physical activities, and alternative therapies such as acupuncture that are typically not covered by insurance but are suggested by medical providers and help patients. The high cost of home care for people with disabilities impacts the quality and quantity of those services. Older adults can fall into a gap where they are too young or have too much money to qualify for services they need, yet cannot afford to privately pay for these services.
- **Transportation** has been consistently identified as one of the top barriers to accessing medical care in previous CHNAs and continues to be a large barrier. Public health officials and other informants indicated that transportation to get to medical appointments is a particularly difficult issue for children and adults living with disabilities, older adults, and low-income populations. Telehealth offers one potential avenue to overcome this barrier for some types of care.

FIGURE 22

Uninsured Population by Race/Ethnicity in Hampden County and Springfield, 2015-2019



Source: U.S. Census Bureau, ACS, 2015-2019.
Notes: Data for Native Hawaiian and Pacific Islander populations is 0% for Hampden County and not available for Springfield. Data for White residents is among those reporting White Non-Hispanic. AI/AN is abbreviated for American Indian/Alaskan Native

Care Barriers

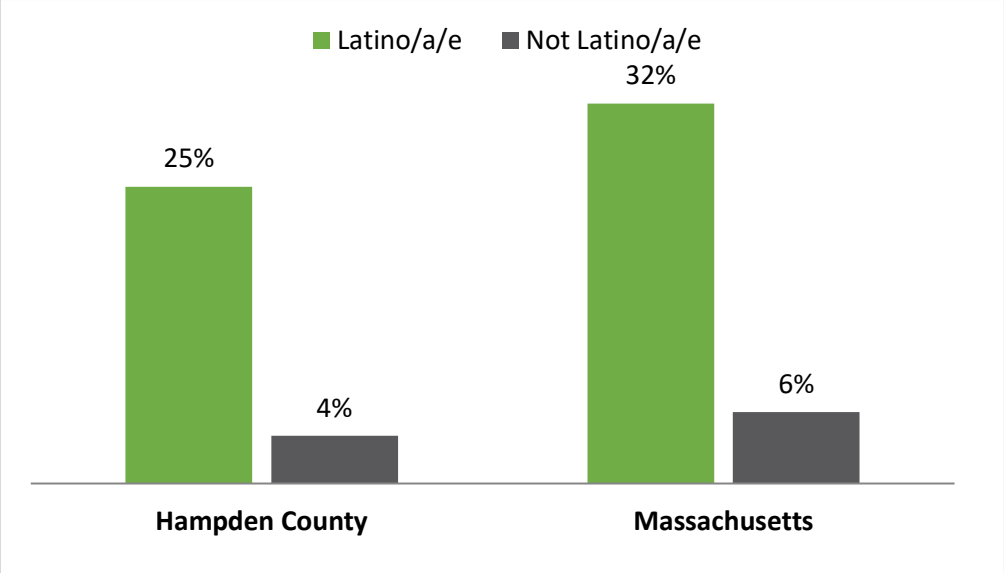
Lack of Care Coordination: Lack of care coordination is a prioritized community health need, as it was in the 2016 and 2019 CHNA. Care coordination refers to the coordination of patient care, including the exchange of information between all parties involved in patient care.[120] BCBS focus group participants spoke about the fragmented health care system, lack of person-centered care, and disconnects between the systems, all of which contributes to inequities among people of color and immigrants.

Health Literacy and Language Barriers: Related to the need for culturally sensitive care is the need for care that is language appropriate as well. Language barriers can create multiple challenges for both patients and health care providers and was previously identified as a need. Increasing availability of interpreters as well as translation of health materials are specific actions that health care institutions can help to address this barrier. When populations are unable to speak English, and they cannot find providers that speak their language or offer simultaneous translation services, this can create barriers to accessing healthcare, understanding their provider, and achieving health literacy. Health literacy is the capacity for an individual to find, "communicate, process, and understand basic health information and services to make appropriate health decisions".[121]

- The refugee and immigrant populations in Hampden County makes for an increasingly diverse linguistic population and in Hampden County, 9.1% of the population 5 years of age and older have limited English proficiency, compared to 9.23% in Massachusetts.[122]
- As shown in Figure 23 below, 25% of populations that identify as Hispanic or Latinx have limited English proficiency as compared to 4% of populations that identify as Non-Hispanic Latinx in Hampden County.[123]

FIGURE 23

Population 5+ with Limited English Proficiency by Ethnicity in Hampden County and Massachusetts, 2015-2019



Data Source: US Census Bureau, ACS, 2015-2019. Source geography: Tract.

3. Health Outcomes

Chronic health conditions

A chronic health condition is one that persists over time and typically can be controlled but not cured. Chronic health conditions continue to remain an area of prioritized health need for Hampden County residents. Residents continue to experience high rates of chronic health conditions and associated morbidity, particularly for obesity, diabetes, cardiovascular disease, cancer, and asthma.

As with other health needs described in this CHNA, there are racial and ethnic disparities for many chronic diseases. Systemic racism and endemic poverty affect access to quality health care, stress levels, exposure to environmental toxins, access to healthy foods, and opportunities to exercise – all factors that influence chronic disease and how well it can be managed.

Asthma: Hampden County residents continue to be impacted by asthma with emergency department (ED) visit rates more than two times that of the state in 2019 (1,128 vs 518 per 100,000, respectively and hospitalization rates over 70% greater (145 vs 84 per 100,000 respectively).[124] Within Hampden County, there were large differences in ED visit rates for asthma between races (see Figure 24). In 2019, the most recent year in the data set, Black residents of Hampden County visited the emergency department for asthma at a rate double that of White residents. Asthma related ED visits rose for Black residents since the last CHNA, whereas they declined or held steady for other racial groups. The state did not provide 2019 data on Latinx visit rates, but in the last CHNA, rates for ED visits by Latinx residents were double visits among Black residents (2617 per 100,000 vs. 1310). The disparities were even more extreme for Latinx pediatric ED visits.[125]

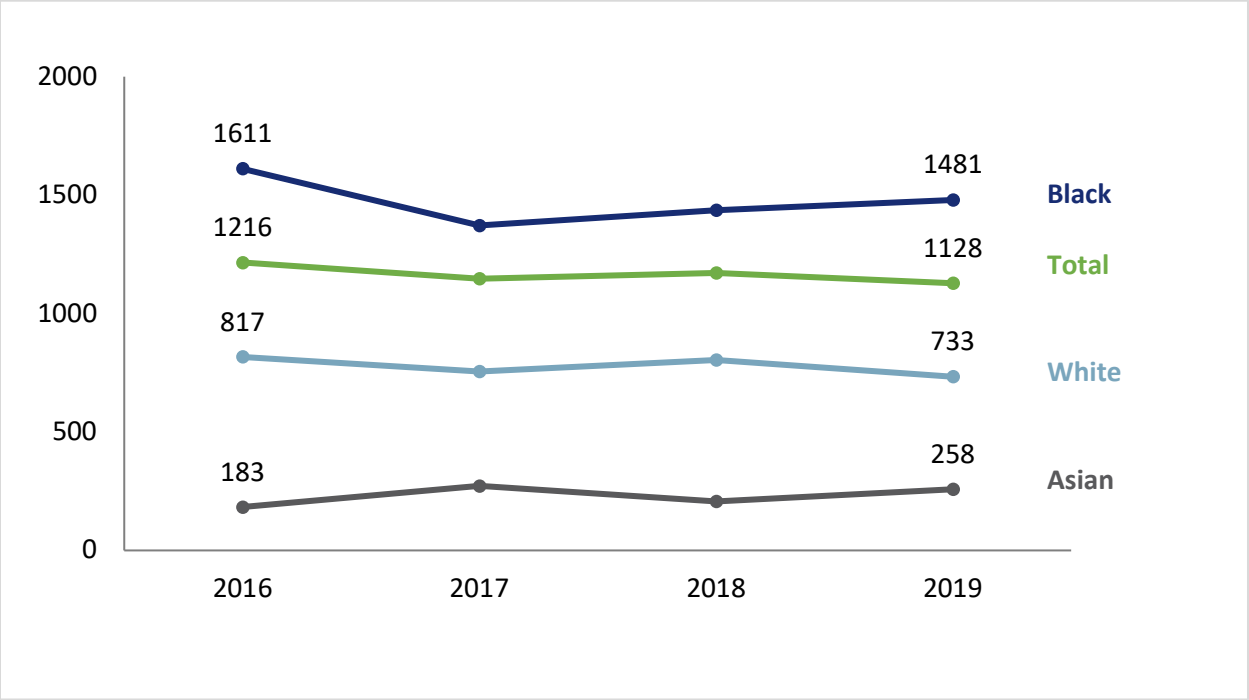
COPD: Chronic Obstructive Pulmonary Disease (COPD) is chronic obstruction of lung airflow that interferes with normal breathing and is not fully reversible. More familiar terms such as chronic bronchitis and emphysema are no longer used but are included within COPD. In 2015, the age adjusted COPD hospital admission rate in Hampden County was 33.9 compared to 41.6 in the Quaboag Valley rural cluster and 3.9 in the Hilltowns rural cluster.[126]

Obesity: Obesity is a national epidemic and contributes to chronic illnesses such as cancer, heart disease, and diabetes. Obesity can impact overall feelings of wellness and mental health status, which can be compounded by weight discrimination and body shaming. A healthy diet and physical activity play an important role in achieving and maintaining good health. Yet many systemic factors contribute to obesity, including availability and access to health foods and safe places to be physically active. The percentage of adults who have obesity has remained relatively the same since the last CHNA, at 31% in Hampden County compared to 25% statewide.[127]

FIGURE 24

Asthma Emergency Department Visits by Race in Hampden County, 2016 - 2019

Age-adjusted rate per 100,000 residents



Source: MDPH Hospital Admissions, State Tables

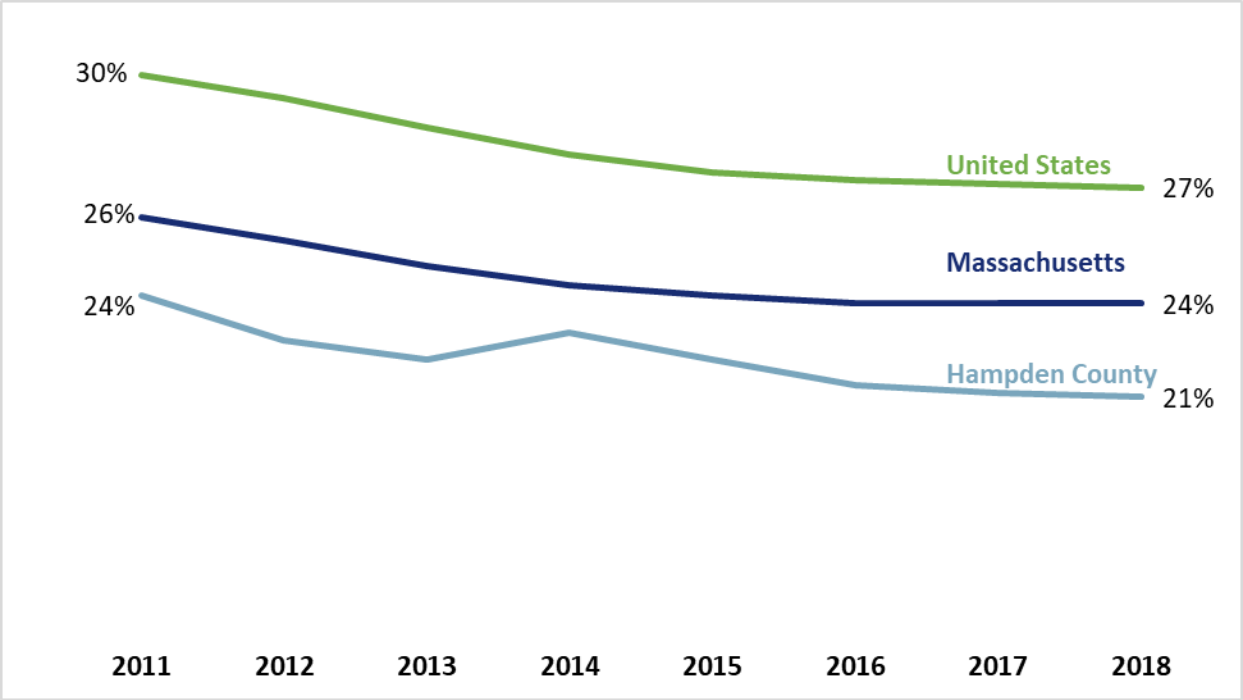
Cardiovascular disease: Cardiovascular disease (CVD) includes diseases that affect the heart and blood vessels, including coronary heart disease, angina (chest pain), hypertension, heart attack (myocardial infarction), and stroke. As of 2018, about one in five (21.2%) of Medicare fee-for-service beneficiaries in Hampden County has ischemic heart disease (23.7% statewide)[128] (see Figure 25). As of 2014, the age-adjusted cardiovascular disease hospital admissions rate for Quaboag Valley rural cluster was 1,410 and 1,157 for the Hilltowns rural cluster, compared to the state average of 1,563.[129]

- As shown in Figure 26, the age-adjusted heart disease emergency department rates in Hampden County between 2016 and 2019 for Black populations is more than double that of White populations (641 vs 1,305 per 100,000) (rates for Latinx populations were not provided).
- The age-adjusted stroke hospital admissions rate in 2014 in the Hilltowns rural cluster was 119.7 per 100,000, which is approximately 113% higher than the state average of 255.1 per 100,000[130] (see Figure 27).
- As of 2018, over half (55.7%) of Medicare fee-for-service beneficiaries in Hampden County had high blood pressure, (55.9% statewide).[131]

FIGURE 25

Medicare Populations with Heart Disease in Hampden County, Massachusetts, and the United States, 2011-2018

Age-adjusted rate per 100,000 residents

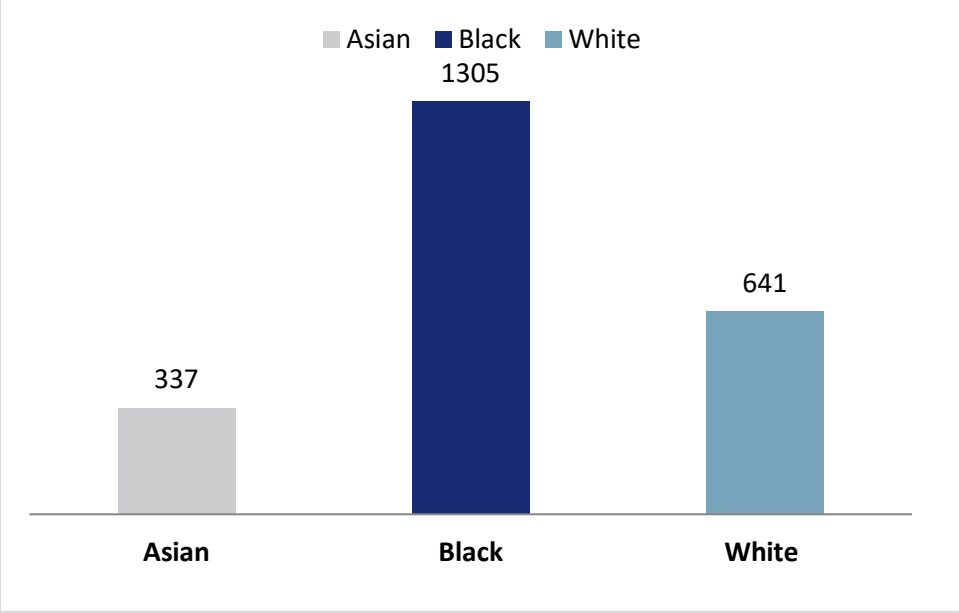


Data Source: Centers for Medicare and Medicaid Services, CMS Geographic Variation Public Use File. 2018. Source geography: County

FIGURE 26

Heart Disease Emergency Department Visits by Race in Hampden County, 2016-2019

Age-adjusted rate per 100,000 residents

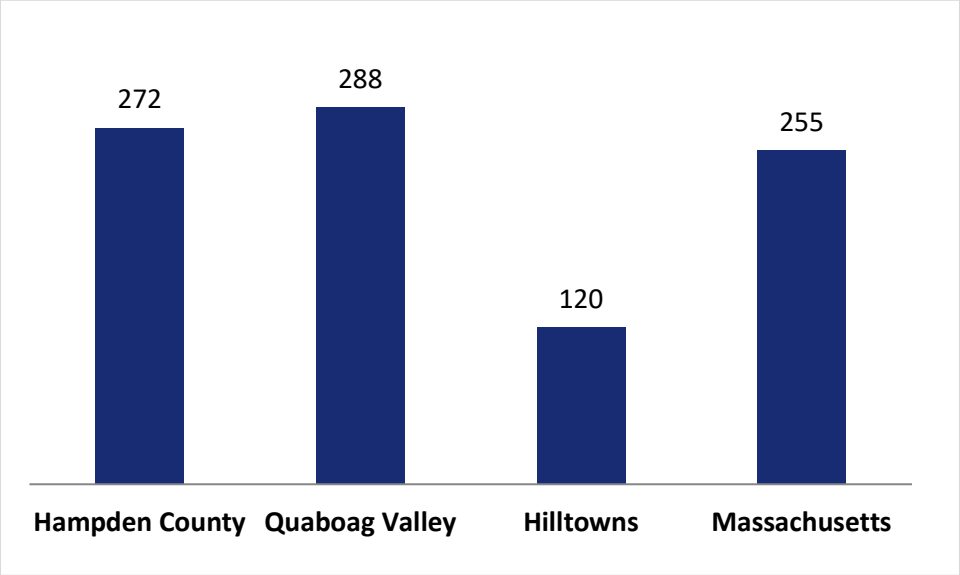


Source: MDPH, Hospital Admissions, State Tables, 2016-2019. Age-adjusted per 100,000.

FIGURE 27

Stroke Hospitalizations by County, Rural Clusters, and Massachusetts, 2014

Age-adjusted rate per 100,000 residents



Source: MDPH, 2014. Rural Cluster Data.

Cancer: Cancer was the leading cause of death for Massachusetts residents in 2019, with the highest rates seen in White residents at 144 per 100,000 and the lowest seen in Asian residents at 91 per 100,000.[132] Advancing age is the most important risk factor for cancer, and between 2010-2019, the population ages 65 and older experienced a 22.9% increase in Hampden County and an even larger increase of 44% and 49% increase in Hampshire and Franklin County, respectively.[133]

In terms of hospital admissions, in 2014 the age-adjusted cancer hospital admission rate was 329 and 332 for the Hilltowns and Quaboag Valley rural clusters and 316 per 100,000 for Hampden County.[134] The colon and rectum cancer incidence rate between 2014-2018 was 37 per 100,000 in Hampden County, which was similar to the statewide average of 35 per 100,000.[135] Breast cancer incidence rates between this same time period in Hampden County were 131 per 100,000 which were also similar to the statewide average of 137.[136]

Diabetes: An estimated 10% of Hampden County residents have diabetes (9% statewide).[137] The vast majority of diabetes is Type 2 diabetes, which is one of the leading causes of death and disability in the U.S. and a strong risk factor for cardiovascular disease. We see inequities in who is experiencing the highest rates of serious illness and complications from diabetes, with greater hospitalization rates among Black patients compared to White patients.[138]

Other Health Outcomes

Infant and Perinatal Health: Infant and perinatal health risk factors continue to affect Hampden County residents, causing poor maternal and infant outcomes. Preterm birth (<37 weeks gestation) and low birth weight (about 5.5 pounds) are among the leading causes of infant mortality and morbidity in the U.S., and can lead to health complications throughout the lifespan.[139] Early entry to prenatal care and adequate prenatal care are crucial components of health care for pregnant women that directly reduce poor birth outcomes, including preterm birth, low birth weight, and infant mortality (infant death before age 1).[140] Smoking during pregnancy is a risk factor that increases the risk for pregnancy complications and affects fetal development.[141]

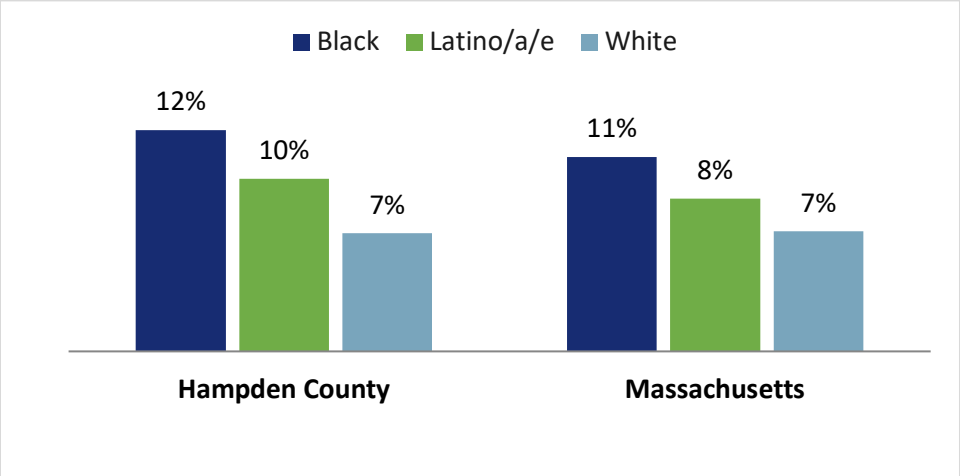
- The percentage of low birth weight births in Hampden County is 8.3% compared to 7.5% statewide with Non-Hispanic Black and Latinx women experiencing inequities[142] (see Figure 28).
- The infant mortality rate in Hampden County between 2013-2019 was 5.2 per 1,000 live births, which is 30% higher than the statewide average of 4.0.[143]

One of the starkest health disparities in the U.S. today is related to maternal death and infant death. Black women are up to four times more likely than White women to die from a pregnancy-related cause.[144]

Sexual health: While great strides have been made to reduce teen birth rates in Hampden County, high rates of unsafe sexual behavior remain a need in Hampden County. From 2017-2019, Hampden and Suffolk County had roughly two times the rate of confirmed gonorrhea cases as compared to other counties in the state.[145] The rate of the population with HIV/AIDS in Hampden County is 492 per 100,000, which is more than 30% higher than the statewide rate of 349.[146]

FIGURE 28

Low Birth Weight by Race/Ethnicity, 2013-2019



Data Source: University of Wisconsin Population Health Institute, County Health Rankings. 2013-2019. Source geography: County

Alzheimer's Disease and Dementia: Alzheimer's disease is the most common form of dementia and accounts for 60-80% of dementia cases. More than 6 million Americans are living with Alzheimer's and between 2000 and 2019, deaths from Alzheimer's increased by 145%.[147] COVID-19 has also had an effect on Alzheimer's, as preliminary reports from the CDC indicate that there were approximately 16% more deaths in 2020 from Alzheimer's and other forms of dementia as compared to the five year average before 2020.[148] Of the total population in Hampden County, 17% is 65 years and older. Between 2010-2019, this population has grown by 23% and is expected to continue to increase as the population ages.[149]

- An estimated 11% of Medicare Fee For-Service Beneficiaries in Hampden County have Alzheimer's disease, which is comparable to the statewide rate.[150]
- People with dementia, including Alzheimer's, were at elevated risk for infection and death from COVID-19, likely due to increased risk from living in nursing homes, which were at increased risk of outbreaks as a congregate care setting.[151]

7. Potential Resources to Address Significant Health Needs

TABLE 2

Community Resource Organizations

Organization	Description of Services Provided	Website
African Diaspora Mental Health Association	Minority-owned outpatient mental health clinic providing culturally specific behavioral health and educational services in Massachusetts.	https://admha.org/
After Incarceration Support Services	The AISS assists formerly incarcerated people in all aspects of their lives as they transition from incarceration into the community. Many of them face a range of issues, such as addiction, mental health problems, lack of identifying documents, employment obstacles, financial concerns, limited education, poor housing situations (or lack of housing), etc. They also cope with a lack of familial support, poor self-esteem, fear of failure, and a constant temptation to return to the criminal lifestyle. AISS is the bridge which carries the positive momentum that has begun during incarceration forward and that assists individuals in the Re-Entry Process.	http://hcsdma.org/aiss-3/
Alzheimer's Association (Massachusetts and New Hampshire)	The Alzheimer's Association is the leading voluntary health organization in Alzheimer's care, support and research. Our mission is to eliminate Alzheimer's disease through the advancement of research; to provide and enhance care and support for all affected; and to reduce the risk of dementia through the promotion of brain health	https://www.alz.org/manh
American Heart Association	American Heart Association is the nation's largest voluntary organization dedicated to fighting heart disease and stroke.	https://www.heart.org/en
Arise for Social Justice	A member-led community organization dedicated to defending and advancing the rights of poor people. Whose mission is to educate, organize, and unite low income people to know what their rights are, stand up for those rights, and achieve those rights.	https://www.arisespringfield.org/
Behavioral Health Network Addiction Services Outpatient Services Carlson Recovery Center	A regional provider of comprehensive behavioral health services for adults, children, and families with life challenges due to mental illness, substance abuse, or intellectual and developmental disabilities. The center treats dually-diagnosed clients with both mental health and substance use disorders through the Enhanced Acute Treatment Program. Services are available 24 hours per day.	http://bhninc.org/
Big Brothers Big Sisters of Hampden County	Provide children facing adversity with strong and enduring, professionally supported one-to-one relationships that change their lives for the better, forever.	http://www.bigbrothers-sisters.org/

Black Men of Greater Springfield	Providing positive experiences and activities for black youth. We are dedicated to exposing our students to highly successful African-American role models that emphasize their ability to achieve and become contributing members of our community, society and the world.	https://bmgspringfield.com/
Springfield Boys and Girls Club	Provides, in a safe environment, programs that inspire, educate, guide, enable, and support all young people to realize their full potential as productive, responsible, respectful citizens and leaders	http://www.sbgc.org/
Brianna Fund for Children with Physical Disabilities	Founded to assist children with physical disabilities by eliminating barriers of access to community resources. With the goal that children with physical disabilities will enhance their capacity for living a full and productive life, the Brianna Fund has to date provided grants to over 46 families in the Greater Springfield community.	https://www.briannafund.org/
Caring Health Center	CHC's team of community health workers, health navigators, and interpreters ensures that patients receive comprehensive care that addresses their cultural, economic, and language needs, while its behavioral health specialists deliver services to address a wide range of emotional and other issues.	http://caringhealth.org/index.html
Center for Human Development	One of the largest social service organizations in western Massachusetts, delivering a broad array of critical services with proven effectiveness, integrity, and compassion.	https://chd.org
CleanSlate Addiction Treatment Center (Suboxone Treatment)	Patient-focused treatment for opioid, alcohol and other drug addictions; appointment-based outpatient treatment.	http://cleanslatecenters.com/
Clinical and Support Options	A "one-stop" model of comprehensive, holistic services to individuals and families with multiple and complex issues	https://www.csoinc.org/
Springfield Community Based Doula	Dedicated to improving birth outcomes in vulnerable populations of Springfield by reducing racial inequities in infant and maternal health. Train community-based labor companions, or doulas, to empower women and families before, during, and after birth.	http://www.springfieldcommunitybaseddoulas.org/
Community Legal Aid	Provides free civil legal services to low-income and elderly residents. Regardless of how much money you have, we assure fairness for all in the justice system, protecting homes, livelihoods, health, and families.	https://communitylegal.org/
Community Services Institute	A family-owned clinic focused exclusively on outpatient, trauma-informed psychotherapy, psychiatry, and psychological assessment.	http://communityserv.com/
Community Survival Center	A non-profit agency that helps families struggling to provide the basics: food, clothing, and household items.	http://communitysurvivalcenter.org/

Alianza (formerly Compañeras)	Dedicated to assisting, supporting, and empowering those whose lives are affected by battering and abuse.	https://www.womanshelter.org/
Council on Aging	Focused on improving and enhancing quality of life for elder residents by striving to ensure that all elder residents are afforded the opportunity to live a lifestyle based on independence, and to mature with dignity and security.	https://www.springfield-ma.gov/hhs/council-on-aging
Counter Criminal Continuum Policing (C3)	The Springfield Police Department and Massachusetts State Police C3 teams facilitate unity of effort and criminal intelligence gathering by, with, and through interagency, community, and private enterprise cooperation in order to detect, disrupt, degrade and dismantle criminal activity.	https://www.springfield-ma.gov/police/
Dress for Success	Provide each client with professional attire to secure employment and furnish her with a confidence that she carries forever and the knowledge that she can actively define her life, the direction she takes and what success means to her.	https://westernmass.dressforsuccess.org/
Dunbar Community Center	Provides martial arts, fitness sessions, dance classes, after school care, summer camp, senior health initiatives, and mentoring opportunities.	http://www.springfieldy.org/family-centers/dunbar-y-family-community-center/
First Pioneer Valley Dream Center *Isaiah's Closet*	A multicultural, bilingual (English-Spanish), faith-based, and volunteer driven non-profit organization that loves and serves others; the homeless, disenfranchised, the struggling families, and individuals from all walks of life	http://firstpvdreamcenter.org/our-story
Foodbank of Western Mass Brown Bag Food for Elders Program	Distributes food to member agencies in Berkshire, Franklin, Hampden, and Hampshire counties. These independent pantries, meal sites, and shelters are on the front lines of emergency food assistance in the region, playing a crucial role helping individuals, families, seniors, and children. Provides a free bag of healthy groceries to eligible seniors once a month at local senior centers and community organizations.	https://www.foodbankwma.org/
The Gándara Center Addiction Services Outpatient Mental Health Services Youth Outreach Programs	The Gándara Center promotes the well-being of Hispanics, African Americans, and other culturally diverse populations through innovative, culturally competent behavioral health, prevention, and educational services.	https://gandaracenter.org
Gardening the Community	A food justice organization engaged in youth development, urban agriculture, and sustainable living to build healthy and equitable communities.	http://www.gardeningthecommunity.org/
Girls Inc. of the Valley	Inspires all girls to be strong, smart, and bold by providing them the opportunity to develop and achieve their full potential.	https://www.girlsincvalley.org/
Girls on the Run	A nonprofit organization dedicated to creating a world where every girl knows and activates her limitless potential and is free to boldly pursue her dreams.	https://www.girlsontherunwesternma.org/

Greater Springfield Senior Services Inc. *Aging Services Access Point*	A private nonprofit organization dedicated to maintaining a quality of life for older adults, caregivers, and persons with disabilities. This mission is achieved through the provision of programs and services which foster independence, dignity, safety, and peace of mind.	https://www.gsssi.org/index.html
Habitat for Humanity	Seeking to put God's love into action, Habitat for Humanity brings people together to build homes, communities and hope.	https://www.habitatspringfield.org/
Hampden County Addiction Task Force	A collaboration of community resources, law enforcement (local and state), health care institutions, service providers, schools and community coalitions individuals and families whose goal is to focus on a county wide approach to address drug addiction, overdose and prevention	https://hampdenda.com/community-safety-and-outreach-unit/hampden-county-addiction-taskforce/
Head Start	Committed to providing low-income children and their families with a Beacon of Hope and source of support for a brighter future. Head Start strives to do so by providing high-quality comprehensive child development services to enrolled children and empowering families to achieve stability in their home environment.	https://hcsheadstart.org/
Home Grown Springfield	Free peer-to-peer support groups, relapse prevention and tobacco cessation support groups, social events, job readiness activities, advocacy, and recovery coaching.	https://www.homegrownspringfield.org/
Hope for Holyoke Recovery Support Center	Free peer-to-peer support groups, relapse preventions and tobacco cessation support groups, social events, job readiness activities, advocacy, and recovery coaching. Participants must be 18 years of age or older.	https://www.gandaracenter.org/hopeforholyoke
International Language Institute	Promotes intercultural understanding by providing high quality language instruction and teacher training.	https://ili.edu/
Jewish Family Services Refugee Resettlement	Provides behavioral health programs and new American programs, as well as supports for older adults. Multicultural, multilingual staff provides comprehensive services which includes case management, family reunification, employment, English as a Second Language, school and health support, and counseling.	www.jfswm.org https://www.jfswm.org/new-americans/refugee-resettlement-integration/
Link to Libraries	Link to Libraries collects and distributes new books to elementary school libraries and nonprofit organizations and to enhance the language and literacy skills of children of all cultural backgrounds.	https://www.linktolibraries.org/
Live Well Springfield	A coalition that brings together over 30 organizations working together to build and sustain a culture of health in Springfield that includes the broadest definition of health, including healthy eating, active living, the built environment, economic opportunity, housing, and education.	http://www.livewellspringfield.org
Massachusetts Trans Political Coalition (MTPC)	Dedicated to ending oppression and discrimination on the basis of gender identity and gender expression. Rooted in social justice, MTPC educates the public, advocates with state, local, and federal government, engages in	https://www.masstpc.org/

	activism, and encourages empowerment of community members through collective action.	
Martin Luther King Jr. Family Services	A multi-cultural and multi-service agency dedicated to being "Keepers of the Dream", we nurture and empower the aspirations of individuals, families, and youth to achieve new realities of peace, social and economic justice, self-determination, self-actualization, and self-sufficiency.	https://www.mlkjrfamilyservices.org/
Mass 211	An easy to remember telephone number that connects callers to information about critical health and human services available in their community. It serves as a resource for finding government benefits and services, nonprofit organizations, support groups, volunteer opportunities, donation programs, and other local resources.	https://mass211.org/
MassHire	Local people interacting with local job seekers and businesses to assist people in building their skill sets to meet the needs of businesses.	https://masshirespringfield.org/about/
Maternal Child Health Commission	The Maternal Child Health Commission (MCHC) promotes a community that nurtures all families to have healthy pregnancies and healthy children.	https://www.springfield-ma.gov/hhs/nursing-programs
Men of Color Health Awareness (MoCHA)	A program aimed to address the poorer health and higher levels of stress that men of color in Springfield experience compared to other groups. Our goals are to empower men of color to play an active role in health care through health education and wellness classes	http://mochaspringfield.org/
Mental Health Association	Offers programs such as mental health services, developmental disabilities services, homeless services, internship programs, recovery from addiction services, and an emotional health and wellness center.	https://www.mhainc.org/
Mental Health First Aid	An 8-hour course that teaches you how to identify, understand, and respond to signs of mental illnesses and substance use disorders.	https://www.mentalhealthfirstaid.org/
MetroCare of Springfield	An organization founded on the principle of providing residents of western Massachusetts with reliable and accessible caregiving. The goal is to provide culturally aware services to a diverse community of individuals with the objective to keep individuals happy and healthy in their homes.	http://metrocareofspringfield.com/en_US/
Women of Color Health Equity Collective (formerly known as MotherWoman)	Promotes the resilience and empowerment of mothers and their communities by building community-capacity and advocating for just policies through evidence-based research and grassroots organizing.	https://wochec.org/
National Association of Mental Illness (NAMI)	The nation's largest grassroots mental health organization dedicated to building better lives for the millions of Americans affected by mental illness.	https://www.nami.org/Find-Your-Local-NAMI/Affiliate/Program-Details-(1)?state=MA&local=0011Q000022GArKQAW

New England Farm Workers' Council	A multi-faceted human services agency dedicated to improving the quality of life for low-income people throughout the northeast. In addition to migrant and seasonal farm workers and their families, the agency serves inner-city and low-income groups.	http://www.partnersforcommunity.org/default/index.cfm/about-pfc/affiliates-programs/nefwc/
New England Justice for Our Neighbors: Trinity United Methodist Church	As a neighborhood church, Trinity is committed to helping all people who want to become active, vital members of the community. Trinity Church works toward justice for all and offers services such as free legal advice.	http://www.newenglandjfon.org/
New North Citizens Council	Serves at risk- youth through services including: groups, workshops, structured recreation projects, video development, and outreach efforts. NNCC addresses two of the needs of the client population: After School leadership/Education program and Outreach/Mentoring Street Worker.	https://www.newnorthcc.org/
Open Doors Social Services	A program that provides case management, housing search assistance, medical, mental health, and substance abuse referrals for homeless people living in area shelters, on the streets, or temporarily doubled up with friends or relatives.	http://www.openpantry.org/open-door-social-services.php
OutNow	A support group for LGBTQIA+ youth from the greater Springfield Area.	http://outnowyouth.org/
Parent Villages	Parent Villages builds bridges between parents, youth, advocates, community leaders, and educators to close the opportunity gap and improve education for students.	https://www.facebook.com/parentvillages/
Pioneer Valley Asthma Coalition	A coalition of health professionals and institutions, community groups and residents, public health organizations, municipal and state agencies, academic institutions, schools, day care, housing and environmental groups committed to improving asthma and environmental conditions that affect health in western Massachusetts	www.pvasthmacoalition.org
Pioneer Valley Transit Authority (PVTA)	A federal, state, and locally funded transit system. It is the largest regional transit authority in Massachusetts with 186 buses, 132 vans, and 24 participating member communities	http://www.pvta.com/
Planned Parenthood	Provides sexual health and reproductive services including: abortion services, birth control, emergency contraception, general healthcare, HIV/STI testing, pregnancy testing, LGBT services, and more.	https://www.plannedparenthood.org/health-center/massachusetts/springfield/01107/western-massachusetts-health-center-2662-90610
Project Baby	A community organization addressing disparities in infant mortality rates in the city of Springfield, Massachusetts and in Hampden County.	http://projectbabyspringfield.org/
Project Coach	Works to bridge the economic, educational, and social divisions facing Springfield youth by empowering and training inner-city teens to coach, teach, and mentor elementary school students in their neighborhoods.	https://www.projectcoach.smith.edu/

Rebekah's Closet	Outreaches to young families in the area seeking support providing for their infants and toddlers. Families can receive diapers, wipes, clothing, toys, books, and furniture as they become available.	https://www.uccholyoke.org/programs-events/rebekahs-closet/
Revitalize Community Development Corporation (CDC)	The mission is to revitalize homes, neighborhoods, and lives through preservation, education, and community involvement.	https://www.revitalizecdc.com/
ROCA	The mission is to disrupt the cycle of incarceration and poverty by helping young people transform their lives.	https://rocainc.org/
Ronald McDonald House	When children are sick and being treated at Springfield area medical facilities, the Ronald McDonald House of Springfield, Massachusetts is a welcome "home away from home" for children and their families. A dedicated group of volunteers assist a full-time house manager to sustain the House. Families have the privacy of their own bedroom and bath and communal support of dining and recreation facilities.	https://rmhc-ctma.org/what-we-do/rmh-springfield/
Salvation Army	Offers a range of programs and services encompassing everything from after-school programs, social clubs, and parenting classes through drug and alcohol rehabilitation and disaster response. We regularly partner with churches, charities, and other organizations to reach and assist as many people as possible	https://springfield.salvationarmy.org/
Scan 360	The Scan 360 Family Center assists families who have a family member with a developmental disability to navigate the service system.	https://www.facebook.com/scan360familycenter/
Springfield 311	Gives the public responsive and easy access to all of Springfield's government services. Allows departments to focus and improve their process and provide the residents of Springfield with a well-managed and proficient government.	http://faq.springfieldma.intelligovsoftware.com/1home.aspx
Springfield Adult Basic Education Directory	Educational resources for adults and out-of-school youth, for Basic Literacy, English as a Second Language, HiSET preparation and testing, Transition to College, Workplace Education, and Family Literacy	https://www.springfieldlibrary.org/library/springfield-adult-basic-education-directory/
Springfield Coalition for Opioid Overdose Prevention (SCOOP)	Trains, educates, advocates, and provides support and resources to all who are affected by opiate abuse and overdoses.	http://www.springfield-ma.gov/hhs/index.php?id=scoop-about
Springfield Department of Health and Human Services	Protects the public health and environment of the City of Springfield through education, inspections, sampling and monitoring, and enforcing federal, state, and local codes as they pertain to public health issues.	https://www.springfield-ma.gov/hhs/
Springfield Food Policy Council	Serves as a diverse group of stakeholders that provides a comprehensive examination and ongoing assessment of Springfield's food system as well as ongoing recommendations for policy and built-environment solutions to improve access to fresh, affordable, and culturally appropriate food for those who live and work in the City of Springfield.	https://www.springfieldfoodpolicycouncil.org/

Springfield Healthy Home Collaborative	City-wide collaboration to address health issues faced by residents due to poor housing conditions, including asthma.	http://springfieldhealthyhomes.org/asthma-triggers/
Springfield Partners for Community Action	Federally designated Community Action Agency for the greater Springfield area, serving low-income individuals and families.	https://www.springfieldpartnersinc.com/
Springfield Rescue Mission	Meets the physical and spiritual needs of the hungry, homeless, addicted, and poor by introducing them to Christ and helping them apply the Word of God to every area of their lives.	https://springfieldrescuemission.org/
Square One	The vision of Square One is to affect meaningful change that results in better lives and more promising futures for children, families, and our communities. It achieves this vision by raising funds, advocating on behalf of children and families, delivering research-based solutions, and developing needed services that promote education, health, safety, holistic development, and self-reliance	https://www.startatsquareone.org/
Stavros	Helps people with disabilities and deafness to develop the tools and skills they need to take charge of their own lives.	https://www.stavros.org/
Stonewall Center	Provides support, resources, programming, and advocacy for lesbian, gay, bisexual, trans, queer, intersex, asexual (LGBTQIA) and allied students, staff, and faculty at UMass Amherst and for the larger Pioneer Valley	https://www.umass.edu/stonewall/
Stop Access Drug-Free Communities Springfield	City-wide coalition, coordinated by the Gandara Center, works to prevent and reduce underage drinking and marijuana use in the Mason Square, South End, and Forest Park neighborhoods of Springfield	https://www.gandaracenter.org/stop-access-coalition
Suit-Up Springfield	Guides the young men of Springfield on professional attire and becoming professionally minded	http://suitupspringfield.com/
Sunshine Village	Built on the belief that adults with disabilities can lead rich, meaningful lives, Sunshine Village is a thriving, vibrant community where adults and their families come to connect, learn, contribute—and shine.	https://www.sunshine.us/
Tapestry Health Needle Exchange Program	Provides sexual and reproductive health services, LGBT health services, HIV health and prevention, family nutrition services, syringe access and disposal, overdose prevention, and community trainings. Needle exchange programs in Holyoke and Northampton, sterile needles to injection drug users, trainings on Naloxone, education, and counseling.	https://www.tapestryhealth.org https://www.tapestryhealth.org/harm-reduction/
The Children's Study Home	Serves children, adolescents, and families with special needs throughout the Pioneer Valley and Cape Cod areas. Children served are often struggling to cope with behavioral, psychiatric, and cognitive issues related to the experiences they have survived.	https://studyhome.org/
The Gray House	Helps its neighbors facing hardships to meet their immediate and transitional needs by providing food, clothing, and educational services in a safe, positive environment in the North End of Springfield.	http://grayhouse.org/

The Parent and Community Engagement Center (PACE)	The "go to place" for Springfield families. The PACE Center recognizes the important role parents and community partners have in the education of our children and the Center offers a centralized place for services for parents and other caring adults.	http://sps.ss18.sharpschool.com/departments/pace
United Way of Pioneer Valley	For almost 100 years United Way of Pioneer Valley has served as our community's fundraiser. But UWPV doesn't just raise money; today's United Way is a focused, results driven system that works year-round to change community conditions and create lasting solutions. Through strong partnerships with volunteers, local businesses, government, and nonprofit organizations, United Way accomplishes what no one can do alone.	https://www.uwpv.org/
UniTy of Pioneer Valley *Transgender Support Group*	A peer led psychosocial support group for transgender individuals, their allies and all GLBTs.	https://www.facebook.com/groups/UniTySpringfield/about/
Urban League of Springfield	Serves the African American Community in Greater Springfield by advocating for and providing model services that enhance the academic and social development of young people and families, promoting economic self-sufficiency, and fostering racial inclusion and social justice.	http://ulspringfield.org/
Valley Bike	A collaboration and partnership with Bewegen Technologies and Corps Logistics to bring bike share to the region in the communities of Amherst, Holyoke, Northampton, South Hadley, and Springfield.	https://www.valleybike.org/
Valley Eye Radio	Broadcasts local news and information to reading impaired listeners throughout the Pioneer Valley.	http://valleyeyeradio.org/
Veteran Services	The City of Springfield Department of Veterans' Services' primary duty is to provide information, counsel, and assistance to veterans and their dependents as may be necessary to enable them to procure the benefits to which they are or may be entitled relative to employment vocational, or other educational opportunities, hospitalization, medical care, pensions, and other veteran benefits	https://www.springfield-ma.gov/hhs/veterans
Way Finders	Confronts homelessness head on in communities throughout western Massachusetts. Develops targeted services that help people lift themselves up and out of homelessness with a focus on Housing, Real Estate, Employment Support, and Community Services	https://www.wayfindersma.org/welcome-way-finders
WestMass Elder Care	A private, non-profit agency that aims "to preserve the dignity, independence, and quality of life of elders and persons with disabilities desiring to remain within their own community." We offer a variety of services for elders, their families and caregivers, and persons with disabilities.	https://www.wmeldercare.org/
YMCA of Greater Springfield	Recreation and physical health classes for youth through adults, including nutrition and diet. Includes the MIGHTY pediatric obesity prevention program.	http://www.springfieldy.org/

8. Evaluation of Impact of Actions Taken to Address Significant Health Needs Identified in 2019 CHNA

The CHNA conducted in 2019 identified significant categories of health needs within the Mercy Medical Center community. Those needs were then prioritized based on the magnitude and severity of impact of the identified need, the populations impacted, and the rates of those needs compared to referent (generally the state) statistics. Two categories of significant health needs, Mercy's implementation strategies to address those needs, and impacts of those strategies are:

a. Barriers to Accessing Quality Health Care:

Hampden County residents experience challenges accessing care due to the shortage of providers.
54% of county residents live in a healthcare professional shortage area.
Western Massachusetts hospitals have high rates of individuals who frequent the emergency rooms more than four times in a two-year period. Patients report that access to the emergency room assists in their medical care as consistent primary care access is sometimes unattainable.

Mercy's Goal: Improve health services and outcomes of individuals by promoting primary care and reducing Emergency Department visits

Mercy promoted health insurance to Emergency Department (ED) visitors and promoted Primary Care Provider (PCP) use to ED visitors. For the High-End Utilizer (HEU) participants, Mercy helped with PCP enrollment while also providing hands on case management services including assistance with transportation, healthcare access and social service referrals. The impact was better case management, better emergency prevention and a lower rate of ED frequentation by the HEU participants.

The need for health information to be understandable and accessible was identified in the CHNA. Data from focus groups indicate the need for increased health literacy, including understanding health information, types of services and how to access them, and how to advocate for oneself in the healthcare system.

Mercy's Goal: Improve health literacy along with access to cervical cancer screenings and mammograms for homeless women.

Mercy helped homeless women that participate in women's regular health screenings by also including cervical cancer and mammography testing. Mercy collected, tracked, and reviewed the number of verified

records of homeless women to increase outreach and access to cervical screening and mammograms. Mercy also offered women's health educational programs for the homeless female population. The impact was increased awareness among homeless women about cervical cancer and breast cancer, an increase in the use of health services, and a decreased rate of missed appointments and screenings for the homeless women cohort.

b. Health Conditions and Behaviors:

Chronic health conditions continue to remain an area of prioritized health need for Hampden County residents. Residents continue to experience high rates of chronic health conditions and associated morbidity, particularly for obesity, diabetes, cardiovascular disease, cancer and asthma. A chronic health condition is one that persists over time and typically can be controlled but not cured. According to the CDC, chronic disease is the leading cause of death and disability in the United States. A healthy diet, good mental health and physical activity play an important role in preventing and managing chronic diseases.

Mercy's Goal: Improve community member physical and emotional health through the 61 Day Health Challenge program entitled Healthy Mind, Healthy Body, and Healthy Spirit.

Mercy provided a fully integrated program for the 61 Day Health Challenge. Numerous offerings were available including the ability to join a challenge group, and a 61 Day Challenge website that included articles and video resources along with live and on-demand class activities. Comprehensive daily and weekly health tips were provided through email and social media, and a free app download was available to assist participants in the challenge. The impact for the registered participants was an increase in physical exercise, healthy habits and better stress management.

Appendix 1. Service Area Demographics

TABLE 3

Communities in Mercy Medical Center Service Area

Hampden County	2019 Population Estimates
Agawam	28,696
Blandford	1,105
Brimfield	3,658
Chester	1,470
Chicopee	55,421
East Longmeadow	16,242
Granville	1,691
Hampden	5,178
Holland	2,630
Holyoke	40,241
Longmeadow	15,791
Ludlow	21,291
Monson	8,779
Montgomery	798
Palmer	12,237
Russel	1,470
Southwick	9,720
Springfield	154,139
Tolland	530
Wales	2,088
Westfield	41,449
West Springfield	28,609

Wilbraham	14,638
Hampshire County	
Granby	6,322
Total Service Area	**474,193**

Source: U.S. Census, ACS 2019 5-Year Estimates Data Profiles, specifically table DP05, Demographic and Housing Estimates

TABLE 4

Sociodemographic Characteristics of Mercy Medical Center Service Area[152]

2020 Census Demographic Information	Massachusetts	Hampden County	Springfield
Age			
Median age (years)	40	39	33
Persons under 18 years, percent	20%	21%	25%
Persons 18-64, percent	63%	61%	63%
Persons 65 years and over, percent	17%	17%	13%
Race and ethnicity			
Latinx or Hispanic	13%	26%	47%
Non-Latinx or Hispanic			
White	68%	60%	28%
Black or African American	7%	8%	18%
American Indian and Alaska Native	0.1%	0.1%	0.2%
Asian	7%	3%	3%
Native Hawaiian and other Pacific Islander	0%	0%	0%
Some other race	1.3%	0.4%	0.6%
Two or more races	5%	3%	3%
Language spoken at home (population over 5)			

Language other than English spoken at home	24%	26%	39%
Educational attainment			
Less than high school graduate	9%	14%	21%
High school graduate (includes equivalency)	24%	31%	33%
Some college or associate degree	23%	28%	33%
Bachelor's degree or higher	44%	27%	19%
Income			
Median household income (in 2019 dollars)	$81,215	$55,429	$39,432

Source: U.S. Census, ACS 2015-2019 and 2020 Census Redistricting Data

Appendix 2. Glossary

Built Environment – man-made structures, features, and facilities viewed collectively as an environment in which people live, work, pray, and play. The built environment includes not only the structures but the planning process wherein decisions are made.

Community – can be defined in many ways, but for the purposes of the CHNA we are defining it as anyone that is *not* part of the Western MA Coalition of Hospitals/Insurer, which could be community organizations, community representatives, local businesses, public health departments, community health centers, and other community representatives.

Community Benefits (hospitals) – services, initiatives, and activities provided by nonprofit hospitals that address the cause and impact of health-related needs and work to improve health in the communities they serve.

Community Health Needs Assessment (CHNA) and Implementation Plan – an assessment of the needs in a defined community. A CHNA and a hospital implementation plan is required by the Internal Revenue Service in order for nonprofit hospitals/insurers to maintain their nonprofit status. The implementation plan uses the results of the CHNA to prioritize investments and services of the hospital or insurer's community benefits strategy.

Community Health Improvement Plan (CHIP) – long-term, systematic county-wide plans to improve population health. Hospitals likely participate, but the CHIPs are not defined by hospital service areas and typically engage a broad network of stakeholders. CHIPs prioritize strategies to improve health and collaborate with organizations and individuals in counties to move strategies forward.

Cultural Humility – an approach to engagement across differences that acknowledges systems of oppression and embodies the following key practices: (1) a lifelong commitment to self-evaluation and self-critique, (2) a desire to fix power imbalances where none ought to exist, and (3) aspiring to develop partnerships with people and groups who advocate for others on a systemic level.

Data Collection

> **Quantitative data** – information about quantities; information that can be measured and written down with numbers (e.g., height, rates of physical activity, number of people incarcerated). You can apply arithmetic or statistical manipulation to the numbers.
>
> **Qualitative data** – information about qualities; information that cannot usually be measured (e.g., softness of your skin, perception of safety); examples include themed focus group and key informant interview data.
>
> **Primary data** – collected by the researcher her/himself for a specific purpose (e.g., surveys, focus groups, interviews that are completed for the CHNA).
>
> **Secondary data** – data that has been collected by someone else for some other purpose but is being used by the researcher for another purpose (e.g., rates of disease compiled by the MA Dept. of Public Health).

Determination of Need (DoN) application – proposals by hospitals for substantial capital expenditures, changes in services, changes in licensure, and transfer of ownership by hospitals must be reviewed and approved by the Massachusetts Department of Public Health. The goal of the DoN process is to promote population health and

increased public health value by guiding hospitals to focus on the social determinants of health with a proportion of funds allocated for the proposed changes.

Ethnicity – shared cultural practices, perspectives, and distinctions that set apart one group of people from another; a shared cultural heritage.

Food insecure – lacking reliable access to sufficient quantity of affordable, nutritious food.

Health – a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (WHO).

Health equity – when everyone has the opportunity to. Attain their full health potential and no one is disadvantaged from achieving this potential because of their social position or other socially determined circumstance. The highest standards of health should be within reach of all, without distinction of race, religion, political belief, economic or social condition (WHO). Health equity is concerned with creating better opportunities for health and gives special attention to the needs of those at the greatest risk for poor health.

Housing insecurity – the lack of security about housing that is the result of high housing costs relative to income, poor housing quality, unstable neighborhoods, overcrowding, and/or homelessness. A common measure of housing insecurity is paying more than 30% of income toward rent or mortgage.

Indigenous — We use this term to refer to people who identify as Alaska Native, Native American, American Indian and/or a specific tribal affiliation.

Inequities — unfair, avoidable or remediable difference in access, treatment or outcomes among groups of people, whether those groups are defined socially, economically, demographically, geographically, or by other dimensions (e.g., sex, gender, ethnicity, disability, or sexual orientation).

Intersectionality — an approach advanced by women of color arguing that classifications such as gender, race, class, and others cannot be examined in isolation from one another; they interact and intersect in individuals' lives, in society, in social systems, and are mutually constitutive.

Investment/Disinvestment — investment refers to a set of strategic and instruments that target some communities for positive social outcomes and improvement to the built environment. Disinvestment described the absence of investment in some communities over a long period of time.

LBGTQIA+ — This term is inclusive of lesbian, bisexual, gay, transgender, queer or questioning, intersex, asexual, agender, non-binary, gender-nonconforming and all other people who identify within this community

People who experience homelessness or are unhoused – we use these terms to refer to people who do not have permanent housing.

Race – a socially created construct, in which differences and similarities in biological traits among groups of people are deemed by society to be socially significant, meaning that people treat other people differently because of them, e.g., differences in eye color have not been treated as socially significant but differences in skin color have. Race is a socially created construct as opposed to true categorization.

> **Asian** — We use this term to refer to people who identify as being of Asian or South Asian descent, as well as Pacific Islanders.
>
> **Black** – we use the term "Black" instead of African American in this report in reference to the many cultures with darker skin, noting that not all people who identify as Black descend from Africa.

Latinx – we use the term "Latinx" in this report in reference to the many cultures who identify as Latin or Spanish-speaking. Latinx is a gender-neutral term, a non-binary alternative to Latino/a. We chose to use Latinx instead of Hispanic or Latino/a, noting that there is a current discussion on how people identify. **Latino/a/e** is another gender inclusive term we use.

People of Color or Communities of Color – We use this term to refer collectively to individuals and groups that do not identify as White or Indigenous. It should not be used to lump all non-white people together, as this erases or dismisses the experience of each racial/ethnic group.

White — We use the term "White" to refer to people who identify as White, Caucasian, or European American, and who also do not identify as Hispanic, Latino/a, or Latinx.

Social determinants of health – the social, economic, and physical conditions in which people are born, grow, live, work, and age. These circumstances are shaped by the distribution of money, power, and resources at global, national and local levels. (WHO)

Social justice – justice in terms of the distribution of wealth, opportunities, and privileges within a society.

Structural poverty – the concept of poverty as structural means that poverty is not primarily the fault of individuals or the result of their actions, but rather is an outcome of our economic system and how it is structured.

Systemic racism — the normalization and legitimization of policies and practices that exist throughout a whole society or organization, and that result in and support unfair advantage to some people and unfair or harmful treatment of others based on race.

Transgender — refers to anyone whose gender identity does not align with their assigned sex and gender at birth.

Appendix 3. Quantitative Data and Sources

TABLE 5

Quantitative Date Included in CHNA and Data Sources

Quantitative Data Cited	Data Source
2019 Population Estimates	U.S. Census, ACS 5-Year Estimates Data Profiles
Proportion of Residents with a Disability by Location	U.S. Census, ACS 2015-2019 and 2020 Census Redistricting Data
Life Expectancy by Census Tract	National Center for Health Statistics. Life Expectancy at Birth for U.S. States and Census Tracts, 2010-2015
Correlates of Life Expectancy	OECD. 2017. Chapter 2. What has driven life expectancy gains in recent decades? A cross-country analysis of OECD member states
Racial Correlates of COVID-19 Risk Factors	Racism, Not Race, Drives Inequity Across the COVID-19 Continuum Rohan Khazanchi, BA; Charlesnika T. Evans, PhD, MPH; Jasmine R. Marcelin, MD, 2020, JAMA Network Open
Effect of COVID-19 by Race	CDC. Covid-19 Racial and Ethnic Disparities. Centers for Disease Control and Prevention. Published February 11, 2020. https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/index.html
COVID-19 Hospitalization by Race	CDC. Age-adjusted Laboratory-Confirmed COVID-19 Associated Hospitalization Rates by Race/Ethnicity - COVID-19-NET, March 1, 2020-February 5, 2022. https://www.cdc.gov/coronavirus/2019-ncov/images/community/health-equity/race_ethnicity_page_updates_2022-02-05.jpg
Leading Causes of Death in the U.S. Since Beginning of Pandemic	KFF https://www.healthsystemtracker.org/brief/covid-19-leading-cause-of-death-ranking/ ; https://www.cdc.gov/nchs/products/databriefs/db427.htm
Confirmed COVID-19 Cases and Deaths as of 1/28/2022	Massachusetts Department of Public Health COVID-19 Dashboard
Massachusetts COVID-19 Deaths	MDPH COVID-19 Chapter 93 Data – State Numbers Daily Report – 3-1-2022 https://www.mass.gov/info-details/covid-19-response-reporting
COVID-19 in Massachusetts Prisons	The Marshall Project. COVID_prison_data/covid_prison_rates.csv at master · themarshallproject/COVID_prison_data. GitHub. https://github.com/themarshallproject/COVID_prison_data/blob/master/data/covid_prison_rates.csv
Massachusetts COVID-19 Deaths by Age	MDPH COVID-19 Dashboard, COVID-19 Raw Data - March 28, 2022, https://www.mass.gov/info-details/covid-19-response-reporting
Vaccination Status of Incarcerated Populations and Staff in Massachusetts	https://www.prisonpolicy.org/blog/2021/12/16/covid_data/
Vaccination Status by County	MDPH, Weekly COVID-19 Vaccination Report https://www.mass.gov/doc/weekly-covid-19-vaccination-report-february-24-2022/download.

COVID-19 Effects on Healthcare Service Usage	CDC Unintended Consequences of COVID-19 mitigation strategies. https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/disparities-impact.html
Real GDP Change 2020 in the Pioneer Valley	US Bureau of Economic Analysis, https://www.bea.gov/data/gdp/gdp-county-metro-and-other-areas".
Early COVID-19 Small Business Revenue Changes	Womply data, from Opportunity Insights, http://tracktherecovery.org
Unemployment by Location	US Bureau of Labor Statistics, Local Area Unemployment Statistics. For a table displaying a map and table with unemployment rates by town, see this PVPC dashboard: https://public.tableau.com/app/profile/pvpc/viz/CHNAUnemploymentData_Jan20toDec21/24MonthU-Rates?publish=yes
Impact of COVID-19 on Women	Lim, Katherine, and Mike Zabek (2021). "Women's Labor Force Exits during COVID19: Differences by Motherhood, Race, and Ethnicity," Finance and Economics Discussion Series 2021-067. Washington: Board of Governors of the Federal Reserve System, https://doi.org/10.17016/FEDS.2021.067 . Also https://www.census.gov/library/stories/2021/03/moms-work-and-the-pandemic.html
2019 Climate Catastrophe Data	Herring, S. C., Christidis, N., Hoell, A., Hoerling, M. P., and Stott, P. A. (2021). Explaining Extreme Events of 2019 from a Climate Perspective. Bulletin of the American Meteorological Society 102, 1, S1-S115
Hampden County Depression Rates	Mercy Vital Signs Cares Report, using data from the 2019 Behavioral Risk Factor Surveillance System (BRFSS) annual survey.
Hospital Admissions Rates by Location and Race	MDPH Hospitalization tables for chronic diseases, 2016-2019
Mental Illness Rates Among Homeless and Unhoused Individuals	HUD 2021 Continuum of Care Homeless Assistance Programs Homeless Populations and Subpopulations, https://files.hudexchange.info/reports/published/CoC_PopSub_State_MA_2021.pdf
Mental Health Admissions by County in Massachusetts	MDPH Hospitalization tables for chronic diseases, 2016-2019
Substance Use by County	CDC Places. Same rates as 2019 CHNA, based on County Health Rankings data.
Change in Deaths of Despair Over Time	Case A, Deaton A. *Deaths of Despair and the Future of Capitalism*. Princeton University Press; 2021.
Number of Deaths of Despair in Western MA	All data on deaths of despair are in Appendix 7, Mercy Vital Signs Cares Report, from Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2016-2020.
Health Service Gap by Race/Ethnicity	Mercy Vital Signs Cares Report, from Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2016-2020. Disaggregated data were only available for White, Black, and Latinx residents
Proportion of Driving Deaths Involving Alcohol	County Health Rankings, 2020.

Emergency Medical Service Calls Related to Opioid Overdose by County	Pioneer Valley Planning Commission. Young Adult Empowerment Collaborative Hampden County Opioid Profile, September 2021
Opioid Overdose Deaths by City	MDPH, Number of Opioid-Related Overdose Deaths, All Intents by City/Town, 2015-2020
Telehealth Usage in Massachusetts Blue Cross Patients	Blue Cross Blue Shield of Massachusetts. *Blue Cross Blue Shield Of Massachusetts Releases New Data On Mental Health & Substance Use Disorder Claims During COVID-19 Pandemic*.; 2021
Racial Disparities in School Discipline	CRDC School Discipline Fact Sheet, U.S. Department of Education Office for Civil Rights. Civil Rights Data Collection "Data Snapshot: School Discipline" (PDF). https://ocrdata.ed.gov/assets/downloads/CRDC-School-Discipline-Snapshot.pdf
Disparities in School Discipline by Race and Ability Status	ACLU. *School To Prison Pipeline Infographic*.
Disparities in School Discipline by Sexuality and Other Intersecting Identities	Unjust: How The Broken Juvenile And Criminal Justice Systems Fail LGBTQ Youth, August 2016, https://www.lgbtmap.org/file/lgbt-criminal-justice-youth.pdf.
Mental Illness Rates by Gender	Altemus M, Sarvaiya N, Neill Epperson C. Sex differences in anxiety and depression clinical perspectives. *Front Neuroendocrinol*. 2014;35(3):320-330. doi:10.1016/j.yfrne.2014.05.004
Western MA youth who reported feeling sad or hopeless, 2020	MDPH COVID-19 Community Impact Survey, 2020
Proportion of Springfield Public School Students Who are Youth of Color	Massachusetts Department of Elementary and Secondary Education, School and District Profiles, 2020-21, https://profiles.doe.mass.edu/profiles/student.aspx?orgtypecode=5&fycode=2021&type=DISTRICT&orgcode=02810000
Springfield Eighth Grader Mental Health Statistics	PHIWM CHLP report, using PHIWM data from 2019 Youth Health Survey.
Health Professional Shortage Areas in Hampden County for Primary Care, 2020	US Health Resources & Services Administration (https://data.hrsa.gov/maps/map-tool/).
Homelessness and Emergency Department Usage	*QuickStats:* Rate of Emergency Department (ED) Visits, by Homeless Status and Geographic Region — National Hospital Ambulatory Medical Care Survey, United States, 2015–2018. MMWR Morb Mortal Wkly Rep 2020;69:1931. DOI: http://dx.doi.org/10.15585/mmwr.mm6950a8
Growth in Use of Telehealth	Massachusetts Health Policy Commission. *The Doctor Will (Virtually) See You Now: Telehealth Visits On The Rise In Massachusetts*.; 2020.
Telehealth Usage by State March 2020 – February 2021	CMS Medicare Telemedicine Snapshot. I saved raw data and calculated percentages by race/ethnicity, sex, urban/rural https://www.cms.gov/files/zip/medicare-telemedicine-snapshot-data-file.zip

Increase in Telehealth Usage by Blue Cross Patients	Blue Cross Blue Shield of Massachusetts. *Blue Cross Blue Shield Of Massachusetts Releases New Data On Mental Health & Substance Use Disorder Claims During COVID-19 Pandemic*.; 2022.
Number of Telemedicine Visits by Federally Qualified Health Centers, Disaggregated by Race	Akoury, A Massachusetts Health Centers Surpass One Million Telehealth Visits. *Business Wire*. Published August 24, 2021. https://www.businesswire.com/news/home/20210824005509/en/Massachusetts-Health-Centers-Surpass-One-Million-Telehealth-Visits.
Barriers to Telehealth	COVID-19 Healthcare Coalition. COVID-19 Telehealth Impact Study. 2020-2021. https://c19hcc.org/telehealth/impact-home/
Housing Burden and Date of Home Construction in Hampden County	US Census Bureau. ACS 2015-2019.
Housing and Aging Data Analysis of Greater Springfield	UMass Donahue Institute. *Greater Springfield Regional Housing Analysis*.; 2021. https://donahue.umass.edu/documents/Greater_Springfield_Regional_Housing_Analysis_Report.pdf
Hampden County Changes in Homelessness Rates	Springfield-Hampden County Continuum of Care. *Point-in-Time Count and Housing Inventory 2019*.; 2019. https://springfieldhampdencoc.files.wordpress.com/2019/06/pit-report-2019-final.pdf
Hampden County Proportion of Public School Students Who are Homeless	EDFacts. U.S. Department of Education. (As reported by Trinity Health System, "Full Assessment Report".) Accessed March 2022.
Hampden County Homeless Population by Race	Springfield-Hampden County Continuum of Care. *Point-in-Time Count and Housing Inventory 2019*.; 2019. https://springfieldhampdencoc.files.wordpress.com/2019/06/pit-report-2019-final.pdf
Hampden County Changes in Home Prices	Kinney, J 'We need houses to sell': Big demand, small supply drove Springfield-area home prices in 2021, The Republican. January 17, 2022. https://www.masslive.com/business/2022/01/we-need-houses-to-sell-big-demand-small-supply-drove-springfield-area-home-prices-in-2021.html
Housing-related Correlates of Health	"Housing And Health: An Overview Of The Literature," Health Affairs Health Policy Brief, June 7, 2018. DOI: 10.1377/hpb20180313.396577
Childhood Lead Poisoning by Location	Massachusetts Department of Public Health. *2020 Annual Childhood Lead Poisoning Surveillance Report*.; 2020. https://www.mass.gov/doc/2020-annual-childhood-lead-poisoning-surveillance-report/download
Food Costs in Food Deserts	"Access to Affordable, Nutritious Food is Limited in 'Food Deserts'. USDA. https://www.ers.usda.gov/amber-waves/2010/march/access-to-affordable-nutritious-food-is-limited-in-food-deserts/
Food Deserts by Location	See Food Access Research Atlas, US Department of Agriculture, Economic Research Service. https://www.ers.usda.gov/data-products/food-access-research-atlas/
Food Insecurity in Western Massachusetts by Location	PVPC, Gundersen, C., Strayer, M., Dewey, A., Hake, M., & Engelhard, E. (2021). *Map the Meal Gap 2021: An Analysis of County and Congressional District Food Insecurity and County Food Cost in the*

	United States in 2019. Feeding America. https://map.feedingamerica.org/
Obesity by Location	MDPH Rural Cluster DataTables
Food Bank of Western Massachusetts, Clients and Meals Served, 2019-2021	PVPC, Food Bank of Western Massachusetts
Pioneer Valley Transit Authority Ridership by Race and Over Time	Pioneer Valley Transportation Authority, as reported to PVPC
Change in Fuel Costs over Time	US Bureau of Labor Statistics. Consumer Price Index News Release, March 10, 2022. https://www.bls.gov/news.release/cpi.htm
Education, Employment, and Language Statistics Disaggregated by Race/Ethnicity in Hampden County, 2015-2019	US Census Bureau, ACS 2015-2019
Hampden County Living Wage Calculation	Massachusetts Institute of Technology Living Wage Calculator, https://livingwage.mit.edu/counties/25013
Changes in Domestic Violence with COVID-19 Lockdowns	Impact Report: COVID-19 and Domestic Violence Trends. Council on Criminal Justice. Published February 23, 2021
Hampden County Violent Crime Rates	Federal Bureau of Investigation, FBI Uniform Crime Reports. Additional analysis by the National Archive of Criminal Justice Data. Accessed via the Interuniversity Consortium for Political and Social Research. 2014; 2016. Source geography: County).
Proportion of Students Experiencing Harm	Public Health Institute of Western Massachusetts. 2021 Springfield Youth Health Survey.
Correlates of Lead Exposure	(National Institute of Environmental Health Science. (2013). Lead and Your Health. National Institutes of Health. Available at https://www.niehs.nih.gov/health/materials/lead_and_your_health_508.pdf).
Levels of Lead Exposure by Location	Massachusetts Department of Public Health. 2020 Annual Childhood Lead Poisoning Surveillance Report. 2020.
Climate Changes Over Time in Massachusetts	Massachusetts Environmental Public Health Tracking. Climate Change | MEPHT. https://matracking.ehs.state.ma.us/Climate-Change/index.html
Insurance Rates and Types, Disaggregated by Race/Ethnicity	US Census Bureau, ACS 2015-2019
Hampden County Emergency Department Visit Rates for Asthma	MDPH 2016-2019. Emergency Department Rates, Hampden County and Massachusetts, Age-Adjusted per 100,000.
Hampden County Emergency Department Visit	MDPH, 2012-2015. Emergency Room Visit Rates by Race for Asthma, Hampden County, Age-adjusted per 100,000

Rates 2012-2015, Disaggregated by Race	
Hampden County COPD Hospital Admission Rate	MDPH, 2015. Rural Clusters Data. COPD Hospital Admission Rate. Age-adjusted per 100,000.
Hampden County Proportion of Adults who Have Obesity and Diabetes	County Health Rankings, 2021.
Proportion of Medicare Fee-For-Service Beneficiaries with High Blood Pressure, Ischemic Heart Disease, Alzheimer's	Centers for Medicare and Medicaid Services, CMS - Geographic Variation Public Use File. 2018. Source geography: County
Age-Adjusted Cardiovascular Disease Hospital Admission Rate	MDPH, 2014. Rural Clusters Data. Cardiovascular Disease Hospital Admissions Rates. Age-Adjusted per 100,000.
Age-Adjusted Stroke Hospital Admission Rate	MDPH, 2014. Rural Clusters Data. Stoke Hospital Admissions Rate. Age-adjusted per 100,000.
Massachusetts Cancer Death Rates by Race	MDPH, Office of Population Health. *Massachusetts Deaths 2019*.; 2022.
Age-Adjusted Cancer Hospital Admission Rate	MDPH, 2014. Cancer Hospital Admissions, Age-adjusted per 100,000.
Hampden County Colorectal Cancer Incidence Rate 2014-2018	National Cancer Institute. State Cancer Profiles. 2014-18. Source geography: County
Hampden County Breast Cancer Incidence Rate 2014-2018	National Cancer Institute. State Cancer Profiles. 2014-18. Source geography: County
Hampden County Age-Adjusted Diabetes Hospitalization Rates	MDPH, 2016-2019. Diabetes Emergency Department Rates by Race, Hampden County. Age-adjusted per 100,000.
Causes of Infant Mortality and Morbidity in the U.S.	Hoyert DL, Freedman MA, Strobino DM, Guyer B. 2001. Annual summary of vital statistics: 2000. *Pediatrics* 108:1241–1255
Hampden County Proportion of Low Birth Weight Births and Infant Mortality Disaggregated by Race	University of Wisconsin Population Health Institute, County Health Rankings. 2013-2019. Source geography: County.
Maternal Mortality by Race	Howell EA, Egorova NN, Janevic T, et al. Race and Ethnicity, Medical Insurance, and Within-Hospital Severe Maternal Morbidity Disparities. *Obstetrics & Gynecology*. 2020;135(2):285-293. doi:10.1097/aog.0000000000003667
Hampden and Suffolk County Confirmed Gonorrhea Cases 2017-2019	MDPH Bureau of Infectious Disease and Laboratory Sciences. *Surveillance Data Overview of Sexually Transmitted Infections, Massachusetts, 1990-2019.*

Hampden County Proportion of Population with HIV/AIDS	Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. 2018. Source geography: County
United States Alzheimer's Deaths Over Time	Alzheimer's Association. What is Alzheimer's? Alzheimer's Disease and Dementia. https://www.alz.org/alzheimers-dementia/what-is-alzheimers
Correlations between Alzheimer's and COVID-19 Infection and Death	Matias-Guiu, Jordi A.; * | Pytel, Vanesa | Matías-Guiu, Jorge, Death Rate Due to COVID-19 in Alzheimer's Disease and Frontotemporal Dementia, Journal of Alzheimer's Disease, vol. 78, no. 2, pp. 537-541, 2020
COVID-19 Incidence Rate in Western MA by County, Pre-Omicron Variant	Massachusetts Department of Public Health COVID-19 Dashboard
Hampden County Proportion of Respondents with High Poor Mental Health Days	Behavioral Risk Factor Surveillance System (BRFSS), 2019.

Appendix 4. Community Members and Partners Engaged in the Process

About the Consultant Team

Lead Consultant

The **Public Health Institute of Western Massachusetts'** (PHIWM) mission is to build measurably healthier communities with equitable opportunities and resources for all through civic leadership, collaborative partnerships, and policy advocacy. Our core services are research, assessment, evaluation, and convening. Our range of expertise enables us to work in partnership with residents and regional stakeholders to identify opportunities and put into action interventions and policy changes to build on community assets while simultaneously increasing community capacity.

Consultants

Community Health Solutions (CHS), a department of the **Collaborative for Educational Services**, provides technical assistance to organizations including schools, coalitions, health agencies, human service, and government agencies. CHS offers expertise and guidance in addressing public health issues using evidence-based strategies and a commitment to primary prevention. CHS believes local and regional health challenges can be met through primary prevention, health promotion, policy and system changes, and social justice practices. CHS cultivates skills and brings resources to assist with assessment, data collection, evaluation, strategic planning, and training.

Franklin Regional Council of Governments (FRCOG) is a voluntary membership organization of the 26 towns of Franklin County, Massachusetts. The FRCOG serves the 725 square mile region with regional and local planning for land use, transportation, emergency response, economic development, and health improvement. FRCOG serves as the host for many public health projects including a community health improvement plan network, emergency preparedness and homeland security coalitions, two local substance use prevention coalitions, and a regional health district serving 12 towns. The FRCOG also provides shared local municipal government services on a regional basis, including inspections, accounting, and purchasing. To ensure the future health and well-being of our region, FRCOG staff are also active in advocacy.

Pioneer Valley Planning Commission (PVPC) is the regional planning agency for the Pioneer Valley region (Hampden and Hampshire Counties), responsible for increasing communication, cooperation, and coordination among all levels of government as well as the private business and civic sectors to benefit the region and to improve quality of life. Evaluating our region – from the condition of our roads to the health of our children – clarifies the strengths and needs of our community and where we can best focus planning and implementation efforts. PVPC conducts data analysis and writing to assist municipalities and other community leaders develop shared strategy to achieve their goals for the region.

Regional Advisory Council

TABLE 6

Name (Last, First)	Title	Organization	Organization Serves Broad Interests of Community	Organization Serves Low Income, Minority, & Medically Underserved Populations	State, Local, Tribal, Regional, or Other Health Department Staff
Anderson, Kathleen	Director of Community Benefits	Holyoke Hospital	X	X	
Audley, Jen	Project Coordinator - Community Health Improvement Plan (CHIP)	Franklin Regional Council of Governments (FRCOG)	X	X	X
Borgatti, Monica	Chief Operating Officer	The Women's Fund of Western Massachusetts	X	X	
Bruno, Kathleen*, Shelly Smith	Health Management Program Manager	Health New England	X	X	
Cairn, Sue	Director of Healthy Families and Communities	Collaborative for Educational Services	X	X	
Cardillo, Beth	Executive Director	Armbrook Village	X	X	
Comerford, Jo	Senator	Massachusetts State Senate	X	X	
Dewberry, Beatrice	Community Building & Engagement Manager	Way Finders	X	X	
Doster, Amanda	Regional Projects Coordinator	Franklin Regional Council of Governments	X	X	
Dukes, Cheryl	Director of Healthcare Outreach and Community Engagement	Baystate Franklin CBAC /UMass College of Nursing; BFMC CBAC	X	X	
Evans, Brenda	Community Liaison	University of Massachusetts, Amherst	X	X	
Fallon, Sean	Massachusetts Regional Director	Community Health and Well Being, Trinity Health of New England/Mercy Medical Center	X	X	

Fludd, Walt	Executive Director Samaritan Inn	Greater Westfield Committee	X	X	
Frutkin, Jim	Senior Vice President Business IFU	ServiceNet; Western Massachusetts Veterans Outreach	X	X	
Gale, Roberta*	Vice President, Community Health	Berkshire Health Systems	X	X	
Garozzo, Sal	Executive Director	United Cerebral Palsy Association of Western Massachusetts	X	X	
Geoff Naunheim	Director of Community Investment	United Way of the Franklin & Hampshire Region	X	X	
Golden, Annamarie*	Director, Community Relations	Baystate Health	X	X	
Gonzalez, Brittney*	Community Benefits Specialist	Baystate Health	X	X	
Gonzalez, Chrimsery	Coordinator Program Lead, Office of Problem Gambling Prevention	Office of Racial Equity, Springfield Department of Health and Human Services City of Springfield, Department of Health and Human Services	X	X	X
Gorton, George*	Director of Research, Planning & Business Development	Shriners Hospital for Children - Springfield	X	X	
Gramarossa, Gail	Program Director	Town of Ware, Drug Free Communities Project	X	X	
Harness, Jeff*	Director, Community Health and Government Relations	Cooley Dickinson Health Care	X	X	
John Bidwell	Executive Director	United Way of the Franklin & Hampshire Region	X	X	
Jones, Kimothy	Project Manager SDoH (Public Health)	Baystate Health	X	X	
Kent, Marian	Strategic Grant Writer	Baystate Health	X	X	

King, Mary	CFCE Coordinator/Family Center Director	Montague Catholic Social Ministries	X	X	
Kinsman, Jennifer	Director of Community Impact	United Way of Pioneer Valley	X	X	
Lake, Eliza	Chief Executive Director	Hilltown Community Health Center	X	X	
Lamas, Kelly	Project Coordinator	Baystate Springfield Educational Partnership	X	X	
Lee, Jennifer	Systems Advocate (former)	Stavros Center for Independent Living	X	X	
Liu, Chung	Senior Technical Manager	Massachusetts Municipal Wholesale Elec.	X		
Lopez, Luz	Executive Director	Metrocare of Springfield	X	X	
Lytton, Kate	Director of Research and Evaluation	Collaborative for Educational Services (CES)	X	X	
Millman, Laurie	Executive Director	Center for New Americans	X	X	
Mulkerin, Angela	Service Director and Paramedic	Hilltown Community Health Center	X	X	
Owens, Christo	Resident			X	
Robinson, Frank*	Vice President, Public Health	Baystate Health	X	X	
Rodriguez, Rafael	Holyoke Coalition Coordinator	Western Mass Training Consortium	X	X	
Rozie, Cherelle, Mary Stuart and Sean Fallon	Regional Manager of Community Benefit	Trinity Health Of New England	X	X	
Rufino, Tiffany and then Latonia Naylor	Regional Director	Parent Villages	X	X	
Scott, Lamont	Mentor	Men of Color Health Alliance	X	X	
Steed, Ebony	Advisor	Young Women's Advisory Council of Western Massachusetts	X	X	

Tetreault, Janna	Assistant Director, Community Services Department	Community Action Pioneer Valley	X	X	
Toto, Sheila	Senior Program Officer	Community Foundation of Western MA	X	X	
Vrabel, Jennifer*	Executive Director of Communications, Planning, and Development	Berkshire Health Systems	X	X	
Walker, Phoebe	Director of Community Services	Franklin Regional Council of Governments	X	X	X

*Coalition of Western Massachusetts Hospitals/Insurer member

Appendix 5. Community Input Received

For this CHNA, the consultant team and other partners solicited extensive community input as described below. In addition, the Regional Advisory Council (RAC) provided input at monthly RAC meetings. (The members of the RAC are listed in Appendix 4.) This myriad input informed the identification and prioritization of significant health needs. For example, a panel of youth mental health experts presented to the RAC at its monthly meeting, which resulted in the elevation of this prioritized need as a regional focus area for the Coalition of Hospitals/Insurer.

A. Community Input on the previous CHNA and CHIP

To solicit written input on Mercy's prior CHNA and Implementation Strategy, both documents are available on our hospital system's website:

https://www.trinityhealthofne.org/about-us/community-benefit/community-health-needs-assessments.

They are posted for easy access and we include contact information for questions or comments. The links on our website also include our federal IRS 990 tax return and an overview of Community Benefit. We have verified and confirmed that we have not received any written comments since posting the last CHNA and Implementation Strategy.

B. Community Chats

Community Chats are an integral part of the CHNA. They are a safe space for community members to come together and discuss important health issues in their community. Community Chats range from 30 to 60 minutes and are welcome to any and all members of the community. Participants in these chats include faith-based community members, older community members, representatives from various youth serving organizations, members of community-based coalitions, state representative, healthcare workers, and non-profit organization members. The goal of these Chats is for people to get a better understanding of the CHNA, why it is done, and to highlight and reflect on the communities' assets and emerging health concerns. The Chats were held over several months during Fall of 2021. During the Chats, a facilitator asked reflective questions on all aspects of community health. Such aspects included culture, social connectedness, access to healthcare, education, and barriers to needs and care. Feedback received during the Chats was summarized and integrated into the findings of the CHNA to help inform prioritized health needs.

TABLE 7

Community Chats Held for 2022 CHNA

Organization	Population	Location	Number of Participants
Hampden County			
Age-Friendly Coalition	Coalition members	Springfield	8
Alzheimer's Support group/Armbrook Village	Caregiver Support Group	Westfield	N/A
Baystate Community Faculty - UMass Medical School (UMMS)-Baystate	Baystate faculty	Springfield	8
Baystate Mason Square Neighborhood Health Center	Community Advisory Board	Springfield	7
Community Benefits Advisory Council Baystate Medical Center	Community Leaders	Springfield	15
Community Benefits Advisory Council Baystate Noble	Community Leaders	Westfield	11
Food Bank of Western Massachusetts	Professional Staff at Food Bank	Hatfield	N/A
Springfield Healthy Homes / Pioneer Valley Asthma Coalition	Community Advocates	Springfield	21
Springfield Youth Health Survey	Planning Team	Springfield	N/A
Youth Mental Health Coalition	Representatives from Various Youth Serving Organizations	Springfield	N/A
Hampshire County			
Baystate Wing Hospital's weekly Compass Huddle	Baystate Health Eastern Region's Managers	Palmer	25
Community Benefits Advisory Council Baystate Wing	Community Leaders	Ware	15
Quaboag Hills Community Coalition	Social Service Providers and Community Members from the Baystate Wing Service Area	Ware	14
Quaboag Hills Substance Use Alliance	Service Providers, Schools, Law Enforcement, Community Members, Faith Leaders	Ware	15
Center for New Americans	Immigrants, refugees, evacuees, migrants, asylum-seekers	Northampton	N/A
Franklin County			
Community Action Pioneer Valley (CAPV) Youth Staff	CAPV Youth Staff	Greenfield	6

Just Roots Farm and Community Supported Agriculture (CSA)	Professional Staff	Greenfield	4
Franklin County/North Quabbin Community Health Improvement Planning	Community Members	Greenfield	20
Stone Soup Cafe	Older Adults	Greenfield	N/A
Western MA			
Health New England	Behavioral Health, Care Management, and Quality departments	Western MA	9
Health New England	Health New England Associates	Western MA	17
Regional Advisory Committee	Community Representatives, Organization Representatives, Coalition Members	Western MA	20

Chats participants were asked what their community needed to live healthy, happy, and productive lives. Overwhelmingly, Chat participants said food assistance and SNAP benefits were extremely beneficial. Public schools allowed children to receive a free education. Recreational spaces were essential to mental health, fueling social cohesiveness. Access to healthcare, dental care, and mental health resources were also stated as assets. Trust and social cohesiveness between community members was seen as a major form of social capital. Free internet was noted to help connect people to each other, and aid education.

Many of the issues prioritized in the 2019 CHNA were still prevalent today. It was noted that structural racism impacted *all* the issues previously and currently prioritized. Participants were overwhelmingly concerned with the elderly community, as they have been socially isolated during the pandemic. It was noted that social isolation has tremendously impacted mental health issues within their communities. Parents raised concerns about receiving paid time off when their children were sent home from school as 'close contacts' to someone with COVID-19. One participant noted the need for emotional support, time off, and care for COVID-19 'long-haulers'. The pandemic also exacerbated all existing issues within communities. Food insecurity, lack of transportation, and lack of quality healthcare providers were all things the pandemic exacerbated.

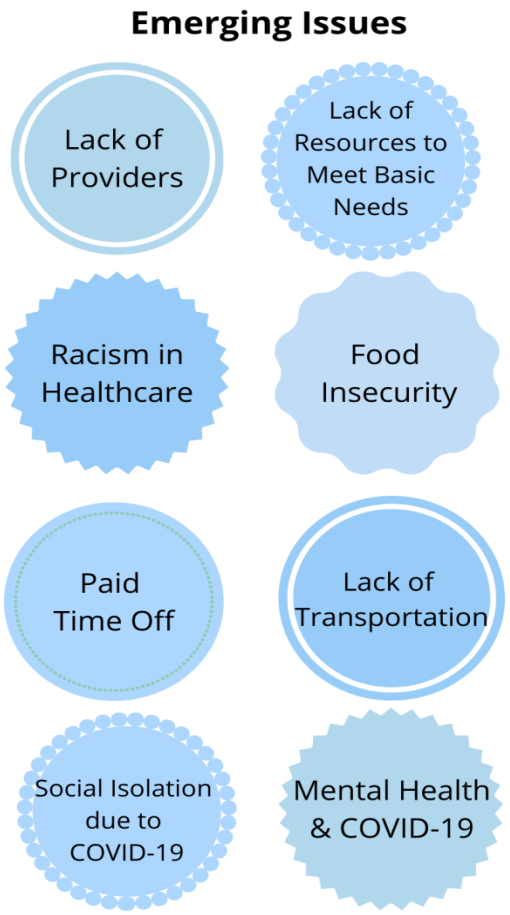
FIGURE 29

Community Assets

Youth mental health was chosen as the regional health priority. Participants were worried about the increased stress and anxiety children have faced both in general, and since the pandemic.

FIGURE 30

Community Needs



Progress towards Bettering Health Concerns

Community members have seen progress on certain health issues. Firstly, in each chat analyzed, it was mentioned that progress is being made in regard to social justice. Participants have noticed the willingness of people to sit and have conversations relating to social justice and racism. A participant also noted that they had noticed more racial equity training being required in certain jobs. It also was noted that more attention was being brought to youth mental health. A participant also stated that they felt coalitions and groups within the western Massachusetts have stepped up and are solving pressing issues for their communities. While there is still work to be done, these small steps towards change are valuable and necessary for a better and healthier community.

C. Survey of Public Health Officials

The consultant team conducted an anonymous survey of public health officials and agents in the four counties of Western MA during fall 2021. A summary of Hampden County results, general western MA themes, and a table on the most pressing issues are provided below.

Summary of Hampden County Results

- 17 respondents; 9 were health directors or agents; 10 working in Public Health in region for 5+ years.
- Mostly white women (10 of those who identified); only one respondent identified as non-white (mixed race).
- Most did varied COVID-related work, including contact tracing, mask enforcement, communications, vax clinics, and more.
- In open-ended question, participants noted need for improved communication and information (9), although specifics vary:
    - Culturally and linguistically appropriate information is insufficient.
    - Access to broadband is a concern.
    - Also mentioned were mental health and substance abuse services (4) and access to fresh food (3).
- Three most urgent needs from checklist included:
    - mental health/substance abuse (7)
    - transportation in general (6), lack of transportation to medical services (5)
    - limited availability of providers (6)
    - health literacy (6)
    - resources/access to digital technology (5)
    - basic needs (5).
- Mental health and communication appear in both questions (open response and prompted) as major issues.
- Special populations in need of care
    - Elderly (7)
    - Russian (4)
        - A few specifically noted a tendency among Russian speaking population to distrust government, avoid vaccine, not believe government sources.
    - Black/Latinx populations (2)
    - Low income (2)
- Assets
    - COAs (5)
    - First responders, municipal departments
    - Informal groups; neighbors helping neighbors; church groups
    - Local agencies and orgs, including Holyoke Community College, Holyoke Health Center, Behavioral Health Network.
- General feeling that there is very little contact or collaboration between hospitals and insurers and local public health systems. Hospitals should listen more to local groups, work with them better, be more transparent.

General Themes among Four Counties

- Enforcing mask mandates and communicating with public were largest roles for public health workers in Hampshire and Berkshire Counties. Hampden and Franklin Counties participants were more likely to take on more varied roles in COVID work (contact tracing, communications, mask enforcements, clinics, more).
- Transportation and support for seniors were two themes that appeared in all four counties.
- There is also general concern over low income families and people. This is a big umbrella that includes homelessness, lack of affordable housing, limited access to healthy foods, etc.
- Communication is another theme- better communication between state and local officials; between local officials and the public; across cultures and languages; between hospitals and local public health workers; lack of high-speed internet is a problem across the board. Franklin County respondents noted the need for a centralized response across the county and more local access to news and information (as opposed to news from Boston/Springfield/Albany etc.).
- COAs and senior centers have been key players in improving public health. This was a resounding sentiment across all counties.
- Other key players include local nonprofits, churches, and social service groups. People stepping up, volunteering time and resources, and checking on neighbors were also crucial.
- Berkshire County has better communication and collaboration between local public health workers and hospitals, but still room for improvement. Respondents in other counties mostly said there was no collaboration.

TABLE 8

Community and Health Issues Identified as Most Urgent

MOST PRESSING ISSUES *(prompted)*	REGION (n=69)	Berkshire (n=15)	Franklin (n=22)	Hampden (n=17)	Hampshire (n=14)
Community Level Factors:					
Limited availability of providers	43%	33%	73%	**35%**	21%
Transportation general	42%	47%	45%	**35%**	36%
Safe and affordable housing	36%	60%	45%	**24%**	14%
Access to digital technology	26%	27%	27%	**29%**	14%
Lack of resources to meet basic needs	25%	13%	18%	**29%**	43%
Health Conditions and Behaviors:					
Mental health and substance use	36%	33%	27%	**41%**	43%
Chronic conditions	22%	33%	23%	**24%**	7%

TABLE 9

Most pressing issues *(open response)*

*Communication issues are largely about COVID-19, vaccines, etc.

REGIONAL SUMMARY (n=69)	Berkshire (n=15)	Franklin (n=22)	Hampden (n=17)	Hampshire (n=14)
Communication and health information (including digital access issues, culturally appropriate). Transportation. Basic needs/food access. Access to mental health services.	Health Information and Communication (including reliability, dissemination, and digital access).	Isolation, particularly among elderly. Transportation. Communication (including reliability, dissemination, and digital access).	Communication and access to information (including culturally and linguistically appropriate, and digital access). Mental health services. Basic needs.	Transportation. Basic needs. Communication.

D. Focus Groups

Purpose: The primary purpose of the youth focus groups was to help inform a Youth Mental Health Coalition communications campaign, and secondarily to inform the CHNA. Key topics were: :(1) ways youth in Springfield talk about their mental health, (2) who they look to for support and why, (3) what are viewed as barriers to reaching out for help, and (4) what type of media platform they might use or look at for positive messaging about mental health, support, and help-seeking. Separate focus groups of parents and caregivers were conducted to enhance what was learned from youth. While we were careful to look for patterns across what the youth (and adults) told us, we recognize that the groups we spoke to do not represent all youth or even all youth within our community. Acknowledging that they do not represent all opinions on the topic does not diminish the importance, value, and beauty of what was shared by the youth and their adult supporters.

MAIN THEMES:

1. It is normal to struggle with mental health and need some support. Youth and adults viewed young people having some mental health struggles such as depression, anxiety, or stress and a need for care from others as normal. This may reflect a generational shift in how having a mental health problem is perceived, specifically in communities of color.
2. However, talking about mental health with others is a challenge. Both youth and adults identified reasons why it is difficult to talk openly about this subject. While both groups provided perspectives that the others did not, there was a great deal of overlap in reasons given for why the conversation is challenging.
3. Despite cautiousness, some youth affirmed that there are people who they can talk to about their mental health. Some adults also have strategies for discussing mental health with their children. While discussing mental health issues as they arise may not be the norm, both youth and adults had examples of being able to successfully do so. This may be helpful guidance in bridging the communications gap that exists.

4. Youth had a variety of opinions as to where or how a mental health normalization campaign should be presented. Youth did not seem to favor one social medium over another though they did have some suggestions as to how to make the content appealing.

Some quotes:
(Y = Said by a youth; C = Said by an adult caregiver/parent/guardian)

[About it being normal] *"Everybody's messy." [Y]*

[About not facing your problems alone] *"[If a friend was struggling] I would tell them it's okay. And that I understand. Like [I'd] give them my perspective- try to make them feel like they're not alone. Cause if you have those feelings and then it's like you're alone on top of those feelings, it makes it worse. So, I give 'em my perspective and that I'm here. Or, I would suggest they talk to [someone] about how they feel." [Y]*

[About it being difficult to talk about] *"I am very comfortable talking to my friends about my mental health and what I'm going through. Parents and my family would be the last. I just don't feel comfortable. Or like, I don't feel like good enough thinking that they would support rather than just critique what I'm going through. It's not a critiquing type of moment. This is a listen and support type moment." [Y]*
Conversation between 3 caregivers*:*
[C 1] "But then you look at this generation, and they are a bunch of emotions. And hopefully we can help them navigate on how to control those emotions and, and not just be an emotional wreck."
[C 2] "But how can we teach them that if a lot of us don't quite know how to, right?"
[C 3] "Right. That's it. But that is educating us as the parents and the caregivers. Like you can do things differently."

[About reasons it's difficult to communicate] *"I've been trying to trust people, but now I kind of like have trust issues because people that I trusted before . . .they just do things. . . people are impulsive and make dumb decisions." [Y]*

"Sometimes you don't know how you're feeling but you know it's not the greatest feeling to have. It's kind of this stuck moment and then [someone responds with] "Well, then nothing's really wrong." But that's not what it is." [Y]

"Yes. It's different. I think our generation wise like for us, we were, we didn't have, we weren't allowed feelings. Right? You were just told, "Do as I tell you. That's it. Don't ask questions. Don't. What do you what are you stressing about? What bills do you pay? What are you about to take care of?" So, the mindset versus now in recognizing that our youth are humans, they have emotions, they have feelings." [C]

[About communications campaign] *[I like ads that] make me aware but also make you feel connected". [Y]*
"And then especially when they don't sugarcoat things, just [be] straight up. Because some ads they're treating us like babies." [Y]

THEME 1: It is normal to struggle with mental health and need some support.

- One adult hypothesized that youth's experiences with the pandemic and their simultaneous symbiotic and parasitic relationship with social media accelerated the change in attitude towards mental health.
- There is also concern that those suffering do not feel alone.
- One parent with nodding heads of agreement from the others in attendance, advised the need for similar supports for anyone raising children who might be struggling.
- Despite most expressing positive sentiments around the need for social support, one youth cautioned that it is important to recognize limitations in how much someone struggling can be supported by others.

THEME 2: Talking about mental health with others is a challenge.

- While the consensus was that it is normal to have problems and need to reach out to others, youth also conveyed that having real conversations about mental health issues with others was fraught with challenges, especially when trying to talk with adults.
- Key barriers to talking with adults that were identified were: (1) Concerns that adults do not take what youth express seriously (sometimes identified as a cultural factor), understand it, or are judgmental about it; (2) Adults make too many assumptions about what is wrong or how to fix it; (3) Adults are not well versed on "modern day" challenges; (4) Not wanting a parent or caregiver to worry, or; (5) Recognition that adults have limited time. While it is not known how many youths who participated in the focus groups live in group homes or foster families, those that did mention it viewed the relationship as particularly difficult for honest discussions of any issues, mental health or otherwise.
- Adults acknowledged and even identified some of these same struggles.
- While most youth spoke of struggling to talk with an adult about their problems, experiences confiding in a peer were more mixed.
- In other words, peers may or may not be viewed as capable of being supportive or validating in these types of conversations.
- In general, both youth and adults viewed issues of trust as a reason why it is difficult for youth (and adults) to communicate how they are feeling to others.
- Adults more frequently cited their culture, gender, or generation as barriers to communicating easily about this subject.
- Relatedly, another reason it can be hard to discuss mental health is difficulty identifying feelings.
- Youth who identify as male were perceived to have a more difficult time naming or discussing feelings.

THEME 3: Despite cautiousness, some youth affirmed that there are people who they can talk to about their mental health and some adults have strategies for discussing mental health with their children.

- As mentioned, some youth cited friends as the people they can go to about "everything and anything." But some hesitancy was expressed in having these conversations with adults.
- Despite the awkwardness, some adults want to support these conversations and have strategies for discussing mental health with their children.
- One set of parents also expressed the value of formal or informal adult support groups, but with certain guidelines.
- In other words, a friend or group with a non-judgmental attitude, capacity to sympathize, and ability to talk through the stress or crisis of the moment might be some important ways adults can be helped in supporting their children.

THEME 4: Youth had a variety of opinions as to where or how a mental health normalization campaign should be presented.

- Youth mentioned YouTube, TikTok, Billboards, Instagram, and even Google "pop-up" ads as places they might look for this type of information.
- One youth suggested that the format of the ad mattered.
- Youth suggested that they gravitate towards information that connects to and respects their experiences.

OTHER IMPORTANT PERSPECTIVES:

- Social media may be contributing.
- The hurtful nature of misgendering.
- The stigma attached to seeking help.
- Parents and caregivers also may have mental health needs that are unaddressed.
- Strain on parents or caregivers with kids who do have a mental health diagnosis.

LIMITATIONS:

Although some adults shared stories about their sons, we were unable to conduct a focus group with youth who identify as male. A survey administered for the same project received more responses from youth who identify as male than female, so perhaps that mode of receiving information is more comfortable for them. One of the adult groups comes together to provide each other support around mental health care for their children. Everyone was friends in the other group and informally help to support the raising of each other's children. Therefore, their responses may not reflect the experiences of parents or caregivers who feel more isolated. COVID or even how a group now is accustomed to meeting meant that the facilitators used a hybrid approach rather than having all groups online or in person. Although one of the online youth groups seemed as chatty as an in person one, the different modes of information collection are not totally comparable and may have affected the youths' willingness to share. While the same information was shared and questions asked each time, facilitators also adjusted their approach based on debriefing discussions after the first two focus groups.

TABLE 10

Youth Mental Health Coalition Focus Group Details and Protocols

Dates	December 6, 13, & 14; January 26; February 16
Participants	18 Youth; 8 Adult supporters
Locations	Youth: (1) South End Community Center (in person); (2) Beat the Odds @ Martin Luther King Jr. Family Services (via zoom); (3) Out Now (via zoom); Adults: (1) Family support group @ Gándara Mental Health Center (in person); (2) South End Community Center (in person)
Demographics represented	We did not ask them to self-identify during these focus groups. Groups were chosen to ensure that we heard primarily from youth in communities in Springfield that are identified as majority Black or majority Hispanic. Based on self-disclosure, we also had representation within and across groups of youth who identify as gender non-binary, transgender, gay, lesbian, or queer. A few youths and adults also spoke about their own mental illness and experiences in foster care or group home settings. The youth ranged in age from 13 to 20. The parent/caregiver group from Gándara Center was conducted in Spanish. The group that was underrepresented was youth who identify as male. A therapeutic

	mentor heavily recruited and promoted the event with his team and their mentees. Although 4 males agreed to come, none showed up.
Facilitators	Tiffany Rufino, Alisa Ainbinder
Mental Health support (for Youth)	Tamera Crenshaw, LMHC, LPC; Whitney Dodds, LMHC, LPC

Question protocol (Youth)
1 & 2: How would you communicate to this friend or really anyone you know that it's okay to talk about mental health/how you feel?/ What's the most important thing you think they should know if they're struggling with a mental illness?
3: But for all of us, it's sometimes still hard to talk about our feelings and what we are scared about or don't understand about our feelings, even with trusted adults - what are some ways to make it easier to have the conversation? With friends? With adults?
4. [Unhelpful things] Can you think of anything that you heard someone say like that?
5 & 6. What would be the best way to make sure that your peers would see the messages? How about your adult supporters? Where might they go? Would you want them to see the same campaign messaging as you do? Or do you think they need some different information?

E. Key Informant Interviews

The consultant team conducted Key Informant Interviews (KIIs) on the prioritized need of Youth Mental Health during winter 2021-22 and also attended webinars, trainings and events related to this topic. These data gathering opportunities are summarized in the table below, followed by a detailed summary of the KIIs.

TABLE 11

Respondents Participating in Key Informant Interviews and Other Qualitative Data Sources

Name (Last, First)	Title	Organization	Organization Serves Broad Interests of Community	Organization Serves Low-Income, Minority, & Medically Underserved Populations	State, Local, Tribal, Regional, or Other Health Department Staff
Greater Springfield Area					
Edna Rodriguez	Director Behavioral Health	Trinity Health of NE	x	x	
Madeline Johnson	Manager	Trinity Health of NE	x	x	
Maria Zygmont	Clinical Manager, Brightside	Trinity Health of NE	x	x	

Katherine Mague	Senior Vice President	Behavioral Health Network	x	x	
Nicole Desnoyers	Peer to Peer Parent Outreach Specialist	Behavioral Health Network	x	x	
Malika Jeffries	Coalition Coordinator	Gandara Center Stop Access Coalition	X	X	
Ysabel Garcia	Founder	Estoy Aquí	X	X	
Tiffany Ruffino	Youth Mental Health Coalition Manager	Public Health Inst of W Mass	X	X	

Other Sources

- City of Springfield Social Work Awareness Month Panel on Youth Mental Health, March 2022
- University of Massachusetts, School of Public Health, Addressing the Mental Health Crisis among Young Adults, an Inter-professional Workshop, March 2022
- Stop Access Coalition hosted webinar, *Suicide Prevention from a racial justice lens*, February 2022
- Community Health Needs Assessment, Regional Advisory Committee panel on youth mental health, January 2022
- Stop Access Coalition hosted webinar, *Mental Health: Beyond the Individual*, December 2021

MERCY SERVICE AREA: PRELIMINARY SUMMARY OF FINDINGS FROM QUALITATIVE INQUIRY ON YOUTH MENTAL HEALTH

The essential question driving this study is: *What are some critical ways hospitals and health insurers can facilitate community, provider, family, and school collaboration to support young people's mental health?*

1. To address this question, the findings presented below cover four essential sub-questions, as well as other topics that respondents identified. How do youth in diverse communities conceive of "mental health"? Who do they turn to? Who do they trust for guidance?
2. What are the current platforms for community support that hospitals can build on in collaboration with others?
3. What effective models exist in Western Mass (e.g., collaboration between Mental Health providers and schools or Primary Care)?
4. How can youth be involved in building more effective support systems?

Methods

The thematic summary is based on semi-structured in-depth interviews conducted with eight key informants working in mental health or youth development roles in the greater Springfield area. The interview protocols are available in Appendix XX. Interview questions and the ensuing conversations were informed and adjusted based on the areas of expertise of the respondents.

The roles and self-identified characteristics of the respondents are as follows: Professional roles

- 4 are mental health providers or clinical program managers.
- 2 are coalition coordinators working on youth issues.
- 1 is a mental health family outreach worker.
- 1 is an educator/trainer on mental health and social justice.

Identity characteristics:

- All respondents identified as female.
- 2 are women of color.
- 2 are white women.
- 2 are women of Hispanic/Latinx/Spanish origin.
- 2 are undisclosed; 1 who identifies as universal.
- Age range is: mid 20's - mid 50's.

Services areas covered:

- Most of the respondents' work is with residents of Springfield or all of Hampden County.
- One person covers Hampden, Hampshire, and Franklin counties.

Staff at the Collaborative for Educational Services conducted interviews using Zoom video-conferencing. Most of the interviews were individual (one on one conversations); one interview included two respondents who worked in the same agency; and one interview was co-facilitated by two interviewers. The findings included in this summary are based on interviews facilitated and analyzed by three white, professional, formally educated women and one bilingual (Spanish-English), professional, formally educated Latinx woman. We provide this information to be transparent and to acknowledge that the identity characteristics of research staff may influence the flow and content of interviews, as well as the analyst's interpretation of findings. To promote respondent comfort and choice, in our initial outreach to key informants, we asked if there are certain characteristics they would like in an interviewer (e.g., gender identify, race, ethnicity, or language abilities) and did our best to accommodate requests. Respondents were offered the option of using the video option or switching cameras off, were reminded that they can skip any question or opt out of the interview at any time, and they were invited to offer their own topics to discuss to better understand issues affecting young people's well-being.

In addition to the key informant interviews, members of the qualitative team participated in several regional webinars or panels on youth mental health issues. These included:

- City of Springfield Social Work Awareness Month Panel on Youth Mental Health, March 2022

- University of Massachusetts, School of Public Health, Addressing the Mental Health Crisis among Young Adults, an Inter-professional Workshop, March 2022
- Stop Access Coalition hosted webinar, *Suicide Prevention from a racial justice lens*, February 2022
- Community Health Needs Assessment, Regional Advisory Committee panel on youth mental health, January 2022
- Stop Access Coalition hosted webinar, *Mental Health: Beyond the Individual*, December 2021

At each of these events, facilitators asked or presented information on topics aligned with this study's essential questions and the specific questions in the interview protocols.

Summary Across Youth Providers

What are some critical ways hospitals and health insurers can facilitate community, provider, family, and school collaboration to support young people's mental health?

1. **How do youth in diverse communities conceive of "mental health"? Who do they turn to? Who do they trust for guidance?**

a. How do youth talk about mental health?

- Some youth avoid specific language around depression, or suicidality. They might just say, "so and so is *'Not feeling right'*", or *"Miss, you should check in on ____"*
- Anxiety, stress, depression -- all common terms: *"youth talk about these as normal"* . They don't understand when stress turns into anxiety or depression. Young people are not necessarily connecting these terms with other emotions or experiences behind these labels.
- Intense exposure via social media and peer groups results in:
    - Comfort talking about depression and anxiety
    - Resonate with folks on TikTok, and learn from them about feelings related to stress and depression
    - Self-diagnosing: ADHD, neuro-divergence,
- Respondents expressed a range of perceptions regarding stigma around mental health; while some said youth are so exposed to issues of anxiety, depression, self-harm and suicidality, they are comfortable talking about it. Others identified stigma as a huge obstacle for seeking support. At least one person noted that the stigma is often greater among adults/parents, so that young people cannot turn to their parents with issues.

b. How are adults talking about youth mental health issues?

- Anxiety, stress, and fatigue tied to *"interface with systems"*; e.g., DYS, DCF, typical day at school. *"Seeing how challenging, constraining, oppressive these are for young people and families."*
    - Highly stressful, not supportive, often disrespectful, combative, traumatizing interactions. Young people are carrying a lot of stress from their day to day interactions.
- Extreme pressure to meet social expectations: performance in school, pursuing college or career, beauty

- Adolescent developmental challenges; going through so much change, identity development, having to figure out what's next (e.g., college, work, etc.)
- LGBTQ youth facing particular challenges around identify, peer perceptions, family
- Well-being, supported development; not simply talking about poor mental health or diagnoses
- Lack of physical activity -- link to mental health
- For many parents/adults, stigma and fear get in the way of talking about mental health issues with the young people in their lives. Don't want to think their children are screwed up AND scared to talk about suicide.
    - For families in Black and Brown communities, stigma is particularly significant
- Multi-generational impacts of racism, structural and policy barriers that have created low-income communities, and the many related challenges -- lack of access to healthy food, fitness, school resources,
- Micro-aggressions: young people feel the barbs, the attitudes. Once you give them the language, they can name what is happening.
- Impacts of COVID:
    - Exacerbated all the problems
    - More time on social media
        - perfectionism/comparison culture; never good enough
    - Less social interactions
    - Less engagement in the regular activities that give joy -- socializing, physical activities
    - Now young people are needing to re-enter the world, *"take their masks off"* -- literally and figuratively. They are not used to being in in-person social environments
    - Harder to engage and connect with youth when they are remote -- for school, activities, etc.

c. Who do youth turn to?

- *"Tiktok"* was the first response offered by one respondent; social media echoed by all
- Peers -- close friends AND frequently via social media
- Many turning inward; *"They hold a lot of stuff and or trying to figure out their feelings or their thoughts by themselves, and sometimes find success with it and other times you know they don't."*
    - don't sense they can trust peers or others, particularly in the world of personal information/photos going viral;
- Trusted adults - coach, youth groups, etc.
- Religion, church, faith -- sometimes forced by parents
    - Can have negative consequences; message in black and brown communities is sometimes "go pray about it"; young people can feel serious feelings are being dismissed
- Surprisingly little mention of parents as essential support; although parents are central in helping young people access mental health services
    - Parents don't know how to support youth; *"parents and caregivers also, I think the first thing that comes to mind is again confusion, just on how to be able to support youth."*
    - *Parents challenged in setting limits (knowing how to set limits) on cell phone/social media use*
    - Stigma gets in the way of young people talking to parents

d. Youth assets:

- Resilience, which as one individual described: *"A lot of them still have a purity and an honesty and the zest for the truth. And I think that is what maintains their resiliency. And they still have hope…. As long as they're given authentic information and they're actually able to have some form of expression and dialogue. … So that is what I look for to capitalize on."*
- Peer support system

2. What are the current platforms for community support that hospitals can build on in collaboration with others?

a. Respondents mostly identified gaps in support systems:

- URGENT NEED: Culture and language appropriate mental health services
    - Youth will only open up to people who they can connect with; people they think really understand them
    - Youth turned off from seeking help because of bad fit; "*when you are paired with a therapist a lot of times it's not a good fit. There aren't very many therapists. … who show cultural humility to black and brown folks. So they wait for a long time to get into therapy and then, once they get someone that is this like totally not a match, so then they're back to square one."*
    - alternative licensing/training to remove barriers to entering the field; current training required to become LICSW and low starting salaries mean that this path is unrealistic particularly for lower income folks, people of color
- URGENT NEED: Adequate supply of counseling supports;
    - young people are waitlisted for months;
    - only able to get services when they are in crisis, and even then, many are stuck in hospital ERs until they can find an appropriate placement
- Schools:
    - Do not have adequately trained teachers or counselors to identify and support students facing challenges.
    - School staff's narrow focus on academic skills, catching up, achievement means that young people are spending hours a day with adults who don't know them, see them, treat them as individuals. *"you have teachers and educators who are coming from cities and towns that are outside of Springfield, that are sometimes very, very different from Springfield. So you have educators who have very different lives than the youth are living …, and so they don't know how to relate to them, they don't know how to teach them, they don't know how to encourage them or motivate them…. youth, are going to school again every day spending most of their days in school with these folks that don't necessarily relate to them or know how to educate them."*
    - "Our educational systems do not relate to … most of the population and the cultures that are in the school, and how that impacts their day to day experience.
- Health insurance -- lack of portability, plans vary in their coverage; parents who get a job lose some of the benefits they had with Medicaid.

b. Opportunities to build on:

- Community-based spaces for youth to convene with trusted, culturally competent and appropriate adult mentors to debrief with on their days, reflect, and destress. Supportive place and healthy activities to help youth unwind.

- Training for providers, schools, community organizations, and local colleges on equity and cultural competence in mental health (e.g., Estoy Aqui). Clinicians need to broaden their understanding of the young person's context and cultural norms (e.g., young person talking to ancestors diagnosed as "hearing voices", schizophrenic)
- Mentoring models -- formal and informal;
    - Culturally competent adult mentors to support families and young people. Adult mentors from the community;
        - Training all adults who interact with young people (e.g., crossing guards) to keep an eye out, encourage,
    - Peer to peer mentoring

- Expanded and appropriate school-based counseling and referral systems; school staff/counselors need to be trained to understand and support whole child, not simply about academic performance
- Systems of care meetings
- Youth Health Coalition
- Current Coalition coordinators, youth development staff -- cultural competence and highly committed to sustainable work with youth

3. What effective models exist in W Mass (e.g., collaboration between Mental Health providers and schools or Primary Care) or what should be further developed?

a. Local community youth groups that offer safe spaces for young people to decompress, share experiences, support each other, "helps them see they are not alone" (e.g., Gandara's Stop Access Coalition youth group)
b. Estoy Aqui training for providers and educators on social justice issues in mental health; how bias, cultural norms and expectations, and racism affect young people
c. Community centers as places that young people are comfortable coming for activities, sports; strong connections, trust between youth and staff;
d. Family and youth resources centers (e.g., Gandara): parent groups, youth groups, Impact Center

4. How can youth be involved in building more effective support systems?

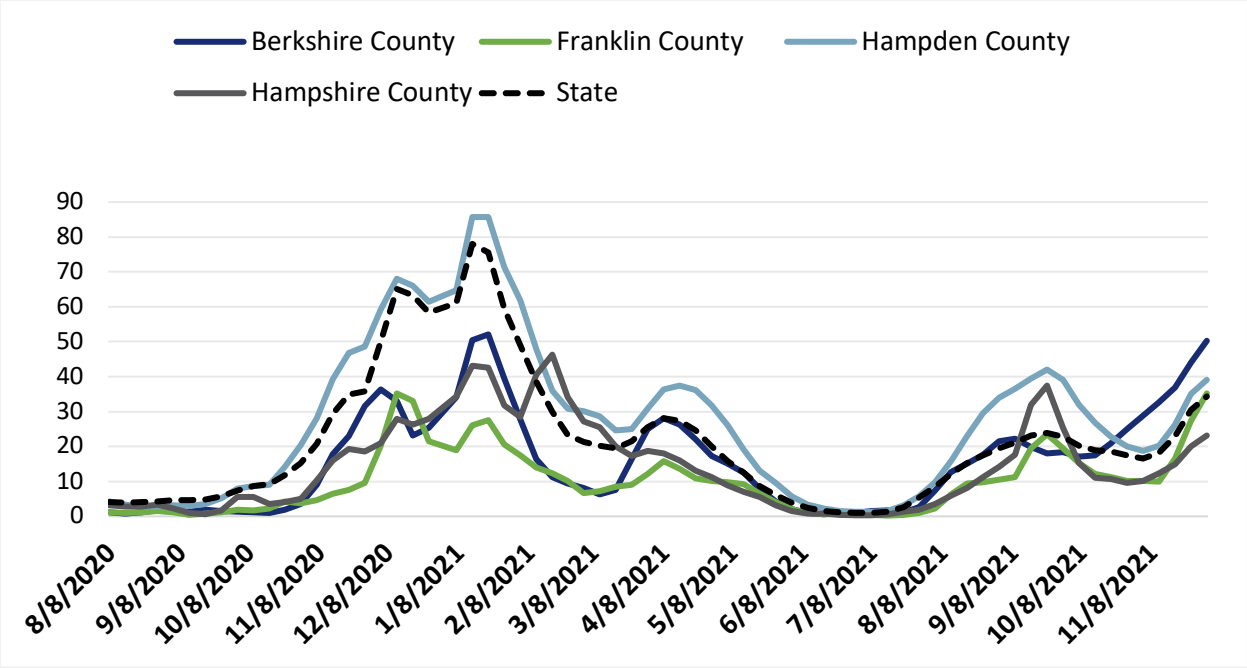
a. Youth groups with trusted culturally similar adults designing centers for youth well-being
b. Creating alternative pathways for education and workforce development -- working with school counseling systems, workforce development agencies, and youth leadership groups to generate new pathways, broaden young people's sense of possibilities, opportunities
c. Need to break down current structures/systems that lead to poor health and bring youth in to build youth-positive systems
d. Imagining with trusted adults, strategies to reduce the harmful impacts of (excessive) social media reliance. Creating or testing programs.

Appendix 6. Supplemental Data on Prioritized Health Needs

A. COVID-19 Supplemental Data

FIGURE 31

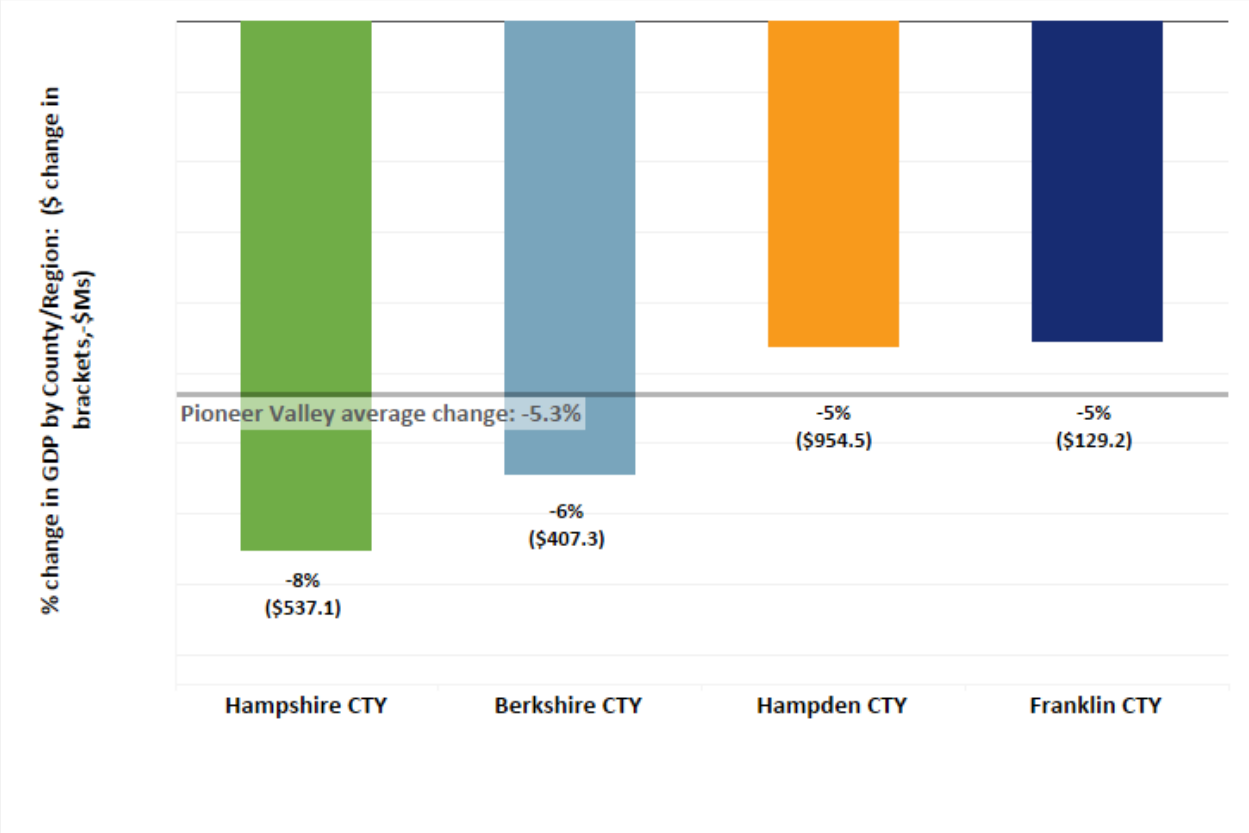
COVID-19 Incidence Rate in Western MA by County, August 2020 – November 2021 (Pre-Omicron Variant)



Source: Massachusetts Department of Public Health COVID-19 Dashboard

FIGURE 32

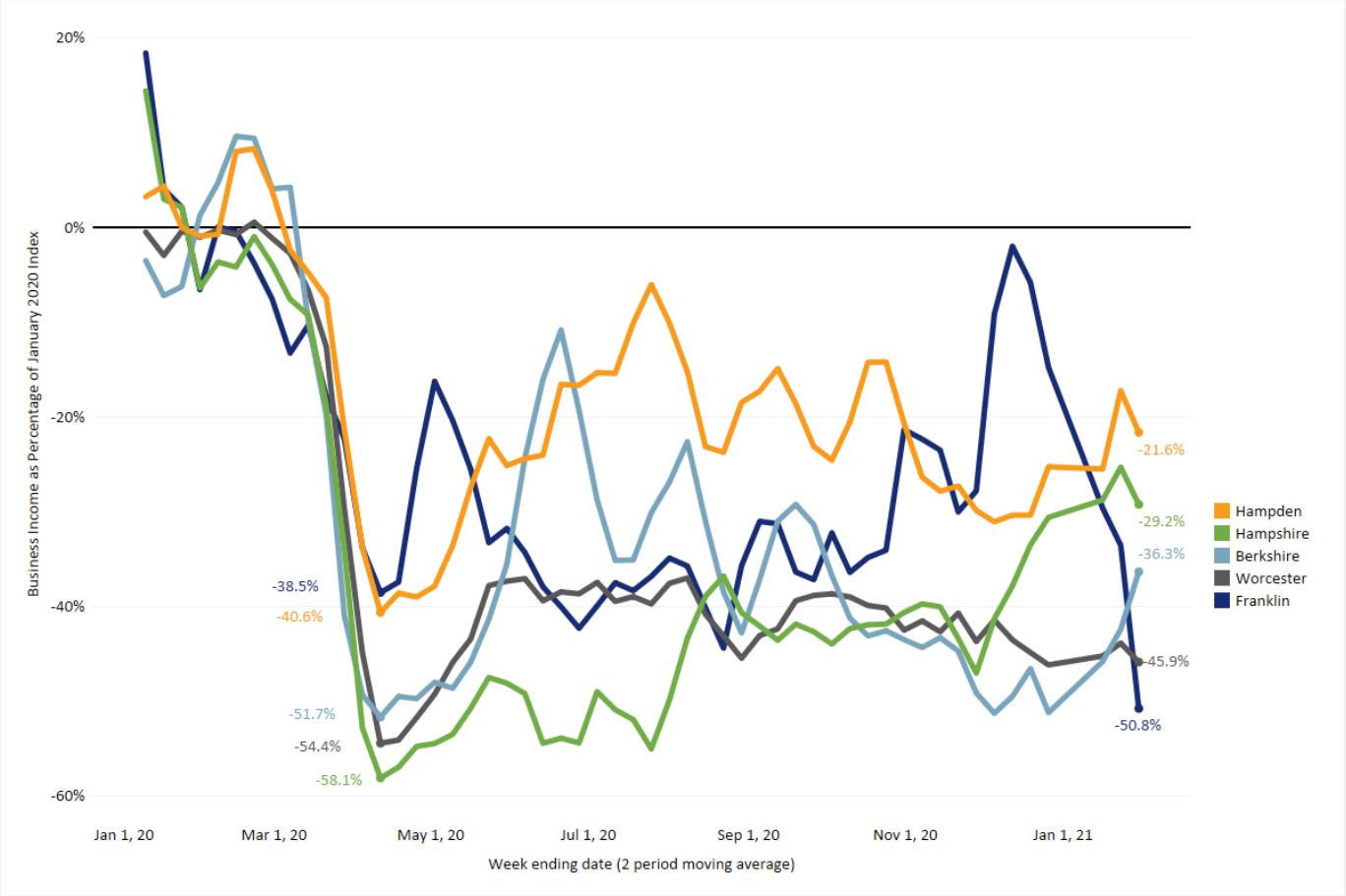
Effects of COVID-19 on Pioneer Valley Gross Domestic Product (GDP), 2020



Source: US Bureau of Economic Analysis, https://www.bea.gov/data/gdp/gdp-county-metro-and-other-areas

FIGURE 33

Small Business Revenues, January 2020 - January 2021



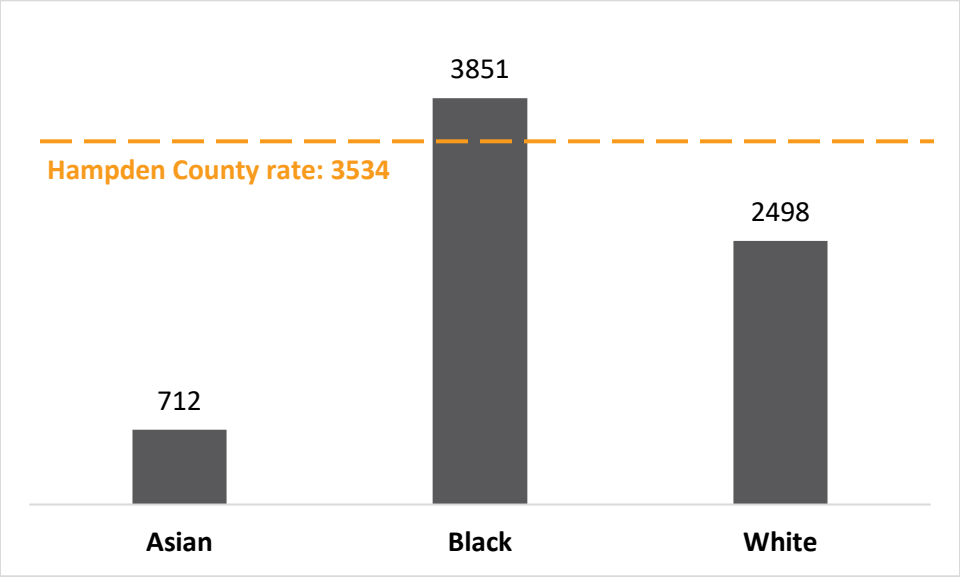
Source: Womply data, from Opportunity Insights, https://www.tracktherecovery.org/

Mental Health Data

FIGURE 34

Mental Health Emergency Department Visits by Race, Hampden County

Age Adjusted Rate Per 100,000

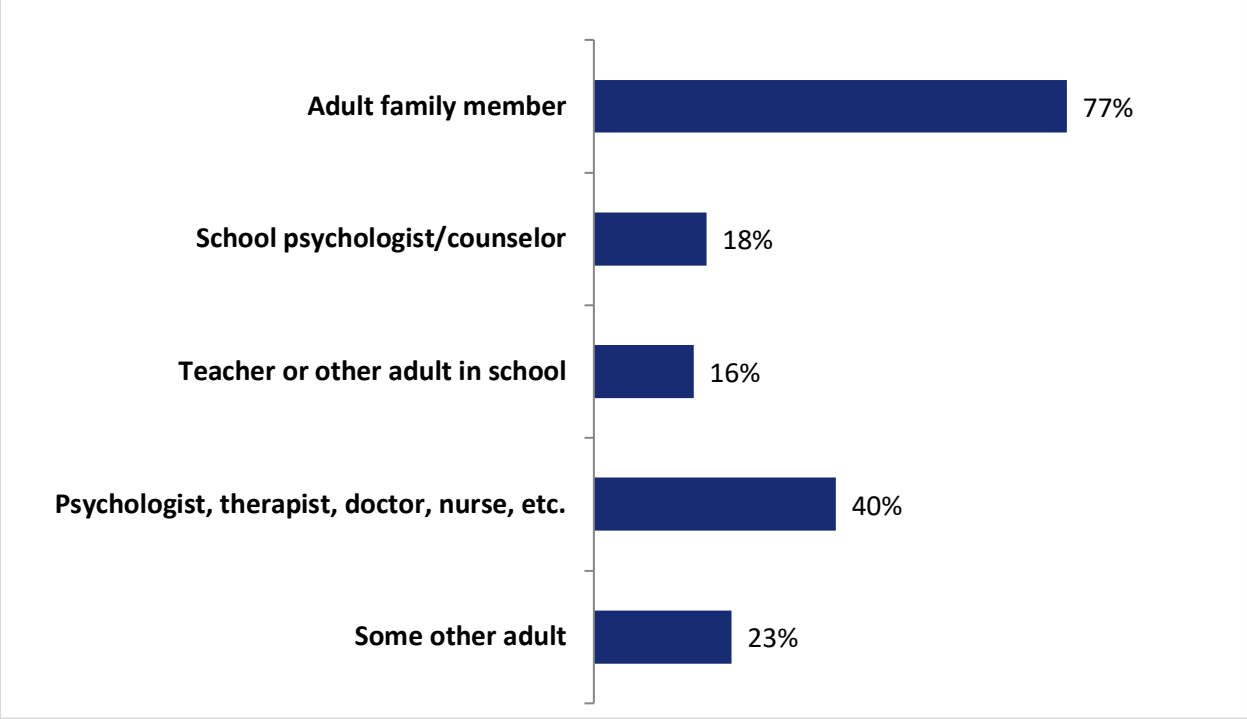


Source: MDPH Hospitalization tables for chronic diseases, 2016-2019.

FIGURE 35

Types of Adults that Springfield Eighth Grade Students Sought Help From, 2021

Percentage of respondents who sought help from adult



Source: Springfield Public Schools, Youth Health Survey of 8th Graders, 2021

COVID-19 Community Impact Survey (CCIS) Data

In response to the ongoing COVID-19 pandemic, the Massachusetts Department of Public Health conducted the COVID-19 Community Impact Survey to better understand the needs of populations that have been disproportionately impacted by the pandemic, including its social and economic impacts. The survey was conducted in the fall of 2020 and reached over 33,000 adults and 3,000 youth (under 25). There was an intentional effort to reach key populations such as people of color, LGBTQIA+ individuals, people with disabilities, older adults, etc.

Compared to past surveillance surveys, this survey reached:

- 10x as many Alaska Native/Native American respondents
- 10x as many LGBTQIA+ respondents
- 5x as many residents who speak languages other than English
- 5x as many Hispanic residents
- 5x as many Asian residents
- Over twice as many respondents in other populations including the deaf/hard of hearing and Black community

In Hampden County, there were 2,253 survey respondents. Respondents were predominantly female (79%), a third identified as a Non-White race or ethnicity, 12% identified as LGBTQIA+, 23% speak a language other than English at home, and 22% had an income below $35,000.

Throughout the report, we will highlight relevant findings for Hampden County and Western MA in general to better understand the impacts of the pandemic. All percentages reported are unweighted and statistical significance testing, a chi-square (X^2) test of independence for comparisons was used where applicable. Caution should be used when interpreting the results of the COVID-19 Community Impact Survey. It is important to note that these findings are only representative of those who participated in the survey and may not be representative of the experiences of everyone in Hampden County.

COVID-19's Impact on Mental Health and Substance Use Health

The COVID-19 pandemic has acutely affected the mental health of residents as well as the availability of care in the region and service area. Among Hampden County public health officials surveyed in 2021 for this assessment, 41% listed mental health and substance use as the most pressing health issue in their community, and it was the top ranked issue overall. A subset of those respondents also cited a shortage of mental health and substance use services.

Data from the statewide COVID-19 Community Impact Survey (CCIS) conducted in 2020 show the negative impacts of the early lockdown phase on mental health as well as substance use.

Depressive Symptoms: In Hampden County, a greater proportion of respondents reported experiencing high rates of poor mental health days compared to previous surveillance data. More than one in three respondents reported 15 or more poor mental health days in the past 30 days (36%, n=1,879) which is

more than twice as high as estimates from 2019 (15%).[153] The rate was 37% for respondents that lived in a rural area.[154] Though not directly comparable to state-wide rates because of different methods used to calculate them, these are slightly elevated from the state response rate of 33%. Respondents with disabilities and parents of children with special health care needs are disproportionately impacted, with **one in two** experiencing 15 or more poor mental health days in the past 30 days. Disparities were also seen among the following subgroups: younger respondents (age 25 to 64), LGBTQIA+ respondents, lower income respondents, parents in general.

Signs of PTSD: The survey also captured information on mental health outcomes that are directly tied to the pandemic. Respondents were asked to report their experience with five post-traumatic stress disorder (PTSD)-like reactions to the COVID-19 pandemic which include nightmares, avoidant behaviors, guilt, etc.[155] More than one in four respondents reported experiencing 3 or more PTSD-like reactions to the pandemic (27%, n=1,843). This was slightly higher (29%) for rural respondents.

Barriers to Care: Overall, the pandemic exacerbated existing poor mental health issues, and it also posed specific barriers to accessing care. Respondents reported delaying needed care during the pandemic due to canceled or delayed appointments, increased wait times, lack of safe transportation, inability to access telehealth, etc. Approximately, one in five respondents that experienced a delay in care reported delaying routine mental health care (22%, n=169) or urgent mental health care (22%, n=82). Also, 35% of respondents that experienced 15 or more poor mental health days in the past 30 days delayed **routine** mental health care (n=69) or **urgent** mental health care (n=50).

Resource Needs: 31% of respondents experiencing 15 or more poor mental health days in the past 30 days worried about getting mental or emotional support(n=680). This was true for 25% of rural respondents. Respondents requested the following resources to help with their mental health and well-being:

- Information on how to see a therapist
- Talking to a health professional on the phone
- Talking to a health professional over video chat
- Meeting in person with a health professional (individual and/or group therapy)
- Using an application on a mobile phone or tablet for mental health support.

Substance Use: The pandemic also resulted in increased substance use. Among Hampden County respondents that used any substance in the past 30 days, 41% increased their substance use compared to before the onset of the pandemic (n=1,097). Rates of elevated use were greatest among: respondents with less than $35,000 annual household income (55%, n=179); LGBTQIA+ respondents (55%, n=147); and Black (52%, n=52) and Hispanic/Latinx respondents (48%, n=149).

Although respondents were able to select multiple substances when indicating increased substance use, respondents that used the following substances reported increased substance use overall:

- 60% of respondents who use marijuana (n=293)
- 54% of respondents who use prescription drugs* (n=127)
- 51% of respondents who use tobacco (n=222)
- 49% of respondents who use e-cigarette (n=47)
- 47% of respondents who use over the counter (OTC) drugs* (n=34)
- 39% of respondents who use alcohol (n=863)

* Please note that prescription and OTC drug use does not specify if it was inappropriate use.

The isolation of rural communities in the lockdown phase of the pandemic may have been harder for those with substance use issues. The rate of reported substance use overall in the past 30 days was 57% for rural respondents vs. 48% urban, with a similar disparity in alcohol use in the past 30 days (54% rural, 43% urban). Of those who reported having used a substance in the last 30 days, 42% of rural respondents increased their substance use compared to before the onset of the pandemic

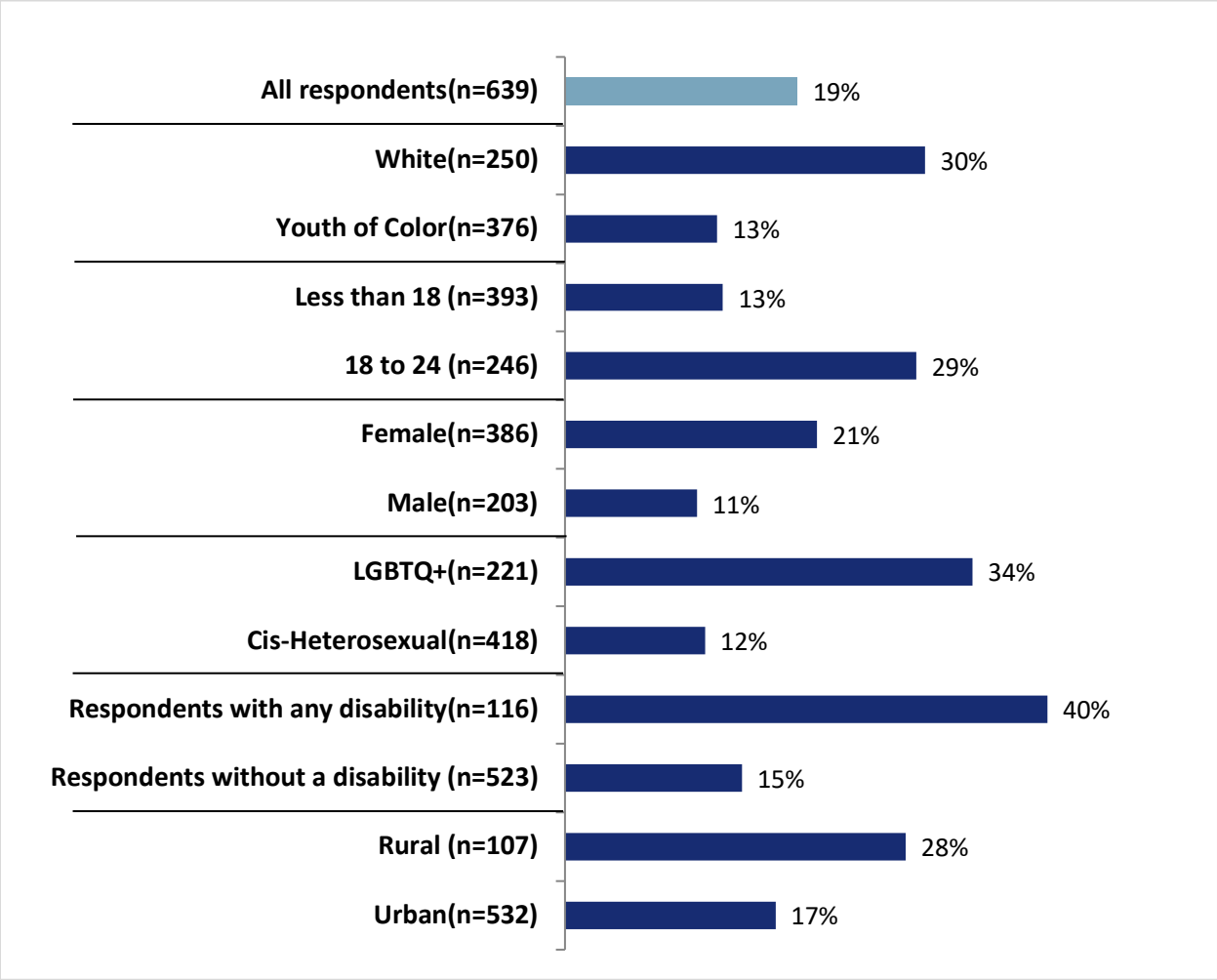
Resource needs: The top three resources requested by respondents who use substances were:

1) Meeting in person with a therapist (individual and/or group therapy).
2) Access to NRT (patches, gum, lozenges) or quitting medication – which was most requested among rural respondents.
3) Talking to a quit coach or counselor via video (for example: WhatsApp, Skype, FaceTime) to help me with my tobacco and vaping.

CCIS Data on Youth Mental Health

FIGURE 36

Western MA Youth Experiencing 3 or more PTSD Like Reactions during COVID-19



Source: MDPH COVID-19 Community Impact Survey, 2020

Impact of COVID-19 on Availability and Access to Providers

County Health Rankings Data on Provider Ratios

Data provided by the County Health Rankings offers a glimpse of provider availability at a county level, though most data is from time periods prior to the pandemic. Unfortunately, there is a delay in when data becomes available due to challenges in data collection and cleaning. We know that COVID-19 has had impacts on provider workforce and availability, but it is helpful to understand status prior to the pandemic. Based on the 2021 County Health Rankings:

- **Primary Care:** There were fewer primary care physicians available per population than reported in the last CHNA. Hampden County had 1,490 residents for each primary care physician (1,490:1) in 2018, compared to 970:1 statewide. The ratio of other types of primary care providers, such as nurse practitioners, is better than the state – 610:1 in the county vs. 730:1 for Massachusetts, but may still be insufficient to meet needs.
- **Dentists:** The ratio of dentists has slightly improved since the previous CHNA, with 1,110 residents per dentists in 2019, although this is still worse than the state ratio of 930:1.
- **Mental Health**: The proportion of mental health providers in 2020 was improved (100:1) from the previous CHNA and continues to be better than the state (150:1).

Despite slight improvements in some areas, the overall situation was challenging even before COVID-19. The map in Section (6)c shows that parts of the county continue to be underserved and/or face provider shortages, notably in Chicopee, Holyoke, Springfield, and West Springfield. These are areas with predominantly Black and Latinx residents who experience numerous health inequities.

Impact of COVID-19 on Availability and Access to Providers

Several facets of the COVID-19 pandemic affected access to providers. Once the country went into lockdown to reduce transmission, most health care providers temporarily ended all non-emergency care. Many tried to pivot to telehealth, which is described in more detail below, but still had limited capacity as providers scrambled to deal with the fallout of the pandemic on their own lives.

The pandemic also resulted in a phenomenon dubbed the Great Resignation, in which millions of Americans left their jobs and were not easily replaced, resulting in massive labor shortages in some fields. Their top reasons for leaving were not necessarily pay, but toxic work environments, job insecurity, high levels of innovation, failure to recognize performance, and poor response to the pandemic.[156]

The Great Resignation placed a strain on frontline health workers in particular, and it has caused staffing shortages throughout the medical system. Many sources consulted for this report expressed concern about the shortage of providers. In a regional survey of health officials, 35% of Hampden County respondents cited the limited availability of providers as the most pressing health issue facing their community.

CCIS data help us better understand the impact of the pandemic on those seeking care in 2020.

- Overall, about 75% of respondents needed health care since July 1, 2020 (n=2,049).
- One in six respondents that sought healthcare during the pandemic reported not receiving care due to barriers presented by COVID-19 (17%, n=1,575). Among rural respondents it was similar (18%, n=146).

- Respondents experienced delays in routine care (53%, n=269), urgent care (21%, n=269), or both (10%, n=269).
- The types of barriers reported by respondents included long wait times, appointment cancellations, and potential COVID-19 exposure.
- Among respondents that spoke a language other than English at home, almost 30% worried about getting needed medical care and treatment for themselves or their families (n=470).
- Top Routine Care Visits Delayed:
    a. Primary Care
    b. Oral Dental Care
    c. OB/GYN care (not including prenatal or sexual and reproductive health)
    d. Chronic disease management
    e. Mental Health Care
- Top Five Acute Conditions Delayed:
    1. Pain (e.g., chest pain, stomach pain, headaches, back pain)
    2. Chronic disease flare ups (e.g., diabetes, uncontrolled asthma, cardiovascular conditions, gastroenterology, lupus)
    3. Severe mental health (e.g. stress, depression, nervousness, or anxiety)
    4. Dental Pain
    5. Severe cold or flu symptoms

The percentage of respondents that experienced these delays in needed health care were higher among subgroups that experience other healthcare barriers such as accessibility, discrimination and bias:

- LGBTQIA+ respondents (26%, n=249)
- People with disabilities (23%, n=269)
- Parents overall (19%, n=269)
- Parents of children with special health care needs (29%, n=55)

Our best source of local data on telehealth is the COVID-19 Community Impact Survey (CCIS).

- CCIS data for Hampden County showed that 44% of respondents that needed care received telehealthcare via phone or video.
- Accessing telehealth for care was higher among respondents with disabilities (55%, n=270) – telehealth may increase access to care if there are other accessibility issues with getting in person care.
- However, telehealth did not meet the needs for all respondents that sought care during the pandemic. About 7% of respondents that experienced delayed care due to pandemic challenges reported telehealth related barriers to care such as lack of a private place to have a phone or video call or lack of a stable phone or internet connection (n=228).

Barriers persist that may exacerbate disparities in who receives care. Telehealth depends on access to digital technology. Geographic location and affordability of internet service are two potential factors affecting ability to use such technology. In the national review cited above, concerns about technology access for patients was the second greatest challenge raised in a survey of health providers. More than 70% saw this as a potential barrier to care beyond the pandemic, and more than 60% also raised specific concerns about lack of digital literacy and lack of patient access to broadband internet. These concerns were highest among rural providers. Among CCIS respondents living in rural areas, almost one in four were worried about their internet access (23%, n=184).

Impact of COVID-19 on Basic Needs

Data from the COVID-19 Community Impact Survey provide a snapshot of basic needs and related issues among some service area residents early in the pandemic.

- **Food access:** One in three respondents were worried about getting food for themselves and their family (31%, n=2,036). Almost twice as many respondents of color reported worrying about getting food compared to White respondents (46%, 25% respectively). Similarly, this concern was also higher among respondents who speak languages other than English at home (47%, n=470) and respondents with a disability (43%).
- **Internet Access:** With the switch to remote work and learning, as well as the need for telehealth access, for many during the pandemic, access to the internet to meet basic needs was essential--for example, being able to order food online rather than shop in the supermarket. Almost one in five of respondents were worried about getting internet access (18%, n=2,036). This concern was higher among the following populations:
    - 23% of rural respondents (n=184)
    - 25% of respondents of color (n=360)
    - 28% of respondents with a disability (n=265)
        - 31% of respondents with a cognitive disability (n=117)
    - 24% of respondents who speak a language other than English at home
        - This subgroup was also more likely to report being worried about accessing a computer or tablet (13%, n=470), or cellphone (n=17%, n=470) to meet their basic needs compared to folks who only speak English at home (5% and 6% respectively).
- **Expenses:** 50% of respondents were worried about paying one or more of their upcoming expenses (n=2,036). This was higher among respondents of color (63%), respondents with a disability (62%), respondents that speak a language other than English at home (63%), parents of children with special healthcare needs (66%), and LGBTQIA+ respondents (59%). Worrying about paying upcoming expenses was even higher among respondents with a cognitive disability (73%, n=117) and respondents with a self-care/independent living disability (80%, n=45).
    - **Housing:** Almost 40% of respondents worried about paying their housing related and/or utility expenses (n=2,036)
    - **Medical:** 13% of respondents worried about insurance (health, disability, or life) or medical related expenses (n=2,036)
- **Childcare** needs of parents during the pandemic posed a barrier to staying in the workforce at the same level or at all. Of respondents that experienced a job loss, a reduction in their work hours, or needed leave from work, 30% did so to take care of their children (n=337). These pandemic related job changes or losses may contribute to other respondent concerns with regards to their expenses and meeting the basic needs of their families. Respondents who speak a language other than English at home were more likely to be concerned about getting affordable and available childcare than respondents who only speak English at home (13% and 9% respectively).

Appendix 7. Mercy Vital Signs Cares Report **

Trinity Health System - Vital Signs Report

Location

Mercy Medical Center - Springfield

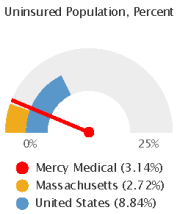
Healthcare Access

Insurance - Uninsured Population

The lack of health insurance is considered a *key driver* of health status.

In the report area 3.14% of the total civilian non-institutionalized population are without health insurance coverage. The rate of uninsured persons in the report area is greater than the state average of 2.72%. This indicator is relevant because lack of insurance is a primary barrier to healthcare access including regular primary care, specialty care, and other health services that contributes to poor health status.

Report Area	Total Population (For Whom Insurance Status is Determined)	Uninsured Population	Uninsured Population, Percent
Mercy Medical Center - Springfield	451,054	14,144	3.14%
MA 01001	16,783	625	3.72%
MA 01003	11,357	437	3.85%
MA 01013	22,515	808	3.59%
MA 01020	30,024	879	2.93%
MA 01022	2,434	24	0.99%
MA 01028	15,823	139	0.88%
MA 01030	11,370	287	2.52%
MA 01040	39,269	1,009	2.57%
MA 01056	20,634	659	3.19%
MA 01075	17,518	292	1.67%
MA 01077	9,694	199	2.05%
MA 01085	41,325	1,078	2.61%
MA 01086	363	0	0.00%
MA 01089	28,496	1,232	4.32%
MA 01095	14,423	139	0.96%
MA 01097	56	0	0.00%
MA 01103	2,300	48	2.09%
MA 01104	23,594	1,156	4.90%
MA 01105	11,634	430	3.70%
MA 01106	15,799	196	1.24%
MA 01107	11,526	677	5.87%
MA 01108	27,012	1,361	5.04%
MA 01109	30,306	1,332	4.40%
MA 01118	14,724	269	1.83%
MA 01119	13,563	348	2.57%
MA 01128	2,541	102	4.01%
MA 01129	6,876	83	1.21%
MA 01151	9,032	342	3.79%
Hampden County, MA	462,644	14,512	3.14%
Hampshire County, MA	159,678	3,565	2.23%
Massachusetts	6,777,468	184,322	2.72%
United States	319,706,872	28,248,613	8.84%



Note: This indicator is compared to the state average.
Data Source: US Census Bureau, American Community Survey. 2015-19. Source geography: Tract

View larger map

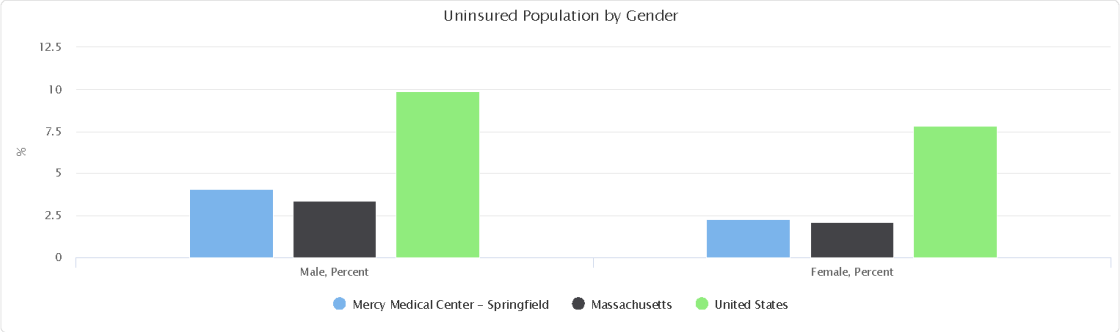
Uninsured Population, Percent by Tract, ACS 2015-19

- Over 20.0%
- 15.1 - 20.0%
- 10.1 - 15.0%
- Under 10.1%
- No Data or Data Suppressed
- Mercy Medical Center - Springfield

Uninsured Population by Gender

This indicator reports the uninsured population by gender.

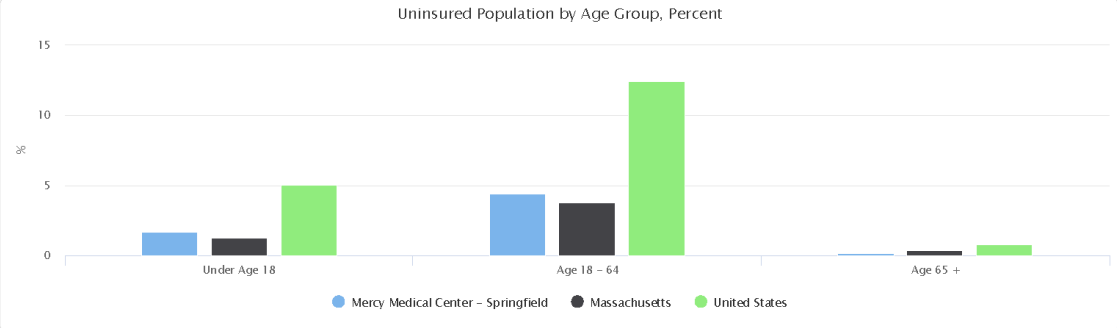
Report Area	Male	Female	Male, Percent	Female, Percent
Mercy Medical Center - Springfield	8,853	5,290	4.10%	2.25%
MA 01001	357	268	4.40%	3.09%
MA 01003	219	218	3.75%	3.95%
MA 01013	477	331	4.51%	2.77%
MA 01020	371	508	2.51%	3.33%
MA 01022	24	0	1.93%	0.00%
MA 01028	124	15	1.69%	0.18%
MA 01030	196	91	3.44%	1.61%
MA 01040	728	281	3.86%	1.38%
MA 01056	453	206	4.41%	1.99%
MA 01075	128	164	1.87%	1.54%
MA 01077	156	43	3.18%	0.90%
MA 01085	668	410	3.37%	1.91%
MA 01086	0	0	0.00%	0.00%
MA 01089	759	473	5.46%	3.24%
MA 01095	59	80	0.88%	1.03%
MA 01097	0	0	0.00%	0.00%
MA 01103	43	5	4.24%	0.39%
MA 01104	726	430	6.67%	3.38%
MA 01105	334	96	5.79%	1.64%
MA 01106	53	143	0.70%	1.74%
MA 01107	509	168	9.07%	2.84%
MA 01108	985	376	7.70%	2.64%
MA 01109	943	389	6.51%	2.46%
MA 01118	172	97	2.31%	1.33%
MA 01119	124	224	1.96%	3.09%
MA 01128	37	65	2.78%	5.36%
MA 01129	58	25	1.78%	0.69%
MA 01151	156	186	3.72%	3.84%
Hampden County, MA	9,202	5,310	4.12%	2.22%
Hampshire County, MA	1,999	1,566	2.68%	1.84%
Massachusetts	110,906	73,416	3.38%	2.10%
United States	15,420,135	12,828,478	9.87%	7.85%



Uninsured Population by Age Group, Percent

This indicator reports the percentage of uninsured population by age group.

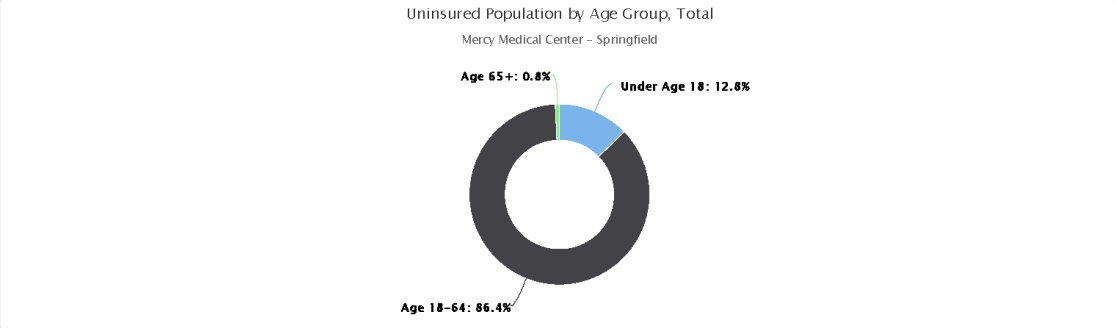
Report Area	Under Age 18	Age 18 - 64	Age 65 +
Mercy Medical Center - Springfield	1.71%	4.44%	0.15%
MA 01001	3.09%	5.32%	0.00%
MA 01003	5.43%	3.44%	0.00%
MA 01013	1.24%	5.26%	0.38%
MA 01020	1.77%	4.33%	0.00%
MA 01022	0.00%	1.79%	0.00%
MA 01028	0.40%	1.38%	0.00%
MA 01030	1.39%	3.69%	0.00%
MA 01040	1.09%	3.65%	0.35%
MA 01056	3.06%	4.26%	0.00%
MA 01075	3.74%	1.61%	0.00%
MA 01077	0.82%	3.28%	0.00%
MA 01085	1.62%	3.62%	0.16%
MA 01086	0.00%	0.00%	No data
MA 01089	2.83%	5.92%	0.00%
MA 01095	0.52%	1.47%	0.00%
MA 01097	0.00%	0.00%	0.00%
MA 01103	0.00%	2.84%	0.00%
MA 01104	1.36%	7.46%	0.79%
MA 01105	0.39%	5.95%	0.00%
MA 01106	1.23%	1.54%	0.45%
MA 01107	2.08%	9.16%	0.44%
MA 01108	2.31%	7.03%	0.61%
MA 01109	0.88%	6.58%	0.13%
MA 01118	2.60%	1.97%	0.00%
MA 01119	0.85%	3.79%	0.00%
MA 01128	7.51%	4.87%	0.00%
MA 01129	0.00%	1.96%	0.00%
MA 01151	1.88%	5.32%	0.00%
Hampden County, MA	1.52%	4.55%	0.14%
Hampshire County, MA	2.07%	2.76%	0.33%
Massachusetts	1.28%	3.82%	0.36%
United States	5.08%	12.42%	0.79%



Uninsured Population by Age Group, Total

This indicator reports the total uninsured population by age group.

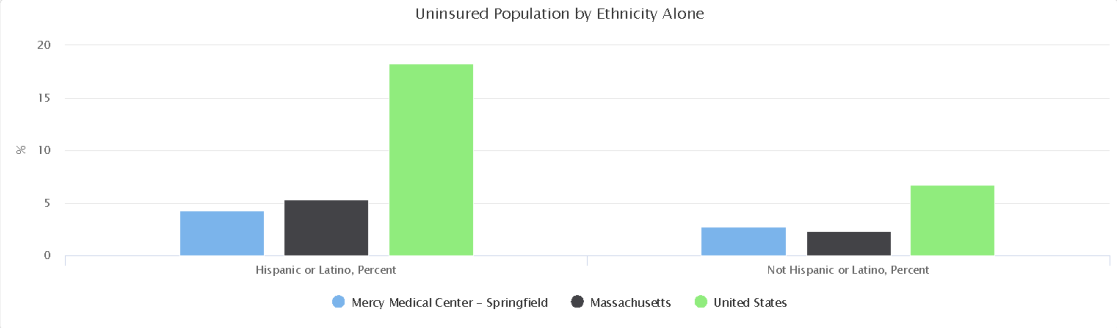
Report Area	Under Age 18	Age 18-64	Age 65+
Mercy Medical Center - Springfield	1,810	12,226	107
MA 01001	101	524	0
MA 01003	127	310	0
MA 01013	68	728	12
MA 01020	104	775	0
MA 01022	0	24	0
MA 01028	15	124	0
MA 01030	34	253	0
MA 01040	108	883	18
MA 01056	130	529	0
MA 01075	112	180	0
MA 01077	17	182	0
MA 01085	140	927	11
MA 01086	0	0	0
MA 01089	173	1,059	0
MA 01095	17	122	0
MA 01097	0	0	0
MA 01103	0	48	0
MA 01104	86	1,044	26
MA 01105	13	417	0
MA 01106	49	133	14
MA 01107	82	590	5
MA 01108	175	1,169	17
MA 01109	71	1,257	4
MA 01118	97	172	0
MA 01119	26	322	0
MA 01128	26	76	0
MA 01129	0	83	0
MA 01151	46	296	0
Hampden County, MA	1,650	12,755	107
Hampshire County, MA	615	2,863	87
Massachusetts	18,771	161,698	3,853
United States	3,945,906	23,910,236	392,471



Uninsured Population by Ethnicity Alone

This indicator reports the uninsured population by ethnicity alone.

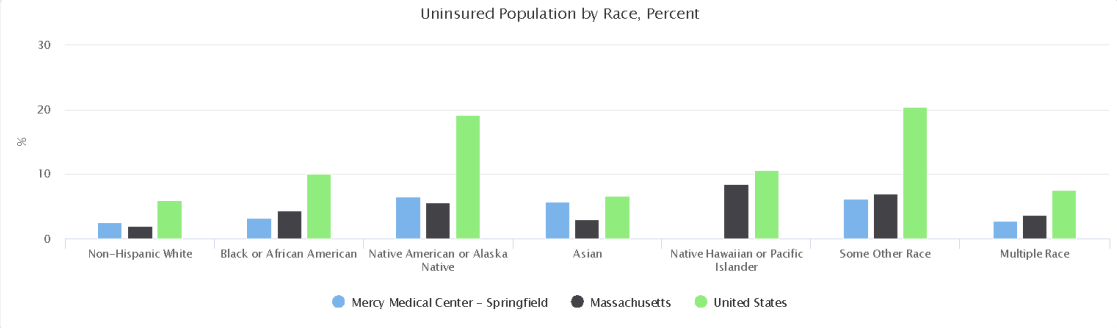
Report Area	Hispanic or Latino	Not Hispanic or Latino	Hispanic or Latino, Percent	Not Hispanic or Latino, Percent
Mercy Medical Center - Springfield	5,016	9,127	4.26%	2.74%
MA 01001	31	594	3.54%	3.73%
MA 01003	46	391	5.91%	3.70%
MA 01013	207	601	3.13%	3.78%
MA 01020	121	758	2.55%	3.00%
MA 01022	8	16	3.65%	0.72%
MA 01028	0	139	0.00%	0.91%
MA 01030	42	245	6.50%	2.28%
MA 01040	444	565	2.05%	3.21%
MA 01056	120	539	8.30%	2.81%
MA 01075	3	289	0.27%	1.76%
MA 01077	0	199	0.00%	2.13%
MA 01085	277	801	7.09%	2.14%
MA 01086	0	0	0.00%	0.00%
MA 01089	266	966	8.78%	3.79%
MA 01095	0	139	0.00%	1.07%
MA 01097	0	0	No data	0.00%
MA 01103	14	34	1.04%	3.58%
MA 01104	610	546	4.49%	5.46%
MA 01105	327	103	4.22%	2.65%
MA 01106	0	196	0.00%	1.33%
MA 01107	647	30	6.97%	1.34%
MA 01108	917	444	7.63%	2.96%
MA 01109	648	684	5.35%	3.76%
MA 01118	164	105	4.63%	0.94%
MA 01119	53	295	1.32%	3.09%
MA 01128	0	102	0.00%	4.95%
MA 01129	0	83	0.00%	1.66%
MA 01151	73	269	2.33%	4.56%
Hampden County, MA	5,043	9,469	4.31%	2.74%
Hampshire County, MA	217	3,348	2.45%	2.22%
Massachusetts	42,746	141,576	5.34%	2.37%
United States	10,515,589	17,733,024	18.22%	6.77%



Uninsured Population by Race, Percent

This indicator reports the percentage of uninsured population by race alone.

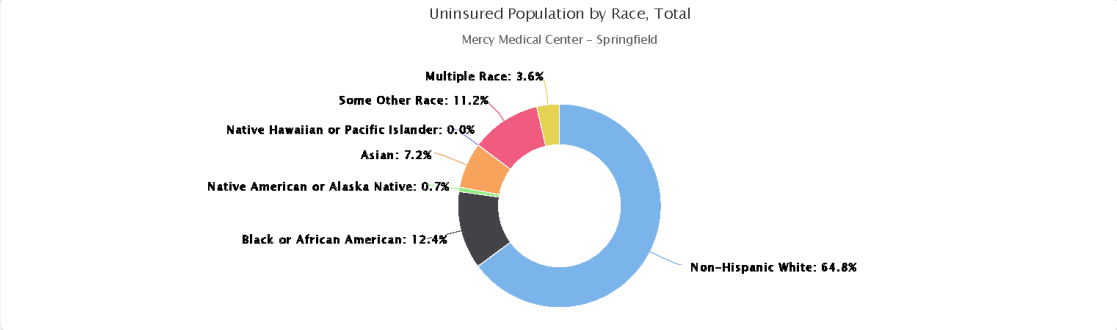
Report Area	Non-Hispanic White	Black or African American	Native American or Alaska Native	Asian	Native Hawaiian or Pacific Islander	Some Other Race	Multiple Race
Mercy Medical Center - Springfield	2.52%	3.23%	6.51%	5.75%	0.00%	6.30%	2.80%
MA 01001	3.93%	0.00%	No data	6.49%	No data	0.00%	3.24%
MA 01003	3.25%	3.29%	0.00%	4.84%	No data	0.00%	6.41%
MA 01013	3.67%	6.73%	0.00%	1.32%	No data	2.99%	0.00%
MA 01020	2.81%	2.89%	0.00%	14.82%	No data	8.09%	3.65%
MA 01022	0.57%	1.47%	No data	0.00%	No data	34.78%	0.00%
MA 01028	1.03%	0.00%	0.00%	0.00%	No data	0.00%	0.00%
MA 01030	2.40%	0.00%	No data	0.00%	No data	80.00%	0.00%
MA 01040	3.18%	4.51%	6.77%	0.00%	0.00%	2.18%	1.98%
MA 01056	2.92%	0.00%	0.00%	0.00%	No data	3.87%	0.00%
MA 01075	1.50%	7.57%	0.00%	4.19%	No data	0.00%	1.59%
MA 01077	2.21%	0.00%	0.00%	0.00%	No data	0.00%	0.00%
MA 01085	2.18%	0.00%	0.00%	2.89%	0.00%	0.00%	0.00%
MA 01086	0.00%	0.00%	No data	No data	No data	No data	0.00%
MA 01089	4.05%	0.00%	0.00%	4.06%	No data	6.16%	0.00%
MA 01095	0.99%	0.00%	No data	0.00%	No data	0.00%	6.39%
MA 01097	0.00%	No data	No data	No data	No data	No data	0.00%
MA 01103	0.00%	1.90%	0.00%	0.00%	No data	1.52%	43.24%
MA 01104	3.36%	3.21%	0.00%	49.89%	No data	10.43%	1.37%
MA 01105	3.96%	1.84%	0.00%	0.00%	No data	4.51%	4.80%
MA 01106	0.86%	0.00%	0.00%	8.68%	No data	0.00%	0.00%
MA 01107	2.38%	0.81%	9.59%	0.00%	No data	17.60%	0.00%
MA 01108	2.51%	3.55%	39.53%	1.97%	No data	3.26%	12.59%
MA 01109	0.93%	5.45%	0.00%	0.00%	0.00%	3.36%	2.44%
MA 01118	0.91%	0.46%	28.57%	0.00%	No data	0.00%	0.00%
MA 01119	2.89%	2.60%	0.00%	1.89%	No data	12.64%	6.28%
MA 01128	6.33%	0.00%	0.00%	0.00%	No data	0.00%	0.00%
MA 01129	1.91%	0.00%	0.00%	0.00%	No data	0.00%	6.79%
MA 01151	3.71%	2.49%	No data	46.07%	No data	0.00%	0.00%
Hampden County, MA	2.55%	3.33%	6.55%	5.85%	0.00%	6.30%	2.61%
Hampshire County, MA	1.87%	10.01%	5.69%	4.36%	0.00%	0.00%	1.09%
Massachusetts	2.04%	4.41%	5.70%	3.08%	8.52%	6.99%	3.69%
United States	5.94%	10.07%	19.23%	6.73%	10.63%	20.38%	7.67%



Uninsured Population by Race, Total

This indicator reports the total uninsured population by race alone.

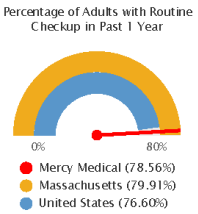
Report Area	Non-Hispanic White	Black or African American	Native American or Alaska Native	Asian	Native Hawaiian or Pacific Islander	Some Other Race	Multiple Race
Mercy Medical Center - Springfield	6,935	1,326	74	775	0	1,197	387
MA 01001	584	0	0	31	0	0	10
MA 01003	252	16	0	100	0	0	23
MA 01013	524	84	0	7	0	48	0
MA 01020	655	31	0	103	0	67	23
MA 01022	9	7	0	0	0	8	0
MA 01028	139	0	0	0	0	0	0
MA 01030	245	0	0	0	0	28	0
MA 01040	503	78	9	0	0	37	20
MA 01056	539	0	0	0	0	17	0
MA 01075	223	23	0	32	0	0	11
MA 01077	199	0	0	0	0	0	0
MA 01085	767	0	0	34	0	0	0
MA 01086	0	0	0	0	0	0	0
MA 01089	919	0	0	47	0	39	0
MA 01095	122	0	0	0	0	0	17
MA 01097	0	0	0	0	0	0	0
MA 01103	0	7	0	0	0	9	32
MA 01104	244	74	0	228	0	311	17
MA 01105	52	51	0	0	0	76	22
MA 01106	115	0	0	81	0	0	0
MA 01107	30	11	7	0	0	398	0
MA 01108	206	174	34	30	0	79	125
MA 01109	59	625	0	0	0	46	41
MA 01118	69	12	24	0	0	0	0
MA 01119	189	62	0	9	0	34	35
MA 01128	102	0	0	0	0	0	0
MA 01129	68	0	0	0	0	0	15
MA 01151	121	66	0	82	0	0	0
Hampden County, MA	7,397	1,361	74	652	0	1,197	357
Hampshire County, MA	2,494	411	17	369	0	0	57
Massachusetts	98,909	22,554	829	13,895	239	19,769	8,159
United States	11,541,949	4,024,678	515,950	1,200,568	62,249	3,230,689	813,166



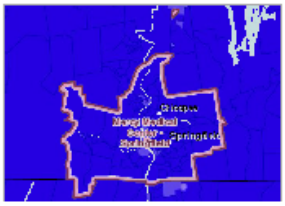
Recent Primary Care Visit

This indicator reports the percentage of adults age 18 and older with one or more visits to a doctor for routine checkup within the past one year.

Report Area	Total Population (2019)	Percentage of Adults with Routine Checkup in Past 1 Year
Mercy Medical Center - Springfield	451,309	78.56%
MA 01001	16,769	80.70%
MA 01003	10,372	70.90%
MA 01013	23,188	77.60%
MA 01020	29,668	79.10%
MA 01022	2,451	79.70%
MA 01028	15,720	81.30%
MA 01030	11,669	79.50%
MA 01040	39,880	77.60%
MA 01056	21,103	78.60%
MA 01075	17,527	80.30%
MA 01077	9,502	79.60%
MA 01085	41,117	78.50%
MA 01086	687	71.60%
MA 01089	28,391	78.80%
MA 01095	14,319	81.70%
MA 01097	111	74.90%
MA 01103	2,479	76.30%
MA 01104	22,865	77.80%
MA 01105	12,350	75.90%
MA 01106	16,021	82.50%
MA 01107	11,611	74.70%
MA 01108	26,688	77.00%
MA 01109	30,250	78.90%
MA 01118	14,071	79.70%
MA 01119	14,152	78.40%
MA 01128	2,631	79.80%
MA 01129	7,019	80.20%
MA 01151	8,698	77.00%
Hampden County, MA	466,372	78.60%
Hampshire County, MA	160,830	79.20%
Massachusetts	6,892,503	79.91%
United States	328,239,523	76.60%



Note: This indicator is compared to the state average.
Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the 500 Cities Data Portal. 2019. Source geography: Tract



View larger map

Primary Care Physician Visit, Percentage of Adults Seen in Past 1 Year by Tract, CDC BRFSS PLACES Project 2019

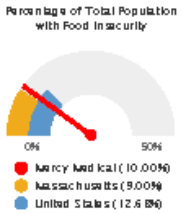
- Over 76%
- 72.1 - 76.0%
- 68.1 - 72.0%
- Under 68.1%
- No Data or Data Suppressed
- Mercy Medical Center - Springfield

Economic Stability

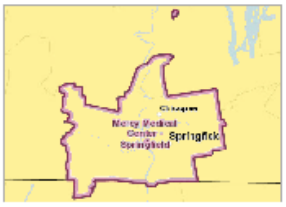
Food Insecurity Rate

This indicator reports the estimated percentage of the population that experienced food insecurity at some point during the report year. Food insecurity is the household-level economic and social condition of limited or uncertain access to adequate food.

Report Area	Total Population	Food Insecure Population, Total	Food Insecurity Rate
Mercy Medical Center - Springfield	456,718.00	45,558.00	10.00%
MA 01001	16,964	1,696	10.00%
MA 01003	10,545	1,012	9.60%
MA 01013	23,458	2,345	10.00%
MA 01020	30,014	3,001	10.00%
MA 01022	2,479	247	10.00%
MA 01028	15,903	1,590	10.00%
MA 01030	11,805	1,180	10.00%
MA 01040	40,345	4,034	10.00%
MA 01056	21,349	2,134	10.00%
MA 01075	17,820	1,710	9.60%
MA 01077	9,612	961	10.00%
MA 01085	41,597	4,159	10.00%
MA 01086	694	69	10.00%
MA 01089	28,722	2,872	10.00%
MA 01095	14,486	1,448	10.00%
MA 01097	112	11	10.00%
MA 01103	2,508	250	10.00%
MA 01104	23,131	2,313	10.00%
MA 01105	12,494	1,249	10.00%
MA 01106	16,207	1,620	10.00%
MA 01107	11,746	1,174	10.00%
MA 01108	26,999	2,699	10.00%
MA 01109	30,603	3,060	10.00%
MA 01118	14,235	1,423	10.00%
MA 01119	14,317	1,431	10.00%
MA 01128	2,661	266	10.00%
MA 01129	7,101	710	10.00%
MA 01151	8,799	879	10.00%
Hampden County, MA	468,900	46,890	10.00%
Hampshire County, MA	160,729	15,430	9.60%
Massachusetts	6,845,444	616,090	9.00%
United States	325,717,422	41,133,950	12.63%



Note: This indicator is compared to the state average.
Data Source: Feeding America, 2017. Source geography: County



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Food Insecure Population, Percent by County, Feeding America 2017

- Over 18.0%
- 15.1 - 18.0%
- 12.1 - 15.0%
- Under 12.1%
- Mercy Medical Center - Springfield

Food Insecurity - Food Insecure Children

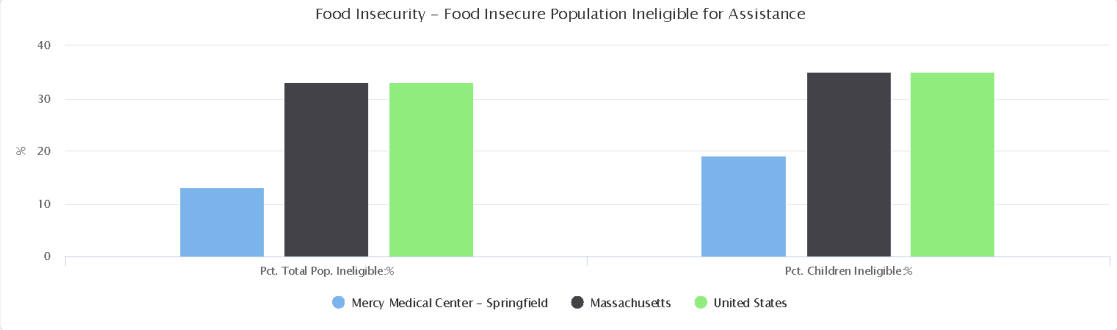
This indicator reports the estimated percentage of the population under age 18 that experienced food insecurity at some point during the report year. Food insecurity is the household-level economic and social condition of limited or uncertain access to adequate food.

Report Area	Population Under Age 18	Food Insecure Children, Total	Child Food Insecurity Rate
Mercy Medical Center - Springfield	99,419	15,032	15.10%
Hampden County, MA	104,052	15,920	15.30%
Hampshire County, MA	24,732	2,770	11.20%
140,115	25,196	18.00%	
United States	73,641,039	13,411,620	18.21%

Food Insecurity - Food Insecure Population Ineligible for Assistance

This indicator reports the estimated percentage of the total population and the population under age 18 that experienced food insecurity at some point during the report year, but are ineligible for State or Federal nutrition assistance. Food insecurity is the household-level economic and social condition of limited or uncertain access to adequate food. Assistance eligibility is determined based on household income of the food insecure households relative to the maximum income-to-poverty ratio for assistance programs (SNAP, WIC, school meals, CSFP and TEFAP).

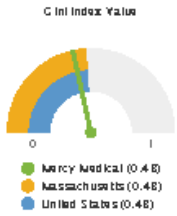
Report Area	Food Insecure Population	Food Insecure Population Ineligible for Assistance, Percent	Food Insecure Children	Food Insecure Children Ineligible for Assistance, Percent
Mercy Medical Center - Springfield	45,558	13.00%	15,032	19.00%
Hampden County, MA	46,890	11.00%	15,920	18.00%
Hampshire County, MA	15,430	42.00%	2,770	38.00%
Massachusetts	616,090	33.00%	159,950	35.00%
United States	41,133,950	33.00%	13,411,620	35.00%



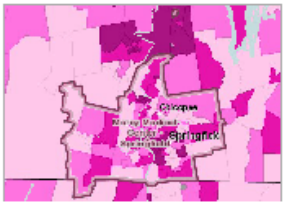
Income - Income Inequality (GINI Index)

This indicator reports income inequality using the Gini coefficient. Gini index values range between zero and one. A value of one indicates perfect inequality where only one house-hold has any income. A value of zero indicates perfect equality, where all households have equal income.
Index values are acquired from the 2015-19 American Community Survey and are not available for custom report areas or multi-county areas.

Report Area	Total Households	Gini Index Value
Mercy Medical Center - Springfield	170,082	0.43
MA 01001	7,413	0.41
MA 01003	42	0.60
MA 01013	9,140	0.46
MA 01020	12,798	0.40
MA 01022	1,154	0.34
MA 01028	5,958	0.44
MA 01030	4,416	0.42
MA 01040	15,278	0.50
MA 01056	7,925	0.40
MA 01075	6,616	0.44
MA 01077	3,804	0.45
MA 01085	15,551	0.43
MA 01086	0	0.00
MA 01089	12,605	0.47
MA 01095	5,253	0.44
MA 01097	20	0.30
MA 01103	1,481	0.50
MA 01104	8,910	0.49
MA 01105	4,991	0.53
MA 01106	5,769	0.44
MA 01107	3,849	0.50
MA 01108	9,690	0.47
MA 01109	9,304	0.47
MA 01118	5,692	0.42
MA 01119	4,900	0.46
MA 01128	1,085	0.42
MA 01129	2,864	0.43
MA 01151	3,430	0.41
Hampden County, MA	179,423	0.47
Hampshire County, MA	58,838	0.45
Massachusetts	2,617,497	0.48
United States	120,756,048	0.48



Note: This indicator is compared to the state average.
Data Source: US Census Bureau, American Community Survey, 2015-19. Source geography: Tract



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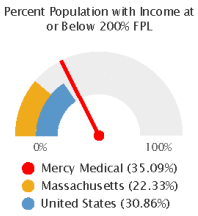
Income Inequality (GINI), Index Value by Tract, ACS 2015-19

- Over 0.460
- 0.431 - 0.460
- 0.401 - 0.430
- Under 0.401
- No Data or Data Suppressed
- Mercy Medical Center - Springfield

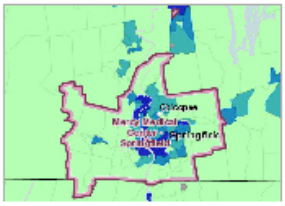
Poverty - Population Below 200% FPL

In the report area 35.09% or 150,460.00 individuals are living in households with income below 200% of the Federal Poverty Level (FPL). This indicator is relevant because poverty creates barriers to access including health services, healthy food, and other necessities that contribute to poor health status.

Report Area	Total Population	Population with Income at or Below 200% FPL	Percent Population with Income at or Below 200% FPL
Mercy Medical Center - Springfield	428,774.00	150,460.00	35.09%
MA 01001	16,639	3,473	20.87%
MA 01003	86	70	81.40%
MA 01013	22,076	9,418	42.66%
MA 01020	29,957	7,811	26.07%
MA 01022	2,586	975	37.70%
MA 01028	15,823	2,805	17.73%
MA 01030	11,335	1,798	15.86%
MA 01040	39,099	19,330	49.44%
MA 01056	20,516	3,793	18.49%
MA 01075	15,216	3,316	21.79%
MA 01077	9,648	1,883	19.52%
MA 01085	38,655	9,006	23.30%
MA 01086	No data	No data	No data
MA 01089	28,457	8,367	29.40%
MA 01095	14,386	1,481	10.29%
MA 01097	56	40	71.43%
MA 01103	2,332	1,472	63.12%
MA 01104	23,582	12,517	53.08%
MA 01105	11,500	8,846	76.92%
MA 01106	15,331	907	5.92%
MA 01107	11,463	8,012	69.89%
MA 01108	26,801	13,525	50.46%
MA 01109	27,181	14,819	54.52%
MA 01118	14,708	4,322	29.39%
MA 01119	12,638	5,282	41.79%
MA 01128	2,541	590	23.22%
MA 01129	6,869	1,961	28.55%
MA 01151	9,032	4,475	49.55%
Hampden County, MA	453,636	155,307	34.24%
Hampshire County, MA	138,168	33,610	24.33%
Massachusetts	6,615,375	1,476,988	22.33%
United States	316,715,051	97,747,992	30.86%



Note: This indicator is compared to the state average.
Data Source: US Census Bureau, American Community Survey. 2015-19. Source geography: Tract



View larger map

Population Below200% Poverty Level, Percent by Tract, ACS 2015-19

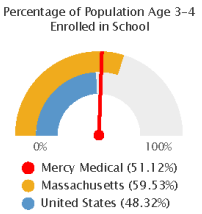
- Over 50.0%
- 38.1 - 50.0%
- 26.1 - 38.0%
- Under 26.1%
- No Data or Data Suppressed
- Mercy Medical Center - Springfield

Education

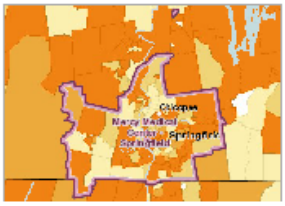
Access - Preschool Enrollment (Children Age 3-4)

This indicator reports the percentage of the population age 3-4 that is enrolled in school. This indicator helps identify places where pre-school opportunities are either abundant or lacking in the educational system.

Report Area	Population Age 3-4	Population Age 3-4 Enrolled in School	Population Age 3-4 Enrolled in School, Percent
Mercy Medical Center - Springfield	9,759	4,988	51.12%
MA 01001	497	277	55.73%
MA 01003	0	0	0.00%
MA 01013	472	182	38.56%
MA 01020	507	164	32.35%
MA 01022	35	11	31.43%
MA 01028	415	236	56.87%
MA 01030	321	189	58.88%
MA 01040	1,243	590	47.47%
MA 01056	465	274	58.92%
MA 01075	336	123	36.61%
MA 01077	187	79	42.25%
MA 01085	836	406	48.56%
MA 01086	0	0	0.00%
MA 01089	477	264	55.35%
MA 01095	155	79	50.97%
MA 01097	0	0	0.00%
MA 01103	19	19	100.00%
MA 01104	661	382	57.79%
MA 01105	328	88	26.83%
MA 01106	291	182	62.54%
MA 01107	329	212	64.44%
MA 01108	496	302	60.89%
MA 01109	655	382	58.32%
MA 01118	334	197	58.98%
MA 01119	387	127	32.82%
MA 01128	14	14	100.00%
MA 01129	48	48	100.00%
MA 01151	252	159	63.10%
Hampden County, MA	10,349	5,267	50.89%
Hampshire County, MA	2,525	1,642	65.03%
Massachusetts	149,802	89,178	59.53%
United States	8,151,928	3,938,693	48.32%



Note: This indicator is compared to the state average.
Data Source: US Census Bureau, American Community Survey. 2015-19. Source geography: Tract



View larger map

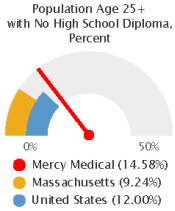
Enrollment in School, Children (Age 3-4), Percent by Tract, ACS 2015-19

- Over 55.0%
- 45.1 - 55.0%
- 35.1 - 45.0%
- Under 35.1%
- No Population Age 3-4 Reported
- No Data or Data Suppressed
- Mercy Medical Center - Springfield

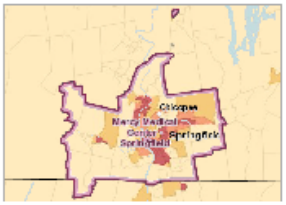
Attainment - No High School Diploma

Within the report area there are 43,669 persons aged 25 and older without a high school diploma (or equivalency) or higher. This represents 14.58% of the total population aged 25 and older. This indicator is relevant because educational attainment is linked to positive health outcomes (Freudenberg & Ruglis, 2007).

Report Area	Total Population Age 25+	Population Age 25+ with No High School Diploma	Population Age 25+ with No High School Diploma, Percent
Mercy Medical Center - Springfield	299,470	43,669	14.58%
MA 01001	13,291	1,016	7.64%
MA 01003	105	25	23.81%
MA 01013	15,026	2,552	16.98%
MA 01020	22,258	2,795	12.56%
MA 01022	1,647	66	4.01%
MA 01028	11,436	700	6.12%
MA 01030	8,307	427	5.14%
MA 01040	26,855	5,529	20.59%
MA 01056	15,838	2,751	17.37%
MA 01075	11,682	622	5.32%
MA 01077	7,172	542	7.56%
MA 01085	27,917	2,876	10.30%
MA 01086	No data	No data	No data
MA 01089	20,231	2,107	10.41%
MA 01095	10,687	576	5.39%
MA 01097	23	6	26.09%
MA 01103	1,836	411	22.39%
MA 01104	15,173	3,839	25.30%
MA 01105	7,428	2,444	32.90%
MA 01106	11,149	510	4.57%
MA 01107	6,239	2,530	40.55%
MA 01108	16,811	4,086	24.31%
MA 01109	16,601	3,428	20.65%
MA 01118	10,121	1,025	10.13%
MA 01119	8,692	1,009	11.61%
MA 01128	2,074	164	7.91%
MA 01129	4,957	404	8.15%
MA 01151	5,780	1,205	20.85%
Hampden County, MA	317,450	45,075	14.20%
Hampshire County, MA	100,133	5,257	5.25%
Massachusetts	4,781,683	441,944	9.24%
United States	220,622,076	26,472,261	12.00%



Note: This indicator is compared to the state average.
Data Source: US Census Bureau, American Community Survey. 2015-19. Source geography: Tract



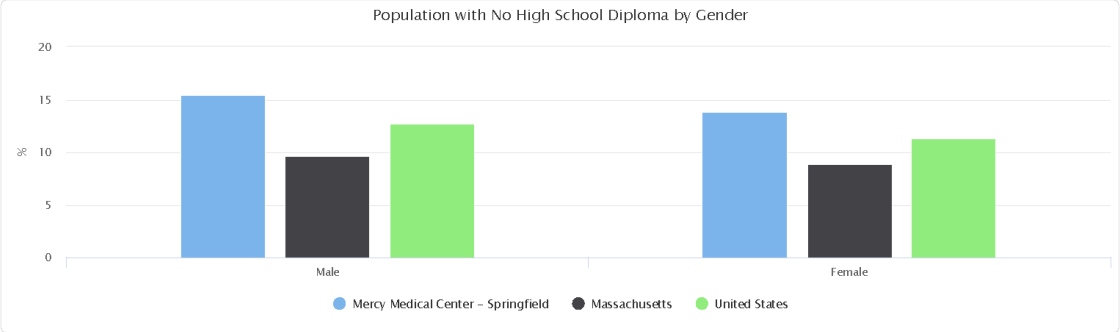
View larger map

Population with No High School Diploma (Age 25+), Percent by Tract, ACS 2015-19

- Over 21.0%
- 16.1 - 21.0%
- 11.1 - 16.0%
- Under 11.1%
- No Data or Data Suppressed
- Mercy Medical Center - Springfield

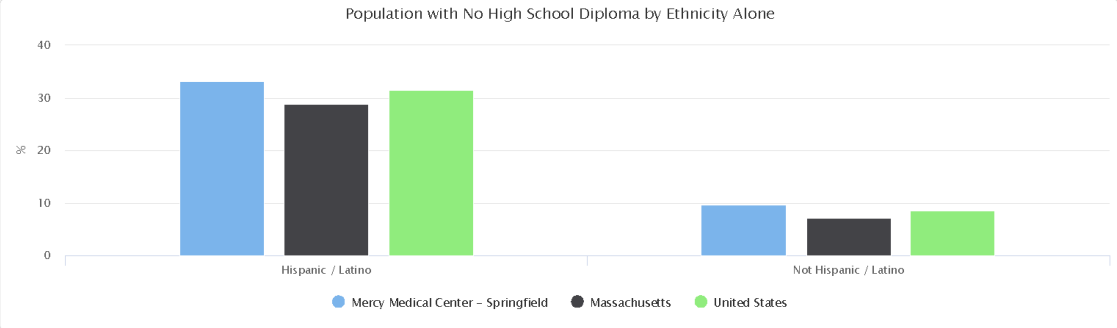
Population with No High School Diploma by Gender

Report Area	Male	Female	Male, Percent	Female, Percent
Mercy Medical Center - Springfield	21,575	22,093	15.44%	13.83%
MA 01001	441	575	7.27%	7.96%
MA 01003	0	25	0.00%	35.21%
MA 01013	1,133	1,419	16.95%	17.01%
MA 01020	1,585	1,210	14.70%	10.54%
MA 01022	12	54	1.55%	6.18%
MA 01028	252	448	4.90%	7.11%
MA 01030	237	190	5.86%	4.46%
MA 01040	2,629	2,900	21.02%	20.21%
MA 01056	1,555	1,196	19.23%	15.43%
MA 01075	247	375	4.76%	5.77%
MA 01077	287	255	8.03%	7.09%
MA 01085	1,320	1,556	10.05%	10.52%
MA 01086	0	0	No data	No data
MA 01089	1,407	700	14.39%	6.70%
MA 01095	240	336	4.96%	5.75%
MA 01097	6	0	100.00%	0.00%
MA 01103	113	298	14.77%	27.82%
MA 01104	1,845	1,994	26.38%	24.38%
MA 01105	1,078	1,366	30.82%	34.76%
MA 01106	248	262	4.63%	4.52%
MA 01107	1,192	1,338	42.59%	38.90%
MA 01108	2,165	1,921	27.31%	21.63%
MA 01109	1,742	1,686	23.94%	18.08%
MA 01118	463	562	10.03%	10.21%
MA 01119	573	436	14.78%	9.06%
MA 01128	102	62	9.43%	6.25%
MA 01129	142	262	6.28%	9.72%
MA 01151	547	658	21.65%	20.23%
Hampden County, MA	22,466	22,609	15.08%	13.42%
Hampshire County, MA	2,482	2,775	5.29%	5.21%
Massachusetts	219,045	222,899	9.62%	8.90%
United States	13,534,549	12,937,712	12.69%	11.35%



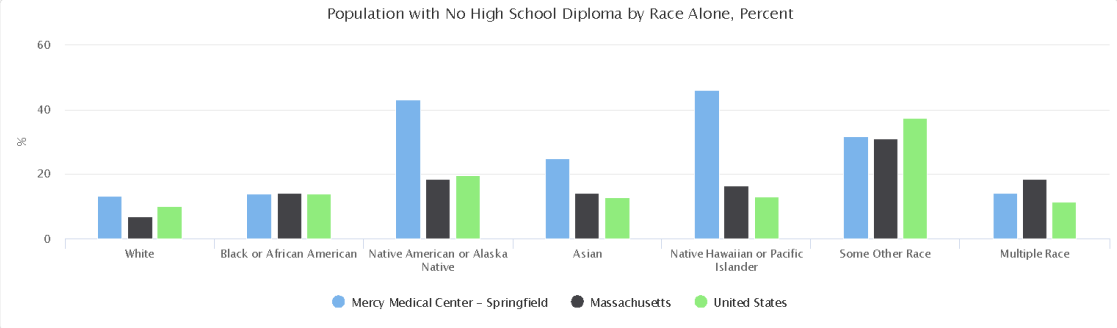
Population with No High School Diploma by Ethnicity Alone

Report Area	Hispanic or Latino	Not Hispanic or Latino	Hispanic or Latino, Percent	Not Hispanic or Latino, Percent
Mercy Medical Center - Springfield	20,727	22,955	33.00%	9.70%
MA 01001	92	924	24.15%	7.16%
MA 01003	0	25	0.00%	24.27%
MA 01013	867	1,685	28.20%	14.10%
MA 01020	584	2,211	21.84%	11.29%
MA 01022	0	66	0.00%	4.12%
MA 01028	28	672	9.36%	6.03%
MA 01030	58	369	16.25%	4.64%
MA 01040	4,095	1,434	34.35%	9.60%
MA 01056	411	2,340	38.85%	15.83%
MA 01075	0	622	0.00%	5.51%
MA 01077	0	542	0.00%	7.74%
MA 01085	674	2,202	32.02%	8.53%
MA 01086	0	0	No data	No data
MA 01089	310	1,797	16.94%	9.77%
MA 01095	13	563	1.58%	5.71%
MA 01097	0	6	No data	26.09%
MA 01103	363	48	37.19%	5.58%
MA 01104	2,763	1,076	36.15%	14.29%
MA 01105	1,936	508	42.29%	17.82%
MA 01106	126	384	21.99%	3.63%
MA 01107	2,335	195	48.24%	13.94%
MA 01108	2,420	1,666	38.04%	15.94%
MA 01109	2,246	1,182	36.80%	11.26%
MA 01118	306	719	19.34%	8.42%
MA 01119	508	501	23.31%	7.69%
MA 01128	35	129	11.11%	7.33%
MA 01129	84	320	9.47%	7.86%
MA 01151	460	745	29.17%	17.73%
Hampden County, MA	20,781	24,294	33.00%	9.55%
Hampshire County, MA	777	4,480	18.41%	4.67%
Massachusetts	131,119	310,825	28.87%	7.18%
United States	10,420,909	16,051,352	31.33%	8.57%



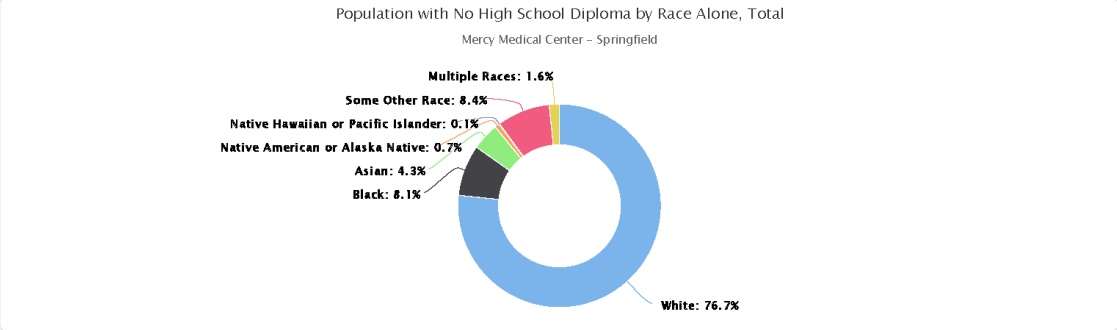
Population with No High School Diploma by Race Alone, Percent

Report Area	White	Black or African American	Native American or Alaska Native	Asian	Native Hawaiian or Pacific Islander	Some Other Race	Multiple Race
Mercy Medical Center - Springfield	13.44%	13.97%	43.16%	24.86%	46.05%	31.81%	14.44%
MA 01001	7.52%	5.05%	100.00%	5.54%	No data	46.15%	16.00%
MA 01003	0.00%	96.15%	0.00%	0.00%	No data	No data	0.00%
MA 01013	15.83%	17.45%	0.00%	22.94%	No data	25.71%	58.78%
MA 01020	12.21%	20.17%	0.00%	10.37%	No data	22.96%	0.00%
MA 01022	4.14%	4.98%	No data	0.00%	No data	No data	0.00%
MA 01028	5.32%	6.45%	0.00%	21.99%	No data	10.00%	13.22%
MA 01030	4.85%	23.97%	No data	0.00%	No data	20.00%	0.00%
MA 01040	19.93%	25.97%	16.95%	30.00%	100.00%	24.05%	21.43%
MA 01056	17.17%	39.78%	No data	0.00%	No data	30.48%	6.12%
MA 01075	5.36%	8.62%	No data	8.15%	No data	0.00%	0.00%
MA 01077	6.79%	0.00%	100.00%	24.83%	No data	0.00%	0.00%
MA 01085	8.70%	28.08%	0.00%	45.00%	0.00%	32.55%	9.01%
MA 01086	No data	No data	No data	No data	No data	No data	No data
MA 01089	9.44%	10.69%	0.00%	22.18%	No data	28.36%	14.47%
MA 01095	5.33%	0.00%	No data	37.35%	No data	0.00%	0.00%
MA 01097	26.09%	No data	No data	No data	No data	No data	No data
MA 01103	23.94%	10.31%	0.00%	0.00%	No data	27.69%	35.14%
MA 01104	25.87%	18.07%	85.00%	13.35%	No data	30.93%	13.29%
MA 01105	39.05%	18.08%	0.00%	18.75%	No data	35.33%	22.50%
MA 01106	3.87%	0.00%	100.00%	13.71%	No data	0.00%	14.45%
MA 01107	39.60%	29.32%	50.94%	0.00%	No data	47.84%	57.38%
MA 01108	22.01%	18.70%	87.21%	41.56%	No data	39.18%	9.49%
MA 01109	27.91%	11.65%	28.16%	31.34%	No data	36.30%	13.26%
MA 01118	9.25%	2.58%	88.10%	26.04%	No data	35.95%	5.30%
MA 01119	12.28%	1.19%	0.00%	49.68%	No data	12.50%	0.00%
MA 01128	3.84%	9.76%	100.00%	60.94%	No data	0.00%	32.43%
MA 01129	9.29%	3.59%	No data	13.55%	No data	0.00%	0.00%
MA 01151	21.58%	18.44%	No data	0.00%	No data	30.51%	28.15%
Hampden County, MA	13.04%	13.75%	43.94%	25.98%	43.75%	31.80%	14.67%
Hampshire County, MA	4.92%	5.68%	12.78%	8.82%	13.85%	26.12%	3.08%
Massachusetts	7.15%	14.45%	18.50%	14.43%	16.31%	31.08%	18.44%
United States	10.10%	14.03%	19.69%	12.88%	13.01%	37.31%	11.53%



Population with No High School Diploma by Race Alone, Total

Report Area	White	Black	Asian	Native American or Alaska Native	Native Hawaiian or Pacific Islander	Some Other Race	Multiple Races
Mercy Medical Center - Springfield	33,473	3,550	1,897	315	35	3,683	714
MA 01001	929	19	20	6	0	18	24
MA 01003	0	25	0	0	0	0	0
MA 01013	2,056	148	53	0	0	208	87
MA 01020	2,461	143	59	0	0	132	0
MA 01022	54	12	0	0	0	0	0
MA 01028	559	20	104	0	0	1	16
MA 01030	385	35	0	0	0	7	0
MA 01040	4,727	316	66	10	35	285	90
MA 01056	2,579	74	0	0	0	89	9
MA 01075	592	15	15	0	0	0	0
MA 01077	467	0	37	38	0	0	0
MA 01085	2,268	89	360	0	0	138	21
MA 01086	No data	No data	No data	No data	No data	No data	No data
MA 01089	1,690	77	163	0	0	133	44
MA 01095	545	0	31	0	0	0	0
MA 01097	6	0	0	0	0	0	0
MA 01103	255	27	0	0	0	103	26
MA 01104	2,839	288	43	34	0	591	44
MA 01105	1,737	316	6	0	0	331	54
MA 01106	396	0	81	8	0	0	25
MA 01107	1,662	173	0	27	0	598	70
MA 01108	2,396	538	443	75	0	599	35
MA 01109	2,095	845	63	29	0	302	94
MA 01118	706	37	138	74	0	55	15
MA 01119	816	17	155	0	0	21	0
MA 01128	64	24	39	13	0	0	24
MA 01129	354	29	21	0	0	0	0
MA 01151	808	287	0	0	0	72	38
Hampden County, MA	34,773	3,528	1,977	330	35	3,696	736
Hampshire County, MA	4,497	129	308	23	9	233	58
Massachusetts	276,259	47,656	44,381	1,810	274	53,404	18,160
United States	16,711,016	3,704,565	1,636,415	336,227	49,291	3,510,814	523,933



Social Support & Community Context

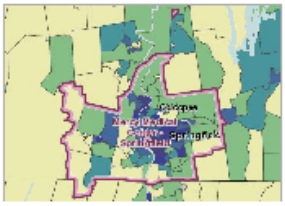
Social Vulnerability Index

The degree to which a community exhibits certain social conditions, including high poverty, low percentage of vehicle access, or crowded households, may affect that community's ability to prevent human suffering and financial loss in the event of disaster. These factors describe a community's social vulnerability.

The social vulnerability index is a measure of the degree of social vulnerability in counties and neighborhoods across the United States, where a higher score indicates higher vulnerability. The report area has a social vulnerability index score of 0.57, which is which is greater than the state average of 0.40.

Report Area	Total Population	Socioeconomic Theme Score	Household Composition Theme Score	Minority Status Theme Score	Housing & Transportation Theme Score	Social Vulnerability Index Score
Mercy Medical Center - Springfield	457,251	0.57	0.61	0.59	0.51	**0.57**
MA 01001	17,252	0.32	0.50	0.30	0.49	0.36
MA 01003	11,211	0.95	0.00	0.34	0.75	0.50
MA 01013	22,754	0.76	0.70	0.67	0.59	0.75
MA 01020	30,518	0.51	0.62	0.51	0.39	0.50
MA 01022	2,398	0.44	0.42	0.35	0.42	0.39
MA 01028	16,200	0.19	0.62	0.37	0.34	0.28
MA 01030	11,492	0.20	0.39	0.36	0.22	0.20
MA 01040	40,376	0.69	0.71	0.76	0.71	0.75
MA 01056	21,336	0.45	0.45	0.47	0.35	0.40
MA 01075	17,776	0.39	0.35	0.24	0.39	0.28
MA 01077	9,727	0.25	0.62	0.24	0.34	0.29
MA 01085	41,546	0.38	0.51	0.45	0.55	0.45
MA 01086	753	0.19	0.00	0.26	0.29	0.03
MA 01089	28,666	0.49	0.39	0.52	0.48	0.47
MA 01095	14,719	0.07	0.46	0.35	0.38	0.21
MA 01097	109	0.29	0.20	0.15	0.23	0.14
MA 01103	2,379	0.96	0.77	0.96	0.77	0.96
MA 01104	23,474	0.85	0.92	0.87	0.49	0.85
MA 01105	12,157	0.96	0.89	0.92	0.93	0.99
MA 01106	16,068	0.10	0.36	0.38	0.29	0.18
MA 01107	11,982	0.96	0.92	0.95	0.76	0.95
MA 01108	27,603	0.85	0.83	0.85	0.47	0.83
MA 01109	30,168	0.89	0.73	0.84	0.77	0.90
MA 01118	14,715	0.46	0.79	0.60	0.41	0.54
MA 01119	13,608	0.70	0.75	0.72	0.57	0.75
MA 01128	2,774	0.38	0.52	0.56	0.36	0.41
MA 01129	6,685	0.42	0.62	0.63	0.26	0.43
MA 01151	8,804	0.87	0.91	0.81	0.45	0.85
Hampden County, MA	469,116	0.61	0.66	0.89	0.84	0.82
Hampshire County, MA	161,159	0.25	0.02	0.57	0.69	0.23
Massachusetts	6,830,193	0.24	0.15	0.81	0.73	0.40
United States	322,903,030	0.30	0.32	0.76	0.62	0.40

Note: This indicator is compared to the state average.
Data Source: Centers for Disease Control and Prevention and the National Center for Health Statistics, CDC - GRASP. 2018. Source geography: Tract



View larger map

Social Vulnerability Index by Tract, CDC 2018

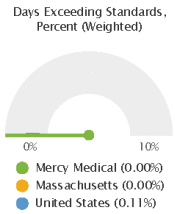
- 0.81 - 1.00 (Highest Vulnerability)
- 0.61 - 0.80
- 0.41 - 0.60
- 0.21 - 0.40
- 0.00 - 0.20 (Lowest Vulnerability)
- No Data or Data Suppressed
- Mercy Medical Center - Springfield

Neighborhood & Physical Environment

Air Quality - Particulate Matter 2.5

This indicator reports the percentage of days with particulate matter 2.5 levels above the National Ambient Air Quality Standard (35 micrograms per cubic meter) per year, calculated using data collected by monitoring stations and modeled to include counties where no monitoring stations occur. This indicator is relevant because poor air quality contributes to respiratory issues and overall poor health.

Report Area	Total Population (2010)	Average Daily Ambient Particulate Matter 2.5	Days Exceeding Emissions Standards	Days Exceeding Standards, Percent (Crude)	Days Exceeding Standards, Percent (Weighted)
Mercy Medical Center - Springfield	451,309	6.20	0	0.00	0.00%
MA 01001	16,809	14.75	0	0.00	0.00%
MA 01003	10,372	5.03	0	0.00	0.00%
MA 01013	23,188	24.47	0	0.00	0.00%
MA 01020	29,668	31.08	0	0.00	0.00%
MA 01022	2,451	2.72	0	0.00	0.00%
MA 01028	15,720	15.48	0	0.00	0.00%
MA 01030	11,629	10.13	0	0.00	0.00%
MA 01040	39,880	49.61	0	0.00	0.00%
MA 01056	21,103	17.81	0	0.00	0.00%
MA 01075	17,527	15.78	0	0.00	0.00%
MA 01077	9,502	10.22	0	0.00	0.00%
MA 01085	41,117	33.94	0	0.00	0.00%
MA 01086	687	1.62	0	0.00	0.00%
MA 01089	28,391	29.76	0	0.00	0.00%
MA 01095	14,319	10.96	0	0.00	0.00%
MA 01097	111	0.09	0	0.00	0.00%
MA 01103	2,479	4.47	0	0.00	0.00%
MA 01104	22,865	22.12	0	0.00	0.00%
MA 01105	12,350	17.40	0	0.00	0.00%
MA 01106	16,021	14.37	0	0.00	0.00%
MA 01107	11,611	11.19	0	0.00	0.00%
MA 01108	26,688	24.95	0	0.00	0.00%
MA 01109	30,250	25.96	0	0.00	0.00%
MA 01118	14,071	13.68	0	0.00	0.00%
MA 01119	14,152	17.03	0	0.00	0.00%
MA 01128	2,631	3.68	0	0.00	0.00%
MA 01129	7,019	8.86	0	0.00	0.00%
MA 01151	8,698	13.50	0	0.00	0.00%
Hampden County, MA	463,490	6.36	0	0.00	0.00%
Hampshire County, MA	158,080	5.92	0	0.00	0.00%
Massachusetts	6,547,629	6.23	0	0.00	0.00%
United States	306,675,006	8.26	0	0.00	0.11%



Note: This indicator is compared to the state average.
Data Source: Centers for Disease Control and Prevention, CDC - National Environmental Public Health Tracking Network. 2016. Source geography: Tract

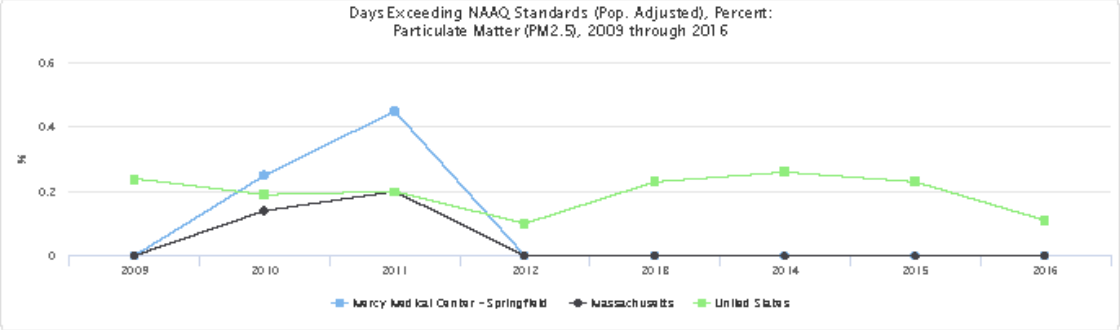
View larger map

Fine Particulate Matter Levels (PM2.5), Percentage of Days Above NAAQ Standards by Tract, NEPHTN 2016

- Over 5.0%
- 1.1 - 5.0%
- 0.51 - 1.0%
- Under 0.51%
- No Days Above NAAQS Standards
- No Data or Data Suppressed
- Mercy Medical Center - Springfield

Days Exceeding NAAQ Standards (Pop. Adjusted), Percent:
Particulate Matter (PM2.5), 2009 through 2016

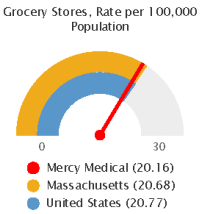
Report Area	2009	2010	2011	2012	2013	2014	2015	2016
Mercy Medical Center - Springfield	0.00%	0.25%	0.45%	0.00%	0.00%	0.00%	0.00%	0.00%
Hampden County, MA	0.00%	0.24%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%
Hampshire County, MA	0.00%	0.08%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%
Massachusetts	0.00%	0.14%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%
United States	0.24%	0.19%	0.20%	0.10%	0.23%	0.26%	0.23%	0.11%



Food Environment - Grocery Stores and Supermarkets

Healthy dietary behaviors are supported by access to healthy foods, and Grocery Stores are a major provider of these foods. There are 91 grocery establishments in the report area, a rate of 20.16 per 100,000 population. Grocery stores are defined as supermarkets and smaller grocery stores primarily engaged in retailing a general line of food, such as canned and frozen foods; fresh fruits and vegetables; and fresh and prepared meats, fish, and poultry. Delicatessen-type establishments are also included. Convenience stores and large general merchandise stores that also retail food, such as supercenters and warehouse club stores, are excluded.

Report Area	Total Population (2010)	Number of Establishments	Establishments, Rate per 100,000 Population
Mercy Medical Center - Springfield	451,309	91	20.16
MA 01001	16,808	4	22.44
MA 01003	10,371	2	21.51
MA 01013	23,187	5	22.44
MA 01020	29,667	7	22.44
MA 01022	2,450	1	22.44
MA 01028	15,719	4	22.44
MA 01030	11,628	3	22.44
MA 01040	39,879	9	22.44
MA 01056	21,102	5	22.44
MA 01075	17,526	4	21.51
MA 01077	9,501	2	22.44
MA 01085	41,116	9	22.44
MA 01086	686	0	22.44
MA 01089	28,390	6	22.44
MA 01095	14,318	3	22.44
MA 01097	110	0	22.44
MA 01103	2,478	1	22.44
MA 01104	22,864	5	22.44
MA 01105	12,349	3	22.44
MA 01106	16,020	4	22.44
MA 01107	11,610	3	22.44
MA 01108	26,687	6	22.44
MA 01109	30,249	7	22.44
MA 01118	14,070	3	22.44
MA 01119	14,151	3	22.44
MA 01128	2,630	1	22.44
MA 01129	7,018	2	22.44
MA 01151	8,697	2	22.44
Hampden County, MA	463,490	104	22.44
Hampshire County, MA	158,080	34	21.51
Massachusetts	6,547,629	1,354	20.68
United States	308,745,538	64,132	20.77



Note: This indicator is compared to the state average.
Data Source: US Census Bureau, County Business Patterns. Additional data analysis by CARES. 2019. Source geography: County

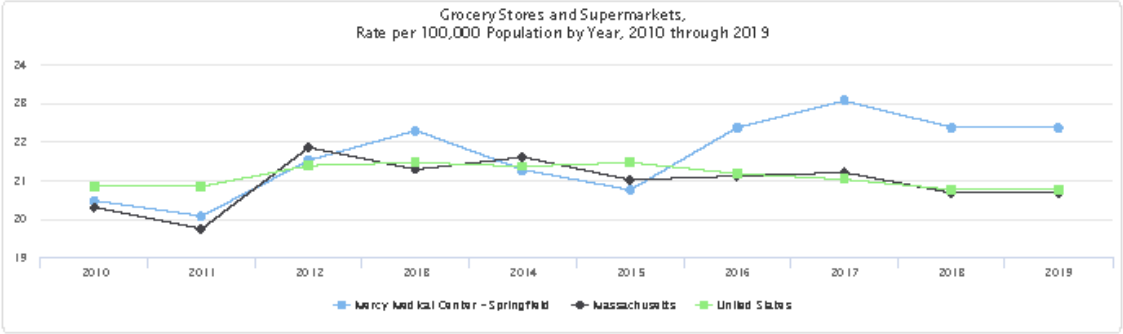
View larger map

Grocery Stores and Supermarkets, Rate (Per 100,000 Pop.) by County, CBP 2019

- Over 35.0
- 25.1 - 35.0
- 15.1 - 25.0
- Under 15.1
- <3 Grocery Stores (Suppressed)
- Mercy Medical Center - Springfield

Grocery Stores and Supermarkets,
Rate per 100,000 Population by Year, 2010 through 2019

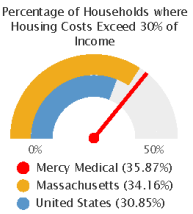
Report Area	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Mercy Medical Center - Springfield	20.48	20.08	21.53	22.3	21.28	20.76	22.38	23.07	22.38	22.38
Hampden County, MA	20.5	20.07	21.36	22.22	21.14	20.71	22.44	23.09	22.44	22.44
Hampshire County, MA	20.24	20.24	24.04	23.41	23.41	21.51	21.51	22.77	21.51	21.51
Massachusetts	20.31	19.75	21.86	21.29	21.61	21.02	21.12	21.21	20.68	20.68
United States	20.85	20.85	21.39	21.47	21.37	21.47	21.18	21.03	20.77	20.77



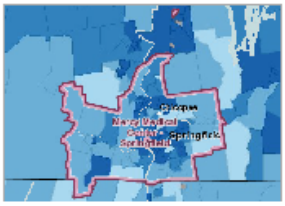
Housing Costs - Cost Burden (30%)

This indicator reports the percentage of the households where housing costs are 30% or more of total household income. This indicator provides information on the cost of monthly housing expenses for owners and renters. The information offers a measure of housing affordability and excessive shelter costs. The data also serve to aid in the development of housing programs to meet the needs of people at different economic levels. Of the 168,850 total households in the report area, 60,569 or 35.87% of the population live in cost burdened households.

Report Area	Total Households	Cost Burdened Households (Housing Costs Exceed 30% of Income)	Cost Burdened Households, Percent
Mercy Medical Center - Springfield	168,850	60,569	35.87%
MA 01001	7,413	2,054	27.71%
MA 01003	42	14	33.33%
MA 01013	9,140	3,607	39.46%
MA 01020	12,798	3,329	26.01%
MA 01022	1,154	568	49.22%
MA 01028	5,958	1,781	29.89%
MA 01030	4,416	1,131	25.61%
MA 01040	15,278	6,234	40.80%
MA 01056	7,925	1,815	22.90%
MA 01075	6,616	2,027	30.64%
MA 01077	3,804	1,327	34.88%
MA 01085	15,551	4,604	29.61%
MA 01086	No data	No data	No data
MA 01089	12,605	4,425	35.11%
MA 01095	5,253	1,119	21.30%
MA 01097	20	6	30.00%
MA 01103	1,481	836	56.45%
MA 01104	8,910	4,100	46.02%
MA 01105	4,991	2,865	57.40%
MA 01106	5,769	1,572	27.25%
MA 01107	3,849	2,074	53.88%
MA 01108	9,690	4,528	46.73%
MA 01109	9,304	4,625	49.71%
MA 01118	5,692	1,761	30.94%
MA 01119	4,900	1,860	37.96%
MA 01128	1,085	392	36.13%
MA 01129	2,864	1,017	35.51%
MA 01151	3,430	1,522	44.37%
Hampden County, MA	179,423	63,569	35.43%
Hampshire County, MA	58,838	19,073	32.42%
Massachusetts	2,617,497	894,165	34.16%
United States	120,756,048	37,249,895	30.85%



Note: This indicator is compared to the state average.
Data Source: US Census Bureau, American Community Survey. 2015-19. Source geography: Tract



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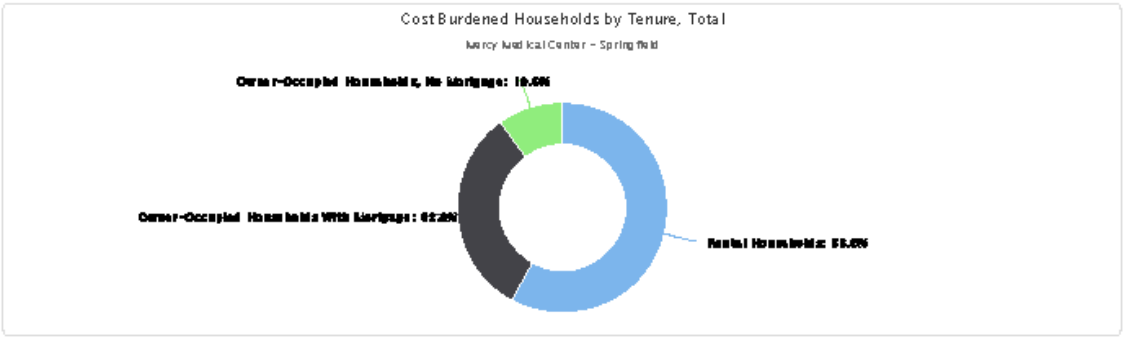
Cost Burdened Households (Housing Costs Exceed 30% of Household Income), Percent by Tract, ACS 2015-19

- Over 35.1%
- 28.1 - 35.0%
- 21.1 - 28.0%
- Under 21.1%
- No Data or Data Suppressed
- Mercy Medical Center - Springfield

Cost Burdened Households by Tenure, Total

These data show the number of households that spend more than 30% of the household income on housing costs. In the report area, there were 60,569 cost burdened households according to the U.S. Census Bureau American Community Survey (ACS) 2015-2019 5-year estimates. The data for this indicator is only reported for households where household housing costs and income earned was identified in the American Community Survey.

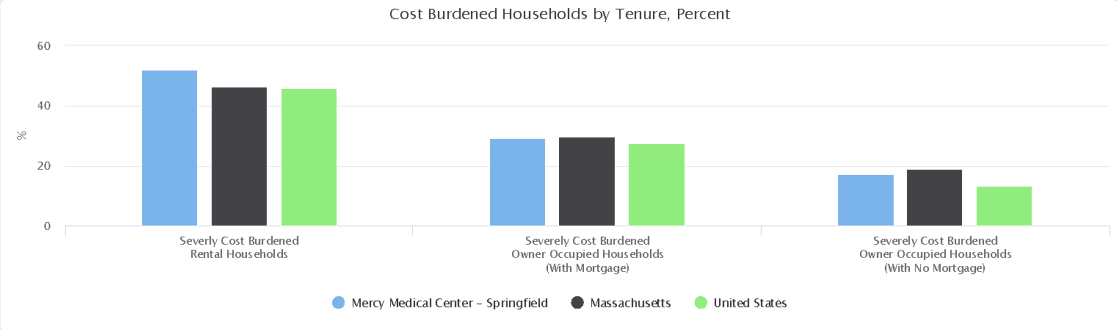
Report Area	Cost Burdened Households	Cost Burdened Rental Households	Cost Burdened Owner Occupied Households (With Mortgage)	Cost Burdened Owner Occupied Households (With No Mortgage)
Mercy Medical Center - Springfield	60,569	35,141	19,394	6,034
Hampden County, MA	63,569	36,123	20,955	6,491
Hampshire County, MA	19,073	9,819	6,968	2,286
Massachusetts	894,165	459,710	338,666	95,789
United States	37,249,895	20,002,945	13,400,012	3,846,938



Cost Burdened Households by Tenure, Percent

These data show the percentage of households by tenure that are cost burdened. Cost burdened rental households (those that spent more than 30% of the household income on rental costs) represented 51.97% of all of the rental households in the report area, according to the U.S. Census Bureau American Community Survey (ACS) 2015-2019 5-year estimates. The data for this indicator is only reported for households where tenure, household housing costs, and income earned was identified in the American Community Survey.

Report Area	Rental Households	Percentage of Rental Households that are Cost Burdened	Owner Occupied Households (With Mortgage)	Percentage of Owner Occupied Households w/ Mortgages that are Cost Burdened	Owner Occupied Households (No Mortgage)	Percentage of Owner Occupied Households w/o Mortgages that are Cost Burdened
Mercy Medical Center - Springfield	67,612	51.97%	66,411	29.20%	34,827	17.33%
Hampden County, MA	69,755	51.79%	72,517	28.90%	37,151	17.47%
Hampshire County, MA	19,497	50.36%	24,638	28.28%	14,703	15.55%
Massachusetts	984,732	46.68%	1,129,945	29.97%	502,820	19.05%
United States	43,481,667	46.00%	48,416,627	27.68%	28,857,754	13.33%

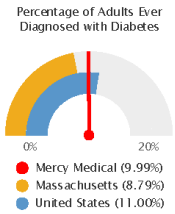


Health Outcomes & Behaviors

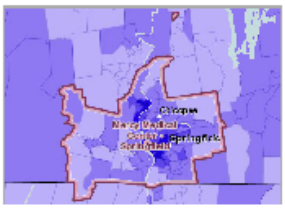
Chronic Conditions - Diabetes (Adult)

This indicator reports the number and percentage of adults age 18 and older who report ever been told by a doctor, nurse, or other health professional that they have diabetes other than diabetes during pregnancy.

Report Area	Total Population (2019)	Adults Ever Diagnosed with Diabetes (Crude)	Adults Ever Diagnosed with Diabetes (Age-Adjusted)
Mercy Medical Center - Springfield	451,309	9.99%	No data
MA 01001	16,769	9.00%	No data
MA 01003	10,372	1.70%	No data
MA 01013	23,188	10.00%	No data
MA 01020	29,668	9.40%	No data
MA 01022	2,451	8.60%	No data
MA 01028	15,720	8.50%	No data
MA 01030	11,669	7.70%	No data
MA 01040	39,880	12.30%	No data
MA 01056	21,103	8.60%	No data
MA 01075	17,527	7.40%	No data
MA 01077	9,502	8.10%	No data
MA 01085	41,117	7.90%	No data
MA 01086	687	0.60%	No data
MA 01089	28,391	8.70%	No data
MA 01095	14,319	8.30%	No data
MA 01097	111	5.00%	No data
MA 01103	2,479	15.10%	No data
MA 01104	22,865	13.40%	No data
MA 01105	12,350	15.30%	No data
MA 01106	16,021	7.60%	No data
MA 01107	11,611	16.10%	No data
MA 01108	26,688	11.60%	No data
MA 01109	30,250	13.10%	No data
MA 01118	14,071	9.60%	No data
MA 01119	14,152	10.00%	No data
MA 01128	2,631	9.50%	No data
MA 01129	7,019	9.90%	No data
MA 01151	8,698	11.00%	No data
Hampden County, MA	466,372	10.70%	9.90%
Hampshire County, MA	160,830	7.50%	7.40%
Massachusetts	6,892,503	8.79%	8.11%
United States	328,239,523	11.00%	9.70%



Note: This indicator is compared to the state average.
Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the 500 Cities Data Portal. 2019. Source geography: Tract



View larger map

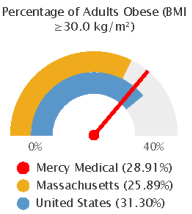
Diabetes, Prevalence Among Adults Age 18+ by Tract, CDC BRFSS PLACES Project 2019

- Over 13.0%
- 10.1% - 13.0%
- 8.1% - 10.0%
- Under 8.1%
- No Data or Data Suppressed
- Mercy Medical Center - Springfield

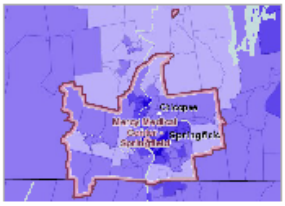
Chronic Conditions - Obesity (Adult)

This indicator reports the number and percentage of adults age 18 and older who are obese, defined as having a body mass index (BMI) ≥30.0 kg/m^2, calculated from self-reported weight and height.

Report Area	Total Population (2019)	Adult Obesity (BMI ≥30.0 kg/m²) (Crude)	Adult Obesity (BMI ≥30.0 kg/m²) (Age-Adjusted)
Mercy Medical Center - Springfield	451,309	28.91%	No data
MA 01001	16,769	25.80%	No data
MA 01003	10,372	20.60%	No data
MA 01013	23,188	29.80%	No data
MA 01020	29,668	27.60%	No data
MA 01022	2,451	26.20%	No data
MA 01028	15,720	24.90%	No data
MA 01030	11,669	25.60%	No data
MA 01040	39,880	32.00%	No data
MA 01056	21,103	26.80%	No data
MA 01075	17,527	23.00%	No data
MA 01077	9,502	26.30%	No data
MA 01085	41,117	25.70%	No data
MA 01086	687	13.90%	No data
MA 01089	28,391	26.80%	No data
MA 01095	14,319	24.60%	No data
MA 01097	111	24.80%	No data
MA 01103	2,479	37.20%	No data
MA 01104	22,865	33.30%	No data
MA 01105	12,350	38.90%	No data
MA 01106	16,021	22.60%	No data
MA 01107	11,611	38.60%	No data
MA 01108	26,688	32.70%	No data
MA 01109	30,250	35.20%	No data
MA 01118	14,071	28.30%	No data
MA 01119	14,152	29.30%	No data
MA 01128	2,631	28.30%	No data
MA 01129	7,019	28.90%	No data
MA 01151	8,698	33.00%	No data
Hampden County, MA	466,372	29.50%	30.00%
Hampshire County, MA	160,830	23.00%	25.10%
Massachusetts	6,892,503	25.89%	26.11%
United States	328,239,523	31.30%	31.30%



Note: This indicator is compared to the state average.
Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the 500 Cities Data Portal. 2019. Source geography: Tract



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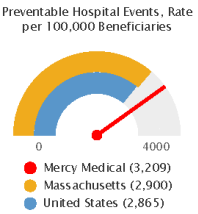
Obese (BMI >= 30), Prevalence Among Adults Age 18+ by Tract, CDC BRFSS PLACES Project 2019

- Over 37.0%
- 30.1% - 37.0%
- 25.1% - 30.0%
- Under 25.1%
- No Data or Data Suppressed
- Mercy Medical Center - Springfield

Hospitalizations - Preventable Conditions

This indicator reports the preventable hospitalization rate among Medicare beneficiaries for the latest reporting period. Preventable hospitalizations include hospital admissions for one or more of the following conditions: diabetes with short-term complications, diabetes with long-term complications, uncontrolled diabetes without complications, diabetes with lower-extremity amputation, chronic obstructive pulmonary disease, asthma, hypertension, heart failure, bacterial pneumonia, or urinary tract infection. Rates are presented per 100,000 beneficiaries. In the latest reporting period there were 92,820 Medicare beneficiaries in the report area. The preventable hospitalization rate was 3,209. The rate in the report area was higher than the state rate of 2,900 during the same time period.

Report Area	Medicare Beneficiaries	Preventable Hospitalizations, Rate per 100,000 Beneficiaries
Mercy Medical Center - Springfield	92,820	3,209
MA 01001	5,216	3,255
MA 01003	0	No data
MA 01013	4,792	3,255
MA 01020	7,431	3,255
MA 01022	632	3,255
MA 01028	4,601	3,255
MA 01030	2,274	3,255
MA 01040	8,231	3,255
MA 01056	5,082	3,255
MA 01075	4,680	2,470
MA 01077	2,033	3,255
MA 01085	8,285	3,255
MA 01086	0	No data
MA 01089	6,230	3,255
MA 01095	3,910	3,255
MA 01097	7	3,255
MA 01103	328	3,255
MA 01104	4,486	3,255
MA 01105	1,321	3,255
MA 01106	4,492	3,255
MA 01107	1,279	3,255
MA 01108	3,474	3,255
MA 01109	4,269	3,255
MA 01118	3,087	3,255
MA 01119	2,675	3,255
MA 01128	540	3,255
MA 01129	1,522	3,255
MA 01151	1,240	3,255
Hampden County, MA	95,615	3,255
Hampshire County, MA	31,018	2,470
Massachusetts	1,219,215	2,900
United States	57,235,207	2,865



Note: This indicator is compared to the state average.
Data Source: Centers for Medicare and Medicaid Services, Mapping Medicare Disparities Tool. 2020. Source geography: County

View larger map

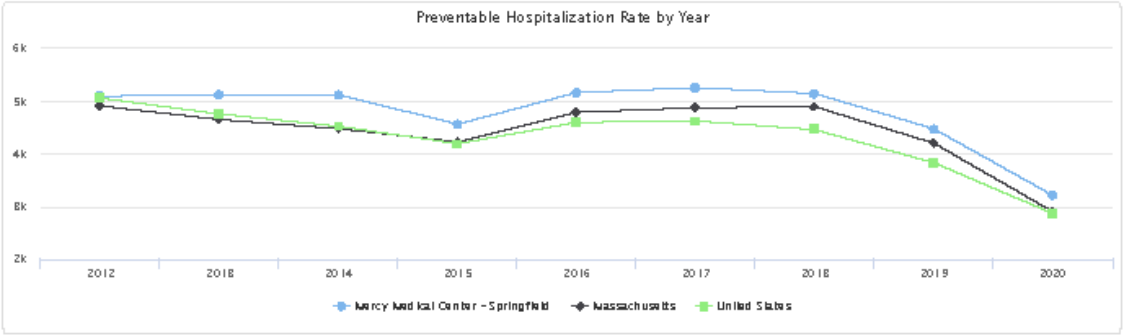
Preventable Hospitalization, Medicare Beneficiaries, Rate by County, CMS 2020

- Over 3600
- 3101 - 3600
- 2500 - 3100
- Under 2500
- No data or Data Suppressed
- Mercy Medical Center - Springfield

Preventable Hospitalization Rate by Year

The table and chart below display local, state, and national trends in preventable hospitalization rates among Medicare beneficiaries.

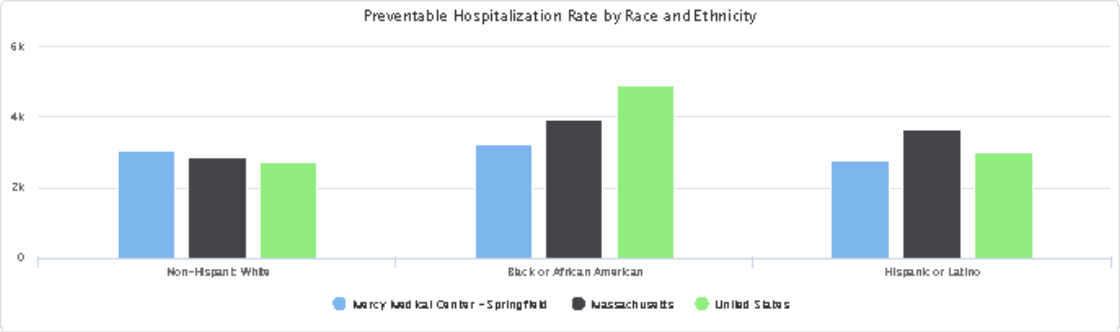
Report Area	2012	2013	2014	2015	2016	2017	2018	2019	2020
Mercy Medical Center - Springfield	5,095	5,126	5,123	4,563	5,165	5,258	5,146	4,476	3,209
Hampden County, MA	5,150	5,211	5,230	4,633	5,256	5,359	5,361	4,558	3,255
Hampshire County, MA	4,197	3,765	3,557	3,546	3,838	3,862	3,806	3,447	2,470
Massachusetts	4,909	4,652	4,477	4,227	4,788	4,876	4,896	4,202	2,900
United States	5,060	4,758	4,523	4,192	4,598	4,624	4,459	3,830	2,865



Preventable Hospitalization Rate by Race and Ethnicity

The table and chart below display local, state, and national trends in preventable hospitalization rates among Medicare beneficiaries for the latest report year by patient race and ethnicity.

Report Area	Non-Hispanic White	Black or African American	Hispanic or Latino
Mercy Medical Center - Springfield	3,046	3,215	2,770
Hampden County, MA	3,094	3,212	2,796
Hampshire County, MA	2,392	3,402	782
Massachusetts	2,870	3,946	3,679
United States	2,754	4,914	3,014

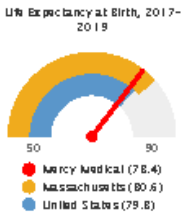


Life Expectancy (County)

This indicator reports the average life expectancy at birth (age-adjusted to 2000 standard). Data were from the National Center for Health Statistics - Mortality Files (2017-2019) and are used for the 2021 County Health Rankings.

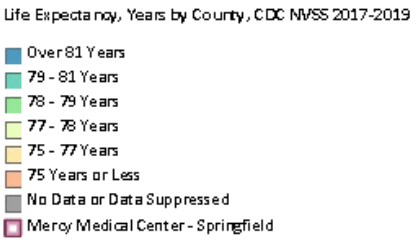
Of the total 423,815 population in the report area, the average life expectancy during the 2017-19 three-year period is 78.4, which is lower than the statewide rate of 80.6.
Note: Data are suppressed for counties with fewer than 5,000 population-years-at-risk in the time frame.

Report Area	Total Population	Life Expectancy at Birth (2017-19)
Mercy Medical Center - Springfield	423,815	78.4
Hampden County, MA	434,867	78.2
Hampshire County, MA	150,450	80.6
Massachusetts	12,800,850	80.6
United States	610,213,316	79.3



Note: This indicator is compared to the state average.
Data Source: University of Wisconsin Population Health Institute, County Health Rankings, 2017-2019. Source geography: County

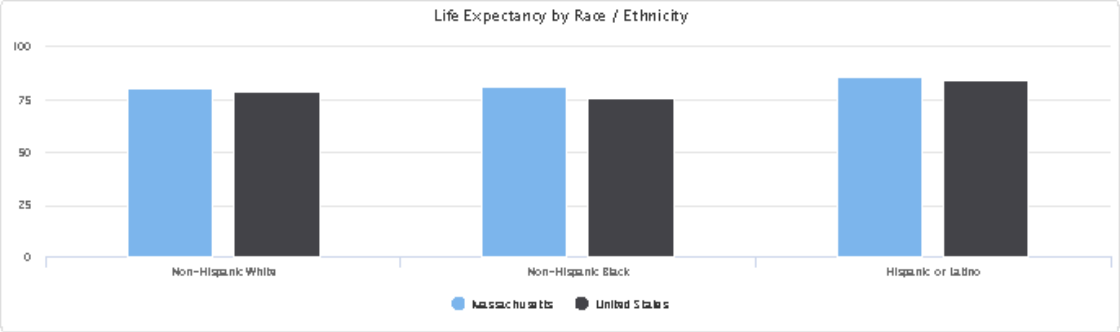
View larger map



Life Expectancy by Race / Ethnicity

This indicator reports the 2017-2019 three-year average number of years a person can expect to live by race / ethnicity.

Report Area	Non-Hispanic White	Non-Hispanic Black	Hispanic or Latino
Hampden County, MA	78.5	75.4	79.6
Hampshire County, MA	80.6	78.9	88.4
Massachusetts	80.4	80.7	85.7
United States	79.2	75.6	84.3

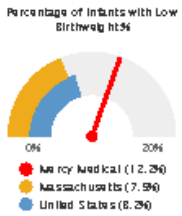


Low Birth Weight

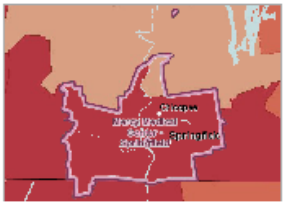
This indicator reports the percentage of live births where the infant weighed less than 2,500 grams (approximately 5 lbs., 8 oz.). These data are reported for a 7-year aggregated time period. Data were from the National Center for Health Statistics - Natality Files (2013-2019) and are used for the 2021 County Health Rankings.

Within the report area, there were 2,742 infants born with low birth weight. This represents 12.2% of the total live births.
Note: Data are suppressed for counties with fewer than 10 low birthweight births in the reporting period.

Report Area	Total Live Births	Low Birthweight Births	Low Birthweight Births, Percentage
Mercy Medical Center - Springfield	33,399	2,742	12.2%
Hampden County, MA	35,186	2,912	8.3%
Hampshire County, MA	7,116	468	6.6%
Massachusetts	987,960	74,504	7.5%
United States	54,416,819	4,440,508	8.2%



Note: (%) indicator is compared to the state average.
Data Source: University of Wisconsin Population Health Institute, County Health Rankings, 2013-2019. Source geography: County



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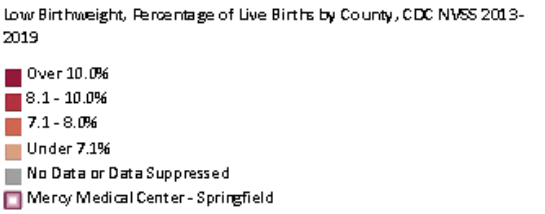
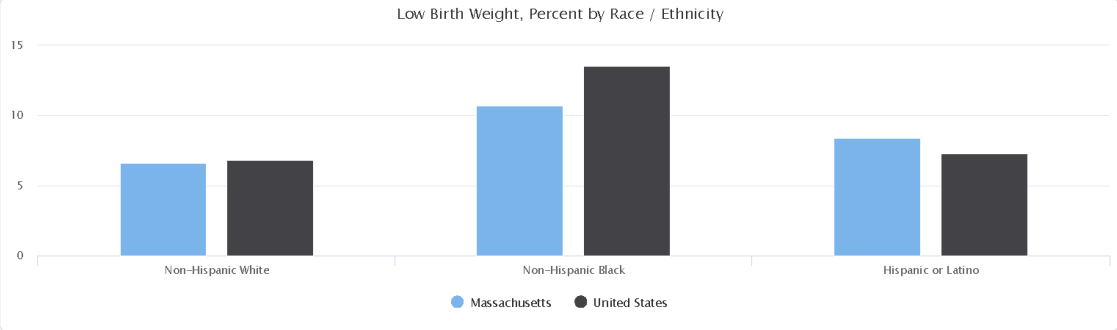


Low Birth Weight, Percent by Race / Ethnicity

This indicator reports the 2013-2019 seven-year average percentage of live births with low birthweight (< 2,500 grams) by race and by Hispanic origin.

Report Area	Non-Hispanic White	Non-Hispanic Black	Hispanic or Latino
Hampden County, MA	6.5	12.2	9.5
Hampshire County, MA	6.1	16.3	8.5
Massachusetts	6.6	10.7	8.4
United States	6.8	13.5	7.3

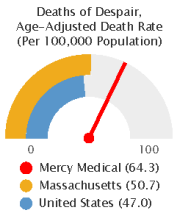


Mortality - Deaths of Despair

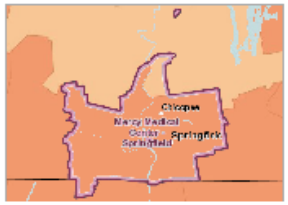
This indicator reports average rate of death due to intentional self-harm (suicide), alcohol-related disease, and drug overdose, also known as "deaths of despair", per 100,000 population. Figures are reported as crude rates, and as rates age-adjusted to year 2000 standard. Rates are resummarized for report areas from county level data, only where data is available. This indicator is relevant because death of despair is an indicator of poor mental health.

Within the report area, there were 1,487 deaths of despair. This represents an age-adjusted death rate of 64.3 per every 100,000 total population.

Report Area	Total Population, 2016-2020 Average	Five Year Total Deaths, 2016-2020 Total	Crude Death Rate (Per 100,000 Population)	Age-Adjusted Death Rate (Per 100,000 Population)
Mercy Medical Center - Springfield	455,849	1,487	65.3	64.3
MA 01001	16,966	56	66.6	65.3
MA 01003	10,593	24	45.6	49.1
MA 01013	23,404	78	66.6	65.3
MA 01020	29,945	100	66.6	65.3
MA 01022	2,474	No data	No data	No data
MA 01028	15,867	53	66.6	65.3
MA 01030	11,737	39	66.6	65.3
MA 01040	40,252	134	66.6	65.3
MA 01056	21,300	71	66.6	65.3
MA 01075	17,900	41	45.6	49.1
MA 01077	9,591	32	66.6	65.3
MA 01085	41,500	138	66.6	65.3
MA 01086	693	No data	No data	No data
MA 01089	28,656	95	66.6	65.3
MA 01095	14,452	48	66.6	65.3
MA 01097	112	No data	No data	No data
MA 01103	2,502	No data	No data	No data
MA 01104	23,078	77	66.6	65.3
MA 01105	12,465	41	66.6	65.3
MA 01106	16,170	54	66.6	65.3
MA 01107	11,719	39	66.6	65.3
MA 01108	26,937	90	66.6	65.3
MA 01109	30,532	102	66.6	65.3
MA 01118	14,202	47	66.6	65.3
MA 01119	14,284	48	66.6	65.3
MA 01128	2,656	No data	No data	No data
MA 01129	7,084	24	66.6	65.3
MA 01151	8,779	29	66.6	65.3
Hampden County, MA	467,810	1,557	66.6	65.3
Hampshire County, MA	161,447	368	45.6	49.1
Massachusetts	6,871,965	18,225	53.0	50.7
United States	326,747,554	806,246	49.4	47.0



Note: This indicator is compared to the state average.
Data Source: Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2016-2020. Source geography: County



View larger map

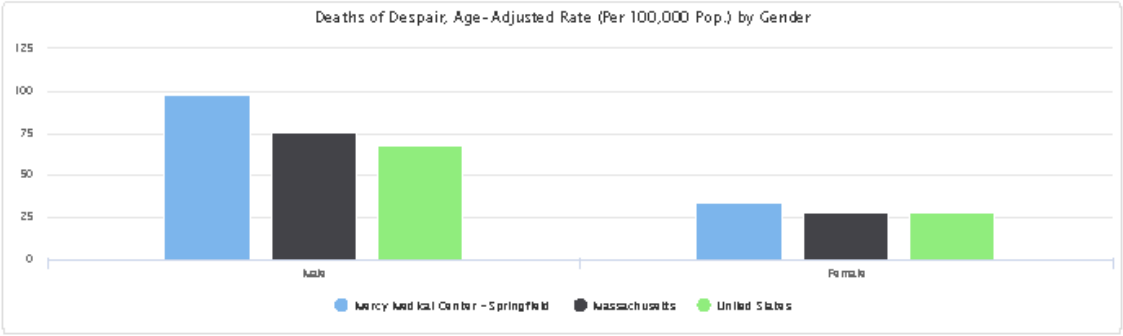
Deaths of Despair, Age Adj. Rate (Per 100,000 Pop.) by County, CDC NVSS 2016-20

- Over 70.0
- 50.1 - 70.0
- 40.1 - 50.0
- Under 40.1
- Data Suppressed (<20 Deaths)
- Mercy Medical Center - Springfield

Deaths of Despair, Age-Adjusted Rate (Per 100,000 Pop.) by Gender

This table reports the age-adjusted rate of death due to intentional self-harm (suicide), alcohol-related disease, and drug overdoses, also known as "deaths of despair," per 100,000 people for the 5-year period 2016-2020 by gender.

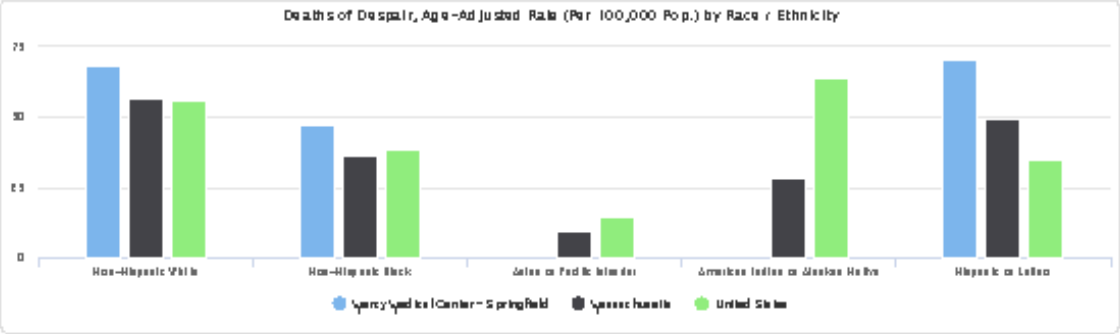
Report Area	Male	Female
Mercy Medical Center - Springfield	98.2	33.2
Hampden County, MA	100.0	33.5
Hampshire County, MA	70.9	29.6
Massachusetts	75.1	27.7
United States	67.7	27.3



Deaths of Despair, Age-Adjusted Rate (Per 100,000 Pop.) by Race / Ethnicity

This table reports the age-adjusted rate of death due to intentional self-harm (suicide), alcohol-related disease, and drug overdoses, also known as "deaths of despair," per 100,000 people for the 5-year period 2016-2020 by race and by Hispanic origin.

Report Area	Non-Hispanic White	Non-Hispanic Black	Asian or Pacific Islander	American Indian or Alaskan Native	Hispanic or Latino
Mercy Medical Center - Springfield	68.4	47.2	No data	No data	70.6
Hampden County, MA	70.0	47.2	No data	No data	70.7
Hampshire County, MA	50.7	No data	No data	No data	68.1
Massachusetts	56.5	36.3	9.3	28.1	49.9
United States	55.6	38.6	14.3	64.3	34.6

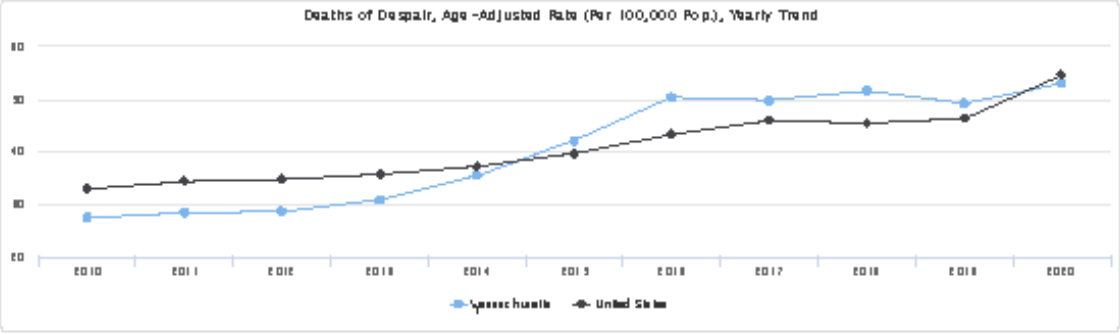


Deaths of Despair, Age-Adjusted Rate (Per 100,000 Pop.), Yearly Trend

The table below shows age-adjusted death rates due to intentional self-harm (suicide), alcohol-related disease, and drug overdoses, also known as "deaths of despair," per 100,000 population over time.

Report Area	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Massachusetts	27.4	28.4	28.6	30.9	35.5	42.1	50.3	49.8	51.5	49.2	53.0
United States	32.9	34.3	34.7	35.7	37.2	39.7	43.3	45.9	45.4	46.3	54.6

Note: No county-level data. See data source and methodology for more detail.

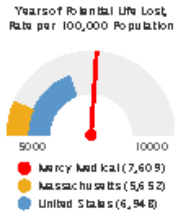


Mortality - Premature Death

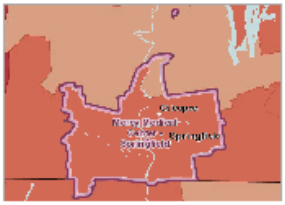
This indicator reports the Years of Potential Life Lost (YPLL) before age 75 per 100,000 population for all causes of death. Figures are reported as crude rates, and as rates age-adjusted to year 2000 standard. YPLL measures premature death and is calculated by subtracting the age of death from the 75 year benchmark. Data were from the National Center for Health Statistics - Mortality Files (2017-2019) and are used for the 2021 County Health Rankings. This indicator is relevant because a measure of premature death can provide a unique and comprehensive look at overall health status.

Within the report area, there are a total of 5,728 premature deaths. This represents an age-adjusted death rate of 7,609 per every 100,000 total population.
Note: Data are suppressed for counties with fewer than 20 deaths in the three-year time frame.

Report Area	Premature Deaths, 2017-2019	Years of Potential Life Lost, 2017-2019 Average	Years of Potential Life Lost, Rate per 100,000 Population
Mercy Medical Center - Springfield	5,728	96,743	7,609
Hampden County, MA	5,978	100,935	7,737
Hampshire County, MA	1,511	25,702	5,695
Massachusetts	136,946	2,170,623	5,652
United States	7,697,253	126,961,190	6,943



Note: This indicator is compared to the state average.
Data Source: University of Wisconsin Population Health Institute, County Health Rankings, 2017-2019. Source geography: County



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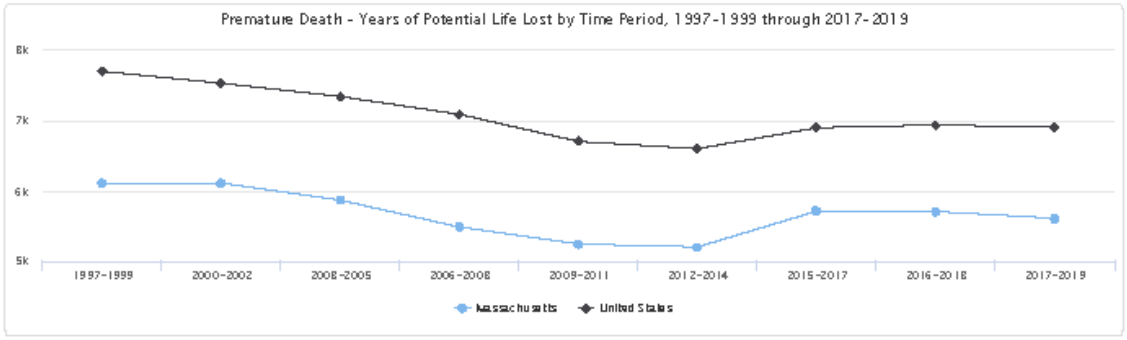
Premature Death - Years of Potential Life Lost by Time Period, 1997-1999 through 2017-2019

The table below shows age-adjusted death rates due to Years of Potential Life Lost (YPLL) before age 75 per 100,000 people over time.

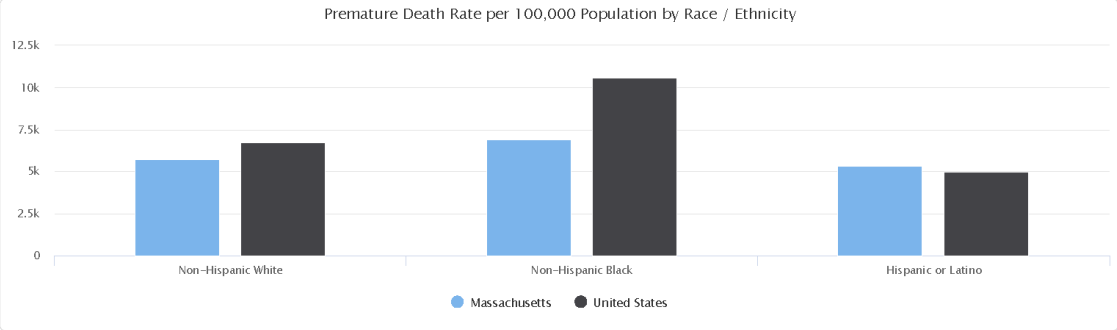
Report Area	1997-1999	2000-2002	2003-2005	2006-2008	2009-2011	2012-2014	2015-2017	2016-2018	2017-2019
Hampden County, MA	7,702.8	7,693.6	7,626.5	6,960.7	6,877.5	6,486.4	6,972.0	7,418.8	7,736.9
Hampshire County, MA	5,207.8	5,668.6	4,497.6	5,105.0	4,732.6	4,859.2	4,965.9	5,480.2	5,694.5
Massachusetts	6,111.1	6,110.7	5,866.3	5,484.0	5,241.6	5,200.7	5,712.5	5,706.0	5,609.7
United States	7,705.2	7,535.0	7,345.0	7,090.5	6,703.7	6,601.2	6,900.6	6,940.1	6,906.6



Premature Death Rate per 100,000 Population by Race / Ethnicity

This indicator reports age-adjusted rate of death due to Years of Potential Life Lost (YPLL) before age 75 per 100,000 people by race and Hispanic origin.

Report Area	Non-Hispanic White	Non-Hispanic Black	Hispanic or Latino
Hampden County, MA	7,433.9	11,194.8	7,681.4
Hampshire County, MA	5,530.0	No data	6,650.6
Massachusetts	5,714.6	6,919.7	5,339.4
United States	6,744.0	10,554.0	4,966.6

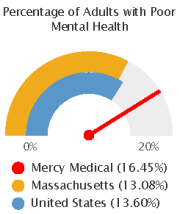


Poor Mental Health

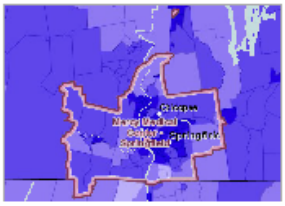
This indicator reports the percentage of adults age 18 and older who report 14 or more days during the past 30 days during which their mental health was not good. Data were from the 2019 Behavioral Risk Factor Surveillance System (BRFSS) annual survey.

Within the report area, there were 16.45% of adults 18 and older who reported poor mental health in the past month of the total population.

Report Area	Total Population (2019)	Adults with Poor Mental Health (Crude)	Adults with Poor Mental Health (Age-Adjusted)
Mercy Medical Center - Springfield	451,309	16.45%	No data
MA 01001	16,769	13.70%	No data
MA 01003	10,372	29.90%	No data
MA 01013	23,188	17.70%	No data
MA 01020	29,668	15.50%	No data
MA 01022	2,451	15.70%	No data
MA 01028	15,720	12.60%	No data
MA 01030	11,669	13.50%	No data
MA 01040	39,880	17.40%	No data
MA 01056	21,103	15.00%	No data
MA 01075	17,527	14.70%	No data
MA 01077	9,502	13.80%	No data
MA 01085	41,117	14.90%	No data
MA 01086	687	19.50%	No data
MA 01089	28,391	15.10%	No data
MA 01095	14,319	12.00%	No data
MA 01097	111	16.30%	No data
MA 01103	2,479	20.50%	No data
MA 01104	22,865	17.60%	No data
MA 01105	12,350	21.60%	No data
MA 01106	16,021	10.60%	No data
MA 01107	11,611	21.40%	No data
MA 01108	26,688	18.60%	No data
MA 01109	30,250	19.70%	No data
MA 01118	14,071	15.00%	No data
MA 01119	14,152	17.20%	No data
MA 01128	2,631	14.50%	No data
MA 01129	7,019	14.70%	No data
MA 01151	8,698	19.10%	No data
Hampden County, MA	466,372	15.00%	15.20%
Hampshire County, MA	160,830	14.60%	14.40%
Massachusetts	6,892,503	13.08%	13.33%
United States	328,239,523	13.60%	13.90%



Note: This indicator is compared to the state average.
Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the 500 Cities Data Portal. 2019. Source geography: Tract



View larger map

Poor Mental Health, Prevalence Among Adults Age 18+ by Tract, CDC BRFSS PLACES Project 2019

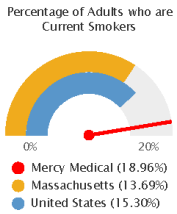
- Over 16.0%
- 13.1% - 16.0%
- 10.1% - 13.0%
- Under 10.1%
- No Data or Data Suppressed
- Mercy Medical Center - Springfield

Tobacco - Current Smokers

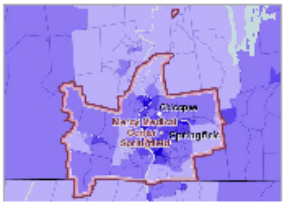
This indicator reports the percentage of adults age 18 and older who report having smoked at least 100 cigarettes in their lifetime and currently smoke every day or some days.

Within the report area there are 18.96% adults who have smoked or currently smoke of the total population.

Report Area	Total Population (2019)	Adult Current Smokers (Crude)	Adult Current Smokers (Age-Adjusted)
Mercy Medical Center - Springfield	451,309	18.96%	No data
MA 01001	16,769	16.40%	No data
MA 01003	10,372	15.60%	No data
MA 01013	23,188	21.80%	No data
MA 01020	29,668	19.50%	No data
MA 01022	2,451	17.20%	No data
MA 01028	15,720	14.60%	No data
MA 01030	11,669	16.30%	No data
MA 01040	39,880	20.60%	No data
MA 01056	21,103	19.40%	No data
MA 01075	17,527	13.00%	No data
MA 01077	9,502	16.90%	No data
MA 01085	41,117	17.20%	No data
MA 01086	687	9.10%	No data
MA 01089	28,391	18.20%	No data
MA 01095	14,319	13.80%	No data
MA 01097	111	18.80%	No data
MA 01103	2,479	24.50%	No data
MA 01104	22,865	21.80%	No data
MA 01105	12,350	26.00%	No data
MA 01106	16,021	11.10%	No data
MA 01107	11,611	25.50%	No data
MA 01108	26,688	22.70%	No data
MA 01109	30,250	21.90%	No data
MA 01118	14,071	18.20%	No data
MA 01119	14,152	18.80%	No data
MA 01128	2,631	18.10%	No data
MA 01129	7,019	18.00%	No data
MA 01151	8,698	23.90%	No data
Hampden County, MA	466,372	17.40%	17.90%
Hampshire County, MA	160,830	12.50%	14.20%
Massachusetts	6,892,503	13.69%	14.07%
United States	328,239,523	15.30%	15.70%



Note: This indicator is compared to the state average.
Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the 500 Cities Data Portal. 2019. Source geography: Tract



View larger map

Current Smokers, Adult, Percentage of Adults Age 18+ by Tract, CDC BRFSS PLACES Project 2019

- Over 25.0%
- 20.1% - 25.0%
- 15.1% - 20.0%
- Under 15.1%
- No Data or Data Suppressed
- Mercy Medical Center - Springfield

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