Mass General Brigham
Cooley Dickinson Hospital

October 2022

Community Health
Needs Assessment

Community Health Needs Assessment 2022

Name of hospital organization operating hospital facility:	Cooley Dickinson Hospital
EIN of hospital organization operating hospital facility:	222617175
Address of hospital organization:	30 Locust Street, Northampton, MA 01060
Contact Person:	Jeff Harness
Date of CHNA approval:	October 24, 2022
Web Address for CHNA Reports:	https://www.cooleydickinson.org/about-us/commitment-to-community/benefiting-our-community/

Prepared by

Public Health Institute of Western Massachusetts
Collaborative for Educational Services
Franklin Regional Council of Governments
Pioneer Valley Planning Commission

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I.   Executive Summary

a. Introduction and Background

Cooley Dickinson Hospital (CDH), located in Northampton, Massachusetts, is a member of Mass General Brigham health care system. Most of the service area is in Hampshire County and it serves about 160,000 residents. Over half of the people residing in the service area live in the larger towns or cities of Amherst, Northampton, Easthampton, and Belchertown, which all have populations over 10,000. The remaining residents live in smaller rural towns in Hampshire and Franklin Counties. Cooley Dickinson Hospital is a member of the Coalition of Western Massachusetts Hospitals/Insurer ("the Coalition"), a partnership formed in 2012 that currently consists of nine non-profit hospitals and insurers in the region and that work to coordinate resources and activities to support health equity in the region and conduct the 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 law, each hospital develops a health improvement plan to address select prioritized needs. The CHNA data also inform Community 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 focuses mostly on Hampshire County data, with town-level and rural cluster data when available.

b. Regional Collaboratives

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; 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 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) include information on the impact of COVID-19 on health needs in the region; and (2) lift up the prioritized needs of youth mental health as a regional focus area for additional data gathering.

c. Regulatory Requirements

Cooley Dickinson Hospital is a member of the Coalition of Western Massachusetts Hospitals/Insurer ("the Coalition"), a partnership formed in 2012 of nine non-profit hospitals, clinics, and insurers in the region to coordinate resources and activities for conducting their Community Health Needs Assessments (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 law, each hospital develops a health improvement plan to address selected prioritized needs. The CHNA data also inform Community Health Improvement Plans (CHIPs) as well as many other community-based initiatives to achieve health equity.

d. Methods

The 2022 CHNA updates the prioritized community health needs identified in previous CHNAs while expanding on the priority focus of youth mental health. Assessment methods include:

- **Literature Review: (fall 2021)**
  - Review of existing assessment reports published since 2019 that were completed by community and regional agencies serving Hampshire County.
- **Quantitative data collection and analysis: (winter 2021-22)**
  - Analysis of COVID-19 Community Impact Survey (CCIS) data from Massachusetts Department of Public Health (MDPH).
  - Analysis of social, economic, and health data from the Massachusetts Department of Public Health, the U.S Census Bureau, the County Health Ranking Reports, Broadstreet, and a variety of other data sources.
  - FY22 Mass General Brigham CHNA Secondary Data Inventory.
- **Qualitative data collection and analysis:**
  - Survey of public health officials in Hampshire and Franklin Counties **(fall 2021).**
  - Focus groups and interviews with key informants conducted by the consultant team (winter 2021- spring 2022).

Limitations

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, but was not always consistent, making it difficult to compare. It is hard to find data on small populations, such as those that make up many of the small towns in the service area, or small numbers of certain races or people with a particular health outcome. Furthermore, this CHNA process cannot begin to cover the full range of identities present in our communities.

e. Target Population(s)

Due to the health disparities evident among people of different races, this CHNA also focuses as much as possible on data pertaining to Black community members and other people of color. These data are often limited, for reasons described above. Transgender and nonbinary people as well as limited income people are also more likely to suffer negative health outcomes. Furthermore, trans and nonbinary people and communities of color are more likely to be people who are lower income. These are also target populations.

f. 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 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, Indigenous, Latino/a/e, Asian, people/communities of color, White, LGBTQIA+, Transgender. The glossary in Appendix A offers further clarification of what we mean by these terms. Throughout the report you may see other terms or labels used in graphics, because these labels were used in the source materials. 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 "Latino/a/e," and differences among those who identify as Chinese, Japanese, or Korean that aren't captured by "Asian."

The Coalition agreed to focus on youth mental health as a regional priority area. For the purposes of this CHNA, "youth" means young people aged 12 to 24.

g. Key Data: Prioritized Health Needs
Social and Economic Determinants of Health

Community and Social Environment

Our health is also greatly impacted by the communities in which we live. We often think of communities as geographical - the town, city, or neighborhood in which we live - but all of us belong to multiple communities based on our identities as well. These can be communities according to race, language, religion, or workplace, as well as many others. Belonging to a strong community offers us a wide social network, close relationships, and a sense of belonging. All these things have positive impacts on our health. However, many people are excluded from certain communities as well, and not all communities can access the same privileges as others.

In a survey done by Community Action Pioneer Valley in 2020, people were asked whether they felt they'd been treated unfairly for something they could not change. Their findings show that many Hampshire County residents feel unfairly treated, largely based on the following factors: income level; gender or sexual identity; age; race or ethnicity; and/or disability. The intersection of these factors and identities means that people often suffer from more than one form of discrimination. These groups should receive increased and specialized support to ensure they can take advantage of community assets and resources as well. Service and health care organizations should strive to hire people who have belonged to or do belong to these groups to ensure they are serving all members of the community best.

Digital Equity

Our reliance on technology has grown since the COVID-19 pandemic had children attending school virtually and encouraged many adults to work from home, and people also relied on technology for social interactions, entertainment, and appointments too. While there are many benefits to modern technologies, not everyone can access them equally. Findings from The Digital Divide (2021) showed that there are three factors that prevent people from having equitable access to technology: lack of connectivity; lack of equipment; lack of digital literacy.

Some towns in the service area, especially in the most rural areas, do not have access to broadband Internet. Other people simply can't afford to pay for it. Many households rely on phones for Internet access, and don't have enough devices for all who need them. Older adults, people with disabilities, and English language learners in particular are at risk of low digital literacy, which prevents them from using technology even when it is available.

Transit

The limited public transportation in the area means that residents have less access to jobs, childcare, medical care and more. Residents spend a disproportionate amount of their income on transportation, and the recent increase in gas prices has likely exacerbated the strain it puts on people, particularly limited income people. The lack of access to public east/west transit also limits travel opportunities.

Food Access and Access to Physical Activity

A healthy diet and regular physical activity are crucial for good health outcomes. Twenty-six percent of Hampshire County adults reported no leisure-time physical activity in the last month, and the USDA estimates that about 70% of limited income residents in the service area have poor access to healthy foods. Even the most recent estimates don't take into account the spike in food prices as a result of inflation, though; many staples such as bread and

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eggs have seen a 10-15% increase in price. Residents in rural areas have to travel longer distances to reach a grocery store, and much of the service area has to rely on a personal vehicle.

About 14,000 people in the area rely on SNAP benefits to access food. Franklin County has higher-than-average SNAP enrollment, while Hampshire County's enrollment is much lower than the state average. Luckily, there are many assets in the area that help people access food. The Healthy Incentives Program (HIP) allows reimbursements for SNAP users at certain farmers markets and stands. The Food Bank of Western Massachusetts supports many pantries and meal sites while providing other food access services throughout the region. The Hampshire County Food Policy Council is working towards sustainable food access solutions in the region.

Housing

As the population in the service area continues to age, available housing will actually decrease, as older people are likely to live in households of only one or two people. This will put an increased strain on housing in an area where over half of residents are "housing burdened," which means they pay more than 30% of their income in housing costs. There are major disparities by race, and they appear to be worsening. In 2013, the median White family income in the Valley was $78,000; Black family income was $41,000; and Latino/a/e median family income was $28,000. By 2018, median White family income had risen to $94,000, but Black and Latino/a/e family incomes had each increased just $3,000. As a consequence, Black and Latino/a/e households have home ownership rates of less than half those of their White peers. The housing cost burden for renters is much higher than that of owners, thus continuing the cycle. Finally, the housing stock in Hampshire and Franklin Counties is comparatively old. Older houses require more maintenance, need updates, and cost more to heat. In addition, older house may have heating, ventilation, and air conditioning (HVAC) and other issues that exacerbate chronic pulmonary conditions such as asthma and COPD.

Violence

Despite lower rates of violent crime when compared to the state, violence has a negative impact on the health of residents. For example, nearly 20% of 8th, 10th, and 12th graders who responded to the Hampshire County Prevention Needs Assessment (PNAS) reported they had friends who had been abused by dating partners. Older people are particularly vulnerable to different forms of violence and abuse. Elder abuse is an important concern with an aging population.

Lack of Resources to Meet Basic Needs

Limited income people struggle with the financial resources and access to essential services required to make healthy choices. Having a lower income and having poor health outcomes are inextricably linked. To improve the health of a community, all residents need geographic and financial access to healthy food, physical activity, affordable housing, safety, technology, and more. They also need the education and time to take advantage of programs, activities, and actions that improve their health.

Community Health Issues and Outcomes

Asthma

According to the CDC, Massachusetts has one of the highest asthma rates in the country at 11%. Asthma, particularly when poorly controlled and treated, often leads to missed school and work and high medical bills, as it is often treated in the emergency department. Black people are more likely to be hospitalized for asthma, despite having asthma at similar rates to other races. Locally, Easthampton has much higher emergency department visits for asthma than the other more densely populated areas of the service area (Amherst and Northampton) and the Hampshire County average.

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Heart Disease

While cardiovascular disease (CVD) is a leading cause of death at Cooley Dickinson Hospital, rates of CVD are far lower than the Massachusetts average. Northampton and Easthampton have higher rates of emergency department visits than the rest of Hampshire County, while Amherst is lower. Black people are more likely to visit the emergency room than their White or Asian counterparts.

Stroke

Hampshire County has lower stroke rates than the rest of the state with 186/100,000 compared to 191/100,000. The Central Pioneer Valley rural cluster has higher rates (195/100,000). A quick response to a stroke is crucial to avoiding permanent disabilities. Rural towns, such as those in the Central Pioneer Valley, have longer to travel to get to the hospital, putting those residents at higher risk for long term disability. Identifying the symptoms of a stroke is crucial to early care. Nationally, Black residents are more likely to have a stroke for the first time as well as to die from a stroke. While death rates from strokes in the US have been falling overall for decades, the death rate among Hispanic people has risen recently.

Mental Health

Mental health admissions for the area are high. While the rural cluster of the Central Pioneer Valley has a lower rate of mental health hospital admissions than the state average, the more urban areas have far higher admissions. Northampton's admissions rate is well over twice the state average. These data mirror what we heard from key informants we interviewed about youth mental health - the lack of services in the area means that people are sometimes forced to wait until their needs reach a crisis level. They are unable to access basic mental health care services, are put on long waitlists, or struggle to navigate complex systems. Transition back to on-site learning, after a period of hybrid or remote learning, and pressure to integrate with others after an extended period of isolation during the pandemic add to the stress young people are experiencing.

COVID and Long COVID

While the service area has had lower COVID rates than the state and fewer deaths, Hampshire County also has a lower vaccination rate. Furthermore, the vaccination rates vary greatly between races, with Black, Latino/a/e, and Hispanic people being less likely to be vaccinated than White and Asian Americans. Furthermore, the complications of long COVID are not yet understood but will likely have serious implications for those who experience it as well as the health system. The CDC estimates that over 13% of people who contracted the virus may have extended health impacts. Also, yet to be determined are the ongoing economic impacts of the pandemic. While employment rates have bounced back regionally, the loss of work impacted women the most. Women were more likely than men to leave the workforce in order to care for family, and they may struggle to recoup the money they lost upon leaving their jobs. Finally, the mental health impacts have been severe, particularly for young people.

Barriers to Accessing Care

When community members struggle to access medical care, their health can deteriorate. Barriers to accessing health care identified in previous CHNAs include limited availability of providers, lack of transportation, insurance challenges, lack of cultural humility, low health literacy, and lack of coordinated care. The number of primary care providers (PCPs) compared to the overall population has been dropping in Hampshire County, although it still remains higher than the state average. Franklin County has far lower numbers of providers than the state or Hampshire County. Both counties have low ratios of dentists and mental health providers compared to the area population.

Transportation to medical care can also be a challenge. As mentioned in other sections, limited public transit, an aging population, and isolated rural areas are factors that contribute to many health outcomes, including access to

medical care. Data from the Massachusetts COVID-19 Community Impact Survey (CCIS) for the service area show that COVID-19 had a negative impact on healthcare access as well.

Regional Priority: Youth Mental Health

Youth report feelings of anxiety and sadness at high rates, and the pandemic increased feelings of isolation and depression. Trans and nonbinary youth report far worse mental health outcomes than their cisgendered peers. Every negative health outcome measured in the 2022 Prevention Needs Assessment Survey (PNAS) showed trans and nonbinary students faring far worse than females, who fared worse than males. For example, 79% of trans and nonbinary students reported they "felt depressed or sad most days in the past year." Females also had very high rates of negative mental health outcomes - 58% of them reported feeling depressed or sad, along with 33% of male students.

Schools and organizations that provide services and programming to young people are vital to the wellbeing of youth, as they provide a place for them to come together and build community. These programs are most successful when young people are given a place at the table when it comes to decision-making. The lack of power reported by youth in the service area contributes to poorer health outcomes.

Key informant interviews with mental health providers and youth program managers indicate a need for more mental health workers who reflect the demographic makeup of the community. Young people search for, and are unable to find, culturally competent care from people who look like them and with whom they share life experiences.

h. Mass General Brigham System Priorities

Priorities selected by Mass General Brigham include cardiometabolic disease and substance use disorders. There is a special focus on the racial and ethnic disparities that impact these health issues.

i. Themes and Conclusion

The service area has many assets when it comes to health care, community resources, and health outcomes, but not all community members have the same likelihood of achieving good health. Certain populations should be prioritized. While the majority of the service area identifies as White and English speaking, community members who belong to communities of color or are English language learners face significant challenges when it comes to maintaining good health, in large part because they are more likely to be limited income. Gender is another important distinction -- trans and nonbinary youth suffer disproportionately in their mental health. Young women also reported poor mental health outcomes. Young men reported poor mental health outcomes at lower numbers, but they are more likely to be impacted by substance mis-use and other outcomes that are often mental health related. In addition, many people report discrimination based on income, housing status, or use of government programs, affecting access to health care and essential services. Given the fact that people of color and trans or nonbinary people are *also* more likely to be limited income, it's likely these respondents experience multiple forms of unfair treatment.

The pandemic has exacerbated almost every negative health outcome, from the actual loss of life from COVID-19 and the long-term health issues associated with long COVID, to economic hardships and mental health and educational problems stemming from isolation and anxiety. The full repercussions remain to be seen but will have continuous impacts on the health of the community.

j. Rationale for identified health needs not prioritized by hospital

Transportation will not be a focus for our implementation plan. We have supported a rural-focused transportation project serving older adults for several years and that project is now self-sustaining. We will continue to advocate for regional and state transportation solutions.

Violence will not be a focus for our implementation plan. The level of violence is lower in Hampshire County compared to the state, and other issues are higher priorities. We will support youth mental health interventions, which may have a secondary benefit on violence.

We will not focus on asthma in our implementation plan. Other priorities identified in this report are higher priorities. We are continuing to address access to providers to treat adult and pediatric asthma patients.

II. COMMUNITY HEALTH NEEDS ASSESSMENT OVERVIEW

a. Purpose and Scope of Community Health Needs Assessment and Community Health Improvement Plan

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 and Regional Advisory Council (RAC) for the 2022 CHNA share guiding principles rooted in an analysis of what prevents health equity, captured visually in the accompanying tree graphic.[1.] 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 1
Health Tree Model: Understanding Root Causes of Health Behaviors and Outcomes
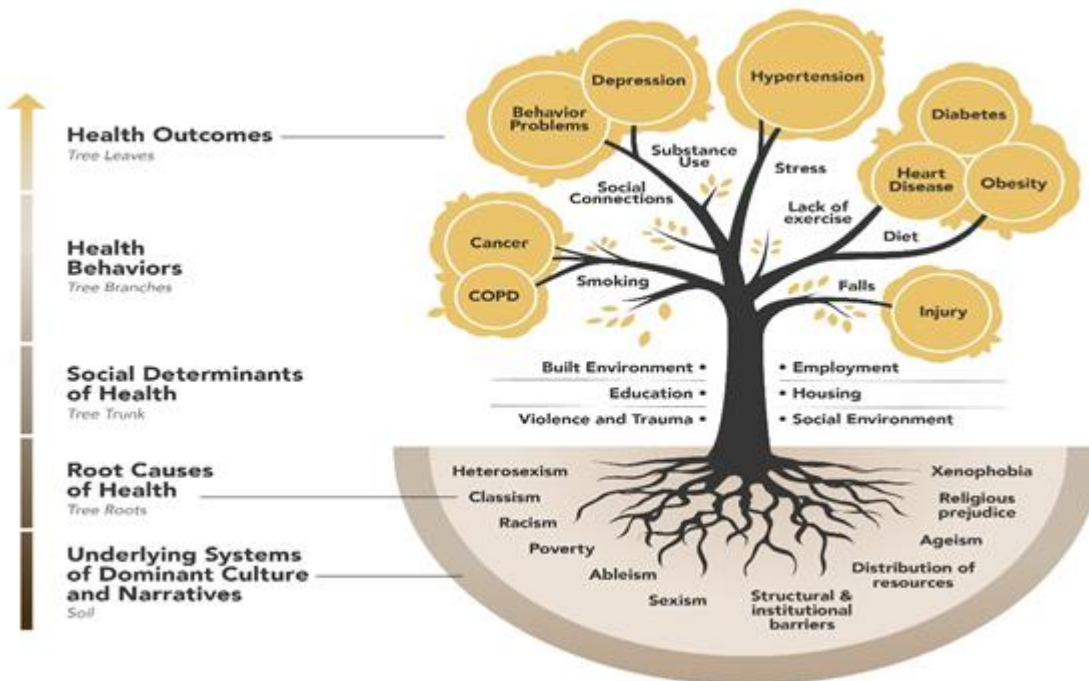
Source: Sanusi M. Root causes: Going past social determinants. Health Resources in Action. 2021. https://hria.org/2021/04/20/rootcauses/.

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 Indigenous tribes, enslaved Africans and their descendants, people of Latin American, Asian and Pacific Islander origin, other immigrants, women, people without wealth, people with disabilities, LGBTQIA+ individuals, 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 of these systemic hierarchies, race, ethnicity, age, gender, wealth and income, disability status, etc. determine one's access to quality health care, a living wage, safe, affordable housing, freedom from violence, a good education, and healthy foods and physical activity.

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 A). The structure of CHNA decision-making shows the commitment to community-led change. The 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 RAC members. Ultimately, we want to share decision-making more fully with those most directly affected by health inequities, to ensure residents can influence the environment we all live in to improve community health, and we will continue holding ourselves accountable to do this.

FIGURE 2
Community Engagement Standards for Community Health Planning Guideline
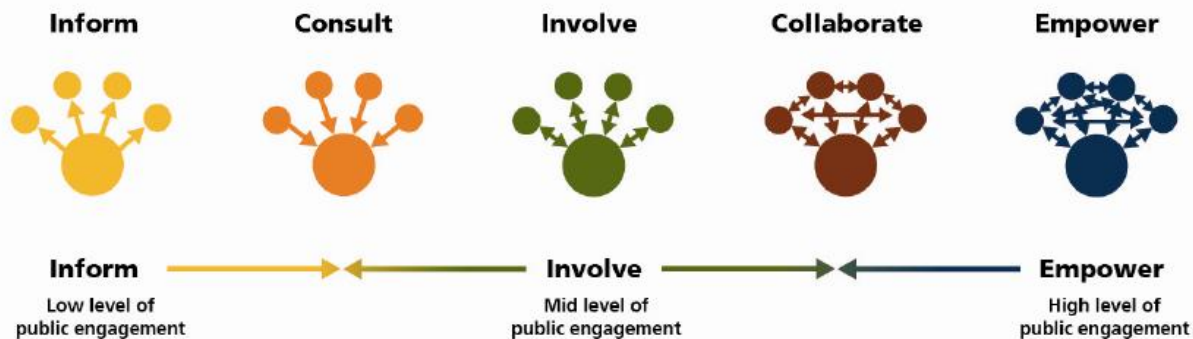
Source: Massachusetts Department of Public Health. Community engagement standards for community health planning guideline. https://www.mass.gov/doc/community-engagement-guidelines-for-community-health-planning-pdf/download. 2017.

In doing so, the Coalition and RAC recognize that the above tree image does not represent the full story of our community, nor an inclusive vision for health equity. Our understanding of the complexity of these issues is evolving as we learn together, and we do not yet have adequate words and images to describe them. We will challenge ourselves to find or create visual representations that better speak to both the inequities and assets of our region, and our aspirations for its future.

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.
2. Further refined the equity values of the CHNA process, as described above.

3. Pursued a commitment to collective <u>action</u> around a regional focus area, Youth Mental Health.
4. Strove to make the CHNA reports more <u>accessible</u> – 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.

b. Data 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.

The primary methods used to inform these findings include:

- Literature Review: (fall 2021)
    - o Review of existing assessment reports published since 2019 that were completed by community and regional agencies serving Hampshire and Franklin Counties.
- Quantitative data collection and analysis: (winter 2021-22)
    - o Analysis of COVID-19 Community Impact Survey (CCIS) data from Massachusetts Department of Public Health (MDPH).
    - o Analysis of social, economic, and health data from the Massachusetts Department of Public Health, the U.S Census Bureau, the County Health Ranking Reports, Broadstreet, and a variety of other data sources.
    - o FY22 Mass General Brigham CHNA Secondary Data Inventory.
- Qualitative data collection and analysis:
    - o Survey of public health officials in Hampshire and Franklin Counties (fall 2021).
    - o Focus groups and interviews with key informants conducted by the consultant team (winter 2021- spring 2022).

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 Hampshire County and Western Massachusetts. 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 the Cooley Dickinson Service Area.

In the Cooley Dickinson service area, there were 1,310 respondents.

- Respondents were predominantly female (78%).
- One in 10 identified as a non-white race or ethnicity.
- 29% identified as LGBTQIA+.
- 7% spoke a language other than English at home.
- 16% had an income below $35,000.
- 40% lived in a rural area.

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.

The Cooley Dickinson Community Benefit Advisory Council and the Healthy Communities Committee reviewed draft priorities and provided recommendations based on CHNA findings.

Data Limitations

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).

Many of the towns that are part of the service area have fewer than 5,000 residents, which makes it difficult to find data. 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. While it might be statistically necessary to remove small data sets, the practical result is a dearth of data for Black, Indigenous, People of Color (BIPOC) residents. Statistics for people of color in Hampshire and Franklin Counties do not begin to reveal the level of detail we would like to know, preventing a better understanding of people who identify with various races and ethnicities. Larger data sets show poorer health outcomes in nearly every arena, often a result of centuries of discrimination and institutionalized racism. Since data specific to BIPOC youth in the area is difficult to find, this report will rely on larger data sets at times.

The service area largely identifies as White and non-Hispanic, and the comparatively smaller numbers of other races lead to the same kind of challenges as small case counts. It is also important to consider intersectionality—the overlapping identities of residents. What impact does being young, Black, and gay in the area 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.

c. Target Population

Due to the health disparities evident among people of different races, this CHNA also focuses as much as possible on data pertaining to Black community members and other people of color. This data is often limited, for reasons described above. Transgender and nonbinary people as well as limited income people are also more likely to suffer negative health outcomes. Furthermore, trans and nonbinary people and communities of color are more likely to be limited income. People who experience multiple forms of discrimination often have poorer health outcomes.

d. Population Characteristics

The service area for Cooley Dickinson Hospital (CDH) includes 16 communities within Hampshire County (Table 1 and Figure 3) and six small towns in Franklin County. Amherst and Northampton are the largest towns in the area, and Northampton is the location of Cooley Dickinson Hospital. The other larger communities in the area are Easthampton and Belchertown. About 67% of the population lives in these urban areas. About 30% of the service area population lives in the remaining rural areas.[2]

FIGURE 3
Communities in Cooley Dickinson Hospital Service Area: 2019 Population Estimates
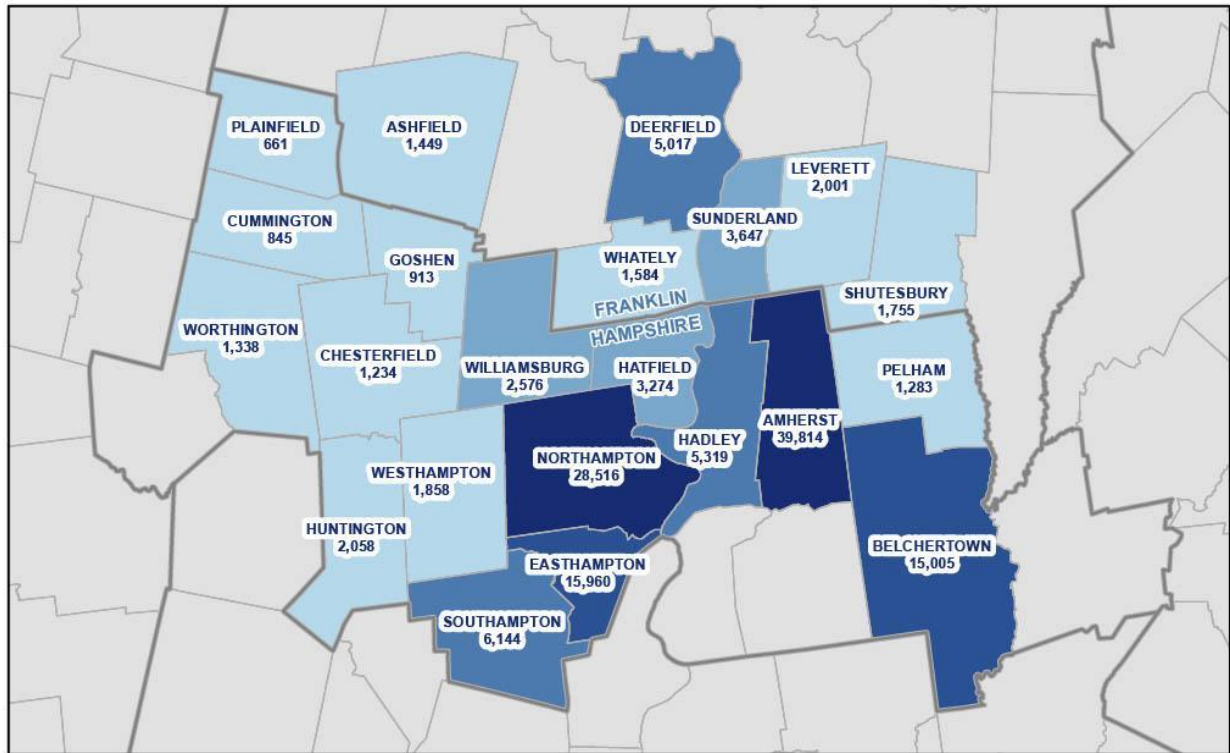
Source: Pioneer Valley Planning Commission. The region's comprehensive economic development strategy (CEDS): The Pioneer Valley plan for progress. http://www.pvpc.org/sites/default/files/2014%20CEDS_Final_Draft_08-12-14_rev_1.pdf. 2014.

The service area includes about 165,000 people, which represents a 2% increase over the last decade.[3] The median age for the area is similar to the U.S. and Massachusetts at 37 years, but this could be skewed by the high number of college students in the area. The proportion of children under five is only half that of the U.S. at 3%. It's especially important to note that the elderly population is growing quickly. In Hampshire County, the 65+ population grew by 44%, and that of Franklin County grew by 49%.[4]

FIGURE 4
Projected Population by Age
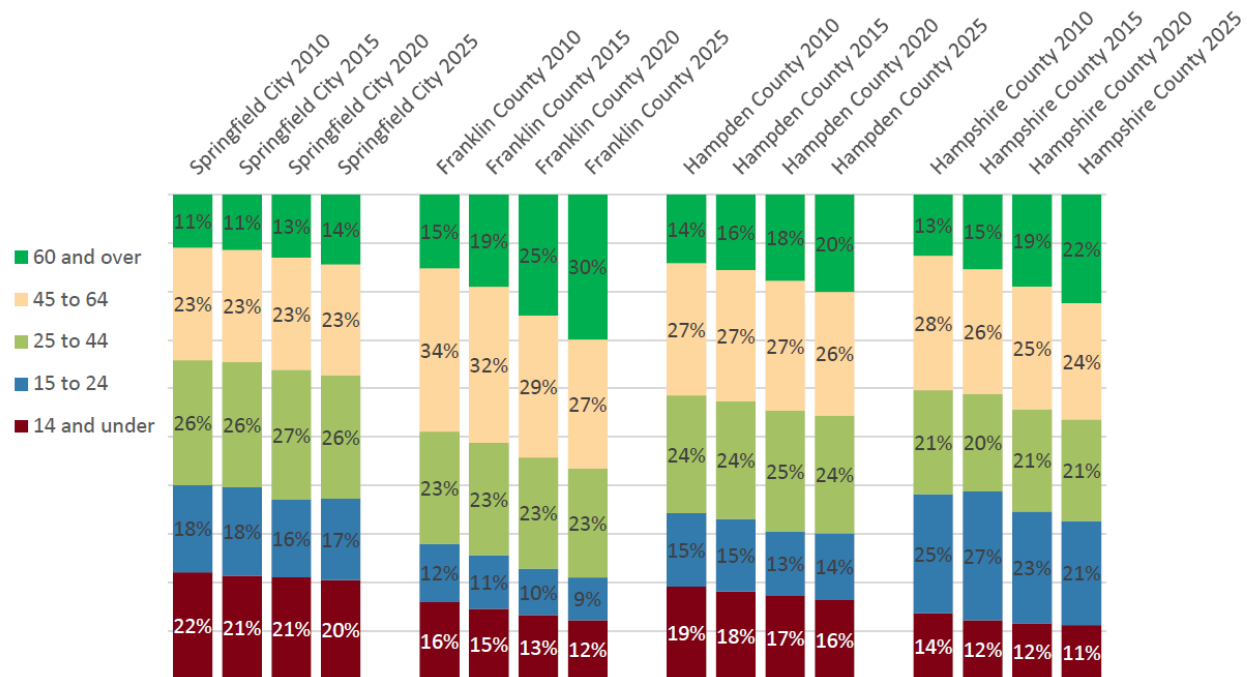
Source: UMass Donahue Institute. Greater Springfield regional housing analysis (based on UMDI Population Projections 2018, U.S. Census Bureau 2018 5-YR ACS Tables B25007 Tenure by Age, B01001 Sex by Age, B25001 Housing Units, B25004 Vacancy Status). March 4, 2021

About 80% of the service area identifies as non-Hispanic White, as shown in Table 1. About 7% identify as Hispanic or Latino/a/e, an increase of over 50% since the 2010 census. A similar proportion identify as two or more races, a rate that has tripled since 2010.

Large socio-economic disparities remain between different ethnic groups. Table 2 shows poverty by race and family configuration. This shows far higher poverty rates among families with a single female householder of any race. Poverty rates for Black/African American householders are far higher than White householders in Franklin County in particular, but also in Hampshire County. Single female householders generally have far more limited incomes than any other demographic.

It's important to note that the large number of students in Cooley Dickinson's service area has a significant impact on population statistics. The University of Massachusetts, Amherst, has an undergraduate student body of 24,231 students, plus 7,814 graduate students.[5] The other four colleges in the area (Amherst College, Hampshire College, Mount Holyoke College, and Smith College) have a combined student population of nearly 7,000.[6,7,8,9]

TABLE 1
Population by Race/Ethnicity, Hampshire County

		2020		2010		Change
		#	%	#	%	
Total		162,308		158,075		**2.7%**
Race	White	130,161	80.2%	140,245	88.7%	**-7.2%**
	Black	4,706	2.9%	3,925	2.5%	**19.9%**
	American Indian	426	0.3%	328	0.2%	**29.9%**
	Asian	10,796	6.7%	7,185	4.5%	**50.3%**
	Pacific Islander	58	0.0%	53	0.0%	**9.4%**
	Other	4,215	2.6%	2,438	1.5%	**72.9%**
	Two or More	11,946	7.4%	3,901	2.5%	**206.2%**
Ethnicity	Hispanic or Latino/a/e	11,622	7.2%	7,455	4.7%	55.9%

Source: U.S. Census Bureau. How many people live in Hampshire County, Massachusetts. https://data.rgj.com/census/total-population/total-population-change/hampshire-county-massachusetts/050-25015/. Published 2020. Accessed June 2022.

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TABLE 2
Family Poverty, Percentage of families with income below 100% FPL by family configuration and race/ethnicity

	All families with householder who is Black or African American	All families with a single female householder who is Black or African American	All families with householder who is of Hispanic or Latino/a/e origin (of any race)	All families with a single female householder who is of Hispanic or Latino/a/e origin (of any race)	All families with householder who is White Non-Hispanic or Latino/a/e	All families with a single female householder who is White Non-Hispanic or Latino/a/e
United States	18%	30%	16%	32%	6%	20%
Massachusetts	**14%**	**25%**	**20%**	**35%**	**4%**	**35%**
Berkshire County	33%	56%	12%	56%	5%	15%
Franklin County	26%	43%	17%	32%	6%	16%
Hampden County	18%	28%	29%	45%	5%	16%
Hampshire County	**25%**	**31%**	**13%**	**21%**	**4%**	**14%**

Educational attainment and health insurance rates are both higher than the U.S. averages, although similar to the state averages. Forty-eight percent of Hampshire County residents are college graduates, compared to 33% of Americans.[10] Only 2.2% of the service area is uninsured, which is slightly lower than the Massachusetts average of 2.4%.[11] The majority of residents (66%) in the service area use private insurance, with the remaining 29% using public insurance.[12]

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III. PRIORITIES

The following health issues continue to be prioritized health needs for the service area:

- Social and Economic Determinants of Health, including social environment, housing, transit, food access, access to physical activity, lack of resources to meet basic needs
- Health Outcomes: mental health and substance abuse; chronic health conditions; Alzheimer's, dementia, and older adults
- Barriers to accessing care, particularly for LGBTQIA+ people and veterans

The regional priority for Western Massachusetts is youth mental health. The priorities selected by Mass General Brigham are cardiometabolic disease and substance use disorder, with a focus on racial and ethnic health disparities.

a. Social and Economic Determinants of Health: Social and Physical Environment

Researchers, policy makers, public health workers, and the medical community are increasingly aware of the impact the social and physical environment has on the health of a community. Traditionally, only individual choices were considered to have a serious impact on one's health; now it is recognized that a wide range of determinants impact the health of an individual or community. These determinants intersect with each other as well as with genetic factors, personal behavior, access to medical care, and more.[13]

Community and Social Environment

Our health is greatly impacted by the communities in which we live. We often think of communities as geographical - the town, city, or neighborhood in which we live - but all of us belong to multiple communities based on our identities as well. These can be communities according to race, language, religion, or workplace, as well as many others. Belonging to a strong community offers us a wide social network, close relationships, and a sense of belonging. All of these things have positive impacts on our health. However, many people are excluded from certain communities, and not all communities can access the same privileges as others.

Community Action[14] surveyed 376 people with an income below 250% of the Federal Poverty Level in their service area of Franklin, Hampshire, and North Quabbin in 2020. This survey gives detailed information on the experiences of people with limited incomes in mostlyrural communities, which is especially important because data on rural communities is harder to find. In this convenience sample, older adults, women, and Franklin County residents were overrepresented. The sample had proportions of people of color and people living in rural areas that are consistent with the area population, but the numbers of people from these groups was very small. It's important to remember that the survey only reflects the opinions of the 376 respondents, and not the entire population. Not every respondent replied to every question.

The Community Action survey shows that community and social environment continues to be a prioritized health need in 2022. Thirty-two percent of respondents replied "yes" or "possibly" when asked if they'd ever been treated unfairly for something they could not change, like gender or race. Respondents gave many different reasons for experiencing discrimination, but the reasons can be grouped into basic categories (respondents could select multiple responses; percentages are among those who reported unfair treatment).

Income: over half of respondents noted they had been discriminated against for being limited income. Others also stated they had been treated poorly for being unhoused, not working, or receiving government benefits. It's

important to remember that all participants in the survey had an income of below 250% of the Federal Poverty Level.

Gender and sexuality: nearly 40% responded they had experienced discrimination because they were female, with smaller numbers reporting they were treated unfairly because they were trans or gender nonconforming, or "lesbian/gay/bisexual," with additional sexualities like pansexual named in the comments section. While fewer people reported unfair treatment because they were trans or gender nonconforming or lesbian/gay/bisexual, we know that these are identity groups that are commonly discriminated against (see Section 3, part f on youth mental health for more).

Age: age discrimination can occur at any age. Over 25% of respondents felt discriminated against either for being elderly *or* too young, especially for being a young parent. Older respondents were over-represented in the survey sample.

Race/ethnicity/language: nearly 30% reported poor treatment because they are not native English speakers, with smaller numbers feeling the same due to being "a person of color and/or Latino."

Disability: almost 30% felt discriminated against for a disability.

Other reasons stated were religion, being overweight, having a criminal record, and more.

This survey suggests that many residents of the service area have experienced discrimination. These groups are likely to face poorer health outcomes. Research shows that even the anticipation of discrimination has a negative impact on health, let alone the actual impact of the discrimination itself, which can lead to lack of access to appropriate health care, safe housing, education, jobs, and more.[15] Maps of income and race show that the service area aligns with national outcomes that show that areas where more White people live have higher incomes, as well as longer life expectancies (see the Opportunity Atlas for examples).

Furthermore, the intersection of race and income means that limited income people of color face even more discrimination, as well as the poor health outcomes that derive from having less money. Given the increased chance of being limited income if you are a person of color or transgender, respondents who faced discrimination for gender and race are likely to have also faced discrimination due to income. The fact that so many respondents felt they have been mistreated due to their income status is an important finding. While we are culturally aware of many "-isms," income discrimination is not one that is as commonly talked about. Limited income people are in need of material support as well as other forms of emotional and community support, perhaps more so because they live in an area with relatively high levels of income and education.

The comments written into the survey also reflect what researchers found when conducting interviews with mental health providers and youth workers (see Section 3-part f) - people seek communities, mentors, and providers that reflect their own identities. They are often unable to find that in our healthcare system, especially when it comes to mental health care, since the majority of healthcare workers are White,[16] and mental health care workers are predominantly White and female.[17,18] This means that people of color and trans, nonbinary, and queer people struggle to find health care providers who share their identity. Social media and technology have made it easier to find community, but they come with downsides as well. Social service organizations, youth groups, and health care facilities can improve the health of all of our communities by increasing diversity in leadership and ensuring the people who lead and work for their programs reflect the populations in which they operate and are meant to serve. This means diversifying workplaces by hiring people from a broader array of communities, cultures, and backgrounds. Unfortunately, this is easier said than done, as systemic racism and discrimination have often excluded traditionally disenfranchised communities from easily accessing higher education and other necessary aspects of securing these careers. Youth development and mental health care are not high-earning fields, which further discourages people from getting the education required to pursue those careers.

Research has shown that engaged communities have better health outcomes, but measuring civic engagement is challenging, especially the more informal types of engagement and mutual support that neighbors provide one another.[19] Yet we know that the COVID-19 pandemic had harmful effects on people's ability to interact. In a survey administered in the fall of 2021 for this CHNA, public health workers from Hampshire County and the Pioneer Valley in general noted the importance of and widespread participation in community and neighborhood support. Informal widespread community support can be seen as an asset in service area, particularly in the rural places that have less access to formal support services. The survey also showed, however, the negative impacts of isolation, particularly among rural seniors. Informal community networks can offer significant improvements to health and wellbeing. Programs that support community building, both within cultural and identity groups and across incomes, races, genders, and other markers, have an opportunity to strengthen communities and improve health and wellbeing.

Fortunately, the service area has many more community assets that contribute to the physical, mental, and emotional wellbeing of residents. While transit can be a challenge, most residents have access to safe outdoor spaces, from urban parks and bike trails to the thousands of miles of wooded trails. There are fairly low crime and violence rates in the service area, which helps make outdoor activities more accessible.[20] Hampshire and Franklin counties were both rated as "very low" social vulnerability by the CDC. To determine social vulnerability, researchers look at populations that are particularly vulnerable to health problems that result from natural or human-made disasters, including climate change and extreme weather.[21]

The unemployment rates, which soared during COVID-19 shutdowns, now remain just below 3% in both Hampshire and Franklin Counties as of May 2022,[22] which means most residents are able to find work. There is also evidence that people, particularly women, have dropped out of the labor force during COVID shutdowns, and thus would not be reflected in unemployment numbers. See the COVID-19 section for more information.

Digital Equity

The Alliance for Digital Equity was recently created by partners in Franklin, Hampshire, and Hampden Counties to explore access to technology, or "digital equity" in the region. They created an assessment to look at causes, impacts, and solutions to the regional digital divide in early winter of 2021.[23] Their findings show that the pandemic highlighted and made worse inequities in access to technology, leading to digital equity becoming a cross-cutting prioritized health need in 2022. Children had to rely on computers and the Internet to participate in remote school; many adults were expected to attend meetings and work virtually; and people relied more heavily on technology for socializing and keeping in touch. Their findings showed that there are three factors that prevent people from having equitable access to technology: lack of connectivity; lack of equipment; and lack of digital literacy.

Rural residents are particularly impacted by a lack of connectivity, especially in towns that don't have widespread broadband access. In the service area, this includes at least the towns of Goshen, Chesterfield, and Worthington.[23] Data for other rural towns were unavailable, and they may lack broadband as well. People with limited incomes struggle to pay for the Internet and often rely on public networks or cell phones.

A lack of equipment is another issue. Even when residents can easily access the Internet, they still need to have computers that work well and are up to date. Some may struggle to access a printer or necessary software. Other families may have one computer to share, or limited quiet or private space for schoolwork, paid work, and appointments that are conducted online.

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"Having a computer and Internet is only part of the story. There are also printing needs, access to software, and then keeping everything up to date and working."
-Survey respondent, The Digital Divide

Digital literacy is "having the skills you need to live, learn, and work in a society where communication and access to information is increasingly through digital technologies and Internet connected devices." Sixty-eight percent of older adults were impacted by a lack of digital literacy. English language learners and people with disabilities are also disproportionately affected.[23]

The digital divide can result in increased isolation; a lack of access to education and job opportunities; and reduced enrollment and participation in programs conducted or advertised online. While virtual meetings and telehealth appointments can be advantageous for many people, service organizations should keep in mind that not everyone can take advantage of them.

Housing
The cost and availability of housing have long been a concern in Massachusetts, and the pandemic has exacerbated the issue, which continues to be a prioritized health need in 2022. The recent Greater Springfield Housing Analysis Report offers local data, some of which follows statewide trends, and some of which highlights the unique challenges and assets of housing in the Pioneer Valley.[4]

The population in the area is growing much more slowly than most of the state. Hampshire County grew by 2%, and the population of Franklin County actually decreased 2% between 2010 and 2019.[24] Both counties are expected to see an increase in population age (see Figure 4). Older people tend to have fewer inhabitants per household, since they are unlikely to live with their children or roommates, as younger people do, which will increase the need for housing units despite a shrinking or slowly growing population.

Meanwhile, over half of Pioneer Valley residents are "housing burdened," which means they pay more than 30% of their income in housing costs (see Figure 5).[25] There are major disparities by race, and they appear to be worsening. In 2013, the median White family income in the Pioneer Valley was $78,000; Black family income was $41,000; and Latino/a/e median family income was $28,000. By 2018, median White family income had risen to $94,000, but Black and Latino/a/e family incomes had increased just $3,000.[4] As a consequence, Black and Latino/a/e households have ownership rates of less than half those of their White peers. The housing cost burden for renters is much higher than that of owners, thus continuing the cycle. This is especially important to note as communities of color are growing in the area.

The housing stock in Franklin and Hampshire counties is also old - 40% of Franklin County homes and 30% of Hampshire County homes were built before 1950.[4] Older homes have higher maintenance costs. Rapid improvements in energy efficiency, from double paned windows and insulation to efficient boilers mean that older homes potentially face higher utility costs until they can modernize. Renters are often unable to make major repairs and improvements and are thus stuck paying higher utilities. Owners can take advantage of programs like Mass Save, which subsidizes efficiency upgrades and offers interest free loans, or state subsidies for energy saving costs. However, when repairs and upgrades pile up it can be difficult to prioritize. Older homeowners interested in "aging at home" may be likely to find themselves in homes that are too hot in the summer, too cold in the winter,

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and unsafe for people with limited mobility. It's also important to note that extremes in temperature are exacerbated by climate change.

Transit

There are many factors in the physical environment that can influence health. One major factor is public transportation, which continues to be a prioritized health need in 2022. It can influence air quality, and it impacts residents' abilities to secure jobs and affordable housing and access healthy food, medical care, childcare, and more. The Pioneer Valley Transit Authority serves the larger communities in the service area and a few smaller communities. These hubs include Amherst, Belchertown, Easthampton, Hadley, Leverett, Northampton, Pelham, Sunderland, and Williamsburg. Even within these "hubs," transit does not run in the evenings or weekends. In Amherst and Northampton, transit is often designed to serve the needs of students, who are not always on campus. Insufficient public transportation makes it difficult to rely on for commuting or obtaining groceries or other goods and services. While public transit allows for some transportation north and south through the Pioneer Valley, there is even more limited access to Boston, Worcester, and other large cities in eastern Massachusetts. The pandemic further limited public transportation. For many limited income families, owning a car is an enormous expenditure when considered as a percent of income.

Fortunately, the Quaboag Connector and Franklin County Regional Transit's ACCESS programs serve part of the service area and allow people, particularly older adults and those with disabilities, to book rides at a low cost. While this is an important asset, it's still very limited. In the service area, a higher share of household income goes towards transportation than in almost any other region of the state.

FIGURE 5

Percentage of Household Income Spent on Housing and Transportation, for Households with up to 80% of Area Median Income
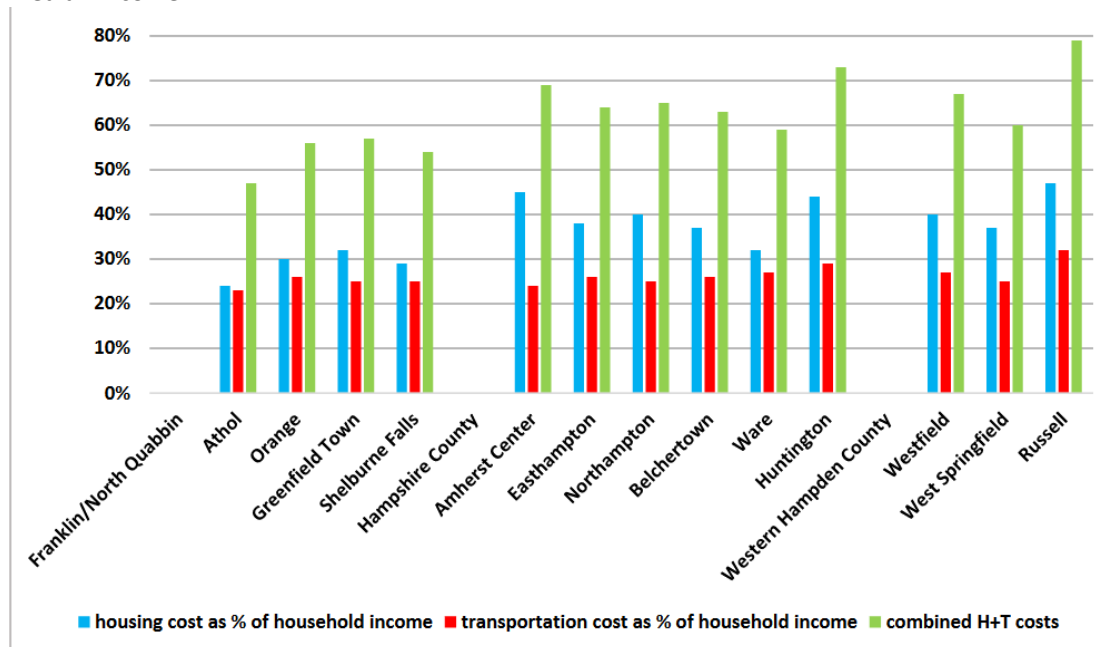
Source: Center for Neighborhood Technology. H&T Index. https://htaindex.cnt.org/. Accessed June 2022.
Note: H+T Index methodology used income data from 2015 American Community Survey.

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Food Access and Access to Physical Activity

Access to healthy food and safe places to exercise are crucial to good health. Recent data indicate that these continue to be prioritized health needs for this CHNA. Twenty-six percent of Hampshire County adults reported no leisure-time physical activity in the last month.[26] Several key informants who worked as health care providers or youth program managers were interviewed about youth mental health. Several of them stated the need for more affordable and accessible physical activities for youth, like sports teams. Key informants emphasized the positive impact of physical activity not just on physical health, but on mental and emotional health as well.

According to a Pioneer Valley Planning Commission (PVPC) report, over 14,000 residents in the service area receive SNAP benefits, and more are eligible but do not receive them.[27] Rural residents often face long travel times to reach a full-service grocery store with data indicating that rural residents (Hilltowns) must travel at least 20 minutes to reach a grocery store. Hilltown residents are more likely to shop at smaller stores or convenience stores, many of which don't accept WIC benefits.[28] Residents living in these areas likely struggle to access fresh, healthy food at prices they can afford. According to the U.S Department of Agriculture (USDA), an estimated 69% of limited income people living in the service area have low access to healthy food.[29] Feeding America lists 8% of Hampshire County and 9% of Franklin County residents as "food insecure" (see Figure 6).[30] Of these people, 36% and 18% respectively have incomes above 200% of the federal poverty line, which renders them ineligible for SNAP and other benefits. There are likely close to 3,000 children in the service area who are food insecure.

FIGURE 6
Food Insecurity in Cooley Dickinson Hospital Service Area by Census Tract (2019)
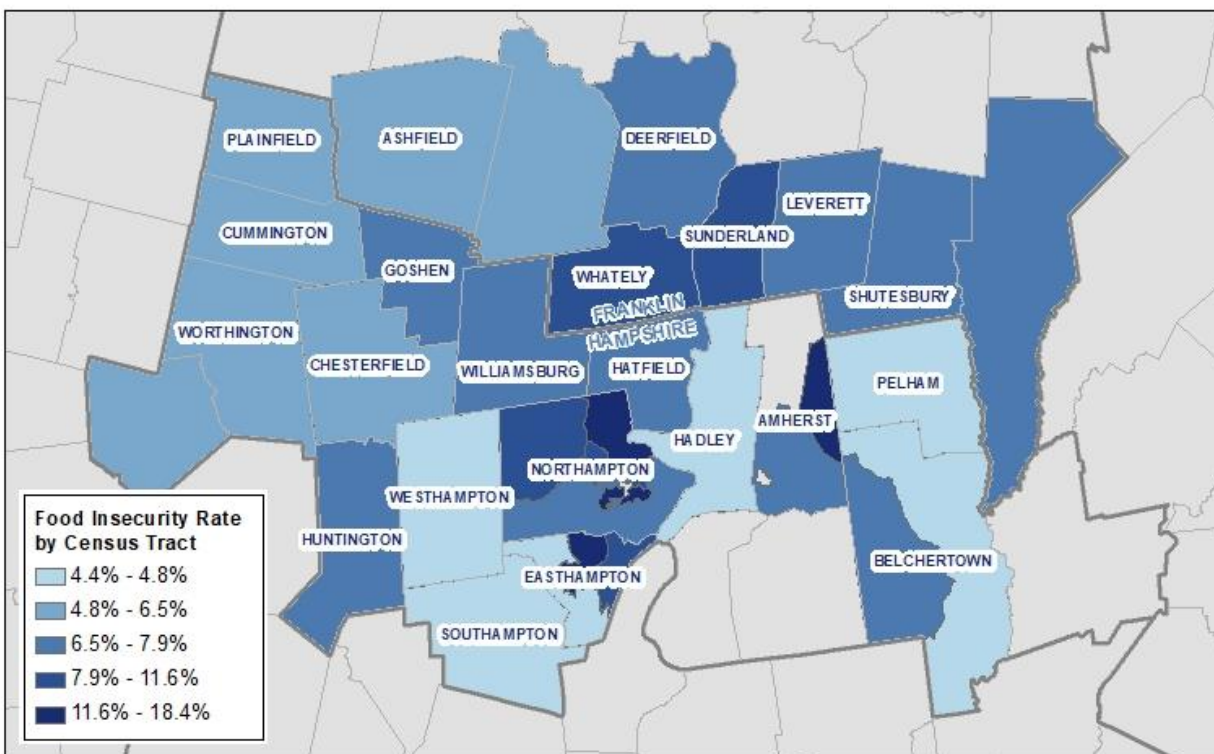
Source: Gundersen C, Strayer M, Dewey A, Hake M, Engelhard E. Map the meal gap 2021: An analysis of county and congressional district food insecurity and county food cost in the United States in 2019. Feeding America. 2021.

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More recent county-level data from 2020 and 2021 show that the pandemic and inflation have had a negative impact on food access too (see Figure 7).

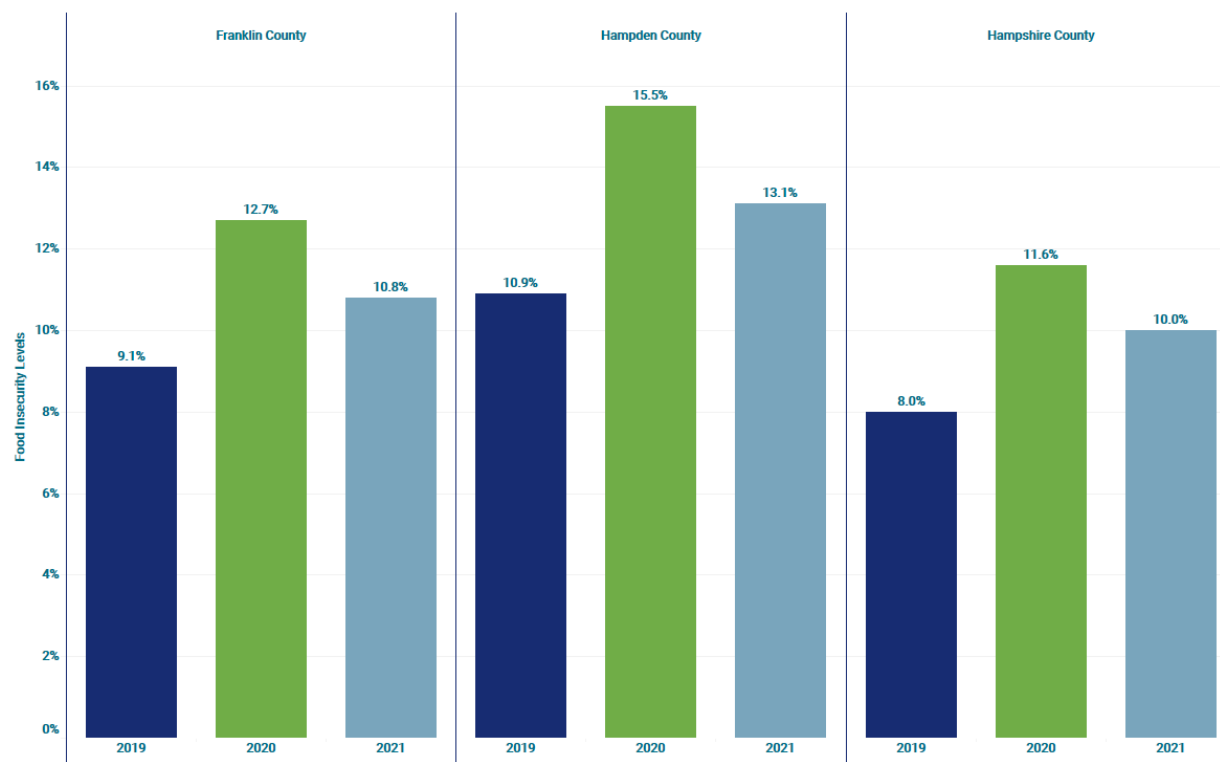**FIGURE 7**

Food Insecurity by County, 2019-2021

Source: Gundersen C, Strayer M, Dewey A, Hake M, Engelhard E. 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. 2021.

The cost of eating at home, traditionally a good way to save on food costs, has risen nearly 9% over the last year. The prices of healthy staples like fresh fruits, milk, and eggs, have risen even more.[31] Presumably, local residents are suffering from rising prices. Furthermore, the available data on food access is likely an undercount, as some sources do not count people experiencing homelessness, as they have no listed address.

Fortunately, the area has many assets when it comes to food access. The Food Bank of Western Massachusetts serves residents throughout western Massachusetts by providing food to pantries and meal programs, as well as nutrition education, mobile food markets, and SNAP application support. Mass General Brigham provided a four-year grant to the Food Bank to increase access to food for patients who qualify based on social determinant of health screening and a secondary clinic screen.

There are 17 food pantries or mobile food bank sites and eight meal sites which receive support from The Food Bank. The Food Bank also has 12 Brown Bag sites in Hampshire County, in which they supply fresh food to seniors monthly. The Food Bank also has 12 Brown Bag sites in Hampshire County, in which they supply fresh food to seniors monthly. The Food Bank provides evidence of the increase in need during the pandemic- they distributed

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30% more food in the first seven months of the pandemic compared to the same period in 2019, and their member programs saw a 215% increase in the number of people served in that same period.[32] Franklin County in particular has very high rates of SNAP participation. While this shows a high need, it also indicates that many residents are accessing support. Franklin County (13%) has higher rates of SNAP use than both Hampshire County (7%) and the state average (11%).[33]

Massachusetts also benefits from HIP (Healthy Incentives Program) which replaces money on EBT cards when it's used to buy local fruits and vegetables from HIP farm vendors.[34] HIP improves the local economy by encouraging and enabling SNAP recipients to buy local and gives SNAP recipients better access to healthy food. There are many farms, farm stands, and farmers markets in the area, some of which run year-round. Hampshire County has similar rates of farmers markets per 100,000 people to the state, but Franklin County has the highest rate of markets at four times the statewide rate.[35] While farm stands and farmers markets are important and HIP increases access, previous research shows that people with limited incomes report that they don't feel completely comfortable shopping in those environments, so their impact may be limited.[36] The service area also has lower numbers of fast-food restaurants per 100,000 residents when compared to other counties in Massachusetts. This could indicate healthier choices but could also be worrisome if affordable food options are less available, particularly for people experiencing homelessness.

Healthy Hampshire is another area asset. They have a number of initiatives dedicated to improving access to healthy food, including increasing SNAP and HIP availability at farmers markets; improving food offerings at convenience stores; and partnering with Cooley Dickinson Hospital to promote healthy food. Healthy Hampshire has also increased community garden opportunities and mobile markets in limited income areas. In partnership with Cooley Dickinson, they also secured funding from MassUP to establish a Hampshire County Food Policy Council. The Food Policy Council works to "identify and propose innovative solutions to make local food systems more economically and environmentally sustainable and socially just".[37]

Violence

Despite lower rates of violent crime when compared to the state, violence has a negative impact on the health of residents, making this an ongoing prioritized health need. While Massachusetts has 384 reported violent crime offenses per 100,000 population, Hampshire County has 271. Regardless, there are reasons for concern. For example, nearly 20% of 8th, 10th, and 12th graders who responded to the Hampshire County Prevention Needs Assessment (PNAS) reported they had friends who had been abused by dating partners.[38] Many respondents said they wanted to help but didn't know how.

Lack of Resources to Meet Basic Needs

People with limited income lack the financial resources and access to essential services and basic needs (such as grocery stores and stable housing) required to make healthy choices. Having a lower income and having poor health outcomes are inextricably linked. Yet because more than 1 out of 10 people in the service area live in poverty, lack of resources to meet basic needs is a continued prioritized health need.[39] To improve the health of a community, all residents need geographic and financial access to healthy food, physical activity, affordable housing, safety, technology, and more. They also need the education and time to take advantage of programs, activities, and actions that improve their health.

Many residents in this area feel discriminated against due to their limited income status.[14] Being limited income also puts people at an increased risk of chronic stress. Due to less predictable working schedules, long hours, and childcare difficulties, they may have less time to manage health issues. People with limited income are less likely to have the sick time required to attend an appointment. In addition, navigating the complexity of the mental health care system and insurance system is time consuming. Paying copays is also challenging. This means people with limited income have less access to mental health care, though their need for it may be higher. Promising

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approaches such as the Northampton Resilience Hub will help people access basic needs such as a meal, shower, a place to store important papers.

b. Barriers to Accessing Care

When community members struggle to access medical care, their health can deteriorate. Barriers to accessing health care identified in previous CHNAs include limited availability of providers, lack of transportation, insurance challenges, lack of cultural humility, low health literacy, and lack of coordinated care. The most recent data show that these barriers to care continue to be prioritized health needs.

The ratio of the overall population to the number of primary care physicians (PCPs) is better in Hampshire County (730:1) than the state average (960:1).[30] This number, though, has been slowly declining over the last decade. Furthermore, while most of the service area is in Hampshire County, it's important to note that Franklin County has far fewer PCPs as a ratio to total population (1530:1). Both counties fall below the overall state ratios when it comes to dentists and mental health providers. Key informants also emphasized the need for more mental health practitioners.

Transportation to medical care can also be a challenge. As mentioned in other sections, limited public transit, an aging population, and isolated rural areas are factors that contribute to many health outcomes, including access to medical care. CCIS data for the service area show that COVID-19 had a negative impact on healthcare access, as one in six survey respondents (17%) who sought healthcare reported that they were unable to receive care due to barriers presented by COVID. That number is slightly higher in the Hilltowns rural cluster (21%).

As with other health outcomes, not all communities are equally impacted. Key informants who work with youth noted the added difficulties LGBTQIA+ people face when seeking medical care. Though many healthcare providers in the region seek to provide quality care to LGBTQIA+ people, the lack of standardized training means that those providers have to self-educate, and don't always receive the training they need to make their patients comfortable. TransHealth in Northampton serves almost exclusively trans and nonbinary patients but cannot serve the entire community and recently had to close their wait list for mental health care.

Veterans are another important community to consider when it comes to barriers to accessing health care. The veteran population in the area is projected to decrease, and most veterans are located in the urban centers south of Northampton. The decreasing population is expected to lead to a decrease in demand for acute inpatient care, but the report expects long term care and outpatient services to be in higher demand. The Veteran Affairs estimates a 22% increase in demand for long-term care in the coming years, as well as increased demand for primary care, mental health, specialty care, dental care, and rehabilitation therapies. If this demand cannot be met, veterans will face barriers to accessing the healthcare they need. If the VA in Leeds eventually shuts down, veterans from Hampshire and Franklin counties can expect longer travel times to reach medical care.

c. Community Health Issues and Outcomes
General health outcomes

The U.S. has a low life expectancy compared to other countries and is behind many developed and developing nations. The Cooley Dickinson service area has a life expectancy of about 80 years, which is roughly the same as that of the U.S. and Massachusetts.[40] However, there are noticeable differences if you examine life expectancy by census tract in Hampshire County. In Table 3, you can see that limited income neighborhoods like North Amherst, and the southern downtown and Baystate neighborhoods of Northampton have higher poverty rates and lower life expectancies when compared to wealthier areas.

This is reflective of data from across the country where people who reside in limited income areas - which often contain higher concentrations of people of color - have a far shorter life expectancy than higher income neighborhoods. Gender, income and education combined lead to even bigger inequities. A recent national study found that women in the most advantaged (higher income and more education) group outlived men in the least advantaged group by over 25 years on average.[41] The reasons why this occurs are numerous and in some cases complex. For example, people with limited incomes have less access to healthy food and suffer higher rates of chronic stress, both of which contribute to poor health outcomes and premature death.

Urban planners are also paying increasing attention to heat islands, which occur in urban areas where vegetation has been replaced by concrete and structures, resulting in higher summer temperatures. This is becoming increasingly dangerous as global temperatures increase, and can lead to poor air quality, increased energy costs, and increases in heat stroke and heat-related mortality.[42] While most of the service area is not densely populated, places like Northampton and Amherst may be impacted the most by increasing heat as the climate crisis worsens.

It's important to focus resources on both limited income areas within larger urban areas, as well as the rural communities that often suffer the consequences of poverty without access to resources that urban areas provide.

TABLE 3
Life Expectancy, Race, Income for Select Communities

Census tract	MHI	% income below 100% FPL	Life expectancy at birth	% non-White population
Hampshire County: Northampton				
Southern Downtown	$43,836	22.3%	79.3	19%
Baystate Area	$53,029	20.6%	76.6	21.7%
Crescent Street Area	$76,786	10.7%	84.5	18.4%
Hampshire County: Amherst				
North Amherst	$43,316	31.9%	82.1	28%
Northeast	$67,604	29.9%	87.4	34.3%

Sources: Life expectancy: USALEEP 2010-2015 data; MHI: ACS 2018 5-year estimate Table B19013; Life expectancy: ACS 2018 5-year estimate Table S1701; non-White pop: ACS 2018 5-year estimate Table DP05

BIPOC (Black, Indigenous, People of Color) residents are more likely to have limited incomes and to suffer negative health consequences. While most people who reside in the service area identify as White, the White population is decreasing while the number of BIPOC residents is increasing. Most region-specific health data are not available by race, but statewide and national trends are clear. At a population level, White people almost always fare better

than their BIPOC counterparts when it comes to health outcomes.[43] Indigenous people comprise a small percentage of the population of Massachusetts. Numbers vary from .1% (see Table 2 in Appendix F) to .5%.[44] The census counts people as "Native American alone," meaning if they also identify as mixed race, they may not be counted as Native American. Furthermore, Native American people are particularly underrepresented in data. Cooley Dickinson Hospital and other service organizations should pay close attention to changing demographics, and how that impacts the services they provide.

Chronic Conditions

Cardiovascular disease (CVD) remains the leading cause of death in the service area as well as nationally, though cardiovascular deaths per 100,000 in western Massachusetts are 27% lower than the U.S. average.[45] The prevalence of diabetes and obesity, which often co-occur with cardiovascular disease, are similar to national rates.[46] Other leading causes of death occur at similar rates nationally, with the exception of neurological disorders. Deaths of neurological disorders occur 25% more per 100,000 than the U.S. average.[45]

While some health data provided from the MDPH allows us to examine health in rural areas through "rural clusters", most data that was available for the CHNA was county-level or looks at larger communities. The rural clusters used for this report include: 1) the Central Pioneer Valley (total population 21,229) which includes the towns of Granby, Hadley, Hampden, Hatfield, and Pelham, and 2) the Hilltowns (total population 34,270) which includes Chesterfield, Cummington, Goshen, Williamsburg, and other towns in Hampshire and Hampden Counties. This is the first-time rural data has been made available through this mechanism. Though there are limitations to this data (e.g., the data is older, it is not inclusive of many towns, it also includes data from towns not in the service area such as Hampden), it allows us to examine health in rural areas. Most of the data below shows information from Amherst, Northampton, and Easthampton. As a result, it is not inclusive of all towns in the service area, and the towns from Franklin County that are included in the service area are largely left out, since they have small populations. Collecting data on such small numbers is challenging and rural towns have unique challenges that should be consistently addressed but are difficult to quantify with data. It's important to note that two rural clusters represented in this data have very different health outcomes sometimes. While we often refer to "rural areas" as a monolith, each town has different challenges and assets, as with any other population grouping.

The 2019 CHNA identified the following chronic conditions as prioritized health needs, and these continue to be prioritized needs in 2022.

Asthma

Massachusetts has one of the highest rates of asthma in the U.S. at 10.7%, and rates have been increasing since the 1980s.[47] Poorly controlled asthma often leads to missed work and school days and puts a strain on the health care system, as well as individual quality of life and finances.

While Black people statewide have similar rates of asthma as other racial groups, they have much higher hospitalization rates (see Figure 8). The CDC has found that asthma is more prevalent in people who are of limited income and have lower educational attainment. Locally, Easthampton has far higher rates of emergency department visits for asthma than other communities in the area. While emergency department visit rates for asthma in Easthampton have declined since 2018, they still remain higher than Northampton, Amherst, and Hampshire County rates.

TABLE 4
Asthma Rates by Region

Geographic Area	Adult Asthma Rate
United States	8.9%
Massachusetts	10.7%
Hampshire County	10.3%
Franklin County	9.6%

Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. PLACES: Local data for better health. https://nccd.cdc.gov/PLACES/rdPage.aspx?rdReport=DPH_500_Cities.ComparisonReport&Locations=25015,25011&rdRequestForwarding=Form. 2021. Accessed June 2022.

FIGURE 8
Asthma Emergency Department Visits, Age Adjusted rate per 100,000 (2016 to 2019)
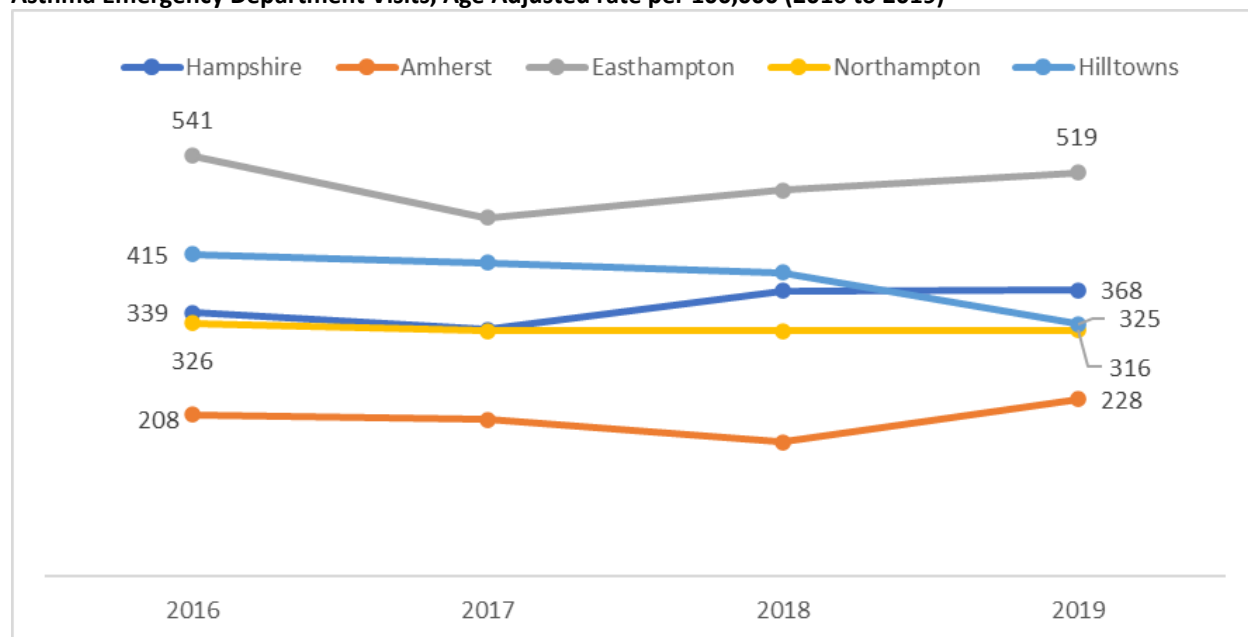
Source: MDPH Hospital Admissions, State Tables

Heart Disease

Both Northampton and Easthampton have higher rates of emergency department visits for heart disease than the Hampshire County average, while Amherst has markedly lower rates (Figure 9).

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FIGURE 9

Heart Disease Emergency Department Visits, Age Adjusted rate per 100,000 (2019)
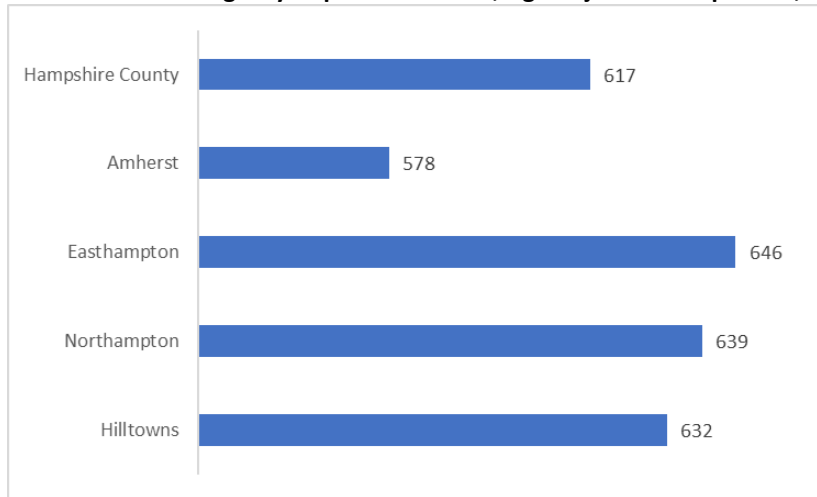
Source: MDPH Hospital Admissions, State Tables

Furthermore, Black residents are using the emergency department (ED) to treat heart disease at higher rates than their White or Asian counterparts (Figure 10). While deaths from CVD are lower in the region than statewide, effort should be put forward to understand why heart disease and asthma ED rates are higher for Black residents compared to White residents. Ongoing access to preventive care and treatment can avoid more costly crisis-level care later. Systemically marginalized populations, particularly Black residents, are less likely to have the resources and healthcare supports to help them effectively manage their condition, thus resulting in more emergency care and poorer health outcomes.

FIGURE 10

Heart Disease Emergency Department Visits by Race, Age Adjusted rate per 100,000 (2016-2019)

Source: MDPH Hospital Admissions, State Tables

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Stroke

While Hampshire County has a lower hospitalization rate for strokes than the state overall, the central Pioneer Valley rural cluster has higher rates (see Figure 11). Strokes are the leading cause of long-term disability in the U.S., and early treatment is crucial. According to the CDC, patients who are treated in the emergency department within three hours of their first symptoms have fewer disabilities than those who delayed care.[48] Residents who live farther from the hospital, such as those in the rural parts of the service area, may be at higher risk of disability.

FIGURE 11

Stroke Hospital Admission by County and Rural Cluster, Age Adjusted rate per 100,000 (2019)

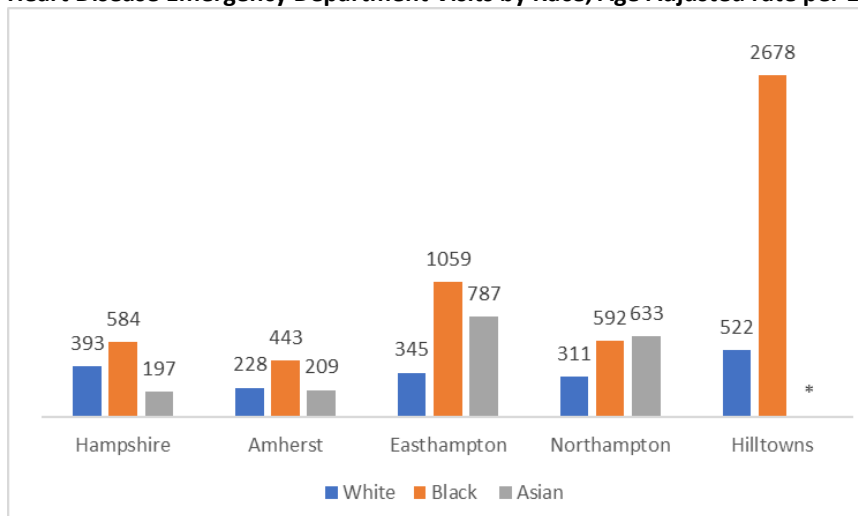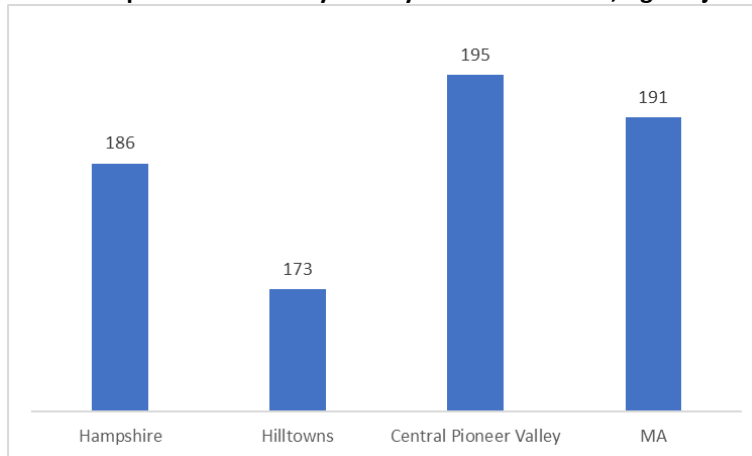**Source:** MDPH Hospital Admissions, State Tables

Strokes are more likely to occur among older adults, but younger people may be at risk as well, particularly if they have high blood pressure, high cholesterol, obesity, diabetes, or they smoke. In 2014, 38% of people hospitalized for a stroke were under 65.[49] It's important to ensure that people of all ages are aware of the signs of a stroke and the importance of early treatment.

The risk of having a stroke for the first time is nearly twice as high for Black individuals as for their White counterparts, and Black people also have the highest rate of death due to stroke. While rates of death from stroke have been falling for decades among all racial groups, there has been a recent increase in death among Hispanic people.[47]

Older Adults: Alzheimer's Disease, Dementia, and Other Outcomes

Alzheimer's disease and dementia continue to be prioritized health needs as identified in the previous CHNA. As stated in the previous CHNA, approximately 1 in every 10 people over age 65 has some form of Alzheimer's disease or dementia, as do over one-third of those over age 85.[50] The proportion of those living with Alzheimer's disease in Amherst (12%), Belchertown (14%), Easthampton (13%), and Northampton (14%) are similar to that of the Massachusetts rate of 14%.[51] Given that between 2010 and 2035, the proportion of people over age 60 is projected to grow from 19% of the population to 32% in Hampshire County, with the number of older adults believed to increase from approximately 30,000 in 2010 to 51,500 in 2035,[52] the need for services for those with Alzheimer's disease or dementia will grow.

The Alzheimer's Association notes that between 2000 and 2017, the number of deaths from Alzheimer's disease has increased 145%.[53] The disease places a high toll on the healthcare system, as well as on caregivers, who are

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mostly family members. Compared with caregivers of people without dementia, twice as many caregivers of those with dementia indicate substantial emotional, financial, and physical difficulties.[49]

The National Council on Aging estimates that about one in ten people aged sixty and over has experienced some form of abuse.[54] While abuse of older adults can involve physical or emotional violence, it often consists of neglect or financial exploitation. Social isolation (a challenge noted by public health officials in the service area when surveyed by FRCOG in 2021) and cognitive impairments such as dementia and Alzheimer's disease put people at particularly high risk. Elder abuse is an important concern with an aging population.

In a survey of 12 public health officials in Hampshire Country (see Appendix E), eight of them wrote that older adults are a population of concern. Councils on Aging were also cited frequently as an important support in the area. Respondents noted the negative health outcomes of isolation among older adults as a particular problem that worsened during the pandemic. Similarly, a 2022 focus group conducted by the Public Health Institute of Western Mass among service providers in the Pioneer Valley found that senior isolation was a major concern.

"What I find is that not only do they [older adults] want to talk, but they need some, they need to just see something different from what they are forced to, to look at every day. You know, aside from their four walls, the same tree..."

-Focus group participant, service provider, 2022

Mental Health and Substance Abuse

Section III provides a more in-depth overview of the mental health of youth in the service area, but poor mental health impacts people of all ages, locations, and cultures. The figure below shows that while the rural cluster of the Central Pioneer Valley has a lower rate of mental health admissions than the state average, all other areas have far higher admissions.

Mental health professionals interviewed as key informants brought up a number of challenges related to the mental health system:

- Long waits in the emergency department before receiving services.
- Lack of non-acute care services, and extremely long wait lists that require follow up for those services that are available.
- Deteriorating mental health of residents as they wait to be seen by a therapist, receive medication, or navigate the complex mental health care system.
- Lack of preventive care.

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FIGURE 12
Mental Health Hospital Admissions, Age Adjusted Rate per 100,000 (2019)
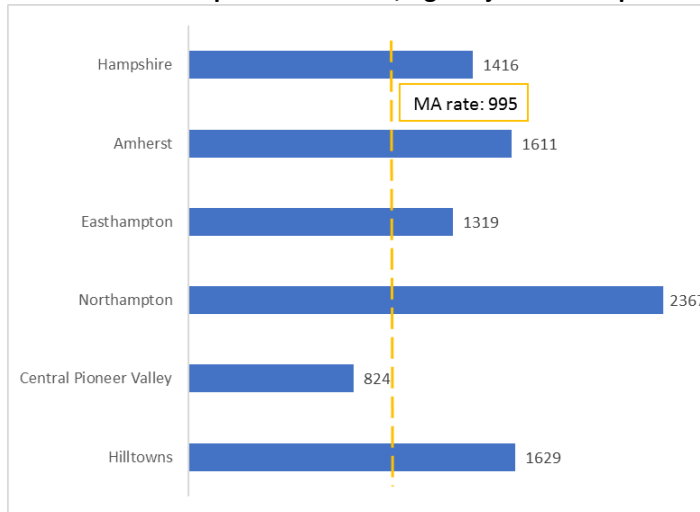
Source: MDPH Hospital Admissions, State Tables

Mental health and substance abuse are closely associated. Many people who develop substance use disorders will also develop mental disorders, and vice versa.[55] For more on opioid abuse, see Mass General Brigham priorities in section 3-part h. While self-reported substance use among youth in the past 30 days dropped sharply during COVID-19 shutdowns, there has been a rebound recently, particularly among older teens.[37] Substance use numbers are nearly as high as they were pre-pandemic, and data did not show whether they had reached a plateau, will continue to rise, or will drop again. Given the higher rates of self-reported anxiety among youth and the link between youth mental health and substance use disorders, substance abuse trends should be monitored.[53] Finally, CCIS data for Hampshire County show that 41% of respondents increased their substance use after COVID-19 caused shutdowns. Rates of elevated use were greatest among LGBTQIA+ respondents, limited income respondents, people under 45 years old, and people with disabilities.

COVID-19

Since the last CHNA, we have faced a global pandemic, with impacts on our physical and mental health, economies, education, and relationships that will likely take many years to understand. The pandemic exacerbated existing health inequities. People of color, people with low wages, people with disabilities, 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.[56]

Some communities of color experienced disproportionately higher rates of illness, hospitalization, and deaths from COVID-19 across the U.S.[57] For example, since the start of the pandemic, the CDC reports that the greatest age-adjusted death rates have been among Indigenous, Black, and Latino/a/e individuals, at rates more than double those of White individuals.[58] As the pandemic progressed and vaccination became available, inequitable access to vaccines and vaccine hesitancy continued to drive COVID-19 health inequities.

Since the pandemic began, COVID-19 has been ranked among the top three leading causes of death in the U.S. for most months.[59,60] Though we do not have up-to-date overall death data for western Massachusetts 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 the four western Massachusetts counties have varied, with communities that have historically experienced inequities bearing greater impact.

TABLE 5
Confirmed COVID-19 Cases and Deaths as of 6/28/2022

County	Total Cases	Total Cases per 100,000	Total Deaths	Total Deaths per 100,000
Berkshire	28,841	22,353	393	305
Franklin	12,242	17,235	149	210
Hampden	146,695	31,491	1,845	396
Hampshire	**33,408**	**20,583**	**365**	**225**
Regional Totals	221,186	26,707	2,752	332
State	1,762,215	25,067	20,910	297

Source: MDPH COVID-19 Dashboard
Note: Please note that case and death counts are updated based on the most up-to-date definition of COVID-19 determined by MDPH. Therefore, you may notice fluctuations in counts to ensure accuracy

While the 375 deaths that occurred due to COVID in Hampshire County were too many, the chart shows that Hampshire County has had a lower death rate than the state average. Although not available at a local level, state data shows that most deaths (74%) occurred among residents 70 and older.

As of June 2021, Massachusetts continues to be a leader in vaccination status, with 90% of the state's population with at least one dose of the vaccine. Hampshire County, though, falls well below the state vaccination rate with 79% of residents having received at least one dose. Furthermore, vaccination rates by race differ greatly. Only 57% of American Indians/Alaskan Natives (AI/AN), 58% of Black people, and 69% of Hispanic people have received one dose in Hampshire County.[61]

FIGURE 13

COVID-19 Deaths by Age (20+) in Massachusetts, August 2020- March 2022
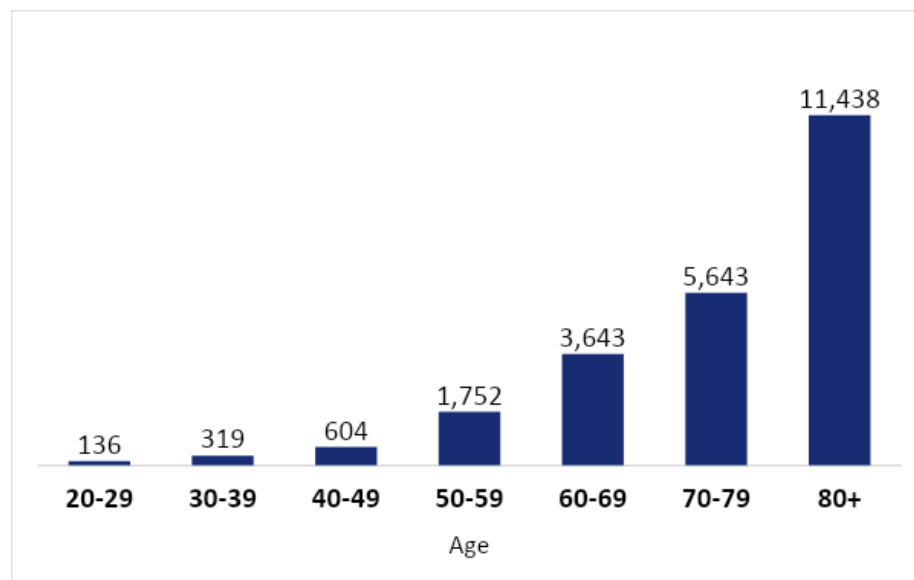
Source: Massachusetts Department of Public Health. MDPH COVID-19 Dashboard, COVID-19 Raw Data - March 28, 2022.
https://www.mass.gov/info-details/covid-19-response-reporting. Accessed June 2022.
Note: Includes ages 20 and older; data from 8/12/20 through 3/4/22.

The long-term repercussions of the pandemic will take years to untangle, but our region, like the rest of the country, has suffered economic upheaval as well as health impacts. Figure 14 shows that unemployment spiked across western Massachusetts at the start of the pandemic, although the area has rebounded in terms of unemployment. Although specific local data is not available, national data shows that women were more likely to be unemployed, in part due to decisions to leave the labor force to care for relatives or help children with remote school.[62,63] Food insecurity increased during the pandemic (see Food Security section for more). The Food Bank of Western Massachusetts reported that their member food programs served nearly 110,000 people per month, and 18% of those people had never been served before.[14]

Rural communities have had challenges during the pandemic that affected their access to employment, school, and health care, driven in part by limited access to the Internet. In a survey done by the Alliance for Digital Equity, 36% of limited income parents said their children would likely not complete their schoolwork due to limited access to a computer, and many had to rely on public Internet.[23] Rural families were also negatively impacted by the need to rely on technology, particularly in places where broadband Internet is not available (see "The Digital Divide" for more).

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FIGURE 14
County Unemployment Rates, April 2019-April 2022

April 2022 County Unemployment Rates

■ Hampden CTY
■ Berkshire CTY
■ Worcester CTY
■ Franklin CTY
■ Hampshire CTY
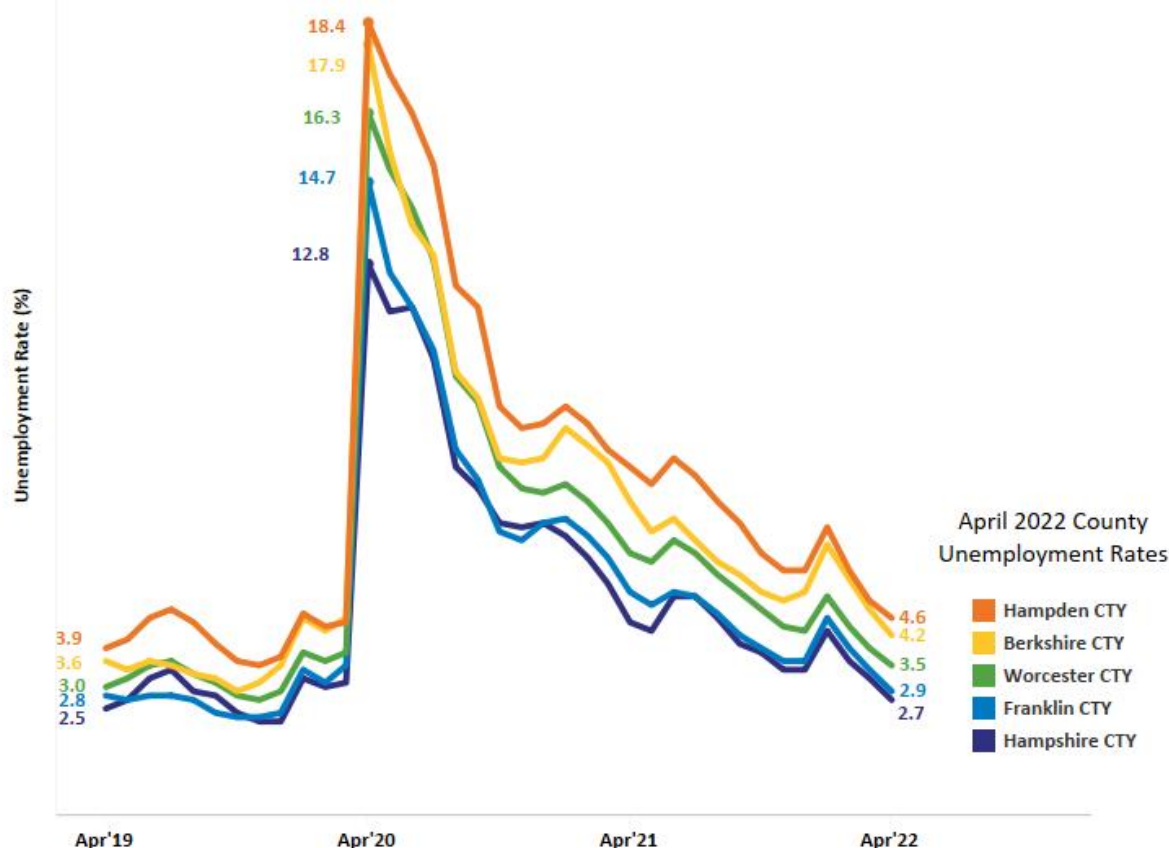
Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics

As the COVID-19 pandemic transitions to becoming a cyclically occurring virus, identifying and measuring the potential long-term health impacts is instrumental in supporting our community. A recent study suggests that most people will recover from COVID-19 and not have long lasting effects. However, some people may have symptoms that persist beyond the duration of infection (often referred to as "long COVID". Ongoing research seeks to learn more about who experiences post-COVID conditions, including whether groups disproportionately impacted by COVID-19 are at higher risk. Best estimates from the CDC suggest that over 13% of people who contracted the virus may have extended health impacts at one month or longer and that more than 30% of hospitalized patients may experience symptoms six months out.[64]

As of July 2021, long COVID could be considered a disability under the Americans with Disabilities Act (ADA),[65] and later in the year, a specific billing code was created for long-haul COVID.[66] Previous data showed that people with disabilities looking for work experience an unemployment rate twice that of workers without disabilities.[67] Not only can persistent symptoms disrupt the lives of individuals and affect their quality of life, but there are also potential impacts on employment, access to adequate healthcare, affordability of care, and more. This is an area that must be explored further so that we are able to comprehensively support local residents with long-term complex symptoms.

d. Key Themes and Conclusions

Many of the issues presented above can be prevented or better controlled in order to avoid hospital admissions or emergency department visits. Statewide, almost three quarters of adults with asthma and over two thirds of children with asthma are living with asthma that is "poorly controlled" or "not well controlled" (Mass.gov), resulting in emergency level care as well as major disruptions to work and school. Heart disease and stroke can be prevented or better controlled when patients receive the resources and supports to make lifestyle changes, such as increased physical activity and a healthier diet, as well as smoking cessation. Organizations supporting food security, outdoor recreation, and physical activity need to be well funded in order to ensure better health outcomes. Physical activity and healthy eating are key to positive mental health as well. When it comes to mental health, residents should be better able to access lower-level care when they need it in order to avoid hospital admissions and acute care needs.

e. Current Programs

These existing programs remain as community needs to be prioritized in enhancing the health of our community.

- A Positive Place
- Athletic Trainers (Northampton High School and Smith Vocational High School)
- Behavioral Health Response Team
- COVID-19 Related
- Diabetes Center
- EMS Resupply
- Geriatrics
- Hampshire HealthConnect
- Latino Health Access
- LGBTQIA+ Access to Care
- MassUP – Food access
- Medical Directors for Geriatrics, Palliative Care, LGBTQIA+, Integrated Mental Health, Infection Prevention
- Medical Interpreters at Community Health Centers
- Memory Care Initiative (Eisenberg)
- Opioid Projects
- Palliative Care
- Sounds of Recovery/music therapy
- Veterans Liaison Program

f. Regional Priority: Youth Mental Health

Overview of Community

The Coalition of Western MA Hospitals/Insurer agreed to choose a regional focus for the 2022 CHNA and, in consultation with the Regional Advisory Council, chose to focus on youth mental health across western Massachusetts. Youth mental health concerns have been growing for several years and were exacerbated by the isolation and anxiety caused by the pandemic. Cooley Dickinson was particularly interested in assessing the mental health needs of Black youth and other youth of color, who often face worse health outcomes than other youth in physical *and* mental health arenas.

For the purposes of this assessment, "youth" was defined as children and young adults ages 12-24. This demographic makes up nearly 30% of the population of Cooley Dickinson's service area.[68] Notably, the percent of

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the population of young people ages 15-24 is far above the U.S. average, while the service area has numbers lower than average for younger children (Table 6). This reflects the impact of large numbers of college students in the area, most of whom are between the ages of 18 and 22. While some of these students commute from home, many are counted by the census as living where they spend most of their time sleeping, regardless of whether they are still dependent on their parents and expect to move "home" during the summer or after graduation.[69] The roughly 30,000 students at the local university and colleges significantly impact the demographics in the area, but many may seek health care through their home provider or use college or university-provided resources.

TABLE 6
Age Distribution in the Service Area and Nationally, 2019

Age Bracket	Service Area % of Population	United States % of Population
10-14	4.6%	6.4%
15-19	11.5%	6.5%
20-24	14.3%	6.8%

Source: ACS 2019

While the service area is mostly composed of White residents, a demographic shift is occurring in Hampshire County, as seen in Table 1. The percentage of residents identifying as White dropped by 7% between the 2010 Census and the 2020 Census. The percentage of the population that identified as having other racial/ethnic identities rose accordingly.

Community-specific Context

Most of the following data comes from two sources. One is the SPIFFY Coalition's 2021 Hampshire County Prevention Needs Assessment Survey (PNAS). This survey included 2,252 respondents across 11 school districts in Hampshire County.[70] Respondents were in grades 8, 10, and 12. Seventy-five percent identified as White alone. The remaining percentage identified as Latino/a/e, Black, Asian, or a combination. Also important to note is that 5% of students identified as trans or nonbinary; 27% identified as not cisgender and/or as LGBTQIA+. The other data source was key informant interviews with mental health providers, youth program leaders, and parents in the service area. These sources provide valuable information about the state of youth mental health, but neither is completely generalizable for every population of young people across the service area.

Adults and youth alike are concerned about increasingly poor mental health of youth, which was exacerbated by the pandemic. Inequities exist by race and gender. Interventions across many institutions and organizations are necessary to improve mental health outcomes. Based on our analysis of youth survey data and key informant interviews, a number of themes emerged:

Changing Language and Culture Related to Mental Health

Nearly all key informants interviewed noted that youth speak more openly about mental health and feel less stigma around it than in years past. There was also agreement that young people are more educated, and that youth are better able to describe their own feelings, as well as how those feelings are impacting their day-to-day

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life. These are changes key informants noted occurred over the last few years. One youth program coordinator talked about how youth also explain how their mental health has impacted their day and their actions, sometimes in addition to talking directly about their mental health. For example, they might share that they are unmotivated and don't want to get out of bed, while another time they might be able to express that they're feeling depressed and don't want to come to a meeting.

> "Culture has changed, and there's a different kind of energy. People are opening up more. Now kids can give a name or term to how they feel, instead of feeling "crazy." Everybody has a struggle, and we can work together through this in whatever way we can. There's less stigma. They're less worried about it."
>
> -Youth program coordinator

As some key informants noted, it's likely that the decrease in stigma around mental health and the increase in education and openness is not widespread among every culture. Some local groups are working to correct this- the Springfield Youth Mental Health Coalition is in the beginning stages of a campaign to normalize conversations around youth mental health. There's also a campaign called Deconstructing Stigma: Changing Attitudes About Mental Health on display at Logan Airport that has the goal of normalizing mental illness by sharing personal stories and portraits. Local groups can look to the programs that already exist to work towards finding local solutions.

Power

Key informants stressed the need for youth to have more control. Many people interviewed discussed how young people want to feel autonomy and be in control of as many aspects of their lives as possible.

> "Things don't change much in terms of kids not wanting to be talked to like they're babies, wanting to be respected and heard. Parents are not always helping as much as they might think, parents can be too engaged or not enough. Letting kids have agency whenever you can is crucial."
>
> -Nurse practitioner

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> ## "We don't care about young people. We say we do, but we don't do anything about it... Children say, "we're experiencing discrimination" but we don't create avenues for them to handle that. We're failing our children by focusing on arbitrary content. It's a systemic problem...individuals feel powerless."
>
> ### -Youth coalition coordinator

Respondents also noted that young people are more likely than in the past to be involved in social causes. Schools have expanded their offerings through clubs devoted to racial justice, LGBTQIA+ issues, and environmental justice. Young people can also get involved online in causes that are important to them. This helps youth find "their tribe" and build community, which is vitally important to good mental health. It also likely helps them feel a sense of control over their lives and their futures, and hopefully can help combat some of the anxiety and fear around the often-depressing state of the world that they've inherited. When asked why young people might have poor mental health, key informants often pointed at the same massive problems that impact the mental health of adults. Some examples include systemic racism, discrimination based on gender or sexual identity, climate change, hate crimes, violence, and injustice. Additionally, young people believe that their feelings and thoughts are dismissed, and their actions are controlled by adults. Being involved in combating these issues is an important way to reclaim some power over worldwide and personal issues and feel less anxious or fearful.

When building support systems, young people should be at the forefront of decision making. Adults frequently make decisions that have major impacts on the lives of youth, whether as parents, school committee members, politicians, coaches, teachers, or more. Youth should be given a place and a voice when adults gather to make decisions and policies that will impact their lives and communities. They should be included as part of the decision-making process throughout.

> ## "Adults in youth spaces don't always think about youth empowerment. Adults have taken away their power."
>
> ### -Youth worker

Young people and adults alike recognized the need for spaces for young people to gather, both formally and informally. When designing these spaces and programs, young people need to be given the power to shape them in as many ways as possible.

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COVID-19

Survey and interview data show that the COVID-19 pandemic has worsened mental health for youth, and has also reduced the ability of the agencies, organizations, or events that supported young people to do so. Youth across genders and races reported less learning when school was remote. PNAS asked about changes over the first year of COVID-19 and found most negative health outcomes increased across groups. COVID-19 increased screen time for youth, while decreasing sleep consistency and exercise. Many youths reported that it was harder to get enough food, perhaps because many students get two meals a day from school cafeterias. Latino/a/e youth (26%) reported difficulty getting enough food at more than twice the rate of White students (12%). Self-reported anxiety and depression have been staying steady or rising for the past 15 years, with a steadier increase seen starting in 2017.[37] See Figure 15 below for a year over year progression by gender. Luckily, numbers for self-harm and suicidality did not grow along with the rise in sadness and depression.

FIGURE 15
Depression and Sadness, All Grades by Gender for Hampshire County, 2007-2021

In the past year, have you felt depressed or sad MOST days, even if you felt okay sometimes?

Hampshire County All grades by Gender
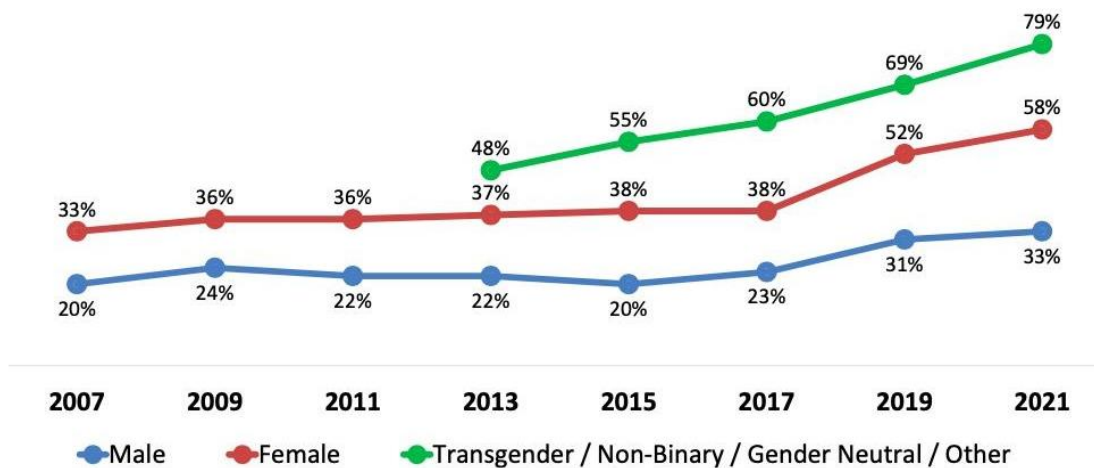
Source: PNAS, 2021

Interventions and Ideas

Key informants who work with youth noted the importance of involvement and community in maintaining good mental health outcomes for youth. It's important to re-start or replace programs that were canceled because of the pandemic. At the same time, we can evaluate the innovations that were forced because of COVID-19 restrictions and keep the ones that are beneficial. Virtual meetings of all sorts have increased during the pandemic. While there are concerns about privacy as well as Internet and device access, telehealth has improved accessibility for many people. It has also opened up access to more specialized treatment. Outside of formal healthcare, it has also allowed people to become involved in causes and activities that are easier to access online.

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Community

Key informants noted teachers, family, coaches, and other trusted adults as supports for youth, and 58% of youth surveyed said they have a trusted grownup they can speak with at school about personal problems. But all noted the importance of peer-to-peer support. They indicated that young people most often turn to their friends when they are struggling. This is often a good thing, as it helps them form deeper relationships. Sometimes, peers can't offer the level of support that's needed or don't know when to get help from an adult (or perhaps don't know who to go to for help).

The use of social media was another major theme brought up by health care providers and youth program coordinators, who saw it as both positive and negative. Young people use social media to build community and relationships. This is particularly important for youth who may struggle to find others who share their interests or identities, such as queer, trans, or gender nonbinary youth. Several key informants noted that young people can form powerful relationships this way, even though adults are likely to dismiss these relationships as "lesser than" those formed face-to-face. The downsides to social media include social comparisons. Young people compare themselves to what they see on social media and are likely to conclude that they are having less fun, or not as attractive, or are generally less successful or popular than their peers. Social media can also be a platform for hatred or bullying, as well as constant exposure to news stories. While staying knowledgeable about current events can be important, it can also be exhausting, scary, anxiety-inducing, and even traumatic for some youth.

"It's easier to bully people today. It's easier to be accessed by hateful people. Bigotry and hate are everywhere. There's a serious lack of innocence. This generation and continued generations will have deeper mental health issues and also better coping skills."

-Youth program coordinator

Mental health outcomes for cisgendered youth in urban school districts in Hampshire County are similar to those of youth in rural districts. LGB and trans/nonbinary youth in rural areas, however, report worse health outcomes. This could be due to the fact that there are fewer opportunities to interact with their peers and fewer resources available to LGB and trans/nonbinary youth in rural areas.

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FIGURE 16

Mental Health Issues among LGB Youth, Rural versus Urban, 2022

Mental health issues among LGB youth in rural v. urban schools
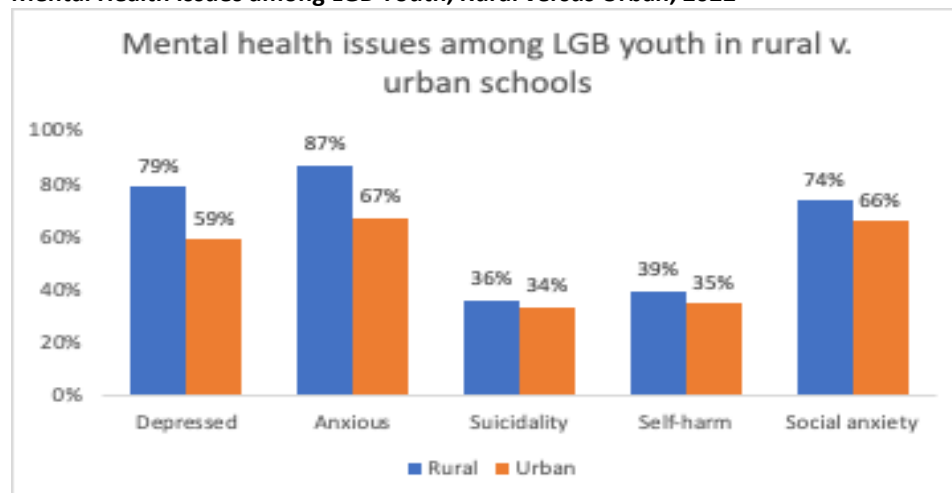
Source: PNAS 2022

Involvement

Most schools have a wide variety of clubs that support students by building their skills, increasing their social networks, and helping young people find a community of like-minded peers. Many of these clubs help students work towards social justice. They serve young people, while encouraging and enabling young people to serve their communities. While social media connections can be useful and important, schools can support students to build community and to find their interests without the downsides of screen time and online relationships.

FIGURE 17

Mental Health Issues among Trans and Nonbinary Youth, Rural versus Urban, 2022

Mental health issues among trans and non-binary youth in rural v. urban schools
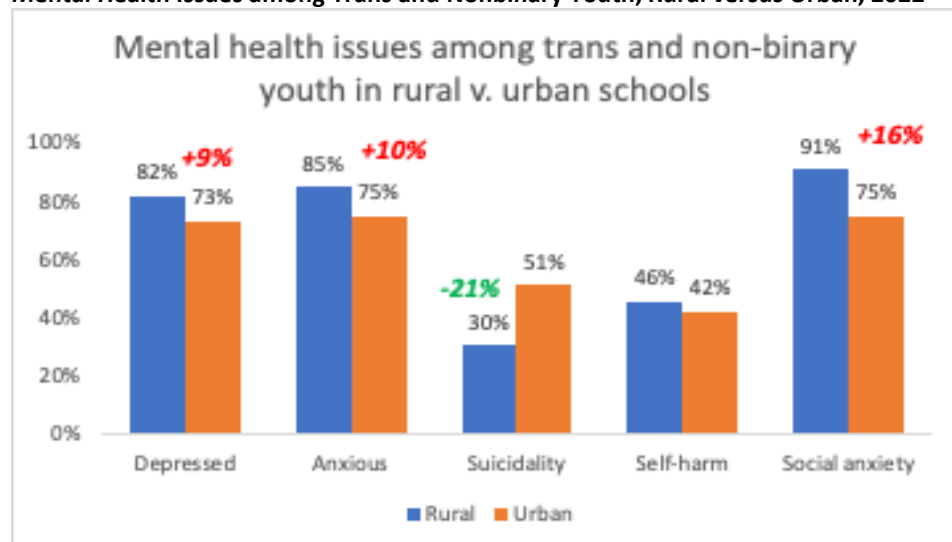
Source: PNAS 2022

TransHealth, Translate Gender, and Community Action, among others, have peer support groups that key informants mentioned as helpful for and popular among young people. Addressing mental health in a group

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setting also helps to alleviate the shortage of mental healthcare providers. TransHealth also addresses the mental (and physical) health needs of trans, queer, and gender diverse youth. However, due to high demand and limited capacity, at the time of this report, their waitlist for therapy referrals was closed. Peer support groups should make special efforts to be available to youth in rural areas.

Inequity

Data show that special populations have poorer mental health outcomes than others

Gender Disparities

Trans and nonbinary people have consistently and significantly worse mental health outcomes than their cisgendered peers. A majority of females also report poor mental health. Every negative health outcome that the PNAS collected data on showed trans and nonbinary students faring far worse than females. Females, in turn, fared worse than males. For example, 79% of trans and nonbinary students reported they "felt depressed or sad most days in the past year." Fifty-eight percent of females and 33% of male students agreed.[14] These numbers are high regardless of gender, but the fact that many trans and nonbinary students feel that level of sadness or depression is especially notable. A nurse practitioner and a therapist who primarily serve trans and nonbinary people and acted as key informants for this research both noted the lack of medical services for this population. Many medical providers indicate that they are (and want to be) adept at providing services for trans and nonbinary people, but the lack of formal training means that they often have good intentions without the proper education to back it up. Northampton in particular and Hampshire County more generally are known for being welcoming to people of any gender or sexuality, and yet specific training and improved systems are needed for full access to services. Furthermore, all people, including trans youth, are bombarded with recent news stories that criminalize trans identities as lawmakers advocate against trans rights in some other states.

Cisgendered females also report consistently worse mental health than males. While they do not report as high levels of depression and anxiety as their trans classmates, the majority still report struggling. Females are also in danger from dating and intimate partner violence. Ninety percent of teens killed in dating/partner violence are female. In most abusive relationships, traits traditionally associated with females (nurturing, emotion, softness) are denigrated.

While males don't report negative mental health in as high numbers as their female and trans peers, they do suffer from outcomes generally associated with poor mental health. Overdose deaths from opioids in Franklin and Hampshire Counties tripled between 2010 and 2020.[71] Statewide (more specific data is unavailable), 73% of overdose deaths were males. Of the 44 drug-related charges among 18–25-year-olds at Hampshire County District Courts, 38 were males. While males report lower rates of self-harm and suicidality, they are more likely to overdose from drugs and commit acts of violence. Their mental health needs might be more likely to be overlooked because the symptoms go unreported, but actions and outcomes indicate that males are in need of better mental health support.

"Boys won't talk in a group about mental health. They'll talk one on one, but want to talk to someone like them, who looks like them. They can't find people who look like them that they can be transparent with."

-Youth Program Coordinator

Many youth don't receive in-depth evidence-based health education that can provide information on drugs, addiction, and healthy relationships. Only about 15% of PNAS respondents said they had discussed healthy relationships in school, and boys were less likely than other genders to discuss healthy relationships with anybody at all. In a survey of Hampshire County health education teachers, many noted a lack of financial and institutional support that prevented them from providing the comprehensive curriculum they wanted.[72] Youth support and community groups based on gender can offer safe places for learning and relationship building.

> ## "We need more places like this, where we can talk. There aren't a lot of places where it is okay."
>
> ## -Pioneer Valley group for young men participant, 2021

Mental Health Disparities Tied to Race and Ethnicity

The PNAS also showed disparities based on race (see Figure 18). In response to the question about whether they "felt depressed or sad most days in the past year," 47% of the survey population replied in the affirmative. Black and White students responded close to the average, but Asian, multiracial, and Latino/a/e students all reported higher levels of sadness and depression.

FIGURE 18
Mental Health Outcomes, Hampshire County, All Grades by Race/Ethnicity, 2021

In the past year, have you felt depressed or sad MOST days, even if you felt okay sometimes?
2021 Hampshire County All grades by Race/Ethnicity Construct

Asian (N=82)	Black/African American (N=57)	Latino (N=121)	Multiracial (N=240)	White (N=1593)	Total (N=2115)
52%	49%	60%	56%	46%	47%
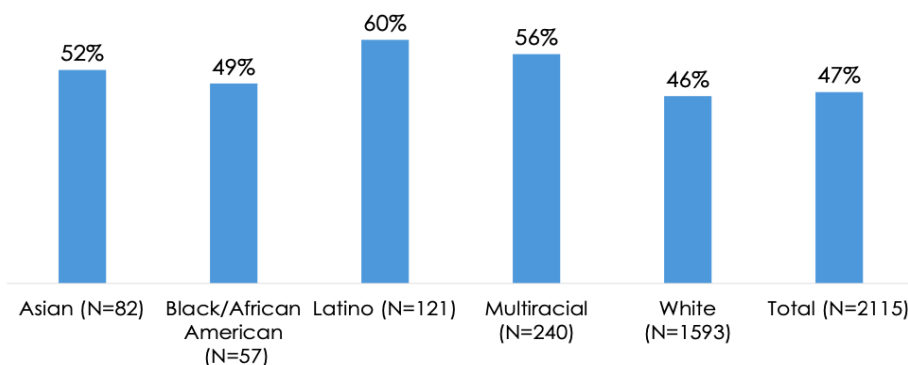
Source: PNAS 2021

While there is no local information is available on mental health outcomes of Indigenous youth, national data shows that they suffer the worst outcomes of any racial or ethnic group. In 2019, the second leading cause of death for American Indian/Alaska Natives (AI/AN) between the ages of 10 and 34 was suicide.[73]

Most health care providers and youth program coordinators interviewed emphasized not only a general lack of mental health care providers, but the lack of mental health care providers who reflect the BIPOC community. Therapists and other formally trained providers are more likely to be White, upper/middle class, and female.

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People of color seek providers who look like them and come from a similar background or culture but cannot find anybody. Language is a challenge as well. One Spanish-speaking mother of five commented on the importance of finding bilingual support. Her children can communicate with an English-speaking therapist, but she cannot. Lowering barriers to accessing the education necessary to become a mental health professional would likely help to diversify the field.

Area Specific Priorities

Strengthening Schools

Key informants identified schools as important partners in supporting good mental health. To do so, they need to have the resources to support young people by drawing and maintaining good staff. COVID has made it a particularly difficult time to work in schools, as students have fallen behind academically and socially. Students and teachers alike are facing the trauma of the pandemic, and many are dealing with isolation, depression, and personal crises. The recent school shootings have made schoolwork more difficult. Staff and teachers at school need to maintain their own mental health as well as the skills necessary to support youth. Interviewees who work with youth noted that schools are one of the primary ways young people access mental health care.

"There's a lot of burnout with people who work with youth. Particularly this year. The students become nameless because of burn out and turn over, and there's not enough energy to devote to getting to know them. Once you stop calling them by their names, they're just this big group, and individuality gets ignored. You can't understand someone's full story."

-Youth Program Coordinator

Simplifying the Healthcare System

According to health care providers and youth program coordinators interviewed for this report, it's difficult for families to access care due to the complexity of the system, and long, decentralized wait lists for care. This means that youth are often left waiting for care until they reach a crisis level. Furthermore, parents (as the ones most often initiating and organizing mental health care) often have to devote immense amounts of time accessing care by calling around to different organizations to be placed on waitlists, working through insurance, and figuring out payment methods. Local agencies have succeeded in centralizing some parts of the system, by sharing receptionist services and alerting all partner agencies if a client has a mental health crisis, but these efforts could be more useful if expanded.

Enhancing Relationships Between Mental Healthcare Providers and Primary Care Providers (PCPs)

Some PCPs collaborate consistently with mental health care providers and integrate that into their primary care, but a widespread model would strengthen these connections. PCPs have an important role as educators of parents. When they do not or cannot educate parents well enough, even the most well-intentioned parents fail to fully support the mental health of their children.

> "Parents need to understand how to talk to kids, how to support them. Trauma is really impactful on your sense of self, on safety, on education, and we don't have good systems to support these youth."
>
> -Therapist

> "As a therapist, I love a great primary care provider!"
>
> -Therapist

Building Services that Help Avoid Crisis-level Care

Mental health providers stressed the importance of keeping people out of crisis care, in part because they felt it's inadequate, and also because of the importance of helping people before they are in crisis. They mentioned community based acute treatment (CBAT) hospital diversion programs as well as telehealth treatment by specialists across the state as helpful options.

Increasing Diversity of Mental Health Providers

Nearly all key informants emphasized the importance of having mental health providers who reflect the community they work with. According to the American Psychological Association, 86% of psychologists in the U.S. are White, and 73% are female.[16, 17] People of color seeking therapists, particularly boys and men, are very unlikely to find one that shares their race, culture, or lived experiences. This is especially crucial as it's likely the experiences of micro aggressions and systemic racism contribute to the poor mental health outcomes for which those people seek care. The barriers in place to enter the mental health field, such as the high cost of school and the many years of advanced education required, are especially hard to overcome for people of color, who are less likely to come from wealthy backgrounds. It's crucial to expand the mental health workforce in order to better serve all members of the community.

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g. Mass General Brigham System Priorities
Context and Priorities

Mass General Brigham Community Health leads the Mass General Brigham system-wide commitment to improve the health and well-being of residents in under-resourced communities in our priority neighborhoods most impacted by health inequities. Mass General Brigham's commitment to the community is part of a $30 million pledge to programs aimed at dismantling racism and other forms of inequity through a comprehensive range of approaches involving our health care delivery system and community health initiatives.

While not required to conduct a CHNA under current regulations, Mass General Brigham's belief in the critical importance of system-wide, population-level approaches resulted in our decision to have every hospital conduct a 2022 CHNA. Having all our hospitals on the same three-year cycle will prove invaluable in our efforts to eliminate health inequities by identifying system-wide priorities that require system-level efforts.

In addition to the priorities each hospital identifies that are unique to its communities, the Mass General Brigham system identified two system-level priorities: cardiometabolic disease and substance use disorder. These priorities emerged from a review of hospital-level data and prevalent trends in health statistics. Our efforts within these priorities will aim to reduce racial and ethnic disparities in outcomes, with the goal of improving life expectancy.

Key Findings

In a national study of deaths during the first wave of the COVID-19 pandemic (March to December 2020), researchers explored non-COVID deaths and excess deaths, defined as the difference between the number of observed and number of expected deaths. Nationally, non-COVID deaths disproportionately affected Black, American Indian/Alaska Native, and Latino/a/e persons (Figure 19, charts A and B).[74] Moreover, when looking at excess deaths, the inequities worsened (Figure 19, charts C. and D.). The greatest disparities are seen for heart disease and diabetes. Inequities also exist for all cancer deaths but not excess cancer deaths.

FIGURE 19

Racial and Ethnic Disparities in Excess Deaths in the U.S. during the COVID-19 Pandemic, March to December 2020
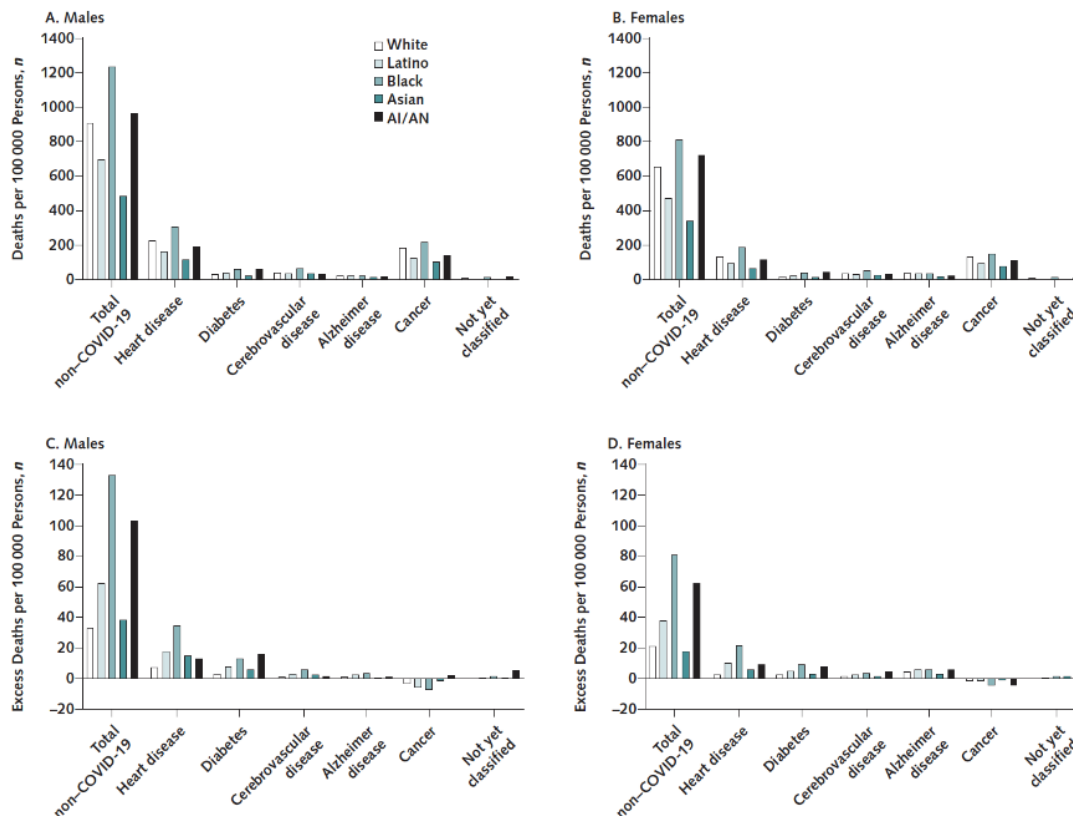
AI/AN = American Indian/Alaska Native.

Source: Annals of Internal Medicine

Massachusetts mortality data for 2019 reveal that heart disease and unintentional injuries, which includes drug overdoses, account for the second and third highest causes of death. As shown in Table 6, the highest number of deaths among individuals from birth to age 44 were the result of unintentional injuries. However, among those 45 years of age and older, heart disease accounts for the highest or second highest cause of death across age groups.

TABLE 6
Top Ten Leading Underlying Causes of Death by Age, MA 2019

Rank	Age Groups (number of deaths)								
	<1 year	1-14 years	15-24 years	25-44 years	45-64 years	65-74 years	75-84 years	85+ years	All
1	Short gestation and LBW[1] (57)	Unintentional Injuries[3] (20)	Unintentional Injuries[3] (186)	Unintentional Injuries[3] (1319)	Cancer (2781)	Cancer (3446)	Cancer (3430)	Heart Disease (5622)	Cancer (12584)
2	Congenital malformations (56)	Cancer (17)	Suicide (67)	Cancer (241)	Heart Disease (1585)	Heart Disease (1786)	Heart Disease (2581)	Cancer (2641)	Heart Disease (11779)
3	SIDS[2] (21)	Congenital malform (9)	Homicide (43)	Suicide (202)	Unintentional Injuries[3] (1138)	Chronic Lower Respiratory Disease[5] (632)	Chronic Lower Respiratory Disease[5] (893)	Stroke (1260)	Unintentional Injuries[3] (4094)
4	Complications of placenta (19)	Other infect (8)	Cancer (27)	Heart Disease (193)	Chronic liver disease (383)	Unintentional Injuries[3] (340)	Stroke (629)	Alzheimer's Disease (1128)	Chronic Lower Respiratory Disease[5] (2842)
5	Pregnancy Complications (13)	Homicide (8)	Heart Disease (7)	Homicide (77)	Chronic Lower Respiratory Disease[5] (350)	Stroke (331)	Alzheimer's Disease (415)	Chronic Lower Respiratory Disease[5] (941)	Stroke (2463)
6	Respiratory distress (8)	Ill-defined conditions-signs and symptoms[4] (7)	Injuries of Undetermined Intent[3] (7)	Chronic liver disease (62)	Diabetes (312)	Diabetes (300)	Unintentional Injuries[3] (381)	Unintentional Injuries[3] (709)	Alzheimer's Disease (1662)
7	Bacterial sepsis of newborn (7)	Influenza & Pneumonia (4)	Diabetes (6)	Ill-defined conditions-signs and symptoms[4] (37)	Suicide (281)	Nephritis (221)	Diabetes (358)	Influenza & Pneumonia (612)	Diabetes (1386)
8	Necrotizing entercolitis (6)	Suicide (3)	Influenza & Pneumonia (4)	Diabetes (29)	Stroke (212)	Septicemia (181)	Nephritis (339)	Nephritis (553)	Nephritis (1280)
9	Circulatory System (5)	Septicemia (2)	Ill-defined conditions-signs and symptoms[4] (4)	Stroke (29)	Septicemia (171)	Chronic liver disease (180)	Parkinsons (285)	Diabetes (381)	Influenza & Pneumonia (1217)
10	Intrauterine Hypoxia (4)	In situ neoplasms (2)	Chronic Lower Respiratory Disease[5] (2)	Injuries of Undetermined Intent[3] (26)	Nephritis (150)	Influenza & Pneumonia (179)	Influenza & Pneumonia (276)	Ill-defined conditions-signs and symptoms[4] (355)	Septicemia (942)
All Causes	255	106	389	2,646	9,417	9,974	13,570	22,303	58,660

Note: Ranking based on number of deaths. The number of deaths is shown in parentheses.

1. LBW: Low birthweight. 2. SIDS: Sudden Infant Death Syndrome. 3. Injuries are subdivided into 4 separate categories by intent: unintentional, homicide, suicide, and injuries of undetermined intent (deaths where investigation has not determined whether injuries were accidental or purposely inflicted. 4. Ill-Defined Conditions: Includes ICD-10 codes R00-R99. 5. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

Source: MDPH, Massachusetts Deaths 2019, February 2022 (https://www.mass.gov/doc/2019-death-report/download)

From 2016 to 2020, opioid-related overdose deaths in Massachusetts declined for White residents. In contrast, the mortality rates for Latino/a/e and Black residents increased dramatically; this was especially prevalent among males (Figures 20 and 21).

FIGURE 20

Massachusetts Opioid-Related Deaths, All Intents, by Race and Ethnicity, 2014-2020

Confirmed Opioid-Related Overdose Death Rates, All Intents, by Race and Hispanic Ethnicity
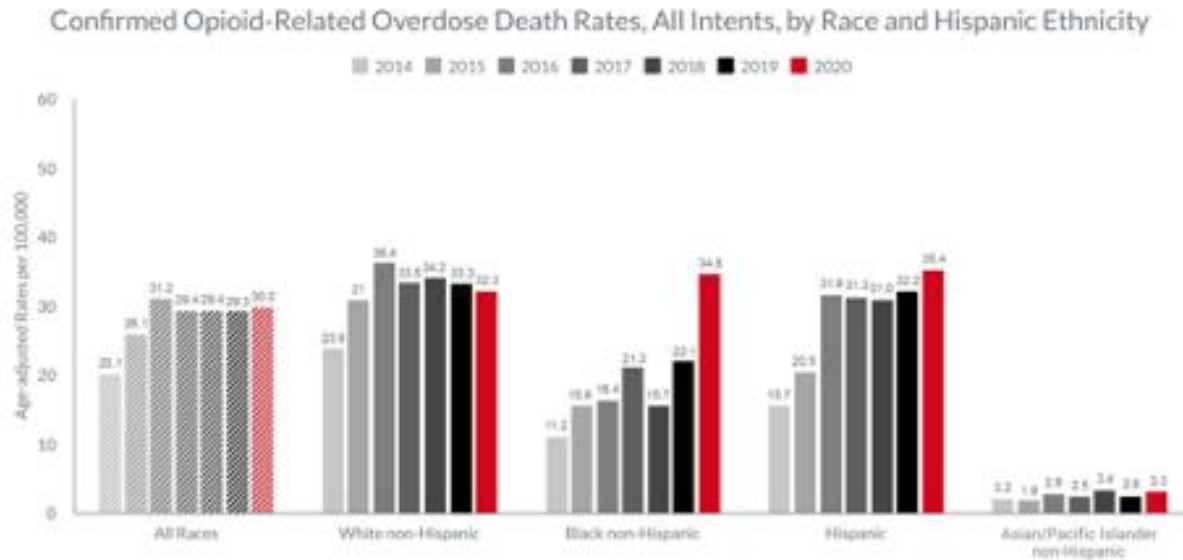
Source: MA Department of Public Health. Opioid-related overdose deaths, all intents, MA residents – Demographic data highlights https://www.mass.gov/doc/opioid-related-overdose-deaths-demographics-may-2021/download. Published May 2021. Accessed June 2022.

FIGURE 21

Massachusetts Opioid-Related Deaths, All Intents, Males by Race and Ethnicity, 2014-2020
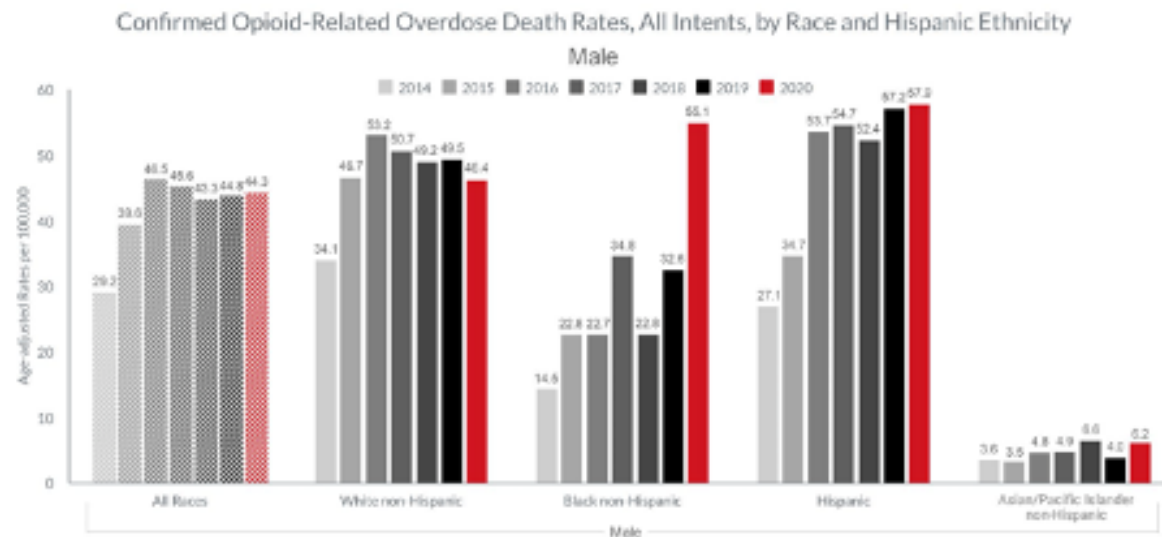
Confirmed Opioid-Related Overdose Death Rates, All Intents, by Race and Hispanic Ethnicity
Male

Source: MA Department of Public Health. Opioid-related overdose deaths, all intents, Male.

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Focus Areas

As Mass General Brigham develops and implements programming and supports that will reduce disparities in health outcomes for the two system priorities, our efforts will focus on the highest need communities across our hospital priority neighborhoods. We will also continue to support locally identified priorities at the hospital level.

h. Rationale for Identified Health Needs Not Prioritized by Hospital

Transportation will not be a focus for our implementation plan. We have supported a rural-focused transportation project serving older adults for several years and that project is now self-sustaining. We will continue to advocate for regional and state transportation solutions.

Violence will not be a focus for our implementation plan. The level of violence is lower here compared to the state and other issues are higher priorities. We will support youth mental health interventions, which may have a secondary benefit on violence.

We will not focus on asthma in our implementation plan. Other priorities identified in this report are higher priorities.

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IV. CONCLUSION

a. Summary of Under Resourced Populations in the Community

Data show that while Cooley Dickinson's service area has many assets that contribute to good health, not all community members have equal access. The proportion of people in the service area who come from communities of color is growing; because of centuries of systemic discrimination, these communities are more likely to have limited incomes. The data in this needs assessment show that this intersection of race and income inequities has created a cascade of negative health outcomes that are identified as prioritized health needs.

The physical health outcomes of the pandemic are severe, and the isolation and anxiety it created only served to worsen already-poor mental health outcomes too. Young people, especially those who are transgender or nonbinary, are at a particularly high risk for depression, anxiety, and self-harm. Trans and nonbinary people have many more negative mental health outcomes than their cisgendered peers.

b. Priorities Identified and How They Address the Needs of the Community

Many residents continue to struggle to meet their basic needs of housing and food access. An aging population will present more challenges, as smaller households tighten the housing market. Communities of color are much more likely to be housing burdened. The rural nature of much of the service area presents challenges when it comes to public transportation; as such, many residents have little to no access to buses or trains.

Like the rest of the country, the service area is challenged by chronic illnesses. Historically disadvantaged populations including BIPOC communities face barriers to managing chronic conditions, resulting in Emergency Department use and poor health outcomes.

Mental health and substance use continue to be concerns for the community. The pandemic has had a mostly negative impact on substance use and mental health, as well as many other areas of health. COVID-19 will continue to impact the health of the population for years to come.

Key informant interviews and information from the community benefit advisory council, paired with quantitative data showing the demographic makeup of health care workers, shows a great need for a more diverse health care workforce. When seeking health care, especially mental health care, people look for specialists with whom they share an identity and life experience. For most people of color, this is simply not possible. Transgender, queer, and nonbinary people also struggle to feel comfortable receiving medical care, especially because of the lack of formal training requirements around trans health. Groups working with youth should also strive to diversify their workforce.

c. Next Steps and Considerations toward Implementation Plan

A community benefit advisory council meeting was held in June to review key findings of the CHNA and to receive feedback about priority topics and populations. Results from that meeting include confirmation that youth mental health is a priority, including youth of color and LGBTQIA+ youth. People also reported the need to support parents of young children and foster collaboration among community programs. Participants also noted concerns about

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the mental health needs of older adults, veterans, and key topics such as housing and homelessness, and transportation.

The findings of this CHNA, feedback from the community benefits advisory council, and review of current projects and programming will inform the development of a three-year implementation plan. That plan will be reviewed and adopted by the Board of Trustees and made available for public review on our website

V. APPENDICES

Appendix A. Glossary

Ableism – intentional or unintentional bias, oppression of, discrimination of, and social prejudice against people with disabilities and those perceived to have disabilities. Ableism creates barriers to equity in education, employment, health care, access to public and private spaces, etc. It is rooted in the belief that typical abilities are superior and people with disabilities need "fixing."

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 Massachusetts 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) 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

    Age-adjusted—Age-adjusted rates are used in data analysis when comparing rates between geographic locations, because differing age distributions can affect the rates and result in misleading comparisons.

    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.

Disability – **A** physical, cognitive, developmental, or mental condition that interferes with, impairs, or limits a person's ability to do certain tasks or engage in daily interactions. Disabilities can be visible, invisible, something a person is born with, something a person acquired, temporary, or permanent.

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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 differences 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 strategies and instruments that target some communities for positive social outcomes and improvement to the built environment. Disinvestment describes the absence of investment in some communities over a long period of time.

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

Limited Income – Having a relatively low or fixed income, not by choice, which may not be sufficient to meet all basic needs and to thrive.

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.

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.

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

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 Latino/a/e. 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 Latine.

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 B. 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.

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Regional Advisory Council
TABLE 7

Name (Last, First)	Title	Organization	Organization Serves Broad Interests of Community	Organization Serves Limited 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
Bidwell, John	Executive Director	United Way of the Franklin & Hampshire Region	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	

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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
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	

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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
Golden, Annamarie*	Director, Community Relations	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	
Jones, Kimothy	Project Manager SDoH (Public Health)	Baystate Health	X	X	
Kent, Marian	Strategic Grant Writer	Baystate Strategic Planning Team	X	X	
King, Mary	CFCE Coordinator/Family Center Director	Montague Catholic Social Ministries	X	X	

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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
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	
Naunheim, Geoff	Director of Community Investment	United Way of the Franklin & Hampshire Region	X	X	
Owens, Christo	Resident			X	
Rosario, Brittney*	Community Benefits Specialist	Baystate Health	X	X	

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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
Robinson, Frank*	Vice President, Public Health	Baystate Health	X	X	
Rodriguez, Rafael	Holyoke Coalition Coordinator	Western Mass Training Consortium	X	X	
Rozie, Cherelle, and then Mary Stuart*	Regional Manager of Community Benefit	Trinity Health Of New England	X	X	
Rufino, Tiffany, 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 C. Respondents Participating in Key Informant Interviews

TABLE 8

Name	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
Cooley Dickinson Health Care Service Area: Hampshire and Franklin Counties					
Talya Sogoba	Inclusive Engagement Specialist	CES	x	x	
Kara McLaughlin	Northampton Prevention Coalition Coordinator	City of Northampton	x	x	
Melissa Heckman	Therapist (LICSW, MEd)	Transhealth Northampton	x	x	
Nancita Alejandro		CES	x	x	
Aleah Nesteby	Nurse Practitioner	Transhealth Northampton	x	x	
Jim Frutkin	Senior Vice President of Strategy and Business Development	ServiceNet	x	x	
Elsa Leiva	Parent of 5	NA	NA	NA	NA

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APPENDIX D. Summary of Key Informant Interviews: Youth Mental Health

COOLEY DICKINSON HEALTH CARE 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?

To address this question, the findings presented below cover four essential sub-questions, as well as other topics that respondents identified.

1) 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 six key informants working in mental health or youth development roles in the organizations that work in Cooley Dickinson's service area. 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

● 3 mental health providers or clinical program managers
● 3 coalition coordinators working on youth issues
● 1 parent

Identity characteristics (not all key informants responded to all questions):

● 4 respondents identified as female; 1 as male; 2 as nonbinary
● 4 respondents identified as white: one as Black/African American
● 1 respondent was under 25; 1 was 36-45; 3 were 46-55; 1 was over 66

Staff at the Collaborative for Educational Services conducted interviews using Zoom videoconferencing or a traditional phone call. All of the interviews were one-on-one conversations. To promote respondent comfort and choice, in our initial outreach to key informants, we asked if there were certain characteristics they would like in an interviewer (e.g., gender identity, 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 were invited to offer their own topics to discuss to better understand issues affecting young people's well-being. Interviews generally lasted 45-60 minutes.

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Constraints and Limitations

The findings included in this summary are based on interviews facilitated and analyzed by a white, professional, and formally educated 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.

Findings

1) How are adults and youth thinking about "mental health"? Who do youth turn to? Who do they trust for guidance?

a) How do adults conceive of youth mental health issues and youth well-being?

Adults are concerned with poor mental health among young people and the lack of supports available to youth when they do experience poor mental health. Several key informants talked about systems that act as obstacles to improving mental health. For example, according to one youth worker, schools are focused on teaching to arbitrary benchmarks that align with state testing, but neglect to teach health class or give students the tools they need to focus enough to find academic success. She described this as "process over content". Some cited systems of oppression that continue to keep certain groups, particularly low-income people, trans and gender diverse people, and people of color, from easily attaining good mental health. The COVID-19 pandemic has worsened mental health for youth and has also slowed or stopped some of the agencies, organizations, or events that supported young people.

> "We don't care about young people. We say we do, but we don't do anything about it... Children say, "we're experiencing discrimination" but we don't create avenues for them to handle that. We're failing our children by focusing on arbitrary content. It's a systemic problem...individuals feel powerless."
>
> -Youth coalition coordinator

Adults see social media as having strong impacts on youth mental health, both positive and negative. Social media is helpful in building community and relationships, particularly for youth who may struggle to find others who share their interests or identities, such as queer, trans, or gender non-binary youth. Young people can form powerful relationships this way, even though adults are likely to dismiss these relationships as "lesser than" those formed face-to-face. The downsides to social media include social comparisons. Young people compare themselves to what they see on social media and are likely to conclude that they are having less fun, or not as attractive, or are generally less successful or popular than their peers. Social media can also be a platform for hatred or bullying, as well as constant exposure to news stories. While staying knowledgeable about current events can be important, it can also be exhausting, scary, anxiety-inducing, and even traumatic for some youth.

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"It's easier to bully people today. It's easier to be accessed by hateful people. Bigotry and hate are everywhere. There's a serious lack of innocence. This generation and continued generations will have deeper mental health issues and also better coping skills."

-Youth program coordinator

b) How do youth talk and think about mental health?

Nearly all respondents noted that youth speak more openly about mental health and feel less stigma around it. There was also agreement that young people are more educated. Many know formal diagnoses, which they learn through TikTok and other social media sites, though they may misuse the terms and are likely to misdiagnose themselves. Still, respondents felt these are positive changes. Youth are better able to describe their own feelings, as well as how those feelings are impacting their day-to-day life. For example, whereas in the past a young person might storm angrily from a meeting, today youth workers felt they would likely explain they were feeling overwhelmed or stressed and state that they needed alone time before leaving. One youth program coordinator talked about how youth also explain how their mental health has impacted their day and their actions, sometimes in addition to talking directly about their mental health. For example, they might share that they are unmotivated and don't want to get out of bed, while another time they might be able to express that they're feeling depressed and don't want to come to a meeting.

"Culture has changed, and there's a different kind of energy. People are opening up more. Now kids can give a name or term to how they feel, instead of feeling "crazy". Everybody has a struggle, and we can work together through this in whatever way we can. There's less stigma. They're less worried about it."

-Youth program coordinator

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b) Who or what do youth turn to for support?

Key informants noted teachers, family, coaches, and other trusted adults as supports for youth, but all noted the importance of peer-to-peer support. They indicated that young people most often turn to their friends when they are struggling. This is often a good thing, as it helps them form deeper relationships. Sometimes, though, peers can't offer the level of support that's needed, or don't know when to get help from an adult (or perhaps don't know who to go to for help). One therapist also noted that her clients are commonly "dropped" by their friends for being "too needy". They also discussed the difficulty of a young person who has mental health struggles turning to a peer who also has mental health struggles, and how this can create a negative cycle.

One interviewee discussed the difficulty of trust between youth and adults. Some young people may have had traumatic experiences with adults and be hesitant to go to any adult with their problems. They might have experience with mandated reporters and fear their trust will be betrayed if they share their problems, or that it will result in "telling on" someone and getting social services involved. Police and DCF are not necessarily likely to make young people feel safer, even if that's their intention.

When young people have a therapist or healthcare provider to go to with mental health issues, they generally start seeing that person due to parent or school intervention. This can be an important relationship, but only if the young person has "bought in" to the relationship.

c) What are the youth assets that help them maintain a sense of well-being or cope with mental health challenges?

While poor mental health is an alarming problem that needs to be addressed, young people themselves are already finding positive ways to cope with it. Most respondents again brought up social media. As discussed above, it can be a positive or a negative coping mechanism. When it's conferring benefits, it allows people to connect to others, build relationships, share artwork and music, and get involved in causes they find important. Many people interviewed discussed the need that young people have to feel autonomy and be in control of as many aspects of their lives as possible. Perhaps social media, which is notoriously difficult for parents and other adults to exert control over, allows young people more freedom to explore, communicate, and act when it can be difficult to have that power in "real life". Again, respondents noted the negatives, such as "doom scrolling", being over-available for friends and chronic sleep loss as a result or making negative social comparisons.

The arts are another important and healthy outlet for youth. This can be an individual activity that is kept private, like sketching alone, or it can be something more organized like attending an arts academy, performing music in public, or sharing art and music on social media. Exercise and sports can be another important tool.

Some key informants also referred back to the spreading knowledge about mental health and the language youth with which youth are equipped in order to talk about it. In the best-case scenarios, this language allows them to name their problems and fears, describe them efficiently to other people, and take action. For example, a young person might express concern that they are going to have a panic attack, or say they need to see the counselor.

"I think language is super important."

-Youth Program Coordinator

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Respondents also noted that young people are more likely than in the past to be involved in social causes. Schools have expanded their offerings through clubs devoted to racial justice, LGBTQIA+ issues, and environmental justice. Young people can also get involved online in causes that are important to them. This helps youth find "their tribe" and build community, which is vitally important to good mental health. It also likely helps them feel a sense of control over their lives and their futures, and hopefully can help combat some of the anxiety and fear around the often-depressing state of the world that they've inherited. When asked why young people might have poor mental health, key informants often pointed at the massive problems most of us struggle with- systemic racism, discrimination based on gender or sexual identity, climate change, hate crimes, violence, and injustice; coupled with having their feelings and thoughts dismissed and their actions controlled by adults. Being involved in combating these issues is an important way to reclaim some power over worldwide and personal issues and feel less anxious or fearful.

Involvement more broadly was also stated as a positive coping mechanism. Respondents felt that young adults are often "busy", generally doing useful or important things, from schoolwork, club involvement, sports, and the arts.

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

a) Asset

School groups: Most schools have a wide variety of clubs that support students by building their skills, increasing their social networks, and helping young people find a community of like-minded peers. Many of these clubs help students work towards social justice. They serve young people, while encouraging and enabling young people to serve their communities.

Youth spaces: having dedicated youth spaces, drop-in centers, and community centers that young people have some control over is beneficial to the mental health of young people.

Peer support groups: TransHealth, Translate Gender, and Community Action, among others, have peer support groups that key informants mentioned as helpful for and popular among young people. Addressing mental health in a group setting also alleviates the shortage of mental healthcare providers. TransHealth also addresses the mental (and physical) health needs of trans, queer, and gender diverse youth. This is particularly important, as surveys among youth locally and nationally indicate that trans and non-binary youth suffer far worse health outcomes than their cisgendered peers.

Technology: Virtual meetings of all sorts have increased during the pandemic. While there are concerns about privacy as well as Internet and device access, tele-health has improved accessibility for many people. It has also opened up access to more specialized treatment that might only be available in the bigger cities of Eastern Massachusetts or elsewhere. Outside of formal healthcare, it has also allowed people to become involved in causes and activities that are easier to access online, perhaps from a car or in between other meetings.

b) Barriers

Lack of providers: Most key informants emphasized not only the lack of mental health care providers, but the lack of mental health care providers who reflect the community. Therapists and other formally trained providers are more likely to be white, upper/middle class, and female. People of color seek providers who look like them and come from a similar background or culture but cannot find anybody.

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"Boys won't talk in a group about mental health. They'll talk one on one, but want to talk to someone like them, who looks like them. They can't find people who look like them that they can be transparent with."

-Youth Program Coordinator

Navigating the system: it's difficult for families to access care due to the complexity of the system, and long, decentralized wait lists for care. This means that youth are often left waiting for care until they reach a crisis level. Furthermore, parents (as the ones most often initiating and organizing mental health care) often have to devote immense amounts of time to accessing care by calling around to different organizations to be placed on waitlists, working through insurance, and figuring out payment methods. Massachusetts is working on centralizing some parts of the system, but exactly when and how these changes will be made remains to be seen. Local agencies have succeeded in centralizing some parts of the system, by sharing receptionist services and alerting all partner agencies if a client has a mental health crisis, but these efforts could be more useful if expanded.

Burnout: schools and youth programs were noted by all key informants as crucial supports to youth mental health, and they have also borne an immense amount of the stress of the pandemic. Schools are dealing with youth who have suffered isolation and trauma and have fallen behind socially and academically. Teachers and youth workers are dealing with their own personal lives, which have surely been impacted by COVID-19, while also trying to support youth who need more than they are able to give. Some youth programs were canceled during the pandemic and haven't started up again or are struggling to gain traction.

"There's a lot of burn out with people who work with youth. Particularly this year. The students become nameless because of burn out and turn over, and there's not enough energy to devote to getting to know them. Once you stop calling them by their names, they're just this big group, and individuality gets ignored. You can't understand someone's full story."

-Youth Program Coordinator

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3) What effective models exist in Western Massachusetts (e.g., collaboration between mental health providers and schools or primary care)?

Schools: schools often help get youth formal mental health care, either by working with parents when a child is having an issue in school, or sometimes by alerting agencies directly to get support.

Primary Care Providers: some primary care providers are intentional about serving the mental health of their patients, although often do so on their own and not supported by any system. For example, some primary care providers work hard to educate themselves on trans health issues in order to serve their trans patients better. That being said, the lack of standards around trans health education means that some providers might think they are being "gender affirming" but might still lack the knowledge necessary (although they may still be great providers in general). Others collaborate consistently with mental health care providers and integrate that into their primary care. PCPs have an important role as educators of parents. When they do not or cannot educate parents well enough, even the most well-intentioned parents fail to fully support the mental health of their children.

"Parents need to understand how to talk to kids, how to support them. Trauma is really impactful on your sense of self, on safety, on education, and we don't have good systems to support these youth."

-Therapist

"As a therapist, I love a great primary care provider!"

-Therapist

Services that avoid crisis level care: Mental health providers stressed the importance of keeping people out of crisis care, in part because they felt it's inadequate, and also because of the importance of helping people before they are in crisis. They mentioned CBAT hospital diversion programs as well as tele-health treatment for specialists across the state as helpful options.

Insurance: Massachusetts has very low levels of uninsured people. Most people can access MassHealth if they don't get insurance through their employer or some other program like Medicare. While the system may be imperfect, it's been critical in improving access to care.

Good people: several key informants mentioned the hard work and efforts of people in a variety of roles -- teachers, parents, friends, neighbors, doctors, therapists, youth workers, and more -- to provide networks of support.

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"A lot of organizations that work with youth provide expert knowledge on navigating the system, who the providers are, where you should go. There's this Western Mass "good human beings" kind of thing- you see kids struggling and you want to fix it. People work hard to link families with resources."

-Clinical Program Manager

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

Key informants stressed the need for youth to have more control. When building support systems, young people should be at the forefront of decision making.

"Things don't change much in terms of kids not wanting to be talked to like they're babies, wanting to be respected and heard. Parents are not always helping as much as they might think, parents can be too engaged or not enough. Letting kids have agency whenever you can is crucial."

-Nurse practitioner

"Adults in youth spaces don't always think about youth empowerment. Adults have taken away their power."

-Youth worker

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APPENDIX E. Summary of Findings: Survey of Municipal 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 Hampshire County results, general western MA themes, and a table on the most pressing issues that respondents identified are provided below.

HAMPSHIRE COUNTY

- 14 respondents, 11 from Boards of Health; mostly older white women
- Most involved with communicating to public (10) and enforcing mask mandates (9), among other COVID roles
- In open-ended question, 5/13 respondents noted need for better transportation
  - Many also noted other basic needs: affordable housing, access to healthy foods
- When selecting three most urgent needs from checklist, results were similar: lack of services to meet basic needs (6); transportation (5) were identified as major needs
  - need for mental health/substance abuse services (6) also figured prominently
- 8/12 cited the elderly as population they are concerned about
  - Also, low-income people/families; people experiencing homelessness
- Strengths: community volunteers from churches, civic groups, and more
  - Local nonprofits/safety net groups including Councils on Aging, Partners in Health, Pioneer Valley Planning Commission, schools, Survival Center, town officials/commissions, and more
- General consensus that local public health systems do not collaborate with hospitals or insurers. Several people noted the poor communications of insurance companies and hospitals and the need for improvement in this area.

TABLE 9
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%**

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TABLE 10
Most pressing issues (open response)
*Communication issues are largely about covid, 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.**

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Appendix F. Service Area Demographics
TABLE 11

Socio-demographics of the Service Area

2020 ACS Demographic Information	Massachusetts	Hampshire County	Northampton	Amherst	Easthampton
Age					
Median age (years)	40	37	40	21	47
Persons under 18 years, percent	20%	15%	16%	9%	14%
Persons 18-64, percent	63%	68%	65%	83%	63%
Persons 65 years and over, percent	17%	17%	19%	8%	23%
Race and ethnicity	Massachusetts	Hampshire County	Northampton	Amherst	Easthampton
Latino/a/e or Hispanic	12%	6%	9%	8%	4%
Non-Latino/a/e or Hispanic					
White	71%	83%	82%	67%	92%
Black or African American	7%	2%	2%	5%	1%

Race and ethnicity	Massachusetts	Hampshire County	Northampton	Amherst	Easthampton
American Indian and Alaska Native	0.1%	0.1%	0.1%	0.2%	0.0%
Asian	7%	5%	3%	14%	1%
Native Hawaiian and other Pacific Islander	0.0%	0.1%	0.0%	0.5%	0.0%
Some other race	0.8%	0.2%	0.1%	0.1%	0.0%
Two or more races	3%	3%	3%	5%	2%

Language spoken at home (population over 5)	Massachusetts	Hampshire County	Northampton	Amherst	Easthampton
Language other than English spoken at home	24%	13%	14%	23%	8%

Educational attainment	Massachusetts	Hampshire County	Northampton	Amherst	Easthampton
Less than high school graduate	9%	5%	7%	4%	5%
High school graduate (includes equivalency)	24%	23%	15%	12%	28%

Some college or associate degree	23%	24%	18%	14%	30%

Educational attainment	Massachusetts	Hampshire County	Northampton	Amherst	Easthampton
Bachelor's degree or higher	45%	49%	61%	71%	38%
Income	Massachusetts	Hampshire County	Northampton	Amherst	Easthampton
Median household income (in 2020 dollars)	$84,385	$73,518	$71,866	$56,906	$63,657

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TABLE 12
Town Data by Age and Race

2020 ACS Demographics by Geography	Total population	Median age (years)	Under 18 years	65 years and over	Hispanic or Latino/a/e (of any race)	Not Hispanic (NH) or Latino/a/e	White NH	Black or African American NH	American Indian and Alaska Native NH	Asian NH	Native Hawaiian and Other Pacific Islander NH	Some other race NH	Two or more races NH
Amherst	39,995	21.4	9%	8%	8%	93%	67%	5%	0.2%	14%	0.5%	0.1%	5%
Belchertown	3,037	39.8	21%	20%	6%	94%	92%	1%	0.0%	0%	0.0%	0.0%	1%
Deerfield	525	41.7	9%	27%	12%	88%	67%	3%	0.0%	2%	0.0%	0.0%	16%
Easthampton	15,930	46.5	14%	23%	4%	96%	92%	1%	0.0%	1%	0.0%	0.0%	2%
Hatfield	1,154	56.5	11%	29%	8%	92%	89%	0%	0.0%	0%	0.0%	0.6%	3%
Huntington	675	39.3	17%	17%	7%	93%	88%	2%	0.0%	0%	0.0%	0.0%	3%
Northampton	28,552	40	16%	19%	9%	91%	82%	2%	0.1%	3%	0.0%	0.1%	3%
South Deerfield	2,150	51	23%	16%	6%	94%	91%	0%	0%	1%	0%	0%	3%

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