
Community Health Needs Assessment 2019

Prepared for Cooley Dickinson Health Care

Adopted by: Cooley Dickinson Board of Trustees, Healthy Communities
Committee, September 2019

Public Health Institute of Western Massachusetts

Collaborative for Educational Services

Franklin Regional Council of Governments

Pioneer Valley Planning Commission



Collaborative for Educational Services
Everyone is a learner



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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 increasing community capacity. PHIWM was formerly known as Partners for a Healthier Community.

2. 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 that 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 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 a number of 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 wellbeing of our region, FRCOG is also active in state and federal 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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I. Executive Summary

Introduction and Methods

Cooley Dickinson Health Care (CDHC), a Massachusetts General Hospital Affiliate, is a community-based health care system in western Massachusetts. CDHC includes an acute care community hospital, the Cooley Dickinson VNA & Hospice, and Cooley Dickinson Medical Group. Hospital-based services include medical/surgical, orthopedics, obstetrics/gynecology, inpatient psychiatry, geriatrics, oncology, palliative care, emergency, diagnostic imaging/radiology, laboratory, urgent care, and rehabilitation services. Cooley Dickinson also provides ambulatory services, including imaging/radiology, laboratory and physical therapy, occupational therapy, and speech-language therapy throughout the region. The Cooley Dickinson VNA & Hospice offers home health and hospice nursing and rehabilitation visits, and Cooley Dickinson Medical Group comprises more than 20 individual medical practices with primary and specialty care physicians, nurse practitioners, nurse midwives, and other providers. CDHC serves Hampshire and Southern Franklin County residents in the Five College region of the Pioneer Valley.

CDHC is a member of the **Coalition of Western Massachusetts Hospitals** (“the Coalition”) a partnership between 8 non-profit hospitals, clinics, and insurers in the region. The Coalition formed in 2012 to bring hospitals in Western Massachusetts together to share resources and work in partnership to conduct their community health needs assessments (CHNA) and address regional needs. CDHC worked in collaboration with the Coalition to conduct this assessment.

The goals of the 2019 CHNA were to:

- update the findings of CDHC’s 2016 CHNA so that CDHC can better understand the health needs of the communities it serves
- meet CDHC’s fiduciary requirement as a tax-exempt hospital
- serve as a resource for community organizations for data that is not readily available in other ways
- guide CDHC’s Community Health Improvement Plan

The Coalition engaged over 1,200 residents across the counties of Western Massachusetts in data collection and outreach about the CHNA.

The assessment focused on communities in Hampshire and Franklin Counties, the primary service area of CDHC. In places where only county-wide data was available, Hampshire County was used as the most accurate proxy. It also should be noted that a challenge encountered with smaller towns is that of small numbers, limiting available health data in rural areas.

The 2019 CHNA was conducted with equity as a guiding value, understanding that everyone has the right to a fair and just opportunity to be healthy and that this requires removing the obstacles to health. Obstacles range from poverty, discrimination, and systemic racism - and their consequences, such as unequal access to jobs, education, housing, safe environments and health care.

When identifying the areas that can be addressed to improve the health of the population, the assessment used the Massachusetts Department of Public Health (MDPH) **social and economic determinants of health framework**, recognizing that these factors contribute substantially to population health. The MDPH framework also offers guidance for community engagement for CHNAs and Determination of Need processes when hospitals make capital improvements and allocate funds for community benefits.

The prioritized health needs identified in the 2019 CHNA include community level social and economic determinants that impact health, access and barriers to quality health care, and health conditions and behaviors. The assessment included analysis and synthesis of 1) a variety of social, economic and health data; 2) findings from recent Hampshire County regional assessment reports; 3) information from 12 focus groups and interviews with 45 key informants conducted for the 2019 CHNA; and 4) community input from 10 Community Chats. In addition, Cooley Dickinson Health Care held a discussion of area health needs in a meeting of their Community Benefits Advisory Council, which met on April 30, 2019 and engaged 35 people. In total, 336 individuals across Hampshire County and selected areas of Hampden and Franklin Counties were engaged in outreach and data collection.

Priority populations were identified using a health equity framework with available data.

Knowing that health inequities exist for many communities of color in Hampshire County, we focus on inequities among those who are Latino and Black. While these populations are small in Hampshire County, we know that they face inequitable health outcomes nationwide. Our research into health outcomes by race in Hampshire County shows this to be the case locally as well. In addition, available data was limited for other racial and ethnic groups, such as Asian, Native American, and others. We use the terms White, Black, and Latino, recognizing that these terms do not always capture how every individual identifies themselves. For more information on the terminology of race and ethnicity as well as other definitions, please see the Glossary in Appendix II.

Information from this CHNA will be used to inform the updating of Cooley Dickinson Health Care's community health improvement plan (CHIP) and to inform the Coalition's regional efforts to improve health.

Findings

Below is a summary of the prioritized community health needs identified in the 2019 CHNA.

Community level social and economic determinants that impact health

A number of social, economic and community level factors were identified as prioritized community health needs in CDHC's 2016 CHNA and continue to impact the health of the population in the CDHC service area. Social, economic, and community level needs identified in this CHNA include:

- **The social environment** – The social environment includes social isolation and social exclusion, such as from interpersonal and institutional discrimination. Older adults and their caregivers report that social isolation is a significant problem for older adults, particularly those living in more rural parts of the county who lack easy access to food, recreation, and medical care. Senior centers can help to connect people with these services, but they often struggle with small budgets and with outreach to those most in need.
- **Housing needs** – Over one-third of residents in both Hampshire and Franklin counties experience housing insecurity, paying more than 30% of their income on housing. These rates are even higher in Amherst and Northampton. A typical Hampshire County household pays almost 60% of its income in housing and transportation costs. Poor housing conditions also impact the health of residents. Older adults and people with disabilities often have difficulty finding housing appropriate for their needs.
- **Lack of transportation, access to healthy food, and places to exercise** – Decisions about how the infrastructure is developed impact transportation choices and access to healthy food, among other determinants. Lack of access to transportation is a consistent issue in Hampshire County. Overall, nearly 8% of Hampshire County residents do not own a vehicle; this rate is higher in Amherst (11%) and Northampton (10%). Food insecurity continues to impact the ability of many residents to have access to food. In a large part of Amherst and some of Northampton, over 20% of residents experience food insecurity. In addition, parts of Northampton and Amherst are also considered food deserts, which are areas where residents with lower-incomes have limited access to grocery stores. These problems have an even stronger impact on older adults, who often need to rely on public transportation or friends and family to access food. A lack of walkable neighborhoods in much of the CDHC service area impacts access to resources as well as exercise.
- **Lack of resources to meet basic needs** – Many CDHC service area residents struggle with insufficient financial means: 14% of Hampshire County residents have income below the poverty line, with higher rates in Amherst (33%) and Northampton (15%). The

unemployment rate in the county is similar to that of the state (about 6% according to Census estimates), with Amherst having the highest rate in the region of 10%.

- **Violence** – Interpersonal violence such as dating violence, bullying, and elder abuse were discussed in focus groups and interviews. A countywide survey shows that youth bullying is an ongoing issue, particularly for LGBTQ+ students. The same survey also indicated that nearly 20% of students reported knowing someone who has been abused by a dating partner, and/or have been told who they can talk to or spend time with by a dating partner. Seven percent of students reported having been forced or pressured into sexual activity.

“The general attitude toward elders in our society is a problem. They are not just people to be cared for.”

Key Informant Interviewee, Integrated Care Management Program Staff, Cooley Dickinson Health Care

Barriers to Accessing Quality Health Care

The lack of affordable and accessible medical care was identified as a need in the 2019 CHNA, as it was in the 2016 CHNA. The following barriers were identified.

- **Limited availability of providers** – Key informant interviewees identified the need for increased mental health and substance use providers and treatment programs, increased health services for the homeless population, and increased dental services for low-income individuals as needs for the service area. For low-income individuals living in the service area, availability of primary care providers is more limited. Older adults are seeking more providers who specialize in geriatric care and/or mental health care for older adults. They also would like to see more home-based services.
- **Insurance related challenges** – Qualitative data collection in the CDHC service area focused on the needs of older adults and touched briefly on issues with insurance. Focus group and interview participants around the region identified insurance-related issues as barriers to accessing the care and services needed to maintain their health. These included a lack of understanding of how to navigate insurance policies, barriers to using insurance to pay for ongoing or specialized care, and the limits of health coverage. Older adults and those managing chronic diseases in particular need education and support to navigate the complexities of the medical care system.
- **Lack of transportation** – Transportation was one of the most frequently cited barriers to accessing health care and health-related services, in particular for older adult residents of Hampshire County. Key informant interviewees and community forum participants identified the need for public transportation, not just for medical appointments but for

access to supports for healthy living, such as medication, healthy food, and recreational opportunities.

- **Lack of care coordination** – Increased care coordination is a need for individuals in the CDHC service area, particularly for older adults. Topics identified in community conversations and key informant interviews include the need for coordinated care between providers in general, between primary care and behavioral health care, and connections between health care providers and providers of other services and resources.

“Could each office have one nurse who works specifically on integrating the office with other resources in the area? They could work with primary care around how to link the patients with those resources, using resources guides and websites about local services.”

Amherst/Northampton Community Forum participant, Hampshire County

- **Need for care provided with cultural humility** – Key informant interviews with the Cooley Dickinson Physician Hospital Organization (CDPHO) integrated care management program staff and with a community resident who is a person of color identified the need for care provided with cultural humility, particularly around mental health issues. Focus groups and key information interviews with other stakeholders across the region echoed this concern, saying that it is difficult for providers to provide effective physical and mental health treatment for people whose cultures do not resemble their own. There is currently a lack of people of color who provide services, and a lack of cultural competence among many medical professionals. This issue goes beyond race and also includes attention to varied gender identities, sexual orientation, physical abilities, cultural identity, and language.

“When service providers do not reflect the demographics of their clientele, they don’t understand their specific cultural needs, and it is difficult for people receiving services to feel comfortable with them.”

Key Informant Interviewee, Integrated Care Management Program Staff, Cooley Dickinson Health Care

- **Health literacy, language barriers** – The need for health information to be understandable and accessible was identified in this assessment. Community forums identified this as a particular need for older adults and those managing chronic diseases. The need for provider education about how to communicate with patients about medical information also arose. Focus group participants and key informant interviewees noted the need for more bilingual providers, translators, and health materials translated in a wider range of languages.

Health Outcomes

- **Mental health and substance use disorders** – Substance use and mental health were identified as urgent health needs/problems impacting the area in virtually every type of stakeholder engagement in the 2019 CHNA. Mental health hospitalization is the only illness for which Hampshire County had higher rates of hospitalization than the state, and its suicide rate is the second-highest in the state, after Barnstable County. Substance use admissions to treatment programs rose in every county from 2012 to 2017, rising 34% in Hampshire County. Alcohol and heroin are the drivers of admissions. Opioid use disorder continues to be a public health crisis, with the number of opioid-related deaths in Hampshire County increasing annually from 12 in 2000 to 36 in 2018. There was overwhelming consensus among focus group participants and health care providers and administrators about the need for increased education across all sectors to reduce the stigma associated with mental health and substance use disorder, the need for more treatment options, and in particular the need for treatment for people with co-morbidities.
- **Chronic health conditions** – While Hampshire County’s rates of chronic health conditions compare favorably with those of other counties and the state overall, there are still a large number of area residents who are affected by chronic health conditions, including cardiovascular diseases, asthma, and diabetes. These diseases inequitably affect people of color, who are hospitalized for most chronic diseases at a significantly higher rate than are White people. Older adults are also heavily impacted by chronic disease. Approximately 70% of adults over the age of 65 in Amherst, Belchertown, Easthampton, and Northampton have hypertension. Coronary heart disease affects 25-35% of older adults in these towns, and 20-30% of older adults in these towns have diabetes. Chronic health conditions are exacerbated by a lack of a healthy diet and physical activity. Lack of access to healthy food and lack of physical activity continue to be an area of need in the CDHC service area.
- **Alzheimer’s disease and dementia** – Between 12% and 15% of older adults in selected Hampshire County communities suffer from Alzheimer’s disease. The proportion of the population over age 60 is projected to grow from 19% of Hampshire County in 2010 to 32% by 2035, so the need for services for dementia will also increase. The burden of disease on patients, caregivers, and the healthcare system is expected to increase.

Priority Populations

Available data indicate that **children and youth, older adults, and Latinos and Blacks** experience disproportionately high rates of some *health conditions* or associated morbidities when compared to that of the general population in the CDHC service area. Children and youth experienced high rates of asthma and are particularly impacted by obesity. Older adults had

higher rates of chronic disease and hypertension. Latinos and Blacks experienced higher rates of hospitalizations due to cardiovascular disease and cancer (diabetes hospitalization data for these groups was too low to report).

Data also indicated increased risk for poor *mental health and substance use disorders* among **youth** and particularly **girls, LGBTQ** (lesbian, gay, bi-sexual, transgender, queer) youth, **older adults, Latinos, Blacks, women, veterans, people reentering society after incarceration, people experiencing homelessness**, and those with **dual diagnoses** (mental health and substance use disorder).

When considering those with disproportionate and inequitable access to the *social determinants of health*, data identified people who are **Latino, Black, youth, older adults, people with lower incomes, women**, people who have been **involved in the criminal legal system, veterans**, those with **mental health and substance use disorders**, and **people with disabilities**.

Summary

The CDHC service area continues to experience many of the same prioritized health needs identified in the 2016 CHNA. Social and economic challenges experienced by the population in the service area contribute to the high rates of chronic conditions and other health conditions identified in this needs assessment. These social and economic factors also contribute to the health inequities observed among priority populations, which include children, older adults, Latinos, Blacks, LGBTQ+ youth, people with low incomes, women, veterans, people with mental health and substance use disorders, people involved in the criminal legal system and those experiencing homelessness, and people living with disabilities. Additional data is needed to better understand the needs of these populations in order to reduce inequities. The CDHC service area population continues to experience a number of barriers that make it difficult to access affordable, quality care, some of which are related to the social and economic conditions in the community, and others which relate to the health care system or insurance-related barriers. Mental health and substance use disorders were consistently identified as top health conditions impacting the community, and the inadequacy of the current systems of care to meet the needs of individuals impacted by these disorders arose as an important issue that needs to be addressed. Chronic health conditions such as diabetes, cardiovascular disease, asthma were also prioritized.

II. Introduction

1. About Cooley Dickinson Health Care

Cooley Dickinson Health Care (CDHC), a Massachusetts General Hospital Affiliate, is a community-based health care system in western Massachusetts. CDHC includes an acute care community hospital, the Cooley Dickinson VNA & Hospice, and Cooley Dickinson Medical Group. Hospital-based services include medical/surgical, orthopedics, obstetrics/gynecology, inpatient psychiatry, geriatrics, oncology, palliative care, emergency, diagnostic imaging/radiology, laboratory, urgent care, and rehabilitation services. Cooley Dickinson also provides ambulatory services, including imaging/radiology, laboratory and physical therapy, occupational therapy, and speech-language therapy throughout the region. The Cooley Dickinson VNA & Hospice offers home health and hospice nursing and rehabilitation visits, and Cooley Dickinson Medical Group is comprised of more than 20 individual medical practices with primary and specialty care physicians, nurse practitioners, nurse midwives, and other providers. CDHC serves Hampshire and Southern Franklin County residents in the Five College region of the Pioneer Valley.

Mission: To serve our patients and communities with exceptional, compassionate and personalized care.

Community Benefits Mission: CDHC will work in partnership with community leaders in business, government, education, religion, public health, health care, and other areas to develop and enact a common vision of improving the health status of the communities and people we serve.

The community health improvement mission will be accomplished by providing accessible, quality health care services at a reasonable price, by taking an active role in assessing community needs, by developing a plan and allocating resources to said needs, and by serving as a role model for other institutions.

The above community benefits mission was affirmed by the Cooley Dickinson Health Care Corporation Board of Trustees, February 1995; revised, August 1996 and October 2009.

Learn more about Cooley Dickinson at cooleydickinson.org

2. The Coalition of Western Massachusetts Hospitals

Cooley Dickinson Health Care (CDHC) is a member of the Coalition of Western Massachusetts Hospitals (“Coalition”). The Coalition is a partnership between eight non-profit hospitals/health plan in Western Massachusetts: Baystate Medical Center, Baystate Franklin Medical Center, Baystate Noble Hospital, Baystate Wing Hospital, Cooley Dickinson Health Care, Mercy Medical Center, Shriners Hospitals for Children – Springfield, and Health New England, a local health insurer whose service areas covers the four counties of western Massachusetts. The Coalition formed in 2012 to bring hospitals within western Massachusetts together to share resources and work in partnership to conduct their community health needs assessments (CHNA) and address regional needs.

3. Community Health Needs Assessment (CHNA)

Improving health and equitable distribution of health outcomes across western Massachusetts is a shared mission across the Coalition of Western Massachusetts Hospitals. To gain a better understanding of these needs, and as required by the 2010 Patient Protection and Affordable Care Act (PPACA), Coalition members conducted community health needs assessments (CHNA) in 2018-2019 to update their 2016 CHNAs. The PPACA requires tax-exempt hospitals and insurers to “conduct a Community Health Needs Assessment [CHNA] every three years and adopt an implementation strategy to meet the community health needs identified through such assessment.” Integral to this needs assessment was the participation and support of community leaders and representatives who provided input through Regional Advisory Council participation, stakeholder interviews and focus groups, Community Conversations, and Chats. Based on the findings of the CHNA and as required by the PPACA, the hospitals develop health improvement plans specific to their hospitals to address select prioritized needs. The CHNA data also informs County Health Improvement Plans (CHIPs) in all Coalition counties.

III. Methodology for 2019 CHNA

1. Equity as a Guiding Value

The CHNA process was conducted with a focus on equity. Health equity means that everyone has a fair and just opportunity to be healthier. This requires removing obstacles to health – such as poverty and discrimination, and their consequences – including lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care.¹

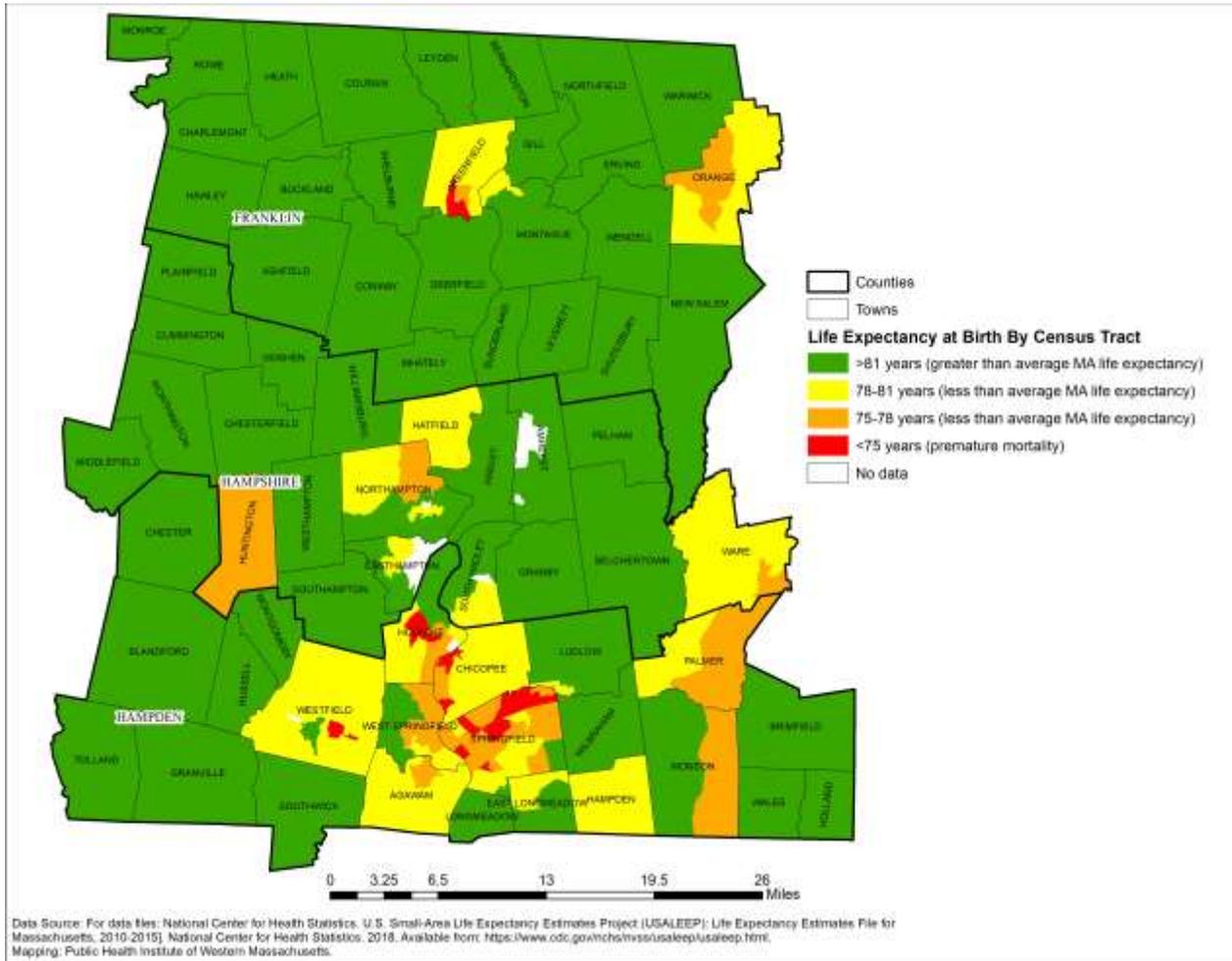
The Coalition of Western Massachusetts Hospitals/Insurers and the Western MA CHNA Regional Advisory Council created a proposition that the CHNA reflect values of health equity, cultural humility, and social justice within a framework of social determinants of health. As part of this, the CHNA process was conducted with an inclusive, community-engaged process that strove for 1) a transparent account of the conditions that affect health of all people in Western Massachusetts, and 2) an actionable CHNA for communities in Western Massachusetts at the local level.

The Coalition, guided by the Regional Advisory Council, or RAC (see below for description of the RAC) used the following methods to conduct this CHNA with a guiding belief in the need to consider health equity:

- having a more diverse collection of community representatives as part of the RAC than in previous years
- engaging substantially more residents from diverse organizations in the community in data collection and outreach activities than in prior years
- disaggregating outcomes and health determinants by race whenever possible
- including discussion of the impact that systemic and institutional policies and practices have on social determinants of health

Opportunities to lead a long and healthy life vary dramatically by neighborhood. Life expectancy in Massachusetts overall is 81 years (80.7), the sixth highest in the nation; however, there are large differences depending on where you live. Some areas of Western Massachusetts people live to be as old as 91 on average; in other areas, such as in parts of Northampton and Huntington, people live on average only between 75-78 years old. Low life expectancy areas have lower incomes, higher unemployment, lower educational attainment, lack health insurance, and have more nonwhite residents, among others.² Inequity impacts health. Figure 1 shows differential life expectancy rates across the region.

Figure 1. Life Expectancy, Western Massachusetts: Hampden, Hampshire, and Franklin Counties



Source: National Center for Health Statistics, Life Expectancy for Massachusetts 2010-2015.

Figure 2. Determinants of Health

2. Social and Economic Determinant of Health Framework

Similar to the 2016 CHNA, this CHNA was conducted using a determinant of health framework recognizing that **social and economic environment contributes substantially to**

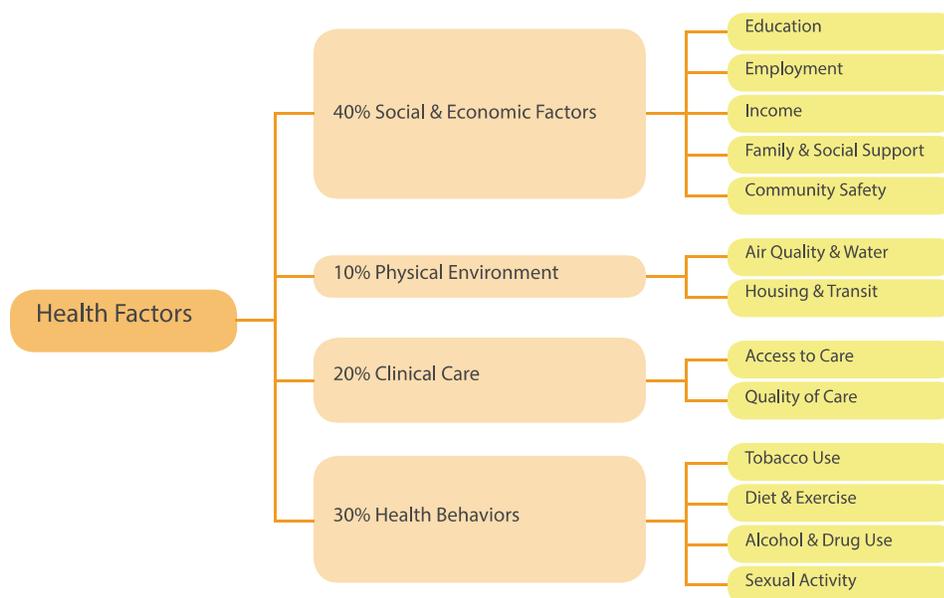


Source: Dahlgren and Whitehead, 1993

population health. Research shows that less than a third of our health is influenced by our genetics or biology.³ Our health is largely determined by the social, economic, cultural, and physical environments that we live in and healthcare we receive (Figure 2).

Among modifiable factors that affect health, research shows that social and economic environments have the greatest impact. The County Health Rankings model (Figure 3), developed by the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, estimates the proportion of health that modifiable factors contribute to, based on reviews of the scientific literature. It is estimated that social and economic factors account for 40% of our health, followed by health behaviors (30%), clinical care (20%), and the physical environment (10%). Many health disparities occur as a result of inequities in these **determinants of health.**⁴

Figure 3. County Health Rankings Model - Health Factors



Since the 2016 CHNA, the Massachusetts Department of Public Health has prioritized six broad categories of determinants, which they refer to as health priorities: housing, employment, education, violence and trauma, the built environment, and the social environment (Figure 4).⁵ MDPH also has focus health issues: substance use, mental illness and health, and chronic disease. This CHNA is organized according to the MDPH categories and focus issues. In all cases, with the exception of education, the MDPH social determinates rose to the level of a prioritized health need for Cooley Dickinson.

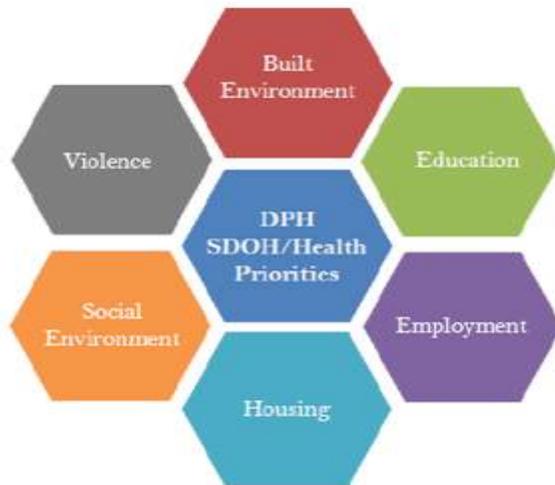


Figure 4. Massachusetts Department of Public Health Priorities

Source: Massachusetts Department of Public Health, 2018

3. Assessment Methods

The 2019 CHNA updates the prioritized community health needs identified in the 2016 CHNA. The prioritized health needs identified in the 2019 CHNA include community level **social and economic determinants that impact health, barriers to accessing care, and health behaviors and outcomes**. We also provide context for the role that social policies and the practices of systems have on health outcomes.

Assessment methods included: 1) analysis of social, economic, and health **quantitative data** from the Massachusetts Department of Public Health, the U.S. Census Bureau, the County Health Ranking Reports, the Massachusetts Healthy Aging Collaborative, Social Explorer, and a variety of other data sources; 2) analysis of findings from **12 focus groups, 45 interviews with key informants** (including with local and regional public health officials), **10 Community Chats** conducted by the consultant team and the Regional Advisory Council (RAC) as part of this CHNA, and a meeting of the **CDHC Community Benefits Advisory Council**; 3) the experiences of community members who gave input in focus groups or key informant interviews in other regions were occasionally considered relevant to this service area and were included; and 4) review of existing assessment reports published since 2016 that were completed by community and regional agencies serving Hampshire County. The assessment focused on county-level data and select community-level data as available. Given data constraints, the following communities were identified for the majority of the community level data analyses: Amherst, Easthampton, and Northampton. Other communities were included as data was available and analysis indicated an identified health need for that community.

Some of the data sources supplied data in rates (e.g. rates per 100,000 of the population), including the main source of data for health outcomes, the Massachusetts Department of Public Health. Creating rates allows us to compare outcomes from geographies that might be drastically different in size or population, for example, the state of Massachusetts and the town of Hatfield. If all we could report was the number of people hospitalized, for example, it would not be possible to compare how Hatfield is doing compared to the state. For example, if 38 people in a town of about 3,300 (Hatfield) were hospitalized in one year for cardiovascular disease, the rate is 748 per 100,000. If over 92,000 people across the approximately 6.9 million people in the state of Massachusetts were hospitalized for the same thing in one year, the rate is 1,216 per 100,000. Thus, we can see that the town of Hatfield had a lower rate of hospitalization.

Community Health Needs Assessments are required to identify “vulnerable populations”. We use the term “priority populations”. To the extent possible given data and resource constraints, priority populations were identified using qualitative and quantitative information. Qualitative data included focus group findings, interviews, input from our Regional Advisory Committee and Community Benefits Advisory Committees, and community outreach. We used quantitative data to identify priority populations by disaggregating by race/ethnicity; age with a focus on children/youth and older adults; and LGBTQ (lesbian/gay/bi-sexual/transgender/queer) populations.

4. Prioritization Process

The 2019 CHNA used the 2016 CHNA priorities as a baseline with a goal of reprioritizing if quantitative and qualitative data, including community feedback, indicated changes. For the 2016 CHNA prioritization, health conditions were identified based on consideration of magnitude and severity of impacts, populations impacted, and rates compared to a referent (generally the state rate). In the 2016 CHNA, prioritized health needs were those that had the greatest combined magnitude and severity or that disproportionately impacted priority populations in the community. Quantitative, qualitative, and expanded community engagement data confirms that priorities from 2016 continue in 2019.

5. Community and Stakeholder Engagement

The input of the community and other important regional stakeholders was prioritized by the Coalition as an important part of the CHNA process. In the region, the Coalition engaged almost 1,200 people in the 2019 CHNAs. Below are the primary mechanisms for community and stakeholder engagement, and the number engaged for the Cooley Dickinson CHNA. See

Appendix 1 for list of public health, community representatives and other stakeholders included in process.

- The **CHNA Regional Advisory Committee (RAC)** included representatives from each hospital/insurer Coalition member as well as public health and community stakeholders from each hospital service area. Stakeholders on the RAC included local and regional public health and health department representatives; representatives from local and regional organizations serving or representing medically underserved, low-income or populations of color; and individuals from organizations that represented the broad interests of the community. The Coalition conducted a stakeholder analysis to ensure geographic, sector (e.g., schools, community service organizations, healthcare providers, public health, and housing), and racial/ethnic diversity of RAC. The RAC met in workgroups (Data and Reports, Engagement and Dissemination, and Health Equity) to guide the consultants in the process of conducting the CHNA, and prioritize community health needs, CHNA findings, and dissemination of information. Assessment methods and findings were modified based on Steering Committee feedback. The RAC consisted of 31 people, including community representatives and Coalition members. The RAC met monthly from September 2018 – July 2019.
- **Key informant interviews** and **focus groups** were conducted to gather information used to identify priority health needs and engage the community. Key informant interviews were conducted with health care providers, health care administrators, local and regional public health officials, and local leaders that represent the interests of the community or that serve medically underserved, low-income or populations of color in the service area. Interviews with local and regional public health officials identified priority health areas and community factors that contribute to health needs. Across all hospital service areas, focus group participants included community organizational representatives, community members (low-income, people of color, and others), and other community stakeholders. Topics and populations included: substance use, transgender health, older adults, youth, mental health, cancer care, gun violence, and rural food access. Key informant interviews and focus groups were conducted from February 2019 – March 2019. Focus groups and key informant interviews engaged 96 people in Hampshire County; these focused on the needs of older adults around access to medical care and quality of life. This CHNA also used qualitative data from other hospital service areas as appropriate.
- Regional Advisory Committee members convened 10 **Community Chats** in the Cooley Dickinson Health Care service area. For Community Chats, RAC members brought information about the CHNA and gathered priorities in regular meetings of service providers, community-based organizations, and groups of staff and administration at hospitals. Chats were held from January 2019 – April 2019 and engaged 77 people in Hampshire County. This CHNA also used qualitative data from Community Chats in other service areas as appropriate.

- A **Community Forum** was held on June 20, 2019 to share the preliminary findings from this report. The Community Forum was attended by approximately 60 individuals representing the broad interests of the community.

“We are too often talking about people, not with people. Community needs to be at the table, have their voices valued. They don’t feel heard.”

Key Informant Interviewee, Public Health Official

6. Limitations and Information Gaps

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

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

Though not generally a problem when reporting data for larger towns such as Amherst or Northampton, a challenge encountered with smaller towns is that of small numbers. When the number of cases of a particular characteristic or condition is small, it is usually withheld from public reports to protect confidentiality and because estimates based on small numbers have quite a bit of variability (i.e. the confidence intervals or margins of errors are large). It can be deceptive to report a statistic when numbers are small, because that statistic may change substantially from year to year without indicating that something meaningful has happened to make the numbers different. For example, the Massachusetts Department of Health will report on suspected opioid overdoses by town if there are five or more in the given time period. If fewer, the report indicates <5. This is referred to as suppressing data and is common practice in reporting public health data. Cut-points for suppressing data vary depending on the data source. It should be noted that even when data is provided, if the number is low, there can still be quite a bit of variability.

The availability of data and the problem of small numbers affects the reporting of data by race and ethnicity in this assessment. Statistics for people of color in Hampshire County do not begin to reveal the level of detail we would like to know. Ideally, we would disaggregate categories for a better understanding of people who identify with different races and ethnicities. We recognize that there are differences between those who identify as Puerto Rican, Mexican, or Cuban that aren’t captured by the term “Latino,” and differences among those who identify as

Chinese, Japanese, or Korean that aren't captured by "Asian." It is also important to consider intersectionality, the overlapping identities of residents. What impact does being young, Black and gay in Hampshire County have on health? Or being transgender and living on an income below the poverty line? We were unable to explore these differences with the quantitative data available. We were able to gather valuable information through focus groups with specific priority populations, while recognizing that a handful of focus groups cannot begin to cover the full range of identities present in our community.

7. Hospital Service Area

The service area for Cooley Dickinson Health Care includes 21 communities within Hampshire County (Table 1 and Figure 5) and six small towns in Franklin County. Amherst and Northampton are the largest towns in the area, and Northampton is the location of the Cooley Dickinson Hospital. The other two larger communities in the area are South Hadley and Easthampton. The remaining communities are primarily rural. The Pioneer Valley Transit Authority serves the larger communities in the Cooley Dickinson service area and a few smaller communities: Amherst, Belchertown, Easthampton, Hadley, Leverett, Northampton, Pelham, Sunderland, and Williamsburg.

Table 1. Communities in Cooley Dickinson Health Care Service Area

Hampshire County	2017 Population Estimate = 91% of Cooley Dickinson service area population
Amherst	39,880
Belchertown	14,906
Chesterfield	1,303
Cummington	860
Easthampton	16,051
Goshen	1,096
Granby	6,318
Hadley	5,301
Hatfield	3,305
Huntington	1,977
Middlefield	464
Northampton	28,548
Pelham	1,277
Plainfield	668
South Hadley	17,737
Southampton	6,090
Westhampton	1,819
Williamsburg	2,481
Worthington	1,253
Franklin County	2017 Population Estimate = 9% of Cooley Dickinson service area population
Ashfield	1,588
Conway	1,800
Deerfield	5,049
Leverett	1,997
Shutesbury	1,752
Sunderland	3,662
Whately	1,339
Total Service Area	168,521

Source: Population Division, U.S. Census Bureau, <http://www.census.gov/popest/index.html>

Figure 5. Cooley Dickinson Health Care Service Area



Source: Public Health Institute of Western Massachusetts

As Table 2 shows, Hampshire County has limited racial and ethnic diversity. County-wide, just under 6% of the population is Latino, 5% is Asian, and less than 3% is Black (U.S. Census Bureau, ACS, 2013-2017), though this diversity is not equally spread throughout the region and tends to be concentrated in the larger population centers of Amherst and Northampton.

While a small part of the population in the service area overall was born in other countries, Amherst’s foreign-born population rate is among the highest in the Pioneer Valley at 13.2%.⁶ The current political climate has exacerbated threats to immigrant health related to the behavioral, cultural, and structural systems that determine individual health decision on a daily basis.⁷ According to the Massachusetts Department of Public Health, in the past 5 calendar years (2014-2018), there were 2,314 refugees with health assessments in Western Massachusetts.⁸ This assessment is the first medical screening provided to refugees; it is their gateway into the medical system.

Table 2. Sociodemographic Characteristics of Cooley Dickinson Health Care Service Area

Sociodemographic Characteristic	Hampshire County	Northampton	Amherst	Easthampton	MA
Age					
Median age (years)	35.8	39.4	21.4	44.7	39.4
<20 years	24%	22%	32%	17%	23%
20-69	66%	69%	63%	72%	66%
70 and over	11%	9%	5%	19%	11%
Race and Ethnicity					
Latino or Hispanic	6%	9%	6%	6%	11%
Non-Latino or Hispanic					
White	84%	81%	72%	88%	73%
Black or African American	3%	3%	6%	3%	7%
American Indian and Alaska Native	0.1%	0%	0.3%	0%	0.1%
Asian	5%	5%	13%	2%	6%
Native Hawaiian and Other Pacific Islander	0%	0%	0.1%	0%	0%
Some other race	0.1%	0%	0.2%	0%	1%
Two or more races	3%	3%	3%	2%	2%
Language Spoken at Home					
Speaks language other than English at home – age 5-17	16%	13%	18%	10%	23%
Speaks language other than English at home – age 18+	14%	13%	19%	9%	24%
Educational Attainment (Population 25 years and over)					
Less than high school graduate	5%	5%	5%	5%	9%
High school graduate (includes equivalency)	25%	17%	12%	31%	24%
Some college or associate's degree	23%	20%	16%	29%	23%
Bachelor's degree or higher	47%	58%	66%	35%	43%
Income					
Median household income	\$67,989	\$62,838	\$50,203	\$61,004	\$74,167

Source: U.S. Census Bureau, ACS, 2013-2017; for MA Census Reporter, available at <https://censusreporter.org/profiles/04000US25-massachusetts/>

The CDHC service area is home to the University of Massachusetts at Amherst, the area's largest employer. CDHC is also a primary employer for the region, along with smaller colleges, a wholesale food distribution center, and a veteran's medical center. The County's rates of unemployment, poverty, and educational attainment are similar to or better than that of the rest of the state (Table 2). The median household income in the service area is about \$68,000 (\$6,000 less than the state) (U.S. Census Bureau, ACS, 2013-2017).

The median age for the service area is lower than that of Massachusetts, likely as a result of the high number of college students. 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 increasing from approximately 30,000 in 2010 to an estimated 51,500 in 2035.⁹

In Hampshire County 11% of the population has a disability. Easthampton has one of the higher proportions of those disabled in the county, with 15% living with a disability (US Census, ACS 2013-2017).

In addition, many aging veterans live in the CDHC service area. In Hampshire County, 7% of the population are veterans, or about 8,900 people (US Census, ACS 2013-2017). In South Hadley 9% of the population are veterans. According to an interview with Ben Cluff, a Veterans' Services Coordinator with the Massachusetts Department of Public Health, about two-thirds of veterans are at least 60 years old. Only about 25% of these veterans use VA hospitals; many of them seek care elsewhere or not at all.

IV. Prioritized Health Needs of the Community

The following are the prioritized health needs identified for Cooley Dickinson Health Care's service area. The prioritized health needs of the community served by Cooley Dickinson Health Care are grouped into three categories: (I) social and economic determinants that impact health, (II) barriers to accessing quality health care, and (III) health conditions and behaviors.

1. Social and Economic Determinants that Impact Health

Based on our analysis, the prioritized community level social and economic determinants of health that impact CDHC's service area are:

- **Social Environment** – social isolation, connection to community, and interpersonal and institutional discrimination
- **Housing Needs** – affordability, quality, stability, and tenure
- **Lack of access to transportation, healthy food, and places to be active**
- **Lack of resources to meet basic needs** – poverty, living wages, unemployment, and workplace policies
- **Violence** – interpersonal violence

The organization of the 2019 CHNA differs slightly from the 2016 CHNA. By aligning with the Massachusetts Department of Public Health's determinants of health framework, we assessed all of the MDPH prioritized determinants. This shift created more data points than in 2016; however, determinants that were prioritized as community health needs in CDHC's 2016 CHNA continue to contribute to the health challenges experienced in its service area.

a. Social Environment

The social environment consists of the **demographics** of a region, including distribution of age, race, ethnicity, immigration status, and ability; **community-level factors** such as language isolation, participation in democracy, social isolation or support, experiences of interpersonal discrimination; and the **policies and practices** of systems of government, cultural norms, and institutional racism, all of which impact people's health every day.

Community-level factors – A variety of community level factors contribute to a social environment that impacts health, with some positively impacting health such as social support and participation in society, and some negatively impacting health such as experiences of oppression. Social isolation and participation in communities arose during focus groups and interviews for the CHNA. Factors mentioned that can lead to **social isolation** are:

- Emotional implications of having a disability
- Decreased day services for people with mental health problems
- For older adults: limited availability of Meals on Wheels; limited Senior Center hours and activities; loss of family friends to death; and hearing, vision, and dental problems

“Social connections and networks for social activities and support are as important as medical and mental health care. Older adults want to feel valued and involved in the community.”
Community Forum participant, Older Adults Community Forum, Hampshire County

Being a connected part of a community is health-protective – Participants of focus groups and interviews gave many examples: rural food pantry users stated that one always has something to eat if you get together with your neighbors; older adults who get support by frequenting Senior Centers; and parents of children with disabilities find connections with other parents helped them find resources. Public health leaders strongly advised health practitioners to become culturally humble and knowledgeable about different communities in order to be better health care practitioners.

“We want to make new ‘families’ and create our own supportive communities, especially if our children/grandchildren live far away from us.”
Community Forum participant, Older Adults Community Forum, Hampshire County

Experiences of **interpersonal racism, discrimination** and other forms of **exclusion** can serve to socially isolate people, and have consequences for mental and physical health.^{10,11} Participants in focus groups and key informant interviews shared their experiences:

- Lack of sensitivity of transgender issues socially isolates transgender people who don’t pass as the gender they identify with.
- People with substance use disorders and mental health disorders face discrimination in the medical system.
- Rural populations feel that their priorities get “kicked down the road.”
- Older people of color lack access to service providers who understand their culture and can connect with them on a personal level.
- Children with disabilities face a high rate of bullying in schools.

Policies and practices of systems of government, cultural norms, and institutional racism impact people's health every day. The 2016 CHNA identified institutional racism as a driver of health inequities. **In the 2019 CHNA, institutional and systemic racism continue as sources of health inequities.** Institutional racism is racial inequities in access to goods, services, and opportunities such as quality education, housing, employment opportunities, medical care and facilities, and a healthy physical environment.¹² Systemic or structural racism extends beyond one institution. Practices of systems and institutions that result in racial inequities become the norm, are often codified by law or policy, and can manifest as inherited disadvantage. These practices do not necessarily transpire at the individual level, but are embedded in our systems, regulations, and laws. Institutional racism is perpetuated by bureaucratic barriers and inaction in the face of need. Structural racism is mutually reinforcing systems (criminal justice, poorly funded public schools, and housing policies, for example) that perpetuate discrimination in all areas of daily life and results in unequal distribution of social resources.¹³ The policies and practices of systems and institutions are directly influenced by who has power and how they use it. Racially-motivated discrimination, whether conscious or built into the practices of systems, can lead to adverse health outcomes such as poor mental health, chronic stress, hypertension, and cardiovascular disease.^{14,15,16}

While the Black, Latino, and Asian populations are a small proportion of the CDHC service area, it is important to recognize the disproportionate burden they face with regard to the social determinants of health. While qualitative data collected for this CHNA report did not address institutionalized discrimination, we heard about this from focus groups and interviews in other CHNA service areas. These included unequal discipline for Black children compared to children of other races in public schools, police response to gun violence, and health care administrative practices that marginalize transgender people.

This CHNA includes examples in the sections that follow of how systemic policies and practice impact the social determinants of health.

Racial residential segregation is a form of institutional racism that is considered to have one of the most detrimental impacts on health by creating limited opportunity environments and embedding communities with structural barriers that directly impact access to quality education, jobs, quality housing, healthy food, and a number of other social determinants of health.¹⁷ The University of Michigan's Center for Population Studies in 2013 ranked the Springfield Metropolitan Statistical Area (Hampden, Hampshire and Franklin counties) as the most segregated in the U.S. for Latinos, and 22nd in the country for Blacks.¹⁸

Mass incarceration and criminalization are examples of institutional racism that result in racial inequities at every stage of the criminal legal system, with health implications. In 2015, admissions to the Hampshire County Jail were similar to that of the Massachusetts rate (212 people per 100,000 in Hampshire County compared to 216 people in Massachusetts). However,

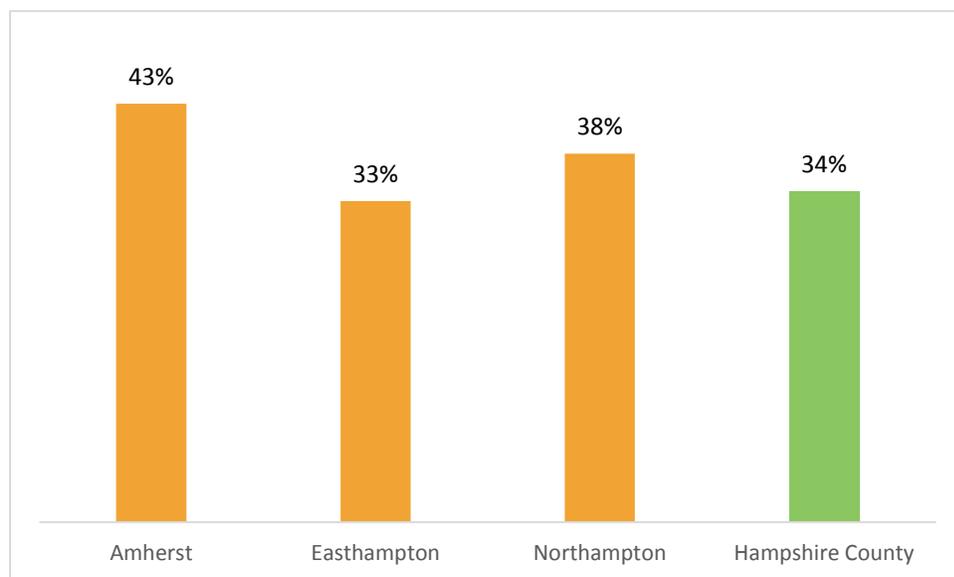
Blacks and Latinos are jailed at disproportionately higher rates, compared to White people. In 2015 in Hampshire County, Blacks were jailed at a rate of 1,113 per 100,000 people and Latinos at a rate of 599 per 100,000 people.¹⁹

b. Housing Needs

Affordable, accessible, and supportive housing is a key contributor to health. Community conversation participants, interviewees from varied sectors, and prioritization in Community Chats identified housing as one of the top health-related concerns for the 2019 CHNA.

Housing insecurity continues to impact Hampshire County residents. About a third of the population in the CDHC service area is housing cost-burdened,¹ with rates close to 45% in Amherst (Figure 6). Typically, renters are more affected by housing costs; across the country in 2017, 47% of renters were cost-burdened compared to 23% of home-owners.²⁰ Lack of affordable housing can contribute to homelessness and housing instability, which leads to increased stress and can often force families to prioritize housing costs over factors that can influence health, such as purchasing healthy foods and medications.

Figure 6. Housing Cost-Burdened, Hampshire County and Select Communities



Source: U.S. Census Bureau, ACS, 2013-2017

¹ Housing cost burden is defined as more than 30% of income going towards housing.

A more complete picture of affordability adds the cost of transportation. In Hampshire County for a typical household income (\$52,000), people spend 59% of their income on housing and transportation costs combined. However, those with a lower household income (\$42,000) spend 70% of their income on housing plus transportation.²¹ In community conversations and key informant interviews, older adults and the people who work with them cited the difficulty of finding suitable housing for their needs, including affordability, safety, and access to services. While adult living communities are plentiful in Hampshire County, they are often very expensive.

Homelessness – A “Point-in-Time” count done by the Western Massachusetts Network to End Homelessness found that there were almost 2,900 people homeless on one night in January 2018 in Western Massachusetts. An estimated 20% were chronically homeless. On the same night, there were 211 homeless veterans in Western Massachusetts, concentrated in the areas around the VA Medical Center and Soldier On in Northampton and Pittsfield, respectively. When someone is chronically homeless, providing housing combined with social and health services is necessary. However, many people experiencing homelessness need housing, social and health services, and an expedited pathway to these services. Approximately 55% of the homeless population are children under the age of 18. Of youth aged 18-24 who are unstably housed, more than half have been involved in the juvenile, foster, or jail systems. In addition, more than 80% of mothers who are homeless are survivors of domestic violence.²²

Community Action Pioneer Valley researched homelessness among youth and young adults in Hampshire, Berkshire, and Franklin Counties. Their findings include that at least 24 youth and young adults were homeless in the January 2018 one-night count, but based on estimates from national prevalence data, up to 3,750 youth and young adults in the three-county region experience homelessness or housing instability. The numbers typically do not include people who are “couch surfing.” Youth of color and youth who are LGBTQ are homeless disproportionately compared to the rates in the general population, and about one-third of youth and young adults who are homeless are pregnant and parenting.²³

Key recommendations from focus groups and interviews to prevent homelessness are to:

- Provide resources including more housing combined with supportive services, more rapid rehousing, and more affordable housing.
- Focus efforts around target audiences including: people who are leaving institutional settings (e.g., foster care, jail, hospital stays), veterans, those at risk of losing housing, people living with physical or psychological disabilities, and survivors of domestic violence.

In a focus group with people experiencing homelessness, the most common health issue mentioned was not housing, but the need for treatment services for mental illness and substance use disorders. In a focus group with Recovery Coaches for people with substance

use disorders, the first need mentioned was housing, particularly for women as well as for people with a Criminal Record Offender Information (CORI) issues.

“You can’t do treatment [for substance use disorder] without a place to live. You can’t do it if you’re living on the street.”

Focus Group Participant, Substance Use Disorder Focus Group, Coalition Hospital

When discussing what would be helpful for people who are living unsheltered, people recommended supportive services, such as having warm places during the day when shelters are closed, having something meaningful to do, and using the time and skills of people who are homeless to rehab old buildings. Interviews with staff helping people reenter after incarceration indicated that the issue of finding housing was critical. The community faces many barriers to finding housing, such as limitations placed on them due to their conviction and needing dual diagnosis or sober housing, which is in short supply.

Poor housing conditions also impact the health of residents. Older housing combined with limited resources for maintenance can lead to problems (e.g., mold, pest/rodent exposure, exposure to lead paint, asbestos, and lead pipes) that affect asthma, other respiratory illnesses, and child development. Housing conditions are important for the safety and accessibility of children, older adults, or disabled populations. While Hampshire County has a relatively low (28%) percent of housing stock built before 1940, nearly 46% of the houses in Northampton were built before 1940 (U.S. Census Bureau, ACS, 2014-2017). The CDHC Community Benefits Advisory Council noted older adults’ need for help with home remodeling.

Housing tenure, or whether someone owns or rents, is also a health issue. Home ownership can be a path to wealth and has the potential to be more stable than renting.²⁴ In Hampshire County, 66% of housing units are occupied by their owners, while 34% are occupied by renters. Historically, redlining lending practices, racial discrimination related to mortgage acquisition in the GI bill, and higher incidence of predatory lending to people of color have denied Black and Latino communities the ability to create stability and generational wealth via home ownership.^{25,26} Reflecting inequitable policies and practices, only 27% of the Black population and 30% of the Latino population of Hampshire County live in owner-occupied units (U.S. Census Bureau, ACS, 2013-2017).

It can be challenging for **seniors and those with disabilities** to access appropriate housing. Community forums and key informant interviews with older adults, people with disabilities, and their care providers highlighted this issue, noting that older adults and people with disabilities want to remain independent and stay in their homes or apartments, but often lack the ability to do so. Often they need homes that are handicapped-accessible and/or provide living space for a care provider. This is even more of a challenge if they need subsidized housing. There is a need for more support to help older adults age in place, more affordable housing opportunities for

older adults and people with disabilities, and congregate housing opportunities that allow people to keep their pets.

c. Need for Access to Healthy Food, Transportation, and Places to be Active

There is a vast research base demonstrating that decisions about how the world around us is constructed can impact health behaviors. Transportation systems and choices, environmental exposures from industry, access to food, community spaces, retail, and institutions all serve to help or harm.

Transportation arose as a barrier to care in the 2016 CHNA, and continues to be a major obstacle to good health (see Barriers to Accessing Quality Health Care for more detail on transportation as a barrier). It was frequently mentioned in focus groups, key informant interviews, and other discussions related to the CHNA. Reliable transportation is a critical part of daily life, allowing individuals to go to work, travel to the grocery store, or get to medical appointments. However, nearly 8% of people in Hampshire County do not have a car, and these rates are higher for Amherst (11%) and Northampton (10%) (U.S. Census Bureau, ACS, 2013-2017).

Unequal access to appropriate transportation options exacerbates racial and ethnic health disparities. Communities of color and those with lower incomes have less access to transportation options compared to majority White and higher income communities.^{27,28} Public transportation plays a significant role in filling transportation needs for many of these households. The Pioneer Valley Transit Authority (PVTA), which operates buses in Northampton and across the Pioneer Valley, reports that the majority of PVTA customers – over 62%, are people of color. A 2017 equity analysis examining proposed bus line service cuts and fare hikes concluded that the changes would have a negative impact on communities of color.²⁹

Older adults are also greatly affected by lack of access to public transportation, as declining health sometimes makes driving difficult for them. While senior centers sometimes provide van service, this must be scheduled in advance and prioritizes medical appointments. It can be difficult for older adults to access transportation for the needs of daily living such as food shopping, socializing, and being involved with their community.

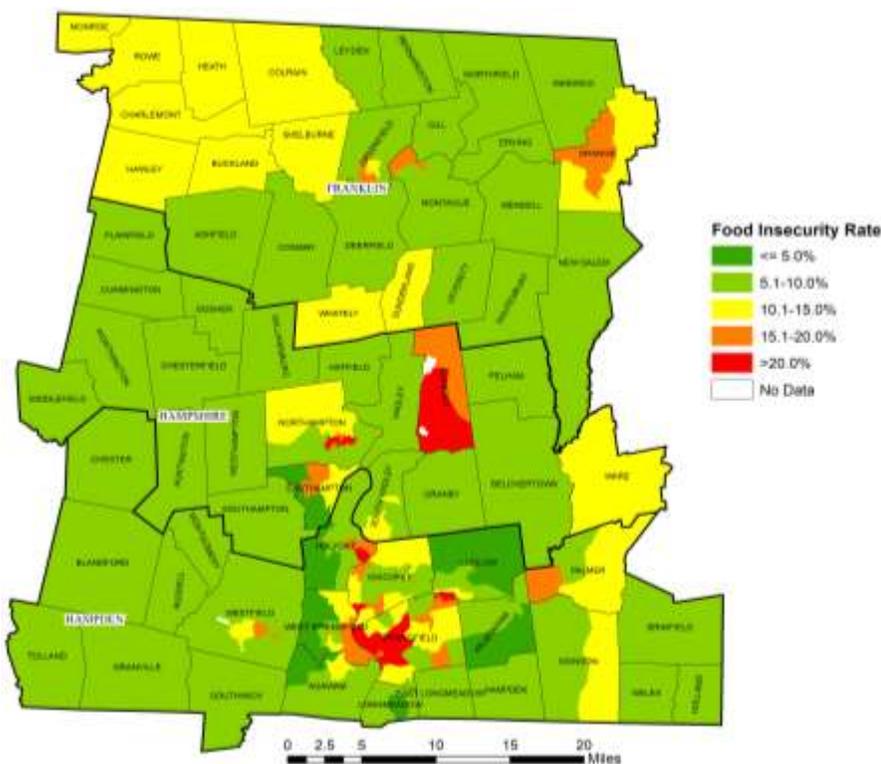
“Transportation, access to health care, ease of getting health care.... We need to make it easy for people to make the decision to get care.”

Key Informant Interview, Community Health Center of Franklin County staff

Food Access – Food insecurity, or being without reliable access to sufficient affordable and nutritious food, continues to impact many Hampshire County residents. Eating nutritious food

promotes overall health and helps manage many chronic health conditions. However, not all individuals and communities have equal access to healthy food. As can be seen in a map of food insecure census tracts in Hampden, Hampshire and Franklin counties, nearly all of Amherst, and small parts of Northampton and Easthampton, have rates of food insecurity greater than 15% (Figure 7). A key informant interview with the Director of Community Programs and Family Support Services at the Hilltown Community Health Center touched on limited food access for Hilltown residents who do not have cars. She reported that there are a significant number of families who are eligible for food aid but who do not go to food pantries, because of stigma, difficulties with access, or the religious affiliation of the food pantry providers.

Figure 7. Percent Food Insecure Hampden, Hampshire, and Franklin Counties

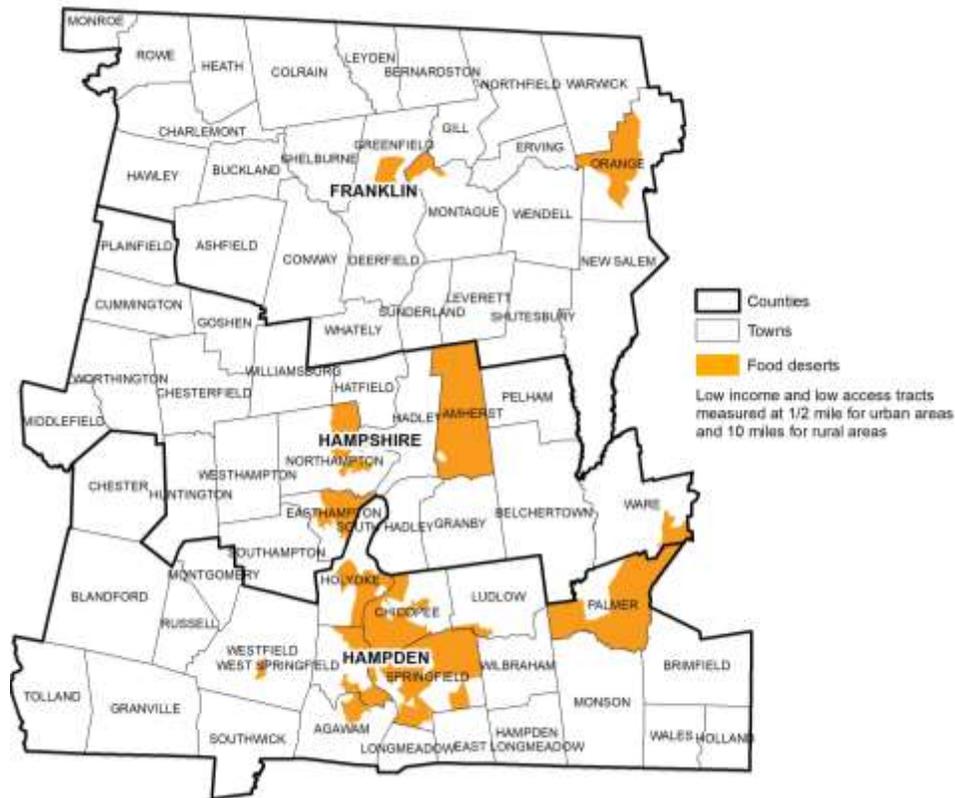


Data source: Gundersen C, Dewey A, Crumbaugh A, Kato M, Engelhard E. 2018. Map the Meal Gap 2018: A Report on the County and Congressional District Food Cost in the United States in 2016. Feeding America, 2018. Provided courtesy of the Food Bank of Western Massachusetts. Mapping: Public Health Institute of Western MA.

Hampshire County also has several **food deserts**, or areas where grocery stores and other options to purchase healthy foods are far away and difficult to access for people who either do not own a vehicle or live where public transportation is limited. People with lower incomes are more likely to live in food deserts. As identified in the 2016 CHNA, nearly all of Amherst and parts of Northampton and Easthampton have been identified by the USDA as food deserts

(Figure 8). Lack of access to healthy food was raised as an issue in focus groups, key informant interviews, and the CDHC Community Benefits Advisory Council.

Figure 8. USDA Food Atlas Food Desert Areas in Franklin, Hampshire, and Hampden Counties



Source: USDA ERS Food Access Research Atlas – 2015; US Census Bureau’s Cartographic Boundary Files; Mapping: Public Health Institute of Western MA. 3/21/2019. USDA Food desert: at least 500 low-income people in a census tract live more than one mile away from a grocery store in urban areas and more than 10 miles from a grocery store in rural areas

Lack of walkable communities is another area related to the built environment that was identified through community forums as an important need, particularly for older adults. They mentioned unsafe streets and a lack of sidewalks as a deterrent to accessing services and also to getting needed exercise. They also expressed a desire for better recreation areas that are easily accessible to them.

d. Lack of Resources to Meet Basic Needs

In CDHC’s service area of Hampshire County, there are many affluent residents but also those who struggle with a lack of resources to meet basic needs, and the poverty rate for the county exceeds that of the state (Table 3). The connections between poor health and poverty, low levels of income, and access to fewer resources are well established. People with lower

incomes are more likely to be negatively impacted by chronic stress associated with challenges in securing basic necessities that impact health, such as housing, food, and access to physical activity.

The median household income of \$64,974 in Hampshire County is less than 85% of that of the state. In Hampshire County, the Census estimates that Black households make less than 55% of what White households earn, and Latino households earn around 70% of what White households earn (Table 3). The unemployment rate for Black and Latino residents of Hampshire County is approximately double that of White residents. Poverty rates for adults and children are also both substantially higher for Black and Latino residents than for White residents.

“Health issues unique to people of color? It’s harder to get hired.”
 Focus Group Participant, Youth of Color focus group, Coalition Hospital

Table 3. Socioeconomic Status Indicators

	Hampshire County				MA*
	Overall	White**	Black**	Latino	
Median Household Income	\$67,989	\$67,388	\$36,691	\$46,250	\$77,385
Unemployment	6.5%	5.7%	11.3%	12.8%	6.0%
Poverty	13.8%	12.2%	36.6%	20.8%	10.5%
Child Poverty	12.3%	10.1%	36.2%	16.2%	14.6%
No high school diploma	5.5%	4.7%	11.2%	17.0%	10.5%

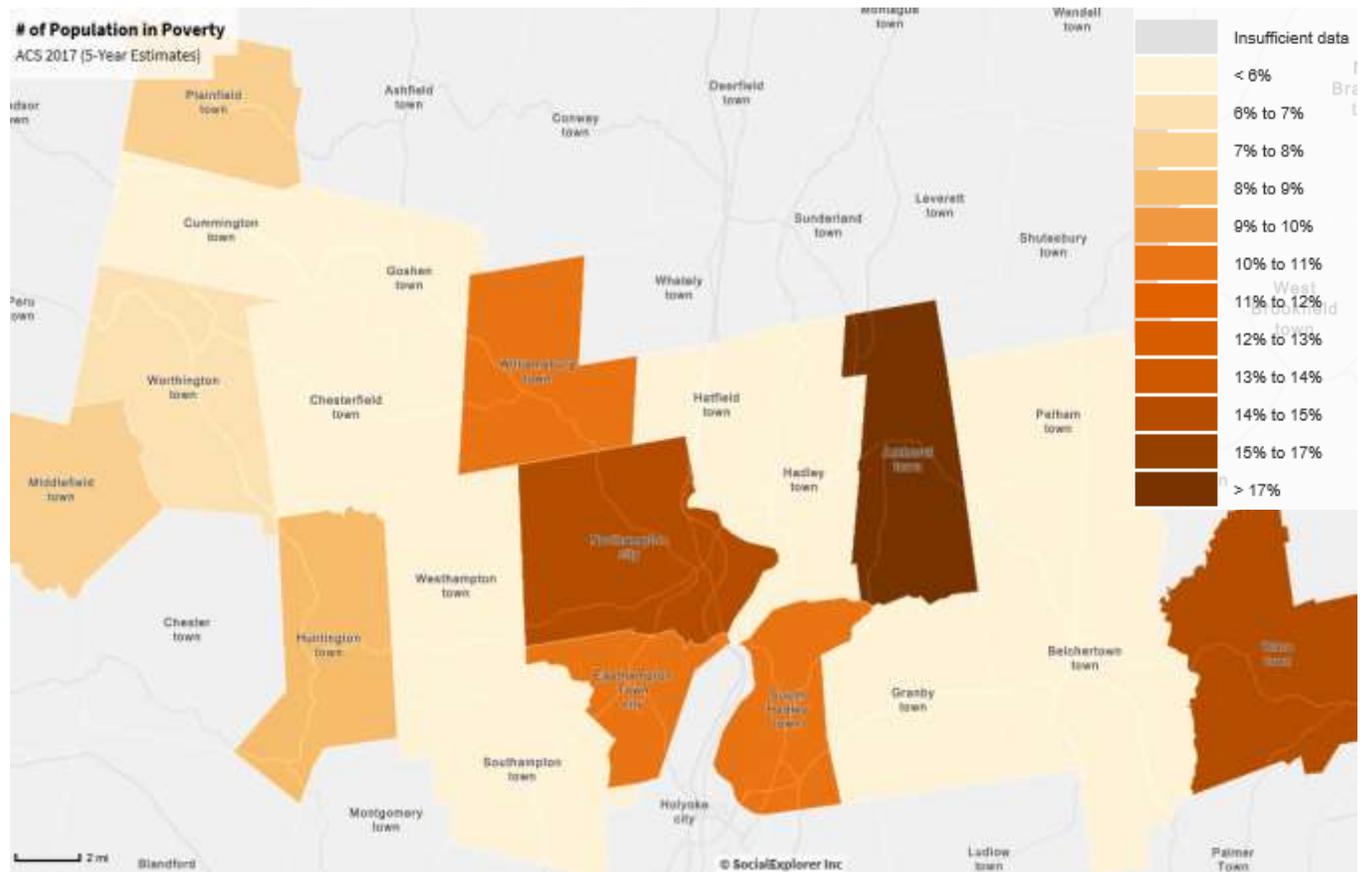
Sources: U.S. Census Bureau, ACS, 2013-2017; poverty is 100% below federal poverty level; no high school diploma among adults age 25 and older

*US Census Bureau, Fact Finder, MA Profile

**Data for White residents is among those reporting non-Latino White. Contrary to previous years, recent census data does not separate people who identify as non-Hispanic Black or Hispanic Black. Therefore, these estimates cannot be compared to previous years.

Just under 14% of Hampshire County residents live in poverty, with rates of poverty much higher in Amherst (33.2%) (Figure 9). The poverty rate in Hampshire County among the Black population is triple that of the White population. An estimated 26% of county residents have incomes at or below 200% of the poverty level, which is a better indicator of people in need as the federal poverty level is extremely low and does not capture all of those who are struggling economically.

Figure 9. Hampshire County Poverty Rates



Source: Social Explorer 2019, U.S. Census Bureau, ACS, 2013-2017; poverty is 100% below federal poverty level

Hiring and workplace discrimination affect people of color more frequently than White people.³⁰ Historically, laws passed during the 1990s “Tough on Crime” era decreased the ability of people who have been arrested, convicted, or incarcerated to find jobs. The National Inventory of Collateral Consequences documents tens of thousands of limitations placed on people who have been convicted,³¹ of which an inequitable proportion are people of color due to discriminatory policies and practices.³²

Levels of education are strongly correlated with both employment status, the ability to earn a livable wage, and many health outcomes.³³ Hampshire County has strong educational attainment rates overall, but these statistics vary greatly by race and ethnicity. While only 6% of Hampshire County residents overall lack a high school diploma, the rate for Black residents is over 11%, and the rate for Latino residents is 17% (U.S. Census Bureau, ACS, 2013-2017).

Workplace policies and practices can help or hinder well-being and health. Lack of access to work-subsidized health care benefits, affordable childcare, sick and personal leave, a living

wage, wellness programs, and workplace discrimination can impact health directly or illness as well as cause chronic stress.^{34,35,36} Number of hours worked and predictability of scheduling are other employer practices that have a large health effect.³⁷

Women, children, and populations of color are disproportionately affected by poor socioeconomic status in Hampshire County. Women in Hampshire County earn 82 cents compared to every \$1 earned by men, and women of color earn even lower proportions. Latinas earn 64 cents to White men's \$1; Black women earn 54 cents.³⁸ Between one-quarter and one-third of children in the larger school districts in Hampshire County qualify for free or reduced lunch, and 12% of children in the county live in families with incomes below the poverty level (U.S. Census Bureau, ACS, 2013-2017). With regard to race and ethnicity, median income levels are lower and unemployment and poverty rates are higher among **Latinos** and **Blacks** (U.S. Census Bureau, ACS, 2013-2017). Hiring and workplace discrimination affects people of color more frequently than Whites.

e. Violence

Violence affects health directly, via death and injury, as well indirectly through the trauma that impacts mental health and healthy relationships.³⁹

Interpersonal violence includes sexual and intimate partner violence, childhood physical and sexual abuse and neglect, and elder abuse and neglect. Western Massachusetts does not have any surveillance systems that measure incidence, prevalence, risk and protective factors, and related negative health outcomes associated with interpersonal violence (including intimate partner, dating, and sexual violence, violence against children, and child exploitation). Data was gathered from subject matter experts across western Massachusetts and the State (Department of Public Health and Executive Office of Public Safety and Security), in addition to publicly available statewide datasets and reports. Not all data was available disaggregated on the local level (Hampshire County). In areas where local data was unavailable, region-wide data was supplied to give a sense of the magnitude of violence in western Massachusetts.

- **Sexual violence** – Of the over 2,900 Provider Sexual Crime Reports (PSCRs) submitted in 2017 and 2018, 13% were from assaults that reportedly occurred in western Massachusetts, and only 57% were reported to the police. Of western Massachusetts PSCRs, 18% (or 70) were in Hampshire County. Females comprised 94% of victims/survivors, and one-third were youth under age 18.⁴⁰
- **Intimate partner violence** – In 2018, nearly 6,900 restraining orders were filed in all of western Massachusetts. Also in 2018, Safe Passage in Hampshire County fielded 936 calls to its hotline, provided services to 1,435 clients, and provided individual counseling to 252 survivors.⁴¹

- **Dating violence** – The 2017 Prevention Needs Assessment Survey, given to 8th, 10th, and 12th grade students across Hampshire County, found that 18% of students reported having friends who were abused by a dating partner. Seventeen percent had dated someone who controlled who they could talk to and spend time with, and 7% had been forced or pressured into sexual activity.⁴²
- **Child abuse and neglect** – The Massachusetts Department of Children and Families (DCF) reports that in the last quarter of 2018 in western Massachusetts, over 3,000 reports of child abuse or neglect were filed and screened in for investigation, and 42% of them were deemed true and in need of services.⁴³
- **Elder abuse and neglect** – Nationally, 1 in 10 older adults reports some type of financial, emotional, physical, or sexual mistreatment or potential neglect in the prior year.⁴⁴ The Massachusetts Executive Office of Elder Affairs reported 9,800 confirmed abuse and neglect cases in 2017, nearly 40% more than in 2015.⁴⁵ In the Florence Area Service Access Point, where reports would be filed, there were 770 intakes completed in 2018, up from 526 in 2014.⁴⁶
- **Bullying** – More than 1 out of every 5 students nationally reports being bullied, with girls, children with disabilities, and LGBTQ students at increased risk. In western Massachusetts, more than one-quarter of female students report being bullied, which is 1.4 to 1.7 times higher than male students.⁴⁷ Findings from the Prevention Needs Assessment Survey (2017) indicate that 24% of Hampshire County 8th, 10th, and 12th grade students were bullied in the past year. About one-third of students who identify as LGBTQ report having been bullied in the past year.⁴⁸ Students with disabilities are 2 to 3 times more likely to be bullied than nondisabled students, and one study showed that 60% of students with disabilities report being bullied regularly compared with 25% of all students. Youth in special education were told not to tattle almost twice as often as youth not in special education.⁴⁹

“My son told me he was being assaulted in class and every day. They started a bullying investigation and before we could even submit his statement they closed the investigation with the finding that no bullying had happened, saying that ‘none of the other students witnessed it.’”
Focus Group Participant, Parent of a Child with Disabilities, Coalition Hospital

2. Barriers to Accessing Quality Health Care

The following prioritized barriers to accessing health care were identified as needs in the 2016 CHNA and continue to be needs today based on the data that follows:

- Limited availability of providers
- Insurance and health care related challenges
- Need for transportation
- Lack of care coordination
- Need for care provided with cultural humility
- Need for health literacy and reduction of language barriers

a. Limited Availability of Providers

Hampshire County has more health care service providers relative to its population than do most other areas of the state. In fact, it ranks first among Massachusetts counties in clinical care.⁵⁰ However, these strong overall statistics mask limited availability of providers for specific types of care.

Community forums among older adults in Northampton and Amherst highlighted areas where they perceive an increased need for services. These included:

- Home-based services
- Specialists in geriatric care
- Mental health providers, particularly those with expertise in the mental health needs of older adults

"We need help to manage the mental aspects of having a chronic disease such as stress, depression, and anxiety."

Community Forum participant, Hampshire County

Focus groups and key informant interviews for the western Massachusetts region also identified a lack of: dental care providers, psychiatrists who can prescribe medication for mental illness, and specialists serving people with disabilities; in particular, these types of specialty providers who accept MassHealth. A 2014 MDPH survey found that less than half of dentists accept patients on MassHealth.⁵¹ While CDHC Community Forums with older adults did not identify these same needs for the general population, it is likely that Hampshire County residents are experiencing these needs as well.

The Massachusetts Office of Rural Health tracks health in six clusters of rural towns across the state, including the Hilltowns. Less than 2% of the state’s dentists practice in these rural areas, and they tend to be older (and closer to retirement) than dentists who practice in urban or suburban areas. Sixty-one percent of dentists in the rural clusters are age 55 or older, compared to 39% of dentists statewide.⁵²

b. Insurance and health care related challenges

While 97% of Hampshire County residents are covered by health insurance (U.S. Census Bureau, ACS, 2013-2017), the ability to navigate both what health insurance will cover as well as the medical care systems continue to be barriers to accessing quality health care. Community forum participants as well as people in focus groups for other hospitals’ service areas talked about the difficulty of navigating without having an advocate. Nearly every population studied in focus groups or represented through interviews mentioned navigation of these systems as challenging, including: people with substance use disorders or mental health issues, transgender patients, people with disabilities, parents of children with disabilities, and older adults.

“The whole system needs a group of people who know what’s going on and know the system and can help people navigate it and coordinate all the different parts that affect a person.”

Focus Group participant, Substance Use Disorder Focus Group, Coalition Hospital

Some examples of insurance challenges that people in focus groups and interviews identified include:

- receiving insurance coverage for ongoing care
- limited health coverage available to some immigrant populations, covering emergency services only
- needing multiple different diagnoses so insurance would cover medical services and school-related resources for disabled children
- providers not taking MassHealth
- insurance companies changing their products

Despite high rates of coverage by health insurance, the cost of health care co-pays, deductibles, tests, and medication is a barrier for many to having optimal health. Beyond the costs of health care that insurance doesn’t cover, additional costs include programs, equipment, physical activities, and alternative therapies such as acupuncture that are typically not covered by insurance but are suggested by medical providers and help patients. A public health leader noted, for example, an increase in demand for free immunizations because people cannot afford co-pays. The high cost of home care for people with disabilities impacts the quality and quantity of those services. Older adults can fall into a gap where they are too young or have too

much money to qualify for financial assistance, yet cannot afford expensive services. Financial counseling that hospitals offer is helpful but there are not enough counselors to serve the need.

c. Need for Transportation

Transportation arose in every focus group, interview with key informants and public health officials, Community Chat and Conversation as well as the meeting of the Community Benefits Advisory Council as major and chronic barriers to health care (see also Transportation section above in the Social and Economic Determinants of Health section).

Transportation is a particularly difficult issue for older adults, who often have health issues that make driving a challenge. While many senior centers have van service, it must be scheduled in advance and is often only available for medical appointments. Scheduling challenges make unplanned stops, for example, to pick up medication, difficult or impossible. MassHealth also provides transportation for people with disabilities, but focus group participants spoke of how this system was unreliable and how drivers often were disrespectful and/or unable to provide needed assistance with mobility.

Lack of transportation also disproportionately impacts children and adults living with disabilities, low income populations, and cancer patients. People in focus groups mentioned challenges due to lack of transportation in getting to medical appointments, the food pantry, places for disabled children to exercise, the grocery store, and the pharmacy. Focus group participants had many creative ideas, such as: expanding existing PVRTA bus service, increasing eligibility for vans that are Americans with Disabilities Act (ADA) compliant, telehealth, more transportation vouchers (Uber, taxis, bus passes), mobile health vans that go to people to do lab draws and fill prescriptions, pharmacies that deliver, and EMS doing wellness checks.

d. Lack of Care Coordination

Lack of care coordination is a prioritized community health need, as it was in the 2016 CHNA. Care coordination refers to the coordination of patient care, including the exchange of information between all parties involved in patient care.⁵³ In the 2019 CHNA, informants went beyond simply identifying that providers need to coordinate individuals' care. Several called for "one-stop shopping," "consolidation of services that already exist," and reduction of the duplication of services, suggestions that were also made in the 2016 CHNA. When patients have complicated medical conditions that require visits among different specialists, the need for coordinated care becomes even more important. Better coordination among primary care doctors and mental health specialists is also an identified need.

Focus group participants and interviewees identified important areas where care provided by multiple providers continues to be uncoordinated and results in challenges, including:

- coordination with primary care providers when someone is discharged from the hospital
- increased follow up when a person is discharged from a mental health treatment program, substance use disorder program, or jail
- increased coordination among agencies that provide support services for transgender clients
- survivor planning for people after cancer as they separate from the health care industry
- integrate mental health and substance use disorder services with primary care
- transitions, communication, and “warm handoffs” from jail to the community for a population that has a high rate of trauma and more needs

“Be sure that providers and patients are ‘tapping the resources,’ for example, the Diabetes Education Center at CDHC. Many primary care doctors do not refer to the Center; I learned so much from the Step Up program and was able to avoid going on medication for 15 years based on diet and exercise.”

Community Forum Participant, Amherst and Northampton

e. Need for Care Provided with Cultural Humility

The need for care provided with cultural humility remains a prioritized health need, as it was in the 2016 CHNA, with increased training as a means to do that. Cultural humility refers to a commitment among health care and social service providers to self-reflection and evaluation in order to reduce the power imbalance between patients and providers, and to the development of care partnerships that are based on mutual respect and equality.⁵⁴

Results from 2019 CHNA interviews with public health leaders and focus groups identified cultural differences between the community and providers and implicit bias as a barrier to health. In a key information interview, a community member from the CDHC service area spoke of a lack of people of color who provide health services to the community, and the importance of care providers understanding the demographics of their clientele. Her views were echoed by two of the public health officials interviewed for this CHNA, and by participants in other focus groups and key informant interviews.

They called for an assessment of: where and when this happens; potential need for increased training, experience, and humility for health care providers to a variety of different cultures; and accountability for cultural insensitivity and bias. Focus group participants noted that cultural humility is not limited to a racial or ethnic culture, but also includes care for stigmatized groups,

such as ex-offenders, homeless individuals, people with mental health or substance use issues, the aging population, transgender, non-binary, and gender non-conforming, adults and children with disabilities.

“We need more racial and cultural competence, especially for mental health providers. The current education system for health providers lacks this.”

Key Informant Interviewee, Public Health Official

f. Health Literacy and Language Barriers

Public health leaders as well as focus group participants and interviewees continued to identify the need for health information to be accessible, understandable and more widely distributed.

Health literacy is the capacity for an individual to find, “communicate, process, and understand basic health information and services to make appropriate health decisions.”⁵⁵

Participants in the community forums for older adults in Northampton and Amherst raised health literacy as an issue. They noted the challenges of managing chronic diseases and following medication regimens. They also would like providers to discuss alternative treatments and end of life care more openly and frequently with them. Integrated care management program staff noted that patients sometimes do not understand what resources are available to them, and the services for which Medicare will and will not pay.

Data from focus groups and key informant interviews associated with other hospitals illustrate the need for increased access to information about providers, services, resources, how to advocate for themselves and their families, and health education. Several focus groups pointed to the need to have all information in one place. In focus groups for transgender, non-binary, and gender non-conforming people as well as parents of children with disabilities, participants mentioned needing a hub of information for their specific needs that all in their communities know is the place to go for information, even if just an on-line resource. One person noted that they had three separately compiled documents with resources for transgendered people, and how helpful it would be if everything were in one spot. While a support group is not a replacement for an institution or organization providing needed information, participants in the Cancer Support Group focus group identified how vital the role the group played in teaching members self-advocacy, providing information about various resources, and health education.

Providers also spoke of health education needs, including increasing parents’ knowledge of typical developmental milestones so they can identify if their child is delayed, and increasing knowledge of resources available to children with disabilities.

Language barriers can create multiple challenges for both patients and health care providers and was previously identified as a need. Increasing availability of interpreters as well as translation of health material are specific actions that health care institutions can help to address this barrier. About 12% of Hampshire County residents speak a language other than English at home. This percent is higher in Amherst (19%) and Northampton (13%) (U.S. Census Bureau, ACS, 2013-2017). Regional Advisory Committee members identified a need to integrate the perspectives of people who speak other languages. There is a need for bilingual providers, translators, and health materials translated in a wider range of languages.

3. Health Conditions and Behaviors

This section focuses on the health conditions and behaviors that have the largest impact on the communities served by Cooley Dickinson Health Care. Based on our analysis, the priority health conditions and behaviors are the following:

- **Mental health and substance use**
- **Chronic health conditions** – obesity, cardiovascular disease, diabetes, cancer, HIV/AIDS, and the need for increased physical activity and healthy diet
- **Alzheimer’s disease and dementia**

a. Mental Health and Substance Use

Substance use and mental health were among the top urgent health needs/problems impacting the area based on secondary data as well as focus groups, interviews with public health officials, content experts and service providers, and Community Chats. Substance use disorders and opioid use specifically were identified as top issues. There was overwhelming consensus about the need for:

- more treatment options, including Medication Assisted Treatment (MAT), long term care options, treatment beds external to the criminal justice system, and treatment for people with dual diagnoses
- increased education across all sectors to reduce the stigma associated with mental health and substance abuse
- more sober and transitional housing for people with mental health issues, those dually diagnosed, and those leaving institutions (such as incarceration or foster care)
- increased integration between the treatment of mental health and substance use disorders
- recognition of the impact of mental health conditions and substance use on families

"We need help to manage the mental aspects of having a chronic disease such as stress, depression, and anxiety."

Community Forum participant, Hampshire County

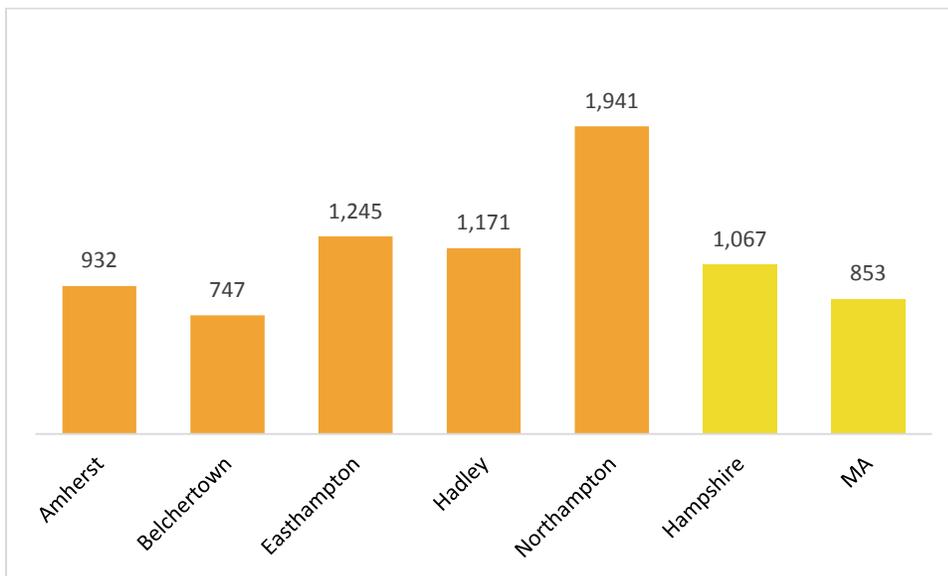
Mental Health

Though mental health is commonly thought of as the absence of mental illness, mental well-being extends beyond the presence or absence of mental disorders. The World Health

Organization defines mental health as the “state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community.”⁵⁶ Only an estimated 17% of U.S adults are “in a state of optimal mental health.”⁵⁷ More than one out of four adults nationally live with a mental health disorder in any given year, and 46% will have a mental health disorder over the course of their lifetime.⁵⁸ Mental health is an indicator of health itself, but also contributes to physical health and inequities.

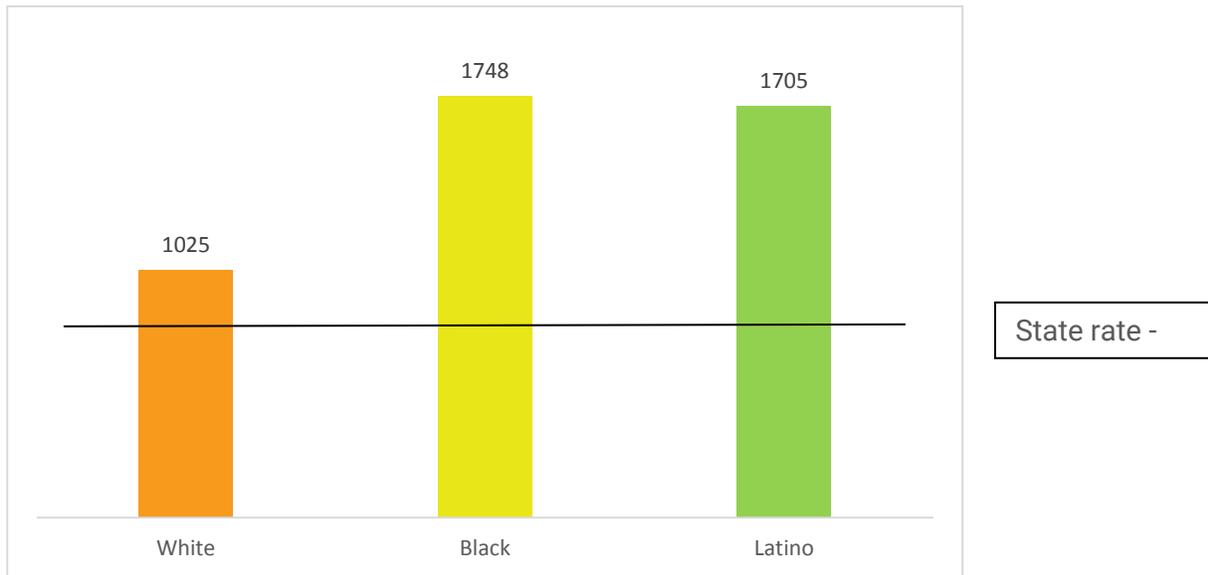
Hampshire County residents reported an average of 4.3 poor mental health days over the past 30 days, which is somewhat higher than the statewide average of 4 days.⁵⁹ Hampshire County also has a high rate of mental health hospitalizations (1,067 per 100,000) compared to the state (853 per 100,000) (Figure 11). Northampton has a substantially higher hospitalization rate for mental health than does the county or the state (Figure 10). Latino and Black people in Hampshire County have a mental health hospitalization rate that is 65-70% higher than that of White people (Figure 11).

Figure 10. Mental Health Disorder Hospitalization Rates for Select Hampshire County Communities



Source: MDPH, 2012 – 2015. Age-adjusted per 100,000

Figure 11. Mental Health Disorder Hospitalization Rate by Race, Hampshire County and Massachusetts



Source: MDPH, 2012-2015. Age-adjusted per 100,000

Depression is the most common type of mental illness, and it affects about 27% of adults.⁶⁰ Depression is the leading cause of disability worldwide.⁶¹ Suicide has risen 27% from 2005 to 2015 in Massachusetts from about 7 per 100,000 to over 9 per 100,000,⁶² and the rate for Hampshire County is the second-highest in the state at nearly 15 per 100,000.⁶³

“Anxiety and depression have increased. It seems like everyone has some psychiatric diagnosis that needs managing.”

Key Informant Interviewee, Community Health Center staff, Coalition Hospital

Suicide is higher in specific populations. According to MDPH, across the state 74% of intentional deaths in 2016 were suicide (n = 638), at a rate of 9.4 per 100,000. Of those 77% were men, and the highest rate is in Whites at 11 per 100,000, then Blacks at 9 and Latinos at 4 per 100,000.⁶⁴ No local data by race are available; however, 2015 data show that in Hampshire County, 75% of suicides were men.⁶⁵

The Community Benefits Advisory Council raised the issue of **trauma among children**, particularly among those experiencing stressors such as foster care and homelessness. They recommend looking at social determinants of health through a trauma lens for all people, but recognize that children are the most vulnerable to the effects of trauma. They recommend trauma sensitivity training for all social service providers. A community member who is raising her grandchildren who have experienced trauma also raised trauma among children as a need. She requested support from the hospital for herself and other grandparents who are in a similar situation, for addressing the children’s trauma as well as coping with the demands of parenting young children without a social support system of same-age peers.

Priority Populations

- **Youth** are disproportionately impacted with mental health issues. In 2017 in Hampshire County, 32% of 8th, 10th, and 12th graders “felt depressed or sad most days.”⁶⁶
- **LGBTQ+** youth are also disproportionately impacted. Over half (52%) of LGBTQ+ 8th, 10th, and 12th grade students responding to the 2017 Prevention Needs Assessment Survey reported that they feel depressed or sad most days.⁶⁷
- **Veterans** experience mental health disorders and substance use disorders at higher rates than do their civilian counterparts.⁶⁸
- Out of all Massachusetts communities statewide, nine of the ten communities with the highest rates of mental health-related hospital admissions among **women** were in western Massachusetts (MDPH, 2014). About 47% of **girls** in Hampshire County schools are at high risk for depression compared to 28% for boys.⁶⁹
- About 1 out of 3 **older adults** experience depression in communities across western and central Massachusetts. Most towns in Hampshire County report lower rates of depression than the state rate of 32%, but Northampton has a higher rate at 35%.⁷⁰
- **Latinos** and **Blacks** experienced high hospitalization rates for mental disorders in Hampshire County with rates greater than Whites and greater than the county rates overall.
- The Substance Abuse and Mental Health Services Agency (SAMHSA) estimates that nationally 26% of **people who experience homelessness** have a severe mental illness and 35% have chronic substance use issues.⁷¹

“There is too much of a separation in treatment between physical and mental health.”
Focus Group Participant, Patients Living with Disabilities, Coalition Hospital

Substance Use

High rates of substance use continue to be a prioritized health need for the community.

- Twenty-six percent of 8th, 10th, and 12th grade students in Hampshire County have used alcohol in the past 30 days, and 21% of them have used marijuana in the past 30 days.⁷² Data from the Gateway Regional School District, which serves a number of rural Hilltown communities, indicates that 14% of 8th grade students, 29% of 10th grade students, and 39% of 12th grade students reported using alcohol in the last 30 days. Rates of reported marijuana use were 6%, 15%, and 13% among the 8th, 10th, and 12th grade students, respectively.⁷³ In key informant interviews, health care providers noted marijuana use among youth as a rising concern since the legalization of marijuana in Massachusetts.
- A national study found that vaping has doubled in high school youth between 2017 and 2018, from 11% to 21%.⁷⁴ The most recent data available for Hampshire County youth

comes from 2017, when 29% of 8th, 10th, and 12th graders reported having tried e-cigarettes, and 13% reported having used e-cigarettes in the past 30 days.⁷⁵

- Among adults over age 65 in Massachusetts, 6.6% report substance use disorders. Proportions in Northampton (7.5%) and Easthampton (7.5%) are higher than that of the state, while rates in Amherst and Belchertown are similar to the state.⁷⁶

“Some high schoolers with learning disabilities can have lots of trouble with anxiety, take drugs to help with the anxiety. We’re not picking up on this fast enough to stop the drug use.”

Focus Group Participant, Substance Use Disorder Focus Group, Coalition Hospital

Substance use disorders (SUD) refer to the recurrent use of drugs or alcohol that result in health and social problems, disability, and inability to meet responsibilities at work, home, or school. Risk factors for SUD include genetics, age at first exposure, and a history of trauma.

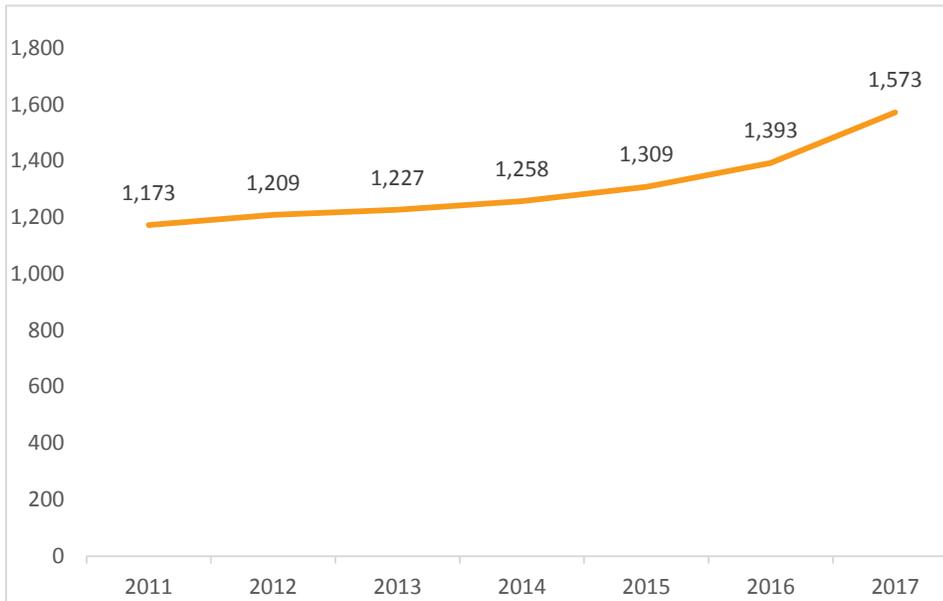
- Emergency room and hospitalization rates for substance use in Hampshire County are lower than those of the state. However, rates are much higher among Latino residents than White residents. The substance use emergency room rate for Latino residents over the period of 2012-2015 was 27% higher than that of White residents. The hospitalization rate for the same period for Latinos was almost 2.5 times higher than for Whites. Emergency room and hospitalization rates for Black residents of Hampshire County was not available (MDPH, 2012-2015).
- Emergency room rates for substance use are elevated among select communities: Northampton had substantially higher rates of ER use for substance use disorders (255 per 100,000) compared to the county (177) and the state (110) (MDPH, 2014).

“The newspaper put a person’s photo on the front page for possession charge – not dealing or anything serious. We don’t treat people with diabetes or other diseases that way.”

Focus Group Participant, Substance Use Disorder Focus Group, Coalition Hospital

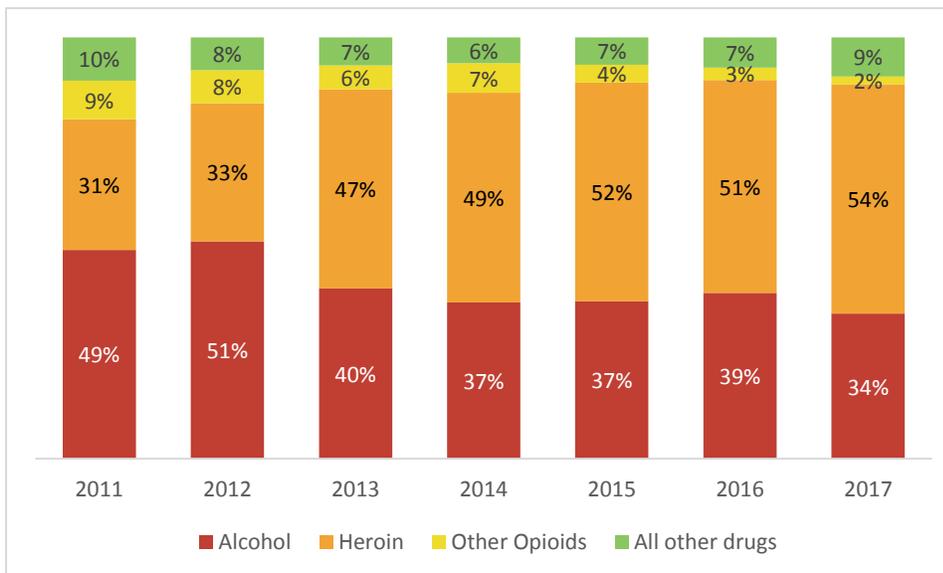
Substance use admissions to treatment programs have increased over time. Total admissions in Hampshire County have risen by 34% from 2011 to 2017 – from 1,173 in 2011 to 1,573 in 2017 (Figure 12). Admissions for heroin and alcohol drive admissions, with heroin increasing over time. Crack/cocaine, marijuana and other opioids currently account for under 10% each, although this figure was higher in earlier years (Figure 13).

Figure 12. Substance Use Admissions to Treatment Programs in Hampshire County, 2011 – 2017



Source: Massachusetts Department of Public Health. Bureau of Substance Addiction Services. 2018. Geographic Fact Sheets FY 2017, Admission Statistics by County. Available at <https://www.mass.gov/lists/substance-abuse-treatment-admissions-statistics#geographic-based-admissions-statistics->

Figure 13. Substance Use Admissions to Treatment Programs in Hampshire County by Primary Drug of Admission, 2011 – 2017

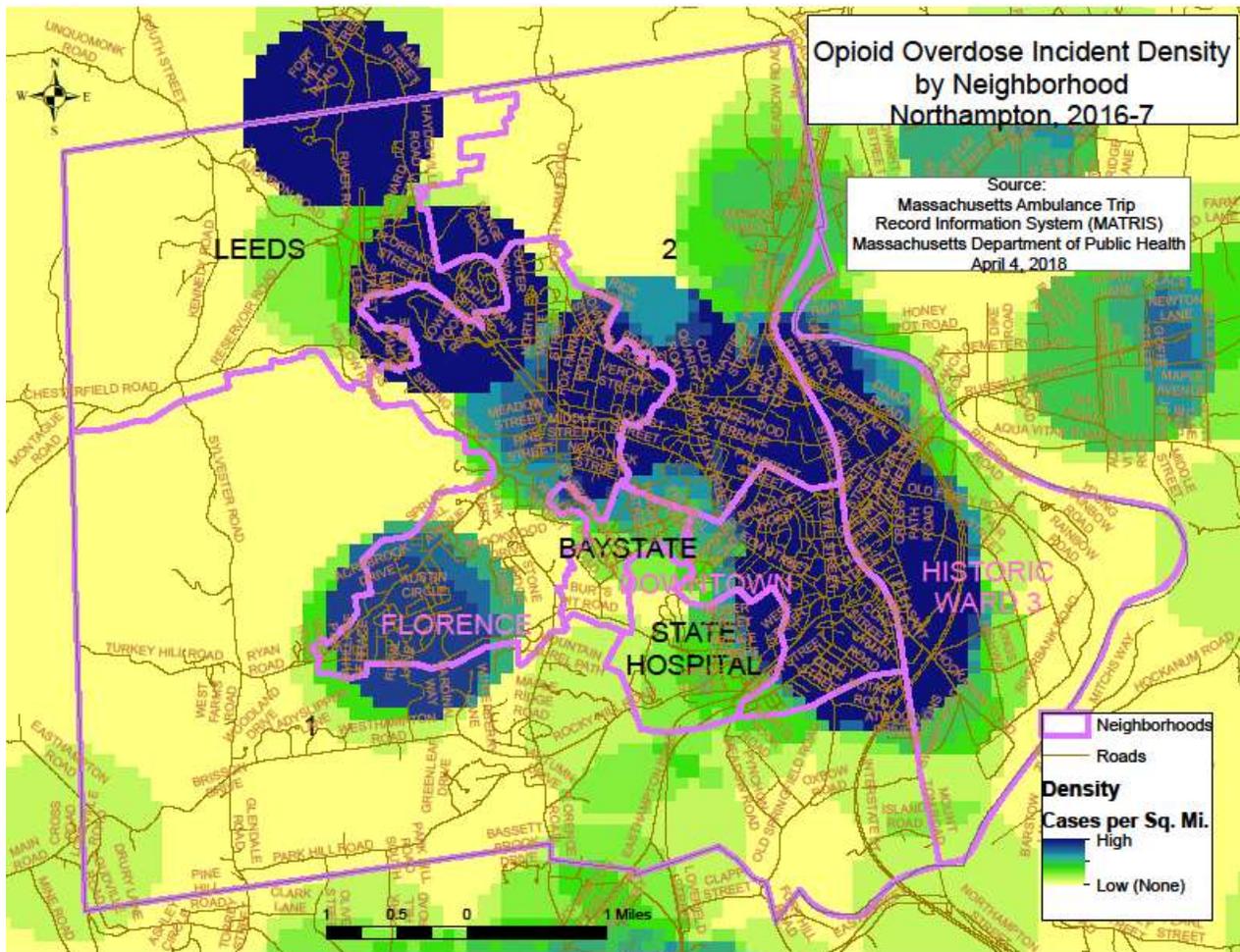


Source: Massachusetts Department of Public Health. Bureau of Substance Addiction Services. 2018. Geographic Fact Sheets FY 2017, Admission Statistics by County. Available at <https://www.mass.gov/lists/substance-abuse-treatment-admissions-statistics#geographic-based-admissions-statistics->

Opioid use disorder continues to be a public health crisis in Massachusetts and across the country. In Massachusetts, the number of opioid-related deaths in 2014 represents a 65% increase from 2012.⁷⁷ Between 2016 to 2017 there was a 4% decrease in the number of opioid-related deaths in Massachusetts; however, in the prior year there had been a 28% increase. In 89% of deaths from opioids, fentanyl was present.⁷⁸

- In Hampshire County, the number of opioid-related deaths has increased over time, from 12 in 2010, trending upward through 2018, with 36 deaths.⁷⁹
- Increased use of harm reduction approaches, such as Narcan, reduces morbidity and mortality of opioid overdose.⁸⁰ Additionally, stakeholders called for increased access to long-term treatment programs, more provider and patient education to reduce stigma and as a means to get people the care they need, and more support for youth, particularly those with histories of trauma.
- From January of 2016 through March of 2018 there were 470 calls to ambulances for opioid overdose incidents. Almost 36% of these calls were in Northampton, the largest proportion of opioid overdose calls in the county.⁸¹ Figure 14 shows where the density of calls were in Northampton.

Figure 14. Opioid Overdose Incidents Density by Neighborhood, Northampton, 2016-2017



Source: Pioneer Valley Opioid Data Committee, 2019

Priority Populations

- **Youth** substance use and abuse can affect the social, emotional and physical well-being of youth and lead to lifelong substance dependence problems. As described above, 26% of 8th, 10th, and 12th grade students in Hampshire County have had alcohol in the past 30 days, and 21% of them have used marijuana in the past 30 days.
- **Latinos** experienced substantially higher substance use ER visit and hospitalization rates than do Whites in Hampshire County (MDPH, 2012-2015).
- In some Hampshire County communities, **older adults** have higher proportions of some form of substance use disorder than statewide, as stated above.
- **People reentering society after incarceration**, particularly if their incarceration was related to drugs in any way. Studies consistently show high risk of overdose in the first two weeks after reentry.⁸²

- **People who have dual diagnoses.** People who have both mental health and substance use disorders face greater challenges accessing services, according to focus group participants and interviewees.

“There are not many dual programs. Many addicts have mental health issues as well, but programs usually do not treat both – just addiction – so they recover but it doesn’t last and they go back in and out of rehab.”

Focus Group Participant, Substance Use Disorder Focus Group, Coalition Hospital

b. Chronic Health Conditions

Chronic health conditions remain an area of prioritized health need for Hampshire County residents. Residents experience high rates of chronic health conditions and associated morbidity, particularly for diabetes, cardiovascular disease, and cancer. A chronic health condition is one that persists over time and typically can be controlled but not cured. According to the CDC, chronic disease is the leading cause of death and disability in the U.S. By 2020 it is estimated that 81 million Americans will have multiple chronic conditions.⁸³ A healthy diet and physical activity play an important role in preventing and managing chronic diseases.

Obesity

In Hampshire County one out of every five adults are obese.⁸⁴ Obesity puts people at higher risk for chronic illnesses such as cancer, high blood pressure, heart disease, stroke, sleep apnea, and diabetes.⁸⁵ Obesity can impact overall feelings of wellness and mental health status. A healthy diet and physical activity play an important role in achieving and maintaining a healthy weight.

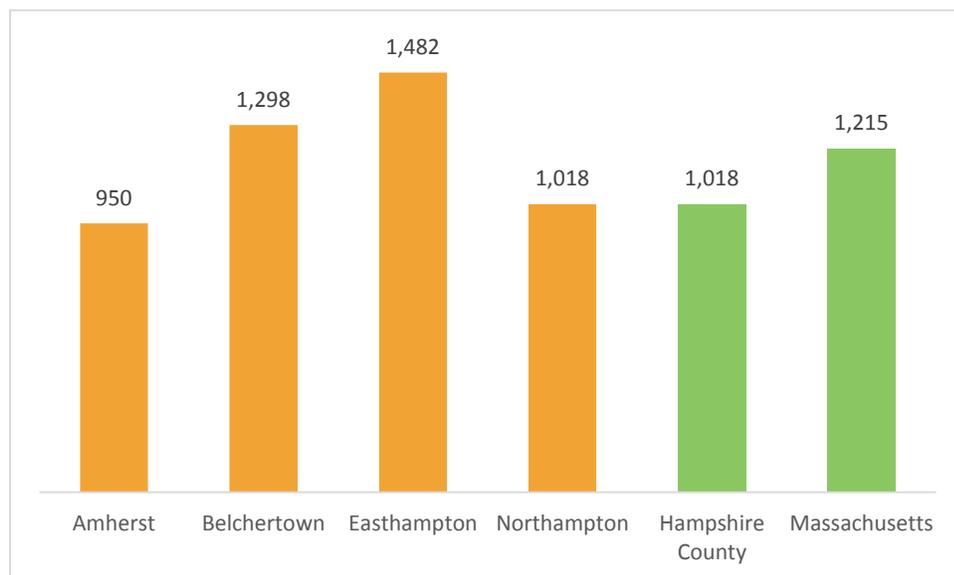
Though childhood obesity rates have been falling nationally and within some communities in the region over the last few years, it remains concerning. Children develop lifelong dietary and physical activity habits in their early years, and children who are obese are more likely to continue to be obese adults in addition to having adult risk factors that are more severe.⁸⁶ In the 2014-2015 school year, combined overweight and obesity rates were over 26% in Amherst-Pelham (11% obese), Belchertown (12% obese) and Northampton (11% obese) schools. At the Northampton Smith Vocational Agricultural School, over 43% of students were either overweight or obese (29% obese).⁸⁷ Easthampton data is unavailable.

Cardiovascular Disease (CVD)

Cardiovascular disease (CVD) includes diseases that affect the heart and blood vessels, including coronary heart disease, angina (chest pain), hypertension, heart attack (myocardial infarction), and stroke. Heart disease is the leading cause of death in Hampshire County (MDPH, 2016).

- Easthampton and Belchertown have higher rates of hospitalization for cardiovascular disease than do the county or state overall (Figure 15).
- Hypertension (high blood pressure) affects about 3 out of 4 adults over age 65 in Hampshire County. Ischemic heart disease affects between 27% to 38% of older adults.⁸⁸

Figure 15. Cardiovascular Disease Hospitalization Rates, Hampshire County and Select Communities



Source: MDPH, 2014. Age-adjusted per 100,000

Priority Populations

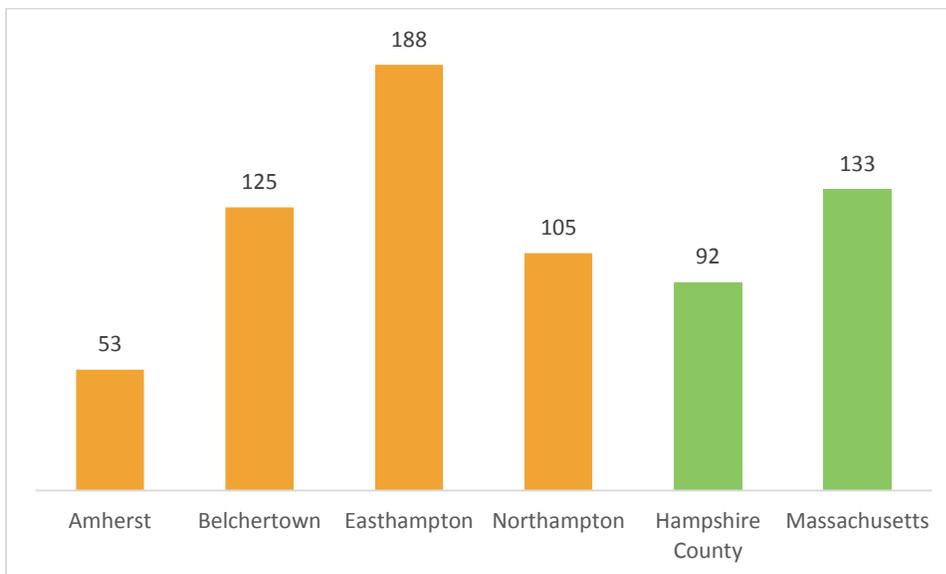
- **Older adults** experience higher rates of CVD. In selected Hampshire County communities, between 67% and 76% of people over age 65 have hypertension, which is reflective of the high rates in the state overall (76%).⁸⁹
- **Latinos** and **Blacks** had much higher rates of stroke and heart disease hospitalizations than Whites across Massachusetts. Incidence is low for these populations in Hampshire County. Because of small numbers it is difficult to have complete confidence in the estimates and thus is not appropriate to compare rates across races.

Diabetes

An estimated 8% of Hampshire County residents have **diabetes**, which is similar to the state rate of 9%.⁹⁰ The vast majority of those suffering from diabetes have Type 2 diabetes, which is one of the leading causes of death and disability in the U.S. and a strong risk factor for cardiovascular disease. The CDC estimates that 9% of people in the U.S have diabetes, of which 24% are undiagnosed.⁹¹ Pre-diabetes is when a person has high blood sugar levels that are not high enough for a diagnosis of diabetes. An estimated 15-30% of people with pre-diabetes will develop Type 2 diabetes within three to five years.⁹²

Diabetes hospitalization rates are a measure of severe morbidity due to diabetes. Easthampton's hospitalization rate for diabetes (188 per 100,000 people) is substantially higher than the state rate (Figure 16). Older adults experience a high prevalence of diabetes. The percentage of adults over age 65 statewide is 32%. Rates are comparable in Belchertown and Easthampton, and lower in Amherst (20%) and Northampton (25%).⁹³

Figure 16. Diabetes Hospitalization Rates, Hampshire County and Select Communities



Source: MDPH, 2012-2015. Age-adjusted per 100,000

Priority Populations

- A higher proportion of **older adults** in Hampshire County have diabetes than adults under age 65. Approximately 8% of all county residents have diabetes, while diabetes rates among adults over age 65 in cities and towns range from 20 - 33%.⁹⁴

- **Latinos** and **Blacks** experience high rates of diabetes statewide and in the Coalition of Western Massachusetts Hospitals/Insurer region. Hospitalization rates for Hampshire County are not reliable due to small incidence numbers (MDPH, 2012-2015).

Asthma

Asthma impacts Hampshire County residents. Asthma is a common chronic respiratory disease that means that it is difficult to move air in and out of your lungs. Asthma affects the health and quality of life of children and adults. Asthma can be impacted by different factors in the environment, including cigarette smoke, second hand smoke, air pollution, pollen levels, and mold, dust, and other household contaminants or exposures. The Springfield Metropolitan District, which includes Hampshire County, was identified as the most challenging place to live in the U.S. with asthma, according to the Asthma and Allergy Foundation's 2018 Asthma Capital rankings. The rankings are based on prevalence of asthma, emergency room visits, mortality, and presence of risk factors.⁹⁵

While the rate of emergency room use for asthma is lower in Hampshire County than the state (315 visits per 100,000 in the population compared to 555 for the state), the rate is higher for Blacks (956) and Latinos (1062) when compared to Whites (272) (MDPH, 2012-2015).

Asthma is the most common chronic disease in children, and is a driver of emergency room use for children.⁹⁶ Asthma also affects the physical, social, and emotional lives of children.⁹⁷ In Hadley (15%) and Northampton (18%), asthma prevalence for children is higher than the statewide prevalence (12%), and in Amherst the prevalence is the same as the statewide rate (MDPH, Environmental Public Health Tracking, 2016-2017).

Older adults in Hampshire County also have a need for asthma services. While across Massachusetts, 15% of those over age 65 have asthma, Amherst (15%), Northampton (16%), and Belchertown (16%) have similar or slightly higher rates of asthma.⁹⁸

Priority Populations

- **Children and older adults** are priority populations for asthma, as noted above.

Cancer

Cancer is a prioritized health need in Hampshire County. Cancer is the second leading cause of death in Hampshire County.⁹⁹ Cancer outcomes are distributed inequitably by race, and Cooley Dickinson has a particular focus on older adults, who are at higher risk for cancer. Even though

Hampshire County's rate of hospitalization for cancer is lower than the state (273 per 100,000 in Hampshire County compared to 337), cancer hospitalization rates are 48% higher in Blacks and 18% higher in Latinos than Whites in Hampshire County (MDPH, 2012-2015). The proportion of the population that is over age 60 is projected to grow from 19% in 2010 to 32% in 2035,¹⁰⁰ and older adults are at higher cancer risk.

The Hampshire County cancer incidence, or rate of people who have cancer, is 417 cases per 100,000 people, lower than the Massachusetts rate of 467.¹⁰¹ Statewide, the most prevalent forms of cancer for men are prostate (23%), bronchus/lung (14%), colon/rectum (8%), and urinary/bladder (8%). For women, the most prevalent forms are breast (30%), bronchus/lung (14%), colon/rectum (8%), and uterine (7%). Cancer of the bronchus/lung accounted for approximately 27% of all cancer deaths from 2011-2015 statewide.¹⁰²

Key informant interviews with cancer care providers yielded ideas about prevention and policy that could impact cancer incidence:

- support for the HPV vaccination outreach, education, and screening
- advocacy so the U.S. Preventative Services Task Force incorporates lung cancer screening into doctors' computer programs so they are prompted to ask about risk factors
- expansion of criteria for lung cancer screening so that insurance companies cover the cost for more populations

HIV/AIDS

HIV/AIDS destroys the white blood cells in the body, weakens the immune system, and leaves those with the disease vulnerable to infections and certain types of cancers.¹⁰³ In Hampshire County, the rate of new infection between 2014 and 2016 was 2.1 per 100,000, compared to the state rate of 9.7 per 100,000.¹⁰⁴ Within Hampshire County the number of new infections has decreased from 15 new infections in 2007 to less than 5 in 2016. The most common way HIV/AIDS is contracted in Hampshire county is through male-to-male sex.¹⁰⁴

Need for Increased Physical Activity and Healthy Diet

Healthy eating and physical exercise are important habits to create and keep to prevent poor health outcomes such as cardiovascular disease, diabetes, dementia, and depression, to name a few.¹⁰⁵ Community-level access to affordable healthy food and safe places to be active, as described in the Social Determinants of Health section, as well as individual knowledge and behaviors affect these rates.

Among Massachusetts residents in the CDC's Behavioral Risk Factor Surveillance System (BRFSS) 2013 survey, only 11% of respondents met the vegetable consumption recommendation and 14% met the fruit consumption recommendations. In general, women, Latinos, and people with higher income are more likely to meet recommended intake levels.¹⁰⁶

In Hampshire County, about 16% of residents over age 20 reports getting no leisure-time physical activity in the past month.¹⁰⁷ As stated before, some areas of Hampshire County offer limited access to healthy foods, particularly for lower-income people who lack cars.

The need for increased youth programming and access to places that encourage physical activity was cited by individuals across several focus groups and interviews conducted for this CHNA, and particularly sports and after school programming that are affordable to those with low incomes. Parents of children with disabilities spoke about the importance of being able to access places where their children can exercise, such as the pool and the BFit program.

c. Alzheimer's disease and Dementia

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 85.¹⁰⁸ 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%.¹⁰⁹ 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 expected to increase from approximately 30,000 in 2010 to 51,500 in 2035.¹¹⁰ For this reason, 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%.¹¹¹ The disease places a high toll on the health care system, as well as on caregivers, who are 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.¹¹²

4. Priority Populations of Concern

Available data indicate that **older adults, Latinos, and Blacks** experience disproportionately high rates of some *health conditions* when compared to that of the general population in Hampshire County. Older adults had higher rates of hypertension and diabetes. Latinos and Blacks experienced higher rates of hospitalizations due to chronic diseases.

With regard to *mental health and substance use disorders*, data indicate increased risk for **youth** and **veterans** for trauma, depression, substance use, and suicide. In particular, **LGBTQ youth** have particularly high rates of depression and suicide. **Older adults** are at risk for substance use disorder. The data show that in Hampshire County, **Latinos** in particular have much higher rates of mental health hospitalizations and substance use Emergency Room visits. Others at risk include **people reentering society after incarceration** who are at high risk for overdose, and people with **dual diagnoses**. People experiencing **homelessness** have high rates of severe mental illness and substance use disorder. **Veterans** have higher rates of mental illness and substance use disorder than their civilian counterparts.

When considering those with disproportionate access to the *social determinants of health*, the **Latino** and **Black** populations experience a host of inequities, including poverty, unemployment, income, educational attainment, interpersonal and institutional racism, affordable and safe housing, and access to transportation and healthy food. **Older adults** experience needs in affordable housing, income, and social isolation. **People with lower incomes** experience poverty, unemployment, income concerns, lack of access to affordable and safe housing as well as poor housing conditions, and lack of access to transportation and healthy food. **Veterans** are disproportionately represented in those who are homeless. **People with disabilities** tend to have higher rates of poverty and lower levels of education, and often face barriers to healthy living such as lack of transportation and lack of access to exercise opportunities. **People who have been involved in the criminal legal system** have barriers to housing and employment, and experience stigma and trauma. **People with mental health and substance use disorders** experience homelessness at higher rates.

5. Geographic Areas of Concern

Amherst, Easthampton, and Northampton often, although not always, had higher rates for the majority of health conditions identified as prioritized health needs. These communities also disproportionately experience numerous social and economic challenges which contribute to the health inequities. Amherst has a high proportion relative to Hampshire County of residents of color, so health inequities experienced by these communities contribute to the many racial and ethnic disparities observed in Hampshire County. As stated previously, rural data collection is a barrier. However, we know that there are challenges unique to the Hilltowns, including transportation, isolation, access to services, and access to food.

V. Community & Hospital Resources to Address Identified Needs

Priority Health Need	Resource Organization Name	Description of Services Provided	Website Address
Access to Care	Hampshire HealthConnect	Connects uninsured and underinsured people with resources and assists with MassHealth applications	https://www.cooleydickinson.org/programs-services/hampshire-health-connect/
HIV and AIDS	A Positive Place	Provides confidential and comprehensive HIV care and prevention	https://www.cooleydickinson.org/programs-services/hiv aids/
Income and Employment	Community Action! of Hampshire and Franklin Counties	Federally designated Community Action Agency serving low-income individuals and families	http://www.communityaction.us/index.html
Education	The Literacy Project; sites in Northampton and Amherst	Provides free adult education classes at 3 levels: basic literacy, pre GED, through GED. provides access to post-secondary education and job training skills	http://www.literacyproject.org/
Housing	Valley Community Development Corporation	Housing Services Affordable Housing Development Small Business Development	http://valleycdc.com/
Housing	WayFinder	Housing assistance to tenants, homebuyers homeowners and rental property owners Largest nonprofit developer of affordable housing in Western Massachusetts'	https://www.wayfindersma.org/
Housing	Hilltown Community Development Corporation	Developing affordable housing opportunities for Hilltown residents	https://www.hilltowncdc.org/

Housing	Center for Human Development (CHD)	Homelessness Services; shelters and information and referral	http://chd.org/adult-services/homelessness-services/
Housing	ServiceNet	Shelters and homelessness services for adults and families; homelessness prevention and support	http://www.servicenet.org/content/shelter-and-housing-services
Transportation	Franklin Regional Transit Authority (FRTA)		http://frta.org/
Transportation	Pioneer Valley Transit Authority (PVTA)		http://www.pvta.com/
Food Insecurity, Food Deserts	Amherst Survival Center	Connects residents of Hampshire and Franklin Counties to food, clothing, healthcare, wellness, and community, primarily through volunteer efforts	https://amherstsurvival.org/
Food Insecurity, Food Deserts	Brown Bag-Food for Elders Program	Food Bank of Western Massachusetts provides a free bag of healthy groceries to eligible seniors once a month at local senior centers and community organizations.	https://www.foodbankwma.org/get-help/brown-bag-food-for-elders/
Food Insecurity, Food Deserts	Easthampton Community Center	Provides a Food Pantry, Community Care Kitchen, and a Clothing Closet, along with meeting space	https://easthamptoncommunitycenter.org/
Food Insecurity, Food Deserts	Food Assistance online list from Forbes Library	Information on free meals and food pantries in greater Northampton and Amherst areas	http://forbeslibrary.org/community/resources/northampton-area-food-assistance/
Food Insecurity, Food Deserts	Northampton Survival Center	Provides nutritious food and other resources	https://www.northampton-survival.org/
Food Insecurity, Food Deserts	Center for Self Reliance at Community Action!	Offers food to families, information and referrals to other services and programs; hosts fresh food and cooking demonstrations and nutrition workshops	http://www.communityaction.us/center-for-self-reliance-food-pantry.html
Obesity	Support Groups	Support groups, exercise, and education workshops that cover topics related to weight loss, nutrition and exercise	http://www.gazettenet.com/Updated-Support-Groups-3174602

Obesity	Healthy Hampshire/Mass In Motion	Community-based coalition to improve health equity through improved access to healthy eating and active living	http://www.northamptonma.gov/1482/Healthy-Hampshire
Cardiovascular Disease	Heart & Vascular Care Services	Comprehensive diagnostics, and treatment options for coronary artery disease (CAD), heart rhythm disorders (arrhythmias) heart failure; cardiac surgeries for adults and children; cardiology clinical trials	https://www.cooleydickinson.org/programs-services/cardiovascular-services/
Diabetes	Diabetes Education Center	Services for the evaluation, treatment, and management of diabetes and other endocrine disorders; education, information, classes and support groups	https://www.cooleydickinson.org/programs-services/diabetes/
Nutrition	Women, Infants and Children (WIC)	Services for pregnant, breastfeeding, and post-partum women and children up to age 5, provides checks to buy nutritious foods	http://www.communityaction.us/wic-women-infants-and-children.html
Nutrition	Mass In Motion	Community-based coalition to improve health equity through improved access to healthy eating and active living	http://www.northamptonma.gov/1482/Healthy-Hampshire
Physical Activity	Cooley Dickinson Health Care Rehab and Physical Therapy Services	Information, resources, coaching and education, stretching, core strengthening, walking and strength training to improve or restore physical function and fitness levels	https://www.cooleydickinson.org/programs-services/rehabilitation-services/
Physical Activity	Hampshire Regional YMCA	Fitness sessions, swimming, dance classes, after-school care, summer camps, senior health initiatives, yoga, Live Strong, weight loss programs	http://www.hrymca.org/
Asthma	Pioneer Valley Asthma Coalition	Community partnership that works to improve the quality of life for individuals, families and communities affected by asthma	www.pvasthmacoalition.org
Mental Health	Cooley Dickinson Behavioral Health Care	Provides Hospital, Substance Use Disorder treatment and support, Mental Health services	https://www.cooleydickinson.org/programs-services/behavioral-health/

Mental Health	Clinical & Support Options	Comprehensive behavioral health services; provides Emergency & Acute Services, Community Based Family Support Services, Outpatient Mental Health and Substance Abuse Services, and Clubhouses	http://www.csoinc.org/
Mental Health	Hilltown Community Health Center	Therapy and substance abuse services for children, adolescents, adults, and elders through individual, group, and family therapy sessions	https://www.hchcweb.org/connect-to-services/service-we-offer/behavioral-health/
Mental Health	ServiceNet	Comprehensive mental health services for children, adolescents, adults, and elders. Services for mental health, developmental delays, autism, and substance use disorder through individual and group counseling, early intervention, residential and vocational.	https://www.servicenet.org/
Substance Use Disorder: Tobacco	Massachusetts Department of Public Health	Quit smoking resources and information; toll-free support line: 1-800-QUITNOW	http://makesmokinghistory.org/quit-now/health-insurance-benefits/
Substance Use Disorder: Opioids and Other Substances	On-Call Healthy Living (Suboxone Treatment)	Medication assisted treatment and behavioral counseling for opioid, alcohol and other substance use disorders; appointment-based outpatient treatment	http://yourhealthylivingprogram.com/
Substance Use Disorder: Opioids and Other Substances	Behavioral Health Network (BHN) Addiction Services	Comprehensive addiction services including detox, post-detox residential series, long-term residential, day treatment programs, and outpatient services.	http://bhnc.org/content/addiction-services
Substance Use Disorder: Opioids and Other Substances	Needle Exchange Program	Needle exchange programs in Holyoke and Northampton, provides sterile needles to injection drug users, trainings on Naloxone, education and counseling, health education and screening on infectious disease	http://www.tapestryhealth.org/index.php/services/prevention/needle-exchange

Substance Use Disorder: Opioids and Other Substances	Hampshire HOPE	Regional coalition that works to prevent and reduce opioid abuse and substance use; supports and advocates for expanded support and recovery services; trains, educates, advocates, and provides resources on opiate abuse and overdoses	http://www.hampshirehope.org/
Substance Use Disorder	SPIFFY Coalition	Promotes teen health in Hampshire County; works with schools and community partners to establish and support effective youth development and health-promotion programs, provides training and technical assistance on evidence-based practices, involves and empowers youth	http://www.collaborative.org/programs/community-health/spiffy-coalition
Substance Use Disorder	Easthampton Healthy Youth Coalition	The Coalition is a group of people from various sectors of the community who care about keeping Easthampton's youth as healthy as possible, protecting them from using drugs, and supporting families in this.	https://www.easthamptoncoalition.org/about-us.html
Substance Use Disorder	Northampton Prevention Coalition	The Coalition's mission is to collaboratively initiate, coordinate, and sustain prevention and intervention efforts that reduce teen substance use in the City of Northampton.	http://northamptonprevents.org/
Prenatal and Perinatal Care	Cooley Dickinson Women's Health Services	Midwife services; Childbirth Center; Menopause treatment; Maternity services; Birth control; Pregnancy services; Nursing and midwifery services; labor and delivery services	https://www.cooleydickinson.org/programs-services/womens-health/
Prenatal and Perinatal Care	MotherWoman	Developed the Western Massachusetts Perinatal Support Coalition Network; provides support groups and training	http://www.motherwoman.org/
Teen Pregnancy	Community Action!	Healthy Families: free home visiting support program for first time parents, age 20 and under, living in the Franklin, Hampshire, and North	http://www.communityaction.us/healthy-families-support-for-parents-under-

		Quabbin regions	21.html
Teen Pregnancy	Massachusetts Department of Public Health Teen Pregnancy Prevention Program	Promotes healthy behavior, responsible decision making and increased opportunities for at-risk youth using evidence-based programs in targeted communities	http://www.mass.gov/eohhs/gov/departments/dph/programs/community-health/primarycare-healthaccess/adolescent-health/overview.html

VI. Input and Actions Taken on Previous CHNA

1. Community Input on Previous CHNA and CHIP

To solicit written input on CDHC's prior CHNA and Implementation Strategy, both documents are available on the hospital website (<https://www.cooleydickinson.org>). They are posted for easy access and we include contact information for questions or comments. We have verified and confirmed that we have not received any written comments since posting the last CHNA and Implementation Strategy.

2. Impact of Actions Taken by Hospital Since Last Community Health Needs Assessment

The CHNA conducted in 2016 identified significant categories of health needs within the CDHC service area. Those needs were then prioritized based on the magnitude and severity of impact of the identified need, the populations impacted, and the rates of those needs compared to referent (generally the state) statistics.

Five categories of significant health needs, CDHC's implementation strategies to address those needs, and impacts of those strategies are:

Access and Barriers to Quality Health Care:

Project: John P. Musante Center/Amherst

CDHC joined with the Hilltown Community Health Centers and other agencies, Town of Amherst, and residents to plan and create the John P. Musante Community Health Center. The Center is a federally qualified health center and opened in 2018. CDHC assisted with planning and start-up funding.

Project: Improved access to care by improving access to transportation

CDHC participated in the Hilltown Regional Coordinating Council, hosted by the Hilltown CDC to develop a pilot project to improve transportation options for rural, isolated older adults and people with disabilities. The Hilltown Community Health Centers, Councils on Aging, Stavros, and others are partners in this project. The Hilltown Easy Ride began operating in 2018 and serves about 75 people each month with rides to medical appointments, shopping, and social outings.

Project: Improved access to care for veterans and military families

CDHC provided financial support to the Western Massachusetts Veterans Outreach Project and held two trainings for area providers to increase awareness of the unique needs of veterans and to develop skills to assess, treat, and refer for additional services.

Project: Improved access to care for lesbians and transgender people

CDHC recruited a provider to develop initiatives to improve services as well as provide clinical services. Highlights include changing electronic medical records fields so people can choose names and pronouns, changing restroom signage to be inclusive, reviewing and revising internal policies related to reproductive health, training providers and staff to be culturally competent and affirming, and more.

Supporting Health Equity:

Project: Latino Access to Health Care

CDHC provided an annual grant to Casa Latina to provide patient navigation, information and referral, and case management services. CDHC continued the grant when Casa Latina services were embedded in the information and referral program of Community Action of the Pioneer Valley.

Project: Increase Understanding of the Impact of Racism

CDHC funded and helped develop a community dialogues on race series as well as an initiative to get more people of color on more non-profit boards and leadership positions. The United Way of Hampshire County is a partner in this project.

Project: Youth of Color Leadership Development

CDHC provided grant funding to support a regional initiative for youth of color to develop leadership skills through mentoring and activities.

Project: Homeless Young People

CDHC contributed funding to support the renovation of a local property. Formerly homeless young adults now have a place to call home.

Project: Interpreter Services

CDHC provided an annual grant to support interpreter services for patients receiving care at one of the Hilltown Community Health Center locations.

Chronic disease rates and preventive practices:

Program: A Positive Place

CDHC provides confidential, equitable, and integrated medical and social case management and health related support services, emergency assistance, risk assessments/reduction, and housing assistance to increase engagement/retention in care, reduce the rate of transmission, and improve quality of life. Services are provided at A Positive Place, off-site at infectious disease specialist, and in people's homes, jail, hospital, treatment program, nursing home, or other location as needed.

Behavioral Health:

Program: Reducing teen substance abuse

CDHC provided financial support to the SPIFFY Coalition to implement the Prevention Needs Assessment (PNAS) survey. The PNAS assists local substance abuse prevention coalitions to plan programs based on local data on youth behaviors and associated risk and protective factors at the individual, family, school, and community levels. CDHC also participates regularly in SPIFFY meetings, Northampton Prevention Coalition, and the Easthampton Healthy Youth Coalition.

Project: Reduce impact of opioid abuse

CDHC is an active member of the Hampshire Heroin Opioid Prevention and Education (HOPE) Coalition. CDHC developed its own task force which led to a comprehensive plan to address opioid use and opioid use disorder. Highlights include Buprenorphine training for more than 20 providers, support and recovery coach services for pregnant and post-partum women, referrals

for medication assisted treatment, Pre-Manage ED on-line case management, training staff to use opioid related tools such as screening in our new electronic medical record, and more.

Project: Trauma Informed Hampshire County

CDHC contributed funds and staff to a new initiative to bring greater awareness of the roots of trauma, the impact, and ways we can become a trauma informed community. The project held a conference in 2018 that was attended by more than 200 people.

Healthy Eating/Active Living:

Project: Healthy eating/active living

CDHC provided funding to expand school gardens and to integrate healthy food into the nutrition services program as well as education curriculum. CDHC also provided funding for children and older adults to receive fresh fruit in the summer meals program of the community center.

Project: Healthy eating/active living

CDHC provided funding to expand the red bag program to more Northampton elementary schools. Families regularly receive a bag of fruits and vegetables.

Project: Tobacco control

CDHC provided funding to train a health department nurse to provide tobacco cessation interventions in low income housing.

Project: Healthy eating/active living

CDHC provided funding to create a resident-led planning project that resulted in the selection of a mobile market as a pilot project. CDHC provided seed money to help establish the market. In its first summer, the market served low income housing communities in Northampton.

VII. Summary

The CDHC service area of Hampshire and Franklin Counties in Massachusetts continues to experience many of the same prioritized health needs identified in CDHC's 2016 CHNA. Social and economic challenges experienced by the population in the service area contribute to the high rates of chronic conditions and other health conditions identified in this needs assessment. These social and economic factors also contribute to the health inequities observed among priority populations, including children, older adults, Latinos, Blacks, LGBTQI+ youth, people with low incomes, people with mental health and substance use disorders, people involved in the criminal legal system, people experiencing homelessness, and people living with disabilities. Additional data is needed to better understand the needs of these populations in order to reduce inequities. The CDHC service area population continues to experience barriers that make it difficult to access affordable, quality care, some of which are related to the social and economic conditions in the community, and others which relate to the health care system. Mental health and substance use disorders were consistently identified as top health conditions impacting the community, and the inadequacy of the current systems of care to meet the needs of individuals impacted by these disorders arose as an important issue that needs to be addressed. Also prioritized are chronic health outcomes, such as cardiovascular disease, cancer, and diabetes.

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