

Community Health Needs Assessment | 2016

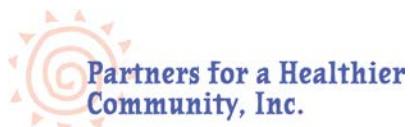
Prepared for

Baystate Noble Hospital

Adopted by the Baystate Health Board of Trustees on Tuesday, November 8, 2016

By

Partners for a Healthier Community
Collaborative for Educational Services
Pioneer Valley Planning Commission



Consultant Team

Lead Consultant

Partners for a Healthier Community (PHC), is the Public Health Institute of Western Massachusetts. Our mission is to build measurably healthier communities with equitable opportunities and resources for all through civic leadership, collaborative partnerships, and policy advocacy. We provide skills, expertise and experience to create successful campaigns and systems to improve health and well-being in the Pioneer Valley. Our efforts focus on activities and policy changes that build on community assets while simultaneously increasing community capacity. Partners for a Healthier Community has a strong track record of supporting coalitions, engaging community members and incorporating public policy advocacy in its work. As a Public Health Institute, we provide “backbone” infrastructure support to the region in a variety of areas, including convening of multi-sector partnerships, design and implementation of population-based health programs, research and program evaluation.

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. We offer expertise and guidance in addressing public health issues using evidence-based strategies and a commitment to primary prevention. We believe local and regional health challenges can be met through primary prevention, health promotion, policy and system changes, and social justice practices. We cultivate skills and bring resources to assist with assessment, data collection, evaluation, strategic planning and training.

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.

Table of Contents

Executive Summary	i
Introduction	1
About Baystate Noble Hospital	1
The Coalition of Western Massachusetts Hospitals.....	1
Community Health Needs Assessment (CHNA).....	2
Methodology for 2016 CHNA	3
Social and Economic Determinants of Health Framework	3
Assessment Methods	3
Prioritization Process.....	4
Community and Stakeholder Engagement	4
Limitations and Information Gaps	5
Hospital Service Area	7
Prioritized Health Needs of the Community	11
I. Community Level Social and Economic Determinants that Impact Health	11
Lack of Resources to Meet Basic Needs	11
Housing Needs	14
Transportation	14
Food Insecurity and Food Deserts.....	15
II. Barriers to Accessing Quality Health Care.....	17
Limited Availability of Providers.....	17
Insurance Related Challenges.....	19
Lack of Transportation	20
Lack of Care Coordination	20
Health Literacy, Language Barriers and Cultural Humility.....	21
III. Health Conditions and Behaviors	23
Chronic Health Conditions	23
Need for Increased Physical Activity and Healthy Diet	30
Mental Health and Substance Use	31
Infant and Perinatal Health Risk Factors.....	36
IV. Vulnerable Populations of Concern.....	37
Community & Hospital Resources to Address Identified Needs	39
Impact of Actions Taken by Hospital Since Last Community Health Needs Assessment	40
Summary	41
References	42
Appendices	A-1

Executive Summary

Introduction and Methods

Baystate Noble Hospital (Baystate Noble) is a 97-bed acute care community hospital providing a broad range of services to the Greater Westfield community. Baystate Noble is able to offer direct access to world-class technology, diagnostics, and specialists as a proud member of the Baystate Health System. Baystate Noble is a part of Baystate Health, Inc. which is the not-for-profit parent corporation of a multi-institutional integrated delivery system which includes the following: Baystate Medical Center, Baystate Franklin Medical Center, Baystate Mary Lane Hospital, Baystate Wing Hospital, Baystate Medical Practices, Baystate Visiting Nurse Association and Hospice, and Baystate Health Foundation. In addition to its 12,500 employees, Baystate Health has 1,500 medical staff, 2,000 nurses, 2,000 students including residents, fellows, and medical, nursing and allied health students, and over 900 volunteers. Together, we passionately work to ensure that our patients have access to exceptional health care, close to home. An ideal combination of “high tech” and “high touch,” a staff of highly trained and compassionate nurses and medical support personnel complements an outstanding medical staff. Services include intensive care, diagnostic imaging, emergency services, cardiopulmonary services and rehab, cancer services, lab and behavioral health.

Baystate Noble is a member of the Coalition of Western Massachusetts Hospitals (“the Coalition”) a partnership between ten non-profit hospitals 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. Baystate Noble joined the Coalition when it joined the Baystate Health System in 2015 and worked in collaboration with the Coalition to conduct this assessment. The assessment was conducted so Baystate Noble can better understand the health needs of the communities it serves and to meet its fiduciary requirement as a tax-exempt hospital.

The assessment focused on Baystate Noble’s service area, which includes nine communities, eight of which are located in the western portion of Hampden County. When identifying the health needs that can be addressed to improve the health of the population, the assessment used the determinants of health framework since it is recognized that these factors contribute substantially to population health. The prioritized health needs identified in the 2016 CHNA include community level social and economic issues that impact health, barriers to accessing quality health care, and specific health conditions and behaviors within the population. The assessment included analysis and synthesis of 1) a variety of social, economic and health data; 2) findings from recent western Massachusetts community health assessment reports; and 3) information from 8 focus groups and 17 key informant interviews, some of which were conducted specifically for Baystate Noble and others which were conducted by other Coalition members and were relevant to this CHNA. Vulnerable populations were identified using a health equity framework with available data.

Information from this CHNA will be used to inform Baystate Noble Hospital's community benefits implementation strategy as well as to inform the Coalition's regional efforts to improve health.

Findings

Below is a summary of the prioritized community health needs identified in the 2016 CHNA.

Community level social and economic determinants that impact health

Social, economic, and community level needs identified in this CHNA include:

- **Lack of resources to meet basic needs** – Many Baystate Noble service area residents struggle with *poverty* and *low levels of income*. Approximately 10% of residents live in poverty. Children are particularly vulnerable with 28% living below the federal poverty level. Low levels of educational attainment among some communities in the service area contribute to *unemployment* and the ability to earn a livable wage. In parts of West Springfield, over 21% of eligible individuals do not have a high school diploma.
- **Housing needs** – *Housing insecurity* is a need that impacts Baystate Noble service area residents. One third of the population is housing cost burdened, with more than 30% of their income going towards housing. A lack of affordable housing leads to increased stress and can often force families to prioritize housing costs over other factors that can influence health, such as purchasing healthy food or medications. In western Massachusetts as a region, many individuals and families face homelessness. In addition, older housing combined with limited resources for maintenance can lead to *poor housing conditions* that negatively impact the health of residents.
- **Transportation** – Regional public health officials interviewed for the 2016 CHNA identified increased transportation options as an overall community need for the region. Individuals who do not own a vehicle face difficulties accessing educational and employment options or participating in community-based programs that promote health, such as exercise and nutrition programs, or other activities that promote social connection.
- **Food insecurity and food deserts** – *Food insecurity* continues to impact the ability of many Baystate Noble service area residents to access to healthy food. Some areas of West Springfield and Westfield have high rates of food insecurity exceeding 15%. In Hampden County, child food insecurity rates are over 50% higher than adults. In addition, parts of West Springfield, Westfield, and Agawam are also considered *food deserts*, which are areas where low-income people have limited access to grocery stores.

Barriers to Accessing Quality Health Care

The lack of affordable and accessible medical care was identified as a priority health need. The following barriers were identified:

- **Limited availability of providers** – Hampden County residents experience challenges accessing care due to the shortage of providers. More than half (54%) of Hampden County residents live in a healthcare professional shortage area. Focus group participants and key informant interviewees overwhelmingly reported a need for increased access to mental health and addiction services for acute, maintenance, and long-term care. A shortage of

dental providers that accept adult MassHealth was identified, as well as insufficient dental service coverage for adults with MassHealth insurance.

- **Insurance related challenges** – Issues related to insurance coverage present barriers to affordable and accessible care. Focus group participants identified the cost of co-pays and some services that are not covered as a barrier to accessing the care and services needed to maintain their health. Key informant interviewees also identified policies for MassHealth that impact availability of providers and services.
- **Lack of transportation** – Transportation to health care services is the most frequently cited barrier in key informant interviews and focus groups for the 2016 CHNA. These challenges relate to both the overall transportation system and public transit.
- **Lack of care coordination** – Increased care coordination is a need in the community. Findings from focus groups and key informant interviews repeatedly highlight the need for more coordinated care delivery, particularly in regards to co-morbid mental health and substance use disorders. Focus group participants and key informant interviewees identified the need for more clinic-community linkages as a means to address substance use concerns.
- **Health literacy, language barriers and cultural humility** – The need for health information to be understandable and accessible was identified in this assessment. Data from focus groups indicate the need for increased *health literacy*, including understanding health information, types of services and how to access them, and how to advocate for oneself in the healthcare system. The need for provider education about how to communicate with patients about medical information also arose. Focus group participants and key informant interviewees identified *language barriers* and noted the need for more bilingual providers and interpreters, as well as the translation of health materials into a wider range of languages. The need for training in *cultural humility* as a means to deliver *culturally sensitive care* was identified as a prioritized health need in this assessment. Public health leaders interviewed for this CHNA called for increased training in this area for health care providers to serve the increasingly diverse needs of community residents.

Health

- **Chronic health conditions** – High rates of *obesity, cardiovascular disease, diabetes, asthma, chronic obstructive pulmonary disease*, and associated morbidities impact Baystate Noble service area residents. Obesity impacts many adults and children in the service area with an estimated 30% of adults in Hampden County that are obese. Childhood obesity rates are as high as 20% in some communities in the service area. Cardiovascular disease (CVD) continues to impact service area residents with heart disease among the leading causes of death in Hampden and Hampshire counties and almost one in four older adults having the disease. Hypertension and high cholesterol, which are strong risk factors for cardiovascular disease, impact more than 30% of residents. Approximately 20% of Hampden County residents have diabetes or pre-diabetes with rates of 16% in West Springfield. Asthma ER visit rates in West Springfield and Westfield are higher than the state, and pediatric asthma rates are high, exceeding 17% among school children in some communities. In West Springfield and Westfield, ER visit rates for chronic obstructive pulmonary disease (COPD) exceed that of the state. Latinos and Blacks are disproportionately impacted by higher rates of asthma and COPD than Whites. Latinos also experience elevated rates of heart disease hospitalizations. Children and youth are particularly impacted by obesity and asthma, and

older adults experience high rates of diabetes, heart disease, hypertension, high cholesterol, and COPD.

- **Need for increased physical activity and healthy diet** - The need for increased *physical activity* and consumption of fresh fruits and vegetables was identified among Baystate Noble service area residents. Low rates of physical activity and healthy eating contribute to high rates of chronic disease and also impact mental health.
- **Mental health and substance use**- *Substance use* and *mental health* were among the top three urgent health needs/problems impacting the area across all focus groups and interviews conducted for this CHNA. The need for more patient education, prevention approaches, and systems changes to provide more integrated timely care was identified. Hospitalization rates for mental health disorders and for substance use are greater than the state in West Springfield and Westfield. The rise in opioid use is of particular concern. Youth, older adults, Latinos and Blacks were identified as vulnerable populations for mental health disorders. Youth and Latinos were also identified as vulnerable populations for substance use disorders.
- **Infant and perinatal health risk factors** - Infant and perinatal health factors impact Baystate Noble service area residents. Needs for increased utilization of *prenatal care* and a decrease in smoking during pregnancy were identified.

Vulnerable Populations

Available data indicate that **children and youth; older adults**; some communities of color, particularly **Latinos and Blacks**; and individuals with **low income** levels, those living in **poverty**, and those who are **homeless** are disproportionately impacted by poor health when compared to the general population in the Baystate Noble service area. **Asian women** experienced disparities in prenatal care entry. Also, qualitative data points to **immigrants, refugees, and veterans**, as vulnerable populations.

Overall, more information is needed to understand the unique factors that impact the health of each of these vulnerable populations.

Summary

The Baystate Noble Hospital service area, consisting of communities primarily located in Hampden County, Massachusetts, experiences a number of priority health needs. 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 disparities observed among vulnerable populations, which include children/youth, older adults, Latinos, Blacks, and Asian Women. Though less data is available, individuals with low income, people living in poverty, those who are homeless, immigrants and refugees, and veterans have been identified as vulnerable populations. Additional data is needed to better understand the needs of these populations in order to reduce inequities. The Baystate Noble service area population continues to experience a number of barriers that make it difficult to access quality health care, some of which are related to the social and economic conditions in the community, and others which relate to the healthcare and insurance system. Service area residents are impacted by high rates of obesity, cardiovascular disease, diabetes, asthma, chronic obstructive pulmonary disease, and associated morbidities. The need for increased

utilization of prenatal care and a decrease in smoking during pregnancy also arose as issues among service area residents. 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. The opioid crisis has emerged as a top issue impacting the health of the community.

Introduction

About Baystate Noble Hospital

Baystate Noble Hospital (referred to as Baystate Noble), located in Westfield, Massachusetts, is a 97-bed acute care community hospital providing a broad range of services to the Greater Westfield community. Baystate Noble is a part of Baystate Health, Inc. which is the not-for-profit parent corporation of a multi-institutional integrated delivery system which includes the following: Baystate Medical Center, Baystate Franklin Medical Center, Baystate Mary Lane Hospital, Baystate Noble Hospital, Baystate Wing Hospital, Baystate Medical Practices, Baystate Visiting Nurse Association and Hospice and Baystate Health Foundation. In addition to its 12,500 employees, Baystate Health has 1,500 medical staff, 2,000 nurses, 2,000 students including residents, fellows, and medical, nursing and allied health students, and over 900 volunteers. Baystate Noble is able to offer direct access to world-class technology, diagnostics, and specialists as a proud member of Baystate Health. Together, we passionately work to ensure that our patients have access to exceptional health care, close to home. An ideal combination of "high tech" and "high touch," a staff of highly trained and compassionate nurses and medical support personnel complements an outstanding medical staff. Services include intensive care, diagnostic imaging, emergency services, cardiopulmonary services and rehab, cancer services, lab and behavioral health.

The **Mission** of Baystate Health is to improve the health of the people in our communities every day with quality and compassion.

The **Community Benefit Mission** of Baystate Health is to reduce health disparities, promote community wellness and improve access to care for vulnerable populations.

The Coalition of Western Massachusetts Hospitals

Baystate Noble Hospital is a member of the Coalition of Western Massachusetts Hospitals (Coalition). The Coalition is a partnership between ten non-profit hospitals/insurer in western Massachusetts: Baystate Medical Center, Baystate Franklin Medical Center, Baystate Mary Lane Hospital, Baystate Noble Hospital, Baystate Wing Hospital, Cooley Dickinson Hospital, Holyoke Medical Center, Mercy Medical Center (a member of Sisters of Providence Health System), 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 when seven western Massachusetts hospitals joined together to share resources and work in partnership to conduct their community health needs assessments (CHNA) and address regional needs. The Coalition has since expanded to ten members and is currently conducting collaborative work to address mental health needs in the region. Baystate Noble joined the Coalition when it joined Baystate Health in 2015.

Community Health Needs Assessment (CHNA)

This is the first community health needs assessment (CHNA) conducted by Baystate Noble. Improving the health of 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 2012-2013. Integral to this needs assessment was the participation and support of community leaders and representatives who provided input through steering committee participation, a community survey, stakeholder interviews and focus groups. Based on the findings of the CHNA, and as required by the PPACA, the hospitals developed community benefits implementation strategies to address select prioritized needs.

The 2016 CHNAs conducted by Coalition members build on the 2013 Coalition CHNA process that included community input and participation in the CHNA design and implementation processes. Findings from Coalition member CHNAs will be used to identify regional needs and corresponding strategies to address these needs.

The 2016 CHNA was conducted so that Baystate Noble can better understand the health needs of the community it serves and to meet Baystate Noble's fiduciary requirement as a tax-exempt hospital. 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." Information from this CHNA will be used to develop a community benefits implementation strategy and to identify regional needs and areas of action to address needs.

Methodology for 2016 CHNA

Social and Economic Determinants of Health Framework

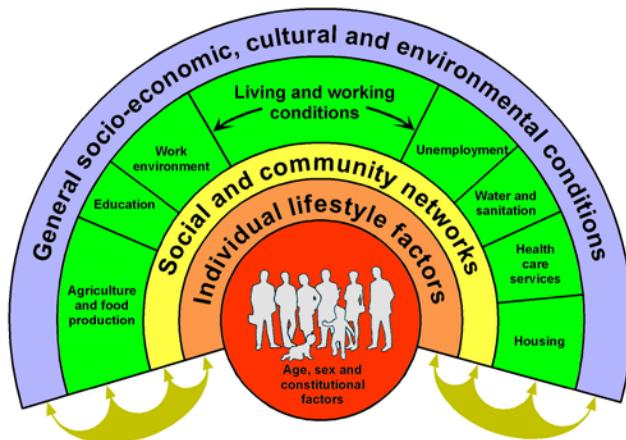
The 2016 CHNA was conducted using a **determinant of health framework** as it is recognized that social and economic determinants of health contribute substantially to population health. It has been estimated that less than a third of our health is influenced by our genetics or biology¹. Our health is largely determined by the social, economic, cultural, and physical environments that we live in and the healthcare we receive (Figure 1.).

Among these “modifiable” factors that impact health, social and economic factors are estimated to have the greatest impact. The County Health Rankings model (Figure 2), developed by the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, estimates how much these modifiable factors contribute to health, based on reviews of the scientific literature and a synthesis of data from a number of national sources. 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**. According to the County Health Rankings, Hampden County ranked last out of 14 counties in the state for health outcomes and health factors (Appendix V).²

Assessment Methods

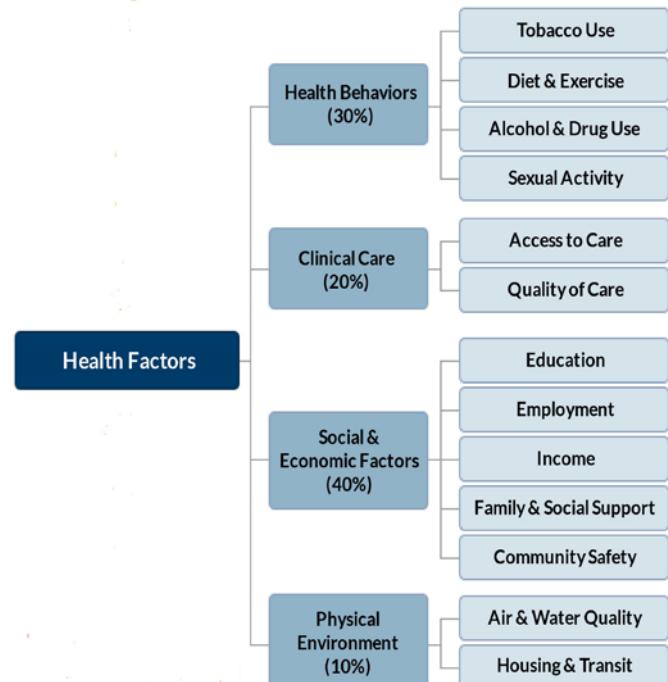
The primary goals of this CHNA were to identify prioritized community health needs for the residents served by Baystate Noble Hospital, and to the extent possible, identify

Figure 1. Determinants of Health



Source: Dahlgren & Whitehead, 1993

Figure 2. County Health Rankings Model - Health Factors



Source: County Health Rankings

potential areas of action. The prioritized health needs identified in this CHNA include **community level social and economic determinants that impact health, barriers to accessing quality health care, and specific health conditions and behaviors** within the population. Assessment methods included:

- 1) analysis of social, economic and health **quantitative data** from Massachusetts Department of Public Health, the U.S Census Bureau, the Centers for Disease Control and Prevention [CDC] Behavioral Risk Factor Surveillance System [BRFSS], the County Health Ranking Reports, Community Commons, and a variety of other data sources;
- 2) analysis of one (1) **focus group** and four (4) **key informant interviews** conducted specifically for Baystate Noble members (Appendix II);
- 3) analysis of findings from an additional seven (7) **focus groups** and thirteen (13) **key informant interviews** conducted for other Coalition members and considered relevant to this CHNA (Appendix II);
- 4) review of seven (7) existing assessment reports published since 2013 that were completed by community and regional agencies serving the western Massachusetts region and Westfield.

The assessment focused on county-level and community-level data as available. In some instances, data constraints related to accessibility and availability limited analyses to highlighted communities located within the service area and chosen by Baystate Noble Hospital. In these instances, analyses focused on Westfield and West Springfield. Other communities were included as data was available and analysis indicated an identified health need for that community.

To the extent possible given data and resource constraints, vulnerable populations were identified using information from focus groups and interviews as well as quantitative data stratified (or broken down) by race/ethnicity and age with a focus on children/youth and older adults.

Prioritization Process

A systematic process was conducted to develop a list of prioritized community health needs. Community level social and economic determinant of health factor related needs and access to care needs were assessed using quantitative and qualitative data gathered for this CHNA. Health conditions were identified based on consideration of the following: magnitude of impact (low, moderate, high), severity of impact (low, moderate, high), populations impacted (including vulnerable populations), and rates compared to a referent (generally the state rate). Prioritized health needs were those that had the greatest combined magnitude and severity or that disproportionately impacted vulnerable populations in the community.

Community and Stakeholder Engagement

The input of the community and other important regional and local stakeholders was prioritized by the Coalition as an important part of the 2016 CHNA process. Below are the primary mechanisms for community and stakeholder engagement (see Appendix I for list of community representatives and other stakeholders included in process):

- A **CHNA Steering Committee** was formed that included representatives from each hospital/insurer Coalition member as well as public health and community stakeholders from

each hospital service area. Stakeholders on the Steering Committee included local and regional public health and health department representatives; representatives from local and regional organizations serving or representing medically underserved, low-income or minority populations; and individuals from organizations that represented the broad interests of the community. When identifying community and public health representatives to participate, a stakeholder analysis was conducted by the Coalition and Consultants to ensure geographic, sector (e.g. schools, community service organizations, healthcare providers, public health, and housing) and racial/ethnic diversity of community representatives. By including these stakeholders on the Steering Committee, the community and public health representatives had input on the CHNA process used to identify and prioritize community health needs, CHNA findings, and dissemination of information. Assessment methods and findings were modified based on the Steering Committee feedback. The Steering Committee met monthly from October 2015 – June 2016.

- **Key informant interviews** and **focus groups** were conducted to both gather information that was utilized 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 organizational leaders that represent the broad interests of the community or that serve medically underserved, low-income or communities of color in the service area. Interviews with the local and regional public health officials were used to identify current and emerging high priority health areas and healthcare and community factors that contribute to health needs. Focus group participants included individuals representing the broad interests of the community, including community organizational representatives, vulnerable population community members (low-income, people of color, etc.), and other community stakeholders. Topics included: maternal and child health, mental health and substance use, behavioral health and emergency department care, and linkages to faith-based communities. Key informant interviews and focus groups were conducted from February 2016 – April 2016.
- A **preliminary CHNA findings review meeting** was held with hospital and community representatives to vet findings and obtain input on whether findings resonated with their understanding of the community and whether any important areas were missing. Prioritized health needs and presentation of data were revised based on feedback from this meeting.
- A **community listening session** was held to vet the revised list of prioritized health needs with community members and modifications were made based on findings from this session. At this session, attendees also provided information on existing resources in the community to address prioritized health needs.

Limitations and Information Gaps

The assessment focused on community determinant areas for which data was available. Given time, resource and data availability limitations, our analysis was not able to examine every health and community issue. Much of the quantitative data gathered for this report was provided by the Massachusetts Department of Public Health (MDPH) as part of a pilot effort to provide data for community health needs assessments. Challenges were experienced as this was their first effort to compile this data across multiple divisions in the short timeframe needed for this assessment. MDPH was very supportive in pulling together supplemental data, and this experience will inform the

continued development of data for future CHNAs. The assessment is based on the best available data given these time and resource constraints.

This assessment utilized both 2012 and 2013 age-adjusted hospitalization and emergency room (ER) data from MDPH. This data was available at the community level if counts were 11 or higher. MDPH suppressed data for counts less than 11 because of data instability and confidentiality concerns. The 2012 data included information on highlighted communities (Westfield and West Springfield), counties, and the state. The 2013 dataset included data for Hampden County and communities within Baystate Noble's service area, unless it was suppressed. 2013 data was used to identify communities with high rates within the service area. Rates presented for small communities should be interpreted with the understanding that estimates for these communities have wide confidence intervals and the potential to vary widely. Hospitalization and ER rates are based on the number of hospitalizations and ER visits reported to the state. They may include an individual utilizing these healthcare services on multiple instances within the timeframe examined.

Much of the social and economic data was obtained through Community Commons (CC), which is an online needs assessment tool that provides up-to-date data from a number of federal and non-profit data sources. The tool allows for customized data for a hospital service area based on county or zip code. Baystate Noble's hospital service area was defined by zip code, and zip codes do not always align with community borders (e.g. some zip codes cross town/city borders). As a result, the aggregate data from the hospital service area may differ somewhat slightly than the service area defined by community borders.

Limited data was available to assess and identify health needs among some vulnerable populations; however, more data is needed. We have included emergent health needs that were identified primarily through qualitative data, though additional data may be needed to better understand the impact of the need or potential actions to address the need.

Hospital Service Area

The service area for Baystate Noble Hospital includes nine communities, eight of which are located in the western portion of Hampden County (Table 1). The total population of the service area is almost 100,000 people, and a majority of this population lives in the cities of West Springfield and Westfield. There is a mix of rural and urban populations as defined by the U.S. Census Bureau (Figure 3). Urban areas consist of census tracts and/or blocks that meets the minimum population density requirement (2,500-49,999 for urban clusters and over 50,000 for urbanized areas) or is adjacent and meet additional criteria. The population is densest surrounding Westfield, West Springfield, and Agawam (CC, US Census Bureau, Decennial Census 2010). The median age of these cities hovers near the county median age of 39 (Table 2). Racial and ethnic diversity is more common in the urban communities, where over 12% of the population identifies as Black or African American, American Indian, Asian, or some other race. Approximately 9% of the service area's population is Hispanic or Latino, and there has been a recent surge in immigrants from Asia and the Middle East to both West Springfield and Westfield. The Pioneer Valley Transit Authority connects three of the communities to the Springfield metropolitan area to the east, and to the hospital itself. Paratransit service is also available for people with disabilities within $\frac{3}{4}$ mile of a fixed route to facilitate access to medical care.

Annual per capita income in the service area exceeds the county average by about \$3,000, and the percentage of those who pay more than 30% of their income for housing costs is below the county rate by more than 4%. The overall poverty rate for this service area is less than 10% – almost half of the county rate. Child poverty, however, is slightly higher than the county rate of 27%. The population has high rates of education, with over 90% having a high school diploma. The percent of the population with a bachelor's degree or higher is slightly higher than the county rate of 26%. The area's 2015 unemployment rate of 5% is comparable to the county unemployment rate (Massachusetts EOLWD). The unemployment rate is based on the number of people who are either working or actively seeking work. Major employers in the area include the service, wholesale and retail trade, and health care industries.³

The general sociodemographic characteristics of Baystate Noble's service area are provided in Table 2.

Table 1. Communities in Baystate Noble Hospital Service Area

Community	2014 Population Estimate
Hampden County	
Agawam*	28,772
Blandford	1,255
Chester	1,365
Granville	1,620
Russell**	1,787
Southwick	9,689
Westfield	41,608
West Springfield	28,627
Hampshire County	
Huntington	2,179
Total Service Area	116,902

Source: Population Division, U.S. Census Bureau

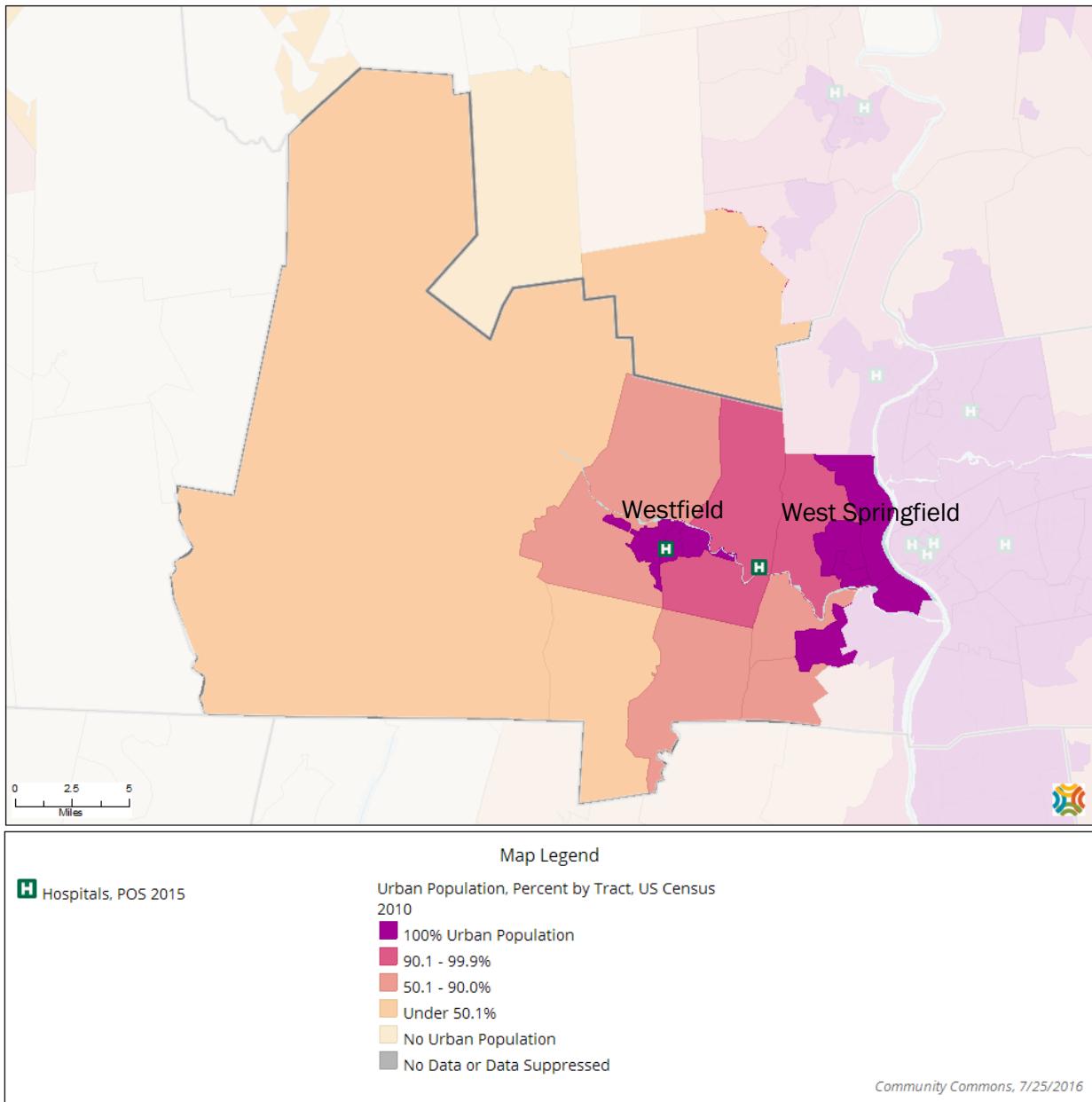
* Only the Feeding Hills section of Agawam is part of service area

**Woronoco is a part of service area and included in list above as part of Russell

Table 2. Sociodemographic Characteristics of Baystate Noble Hospital Service Area

Sociodemographic Characteristic	Baystate Noble Service Area*	Hampden County	Westfield	West Springfield
Total population	116,902	466,447	41,371	28,554
Age				
Median age (years)	NA	38.7	36.8	39.6
Under 5	5.2%	5.9%	5.5%	5.8%
5 to 17	16.8%	17.1%	15.4%	15.6%
18 to 64	64.3%	62.3%	65.1%	63.2%
65 and over	14.7%	14.7%	14.1%	15.3%
Race and Ethnicity				
One race	97.7%	97.7%	98.3%	98.0%
White	90.3%	78.2%	89.9%	85.0%
Black or African American	2.0%	8.7%	2.1%	3.1%
American Indian and Alaska Native	0.5%	0.3%	0.0%	1.2%
Asian	2.1%	2.1%	2.9%	4.2%
Native Hawaiian and Other Pacific Islander	0.1%	0.0%	0.2%	0.0%
Some other race	2.7%	8.4%	3.2%	4.5%
Two or more races	1.7%	2.3%	1.7%	2.0%
Hispanic or Latino origin (of any race)	7.1%	22.1%	8.5%	9.7%
White, not Hispanic or Latino	NA	66.1%	84.7%	79.8%
Language Spoken at Home (population over 5)				
Speak language other than English at home	NA	25.0%	14.4%	23.6%
Educational Attainment				
Population 25 years and over				
Less than high school graduate	9.8%	15.9%	9.9%	12.4%
High school graduate (includes equivalency)	NA	30.6%	29.0%	29.9%
Some college or associate's degree	NA	28.1%	30.8%	29.3%
Bachelor's degree or Higher	NA	25.5%	30.2%	28.5%
Income				
Median Income - Individual	NA	\$25,416	\$27,570	\$26,872

Source: U.S. Census, American Community Survey (ACS), 2010-2014; *CC, ACS 2010-2014

Figure 3. Urban Population in the Baystate Noble Hospital Service Area

Source: CC, U.S. Census Bureau, Decennial Census, 2010

Prioritized Health Needs of the Community

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

I. Community Level Social and Economic Determinants that Impact Health

Below are the community level social and economic determinants of health that impact Baystate Noble's service area.

Lack of Resources to Meet Basic Needs

In Baystate Noble's service area, many residents struggle with **poverty** and **low levels of income**. The connections between poor health and poverty, low levels of income, and limited access to resources are well established. Low-income individuals are more likely to be negatively impacted by the chronic stress associated with challenges in securing basic necessities such as housing, food, and access to physical activity.

The median family income of \$61,898 in Hampden County is almost 30% lower than that of the state (Table 3). Westfield and West Springfield have even lower rates with the median family income under \$45,000, which is just over half of the state rate. Similarly, rates of unemployment in Hampden County are 40% higher than the state.

Approximately 10% of residents in the Baystate Noble service area live at or below the federal poverty level with pockets of high poverty in parts of West Springfield, Agawam, and Westfield (Figure 4). The federal poverty level (FPL) is extremely low and omits a sizeable portion of the population that is struggling economically. The percent of the population living below 200% of the federal poverty level offers a better glimpse of individuals who are low income and may lack resources to meet basic needs. In particular, families that live below 200% of the poverty line likely do not have the resources they need to be economically self-sufficient. An analysis done by the Crittendon Women's Union found that the income needed for a family with 2 adults and 2 children in Hampden County to be self-sufficient in 2010 was \$56,347,⁴ which was higher than the 2010 200% poverty level of \$44,226 for a family of four.⁵ In the Baystate Noble service area, approximately 27% of the population lives in households with income at or below 200% of the federal poverty level.

Children are disproportionately impacted by poverty in the Baystate Noble service area with 28% of children living below the federal poverty level compared to 15% statewide. Child poverty is concentrated in areas of Westfield and West Springfield.

Across all interviews and focus groups conducted for the coalition for the 2016 CHNA, poverty was identified as a factor that impacts overall health, access to health care, and access to program and services that promote health.

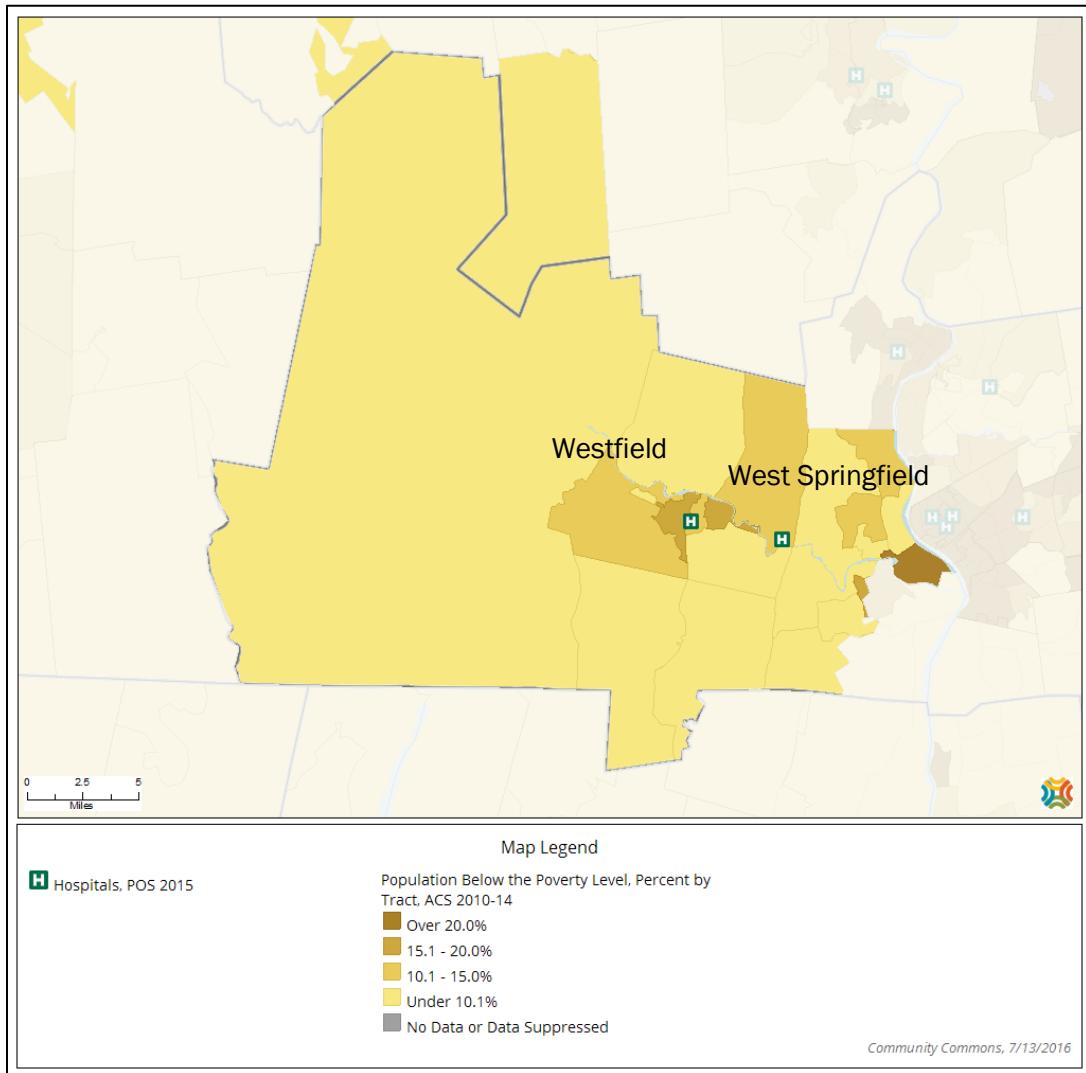
Table 3. Socioeconomic Factors

	Baystate Noble Service Area	Hampden County	Massachusetts
Median Family Income*	n/a	\$61,898	\$86,132
Unemployment**	5.2%	5.2%	3.9%
Poverty			
Population living below federal poverty level*	9.7%	17.1%	11.6%
Population living below 200% of Federal Poverty Level*	27.1%	36.9%	25.0%
Children living below federal poverty level*	28.1%	27.4%	15.1%
Children eligible for free or reduced lunch*	40.5%	59.8%	38.3%
No high school diploma*	9.8%	15.9%	10.5%

Sources: *CC, 2016, U.S. Census Bureau, 2010-2014; no high school diploma among adults age 25 and older

**CC, 2016, US Department of Labor, Bureau of Labor Statistics, April 2016

Figure 4. Baystate Noble Hospital Service Area Poverty Rates



Source: CC, 2016, U.S. Census Bureau, 2010-2014; poverty is below federal poverty level

Low levels of educational attainment also contribute to availability of resources to meet basic needs. Levels of education are strongly correlated with both employment status and the ability to earn a livable wage. Approximately 10% of Baystate Noble service area residents age 25 and older do not have a high school diploma. Rates in parts of Feeding Hills, Westfield, and Southwick exceed 11%, and in parts of West Springfield over 21% of eligible individuals do not have a high school diploma (CC, U.S. Census Bureau, ACS, 2010-2014).

Vulnerable Populations

Children and populations of color are disproportionately impacted by poor socioeconomic status in the Baystate Noble service area.

- Almost 41% of **children** living in the Baystate Noble service area qualify for free or reduced lunch and 28% live below the poverty level (CC, NCES 2013-14).

- Nearly a third of **Latinos** (31%) and **Asians** (30%) and a fifth of **Blacks** (20%) in the Baystate Noble service area live below the federal poverty level compared to only 8% of Whites (CC, ACS, 2010-2014).

Housing Needs

Housing insecurity is an issue that impacts Baystate Noble service area residents. In key informant interviews, regional public health officials identified access to affordable housing as a critical community need. Over a third of the population in the Baystate Noble service area is housing cost burdened, with high rates concentrated in parts of Huntington, Westfield, West Springfield, and Agawam (CC, ACS, 2010-2014). Among renters in Hampden County, over 50% are housing cost burdened (CC, U.S. Census Bureau, 2010-2014). Housing cost burden is defined as more than 30% of income going towards housing.

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. Regional public health officials and Baystate Noble key informant interviewees identified homeless individuals as a vulnerable population of concern. Despite a decrease in overall homelessness in western Massachusetts in recent years, rates of homeless families have increased and are higher than state and national rates.⁶ From 2013 to 2015, the number of homeless families in western Massachusetts increased from 631 to 909 families. In 2015, there were 339 homeless youth (age 24 and under) in western Massachusetts, and 280 of these youth identified as parents.⁷ The number of homeless youth is likely an underestimate since homeless youth without children tend to avoid traditional shelters and services.⁸

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) that affect asthma and other respiratory illnesses; exposure to environmental contaminants such as lead paint, asbestos, and lead pipes; and safety and accessibility issues for children, elderly, or disabled populations. Hampden County has a large older housing stock with 30% of housing built before 1940. Rates are similar in Westfield and West Springfield. In Hampden County, rates are even higher among renter-occupied housing units, with over 40% of units built before 1940 (U.S. Census Bureau, 2010-2014).

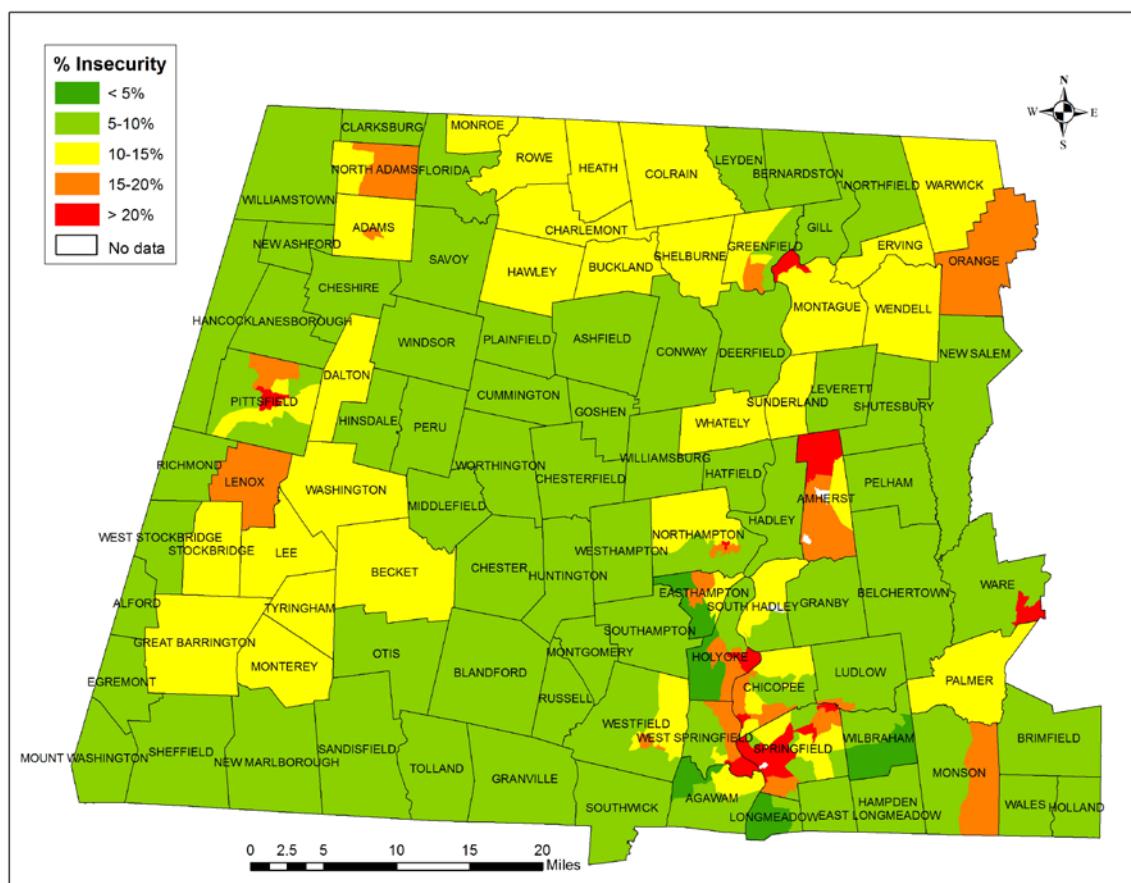
Transportation

Regional public health officials interviewed for the 2016 CHNA identified increased transportation options as an overall community need for the region. Individuals who do not own a vehicle face difficulties accessing educational and employment options; community-based programs that promote health, such as exercise and nutrition programs; and other activities that promote social connection. In addition, lack of accessible transportation has a great impact on health for low-income or elderly populations living in rural areas, where public transportation may have limited routes and frequency of service. In Westfield and West Springfield, 8–10% of households do not have vehicles (U.S. Census Bureau 2010-2014).

Food Insecurity and Food Deserts

Food insecurity impacts the ability of many Baystate Noble service area residents to access healthy food. Eating nutritious food is good for promoting overall health and is important for managing many chronic health conditions. However, not all individuals and communities have equal access to healthy food. Food insecurity is a measure of inadequate or uncertain access to food, including healthy food, and is estimated based on social and economic characteristics such as income. In Hampden County, 12% of residents are estimated to be food insecure. The food insecurity rate among children is even higher with 19% of children estimated to be food insecure in Hampden County.⁹ As can be seen in a map of food insecure census tracts in western Massachusetts (Figure 5), portions of West Springfield and Westfield have rates of food insecurity greater than 15%.

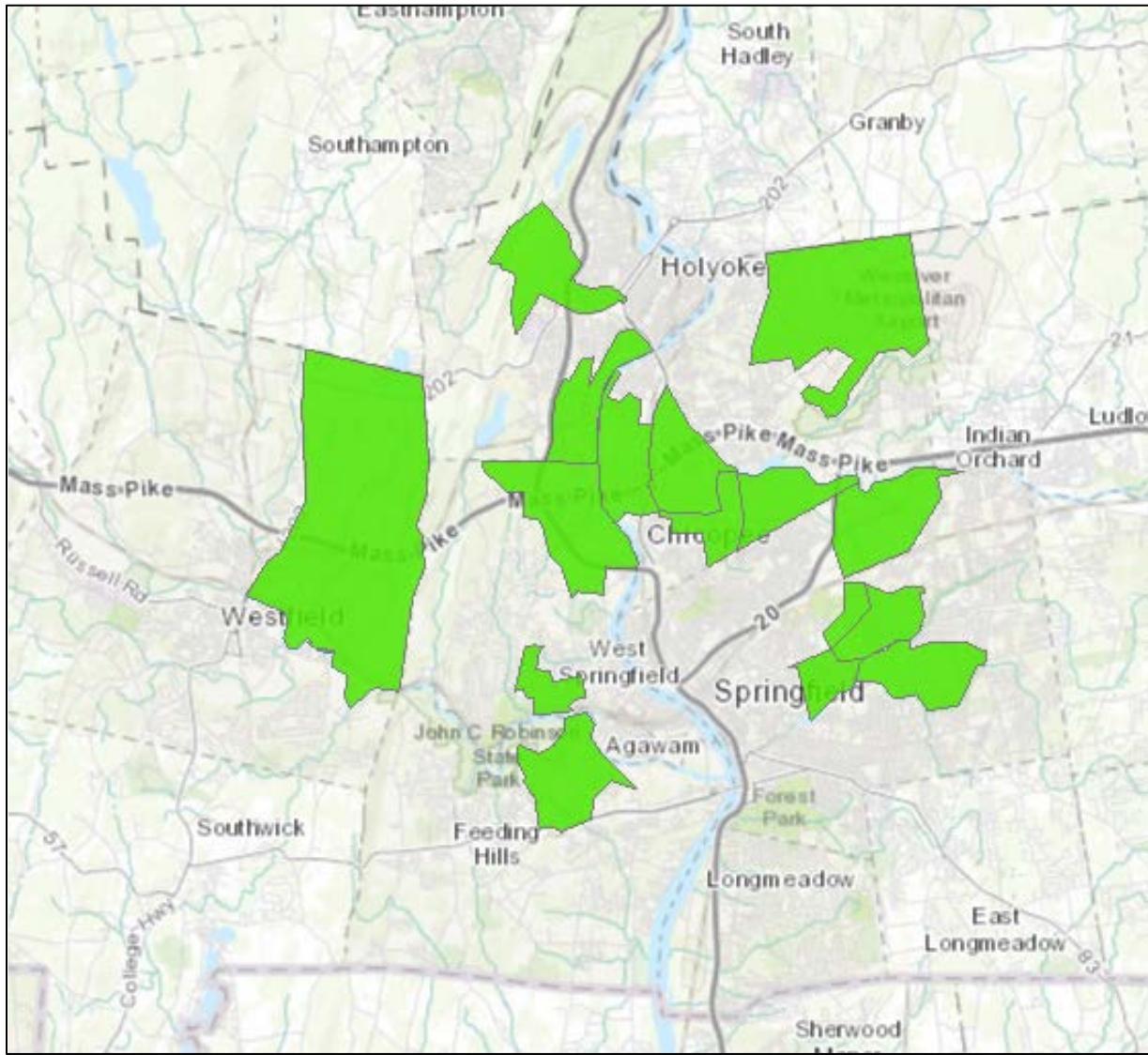
Figure 5. Food Insecurity Rates in Western Massachusetts



Data source: Gunderson, C., A. Satoh, A. Dewey, M. Kato & E. Engelhard. Map the Meal Gap 2015: Food Insecurity and Child Food Insecurity Estimates at the County Level. Feeding America, 2015. Feeding America. Source: Provided courtesy of the Food Bank of Western Massachusetts. Mapping: Provided courtesy of Baystate Medical Center Biostatistics and Epidemiology Core

The Baystate Noble service area also has several **food deserts**. Low-income individuals are more likely to live in food deserts, which are areas where grocery stores and other options to purchase healthy foods are far away and difficult to access for people that either do not own a vehicle or where public transportation is limited. Figure 6 highlights in green the parts of West Springfield, Westfield, and Agawam that the USDA has identified as food deserts.

Figure 6. USDA Food Atlas Food Desert Areas in the Baystate Noble Hospital Service Area



Source: USDA Food Access Research Atlas; accessed 5/18/16

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

II. Barriers to Accessing Quality Health Care

The lack of affordable and accessible medical care is a priority health need. Access to healthcare was also identified as a need in the healthcare needs assessment, *Health and Community: A Healthcare Needs Assessment for Westfield, Massachusetts*.

Limited Availability of Providers

Hampden County residents experience challenges accessing care due to the shortage of providers. Lack of primary care providers and specialty care providers pose a significant challenge to individuals needing health care services. Accessibility to an already limited number of providers can be impacted by community location (rural or urban), and/or insurance restrictions. Low-income individuals are more negatively impacted by insurance related issues of access.

Fifty-four percent of Hampden County residents live in a healthcare professional shortage area, compared to 15% for Massachusetts residents overall (CC, Health Resources and Services Administration, March 2015). In addition, the U.S. Health Resources and Services Administration has designated parts of the Baystate Noble service area as a medically underserved area (Figure 7). Medically underserved status is based on availability of primary care providers, infant mortality rate, poverty rate and proportion of older adults. Medically underserved areas are based on the overall population, whereas medically underserved populations are based on economic, cultural, or linguistic barriers. A Governor's exception refers to a medically underserved area or population designated at the request of a Governor based on documented unusual local conditions and barriers to accessing personal health services.¹⁰ Baystate Noble service area residents have less access than the state to primary care providers, with 73 primary care physicians per 100,000 people compared to 106 per 100,000 statewide (CC, HRSA, 2013).

"Patients can't get follow-up treatment in the community after they're hospitalized. They have to wait sometimes 2 months for an outpatient appointment."

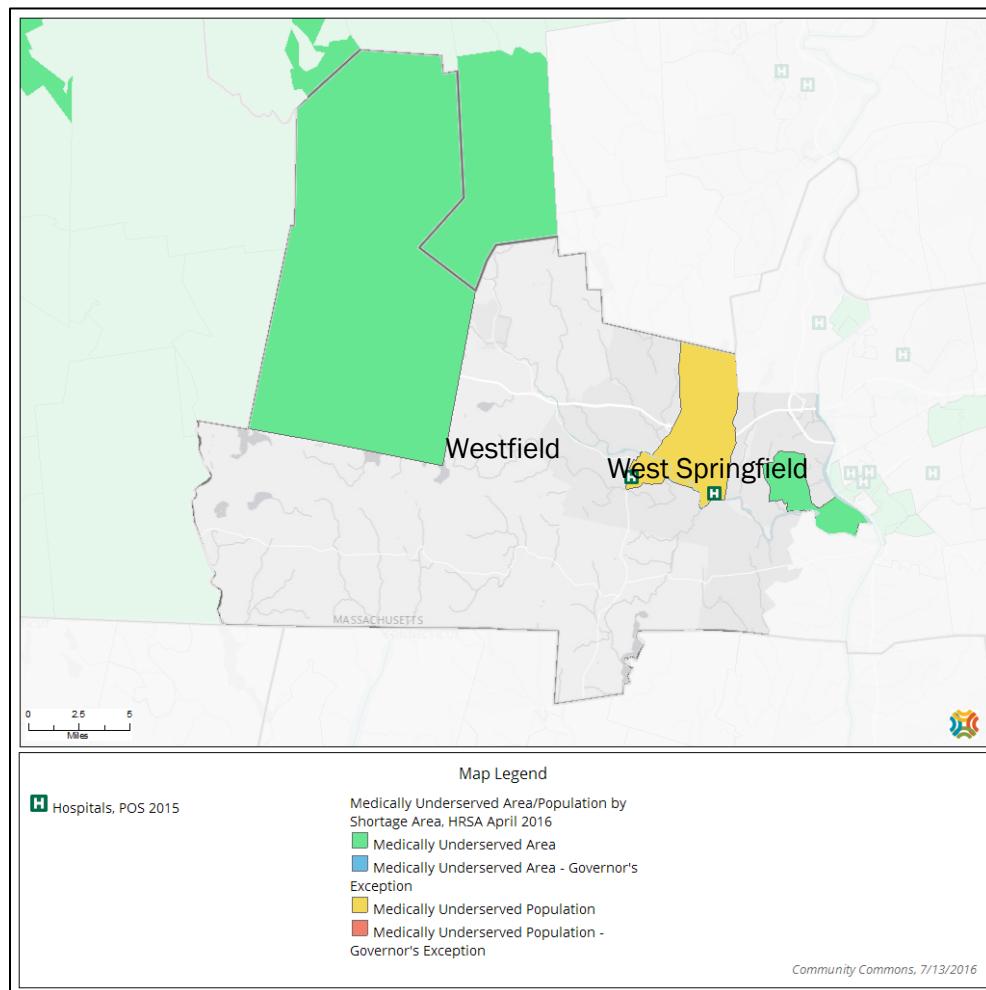
- Key Informant Interviewee, Baystate Noble

Focus group participants and key informant interviewees overwhelmingly reported a need for increased access for both mental health and substance abuse services for acute, maintenance, and long-term care, despite greater access to mental health providers for Hampden County residents as compared to the state (160:1 vs. 200:1 in MA). In addition, key informant interviewees at Baystate Noble Hospital noted overall shortages of providers treating mental health and substance use conditions, and significant challenges for youth needing access to psychiatric care providers that accept MassHealth and other state-funded insurance programs.

Increased access to dental services for adults on MassHealth was identified as a need. According to a member of the Massachusetts Oral Health Advocacy Taskforce, adults on MassHealth experience challenges accessing dental services because of the shortage of dental providers accepting

MassHealth and insufficient coverage of services. Although access to pediatric dentists has improved over the years, access to dental services remains a challenge for adults.

Figure 7. Medically Underserved Areas/Populations in the Baystate Noble Hospital Service Area



Source: CC, HRSA 2015

Insurance Related Challenges

Issues related to insurance coverage present barriers to affordable and accessible care. Findings from focus groups and key informant interviews conducted with health care providers and administrators for Baystate Noble and the Coalition identified multiple systemic barriers imposed by the health insurance system. These obstacles directly impact adequate treatment of multiple health concerns, most notably mental health and substance abuse conditions. Issues identified include:

- gaps in service coverage for mental health and substance abuse treatment between public and private insurance;
- reimbursement policies that silo care;
- the limited number of providers that accept patients with public insurance due to bureaucratic requirements (i.e. paperwork to become an approved provider in addition to low reimbursement rates). This lack of MassHealth providers was most significant in rural communities across western Massachusetts.

Findings from focus groups conducted with residents noted the high cost of deductibles and co-pays for medication and services as barriers to accessing the care and services they need, as well as general frustrations with navigating the health insurance system.

In addition, both health care administrators and community residents interviewed for this CHNA identified the “three strikes and you’re out” guidelines for Medicaid patients as an obstacle. Behavioral health patients who miss three consecutive appointments have their cases closed. Similarly, MassHealth patients reported that if they miss three consecutive appointments with a primary care provider, they are required to find a new provider. It is not clear if this is due to MassHealth policy or primary care provider policy. This is an additional challenge in areas where providers that accept Medicaid are limited. Key informant interviewees identified multiple barriers that can contribute to missing three consecutive appointments:

- lack of transportation;
- financial concerns;
- the impacts of a health condition, such as a physical disability or mental health disorder, that may make it difficult for a person to leave their home.

“The way health insurance is going these days, with high deductibles, is causing people to avoid needed healthcare.”

- Key Informant Interviewee, Health Care Administrator, Baystate Noble Hospital

“My son has been on his medication for 13 years, and now they are saying that they cannot cover it. They offer an alternative, but we have already done all of the alternatives- Why step backwards?”

-Focus Group Participant, Access to Health Care for Low-Income Individuals

Lack of Transportation

In key informant interviews for Baystate Noble and with local and regional public health officials for the Coalition, transportation was the most frequently cited barrier to care. Transportation barriers include challenges with the overall transportation infrastructure in the region and with public transit. Public transit challenges identified in previous assessments include limitations in service options resulting in lengthy wait/trip time and limited access.¹¹ The Pioneer Valley Transit Authority has made some progress addressing needs cited by transit customers resulting in increases in ridership, (up 18% since 2010), however, challenges remain.

Lack of Care Coordination

Lack of care coordination is a priority health need in the Baystate Noble service area. Care coordination refers to the coordination of patient care and information sharing among all health care and other service providers to improve health. In the 2016 CHNA, focus groups and key informant interviews from Baystate Noble and across the Coalition identified important areas where care administered by multiple providers continues to be uncoordinated and results in challenges and can negatively impact health. Examples include:

- lack of coordination in managing the overlap between mental health and substance use;
- the need for more linkages between hospitals, community organizations, and emergency responders to better manage the opioid crisis;
- an increasing need for education and capacity for primary care providers to be better equipped to manage mental health and substance abuse concerns within routine care provision.

Focus group participants and key informant interviewees identified a need for stronger **clinic-community linkages** as a means to better address substance abuse concerns. Baystate Noble Hospital focus group participants cited the model of aftercare used by Westfield State that integrates an individual, their family, their provider, and the school to ensure continuity of care. Baystate Noble Hospital key informant interviewees also called for collaborations with local schools to promote substance abuse prevention education, as well as connecting with faith-based organizations, community and peer-run support groups as a means to enhance care coordination.

"We need comprehensive prevention work in the schools. It has been embraced in a patchwork fashion.

- Key Informant Interviewee, Regional Public Health Official

Health Literacy, Language Barriers and Cultural Humility

The need for health information to be understandable, accessible, and provided with cultural humility was identified as a regional need in this assessment.

Health literacy is defined by the CDC as the capacity for an individual to find, “communicate, process, and understand basic health information and services to make appropriate health decisions.”¹² Data from the 17 key informant interviews conducted with regional public health officials as well as Baystate Noble administrators and staff illustrate the need for increased health literacy, including:

- education about health information, types of services, and how to access them;
- education for patients and their families about how to advocate for themselves to ensure they are getting the information and services they need.

Findings from focus groups conducted for the Coalition identified a need for both patient and provider education to ensure that patients understand what they are being told during a clinical encounter. This includes:

- giving them time to process information;
- asking if they understand what they are being told;
- using less medical jargon.

Language barriers can create multiple challenges for both patients and health care providers. Increasing availability of interpreters as well as translation of health material are specific actions that health care institutions can help to address this barrier. Key informant interviewees reported a need for more bilingual providers, interpreters, and health materials translated in a wider range of languages. This is due to the growing refugee, immigrant and migrant worker populations, and the increasingly diverse linguistic population in the Westfield and West Springfield areas. In Hampden County, a quarter of the population speaks a language other than English at home, and 6% of Hampden County residents live in linguistically isolated households (U.S. Census 2010-2014). Compared to Hampden County, fewer households in the Baystate Noble service area are linguistically isolated (3%); however, parts of Westfield and West Springfield have rates of nearly 12% and 19%, respectively (CC, US Census 2010-2014). Linguistic isolation is defined by the U.S. Census Bureau as a household in which all members older than age 14 speak a non-English language and have difficulty with English. Baystate Noble interviewees and focus group participants specifically identified the need for increased translation services to support Turkish, Russian, and Nepalese patients.

Need for Cultural Humility

The need for culturally sensitive care was identified as a prioritized health need in this assessment. Increased training in cultural humility as a means to deliver more culturally sensitive care was identified as a prioritized health need for this region in this assessment. Cultural sensitivity and humility refer to a commitment among health care providers to self-reflection and evaluation in order to reduce the power imbalance between patients and providers, and to the development of health care partnerships that are based on mutual respect and equality.¹³

2016 CHNA interviews with regional public health leaders identified cultural and language differences between the community and providers as a gap in service. They all called for increased training for health care providers in the area. Participants in focus groups conducted for the Coalition noted that cultural sensitivity is not limited to a racial or ethnic culture, but also includes care for often stigmatized groups, such as LGBTQ individuals, veterans, and people with mental health or substance use issues, homeless individuals, and ex-offenders. Focus group participants also noted that in some cultures, asking providers a question is seen as disrespectful. In addition, findings from a focus group conducted for the Coalition highlighted the need for more community liaisons or community health workers (CHWs) to address issues of access, as well as care coordination, health literacy, and language and cultural barriers.

"I tell people I'm a veteran and they assume I'm going to have an episode and go off."

- Focus Group Participant, Health Care Needs of Veterans

III. Health Conditions and Behaviors

This section focuses on the health conditions and behaviors that have the largest impact on the communities served by Baystate Noble Hospital. Data is summarized for each condition or behavior included. See Appendix III for detailed hospitalization (overall and by race/ethnicity) and prevalence data as available for highlighted communities in the Baystate Noble service area.

As discussed in limitations, hospitalization and ER data for small communities should be interpreted with the understanding that they have wide confidence intervals and estimates can vary widely.

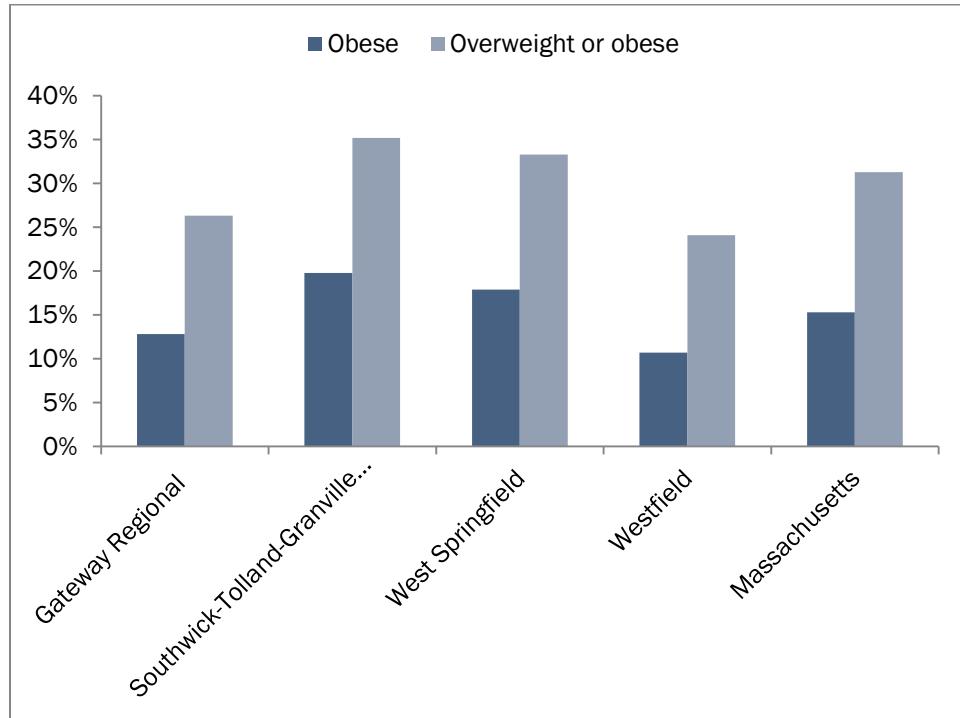
Chronic Health Conditions

Chronic health conditions are a prioritized health need for Baystate Noble service area residents. Residents experience high rates of chronic health conditions and associated morbidity, particularly for **obesity, diabetes, cardiovascular disease, asthma, and chronic obstructive pulmonary disease**. A chronic health condition is one that persists for a long period of 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.¹⁴ A **healthy diet** and **physical activity** play an important role in preventing and managing chronic diseases.

Obesity

In Hampden County almost 30% of adults struggle with obesity and 65% are overweight or obese (MA: obese - 24%; overweight/obese - 59%) (BRFSS 2011). Obesity is a national epidemic and contributes to chronic illnesses such as cancer, heart disease, and diabetes. Obesity can impact overall feelings of wellness and mental health status. 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, rates among children remain high in highlighted communities in the Baystate Noble service area. The highest rates were observed among children from the Southwick-Tolland-Granville Regional School District, where 20% of children examined were categorized as obese and 35% as overweight or obese (Figure 8). There were also high rates in West Springfield, with 18% of children categorized as obese and 33% as overweight or obese. County-level childhood obesity data is not available.

Figure 8. Childhood Obesity Rates for School Districts in the Baystate Noble Service Area

Source: "Results from the Body Mass Index Screening in Massachusetts Public School Districts, 2014"
Children are screened in grades 1, 4, 7, 11.

Note: Agawam did not submit data; The two regional school districts may also serve communities that fall outside of the Baystate Noble service area

Vulnerable Populations

- **Children** experience high rates of overweight and obesity which increases their risk for adult onset chronic diseases such as diabetes, and it also increases their risk for being obese and experiencing chronic disease as an adult.

Cardiovascular Disease

Cardiovascular disease (CVD) was identified as a prioritized health need for the Baystate Noble service area. Heart disease is among the top leading causes of death in Hampden County and there is a high prevalence of heart disease among older adults. In addition, there is a high prevalence of hypertension and high cholesterol, which are strong risk factors for cardiovascular disease. CVD includes diseases that affect the heart and blood vessels, including coronary heart disease, angina (chest pain), heart attack (myocardial infarction), and stroke.

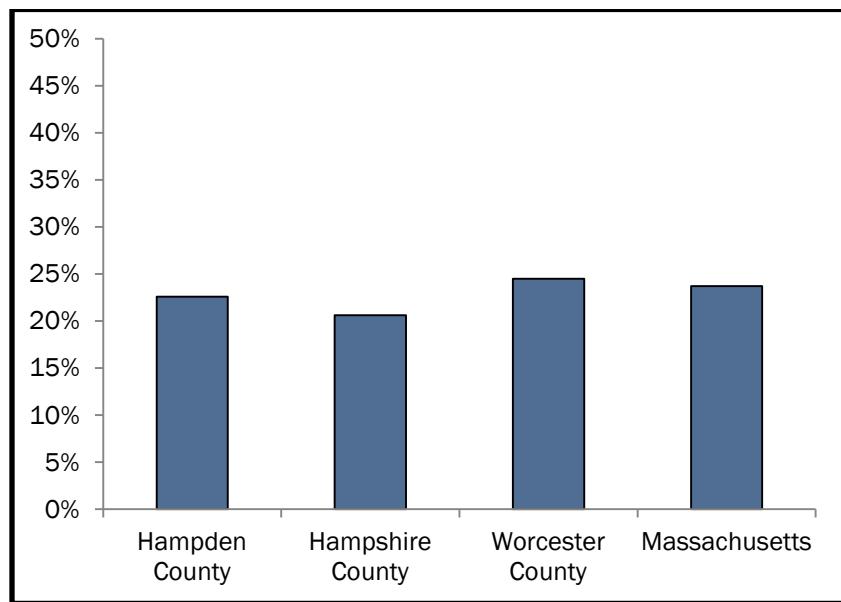
Older adults experience high rates of CVD. In Hampden County in 2014, an estimated 23% of older adults had heart disease (24% for Massachusetts) (Medicare 2014, one year estimates) compared to 8% among adults in the county overall (BRFSS 2012-2014). Figure 9 illustrates prevalence of heart disease among older adults.

Hypertension, or high blood pressure, and high cholesterol are conditions that increase risk for CVD and have a high prevalence in Hampden County. In 2011, an estimated 34% of adults in Hampden County had hypertension and 38% had high cholesterol (BRFSS). In 2014, more than half of older adults in Hampden County had hypertension (62%) (statewide 56%) (Medicare 2014, one-year estimate). In 2012, 41% of Medicare beneficiaries in the Baystate Noble service area had high cholesterol (45% for MA) (CC, CMMS, 2012).

Vulnerable Populations

- Older adults experience high rates of heart disease, hypertension and high cholesterol as described above;
- Latinos in Westfield experience high rates of heart disease hospitalizations, at rates more than 2.5 times higher than that of Whites (MDPH, 2012).

Figure 9. Coronary Heart Disease Prevalence Among Medicare Enrollees Age 65 or Older in Baystate Noble Service Area Counties, 2014



Source: MDPH, Medicare 2014, one-year estimates

Diabetes

An estimated 13% of Hampden County residents have **diabetes**, which is greater than the state and national rate, and approximately one in five Hampden County residents have **pre-diabetes or diabetes** (BRFSS, 2010-2012). Community level diabetes prevalence data was limited for Baystate Noble's service area with data only available for West Springfield. An estimated 8% of West Springfield residents have diabetes and 16% have pre-diabetes or diabetes (BRFSS, 2010-2014). Diabetes (the vast majority of which is Type 2 diabetes [T2D]) is one of the leading causes of death and disability in the U.S. and is a strong risk factor for cardiovascular disease. The CDC estimates that 9% of people in the U.S have diabetes, of which 28% are undiagnosed.¹⁵ Pre-diabetes is when a person has high blood sugar levels that are not high enough for a diagnosis of diabetes. An

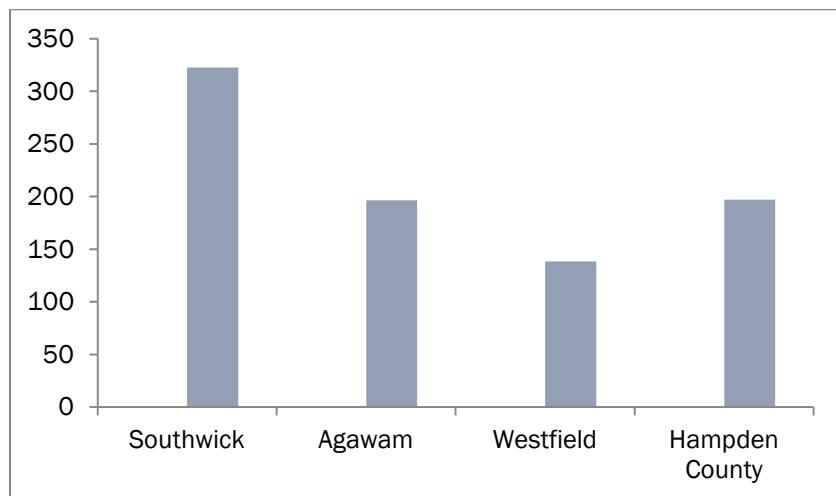
estimated 15-30% of people with pre-diabetes will develop T2D within 5 years. T2D can be prevented and managed with a combination of weight loss, exercise, medication, and maintaining a healthy diet.¹⁶

Diabetes hospitalization rates are a measure of severe morbidity. Figure 10 illustrates the communities in the Baystate Noble service areas with the highest 2013 diabetes hospitalization rates compared to the 2012 state rate (MDPH, 2012). Hampden County 2012 hospitalization rates were higher than the state in 2012 and increased slightly in 2013 (Figure 11) (MDPH, 2012-2013).

Vulnerable Populations

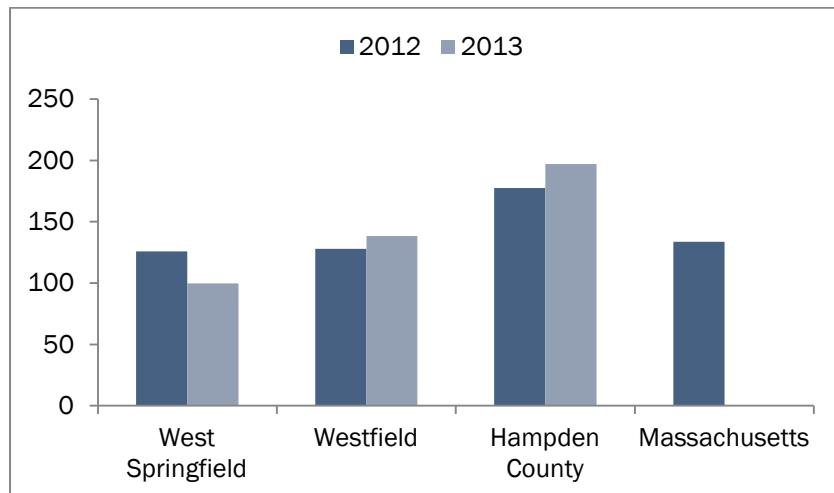
- **Older adults** experience higher rates of diabetes with Medicare data indicating that an estimated 26% of Medicare enrollees age 65 and older in Hampden County have diabetes (24% in MA) (Medicare 2014, one-year estimate). Approximately one third of older adults living in West Springfield and Westfield have diabetes (Medicare/Medicaid, 10-Year Estimates, 2002-11).

Figure 10. Communities with the Highest Diabetes Hospitalization Rates in the Baystate Noble Service Area, 2013



Source: MDPH; age-adjusted per 100,000; reliable data available for less than 5 communities

Figure 11. Diabetes Hospitalization Rates in Highlighted Baystate Noble Service Area Communities, 2012-2013



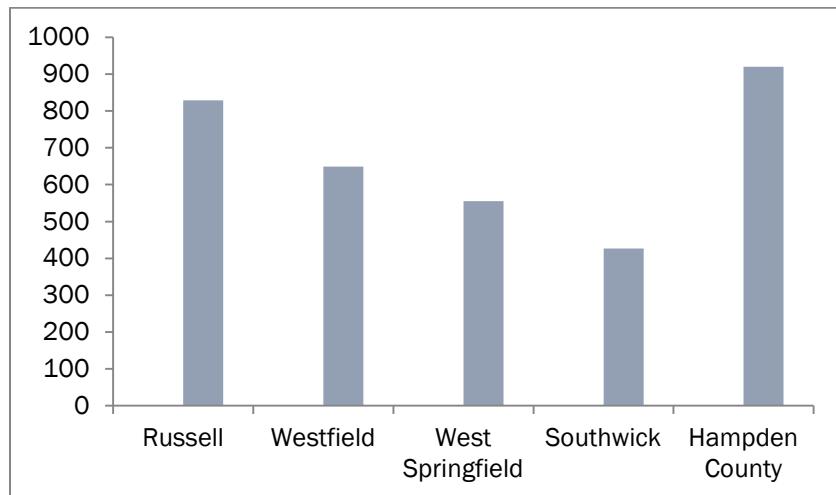
Source: MDPH; age-adjusted per 100,000

Asthma

Asthma impacts many Baystate Noble service area residents with an estimated 12% of Hampden County adults (BRFSS 2008-2010) and 17% of Hampden County school children having asthma (12% statewide) (MDPH EPHT, 2013-2014). Pediatric asthma prevalence rates exceeded the statewide rate in Huntington (18%), Southwick (18%), and Chester (16%) (MDPH EPHT, 2013-2014). In Westfield and West Springfield, pediatric asthma prevalence was 11% and 10%, respectively (MDPH EPHT, 2013-2014). Asthma prevalence among adults was not available at a community level. Asthma is a common chronic respiratory disease that 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.

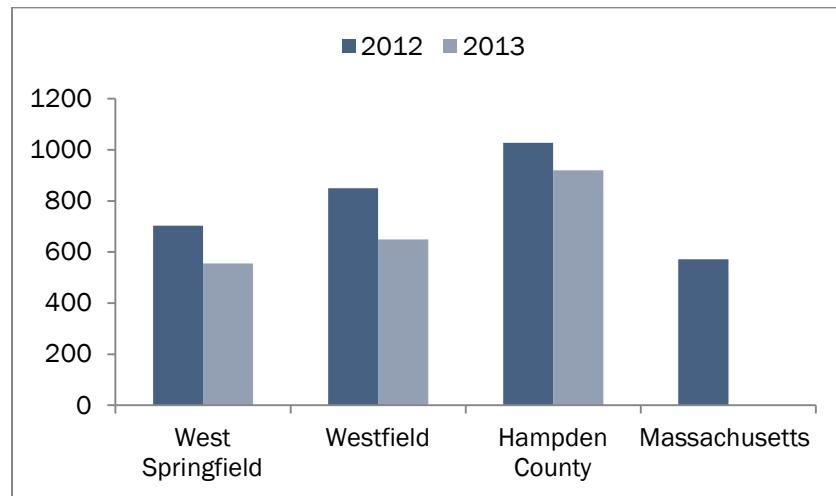
Among Baystate Noble service area communities, Russell had the highest asthma ER visit rate followed by Westfield, West Springfield, and Southwick (Figure 12) (MDPH, 2012-2013). In 2012, ER visit rates in Westfield were almost 50% higher than that of the state (Figure 13).

Figure 12. Communities with the Highest Asthma ER Visit Rates in the Baystate Noble Service Area, 2013



Source: MDPH; age-adjusted per 100,000; reliable data available for less than 5 communities

Figure 13. Asthma ER Visit Rates in Highlighted Baystate Noble Service Area Communities, 2012-2013



Source: MDPH; age-adjusted per 100,000

Vulnerable Populations

- **Children** with asthma are a vulnerable population. As discussed above, childhood asthma prevalence rates are high in some communities in the Baystate Noble service area. In addition, pediatric ER visit rates (age 0-14) in West Springfield and Westfield are higher than that of the state (982.8 and 952.1, respectively, vs. 865.7 per 100,000) (MDPH, 2012).
- **Latinos**, experience large asthma related disparities. In West Springfield the 2012 asthma ER visit rate for Latinos was 5 times that of Whites and 4 times that of the state ER visit rate

overall. Disparities also existed among Latinos in Westfield, with an ER visit rate 3 times that of the Whites and 4 times that of the state (MDPH, 2012).

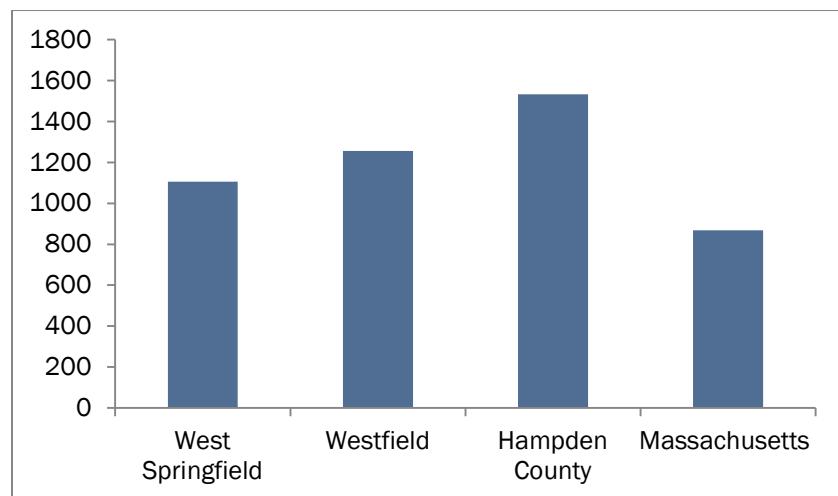
- **Blacks** also experience large asthma related disparities. In West Springfield, the ER visit rate among Blacks is more than 3 times that of Whites and of the state overall. Disparities also exist among Westfield, where the rate among Blacks is 3 times that of Whites and 4 times the statewide rate (MDPH, 2012).

Chronic Obstructive Pulmonary Disease

Chronic obstructive pulmonary disease or COPD refers to “a group of diseases that cause airflow blockage and breathing-related problems”, including emphysema and chronic bronchitis, and was the third leading cause of death in the U.S in 2011.¹⁷ COPD is most commonly caused by smoking, although indoor and outdoor air pollution, genetics, and respiratory infections can contribute. COPD is most likely to impact individuals over the age of 65, females, past or current smokers, and low-income individuals. COPD is commonly underreported, has better long-term outcomes if detected early, and can negatively impact quality of life if not managed.¹⁸

In 2012, Hampden County had a COPD ER visit rate almost 75% higher than that of the state (Figure 14). ER visit rates in Westfield and West Springfield also exceeded the state rate with rates in Westfield almost 50% higher than the 2012 state rate (Figure 14) (MDPH, 2012).

Figure 14. COPD ER Visit Rates in Highlighted Baystate Noble Service Area Communities, 2012



Source: MDPH; age-adjusted per 100,000

Vulnerable Populations

- **Blacks** in West Springfield and Westfield experienced high COPD ER visit rates that were 2.5 to 3 times higher than those of Whites and 3 times higher than that of the state. (MDPH, 2012).
- **Latinos** in West Springfield and Westfield experienced high COPD ER visit rates that were 2 to 3 times higher than those of Whites and 3 times greater than that of the state. Disparities

were also evident in hospitalization rates among Latinos in Westfield, with rates among Latinos 3 times higher than that of Whites (MDPH, 2012).

- As mentioned above, COPD is most likely to impact **Older Adults**. An estimated 23% of West Springfield and 22% of Westfield older adults are living with COPD (Medicare/Medicaid, 10-Year Estimates, 2002-11).

Need for Increased Physical Activity and Healthy Diet

The need for increased **physical activity** and consumption of fresh fruits and vegetables is a national issue that was identified as a need for Hampden County residents by regional public health authorities. Among Massachusetts residents in the CDC's BRFSS 2013 survey, only 9% of respondents met the national vegetable consumption recommendation and 14% met the fruit consumption recommendations.¹⁹ Only half of Hampden County adults (53%) met the guidelines for aerobic physical activity, and only about a quarter (21%) met the guidelines for both aerobic and muscle-strengthening activity,²⁰ which are also comparable to national rates. These rates are affected by the availability of affordable healthy food and safe places to be active as well as individual knowledge and behaviors.

Mental Health and Substance Use

Substance use and mental health were among the top three urgent health needs/problems impacting the area across all focus groups and interviews conducted for this CHNA. Substance use disorders overall, and opioid use specifically, were identified as top issues. 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 abuse;
- Increased access to treatment, and the need for long term care;
- Increased integration between the treatment of mental health and substance use disorders;
- The impact of mental health conditions and substance abuse on families.

"At an outpatient mental health clinic, if someone has a problem with heroin, we have to make sure to find a mental health condition too otherwise we can't bring him in. We can't treat substance abuse and mental health together even though it is the most effective way."

-Focus Group Participant, Mental Health and Substance Use, Baystate Noble Hospital

Mental Health

An estimated 16% of Hampden County residents have poor mental health on 15 or more days in a month (11% statewide) (BRFSS 2012-2014). 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, and has been defined by the World Health Organization 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.²¹ Only 17% of U.S adults are estimated to be "in a state of optimal mental health."²² Mental health is an indicator of health itself, but also contributes to physical health and inequities.

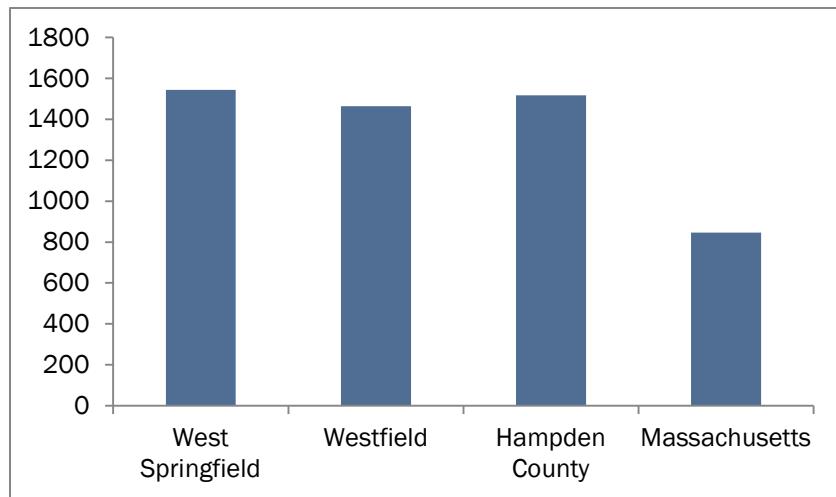
Depression is the most common type of mental illness, and it affects more than 26% of U.S adults.²³ It is estimated that by 2020, depression will be the second leading cause of disability worldwide, and children are a particularly vulnerable population.²⁴ Mental illness often co-occurs with substance use disorders and impacts physical health as well.

Hospitalization rates for mental health disorders (including substance use) were 70-80% higher than the state in Westfield and West Springfield in 2012 (Figure 15). Among Baystate Noble service area communities, West Springfield had the highest 2013 mental health disorder ER visit rate followed by Westfield, Agawam, and Chester (including substance use) (MDPH, 2013).

"For mental health, the services are harder to access, especially when people need inpatient services. Sometimes that's very limited, and we have patients in the ER for 5-6 days because access to services is so limited."

- Key Informant Interviewee, Baystate Noble Hospital

Figure 15. Mental Health Disorder Hospitalization Rates in Highlighted Baystate Noble Service Area Communities, 2012



Source: MDPH; age-adjusted per 100,000

Note: mental health disorder hospitalizations include those related to substance use

Vulnerable Populations

- **Blacks** in Westfield experienced high ER visit rates for mental health disorders, with rates more than three times greater than that of Whites and that of the state. (MDPH, 2012).
- **Latinos** in West Springfield and Westfield experienced high hospitalization rates for mental health disorders with rates 33-40% greater than Whites and more than double the overall state rate. Disparities were also evident in ER visit rates among Latinos in Westfield and West Springfield in comparison to Whites and the overall state rate. The rate among Latinos in West Springfield was 94% greater than that of Whites (MDPH, 2012).
- **Older Adults** experience high rates of depression. An estimated 27% of West Springfield and 25% of Westfield Medicare Enrollees age 65 and over have been diagnosed with depression during their lifetime (Medicare/Medicaid, 10-Year Estimates, 2002-11).
- **Youth** are disproportionately impacted with mental health issues. In the Hampden County Twelve Town Community Health Assessment, depression among youth was identified as an issue with a key informant interviewee noting “there’s more depression and desperation just under the surface among the young.” In addition, teen suicide was also raised as an issue among West Springfield interviewees.²⁵

“Substance abuse programs as a rule don’t want to admit someone from a psychiatric hospital. It’s very siloed on both sides.”

- Key Informant Interviewee, Baystate Noble Hospital

Substance Use

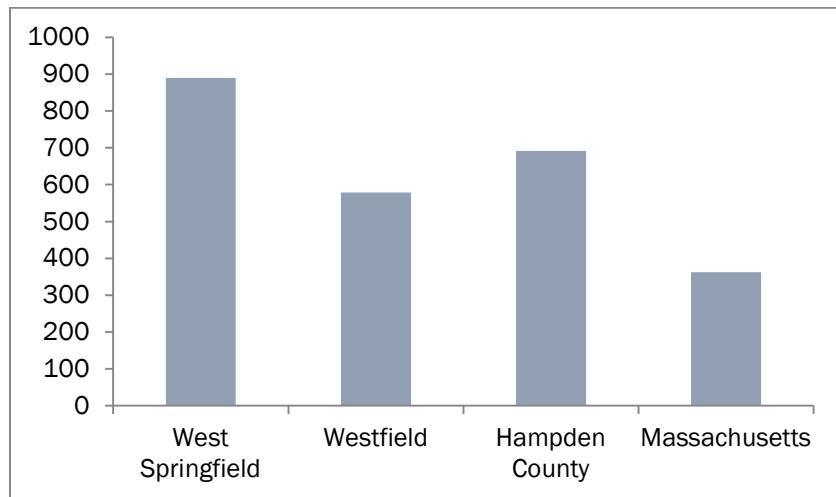
High rates of substance use, including tobacco, alcohol, and drugs, were identified as a priority health need in *Health and Community: A Healthcare Needs Assessment for Westfield, Massachusetts*, and it continues to be a prioritized health need for this community as well as Baystate Noble's entire service area. Countywide smoking rates are high; an estimated 21% of Hampden County residents smoke **tobacco** as compared to 16% statewide (BRFSS 2012-2014).

Substance use disorder (SUD) ER visits are also high. 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. In 2012, the substance use disorder hospitalization rate in Westfield was 60% higher than that of the state, and the rate in West Springfield was more than twice that of the state (Figure 16). Figure 17 illustrates the communities in the Noble service area with the highest 2013 ER visit rates for substance use disorder (MDPH, 2013). In preliminary draft meetings for this CHNA, hospital providers noted that substance use ER and hospitalization visit rates are likely an underestimate as people with substance use disorder are sometimes given a primary mental health diagnosis instead to satisfy criteria for admission.

"Detox programs are not accessible right away. It may be two or three days or a week, not right away. When they come here desperate and needing immediate treatment, it is not available or there are no beds."

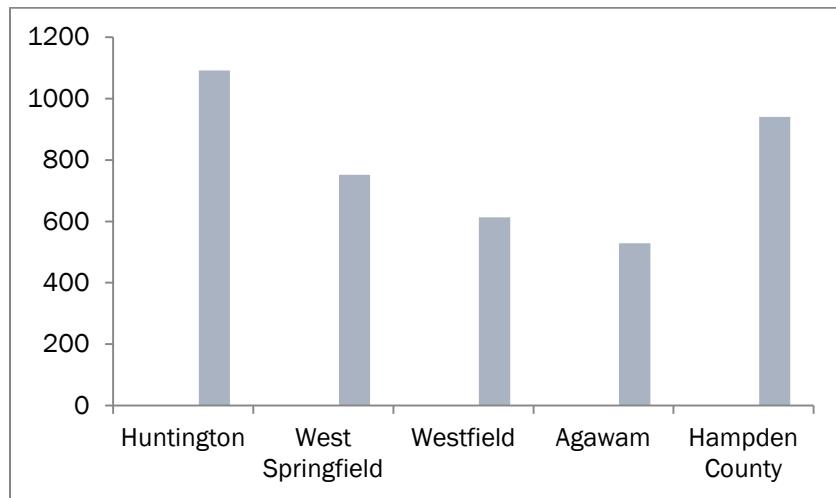
- Key Informant Interviewee, Baystate Noble Hospital

Figure 16. Substance Use Disorder Hospitalization Rates in Highlighted Baystate Noble Service Area Communities, 2012



Source: MDPH; age-adjusted per 100,000

Figure 17. Communities with the Highest Substance Use Disorder ER Visit Rates in the Baystate Noble Service Area, 2013



Source: MDPH; age-adjusted per 100,000; *state data only available for 2012

Opioid use disorder has rapidly emerged as a public health crisis in Massachusetts and across the country. Between 2002 and 2013 in the U.S., there has been a 286% increase in opioid-related deaths.²⁶ In Massachusetts alone, the number of opioid-related deaths in 2014 represents a 65% increase from 2012.²⁷

Opioid overdose fatalities in Hampden County are higher than that of the state with 12.7 fatalities per 100,000 as compared to 10.7 statewide. This is despite lower opioid overdose hospitalization

rates in Hampden County (79.4 vs. 103.9 per 100,000).²⁸ In 2012, the rate of opioid-related hospitalizations in West Springfield (831.6) and Westfield (557.5) exceeded that of the state (375.0 per 100,000), and in West Springfield, the rate was also greater than Hampden County (740.3) (MDPH, 2012).

Findings from key informant interviews and mental and substance use focus groups conducted for the Coalition identified the following needs:

- increased institutional support to promote harm reduction approaches, such as Narcan, to reduce morbidity and mortality that occur as a result of opioid overdose;
- more access to long-term medication-assisted treatment (MAT) programming;
- continued focus on therapeutic, not just pharmaceutical, treatment of substance use disorders;
- more support and prevention education for youth, particularly those with histories of trauma.

Vulnerable Populations

- **Youth** substance use can affect the social, emotional and physical well-being of youth and lead to lifelong substance dependence and substance use disorder. Baystate Noble focus group participants highlighted the importance of earlier substance abuse prevention programming for school-aged youth.
- **Latinos** experienced high substance use hospitalization rates. In West Springfield rates among Latinos were 54% higher than that of Whites and more than 4 times the overall state rate. In Westfield, rates among Latinos were 36% higher than that of Whites and more than twice that of the overall state rate. (MDPH, 2012). Opioid-related hospitalization rates were also higher than the rate among Whites (MDPH, 2012).

"You can't treat an opioid addiction in the Emergency Room and that's what we're doing."

- Focus Group Participant, Mental Health and Substance Use, Baystate Noble Hospital

"Lots of the stuff we do is reactive. For a child who is starting to have problems with Percocet, you call a program and they say to call back in 2 months. By then, it evolves into a full addiction. The system doesn't allow us to address substance abuse issues early on before they evolve into more serious issues."

- Focus Group Participant, Mental Health and Substance Use, Baystate Noble Hospital

Infant and Perinatal Health Risk Factors

Infant and perinatal health risk factors are a priority health need in the Baystate Noble service area. Preterm birth (<37 weeks gestation) and low birth weight (<2,500 grams) are among the leading causes of infant mortality and morbidity in the U.S., and can lead to health complications throughout the life span. Early entry to prenatal care, as well as adequate prenatal care, are crucial components of health care for pregnant women that directly impact birth outcomes, including preterm birth, low birth weight, and infant mortality (infant death before age 1). Smoking during pregnancy is a risk factor that increases the risk for pregnancy complications and affects fetal development.²⁹

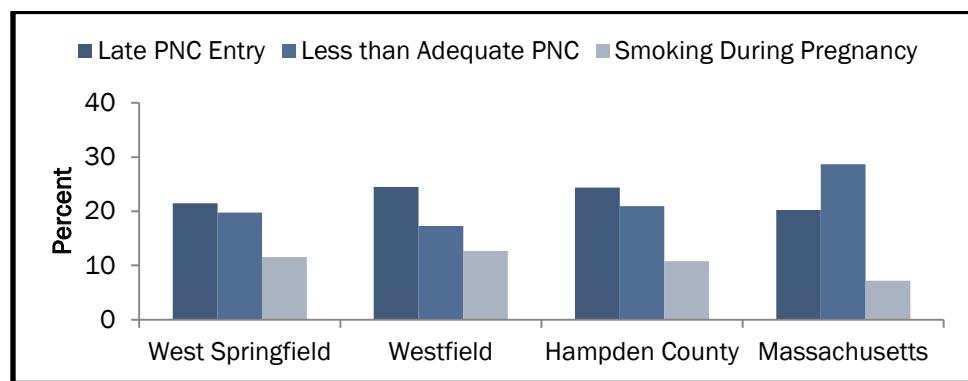
Approximately one in ten infants were born **preterm** among Westfield residents in 2014 versus one in nine statewide. Rates of infants with **low birth weight** in the Baystate Noble area are comparable to the statewide rate (MDPH 2014).

In West Springfield and Westfield, approximately one in five women entered **prenatal care** after their first trimester. Similarly, almost 20% of women in these communities had less than adequate prenatal care (Figure 18). Adequacy of prenatal care is based on whether a woman entered prenatal care early in pregnancy and the number and timing of prenatal visits. While these rates were comparable to or lower than the statewide rate, they represent a notable portion of the population. Participants in focus groups conducted for this CHNA expressed:

- a need for more support around stress and anxiety, particularly in the postpartum period;
- feelings of social isolation;
- the need for increased parenting education and support for fathers.

Another area of need is smoking during pregnancy. Thirteen percent of women in Westfield and 12% in West Springfield reported smoking during pregnancy, close to double the statewide rate of 7%. (MDPH, 2012).

Figure 18. Percent of Women with Late Entry to Prenatal Care, Less Than Adequate Prenatal Care, or that Smoked During Pregnancy in Highlighted Baystate Noble Service Area Communities, 2012



Source: MDPH; adequate prenatal care includes women that received adequate or adequate plus care

*Late PNC entry is entry to prenatal care after the 1st trimester

Vulnerable Populations

- **Asian women** experienced higher rates of late entry to prenatal care compared to Whites in West Springfield (40% v. 18%) and in Massachusetts overall (20%) (MDPH, 2012).

IV. Vulnerable Populations of Concern

Available data indicate that **children and youth, older adults**, and some communities of color, particularly **Latinos** and **Blacks**, experience disproportionately high rates of some health conditions or associated morbidities when compared to that of the general population of communities within the Baystate Noble service area.

- Children/youth experienced high rates of asthma and are impacted by obesity. Youth are disproportionately impacted with mental health issues, and they are vulnerable with regard to substance use because of the potential lifelong consequences.
- Older adults had higher rates of chronic disease (heart disease, diabetes, COPD), hypertension, high cholesterol, and a high prevalence of depression.
- Latinos and Blacks experienced higher rates of hospitalizations due to some chronic diseases, including asthma and COPD, as well as mental health. Latinos also experienced high heart disease hospitalizations and substance use ER visit rates.
- **Asian women** experienced disparities in entry to prenatal care.

Individuals with **low income**, those living in **poverty** (especially children, Latinos, Blacks, and Asians), and those who are **homeless** are also disproportionately impacted by poor health. Though data was not available for health conditions by income/poverty level or whether someone is homeless, these factors have been consistently documented with poor health outcomes. Qualitative data points to **immigrants** and **refugees**, who may experience language barriers when trying to access health care and other services, as vulnerable populations.

"97% of anyone in the medical field is not adequately prepared to deal with anyone with PTSD or veterans in general"

- Focus Group Participant, Health Care Needs of Veterans

Overall, more data is needed to understand the unique factors that impact the health of each of these vulnerable populations.

In the focus group conducted for Baystate Noble Hospital, **veterans** were identified as a vulnerable population of concern, especially given the U.S National Guard Army base located in Westfield. Focus groups specific to veteran health needs conducted for another coalition hospital identified a range of health concerns for this particular population, including:

- challenges with accessing services, compounded by the lack of training for outside hospitals and service providers to adequately meet and assess unique needs faced by veterans;
- stigma faced by veterans, including perceptions of mood disorders, mental health, conditions, and substance use disorders;

- PTSD and substance use disorder, and the fear of disclosing either (and potentially losing benefits);
- need for more peer-support groups outside of the VA system;
- need for more services to support transition back to civilian life, both for veterans and their families.

Community & Hospital Resources to Address Identified Needs

Community and hospital resources to address identified needs can be found in Appendix IV.

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

In September 2015 Baystate Health acquired Noble Hospital, located in Westfield, Massachusetts. Prior to joining the Baystate Health system, Noble Hospital was a free standing community hospital with very limited resources available for community health planning efforts. As a result of joining the Baystate Health system Baystate Noble now has access to system level resources and technical assistance to assist the hospital to better account for its community benefits activities, as well as engage in meaningful community health planning efforts following the completion of the 2016 community health needs assessment.

In 2017 Baystate Noble will be launching a Community Benefits Advisory Council, similar to the one established at Baystate Franklin, Baystate Medical and the Baystate Eastern Region. The CBAC will include internal Baystate Noble leaders and employees, as well as a diverse cross sector of community stakeholders.

Baystate Noble continued to provide much needed **financial counseling** services to its community and patients who have concerns about their health care costs. Financial Counselors are dedicated to: identifying and meeting their client's health care needs; providing assistance to apply for health insurance; navigating the health care industry; as well as determining eligibility for the Baystate Financial Assistance Program. They can also assist in linking their clients to health insurance and community resources. There has been an increase in providing additional community support, including assisting patients with finding a new primary care physician, providing information on behavioral health services and also contacting pharmacies to straighten out insurance issues.

Baystate Financial Assistance Program – Baystate Health is committed to ensuring that the community has access to quality health care services provided with fairness and respect and without regard to a patients' ability to pay. Baystate hospitals' not only offers free and reduced cost care to the financially needy as required by law, but has also voluntarily established discount and financial assistance programs that provide additional free and reduced cost care to additional patients residing within the communities served by the hospitals. Baystate hospitals also make payment plans available based on household size and income.

Baystate Noble Hospital was awarded a CHART Grant from the Massachusetts Health Policy Commission to improve patient care in Greater Westfield. The **Community Hospital Acceleration, Revitalization and Transformation Investment Program (CHART)** is a two-year long initiative to focus attention on avoidable hospital re-admissions, celebrate how hospitals and communities are working together to improve care transitions, and help patients and families understand the role they can play in their healthcare. The Baystate Noble CHART team consists of 3 nurses, 3 social workers, 1 care coordinator, and a steering committee. The team works to identify patients who have had three or more inpatient admissions or nine or more emergency admissions over a year's time. They will meet with those patients to complete medical and behavioral health assessments and identify possible future problems. In addition to educating patients about their health problems, tests, and medications while in the hospital, the CHART team will help coordinate care with other providers and services after discharge. Team members will also make follow up visits and phone calls to continue the patient's care and avoid unnecessary re-admissions.

Summary

The Baystate Noble Hospital service area, consisting of communities primarily located in Hampden County, Massachusetts, experiences a number of priority health needs. 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 disparities observed among vulnerable populations, which include children/youth, older adults, Latinos, Blacks, and Asian Women. Though less data is available, individuals with low income, people living in poverty, those who are homeless, immigrants and refugees, and veterans have been identified as vulnerable populations. Additional data is needed to better understand the needs of these populations in order to reduce inequities. The Baystate Noble service area population continues to experience a number of barriers that make it difficult to access quality health care, some of which are related to the social and economic conditions in the community, and others which relate to the healthcare and insurance system. Service area residents are impacted by high rates of obesity, cardiovascular disease, diabetes, asthma, chronic obstructive pulmonary disease, and associated morbidities. The need for increased utilization of prenatal care and a decrease in smoking during pregnancy also arose as issues among service area residents. 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. The opioid crisis has emerged as a top issue impacting the health of the community.

References

- 1 McGinnis M, Williams-Russo PN. Race, race-based discrimination, and health outcomes among African Americans. *Annu Rev Psychol.* 2007;58:201-25.
- 2 University of Wisconsin Population Health Institute. County health rankings and roadmaps. <http://www.countyhealthrankings.org/>. Updated 2016. Accessed June, 2016.
- 3 Massachusetts Executive Office of Labor and Workforce Development. Employment and wages (ES-202). http://lmi2.detma.org/lmi/lmi_es_a.asp. Updated 2013. Accessed May, 2016.
- 4 Crittenton Women's Union. Massachusetts economic independence index 2010. Boston; 2010 March.
- 5 U.S. Census Bureau. Poverty thresholds by size of family and number of children. <http://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html> . Accessed August, 2016
- 6 Western Massachusetts Network to End Homelessness. Western Massachusetts opening doors: A collective impact framework to prevent and end homelessness. 2015.
- 7 Western Massachusetts Network to End Homelessness. Western Massachusetts opening doors: A collective impact framework to prevent and end homelessness. 2015.
- 8 Western Massachusetts Network to End Homelessness. Western Massachusetts opening doors: A collective impact framework to prevent and end homelessness. 2015.
- 9 Feeding America. Child food insecurity in Massachusetts. <http://map.feedingamerica.org/county/2014/child/massachusetts/>. Updated 2014. Accessed June, 2016.
- 10 U.S. Department of Health and Human Resources, Health Resources and Services Administration. MUA/Ps: Dictionary. <http://www.hrsa.gov/shortage/mua/dictionary.html>. Accessed May 2016.
- 11 Pioneer Valley Planning Commission under the direction of the Pioneer Valley Metropolitan Planning Organization for the Pioneer Valley Transit Authority, Pioneer Valley Regional Non-transit User Study, Oct 2011
- 12 Centers for Disease Control and Prevention (CDC). Learn about health literacy. <http://www.cdc.gov/healthliteracy/Learn/index.html>. Updated September 2015. Accessed May 2016.
- 13 Tervalon, M, Murray-Garcia, J. Cultural humility versus cultural competence: a critical distinction in defining physician training outcomes in multicultural education. *J Health Care Poor Underserved.* 1998;9(2):117-125.
- 14 University of Michigan Center for Managing Chronic Disease. <http://cmcd.sph.umich.edu/>. Updated 2016. Accessed May 2016.
- 15 Centers for Disease Control and Prevention (CDC). 2014 National diabetes statistics report. <http://www.cdc.gov/diabetes/data/statistics/2014StatisticsReport.html>. Updated May 2015. Accessed May 2016.
- 16 Centers for Disease Control and Prevention (CDC). Diabetes. <http://www.cdc.gov/diabetes/basics/index.html>. Updated October 2015. Accessed May 2016.

-
- 17 Centers for Disease Control and Prevention (CDC). Chronic obstructive pulmonary disease (COPD). <http://www.cdc.gov/copd/index.html>. Updated 2015. Accessed May 2016.
- 18 Centers for Disease Control and Prevention (CDC). Chronic obstructive pulmonary disease (COPD). <http://www.cdc.gov/copd/index.html>. Updated 2015. Accessed May 2016.
- 19 Centers for Disease Control and Prevention (CDC). Morbidity and mortality weekly report July 2015, vol 64, no. 26. <http://www.cdc.gov/mmwr/pdf/wk/mm6426.pdf>. Updated July 2015. Accessed May 2016.
- 20 Centers for Disease Control and Prevention (CDC). Exercise or physical activity. <http://www.cdc.gov/nchs/fastats/exercise.htm>. Updated February 2016. Accessed May 2016.
- 21 World Health Organization. Strengthening mental health promotion, fact sheet number 220. <http://www.who.int/mediacentre/factsheets/fs220/en/>. Updated 2014. Accessed July 2014.
- 22 Centers for Disease Control and Prevention (CDC). Mental health basics. <http://www.cdc.gov/mentalhealth/basics.htm>. Updated October 2013. Accessed May 2016.
- 23 Centers for Disease Control and Prevention (CDC). Mental health basics. <http://www.cdc.gov/mentalhealth/basics.htm>. Updated October 2013. Accessed May 2016.
- 24 Centers for Disease Control and Prevention (CDC). Mental health basics. <http://www.cdc.gov/mentalhealth/basics.htm>. Updated October 2013. Accessed May 2016.
- 25 Hampden County Shared Public Health Nurse Oversight Committee. Hampden county twelve town community health assessment. Prepared by Ready EDI and Associates, 2015.
- 26 Centers for Disease Control and Prevention (CDC). Today's heroin epidemic. <http://www.cdc.gov/vitalsigns/heroin/index.html>. Updated July 2015. Accessed May 2016.
- 27 Massachusetts Department of Public Health. Data brief: opioid-related overdose deaths among Massachusetts residents. <http://www.mass.gov/eohhs/docs/dph/quality/drugcontrol/county-level-pmp/data-brief-overdose-deaths-ma-residents-january-2016.pdf>. Updated January 2016. Accessed May 2016.
- 28 Partners for a Healthier Community. Issue brief: opioid overdose in western Massachusetts. Springfield, MA: Baystate Health; 2015.
- 29 Centers for Disease Control and Prevention (CDC). Smoking during pregnancy. http://www.cdc.gov/tobacco/basic_information/health_effects/pregnancy/. Updated March 2016. Accessed May 2016.

Appendix I:

Stakeholders Involved in CHNA Process

Steering Committee Members

Focus Group Participants

Key Informant Interviewees

Steering Committee Members

Name (Last, First)	Title	Organization	Organization Serving Broad Interests of Community	Organization Serving Low-Income, Minority, And Other Medically Underserved Populations	State, Local, Tribal, Regional, or Other Health Department Staff
Allard, Andrea	President/CEO	YMCA of Westfield	X	X	
Amador, Ruth	President	National Association of Hispanic Nurses – Western MA Chapter	X	X	
Ayres, Jim	Executive Director	United Way of Hampshire County	X	X	
Barber, Tania	President/CEO	Caring Health Center	X	X	
Blanchette, Mary Ellen	Nurse Leader	Palmer Public Schools	X	X	
Caisse, Ed	C3/Safe Neighborhood Initiative – South Holyoke	Hampden County Sheriff's Dept.	X	X	
Christopolis, Dave	Executive Director	Hilltown CDC	X	X	
Garozzo, Salvatore	Executive Director	United Cerebral Palsy Assoc. of Berkshire County, Inc.	X	X	
Graves, Marie	Program Director	Springfield Dept. Health & Human Services	X		X
Koehn Rudder, Shannon	Executive Director	MotherWoman	X	X	
Lee, Jennifer	Systems Advocate for Change	Stavros Center for Independent Living	X	X	
Lewandowski, Sue	Representative for Worcester County	Assumption College	X	X	
Lopez, Luz	Springfield Organizer	Stand for Children	X	X	
McCafferty, Gerry	Director of Housing	City of Springfield, Office of Housing	X	X	
Prullage, Beth	Clinical Social Worker	Providence Behavioral Health		X	

Name (Last, First)	Title	Organization	Organization Serving Broad Interests of Community	Organization Serving Low-Income, Minority, And Other Medically Underserved Populations	State, Local, Tribal, Regional, or Other Health Department Staff
Reeves, Halley	Community Health Planning and Engagement Specialist	MA Dept. of Public Health			X
Silverman, Risa	Coordinator, Office for Public Health Practice & Outreach	UMASS Amherst School of Public Health and Health Sciences	X	X	
Simmons, Tony	Community Liaison	Hampden County District Attorney's Office	X	X	
Simonds, Jane	Sr. Program Manager	Behavioral Health Network - Outpatient Services	X	X	
Walker, Phoebe	BFMC CBAC Co- chair	Franklin Regional Council of Governments (FRCOG)	X		X
Wilson, Gloria	Member	Western MA Black Nurses Association	X	X	
Wood, Ben	Healthy Community Design Coordinator	MA Dept. of Public Health			X

Focus Group Participants

Findings from seven focus groups conducted informed this CHNA. Each focus group had a specific topic, and participants represented a range of age, gender, and race/ethnicity. Focus groups included:

Baystate Noble Hospital: Mental Health and Substance Use

- 8 participants
- 3 female; 5 male
- Identified as white

Cooley Dickinson Hospital: Health Care Needs of Veterans

- 10 participants
- All post 9-11 veterans

Cooley Dickinson Hospital: Health Care Needs of Military Families

- 6 participants
- Primarily women

Holyoke Medical Center: Mental Health and Substance Use

- 9 participants
- Primarily male, aged 51-60
- Identified as white, Hispanic, and African-American

Baystate Mary Lane and Wing Hospitals: Mental Health and Substance Use

- 15 participants
- Primarily female, aged ≥ 51
- Identified as white

Mercy Medical Center and Baystate Medical Center: Faith-Based Leaders

- 11 participants
- Half male, half female
- Identified as white and African-American

Baystate Medical Center: Maternal and Child Health

- 7 participants
- All females between 21-30
- Identified as African-American, Latina, and multi-racial

Health New England

- 6 participants
- All females
- Identified as White, non-Hispanic

Key Informant Interviewees

Name (Last, First)	Title	Organization	Organization Serving Low-Income, Minority, And Other Medically Underserved Populations	State, Local, Tribal, Regional, or Other Health Department Staff
<i>Baystate Noble Hospital</i>				
Adzigirey, Liliya	Translator/ Interpreter	Baystate Noble Hospital		X
Blanchet, M.D., Jacques	Director of the Emergency Department	Baystate Noble Hospital	X	X
Crowley, Kelley	Administrative Director of Behavioral Health	Baystate Noble Hospital	X	X
Shaver, John	CFO	Baystate Noble Hospital	X	X
<i>Health New England</i>				
Azeez, Robert	Medicaid Behavioral Health Manager	Health New England		X
LaBounty, Kerry	Medicaid Program Manager	Health New England		X
Silva, David	Medicaid Community Leader	Health New England		X
Spain, M.D., Jackie	Medicaid Program Medical Director	Health New England		X
<i>Public Health Personnel</i>				
Caulton-Harris, Helen	Commissioner of Public Health	City of Springfield	X	X
Dennis, Soloe	Western Region Director	Massachusetts Department of Public Health (MDPH)		X
Garcia, Luz Eneida	Care Coordinator	MDPH Division for Perinatal, Early Childhood and Special Needs, Care Coordination Unit		X
Hyry-Dermith, Dalila	Supervisor	MDPH Division for Perinatal, Early Childhood and Special Needs, Care Coordination Unit		X
Metcalf, Judy	Director	Quabbin Health District	X	X
O'Leary, Meredith	Director	Northampton Health Department	X	X

Name (Last, First)	Title	Organization	Organization Serving Broad Interests of Community	Organization Serving Low-Income, Minority, And Other Medically Underserved Populations	State, Local, Tribal, Regional, or Other Health Department Staff
Steinbock, Lisa	Public Health Nurse	City of Chicopee	X	X	X
Walker, Phoebe	Director of Community Services	Franklin Regional Council of Governments (FRCOG)	X		X
White, Lisa	Public Health Nurse	Franklin Regional Council of Governments (FRCOG)	X		X

Appendix II:

Focus Group and Key Informant Interview Summaries

Focus Group Reports

- Baystate Noble Hospital: Mental Health and Substance Use
- Cooley Dickinson Hospital: Health Care Needs of Veterans
- Cooley Dickinson Hospital: Health Care Needs of Military Families
- Holyoke Medical Center: Mental Health and Substance Use
- Baystate Mary Lane and Wing Hospitals: Mental Health and Substance Use
- Mercy Medical Center and Baystate Medical Center: Leaders from Faith-Based Communities
- Baystate Medical Center: Maternal and Child Health
- Health New England: Access to Health Care for Low-Income Individuals

Key Informant Interviews

- Baystate Noble Hospital
- Public Health Personnel
- Health New England

Focus Group Report: Mental Health and Substance Use

Participants: Professionals working in the area of mental health and/or substance abuse services.

Primary Hospital/Insurer: Baystate Noble Hospital

Date: February 26, 2016

Executive Summary

This focus group explored mental health and substance abuse services and access to care for pediatric and adult populations. Participants had backgrounds working and/or engaging with populations with mental health and/or substance abuse issues, ranging from direct services, to educational contexts, to public service.

Participants concurred that the severe need for mental health and substance abuse care and services for both adults and youth far exceeds what is available. The most significant issue for participants was the shortage of inpatient and outpatient mental health and substance abuse treatment providers and facilities. Many individuals seek care in the emergency room, and the lack of discharge options contributes to long waiting periods in the ER. In addition, individuals are subjected to long gaps for follow-up care, which is a serious barrier to recovery and a hazard. An overall system of training and treatment that separates mental and substance use care was also discussed as a significant issue given frequency of dual diagnoses in these areas.

The other major issue for participants related to the insurance system dictating care through coverage, limiting access with high deductibles, and discouraging practitioners from serving low-income populations with non-commercial insurance due to bureaucracy and low reimbursement rates. Participants repeatedly noted that the time spent obtaining approval for care or submitting claims detracted from time spent with patients. This, along with the powerful role of the pharmaceutical industry in shaping care systems, was the dominant theme among participants.

Participant Demographics

Eight individuals participated in the focus group. Three participants were women and five were men. All eight participants identified as White and Non-Hispanic. Participants ranged in age between 31-over 60. Most participants identified as straight, while two identified as gay or lesbian.

Areas of Consensus

- Shortage of providers and facilities for emergency and long-term inpatient and outpatient care for adult and pediatric mental health and substance abuse.
- Community lacks information about available services.
- Difficulty recruiting and retaining sufficient number of qualified clinicians, especially psychiatrists, especially in practices that take Mass Health and treat youth.
- Limited access and availability of services forces patients needing intensive and long-term treatment to seek care in the emergency department.
- Limited or no follow-up options after leaving emergency department, or placement on long waitlists that put patients at serious risk and more likely to return to ED.

- Culture that emphasizes quick fixes in the training and treatment of mental and substance use issues.
- Mental health and substance use treatment are siloed, despite frequent comorbidity. Both require long term, multifaceted, responsive, high touch treatment.
- The insurance system and pharmaceutical industry present some of the most significant barriers to care.
- Dictates patient options for treatment.
- High deductibles deter people from accessing care.
- Extensive paperwork and low reimbursement rates reduce a practitioner's time with patients and deter practitioners from serving low-income populations.
- Pharmaceutical industry has a significant role in catalyzing the current opioid crisis through proliferating read access to opiate drugs.
- Paradigm shift needed in which mental health and substance abuse is treated with the same urgency and system of substantive long-term support as other chronic diseases.

Recommendations

- More mental health and substance abuse providers, services, and facilities.
- More information for patients about how to access mental health and substance abuse services and resources.
- Support for patients and families to deal with severe stigma attached to mental and substance abuse issues.
- Expanded proactive early education on substance use.
- Systems change how mental health and substance abuse services are insured so patients can access the care they need and so providers can focus on patients rather than negotiating coverage and treatment options with insurers.
- Paradigm shift so mental health and substance abuse are treated as medical conditions, comparable to chronic diseases, with implications for training treatment, insurance coverage, available services.
- Integrated treatment of mental and substance use issues.

Quotes

- “Substance abuse and mental health are definitely connected, but based on how they are funded and regulated, they are completely separate. In the mental health hospital, we can't treat someone for substance abuse; we have to treat them for mental health. At an outpatient mental health clinic, if someone has a problem with heroin, we have to make sure to find a mental health condition too otherwise we can't bring him in. We can't treat substance abuse and mental health together even though it is the most effective way. With the way it is funded, it has to be separate.”
- “It's about continuity of care...We know from 24-hour care a day into 1-hour of care bi-weekly in two months from now is a really long inappropriate gap. It makes it really hard, and it makes it really dangerous. We've seen these people come back to the ED again and again and again.”
- “You can't treat an opioid addiction in the Emergency Room and that's what we're doing.”

- “You really need to be in detox, but there are no detox beds so go home and call detoxes tomorrow. If that doesn’t work, call them the next day.’ If there aren’t, call another hospital, and then the next day do the same. Maybe in a few weeks some hospital will say we have a bed, come in. That is the reality of what is going on.”
- “Lots of the stuff we do is reactive. For a child who is starting to have problems with Percocet, you call a program and they say to call back in 2 months. By then, it evolves into a full addiction. The system doesn’t allow us to address substance abuse issues early on before they evolve into more serious issues.”

Key Issues

Question	Synthesis of Responses
1. What are the 3 most urgent health needs/problems in your service area?	<ul style="list-style-type: none">• Access issues:<ul style="list-style-type: none">◦ Financial burden of care◦ Lack of sufficient outpatient and inpatient services for youth and adults with behavioral health issues◦ Lack of awareness within the community about services and resources for mental health and substance abuse◦ Difficulty navigating the system relative to getting treatment and insurance coverage• Systemic problems with the insurance system and government regulations- wasted time getting authorization for care, paperwork, coding systems, insurance dictates care• Mental/Behavioral health services, outpatient and inpatient services• Other urgent needs/problems:<ul style="list-style-type: none">◦ Stress, Depression, Anxiety◦ Dental Care◦ Homelessness◦ A culture which prioritizes quick fixes at a low cost. This is reinforced by mental health and substance abuse training

2. What specific vulnerable populations are you most concerned about and why?

- Youth
 - Prevention and early interventions for substance abuse and mental health issues
 - Medicating and overmedicating youth can have long-term negative consequences
- Elderly
- Other vulnerable populations:
 - People with substance abuse issues and their families
 - People with chronic conditions
 - People with comorbid mental health and substance abuse disorders.
 - Low-Income people, who are at the mercy of insurance companies and struggle with other issues like transportation
 - People who don't earn enough to afford care but earn too much to qualify for subsidized care
 - Pregnant teens and overwhelmed parents
 - Veterans, who may have PTSD or other mental illnesses and are using substances as a coping strategy

<p>3. What are the most serious barriers or service gaps that adult consumers face in accessing mental health and substance use care?</p>	<ul style="list-style-type: none">• Severe shortage of providers and services offering inpatient and outpatient treatment for mental health and substance use• Insurance system and the pharmaceutical industry:<ul style="list-style-type: none">◦ Even with insurance, the cost of care (high deductibles) may deter people from getting services◦ Control insurance companies exert over care and access to treatment◦ Insurance industry has influenced the availability of services and created service gaps, most particularly the shortage of outpatient and inpatient services for mental health and substance abuse◦ Low reimbursement rates and excessive paperwork are barriers to providers, many of whom opt to only accept private insurance, further limiting services for low-income consumers◦ Many practitioners would rather spend time with patients than on the phone with insurance companies determining and negotiating coverage for treatment◦ Low insurance reimbursement rates are also barriers for hiring practitioners; practices have difficulty recruiting qualified practitioners in all areas, and acutely in both adult and pediatric psychiatry• Severe shortage of detox facilities• The industry is slanted toward pharmaceutical solutions and away from longer-term relationship-based therapeutic treatment• Financial barriers and the prohibitive cost of care for many and especially for low-income adults and families.<ul style="list-style-type: none">◦ People in the middle who don't qualify for health subsidies but are also not earning enough to comfortably pay for care◦ Disparities in coverage between public and commercial insurance• Burden of accessing care falls on the patient. The system is already incredibly difficult to navigate, but when you are struggling with a mental health or substance abuse issue, you may not be able to manage appointments and medication
--	---

<p>4. What are the most serious barriers or service gaps that children, adolescents, and young adults face in accessing mental health and substance use care?</p>	<ul style="list-style-type: none"> • HIPAA– barrier to continuity of care, particularly when providers are prohibited from obtaining information about previous or on-going patient treatment or student • Insurance system, both commercial and governmental– limits access to care, in an arena where options for youth are already limited. Government regulations and paperwork have sacrificed a provider's time with patients. Some practices actually avoid Medicaid patients because of the bureaucratic burden. • Lack of mental health services for youth, including limited options and long waitlists. It is more difficult to find mental health outpatient care for youth than adults. The shortage of mental health outpatient care options impacts continuity of care, leaving inappropriate and even dangerous gaps between inpatient and outpatient care.
<p>5. In light of the opioid use epidemic, what are the most pressing issues and needs around access to care for detox, long-term treatment, criminalization, and stigma? What are other needs or trends in opioid addiction in your service area and what impact does that have on providers and services?</p>	<ul style="list-style-type: none"> • More treatment and detox beds in the area. In addition to a shortage in detox beds, there is a shortage of post-detox treatment and follow-up care. • Need to treat substance abuse and mental health together, or to at least remove the barriers of addressing these co-morbid conditions. Funding and regulations perpetuate this separation even though treating these conditions together is more effective. • Liability issues influencing access to care. Risk aversion deters providers from using harm reduction models even though they more effective in the long run. Higher liability working with certain populations (i.e. youth). • Need more proactive treatment, including resources to catch substance abuse early before it escalates to full blown addiction. Narcan and detox beds are considered reactive responses. • The pharmaceutical industry has perpetuated the opioid crisis by pushing pain medication, and now drugs like Narcan. • The opioid crisis has made it difficult for terminally ill cancer patients to access pain medication.
<p>6. What are the major needs, service gaps or barriers for accessing mental health and substance use care in a crisis situation, such as urgent/emergency care in the emergency department? What is working well and what can be improved?</p>	<ul style="list-style-type: none"> • Shortages in inpatient and outpatient beds. When there no discharge options, patients end up waiting in the hospital. • Model of aftercare used by Westfield State brings together the individual, their family, their providers, and the school has been effective to ensure the individual doesn't fall through the cracks. • Having a community of support is needed for recovery

<p>7. What about long-term mental health and substance use care needs for adults and youth? What are the needs for such services and who is most vulnerable when those services are not available?</p>	<ul style="list-style-type: none"> • Education for youth about substance abuse both in the school and outside. • Other needs: Peer group based support for youth, more resources, and improvement in the insurance realm
<p>8. What do you think community leaders think about the philosophy of harm reduction for addiction including the use of Narcan and needle exchange?</p>	<ul style="list-style-type: none"> • Narcan is necessary but does not treat the problem or root cause of why people are using opioids in the first place <ul style="list-style-type: none"> ◦ People are not mandated to go into treatment after receiving Narcan • Shift in the use of Methadone and Suboxone from temporary treatment to long-term maintenance
<p>9. If you could change any aspect of the mental health and substance abuse care system, what one or two things would you change that would have the most profound positive impact on access and care for the populations we've been discussing?</p>	<ul style="list-style-type: none"> • Changes in the insurance system. Treatment/care and profit are opposing forces and insurance should be nonprofit. • Institute mental health screenings for youth, comparable to annual physicals and vaccinations
<p>10. What kind of structural and social changes are needed to tackle health inequities in your community/service area?</p>	<ul style="list-style-type: none"> • Improve the insurance system
<p>11. How would you recommend that your local hospitals/insurers and the Western Massachusetts Hospital Coalition work in closer partnership with local and regional municipal public health entities and other community partners after the CHNA is completed? What specific ways can such partnerships be supported and sustained?</p>	<ul style="list-style-type: none"> • Recommendations included: <ul style="list-style-type: none"> ◦ Create more opportunity for providers to be heard. A practitioner will have a better sense of what treatments are successful, and these recommendations should be brought up the ladder and to government. ◦ Involve and inform policy makers. ◦ Create a complaint/feedback process. ◦ The Hospital should take the lead role in bringing together care providers and groups that are already working towards common goals but are disconnected. ◦ Accountability and action.

Focus Group Report: Health Care Needs of Veterans

Participants: Veterans

Primary Hospital/Insurer: Cooley Dickinson Hospital

Date: February 16th, 2016

Executive Summary

Participant Demographics

The focus group had 10 participants, all post 9-11 veterans.

Areas of Consensus

Participants were in agreement about several major areas:

- Access to health care, both inside and outside of the VA system, can be very challenging. VA is an antiquated system with long waits, but it's familiar to and with veterans. Outside of the VA system, care is better, but costly, and veterans' issues are not as well understood.
- Stereotypes about veterans, in health care and among the population in general, hinder veterans' access to health care and support networks.
- Active duty service members, including those in the National Guard, fear seeking help for behavioral health issues because of a lack of confidentiality and the possibility of a bad conduct discharge, which would cost them their benefits.

Recommendations

- Provide professional development to health care providers, particularly to first responders and intake personnel at civilian hospitals and medical centers, concerning issues and needs specific to veterans.
- Facilitate connections between the VA and civilian hospitals, so that records can be transferred across systems (at veterans' request) and billing is streamlined.
- Keep records of treatment for mental health and substance abuse completely confidential, so that seeking help for these issues does not negatively impact a soldier's current position or a veteran's eligibility for federal jobs.
- Veterans need more help accessing medical services and receiving emotional support when they transition to civilian life.

Quotes

- "We lose thousands of veterans every day just because something wasn't done quickly enough."
- "I tell people I'm a veteran and they assume I'm going to have an episode and go off."
- "97% of anyone in the medical field is not adequately prepared to deal with anyone with PTSD or veterans in general."
- "Many veterans are getting hit financially as a result of the VA not paying bills or taking a long time to pay bills."
- "I've fallen behind in life as a result of being a vet."

Focus Group Report: Health Care Needs of Military Families

Participants: Families of Veterans

Primary Hospital/Insurer: Cooley Dickinson Hospital

Date: February 22nd, 2016

Executive Summary

Participant Demographics

The focus group had six participants - all women. Five have spouses who had served in the past 15 years (post 9/11). One has a son who is active military. One additional woman (female, adult daughter of a Veteran) was interviewed by phone afterwards and her input is included in this report.

Areas of Consensus

Participants were in agreement about several major areas:

- Access to health care, both inside and outside of the VA system, is difficult. Long wait time for services at VA, lack of mental health services at VA. Outside of the VA system veterans' issues are not as well understood, insurance becomes a barrier.
- Lack of support for transition from military/reserves to civilian life, both for veteran and family members. Need access to support groups, resources, assistance accessing resources (including appropriate health care, insurance.)
- Active duty service members, including those in the National Guard, fear seeking help for behavioral health issues because of a lack of confidentiality and the possibility of a bad conduct discharge, which would cost them their benefits. They also fear they will be demoted, or lose out on promotions. This carries into civilian life. There is a strong stigma against mental health issues - sign of weakness.

Recommendations

- Educate Primary Care Providers about veteran's needs and issues so they can make appropriate referrals, especially around mental health issues.
- Veteran's want more "say" over their health care, including the ability to choose their own health care providers, insurance. Especially outside of the VA.
- Keep records of treatment for mental health and substance abuse completely confidential, so that seeking help for these issues does not negatively impact a soldier's current position or a veteran's eligibility for federal jobs.
- Families of Veterans, especially spouses, need support with the transition to civilian life. What to expect, where to find support groups, how to support their spouse and children, what to watch for in terms of mental health issues, how to navigate insurance and health care providers. They need this information and support *before* their family member is discharged.

Quotes:

- "Spouses are supporting the vets - who is supporting them?"
- "The transition (from military to civilian life) is always hard on everyone."
- "Most of our friends and even his family don't get it." (referring to PTSD)
- "What is really scary is when veterans with untreated PTSD get Alzheimer's..."
- "I wish there were more people to oversee their care at the VA and to make sure they are getting appropriate treatment."

Focus Group Report: Mental Health and Substance Use

Participants: Service Providers and Public School Leaders

Primary Hospital/Insurer: Holyoke Medical Center

Date: February 18, 2016

Executive Summary

Participant Demographics

The 9 participants were service providers and leaders from the local public schools; Hampden County Sheriff's Department/corrections; Massachusetts Department of Public Health; Holyoke Community College; Homework House; Behavioral Health Network; Holyoke Health Center and Holyoke Medical Center. Demographically, the participants were:

- 63% male; 37% female
- 87% white
- 13% African-American
- 0% Asian
- 87% not Hispanic
- 13% Hispanic
- 13% were between the ages of 31-40
- 25% were between the ages of
- 50% were between the ages 51-60
- 13% were over the age of 60

Areas of Consensus

- The recent increase in opioid abuse is a major health issue, but the drug trade and negative impact of substance use and addiction on the Holyoke community is not necessarily anything new.
- There is still a widespread need for more bilingual services, providers and educational materials that are written in accessible ways with attention to low-literacy rates in both English and Spanish; need to look at materials and online resources written at a 3rd grade level.
- Trauma, intergenerational substance use, gang violence, and mental health issues are closely tied together and result in significant need for mental health and substance use disorder treatment services; there are is a lack of adolescent psychiatric and shelter services; substance use prevention, intervention and mental health support services must start at much younger ages.
- The HMC service area still faces a significant percentage of community members who are not insured; there is a significant homeless population or families "doubling up" and that have a huge impact on young children and school age youth.

- Holyoke is a small enough community that with leadership and enough collaboration, we could go after money on a larger scale; with a significant amount of funding, could do something like the Harlem Children's Zone which includes intensive wraparound services for children and families. The Flats, South Holyoke - these neighborhoods are small enough to make a huge impact on education, jobs, and resources for the parents.

Recommendations

- We need to focus on our collaborations more. There are a variety of networks and partnerships in Holyoke, but they are not talking to each other. Around issues of drug and alcohol dependence, the Hospital could work with and convene other entities, in order to continue this type of collective 'big picture' dialogue and problem-solving. The Hospital can play a leadership role to bring people together. We can then advocate for more services in the schools and community, and strategize on ways to better address underlying social-economic issues that impact health. A strong collaborative network would be important.
- There is a need for more mental health counselors in the schools and community; we need to find a way to collaborate with school nurses and work toward creating a better and more standardized referral process for behavioral health services in the community.
- We need to look more closely at the LGBTQ+ community's health needs, as this population may need more support, but may currently get the least.

Quotes

- "Kids are being raised by aunts, uncles, grandparents or other relatives because of parents' drug use and mental health issues. This cycle continues unless it is nipped in the bud. We all need to start earlier."
- "We can't talk about this (the opioid abuse crisis) without mentioning big pharma; they are pushing opioids, now they push drugs for opioid-induced constipation. One of our doctors works here and in Greece; in Greece, they don't prescribe opioids, just Tylenol. Here, everyone gets opioids. Drugs are pushed in the U.S."
- "My instincts are that there is more of a stigma around behavioral health and mental health than substance abuse. We have gotten numb to addiction issues."
- "The heroin trade is not new in Holyoke. In 1999, the drug trade in Holyoke was estimated at \$50 million annually. We have always dealt with families that are gang involved, involved with drug abuse."

Key Issues

Question	Synthesis of Responses
1. What are the 3 most urgent health needs/problems in your service area?	<ul style="list-style-type: none"> • opioid abuse; (opiates are a problem, but also substance abuse in general; with marijuana seen as legalized, there has been an increase in marijuana smoking and use in youth) • obesity • asthma • mental health issues, especially among children
2. What specific vulnerable populations are you most concerned about? And why?	<ul style="list-style-type: none"> • Youth ages 15-25 , because of the availability of drugs; • alcohol use starting with younger kids; age 10+ as shown by alcohol drinking on the school bus, coming to school drunk and what incarcerated persons tell us about their use of drugs at very young ages
3. What are the most serious barriers or service gaps that consumers face in accessing mental health and substance use care?	<ul style="list-style-type: none"> • Lack of transportation. • Language; there is need for more bilingual capacity in services and educational materials • Kids who are inappropriately medicated is a big issue; too many kids are suffering from trauma and not being treated. • Lack of insurance; people think everyone has insurance, but if you live under a bridge, you do not have insurance.
4. What are the major needs, service gaps or barriers accessing mental health and substance use care in a crisis situation, such as urgent/emergency care in the emergency department? What is working well and what can be improved?	<ul style="list-style-type: none"> • Need to allocate funds to organizations working with schools and the hospital around improving crisis and emergency care • Kids don't get the follow-up care they need once they're in the system. For example, a child whose mom or dad is in the criminal justice system, or kids go into foster care, they go off the radar completely and are disconnected from care. • There are no placement options for children after crisis care; lack of emergency youth shelters, even temporary ones. • If a student is homeless, there is no place to take them after the crisis; they can easily get disconnected from school, and other services.

Question	Synthesis of Responses
<p>5. What about long-term mental health and substance use care needs? What are the needs for such services? Who is most vulnerable when those services are not available?</p>	<ul style="list-style-type: none"> • Geriatric patients are lacking placement options. Nursing homes don't take behavioral patients outside of small dementia units. With Medicaid/ Mass Health, some nursing homes don't accept these because of payment issues. • LGBTQ - this population needs the most and gets the least. • At Holyoke Community College, there is a growing population of students facing issues of homelessness, bullying and behavioral health needs. In the LGBTQ student group, there is concern about bullying, discrimination; levels of stress are very high.
<p>6. What are other needs or trends in opioid addiction in this area and what impact does that have on providers and services?</p>	<ul style="list-style-type: none"> • Holyoke Health Center has been proactive in educating staff about opioid overdose prevention. Staff members are trained in the use of Narcan; they have Narcan kits and information in English and Spanish. What is not working as well is that people are still afraid to talk about it. • There is a lot of education going on right now to train providers in safer prescribing. • MDPH working with medical schools in MA on teaching doctors about opioid overuse. • Overdose deaths have been significant in past year and this is waking up people. All of a sudden, wealthy children are dying and this is opening up minds and resulting in more media attention • There's also a problem with social acceptability of drug use. People have in their minds that marijuana use is OK.
<p>7. What kind of structural and social changes are needed to tackle health inequities in your community/service area?</p>	<ul style="list-style-type: none"> • We need more sports, things to do, to keep youth involved, and have conversations. Get to know kids, families. Not just sports, also arts, music, crafts, computers. • We have the Youth Task Force and it got money from SAMHSA, but not in that kind of coordinated, big-picture way. We need more capacity than any small organization can manage. Coalitions are doing a great job, but coalitions come, make an impact, move on; we need more permanence. • Universal Pre-K is a huge need in a community like Holyoke; the sooner kids are in the system, the better they will be. Starting earlier, we can identify issues before they become big problems. By the time they start school, it's harder to address them.

Question	Synthesis of Responses
<p>8. What do you think community leaders think about the philosophy of harm reduction for addiction including the use of Narcan and needle exchange?</p>	<ul style="list-style-type: none"> • No clear consensus about it depends how you define community. There is more acceptance in some communities than others. • The majority believes that harm reduction is the way to go, but strong vocal minority (45%) don't think its right. In some sense, it's all political noise. The real data need to come from health organizations. • In looking at first responders (police and fire departments), do they have Narcan, and are they willing to administer it? In departments within the HMC service area, some do, some don't. • HCC has Narcan and some public schools have it. We need to advocate for all schools to have it and for it to be accessible. • There should be a bigger effort to educate about Narcan.
<p>9. How would you recommend that your local hospitals/insurers and the Western Massachusetts Hospital Coalition work in closer partnership with local and regional municipal public health entities and other community partners after the CHNA is completed? What specific ways can such partnerships be supported and sustained?</p>	<ul style="list-style-type: none"> • There are limited resources. Organizations must collaborate with others to seek out best practices, find a way to solve the problem. There are a lot of programs, but limited resources, need to develop a mindset of working together. The MA DPH can assist as possible. • There is a lot of collaboration already going on. We need to cultivate more positive influences on young people. Need supports like Homework House, different after school programs; connections to mentors and more mentor volunteers; • Need to include higher education as it is critical to process. There is currently a disconnect between academia and community groups. Holyoke Community College is in the process of developing an office to engage higher education around opioids and other health needs so that we can write grants, help solve problems.

Focus Group Report: Mental Health and Substance Use

Participants:

Primary Hospital/Insurer: Baystate Mary Lane and Baystate Wing Hospitals; findings may also be applicable to Health New England, with respect to rural, lower-income service areas

Date: March 4, 2016

Executive Summary

Participant Demographics:

The 15 participants were members and invited guests representing providers and agencies attending the Community Benefits Advisory Council (CBAC) meeting. Demographically, the participants were:

- 80% female; 20% male
- 100% white
- 100% not Hispanic
- 6% were between the ages of 21-30
- 20% were between the ages of 41-50
- 33% were between the ages 51-60
- 40% were over the age of 60

Areas of Consensus:

- There is a lack of primary care providers' knowledge and skills to treat mental health and addiction as chronic diseases.
- Need increased parental and community education to broaden understanding of what addiction is, how it can be prevented and treated.
- The health insurance system is overwhelmingly complex and hard to navigate; much of the burden to navigate is put on the individual; lack of skills and motivation interfere with meeting insurance enrollment and renewal requirements.
- Lack of transportation, poverty, and rural isolation are major barriers to accessing health care and improving community health status.

Recommendations:

- Look at innovative care and support models with more emphasis on outreach and community health workers in role to overcome transportation barriers and bring services to most vulnerable populations.
- Invest in broad community education and social norms marketing campaigns on addictions (similar to campaign on domestic violence).
- Substance use treatment needs to be longer, more accessible, more flexible, and take into account the ease of accessing opioids outside of treatment; establish and sustain local, active peer recovery programs.
- Provide more community education about using health care and how the health care systems and personal health choices interact with one another.

Quotes:

- "Primary care doctors are refusing to or claiming they are not able to care for young family members with addictions."
- "People don't get well (from substance use) in a short period of time."
- "Treat it (substance use) as a chronic illness - you wouldn't suggest treating a diabetic like that."
- "We need to be more mindful with prescriptions and how much we prescribe for what"
- "(We need) systems of care that are flexibly responsive to what people need, when then need it."

Key Issues

Question	Synthesis of Responses
1. What are the 3 most urgent health needs/problems in your service area?	<ul style="list-style-type: none"> • Obesity and the chronic illnesses associated with it such as diabetes • Substance use including tobacco, alcohol, marijuana and opioid use • Mental health needs, especially depression, family guidance and parenting training • Rate of asthma among young children is very high, exacerbated by tobacco smoking in the home
2. What specific vulnerable populations are you most concerned about? And why?	<ul style="list-style-type: none"> • Homeless population • Domestic violence victims • Youth with an unplanned pregnancy • Rural, socially isolated communities with limited access to health care and health education • Young adults (ages 20-30) • Low-income individuals/families at the intersection of low education, poverty, and unmet health needs
3. What are the most serious barriers or service gaps that consumers face in accessing mental health and substance use care?	<ul style="list-style-type: none"> • Lack of beds and providers - there are wait lists for behavioral health care and primary care • Lack of primary care providers' knowledge and skills to treat mental health and addiction as chronic diseases <ul style="list-style-type: none"> • People with addiction are afraid to admit it, because they feel it will impact their health care • Needs to be better integration between primary care and local hospitals and outside/greater community resources • Lack of continuity and consistency for patients results in 'stops and starts', fragmented care

<p>4. What about mental health care and substance use/addiction care for adolescents and young adults? What are the major needs and issues for such care?</p>	<ul style="list-style-type: none"> • Young members of the community are often unaware about how to use and navigate through the health care system, i.e., where to appropriately go for what types of and levels of health care such as primary care, urgent care, emergency care, behavioral health care, hospital care, etc. They misuse ED and other urgent care providers when primary care would be more appropriate
<p>5. In light of the opioid use epidemic, what are the most pressing issues and needs around prevention, intervention and access to care?</p>	<ul style="list-style-type: none"> • Treatment needs to be more accessible and flexible and take into account the ease of accessing opioids outside of treatment • Need for local, active peer recovery programs • Need longer and more comprehensive care options based on ‘best practices’ for addiction treatment • Doctors need to prescribe less opioid painkillers; goal is to REDUCE pain; taking away pain is counterproductive to understanding patients symptoms and needs • Need increased parental and community education to broaden understanding of what addiction is <ul style="list-style-type: none"> • improve the link between the community and services to help people better know what resources are available and how to access them • there are limitations on what we can do to help members of our community; I can't bring my neighbor to any services because of lack of my authority on the part of the community • Opiates are linked to alcohol/tobacco/marijuana/other drugs; heroin is rarely the first drug used
<p>6. What are some other needs or trends in opioid addiction in this area and what impact does that have on providers and services?</p>	<ul style="list-style-type: none"> • Effective programming for middle schools on understanding substance abuse crisis • Hepatitis C is a substantial community health issue; transmission is largely via sharing needles ; area could benefit from establishing a needle exchange program that is more than just providing needles could also provide: <ul style="list-style-type: none"> • Linkage to treatment and support resources • Other harm reduction and health services • Community education and social norms marketing campaigns on addictions (similar to campaign on domestic violence)
<p>7. What is your wish list for improving health in your rural service area and for the populations you serve?</p>	<ul style="list-style-type: none"> • Outreach services to bring people into care** <ul style="list-style-type: none"> • This may be a first step to helping address lack of transportation services • Community liaison or Community Health Worker (CHW) doing in home consulting services • Primary care that is invested in communities • Transportation services**** • Broader based community education services

8. What kind of structural and social changes are needed to tackle health inequities in your community/service area?	<ul style="list-style-type: none">• Need better jobs; we lack access to jobs that are life sustaining and provide a livable wage• Need more community education about using health care and how the health care systems and personal health choices interact with one another• Need a more access to dental health care services<ul style="list-style-type: none">• Children are facing increasingly difficult health issues when parents do not practice good dental hygiene; loss of teeth and dental disease affect health, but also affect appearance and future prospects for jobs• Substance abuse compounds poor dental health• The health insurance system is overwhelmingly complex and hard to navigate; much of the burden to navigate is put on the individual; lack of skills and motivation interfere with meeting insurance enrollment and renewal requirements<ul style="list-style-type: none">• Individuals with substance abuse/mental health issues need help, but must also exercise personal responsibility, to maintain insurance and eligibility for services• PATCH program was brought up as a suggestion for supplemental support• Need to provide life skills training• Need urgent care options that are not an ED
---	--

Focus Group Report: Faith-based Leaders

Participants: Faith Based Leaders

Primary Hospital/Insurer: Baystate Medical Center and Mercy Medical Center

Date: February 29, 2016

Executive Summary

Participant Demographics

The focus group included 11 faith-based leaders from Hampden County, including Springfield, Holyoke, and several other towns. A small number specifically referenced their work with low-income or homeless populations. Several reflected primarily on the needs of working or middle class and older populations. The group included:

- 6 women and 5 men
- 9 White and 2 African-American participants

Areas of Consensus

- Faith leaders are clearly interested in enhanced communication and coordination with hospital staff. Several agreed they want to be able to count on communication from the hospital when congregants are hospitalized or need community supports. They see personal outreach from hospital chaplain's office as an effective way to build relationships and bridges. Several would facilitate health outreach and education efforts aimed at their parishioners/community.
- There was general consensus about the breadth of substance use and addiction problems affecting diverse populations. The opioid crisis is appearing in all communities. All noted that drug use is prevalent among youth, and many pointed to alcohol addiction in older populations. Some are particularly concerned with the dual challenges of homelessness and addiction. All agreed on the need for enhanced short and long term treatment options for those with and without insurance.
- Many pointed to the widespread need for greater health literacy; access to information about wellness, health promotion, diseases, and service options. Several said they would work with the hospital to organize community events promoting wellness, at which health care providers could provide education, information, and referral services.
- For many consumers, navigating and advocating within the health care system is a major challenge. Many consumers simply don't know where to go or how to access certain services. Particularly those with multiple issues--several mentioned increasingly complex health concerns faced by seniors--have trouble finding providers and coordinating among multiple providers, treatments, and medications.
- Faith leaders identified a number of issues affecting health equity. These include: financial status, noting that MassHealth doesn't offer the same quality and access to services as private insurance and that those above the MassHealth threshold face greater challenges in

accessing care; cultural insensitivity among providers; education and cultural background affecting patient advocacy skills; and stigma relative to certain populations (those who use drugs, ex-offenders, homeless, mentally ill, e.g.).

Recommendations

- Hospitals are well-positioned to collaborate with churches on outreach and education. This process needs to respect community stakeholders as equal partners who have essential knowledge about community needs and engagement. Church leaders would welcome hospital representatives to provide education on specific health issues and to offer community-based health services at church organized events. Collaboration with parish nursing programs could benefit health providers and faith communities by enhancing or expanding health education and screening opportunities for congregants. However, only a few of the churches have such programs or other informal health care educators (e.g., retired health professionals).
- One particular area to address is coordination of care and managing transitions for seniors. Hospitals could consider expanding on municipal senior service programs to reach a broader swath of the elderly. Collaboration between churches and hospital services could promote effective communication with the seniors and family members and help get community supports in place as seniors require an expanded array of services.
- Faith leaders often find themselves ill-informed or lack the time to help congregants with health advocacy and navigation. They suggested that health care providers could help to train church representatives on service availability, resources, and advocacy skills; so that these lay leaders could support congregants in accessing appropriate care. Hospital and faith leaders could work together to identify other ways to create a “health care clearinghouse.”
- This focus group provided a forum that faith leaders were excited to participate in. They welcomed the opportunity to come together to share ideas and challenges. Baystate and Mercy should consider opportunities to follow-up with these participants and those from other faith communities. Personal outreach and relationships will offer a foundation for creating a stronger network of health system and faith community leaders working together to address community health issues.

Quotes

- **Substance use:**
 - “Immensity of [opioid use] overwhelms me.”
 - “Especially when dealing with drug addiction, a parishioner’s depression when not well managed can lead to drug abuse. Insurance may be done but his health needs are far from done. People need ongoing care to stay clean.”
- **Health literacy and access to information:**
 - “In general people need a little more education. And easy access [to information on health care options], [it's] available on websites, but to find an answer to an exact question is very difficult for people. They don’t use official sources, word of mouth, sometimes it is not the real useful information.”
 - “People need services and don’t know to ask for them, don’t know they exist, don’t know who to ask.”

- **Coordination of care:**
 - “[A big problem is] parishioners that have many medications and many doctors. Miss the days one doctor was looking at all of it.”
- **Collaboration between hospitals and communities/churches:**
 - “How do you collaborate with community with integrity? ... Agencies from health care go to organizations with credibility, credibility means we [community stakeholders] have to have say.”
 - “Relationship building that would benefit populations that we serve: [hospitals] could serve the target populations far better than they do [through] outreach and collaboration.”
- **Navigation and advocacy:**
 - “Sometimes we are the only rational person in the room; have to broker a lot of deals. [We could use] local formal training. We know the people and they know us.”
 - “One minute I’m a pastor, the next I’m navigating their care. They are looking at their doctor like what are they talking about.”
 - “When these things happen, people are in crisis. [It’s] hard to navigate, make [the needed] phone calls.”
- **Health care coverage:**
 - “[This is] “a moral issue! When did healthcare become for profit, immoral to me!”

Focus Group Report: Maternal and Child Health

Participants: Mothers

Primary Hospital/Insurer: Baystate Medical Center

Date: March 7, 2016

Executive Summary

Participant Demographics

The 7 participants were recruited through informal networks primarily by CHNA Steering Committee members. Several worked or had previously worked in health related field.

- All participants were women who had at least one child.
- 6/7 were in the 21-30 age range.
- 4 identified as Hispanic/Latino; 3 as African-American; 2 as more than one race.

Areas of Consensus

- Women face a variety of challenges in terms of managing medical care for themselves and their families, among many other responsibilities (work, child care, children's education, housing, etc.).
- Stress, anxiety, depression all make it difficult to make decisions, manage health care, and take care of oneself as a new parent.
- Appointment scheduling: women are consistently frustrated with challenges in scheduling timely appointments. They often have to wait for weeks to address immediate needs.
- Payment/cost frequently hinders access to care.
- Women rely on informal support systems (family and friends) for information, guidance, and shared resources. They would be very interested in health services that work with or build support systems among mothers.
- Many are interested in expanded supports and education for fathers, so they can be more effective and active in the parenting role.
- Many women feel that medical providers are working from a protocol, rather than tuning in to a specific woman's needs. They identify several instances where providers don't follow-up on issues or appropriately attend to patient concerns.

Recommendations

- **Build (on) informal support systems:** women expressed an interest in accessing health care that has built into informal support systems (for example, a support group that is initiated early in prenatal care). They tend to share information through family members, who could potentially be recruited to help women access appropriate care.
- **Build formal support structures:** for example, include a patient advocate, social worker, or case manager early in prenatal care to support care coordination for mothers and their

children. This role would check in with mothers on mental and physical health, barriers to accessing care, and other stressors and help women to navigate the various support systems.

- **Identify ways to make health care service delivery more patient-centric:**
 - Use accessible (non-technical) language; translate documents
 - Ease access to appointments: Recognize that pregnant and parenting women have many obstacles to getting to appointments on time. Increase flexibility to allow for short-term appointment scheduling and late arrivals for appointments.
 - Prior to any testing or treatment, provide relevant and accessible information; time for parents to process information, ask questions, and make decisions; and a clear consent process.
 - Immediately after delivery, women are engaged in intense physical recovery and emotions. Hospital staff should look at policies and practices to alleviate the pressure on mothers to make decisions and prepare for discharge.
 - Add some luxury services to help relieve stress (e.g., massage, manicure).
- **Coordination and Access:**
 - Provide multiple services under one roof: let women and children access health care appointments in one location.
 - Facilitate sharing of information among patients and their providers including, prenatal, postpartum, pediatricians, and specialists. For example, women are more likely to see their newborn's pediatrician over the first six months than their own ob/gyn. Consider how staff in pediatric offices could follow-up with mothers on mental and physical health issues.
- **Communication:** Use multiple methods of communication, and communicate information more than once. Follow-up with mothers before and after appointments.

Quotes

- **Scheduling challenges:**
 - "I tell them to call me as soon as they get an appointment. I harass them every day?"
 - "My daughter is always sick, so I need to be able to get in. I can't wait for a long time for an appointment."
 - "I had tons of morning sickness. [My doctor's office policies are] if you are more than 15 minutes late, you have to reschedule. They should have more common courtesy and be flexible."
- **Provider sensitivity and communication:**
 - "[hospital staff] see people having babies everyday; it's no big deal. They don't see it from a new mom's eyes."
 - Providers need to talk in "regular English" – break it down; Moms "may not ask because they don't want to feel stupid."
- **Ease of access/ one-stop shopping:**
 - "If there was one place we could go, we would get there."

Key Issues

Question	Synthesis of Responses
1. Urgent health needs among pregnant and parenting women:	<ul style="list-style-type: none"> ● Responsive prenatal care ● Mental health: stress reduction, postpartum depression, anger mgmt. ● Follow-up medical/emotional care and supports after post-partum visit(s) ● Diabetes management and follow-up ● Providers to pay attention to women's concerns and issues that arose in previous pregnancies
2. Other supports needed:	<ul style="list-style-type: none"> ● Groups for parents of children with special needs (managing health and school issues) ● Childcare ● Individualized Educational Program (IEP) advocacy with schools
3. Barriers to accessing appropriate care:	<ul style="list-style-type: none"> ● Difficult to schedule appts. ● Insurance; high cost of services; lack of money to cover co-pay ● Provider-centric policies (e.g., scheduling, late arrivals) put women off ● Mother's feeling that providers are not listening or following-up on issues ● Awareness of appropriate services ● Transportation ● Understanding all the information and making decisions (e.g., vaccine information given at birth) ● Lack of knowledge/information regarding birthing classes
2. How did you find a health care provider (for PNC or Ped):	<ul style="list-style-type: none"> ● Mother, sister ● ER ● Internet/google ● Hospital (where gave birth) recommended pediatrician ● MD/nurse recommendations ● School referral for counselors ● Early Intervention ● Rick's Place ● Square One

Question	Synthesis of Responses
3. Trusted sources of information:	<ul style="list-style-type: none"> ● Pediatrician (but some don't trust MD recommendation) ● Family/Friends ● WIC ● Family/personal history with specific MD ● Knowledge/reputation of area hospitals strengths and weaknesses for OB (e.g., liked Riverbend/Mercy for PNC and likes patient portal; like Baystate for delivery because the NICU is there)
4. Ever had trouble finding a provider:	<ul style="list-style-type: none"> ● Yes, for mothers and for kids, particularly for mental health for moms, and special therapeutic services for kids ● Helps to be connected through one provider: e.g., Square One
5. What works about health care services you have received:	<ul style="list-style-type: none"> ● Convenient location: my OB was in the same place I worked ● Had own transportation ● Hours worked around work schedule ● Doctor made me feel really comfortable ● Meeting pediatrician in hospital (at delivery) and continuing to work with that MD ● WIC is good at frequently reminding/checking-in with women about service options, decisions that need to be made
6. Would you recommend to others?	<ul style="list-style-type: none"> ● "Absolutely" ● Others will warn friends about providers they were dissatisfied with

Question	Synthesis of Responses
7.What didn't go well:	<ul style="list-style-type: none">● Scheduling appointments for routine and urgent care:<ul style="list-style-type: none">○ Difficult to get appointment quickly○ If need to re-schedule may have to wait for a long time○ Had to switch doctors because couldn't get an appointment○ Difficult to get through to scheduling● Switching doctors● Unfriendly/insensitive nurses, doctors● Providers going through their “checklists,” but not paying attention to individual patient responses and needs; patient is treated as a diagnosis, not as a person● Payment challenges:<ul style="list-style-type: none">○ providers say we won’t see you any more if you can’t pay; one mother had to find a new provider for PNC, because she owed money to previous provider○ If supposed to bring co-pay at time of visit, often postpone appointments○ Huge co-pays for labs, visits, and prescriptions● Lack of information about procedures and options;<ul style="list-style-type: none">○ One mother reported routine drug, STD testing without information or consent

Question	Synthesis of Responses
8.How could we do it better:	<ul style="list-style-type: none"> ● Provide easy-to-read handouts with clear explanations of what patient can expect, and what lab work they are doing. ● Flexibility in scheduling appointments – be more accessible on short notice. Follow-up promptly on needed appointments. ● Recognize the demands and challenges for moms – if they are late for an appoint, figure out how to accommodate ● Be more sensitive to patient perspective and needs; speak in easy-to-understand language (avoid technical jargon) ● Home visits for PNC and post-partum ● Attention to individual woman's issues and follow-up (e.g., don't just ask once how the mom is feeling postpartum; ask again in a week or a month; pay attention to stressors). <ul style="list-style-type: none"> ○ Assign a counselor or therapist that really pays attention to mom's status and needs ● Moms need someone to talk to; providers or other supports services need to find time to listen and talk ● Cover mom's post-partum health and baby visits at the same time ● Don't do treatment, tests, or even little things (e.g., pacifier) without getting consent ● Skype call ("mobile doctor") so you can get quick access to a MD ● Group visits: appealed to many; create support group early in pregnancy. Women who can share information and ideas with each other. Perhaps they can have medical visits at the same time. ● Includes supports for fathers and families; family counseling to help manage stress and help new parents work together. ● Should have all services together in one place!! <ul style="list-style-type: none"> ○ Services are set up at convenience of doctors and hospitals; patients/women are not at the center of the service design ● Let mom rest for the hours after delivery; "<i>don't rush us out and try to cram everything in</i>" ● Pregnant/postpartum: women are feeling "fat and ugly" and tired. Provide "feel good" services: e.g., manicure, massage, hair cut
9.What prenatal services did you not receive that you wish you had:	<ul style="list-style-type: none"> ● Education, support resources for fathers

Question	Synthesis of Responses
10.What advice would you give your friend or sister about prenatal care:	<ul style="list-style-type: none"> • Go to the birthing classes • Request frequent reminders about different service options, decisions they will need to make • Get ongoing support for nursing • Get more information for after the baby is born: what to expect from baby and what you can expect (e.g., hair loss)
11.WHEN YOU WERE PREGNANT, what was the most helpful advice/information you received:	<ul style="list-style-type: none"> • MD said: “just relax”; relax and be calm; one day at a time • Nothing: “I’m pregnant now, and I can’t think of one helpful thing that anyone has told me”
12. Where did you turn for information about <u>pregnancy</u>: Where did you turn for information about <u>parenting</u>:	<ul style="list-style-type: none"> • Mom, sisters, sister-in-law • Internet • Nurses • No one • Family, mother-in-law • Early Intervention “helps more than doctors’ offices” <ul style="list-style-type: none"> ◦ EI came to house to evaluate child and helped get them the stuff she needed for her child (braces, shoes) • DCF sponsored parenting class
13. How do you prefer to get information: Information challenges:	<ul style="list-style-type: none"> • Text messages and emails • Mail - hard copies • Needs to be translated • In person • Want test results whether they are normal or abnormal. • Patient portal – can see all your results • Online videos: yes interested, but how are you going to know what’s out there • Davis Foundation: has texting campaign to let people know about things going on in Springfield • Baystate Pediatrics is very helpful • Can’t always make it to everything and then you miss out on information, <ul style="list-style-type: none"> ◦ Often don’t find out about things until after it’s over (e.g., free shoes and hair cut for your kids) • Phone calls: often too rushed; don’t get complete information • Need more coordination among different providers, so getting same information from everyone

Question	Synthesis of Responses
14. How many different doctor's offices do you have between yourself and your children:	<ul style="list-style-type: none"> • Some just have one doctor (pediatrician) • Several said 3 • Ranged up to 5, including primary care/gyn, pediatrician, therapists, and specialists • Others included ER as one of their providers • Most have to go to multiple buildings or practices for parents and children • Get different information from different providers: "crazy"; huge waste of time and money
15. Are you able to use the same practice for prenatal and postpartum:	<ul style="list-style-type: none"> • Many "yes"
16. How do you navigate multiple providers:	<ul style="list-style-type: none"> • Good calendar systems • Moms as navigator for family • Reminder calls are really helpful • Patient care coordinator – they were going to get the patients calendars and help patient follow-up on appointments
17. Things that you need to have to take care of a baby or children:	<ul style="list-style-type: none"> • Money: "<i>this is what gets you access to everything else</i>" • Shelter/housing • Support system • Information • Patience • Milk/formula – when you first come out of the hospital; food • Clothing • Support group for sharing resources (e.g., knowledge and needed resources, e.g., formula) • Transportation to get to appointments • Free services • Timely appointment (ease of access to medical appointments) • Need help addressing the multiple challenges: education, job, child care • Supportive employers- "<i>really, really hard to go back to work after you've had a baby</i>" <ul style="list-style-type: none"> ◦ Employee assistance program • Car seats • Father support/education • Child care

Question	Synthesis of Responses
18. Which have you had difficulty obtaining:	<ul style="list-style-type: none"> • Milk/formula • Child care • Education • Resources for fathers • Father groups/supports • Father education • Fathers don't know what it entails to take care of a baby/family • They need to be educated on how to support mom • Lack of access to support system • Timely appointments: <ul style="list-style-type: none"> ◦ E.g., son having a reaction to a medication, and they say wait for 3 weeks for an appointment ◦ Don't schedule time-sensitive appointments 1-2 weeks out • Information on short-term decisions/things to do for your baby (e.g., circumcision)
19. Challenges with housing while pregnant or parenting: Could health care providers help with housing?	<ul style="list-style-type: none"> • YES! And know many other moms • Some live with mother, other family members • Unforeseen circumstances, out of their control, can change stability quickly: <i>"How do you relax when you don't know where you are going to live"</i> • Have a newborn in far below acceptable housing is very stressful (e.g., with rodents) • Could have someone helping with all social services – make sure all essential supports are in place • How do they help people who aren't eligible for services? <ul style="list-style-type: none"> ◦ Services aren't there if you are in the upper low-income range: <i>"they want you to give up your car, take the bus, and then you are late for appointments ..."</i>
20. Last thoughts:	<ul style="list-style-type: none"> • Interest in awareness/support groups for various issues: sickle-cell, pain management, IEP needs and advocacy, sharing material goods • <i>"Don't forget the fathers."</i> • Provide postpartum mental health supports • Build and build on support systems! • Provide "really lovely" treatment for stressed moms (e.g., massage)

Focus Group Report: Access to Health Care for Low-Income Individuals

Participants: low-income individuals

Primary Hospital/Insurer: Health New England

Date: April 5, 2016

Executive Summary

The focus group consisted of six female residents of a low-income housing development in Greenfield, MA. Discussions revolved around access to healthcare, including gaps and barriers to obtaining needed services.

Poverty was an underlying theme of this focus group. Poverty is a significant barrier to health. Respondents spoke about their inability to afford medications, transportation to appointments, childcare, and gym memberships.

Participant Demographics

6 participants, recruited through the housing coordinator at a low-income housing complex located in Greenfield

- All participants were females: all identified as straight
- Age distribution:
 - 1: 21-30 years old
 - 1: 41-50 years old
 - 2: 51-60 years old
 - 2: >60 years old
- All identified as White, and not Hispanic/Latino

Areas of Consensus

- Participants generally agreed that lack of transportation is a significant barrier to accessing needed care. Most participants rely on others for rides or use public transportation.
- Public transportation was reported to run infrequently, and/or have limited drop off locations that require a secondary form of transport (or walking in areas that are not pedestrian friendly).
- “TP1’s” (insurance funded transportation system) has to be scheduled in advance, and do not make accommodations for accompanying a dependent.
- Participants agreed that waiting for appointments is a barrier. They reported that it can take a few days to see a doctor when sick, a few weeks to see a specialist, and up to a year to schedule a routine physical. Limited access to transportation compounds this issue.
- Participants agreed that they have limited input in setting the goals and priorities for their health.
- Most participants reported feeling rushed during appointments; not having enough time for questions; and having a limited understanding of medical jargon when discussing medical conditions.
- Half of the participants reported limited dental coverage.
- Changes in prescription coverage as a result of recent insurance changes were a frustration for most participants.

Recommendations

- Increased availability of transportation options for those that don't own cars.
- More free venues for exercise and more nutrition/diet support services.
- More comprehensive dental and vision coverage.
- Better training for customer service representatives at insurance companies and doctor's office.
- More social workers/patient navigators to assist with paperwork, scheduling appointments, transportation, and support during (and to prepare for) doctor's appointments.

Quotes

- "My son has been on his medication for 13 years, and now they are saying that they cannot cover it. They offer an alternative, but we have already done all of the alternatives- Why step backwards?"
- "Everyone in my house was sick last month. I had already taken too much time from work. I couldn't get appointment with primary care doctor that worked with my schedule, so I went to the clinic. Then the clinic made me wait for authorizations."
- "TP1s only apply to that one person. It is difficult for single parent- you can't bring your kids with you."
- "You have to wait 45 minutes for a 5-minute appointment. I think of things afterwards because they rush you and you don't have time to think about it sometimes."

Key Issues

Question	Synthesis of Responses
1. What has you/your family member's experience with the health care system been like	<p>Participants primarily focused on barriers to obtaining prescription medication, including:</p> <ul style="list-style-type: none">• The cumbersome and timely preauthorization process• Insurance company stopping coverage of certain prescription drug benefits• Co-pays for prescription medications• Waiting for prescriptions to be filled <p>In response to this question, participants primarily focused on service coverage as opposed to interpersonal interactions when seeking care</p>

Question	Synthesis of Responses
<p>2. Please tell me about barriers you've experienced when trying to get care</p>	<ul style="list-style-type: none"> • Most participants agreed that transportation was a significant barrier to getting care • Although transportation vouchers ("TP1's") are available, they are limited to doctor's appointments (i.e. not pharmacy visits) and are only valid for the patient receiving services (and therefore do not cover the cost of bringing or accompanying a child/dependent to an appointment) • TP1 vouchers must be scheduled nearly a week in advance, so are not helpful in emergency situations • Specialty services (i.e. optician) that accept their insurance are not located on a bus line- this requires paying for taxi fare, or walking on the shoulder of the road • Services that are not housed in one location are more difficult to access; this means more time away from work to access all services • A few participants noted barriers surrounding vision care, specifically limited optician services within a reasonable distance • Insurance only covers one pair of glasses/year, which can be challenging for children who are prone to damage them; when broken, it can take up to 6 months to repair • Other barriers mentioned included difficulty getting appointments to see Primary Care Provider (PCP) with short notice, long office waits, and cumbersome authorizations required to visit urgent care clinics. • Although some providers have e-portals for communication, participants reported the cost of Internet service and availability of computers as a barrier to accessing this service • Most reported missing appointments that have to be booked far in advance • If three consecutive appointments are missed, the patient is required to find a new PCP • Most reported long wait times for appointments (2 days for urgent care, a few weeks for specialty care, 1 year for primary care)
<p>3. When you have gotten medical care (PCP, ER, specialty), what has your experience been like?</p>	<ul style="list-style-type: none"> • The majority of participants reported long wait times in doctor's offices, and short appointment times • One participant expressed feelings of not being listened to • Participants report feeling rushed during appointments, and forgetting to ask questions • The use of medical jargon is frustrating

Question	Synthesis of Responses
<p>4. Who do you call if you or a family member has a health crisis? (i.e. family member, clergy, doctor, mental health professional, friends, police, emergency room, hotline?) Who do you contact if you have a concern about your treatment or recovery?</p>	<ul style="list-style-type: none"> Answers varied: some participants call 911, others call a family member to avoid the high cost of taking an ambulance Some participants reported calling their doctor's office if they have concern about their treatment or recovery One participant noted that you sometimes get a faster response if you call to speak to a nurse Most participants referred to seeking professional input (call lines at doctor's office) versus seeking input from family or other social support connections
<p>5. How much input do you have in setting the goals and priorities in taking care of your health?</p>	<ul style="list-style-type: none"> Most participants reported having limited input or choices in the services and care they receive. This is linked to limited appointment time and use of medical jargon that confuses patients
<p>6. What health services are valuable/not valuable, what services do you need to meet your health goals, where do you get services?</p>	<ul style="list-style-type: none"> Participants generally agreed that follow-up appointments seemed like they were for no reason, and were a waste of time It appears that individuals could benefit from increased education about what conditions need immediate care and/or prescription medication Two participants shared stories about their doctors making recommendations that they could not afford, including attending a specific seminar and buying PediaSure Half of the participants spoke about needing to have medications and conditions explained in plain language, and requested less medical jargon overall Two participants reported their doctors told them to go home and Google their questions

Question	Synthesis of Responses
<p>7. What other services would help you achieve your health needs/recovery goals?</p>	<p>Participants mentioned the following services:</p> <ul style="list-style-type: none"> • Services for diet and exercise, including diet educators, nutritionists, and no-cost exercise facilities • Participants were either unaware of gym membership reimbursements, or were unable to pay out of pocket at the time • The length of time to get reimbursed was noted to be a barrier to using this service • More dental services • Childcare for appointments and in general • Patient navigators/social workers to help with insurance sign-ups, paperwork, transportation, coordinating appointments, etc. • Patient advocates/navigators to help prepare questions while waiting for appointments, elucidate medical jargon and navigate appointments • Increased transportation services • Job training
<p>8. If you could change any aspect of the health care system that you have experienced, what one or two things would you change that would have the most positive impact?</p>	<ul style="list-style-type: none"> • The majority of participants focused on training customer service professionals at insurance companies and doctors' offices to ease a patient's ability to navigate the system and get prompt responses. • Need for expanded dental coverage (more than just "pulling and cleaning") • For doctor appointments: more time, be listened to more, have more input and choices, simplify language
<p>9. IF TIME: Are there some health or other services available now but you cannot access them because of when or where they are offered? What are they and what are the barriers?</p>	<ul style="list-style-type: none"> • Participants mentioned limited accessibility to women's health services • When asked, all 6 participants reported not receiving routine OB GYN care • Other services mentioned throughout the focus group include: <ul style="list-style-type: none"> o Glasses- better replacement options for young children o Dental Care- increased services, such as dentures

Key Informant Interview Report: Baystate Noble Hospital

Dates:

February 12th - March 1st, 2016

Interview Format:

Phone interviews, approximately 1 hour in length.

Participants:

1. Liliya Adzigirey, Translator/Interpreter, Baystate Noble Hospital
2. Jacques Blanchet, MD, Director of Emergency Department, Baystate Noble Hospital
3. Kelley Crowley, Administrative Director of Behavioral Health, Baystate Noble Hospital
4. John Shaver, CFO, Baystate Noble Hospital

Areas of consensus across interviewees:

- Insurance system is flawed
- Substance use and abuse, especially opioid epidemic is an urgent health problem
- Mental health is an urgent health need/problem
- Substance abuse and mental health are siloed
- Significant gaps in mental health and substance abuse services
- Gaps between emergency and follow-up care
- Barriers include culture, language, transportation, cost of care
- Vulnerable populations include elders, immigrants, substance users/abusers
- Need communication, resource sharing, and joint problem solving to sustain partnership

Question	Synthesis of Responses
1. What local policies and social conditions predispose people in your community/service area to good health and mental wellness? Are there groups of people who benefit from these policies/social conditions more than others?	<ul style="list-style-type: none">• Community support (i.e. churches, peer-run support groups, club houses)• Promotion of exercise and physical activity, including through the built environment and access to places for recreation. Those who are educated, employed, and with higher incomes are more likely to benefit• Employment• English-speakers/those without language barrier are more likely to benefit• Other factors include: access to educational materials and having health insurance

<p>2. What kind of structural and social changes are needed to tackle health inequities in your community/service area?</p>	<ul style="list-style-type: none"> • Issues with the insurance system, including: <ul style="list-style-type: none"> ◦ Insurance dictates care- not every insurance company pays for the same services; differences between MassHealth and commercial insurance. ◦ The time-consuming authorization process leads to delays in care, which has ripple effects throughout the system. ◦ High deductibles cause people to avoid preventive healthcare. ◦ Reimbursements influence the types of care and procedures hospitals focus on and have perpetuated a culture of sick-care over preventive care. • Improving access to care, particularly for immigrant communities, by assigning them to local PCPs and making educational resources more readily available and in appropriate languages. • Need shift towards health promotion and preventative care • Lack of parity between mental health and substance abuse • Other changes include: laws for involuntary treatment for substance abuse, stop incarcerating people due to unavailability of treatment beds, and increased wraparound care
<p>3. What are the 3 most urgent health needs/problems in your service area?</p>	<ul style="list-style-type: none"> • Substance abuse, particularly opioid addiction • Mental health issues • Homelessness • Dental care, particularly for low-income populations • Health care/promotion for the elderly
<p>4. What health issues have emerged and/or dramatically increased in prevalence in the last 1-2 years in your area? What evidence/data do you have to illustrate this increase?</p>	<ul style="list-style-type: none"> • Drug use, particularly the opioid crisis, was mentioned by all interviewees, as evidenced by increased deaths and awareness in the community, increased volume at the ER and waitlists for care • Exacerbated by a lack of follow-up services, leading to gaps in care and ultimately relapse. • Other issues include: overweight/obesity, preventable conditions such as diabetes and hypertension among the mentally ill, mental health conditions, domestic violence, dental care for low-income populations, and housing/disposition of patient

<p>5. What gaps in services exist in addressing these needs? What are barriers to filling these gaps?</p>	<ul style="list-style-type: none"> • Gaps Include: <ul style="list-style-type: none"> ○ Sufficient facilities and providers for inpatient and outpatient mental health and substance abuse care, including dual-diagnosis programs, on-demand substance abuse treatment, and Suboxone clinics, leading to extended ER stays and gaps in care ○ Siloing of mental health and substance abuse treatment ○ Local primary care ○ Education and community support, for immigrant groups, elderly, and the general population, as well as drug education among youth ○ Training, including training mental health professionals in substance abuse and vice versa • Barriers include: <ul style="list-style-type: none"> ○ Separating mental health and substance abuse treatment ○ Language and cultural barriers complicate access to care- Russian and Nepalese populations ○ Transportation ○ The cost of service, including high insurance deductibles ○ Stigma around mental health ○ General lack of knowledge about available resources among providers and the community
<p>6. In addition to more funding, what resources do you need to better address these emerging or increasing health concerns?</p>	<ul style="list-style-type: none"> • More knowledge, information, and education about available services in the community • Other needed resources include: training, community education, more translators in other languages like Turkish and Nepalese, community translation services for everyday issues, and programming to encourage family support and involvement in healthcare
<p>7. What specific vulnerable populations are you most concerned about? And why?</p>	<ul style="list-style-type: none"> • Elders <ul style="list-style-type: none"> ○ Elders from certain immigrant populations such as Russian, Ukrainian, and Moldavian don't understand preventive care and need information in their own language ○ Geriatric psychiatric patient- there is a lack of practitioners trained to address their unique needs • Immigrant populations- language and cultural barriers • People with substance abuse issues • Homeless- difficult to discharge • Transportation

8. Externally, what resources or services do you wish people in your area had access to?	<ul style="list-style-type: none">• Substance abuse treatment, including detox centers and Suboxone clinics• Mental health services, including more psychiatric prescribers, providers, and outpatient follow-up services• Preventative education, including programs to educate youth about drugs
9. How would you recommend that your local hospitals/insurers and/or Western Massachusetts Hospital Coalition work in closer partnership with local and regional municipal public health entities after the CHNA is completed? What specific ways can such a partnership be supported and sustained?	<ul style="list-style-type: none">• All interviewees mentioned communication, resource sharing, and joint problem solving Specific recommendations included:<ul style="list-style-type: none">○ Establishing a task force to explore issues, share information, and recommend solutions.○ Develop a coordinated approach to HIPAA between hospitals.○ Establish common goals.○ Inventory and evaluate mental health and substance abuse resources to identify gaps and coordinate to fill those gaps.

Quotes:

- “The way the health insurance is going these days, with high deductibles, is causing people to avoid needed healthcare.”
- “Substance abuse programs as a rule don't want to admit someone from a psychiatric hospital. It's very siloed on both sides.”
- “Patients can't get follow-up treatment in the community after they're hospitalized. They have to wait sometimes 2 months for an outpatient appointment...”
- “For mental health, the services are harder to access, especially when people need inpatient services. Sometimes that's very limited, and we have patients in the ER for 5-6 days because access to services is so limited. The insurance dictates where these patients can go.”
- “Detox programs are not accessible right away. It may be two or three days or a week, not right away. When they come here desperate and needing immediate treatment, it is not available or there are no beds.”

Key Informant Interview Report: Health New England

Dates:

February 3rd - February 15th, 2016

Interview Format:

Phone interviews, approximately 1 hour in length.

Participants:

- David Silva, Medicaid Community Leader
- Robert Azeez, Medicaid Behavioral Health Manager
- Kerry LaBounty, Medicaid Program Manager
- Jackie Spain, MD, Medicaid Program Medical Director

Summary:

Interviewees range in their professional roles within Health New England, yet there were multiple areas of consensus, including:

- Increased capacity to treat substance use disorder and mental health needs within primary care
- More care coordination, including increased access to transportation and multiple services offered in one location/in closer proximity to each other
- Need for more patient education about what constitutes “good care” (for example, more intervention is not always appropriate, but is often expected/defined as receiving good care)
- Rural areas face multiple barriers to health, including limited programming, transportation barriers, low access to healthy foods
- A need to collect more data
- Insurance policies (lose coverage or provider after missing 3 consecutive appointments) significantly impact patients with behavioral health needs (mental health and addiction) who often miss appointments as a result of their health condition
- Need for patient education to improve overall health literacy
- Need for provider training to improve cultural sensitivity/competency

Quotes:

- “Heart of improving health care, giving people that ability to lead a healthy lifestyle.”
- “Need to get beyond ‘we deliver care, they pay for care’ to ‘where can we bring common resources to bear?’”
- “Do not make assumptions about what we think that problems are- get a better sense of community needs, and act based on data and not what you think.”
- “Use community agencies, churches, etc. to reach people to make differences.”
- “How we get care and who we trust may depend on who we are.”
- “If we are truly patient centered, then we really need to be patient center.”

Question	Synthesis of Responses
1. What are the 3 most urgent health needs/problems impacting your members?	<ul style="list-style-type: none"> • Poverty • Lack of access to nutritional foods (food deserts) • Lack of transportation • Homelessness- difficult for member engagement and follow up • Untreated Behavioral Health (BH) conditions • Unmet maternal, Child, Health (MCH) needs (i.e.-access to contraception, late entry to prenatal care, poor birth outcomes) • Diabetes, hypertension, CVD, diabetes block
2. What health issues have emerged and/or dramatically increased in prevalence in the last 1-2 years in your area?	<ul style="list-style-type: none"> • Opioid use disorder • Hepatitis C from chronic alcohol use and opioid use (current treatment carries an extremely high internal cost) • Unmet behavioral health needs • Obesity, cardiovascular disease, Type 2 Diabetes block • Asthma
3. What specific vulnerable populations are you most concerned about? And why?	<ul style="list-style-type: none"> • Minority populations, specifically African American and Latino/a • Disparities in cancer screening rates by race/ethnicity • Homeless individuals/families • Rural poor (who have the highest ER and ambulance utilization rates) • Those with Substance use (SA) issues • Youth not engaging in routine PC- lack of immunizations • Socially isolated individuals • Obese and underactive children and the earlier onset of adult diseases • Children in foster care system (fragmented care, hard to follow) • Incarcerated adults/adolescents (fragmented care, hard to follow)

Question	Synthesis of Responses
<p>4. Please discuss the barriers to accessing care such as (1) logistical, family, psychosocial, financial, geographical; (2) health insurance (coverage of benefits, cost sharing, etc.); (3) type of care people are seeking (primary, dental, behavioral, specialty); (4) lack of providers (if so, what kind); and (5) other.</p>	<p><u>Structural/logistical:</u></p> <ul style="list-style-type: none"> Access to and affordability of transportation (MassHealth transportation system is not accessible for unplanned medical needs) Distance to providers (rural areas) Distance between services required to be compliant (ex. if x-ray, lab, and pharmacy are all in different places, people may be more likely to end up seeking all of those services in the ER) State regulations- can change plan daily, this impacts continuity of care Rules for BH care for Medicaid population: cases are closed after 3 no-shows, but various barriers can contribute BH issues themselves pose barrier to care (ex. depression) <p><u>Providers:</u></p> <ul style="list-style-type: none"> Lack of providers in rural areas that accept Medicaid Lack of specialty providers that accept (ex. dental and dermatology) Lack of BH providers, overall Long wait times for specialty and primary care (leads to high emergency room (ER) utilization) <p><u>Housing instability:</u></p> <ul style="list-style-type: none"> Housing instability makes tracking members challenging, changing contact info means some might lose insurance because they don't see notices Notices sent re: maintaining insurance are not always at the appropriate literacy level/translated <p><u>Cultural:</u></p> <ul style="list-style-type: none"> Latino population, less importance placed on timeliness in terms of making appointments (mentioned by ¾ interviewees) White populations have less family support systems as compared to AA and Latino populations Fear of losing benefits if health improves Cultural ideas of what good care is (for some, lots of med and interventions are seen as good quality care, if not received from PCP, go to ER to get- this relates more to overuse)
<p>5. Please discuss quality of care as reported by members and/or clinicians (perceptions of quality of care members are receiving- i.e. do people believe that the care they are getting has value?)</p>	<ul style="list-style-type: none"> Members are frustrated by access to and time to get appointments Providers are frustrated by lack of compliance and rates of no shows Need for more integration of BH care into routine PC (primary care) Need for more culturally sensitive care (more training for specialty populations- transgender individuals, adolescents, varying ethnic groups)

Question	Synthesis of Responses
<p>6. Please discuss the access to and availability of community resources needed to be healthy (built or community environment (e.g.- food, safety); fitness/gym facilities; benefits covered by health insurance; community organizations).</p>	<ul style="list-style-type: none"> Rural areas- programming is limited, or spread out/located in pockets that can be difficult to get to Urban areas- programs exist, but often people are unaware of what is available Need for lower cost gyms, afterschool programs not just focused on homework Lack of culturally tailored programming, especially in rural areas Lack of access to healthy, culturally relevant foods Lack of safe areas for recreation
<p>7. Please discuss health behaviors of concern (ex. tobacco use, alcohol & drug use, lack of physical activity, etc.) and the barriers to engaging in healthy behaviors among members.</p>	<p><u>Exercise and nutrition:</u></p> <ul style="list-style-type: none"> Lack of exercise options for children: team sports are cost-prohibitive, and transpiration is an issue (4/4 mentioned) HNE offers reimbursement for gym memberships, vastly underutilized in Medicaid pop- not exactly certain why Food deserts Lack of education about portion size Come cultural practices/beliefs: a “fat baby is a healthy baby” Lack of cultural support for breastfeeding SNAP benefits for farmers market underutilized in urban area due to lack of culturally relevant foods; more utilized in rural areas, if members can get transport to farmers market <p><u>Non-compliance with medication/treatment protocols</u></p> <ul style="list-style-type: none"> Lack of comprehension about chronic health conditions- (i.e. feel better, stop meds) Lack of understanding about preventative health, importance of continuous care to manage chronic conditions Cultural beliefs and attitudes and expectations of western medications Lack of understanding about medications (e.g. antibiotics, stimulant meds) Education for Latino population about new diagnoses is not given enough time; often need 1-1 and more time to understand diagnosis and importance of adherence to meds and lifestyle recommendations <p><u>Multigenerational health patterns:</u></p> <ul style="list-style-type: none"> Parental lack of education and modeling (3/4 interviewees) Multigenerational patterns of SA and MH Need more opportunities for fun, physical activity (ex. adult sports leagues/softball to get entire families active

Question	Synthesis of Responses
<p>8. How would you recommend that your local hospitals/insurers and/or Western Massachusetts Hospital Coalition work in closer partnership with local and regional municipal public health entities after the CHNA is completed? What specific ways can such a partnership be supported and sustained? Specifically, what can Health New England do to help impact the health of its most vulnerable members?</p>	<p><u>Overall:</u></p> <ul style="list-style-type: none"> • More support for peer education model (2/4 mentioned) • More collaboration across multiple sectors- business community, faith-based, hospitals, etc.) • More grassroots education in rural areas about substance use • More accessible resources • Shift perception of hospital as a stand-alone entity, increase its role in screening people for unmet health needs, link people to resources to address social determinants of health • Bundled rates that support education and visit, support/fund peer educators, support providers <p><u>For HNE specifically:</u></p> <ul style="list-style-type: none"> • Explore alternative reimbursement models • Community perception that HNE is not involved in the community- perhaps sponsor a sports team, or support transportation efforts for rural sports programs • Partner more with providers to explore alternative models of health care delivery by using shared resources
<p>9. If time: Is there anything else you would like to share?</p>	<ul style="list-style-type: none"> • Need to collect better data on who is being seen and what their needs are • Need to improve cultural competence/sensitivity

Key Informant Interview Report: Public Health Personnel

Dates:

January 2nd - February 1st, 2016

Interview Format:

Phone interviews, approximately 45 minutes in length.

Participants:

- Helen Caulton Harris, Commissioner of Public Health, City of Springfield
- Soloe Dennis, Western Region Director, Massachusetts Department of Public Health (MDPH)
- Dalila Hyry-Dermith, Supervisor, MDPH Division for Perinatal, Early Childhood and Special Needs, Care Coordination Unit
- Luz Eneida Garcia, Care Coordinator, MDPH Division for Perinatal, Early Childhood and Special Needs, Care Coordination Unit
- Judy Metcalf, Director, Quabbin Health District
- Merridith O'Leary, Director, Northampton Health Department
- Lisa Steinbock, Public Health Nurse, City of Chicopee
- Phoebe Walker, Director of Community Services
- Lisa White, Public Health Nurse, Franklin Regional Council of Governments

Question	Synthesis of Responses
1. What local policies and social conditions predispose people in your community/service area to good health and mental wellness? Are there groups of people who benefit from these policies/social conditions more than others?	<ul style="list-style-type: none">• All respondents agreed that the region provides excellent health services, but many talked about the difficulty some populations have in accessing them. Lack of transportation is a major issue for some groups of people throughout the service area.• Respondents from Hampden County had difficulty naming local policies and service conditions other than health care institutions that promote health and wellness. One mentioned Mass Health as expanding access to most people. In Franklin and Hampshire counties, respondents named access to fresh local food, compliance policies around tobacco and alcohol, town-based programs such as senior centers, Mass in Motion, public transportation, and access to mental health providers as predisposing people toward good health.

Question	Synthesis of Responses
<p>2. What kind of structural and social changes are needed to tackle health inequities in your community/service area?</p>	<ul style="list-style-type: none"> • Again, the most frequently mentioned issue is lack of transportation. Other changes that would help improve inequities included: <ul style="list-style-type: none"> ○ Help families understand what resources are available to them ○ Follow through beyond initial outreach ○ Workforce development ○ Affordable/improved housing ○ Continuity of care around addiction treatment ○ Healthy markets ○ Workplace wellness programs ○ Education around harm associated with marijuana ○ Coordination of care/avoiding readmission
<p>3. What are the 3 most urgent health needs/problems in your service area?</p>	<ul style="list-style-type: none"> • This list shows the issues named and the number of people who named each one: <ul style="list-style-type: none"> ○ Substance abuse/addiction/treatment (5) ○ Mental health (3) ○ Poverty (2) ○ Communicable diseases (2) ○ Obesity (1) ○ Diabetes (1) ○ Teen pregnancy (1) ○ Lack of prevention services in schools (1) ○ Smoking (1) ○ Lack of youth engagement (1) ○ Perception of city as drug-friendly (1) ○ Chronic diseases (1) ○ Need to improve workforce development in health care (1)
<p>4. What health issues have emerged and/or dramatically increased in prevalence in the last 1-2 years in your area? What evidence/data do you have to illustrate this increase?</p>	<ul style="list-style-type: none"> • Every respondent mentioned substance abuse as an emerging issue, with four specifically referencing opioids. Other issues, each noted by one respondent, were: <ul style="list-style-type: none"> ○ Mental health ○ Pertussis ○ Lyme disease ○ Obesity ○ Sexually transmitted diseases

Question	Synthesis of Responses
5. What gaps in services exist in addressing these needs? What are barriers to filling these gaps?	<p>Some respondent's spoke of gaps around connecting people with services - the services exist, but people are not aware of them or unable to reach them because of barriers including lack of transportation, waiting lists, cultural and language differences between the community and providers, and lack of information about what is available.</p> <p>Other gaps included lack of services for substance abuse, the lack of coordination among agencies doing similar work, lack of comprehensive prevention work in some schools, lack of mental health providers, lack of access to exercise and healthy food.</p> <p>Barriers cited included lack of funds, lack of time for coordination and planning, and lack of consensus in the community about the importance of the issues.</p>
6. In addition to more funding, what resources do you need to better address these emerging or increasing health concerns?	<p>Several respondents mentioned the need for increased coordination and communication among hospitals concerning the services that are available and what is needed (one person noted that the CHNA is a good start).</p> <p>Other needed resources that respondent noted were:</p> <ul style="list-style-type: none"> • Support for families as they navigate the healthcare system • Better transportation, either public or provided by hospitals • Better-trained, more diverse health care staff
7. What specific vulnerable populations are you most concerned about? And why?	<p>Three respondents mentioned the elderly, and two each mentioned mentally ill people, homeless people, and low-income people. Reasons given usually addressed these populations' lack of access to services that meet their needs. These are populations which are less able to advocate for themselves and find help.</p>
8. Externally, what resources or services do you wish people in your area had access to?	<p>These responses varied, but three respondents mentioned better transportation options. Other resources and services mentioned included:</p> <ul style="list-style-type: none"> ○ Mental health care ○ Better care coordination ○ More workforce development ○ Partnerships or services around improving air quality (high asthma rates) ○ More money for community outreach ○ Universal child care/after school care ○ Support groups and behavioral interventions ○ Access to healthy food

Question	Synthesis of Responses
<p>9. How would you recommend that your local hospitals/insurers and/or Western Massachusetts Hospital Coalition work in closer partnership with local and regional municipal public health entities after the CHNA is completed? What specific ways can such a partnership be supported and sustained?</p>	<p>Respondents often did not have a clear idea of what this could look like. Two respondents addressed community benefit programs and expressed an interest in or questions about how these programs relate to coalition-building, particularly with regard to hospitals acquired by Baystate. Both said it was unclear what these programs look like in their communities.</p> <p>One respondent spoke of the need for greater coordination among and also within hospitals, including sharing information on individual patients (within the hospital) and letting people know what is available in the community. Hospitals could also work together to identify and fill local service gaps.</p> <p>Some specific suggestions included involving hospitals in community discussions around:</p> <ul style="list-style-type: none"> • Where people who been treated for overdoses can go after release from the hospital • Reducing re-admissions • Workplace health screenings <p>Ideas around sustaining and supporting this collaboration included:</p> <ul style="list-style-type: none"> • Regular meetings • Open forums to discuss issues and problems • Discussion of what resources are available • Funds are available as part of capitation - hospitals are changing the kind of work that they do, supporting efforts to keep people out of hospitals • Developing a common vision for improving health • Making it an ongoing effort with partners who are engaged with the process
<p>10. Is there anything else you would like to share?</p>	<p>Only one person took the opportunity to add to the conversation. She suggested that more efforts need to be placed on prevention programs, and suggested that hospitals partner with the YMCA or other organizations to offer vacation and afterschool programs for youth. This would motivate young people to exercise and also keep them out of trouble.</p>

Appendix III:

Data Tables

Hospitalizations and Emergency Room Visits among Highlighted Communities in Hampden County, 2012 and 2013

Hospitalization and Emergency Room Visits for Highlighted Hampden County Communities by Race/Ethnicity, 2012

Behavioral Risk Factor Surveillance System (BRFSS) Prevalence Estimates for Health Behaviors and Conditions by County

Hospitalizations and Emergency Room Visits among Top Communities, 2013

Hospitalizations and Emergency Room Visits among Highlighted Communities in Hampden County, 2012 and 2013

Geography	Hospitalizations					
	Stroke		Diabetes		Substance Use	
	2012	2013	2012	2013	2012	2013
West Springfield	210.6	227.1	125.8	99.86	889.8	NA
Westfield	223.9	200.5	128.0	138.5	579.0	NA
HAMPDEN COUNTY	242.7	229.2	177.4	197.0	691.9	NA
MA	219.5	NA	133.7	NA	362.4	NA

Geography	ER Visits						
	Asthma		COPD	Mental Disorders		Substance Use	
	2012	2013	2012	2012	2013	2012	2013
West Springfield	702.7	555.4	1105.4	2346.9	2346.1	811.5	752.0
Westfield	849.2	649.2	1255.1	2221.3	2196.5	665.8	613.4
HAMPDEN COUNTY	1027.6	920.2	1532.3	2850.4	2899.8	1019.1	940.2
MA	571.9	NA	867.9	2304.4	NA	986.5	NA

Hospitalization and ER Visit Rates for Highlighted Hampden County Communities by Race/Ethnicity, 2012

Geography	Race / Latino Ethnicity	Hospitalizations					ER Visits	
		Substance Use Related	Stroke	Diabetes	Mental Disorders	Asthma	Pediatric Asthma	COPD
West Springfield	White	981.2	201.6	108.8	1599.4	130.5	542.5	834.4
West Springfield	Black	NA	NA	NA	NA	NA	NA	2570.9
West Springfield	Latino	1508.1	NA	NA	2120.2	NA	2141.9	2919.6
West Springfield	Asian / Pacific Islander	NA	NA	NA	NA	NA	NA	NA
Westfield	White	566.8	208.7	115.9	1415.3	77.6	818.3	1130.92
Westfield	Black	NA	NA	NA	1921.2	NA	NA	2872.8
Westfield	Latino	769.6	NA	NA	1983.4	NA	1579.0	2556.4
Westfield	Asian / Pacific Islander	NA	NA	NA	NA	NA	NA	NA
Hampden County	White	675.5	212.7	126.4	1353.2	93.6	654.9	807.4
Hampden County	Black	443.1	386.5	326.5	1354.0	178.3	1715.8	1921.4
Hampden County	Latino	922.1	396.4	386.6	2237.4	543.9	2903.6	3793.8
Hampden County	Asian / Pacific Islander	114.9	NA	NA	292.3	NA	NA	NA
Massachusetts Total	White	392.6	208.2	115.9	861.2	101.0	527.3	698.4
Massachusetts Total	Black	260.2	309.5	320.2	816.7	276.3	1804.5	2570.9
Massachusetts Total	Latino	317.8	246.7	222.8	860.6	294.6	1643.0	2919.6
Massachusetts Total	Asian / Pacific Islander	39.8	149.7	43.1	164.9	69.7	376.7	NA

*NA - data suppressed because of low counts

Behavioral Risk Factor Surveillance System (BRFSS) Prevalence Estimates for Health Behaviors and Conditions By County

Geography	Obese*	Over-weight or Obese*	Heart Disease**	Stroke*	Heart Attack or MI*	Diabetes*	Pre-diabetes*	Poor Mental Health (15+ days)*	Current Smoker*	Binge Drinker*
Berkshire County	22.04	56.28	6.72	3.14	5.30	9.4	6.78	10.79	20.64	18.35
Hampden County	28.76	64.69	7.85	3.38	5.06	13.2	7.56	15.86	21.47	16.12
Hampshire County	19.97	55.94	5.54	2.56	3.74	4.7	8.56	12.12	15.52	23.04
Franklin County	22.40	54.38	4.42	NA	3.63	8.7	10.27	12.41	19.66	17.81
Worcester County	27.33	62.999	5.84	2.44	3.75	10	8.04	11.17	18.96	19.10
Massachusetts	23.6	59.0	6.1	2.4	4.0	9.0	7.3	11.1	16.1	18.7

*Direct estimates 2012-2014

**Direct estimates 2011, 2012, 2014

NA - estimate unavailable

Hospitalizations and Emergency Room Visits among Top Communities, 2013

Rank	Hospitalizations			ER Visits		
	Stroke	CVD	Diabetes	Asthma	Mental Disorders	Substance Use
1	West Springfield 227.1 (177.34-276.88)	Agawam 1358.9 (1249.48-1468.42)	Southwick 322.5 (214.12-430.95)	Russell 828.7 (409.33-1248.10)	West Springfield 2346.1 (2168.9-2523.2)	Huntington 1091.0 (600.41-1581.52)
2	Agawam 216.4 (173.34-259.47)	Southwick 1275.9 (1075.06-1476.8)	Agawam 196.4 (149.72-243.08)	Westfield 649.2 (568.91-729.55)	Westfield 2196.5 (2052.8-2340.2)	West Springfield 752.0 (653.08-850.93)
3	Southwick 210.3 (129.44-291.09)	Westfield 1194.8 (1096.02-1293.58)	Westfield 138.5 (102.84-174.11)	West Springfield 555.4 (467.11-643.7)	Agawam 1977.8 (1809.3-2146.4)	Westfield 613.4 (535.76-690.96)
4	Westfield 200.5 (159.56-241.52)	Huntington 1184.1 (737.46-1630.76)	NA	Southwick 426.3 (283.02-569.63)	Chester 1849.3 (1038.8-2659.8)	Agawam 528.8 (441.24-616.44)

Appendix IV:

Community and Hospital Resources to Address Identified Needs

Priority Health Need	Resource Organization Name	Description of Services Provided	Contact/Website
Income and Employment			
Education	Baystate Springfield Educational Partnership	Provides career pathway programming to Springfield students with an expressed interest in the health care professions	peter.blain@baystatehealth.org
Housing	HAP Housing	Provides housing assistance to tenants, homebuyers, homeowners and rental property owners; largest nonprofit developer of affordable housing in Western Mass	http://www.haphousing.org/default
Transportation			
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/
Obesity			
Cardiovascular Disease			
Diabetes			
Nutrition			
Physical Activity	YMCA of Greater Springfield	Recreation and physical health classes for youth through adults, including nutrition and diet. MIGHTY pediatric obesity prevention program.	www.springfieldy.org

Priority Health Need	Resource Organization Name	Description of Services Provided	Contact/Website
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	Behavioral Health Network's Outpatient Services	Through 6 licensed clinics, BHN provides services to chronically mentally ill adults, seriously emotionally disturbed children, adolescents, and families.	http://bhninc.org/content/outpatient
Substance Use Disorder: Tobacco/Alcohol	Caring Health Center's Tobacco Treatment Services	Individual, group counseling, and pharmacological treatment	http://caringhealth.org/tobaccotreatmentservices.html
Substance Use Disorder: Opioids and Other Substances	Gandara Center's Addiction Services	Outpatient treatment services and a structured "partial hospitalization" program	https://gandaracenter.org/counseling-therapeutic-services/#outpatient-addiction-recovery-services
	Behavioral Health Center's Addiction Services:	Provides comprehensive addiction services including detox, post-detox residential series, long-term residential, day treatment programs, and outpatient services.	http://bhninc.org/content/addiction-services
	Gandara Center's Recovery Supportive Housing:	The Supportive Housing Programs work in collaboration with HAP Housing, area recovery homes, and shelters to provide safe, sober, and affordable bilingual housing options to individuals and families in recovery. Location in Holyoke for women and in Springfield for men.	https://gandaracenter.org/adult-services/#recovery-supportive-housing
	Needle Exchange Program	Needle exchange programs in Holyoke and Northampton, sterile needles to injection drug users, trainings on Naloxone, education and counseling	http://www.tapestryhealth.org/index.php/services/prevention/needle-exchange

Priority Health Need	Resource Organization Name	Description of Services Provided	Contact/Website
	Springfield Coalition for Opioid Overdose Prevention:	Coalition whose mission is to train, educate, advocate, and provide support and resources to all who are affected by opiate abuse and overdoses.	http://www.springfield-ma.gov/hhs/index.php?id=scoop-about
Prenatal and Perinatal Care			

Appendix V:

County Health Rankings, 2016

Shaded columns are rankings based on the 14 counties in Massachusetts. Lower numbers indicate better status. A rank of 14 indicates a county is ranked last in the state.

The Rankings are based on a model of population health that emphasizes the many factors that, if improved, can help make communities healthier places to live, learn, work and play.

The County Health Rankings measure the health of nearly all counties in the nation and rank them within states. The Rankings are compiled using county-level measures from a variety of national and state data sources. These measures are standardized and combined using scientifically-informed weights.

For more information, visit: <http://www.countyhealthrankings.org/>

	Massachusetts	Hampshire County	Hampden County	Franklin County	Berkshire County	Worcester County
Health Outcomes		5	14	8	11	7
Length of Life		5	14	7	12	8
Premature deaths	5,100	4,700	6,600	5,500	6,200	5,500
Quality of Life		5	14	8	10	7
Poor or fair health	14%	12%	19%	12%	13%	12%
Poor physical health days	3.5	3.3	4.4	3.5	3.4	3.1
Poor mental health days	3.9	3.9	4.5	4.0	4.1	3.6
Low birthweight	8%	6%	8%	7%	8%	7%
Health Factors		3	14	7	9	11
Health Behaviors		6	14	8	7	11
Adult smoking	15%	15%	18%	15%	15%	16%
Adult obesity**	24%	21%	29%	22%	23%	26%
Food environment index**	8.3	8.1	7.9	8.1	7.9	8.2

	Massachusetts	Hampshire County	Hampden County	Franklin County	Berkshire County	Worcester County
Physical inactivity**	22%	16%	26%	18%	20%	23%
Access to exercise opportunities	94%	86%	94%	72%	79%	91%
Excessive drinking	20%	24%	18%	20%	18%	19%
Alcohol-impaired driving deaths	29%	28%	32%	27%	21%	31%
Sexually transmitted infections**	349.2	222.2	576.5	257.2	320.0	278.0
Teen births	17	4	37	20	21	19
Clinical Care		2	12	7	3	9
Uninsured	4%	4%	5%	4%	4%	4%
Primary care physicians	940:1	690:1	1,410:1	1,420:1	910:1	960:1
Dentists	1,070:1	1,550:1	1,300:1	1,540:1	1,310:1	1,500:1
Mental health providers	200:1	140:1	160:1	160:1	150:1	250:1
Preventable hospital stays	56	47	63	49	44	55
Diabetic monitoring	90%	89%	89%	90%	91%	89%
Mammography screening	74%	77%	71%	72%	73%	70%
Social & Economic Factors		3	14	7	11	9
High school graduation**	85%	90%	73%	84%	84%	86%
Some college	71%	78%	59%	67%	63%	67%
Unemployment	5.8%	5.0%	7.8%	5.3%	6.5%	6.2%

	Massachusetts	Hampshire County	Hampden County	Franklin County	Berkshire County	Worcester County
Children in poverty	15%	13%	26%	17%	20%	15%
Income inequality	5.4	4.9	5.7	4.5	4.9	5.0
Children in single-parent households	31%	31%	47%	33%	36%	29%
Social associations	9.5	9.6	8.7	12.4	11.8	8.8
Violent crime**	434	245	641	379	403	447
Injury deaths	46	42	53	49	58	48
Physical Environment		10	13	11	14	12
Air pollution - particulate matter	10.5	10.7	10.7	10.6	10.8	10.5
Drinking water violations		Yes	Yes	Yes	Yes	Yes
Severe housing problems	19%	17%	19%	16%	18%	16%
Driving alone to work	72%	71%	83%	78%	79%	82%
Long commute - driving alone	41%	35%	27%	35%	23%	41%