Community Health Needs Assessment

Prepared for
MERCY MEDICAL CENTER

By
VERITÉ HEALTHCARE CONSULTING, LLC

And
COMMUNITY HEALTH ADVISORS, LLC

May 28, 2013

VERITÉ HEALTHCARE CONSULTING

ABOUT VERITÉ HEALTHCARE CONSULTING

Verité Healthcare Consulting, LLC (Verité) was founded in May 2006 and is located in Alexandria, Virginia. The firm serves as a national resource that helps hospitals conduct community health needs assessments and develop implementation strategies that address priority needs. The firm also helps hospitals, associations, and policy makers with community benefit reporting, planning, program assessment, and policy and guidelines development. Verité is a recognized, national thought leader in community benefit and in the evolving expectations that tax-exempt healthcare organizations are being required to meet.

The CHNA prepared for Mercy Medical Center was directed by the firm's president and managed by a senior-level consultant. Associates and research analysts supported the work. The firm's president, as well as all senior-level consultants and associates, hold graduate degrees in relevant fields. Mark Rukavina of Community Health Advisors, LLC, based in Chestnut Hill, MA, conducted all community interviews.

More information on the firm and its qualifications can be found at www.VeriteConsulting.com.

Verité Healthcare Consulting's work reflects fundamental concerns regarding the health of vulnerable people and the organizations that serve them

TABLE OF CONTENTS

INTRODUCTION

This community health needs assessment (CHNA) was conducted by Mercy Medical Center (Mercy or the hospital) because the hospital wants to understand better community health needs and to develop an effective implementation strategy to address priority needs. The hospital also has assessed community health needs to respond to community benefit regulatory requirements.

Mercy is a member of the Coalition of Western Massachusetts Hospitals (Coalition) which also includes Baystate Medical Center, Baystate Franklin Medical Center, Baystate Mary Lane Hospital, Cooley Dickinson Hospital, Holyoke Medical Center, and Wing Memorial Hospital. The Coalition hospitals collaborated in preparing their CHNAs.

Federal regulations require that tax-exempt hospitals provide and report community benefits to demonstrate that they merit exemption from taxation. As specified in the instructions to IRS Form 990, Schedule H, community benefits are programs or activities that provide treatment and/or promote health and healing as a response to identified community needs.

Community benefit activities or programs seek to achieve objectives, including:

- improving access to health services,
- enhancing public health,
- advancing increased general knowledge, and
- relief of a government burden to improve health.[1]

To be reported, community need for the activity or program must be established. Need can be established by conducting a community health needs assessment.

The 2010 Patient Protection and Affordable Care Act (PPACA) requires each tax-exempt hospital to "conduct a [CHNA] every three years and adopt an implementation strategy to meet the community health needs identified through such assessment."

CHNAs seek to identify priority health status and access issues for particular geographic areas and populations by focusing on the following questions:

- ***Who*** in the community is most vulnerable in terms of health status or access to care?
- ***What*** are the unique health status and/or access needs for these populations?
- ***Where*** do these people live in the community?
- ***Why*** are these problems present?

The question of ***how*** the organization can best use its limited charitable resources to address priority needs will be the subject of the hospital's separate Implementation Strategy.

This assessment considers multiple data sources, including secondary data (regarding demographics, health status indicators, and measures of health care access), assessments prepared by other organizations in recent years, and primary data derived from a community survey and from interviews with persons who represent the broad interests of the community, including those with expertise in public health.

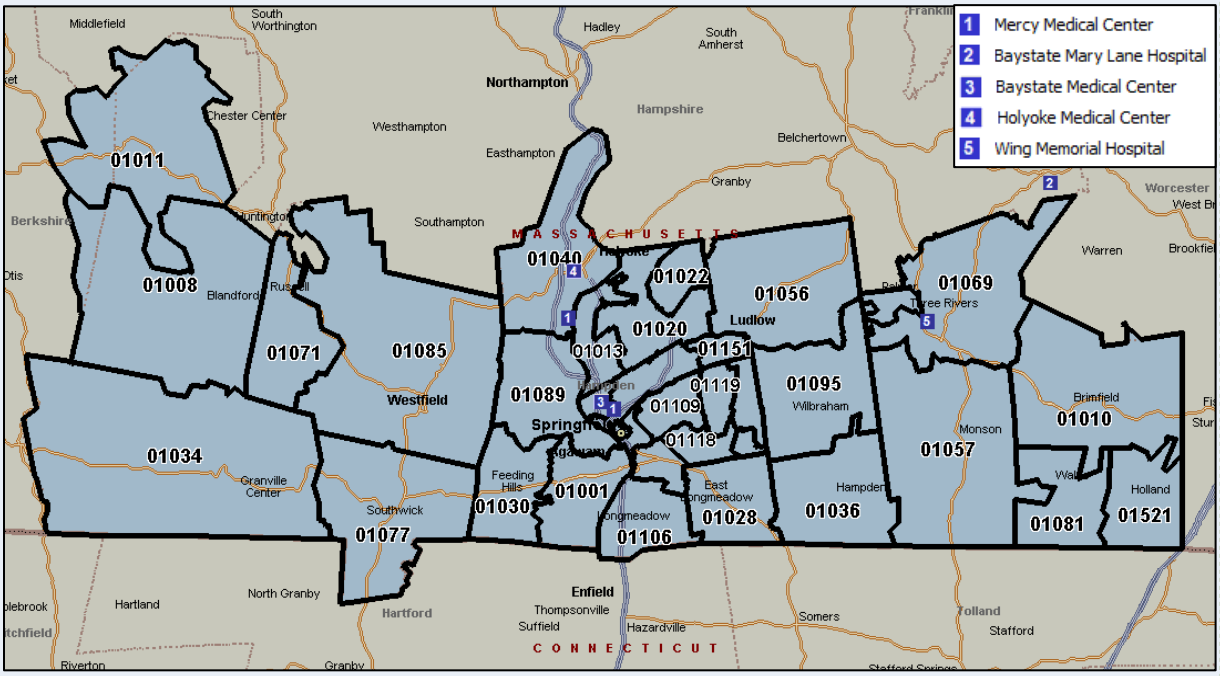
[1] Instructions for IRS Form 990, Schedule H, 2012.

The following topics and data are assessed in this report:

- Demographics, e.g., numbers and locations of vulnerable people;
- Economic issues, e.g., poverty and unemployment rates, and impacts of health reform;
- Community issues, e.g., homelessness, lack of affordable housing, environmental concerns, crime, and availability of social services;
- Health status indicators, e.g. morbidity rates for various diseases and conditions, and mortality rates for leading causes of death;
- Health access indicators, e.g., uninsurance rates, discharges for ambulatory care sensitive conditions (ACSC), and use of emergency departments for non-emergent care;
- Health disparities indicators; and
- Availability of healthcare facilities and resources.

The assessment identifies a prioritized list of community health needs. Mercy will be preparing an Implementation Strategy that describes how the hospital plans to address the identified needs.

EXECUTIVE SUMMARY



Mercy Community By the Numbers

- 51 ZIP codes representing all of Hampden County
- Population (2012): 464,416
- Projected population change (2012-2017):
  - Growth of about 1% overall; 11% increase in the 65+ population
- 10% of Mercy's discharges for ambulatory care sensitive conditions (ACSC)
- Discharges for ACSC most frequent among Medicare patients
- High poverty rates in 6 Springfield ZIP codes
- Higher crime rates than the commonwealth
- Disparities for Black and Hispanic (or Latino) residents:
  - More likely to be living in poverty
  - Higher stroke, heart disease, diabetes, and cancer mortality rates
- Growing diversity:
  - Growing Asian, Black, and Hispanic (or Latino) populations
  - 14% non-White in 2012; 16% non-White by 2017

The Mercy community, which includes all 51 ZIP codes in Hampden County, benchmarks favorably on a number of health indicators. However, health status and access problems are present, and this assessment seeks to identify the most pressing issues.

A person's health is influenced by complex (and interconnected) social and economic factors, including income, education, race/ethnicity, and local environment. Racial and ethnic minority groups, children, the elderly, and those with special needs are more likely to lack the social and economic resources necessary to maintain optimal health. Such inequalities can create barriers to access (to health services, employment, quality education, healthy food, housing, and other necessities and opportunities) and thus contribute to poor health. Analysis of primary and secondary data reveals problematic health disparities in the hospital's community.

A community survey was conducted as a major element of the CHNA methodology. 1,321 responses were received from residents of Mercy's community. Survey results were post-stratified to help assure that they accurately reflect the community's demographics. Responses also were assessed by race, insurance status, and education status.

Survey results indicate that the community has difficulty accessing prevention, wellness, and mental health services. Access disparities also are present, with White residents better able to access care. Uninsured residents and MassHealth (Medicaid) recipients rely primarily on free or low-cost clinics and hospital emergency rooms for basic primary care needs, or they indicate that "no routine healthcare is received."

The community perceives top health issues to include low income/financial challenges, obesity, substance abuse, diabetes, and unemployment. MassHealth (Medicaid) recipients identify mental health as a top health issue, Medicare beneficiaries identify cancer, those with Commonwealth Connector identify dental health issues, and those without health insurance identify tobacco use. Medicare recipients, MassHealth (Medicaid) beneficiaries, and those without health insurance also perceive a lack of exercise to be a top health issue.

Following is a brief summary of health issues in the community served by Mercy Medical Center. The summary is based on an assessment of all study data sources, including community interviews, the community survey, and the wide array of secondary data – all of which are described and assessed in the report.

Demographics.
The community is aging and diversifying, driven by growth in elderly and in Asian, Black, and Hispanic (or Latino) populations.

Hampden County reports comparatively low graduation rates and comparatively high rates of disability, particularly among youth. These factors can contribute to poverty, health care access barriers, and poor health.

Economics.
Poverty rates (particularly in Springfield) are above the Massachusetts average. Pediatric poverty and unemployment also are comparatively high. Unemployment disparities exist for Black, Asian, and Hispanic (or Latino) residents.

Hampden County residents are more reliant on government support programs such as the Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF) than the Massachusetts average. Lack of access to affordable food and housing also are concerns for segments of the community.

Social Factors.
Language and cultural barriers between patients and providers and the complexity of navigating the health system prevent some residents from seeking timely and appropriate health services for themselves and their children.

Insufficient coordination and culturally-appropriate services are perceived as barriers to care.

Behavioral Factors.
The Mercy community reports high rates of unsafe sex, teen pregnancy, and chlamydia. High rates of smoking during pregnancy and other infant health risk factors are present. Low rates of healthy food consumption and exercise and above average rates of obesity and chronic diseases like diabetes also are problematic. Prevalent alcohol, tobacco, and drug use also are concerns for the community as a whole and the youth population.

Mortality and Morbidity.
The community experiences comparatively high rates of chronic disease and disease-related mortality, including cancer, stroke, diseases of the circulatory system, and chronic liver disease. Racial and ethnic disparities for a variety of morbidity and mortality indicators are evident.

Poor mental and dental health affect many in the community particularly low-income residents, homeless residents, and children. The community also exhibits comparatively high suicide rates, particularly within the White population.

Asthma and air quality are issues, particularly for children. The community reports higher asthma prevalence and hospitalization rates than the Massachusetts average.

Local Environment.
Poor built environment and low environmental quality are present in parts of Hampden County. Several census tracts in or near Springfield, Chicopee, and Holyoke are classified as "food deserts," where people lack convenient access to healthy food.

Community safety also is a concern; homicides and other firearm-related deaths are comparatively frequent.

Care Access and Delivery.
Health system complexity and regulatory and administrative burdens result in frustration both for patients and providers.

Cost and an undersupply of certain healthcare providers in Hampden County are resulting in barriers to accessing primary, mental health, and dental care.

Discharges for Ambulatory Care Sensitive Conditions (ACSCs , which are potentially preventable if patients access primary care resources at optimal rates), were about 10 percent of Mercy's discharges. Bacterial pneumonia, chronic obstructive pulmonary disease or asthma, congestive heart failure, and urinary tract infection were the most common ACSC discharges from Mercy.

The community has a variety of resources working to address access barriers. There are 3 Federally Qualified Health Centers (FQHC) located in Hampden County with 21 additional site partners. All serve medically underserved areas and populations.

Priority Health Needs

This assessment begins by identifying the communities served by Mercy. Findings are based on various quantitative analyses regarding health-related needs in those areas, a review of health assessments conducted by other organizations in recent years, information obtained from interviews, and findings from a community survey. Preliminary assessment findings were discussed with community stakeholders during a series of "listening sessions" and feedback from participants helped validate findings. Finally, Verité applied a ranking methodology to help prioritize the community health needs identified by the assessment.

Including multiple data sources and stakeholder views is important when assessing the level of consensus that exists regarding priority community health needs. If alternative data sources including interviews support similar conclusions, then confidence is increased regarding the most problematic health needs in a community.

Further information about the analytic methods and prioritization process and criteria can be found in the CHNA report.

The table that follows describes the health needs identified throughout the assessment as priorities in the community served by Mercy Medical Center. These needs are presented in alphabetical order, by category. The prioritized list identifies the 15 most problematic community health needs found by this assessment.

Prioritized List of Community Health Needs

Access to Care

- Lack of Affordable and Accessible Medical Care
- Need for Care Coordination and Culturally Sensitive Care

Dental Health

- Lack of Access to Dental Care

Health Behaviors

- High Rates of Alcohol, Tobacco, and Drug Use
- High Rates of Unsafe Sex, Teen Pregnancy, and Chlamydia

Maternal and Child Health

- Prevalent Infant Health Risk Factors (e.g., smoking during pregnancy, lack of prenatal care)
- Pediatric Disability

Mental Health

- Lack of Access to Mental Health Services and Poor Mental Health Status

Morbidity and Mortality

- High Rates of Diet and Exercise-Related Diseases and Mortality (e.g., obesity, diabetes, heart disease)
- High Rates of Asthma
- Racial and Ethnic Disparities in Disease Morbidity and Mortality (e.g., breast and prostate cancer, chronic liver disease, stroke)

Physical Environment

- Poor Community Safety (e.g., homicide and other violent crimes)
- Poor Built Environment and Environmental Quality (e.g., air quality, presence of food deserts)

Social and Economic Factors

- Basic Needs Insecurity: Financial Hardship, Housing, and Food Access
- Low Educational Achievement

CHNA REPORT

METHODOLOGY

Analytic Methods

This assessment begins by identifying the communities served by Mercy. Findings based on various quantitative analyses regarding health needs in those areas are discussed, followed by a review of health assessments conducted by other organizations in recent years.

The assessment then presents information obtained from interviews and a community survey. Interviews were conducted with stakeholders who represent the broad interests of the community, including public health officials and experts, and Mercy-affiliated clinicians, administrators, and staff. Interviews were conducted between December 2012 and February 2013.

Community survey results were post-stratified to help assure they represent accurately views from all residents in Mercy's community. For example, if women represent 45 percent of the population but 75 percent of survey responses, post-stratification re-weights these responses to reflect a more representative proportion. Because statistical error increases if too many variables are considered, the community survey was post-stratified only by sex and by age.[2] Preliminary assessment findings were discussed with community stakeholders during a series of "listening sessions." Feedback from participants helped validate findings and prioritize the identified health needs.

Identifying priority community health needs involves benchmarking and trend analysis. Statistics for several health status and health access indicators were analyzed and compared to state-wide and national benchmarks. The assessment considers multiple data sources, including indicators from local, state, and federal agencies. Including multiple data sources and stakeholder views is important when assessing the level of consensus that exists regarding priority community health needs. If alternative data sources including interviews support similar conclusions, then confidence is increased regarding the most problematic health needs in a community.

Prioritization Process and Criteria

Verité applied a ranking methodology to help prioritize the community health needs identified by the assessment. Verité listed all identified health issues and assigned to each a severity score based on the extent to which indicators exceeded Massachusetts or U.S. averages. A score was calculated for each category of data (secondary data, previous assessments, survey, and interviews) based on the number of sources that measured each health issue and the severity of the issue as measured by data and as indicated by community input. Scores were averaged and assigned a weight: 35 percent, 10 percent, 35 percent, and 20 percent, respectively. A final score was calculated by summing the weighted averages.

[2]Applied Technologies for Learning in the Arts and Sciences, 2009. *Post-Stratification Weights.* Retrieved 2013, from http://www.atlas.illinois.edu/support/stats/resources/spss/create-post-stratification-weights-for-survery-analysis.pdf.

Information Gaps

No information gaps have affected Mercy's ability to reach reasonable conclusions regarding priority community health needs.

Collaborating Organizations

Mercy collaborated with each of the hospital facilities that are members of the Coalition of Western Massachusetts Hospitals for this assessment.

Mercy also collaborated with organizations that participated in a "Design Team" established by the Coalition. Representatives from The Collaborative for Community Health, Inc., the Franklin Regional Council of Governments, the Massachusetts Department of Public Health, and the Springfield Department of Health and Human Services participated on this Team.

Many individuals provided input for this assessment. Lists of interviewees are included in the report.

DEFINITION OF COMMUNITY ASSESSED

This section identifies the community assessed by Mercy. Verité validated the community definition by analyzing the geographic origins of the hospital's discharges (**Exhibit 3**).

Mercy's community is comprised of 51 ZIP codes in 21 cities and towns: Agawam, Blandford, Brimfield, Chester, Chicopee, East Longmeadow, Granville, Hampden, Holland, Holyoke, Longmeadow, Ludlow, Monson, Palmer, Russell, Southwick, Springfield, Wales, West Springfield, Westfield, and Wilbraham. The 51 ZIP codes collectively and essentially are equivalent to Hampden County (**Exhibit 1)**. The hospital is located in Springfield.

Exhibit 1: Community Population, 2012

Town/City*	Total Population 2012	Percent of Total Population
Agawam	28,516	6.1%
Blandford	1,320	0.3%
Brimfield	3,844	0.8%
Chester	1,277	0.3%
Chicopee	55,453	11.9%
East Longmeadow	15,723	3.4%
Granville	2,085	0.4%
Hampden	5,191	1.1%
Holland	2,512	0.5%
Holyoke	40,073	8.6%
Longmeadow	16,044	3.5%
Ludlow	21,197	4.6%
Monson	8,493	1.8%
Palmer	12,174	2.6%
Russell	1,605	0.3%
Southwick	9,629	2.1%
Springfield	152,998	32.9%
Wales	1,691	0.4%
West Springfield	28,292	6.1%
Westfield	42,044	9.1%
Wilbraham	14,255	3.1%
Total	**464,416**	**100.0%**

Source: The Nielsen Company and Truven Health Analytics via Mercy, 2012.
*Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Springfield (where Mercy is located) is the most populous city in the community

In the 12 months ended in September 2011, 88.4 percent of inpatients originated from the identified areas (**Exhibit 2**).

Exhibit 2: Inpatient Discharges by Town/City, 2010-2011

Town/City*	Number of Discharges	Percent of Total Discharges
Agawam	1,014	6.4%
Blandford	4	0.0%
Brimfield	11	0.1%
Chester	8	0.1%
Chicopee	1,940	12.2%
East Longmeadow	561	3.5%
Granville	31	0.2%
Hampden	94	0.6%
Holland	3	0.0%
Holyoke	1,086	6.8%
Longmeadow	273	1.7%
Ludlow	493	3.1%
Monson	72	0.5%
Palmer	130	0.8%
Russell	21	0.1%
Southwick	101	0.6%
Springfield	6,300	39.5%
Wales	3	0.0%
West Springfield	993	6.2%
Westfield	611	3.8%
Wilbraham	338	2.1%
Community Total	**14,087**	**88.4%**
Other Areas	**1,849**	**11.6%**
Total	**15,936**	**100.0%**

Source: Mercy Medical Center, 2012.
*Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

The 21 towns in the community accounted for 88% of Mercy's inpatient discharges

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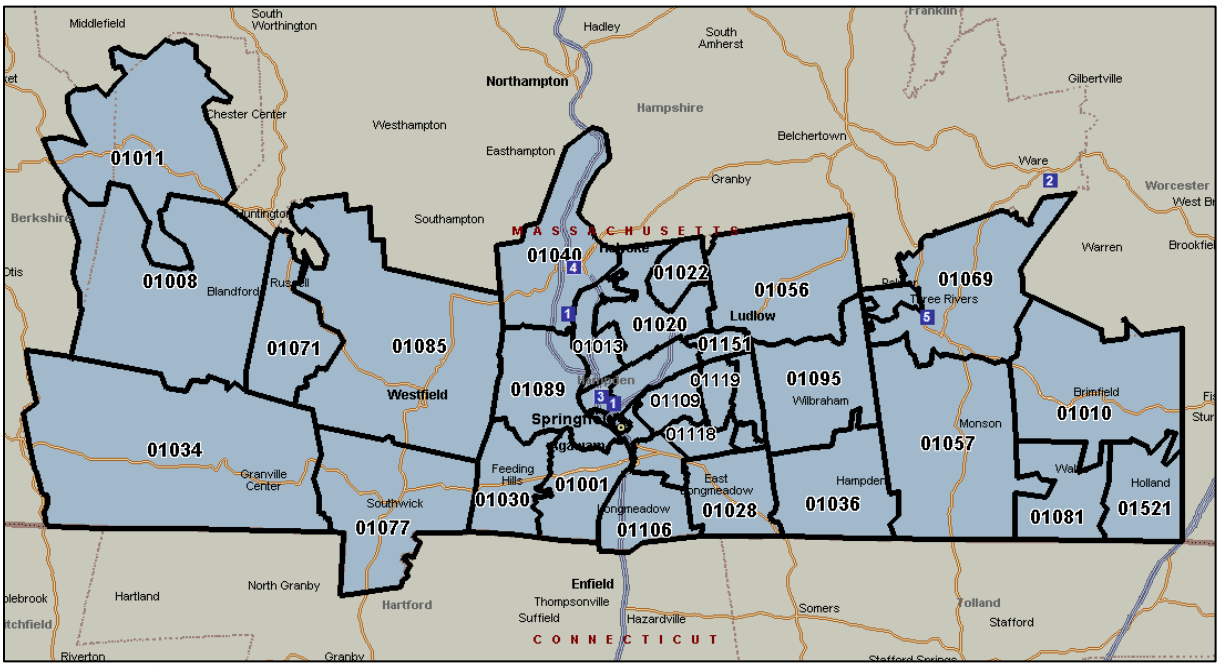
Springfield represented about 40% of Mercy's inpatient discharges

Exhibit 3 presents the ZIP codes that comprise Mercy's community.

Exhibit 3: Mercy Community



Source: Microsoft MapPoint and Mercy, 2012.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

51 ZIP codes in Hampden County comprise the community

…

Total Population: 464,416

SECONDARY DATA ASSESSMENT

This section assesses secondary data regarding health needs in the Mercy community.

Demographics

Population change plays a determining role in the types of health and social services needed by communities. Overall, the population living in the community is expected to increase about 0.7 percent between 2012 and 2017 (**Exhibit 4**).

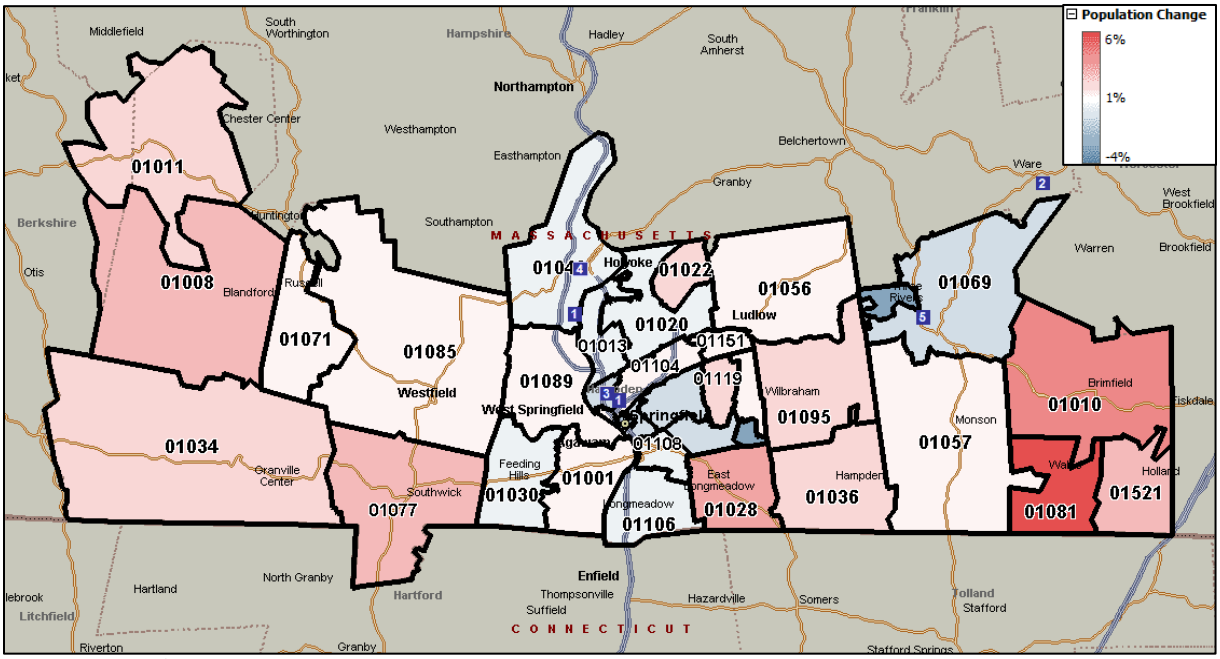
Exhibit 4: Percent Change in Population by County and Age, 2012-2017

Town/City*	Total Population 2012	Total Population 2017	Percent Change
Agawam	28,516	28,707	0.7%
Blandford	1,320	1,354	2.6%
Brimfield	3,844	3,994	3.9%
Chester	1,277	1,301	1.9%
Chicopee	55,453	55,684	0.4%
East Longmeadow	15,723	16,250	3.4%
Granville	2,085	2,130	2.2%
Hampden	5,191	5,268	1.5%
Holland	2,512	2,587	3.0%
Holyoke	40,073	40,222	0.4%
Longmeadow	16,044	16,075	0.2%
Ludlow	21,197	21,445	1.2%
Monson	8,493	8,579	1.0%
Palmer	12,174	12,017	-1.3%
Russell	1,605	1,620	0.9%
Southwick	9,629	9,919	3.0%
Springfield	152,998	153,160	0.1%
Wales	1,691	1,791	5.9%
West Springfield	28,292	28,484	0.7%
Westfield	42,044	42,566	1.2%
Wilbraham	14,255	14,491	1.7%
Total	**464,416**	**467,644**	**0.7%**

Source: The Nielsen Company and Truven Health Analytics via Mercy, 2012.
*Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Population growth rates vary by town. ZIP code 01081 (Wales) has the highest projected growth in population, with a 5.9 percent increase expected between 2012 and 2017. ZIP code 01069 (Palmer) is projected to experience a population decline of 1.3 percent (**Exhibit 5**).

Exhibit 5: Population Change by ZIP Code, 2012-2017



Sources: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via Mercy, 2012.

ZIP code 01081 (Wales) projects growth of about 6% from 2012-2017

Exhibit 6 indicates that the 65+ and 45 to 64 age cohorts are expected to increase while other age cohorts will see population declines.

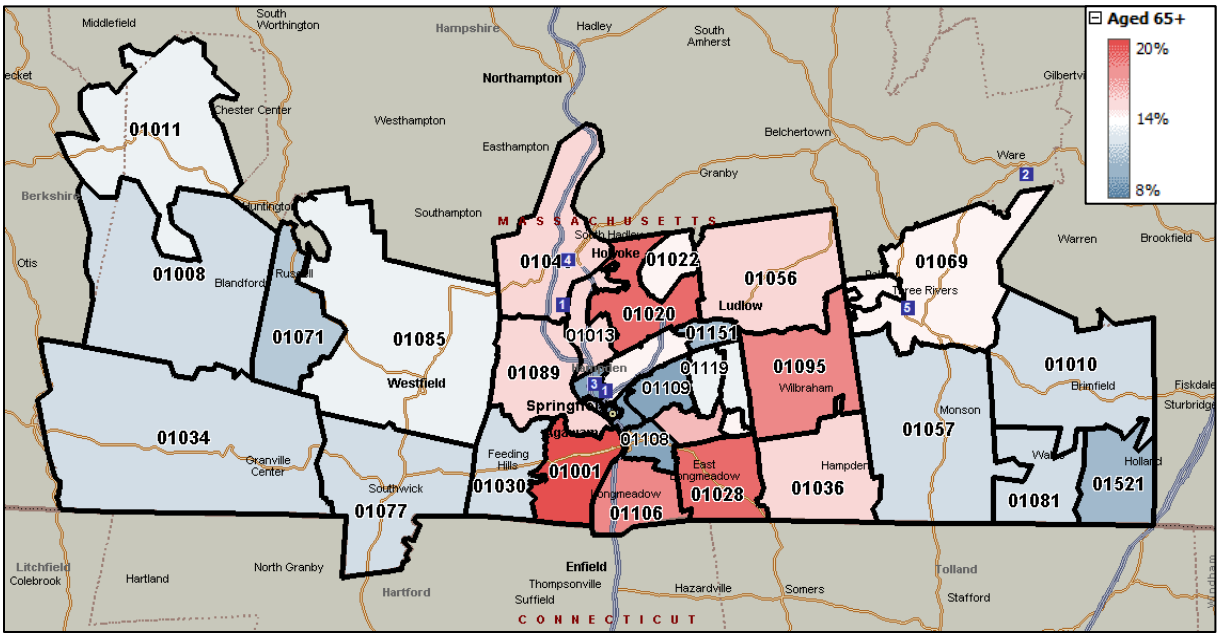
Exhibit 6: Percent Change in Population by Age/Sex Cohort, 2012-2017

Age/Sex Cohort	Community Population 2012	Community Population 2017	Percent Change
0-17	110,925	106,327	-4.1%
Female 18-44	81,921	80,284	-2.0%
Male 18-44	81,095	80,863	-0.3%
45-64	125,542	128,095	2.0%
65+	64,933	72,075	11.0%
Total	**464,416**	**467,644**	**0.7%**

Source: The Nielsen Company and Truven Health Analytics via Mercy, 2012.

The percentage of people aged 65+ is highest in ZIP codes 01001 (Agawam), 01028 (East Longmeadow), and 01020 (Chicopee) (**Exhibit 7**).

Exhibit 7: Percent of Population Aged 65+ by ZIP Code, 2012



Source: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via Mercy, 2012.

1. Mercy Medical Center
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ZIP code 01001 (Agawam) has the highest proportion of population aged 65+

In 2012, about 76 percent of the community's population was White. Non-White populations are expected to grow faster than White populations in the community. The Asian, American Indian, Black, and Other[3] population and those who identify as two or more races are expecting the fastest growth (**Exhibit 8**). The growing diversity of the community is important to recognize given the presence of health disparities and community input regarding the need to enhance cultural competency of health care providers.

Exhibit 8: Distribution of Population by Race[4], 2012-2017

Racial Cohort	2012	2017	Percent Change
White	75.8%	73.8%	-1.9%
Black	9.1%	9.4%	3.7%
American Indian	0.4%	0.4%	6.8%
Asian	2.1%	2.4%	14.8%
Other Race	9.6%	10.8%	12.5%
Two or More Races	3.0%	3.2%	8.5%
Total	**464,4**	**467,64**	**0.7%**

Source: The Nielsen Company and Truven Health Analytics via Mercy, 2012.

The Asian population will grow by almost 15% from 2012 to 2017

Projections indicate that the Hispanic (or Latino) population is expected to increase more rapidly (approximately 12.6 percent between 2012 and 2017) than the non-Hispanic (or Latino) population (**Exhibit 9**).

Exhibit 9: Distribution of Population by Ethnicity, 2012-2017

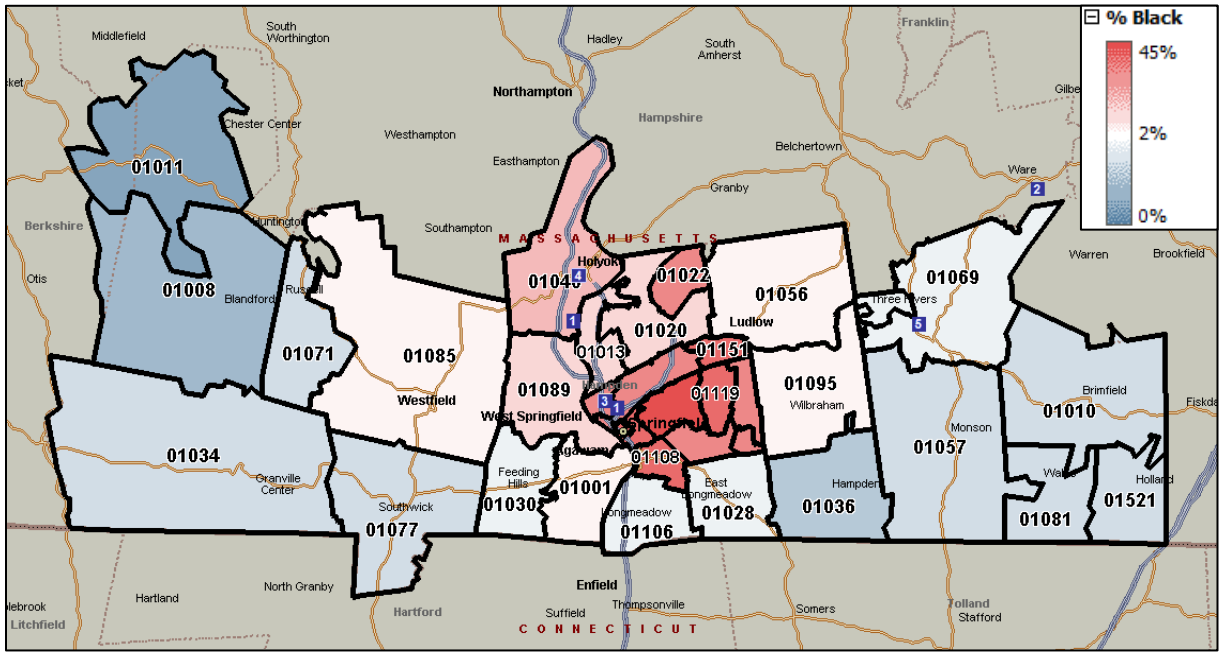
Ethnic Cohort	2012	2017	Percent Change
Hispanic (or Latino)	21.8%	24.6%	12.6%
Non-Hispanic (or Latino)	78.2%	76.1%	-2.6%
Total	**464,416**	**467,644**	**0.7%**

Source: The Nielsen Company and Truven Health Analytics via Mercy Medical Center, 2012.

Exhibits 10, 11, and 12 show where the percent of the population that is Black, Asian, and Hispanic (or Latino) is highest. The percent of Black residents is highest in ZIP code 01109 (Springfield). The percent of Asian residents is highest in ZIP code 01108 (Springfield). The percent of Hispanic (or Latino) residents is highest in three Springfield ZIP codes, particularly 01107.

[3] The "Other" population is the population that does not identify as White, Black, American Indian, Asian, or two or more races.
[4] The Nielson Company and Truven Analytics do not include "Hispanic" as a race.

Exhibit 10: Percent of Population (Black), 2012



Sources: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via Mercy, 2012.

1. Mercy Medical Center
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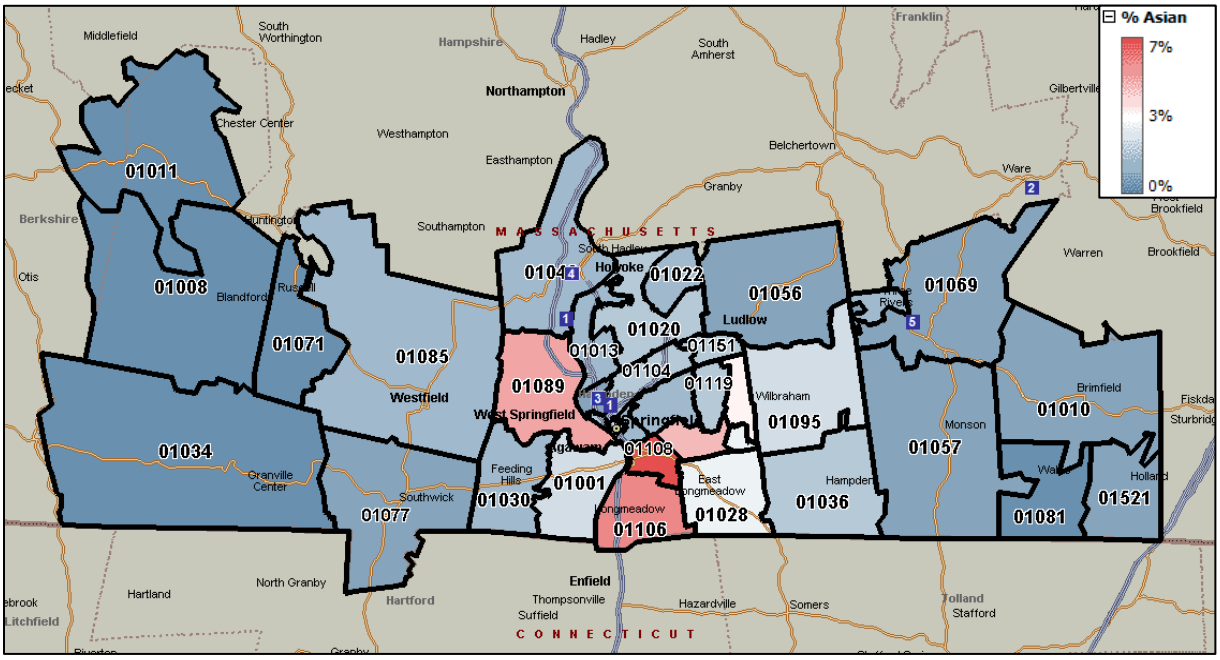
5. Wing Memorial Hospital

Black residents make up the highest percentage of the population in ZIP code 01109 (Springfield)

Exhibit 11: Percent of Population (Asian), 2012



Sources: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via Mercy, 2012.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
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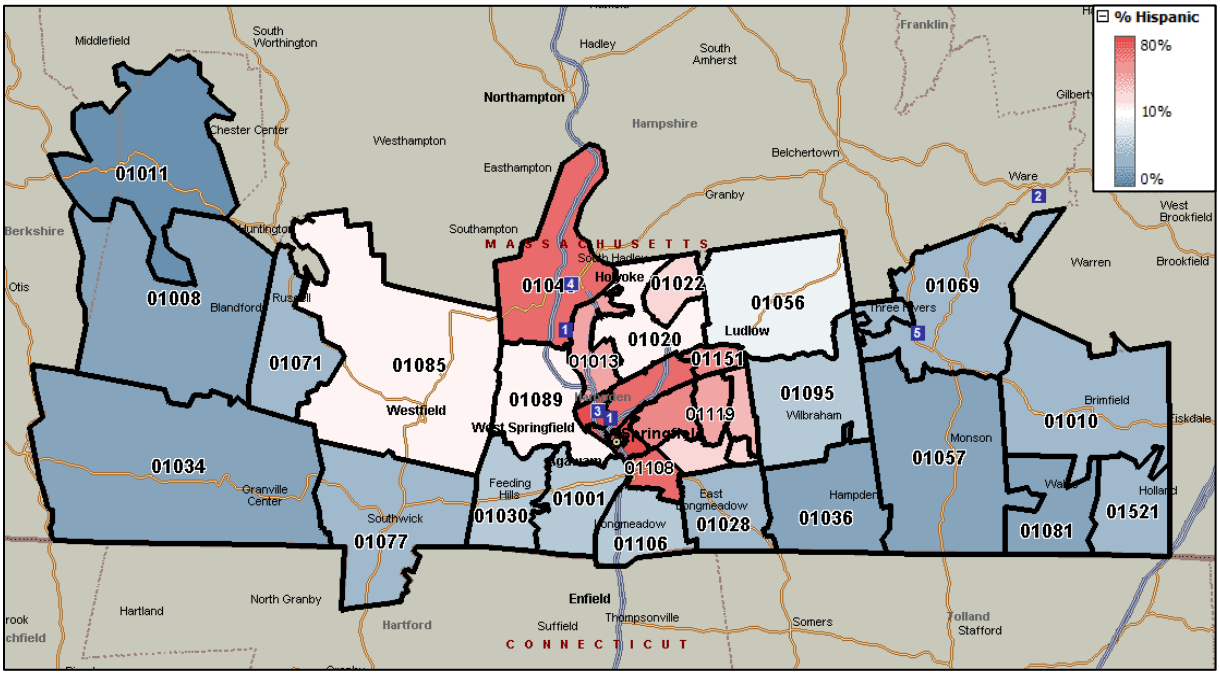
5. Wing Memorial Hospital

ZIP code 01108 (Springfield) had the highest proportion of Asian residents in the community

Exhibit 12: Percent of Population (Hispanic (or Latino)), 2012



Sources: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via Mercy, 2012.

1. Mercy Medical Center
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About 78% of the population in ZIP code 01107 (Springfield) identified as Hispanic

Other demographic characteristics are presented in **Exhibit 13**. Key findings include:

- Hampden County had much higher percentages of residents reporting a disability than the national and Massachusetts averages. Pediatric disability was more than double the national average.
- Over 16 percent of Hampden County residents aged 25 and older did not graduate high school, slightly above the national average.
- Hampden County reported a slightly higher percentage of residents aged 5 and older who were linguistically isolated than the Massachusetts and national averages.[5]

Exhibit 13: Other Demographic Indicators, 2011

Demographic Indicators	Hampden	Massachusetts	U.S.
Total Population With Any Disability*	16.8%	**11.3%**	**12.1%**
Population 0-18 With Any Disability*	8.8%	**4.5%**	**4.0%**
Population 18-64 With Any Disability*	14.9%	**8.8%**	**10.2%**
Population 65+ With Any Disability*	39.3%	**34.1%**	**36.6%**
Population 25+ Without High School Diploma	16.6%	**10.8%**	**14.1%**
Population 5+ Who are Linguistically Isolated	9.3%	**8.9%**	**8.7%**

Source: U.S. Census Bureau, 2012.
*Respondents who report any one of the following six disability types are considered to have a disability: hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty.

Key insights: ***Demographics***

- **The community population is aging and diversifying.**
- **Springfield is home to many Black, Asian, and Hispanic (or Latino) residents.**
- **Hampden County also reports very high disability rates across all age cohorts.**
- **Hampden County reports higher rates of linguistic isolation and low educational achievement than the Massachusetts and national averages.**

[5] Linguistic isolation is defined as the population aged 5 and older who speak a language other than English at home and who speak English less than "very well."

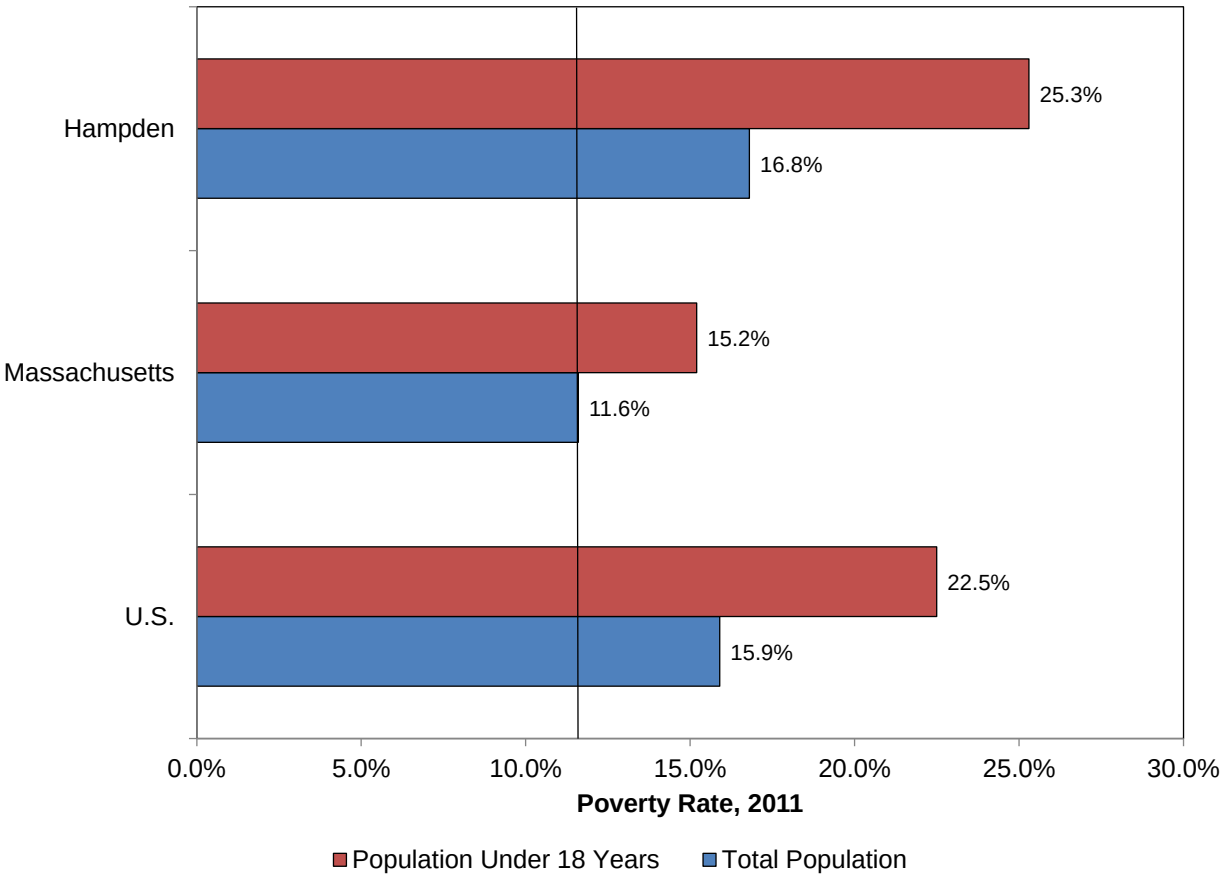
Economic Indicators

The following types of economic indicators with implications for health were assessed: (1) people in poverty, (2) household income, (3) unemployment rates, (4) crime, (5) health reform in Massachusetts, (6) utilization of government assistance programs, and (7) insurance status.

1. People in Poverty

Many health needs are associated with poverty. According to the U.S. Census, in 2011, nearly 16 percent of people in the U.S. and nearly 12 percent of people in Massachusetts lived in poverty. Hampden County reported a poverty rate significantly higher than commonwealth and national averages (**Exhibit 14**). The pediatric population has experienced higher poverty rates than the total population.

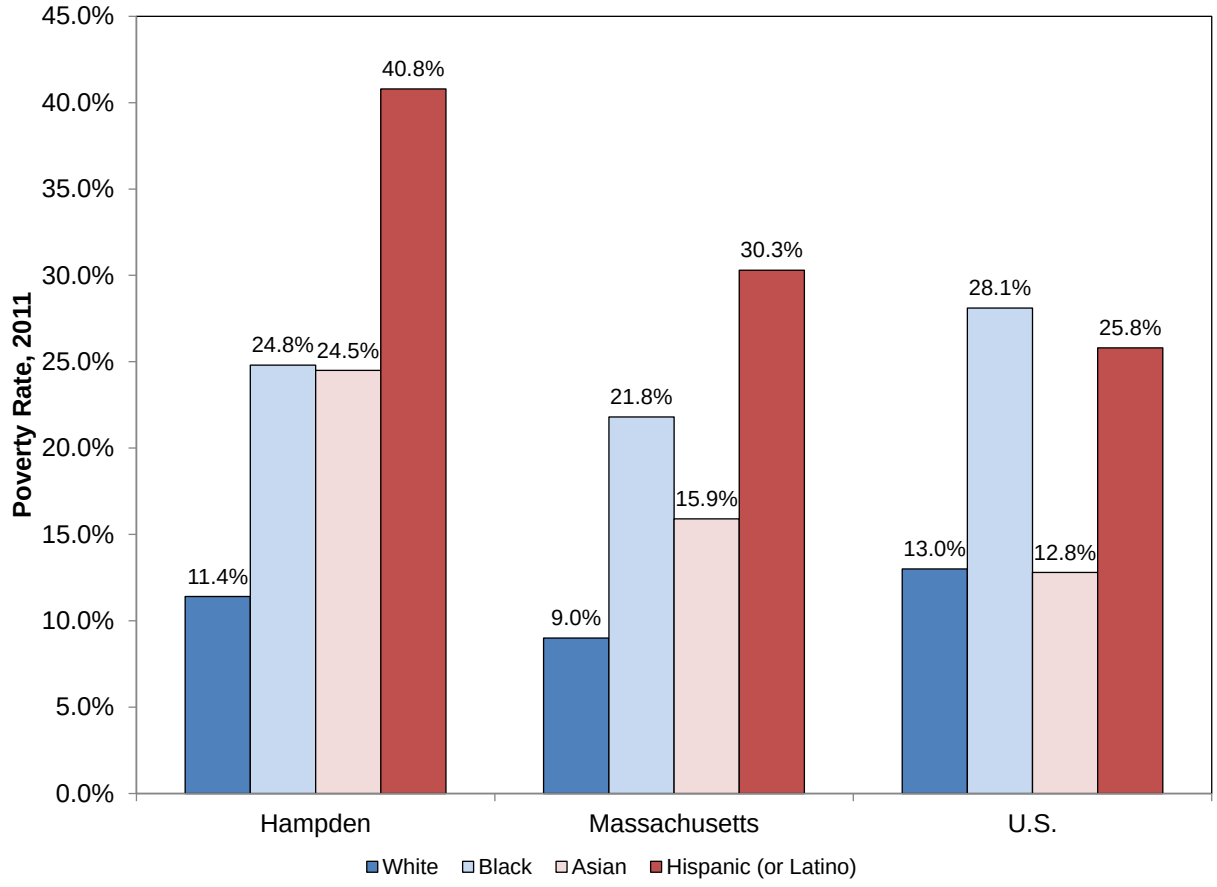
Exhibit 14: Percent of People in Poverty, 2011



Source: U.S. Census Bureau, 2012.

Exhibit 15 presents poverty rates by race. Asian, Black, and Hispanic (or Latino) populations in Hampden County reported higher poverty rates in 2011 than the White population. Poverty rates for each racial/ethnic group were higher in Hampden than comparable groups elsewhere in Massachusetts.

Exhibit 15: Percent of People in Poverty by Race/Ethnicity, 2011



Source: U.S. Census Bureau, 2012.

2. Household Income

In the Mercy community in 2012, 28 percent of all households had incomes below $25,000, an approximation of the federal poverty level (FPL) for a family of four; 54 percent had incomes less than $50,000, an approximation of 200 percent of the FPL for a family of four. FPL is used by many agencies and organizations to assess household needs for low-income assistance programs. The cities of Holyoke and Springfield reported the lowest average household income (**Exhibit 16**).

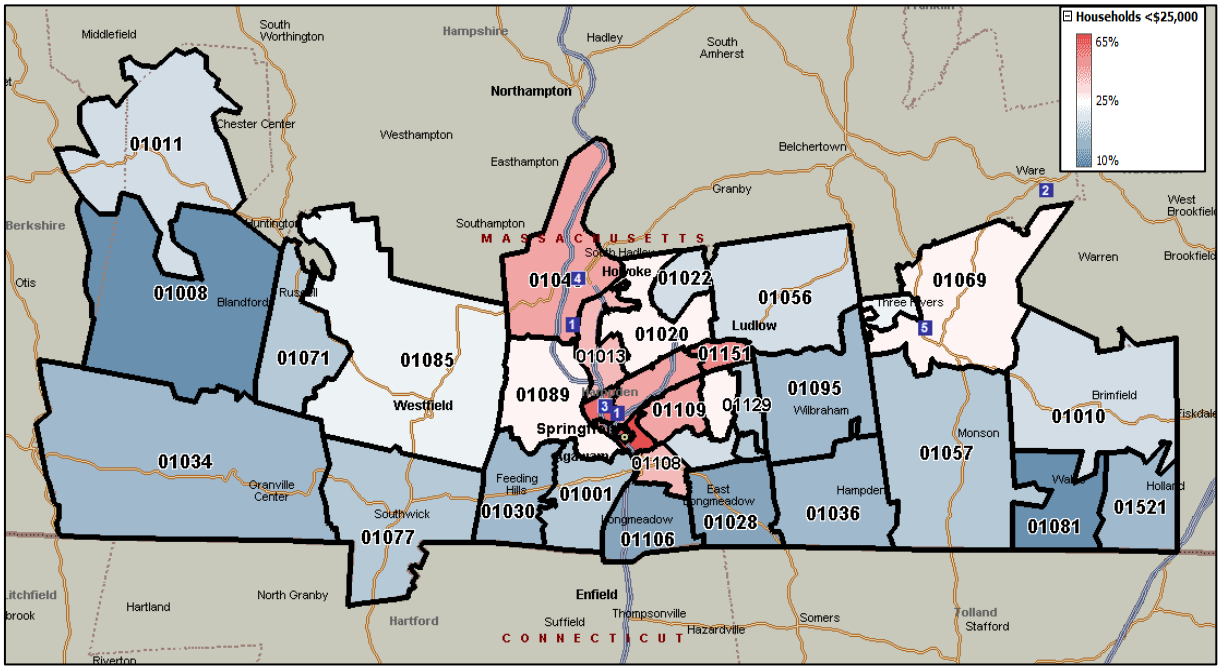
Exhibit 16: Percent Lower-Income Households by Town, 2012

Town/City*	Number of Households 2012	Average Income	Percent Less Than $25,000	Percent Less Than $50,000
Agawam	11,735	$67,092	16.5%	41.4%
Blandford	534	$76,025	11.0%	30.5%
Brimfield	1,526	$72,520	18.0%	41.0%
Chester	527	$59,829	18.8%	46.9%
Chicopee	23,864	$49,929	28.5%	60.8%
East Longmeadow	5,859	$91,210	13.3%	31.1%
Granville	818	$80,999	15.4%	33.7%
Hampden	1,930	$91,105	15.2%	29.9%
Holland	1,016	$75,103	15.4%	33.4%
Holyoke	15,504	$45,543	38.8%	66.1%
Longmeadow	5,900	$112,328	12.3%	28.2%
Ludlow	8,162	$65,395	18.6%	43.5%
Monson	3,276	$74,751	16.0%	35.5%
Palmer	5,115	$54,741	24.1%	52.0%
Russell	590	$63,983	15.8%	41.9%
Southwick	3,770	$71,493	16.5%	37.6%
Springfield	56,786	$44,902	38.3%	66.3%
Wales	676	$69,264	10.2%	37.7%
West Springfield	12,091	$58,115	26.2%	53.1%
Westfield	15,761	$65,389	22.4%	46.3%
Wilbraham	5,327	$98,618	14.2%	31.3%
Total	**180,767**	**$58,663**	**27.9%**	**54.0%**

Source: The Nielsen Company and Truven Health Analytics via Mercy, 2012.
*Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Six ZIP codes (01103, 01104, 01105, 01107, 01109, and 01151) in Springfield had over 40 percent of households reporting incomes under $25,000 (**Exhibit 17**).

Exhibit 17: Percent of Households with Incomes Under $25,000 by ZIP Code, 2012



Sources: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via Mercy, 2012.

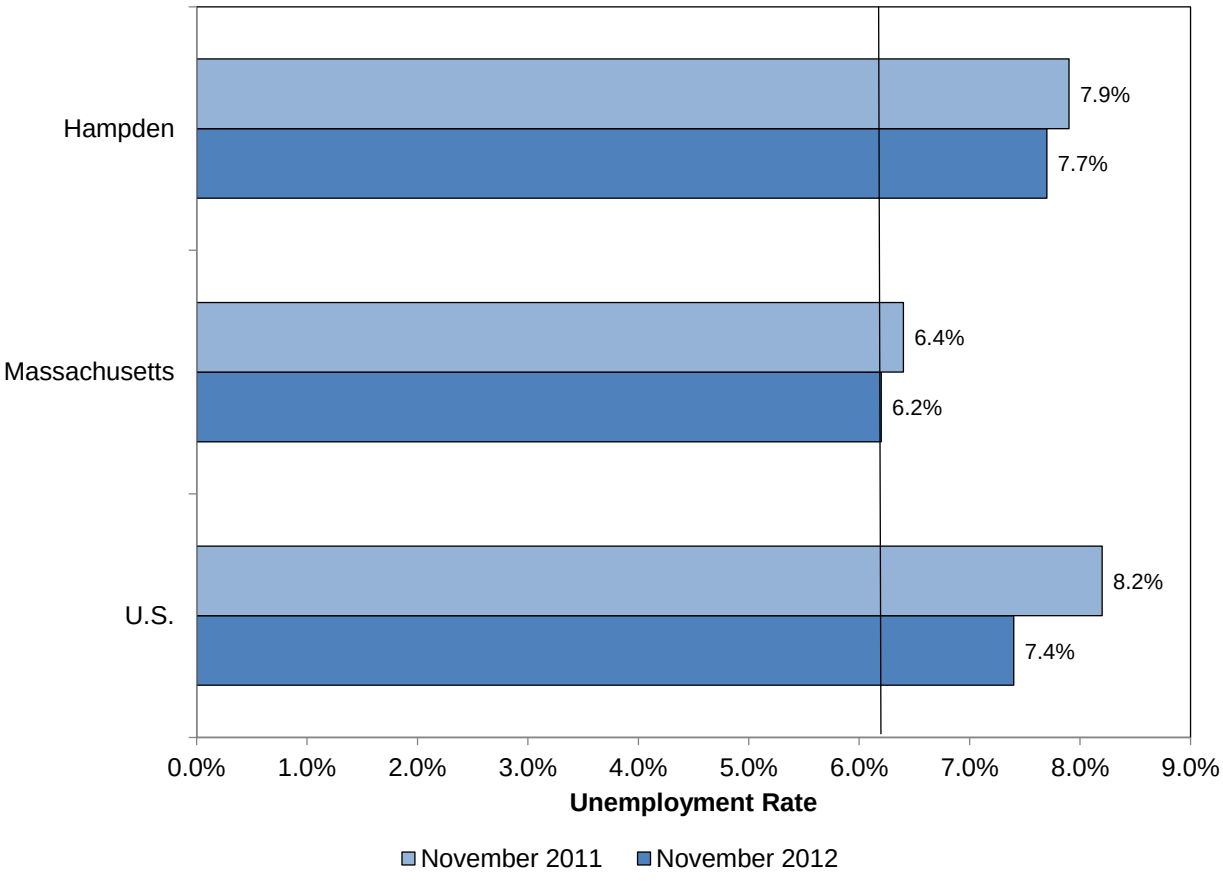
1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

ZIP code 01105 (Springfield) reported over 63% of households earning less than $25,000 per year

3. Unemployment Rates

Exhibit 18 shows the unemployment rates for Hampden County in November of 2011 and 2012, with Massachusetts and national averages for comparison. Hampden County reported unemployment rates above commonwealth averages in both 2011 and 2012.

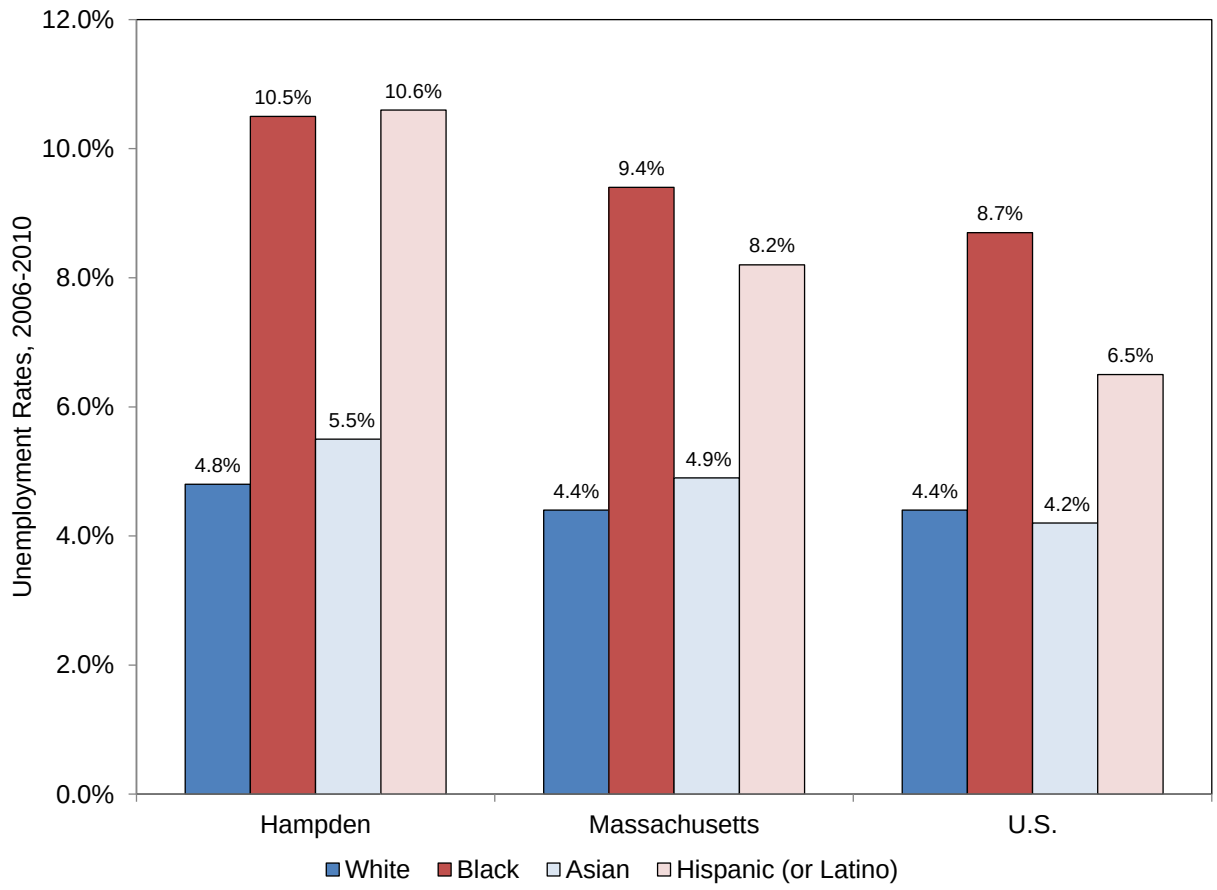
Exhibit 18: Unemployment Rates, 2011 and 2012



Source: U.S. Bureau of Labor Statistics, 2012.

Hampden County reported higher rates of unemployment across all racial and ethnic categories than the Massachusetts and national averages during the 2006-2010 period. Unemployment rates from 2006 to 2010 were highest for the Black and Hispanic (or Latino) populations (**Exhibit 19**).

Exhibit 19: Unemployment Rates by Race and Ethnicity, 2006-2010*



Source: U.S. Census Bureau, 2011.
*Unemployment data by race were available only within ACS 5-Year Estimates, 2006-2010.

4. Crime

The Federal Bureau of Investigation reports available data on violent crime in the United States. Hampden County reported significantly higher rates of all crimes than the Massachusetts and national averages (**Exhibit 20**).

Exhibit 20: Violent and Property Crime Rates, 2011

County	Population 2011	Crime Rates per 100,000 Population					
		Murder and Non-Negligent Manslaughter	Forcible Rape	Aggravated Assault	Robbery	Total Violent Crime	Total Property Crime
Hampden	449,520	5.6	31.4	409.5	160.8	607.3	3,353.4
Massachusetts	**6,349,092**	**2.9**	**25.6**	**309.3**	**106.6**	**444.5**	**2,343.5**
U.S.	**303,585,583**	**4.8**	**27.5**	**247.4**	**116.7**	**396.4**	**2,985.4**

Sources: Violent crime counts retrieved from the Federal Bureau of Investigation, Uniform Crime Reports, 2012. Population 2011 estimates obtained from the U.S. Census Bureau, ACS 1 Year Estimates 2011. Rates calculated by Verité.

5. Health Reform in Massachusetts

Massachusetts enacted comprehensive health reform in 2006 that expanded health insurance coverage for residents. The expansion has reduced the number of uninsured people in Mercy's community; however, this CHNA (including the community survey) indicates that access barriers remain present.

The Massachusetts Healthcare Insurance Reform Law required Massachusetts residents to carry a minimum level of healthcare insurance. Residents have been required to obtain coverage or face a tax penalty, unless they obtain a waiver from the Health Connector or for religious reasons.[6] Residents earning less than 150 percent of the federal poverty level (FPB) receive free health care insurance.

The impacts of these reforms have been well-studied. In 2010, while 18.4 percent of U.S. residents were uninsured, just 6.3 percent of Massachusetts residents were uninsured (a decrease from 10.9 percent in 2006). Primary care provider capacity has expanded to meet growing demand for services. More residents reported having a usual source of care, a preventive care visit, and a dental care visit in 2010 than in 2006.[7]

Even after the reforms, however, low-income residents remain more likely to be uninsured than higher income residents.[8] Other characteristics of the remaining uninsured are: single, young,

[6]The 188th General Court of The Commonwealth of Massachusetts. (2006). Chapter 58: An Act Providing Access to Affordable, Quality, Accountable Health Care. Retrieved from http://www.malegislature.gov/Laws/SessionLaws/Acts/2006/Chapter58

[7]The Henry J. Kaiser Family Foundation. (2012, May). Massachusetts Health Reform: Six Years Later. Retrieved from http://www.kff.org/healthreform/upload/8311.pdf

[8]Blue Cross Blue Shield of Massachusetts Foundation. (2012, May). Health Reform in Massachusetts: Expanding Access to Health Insurance Coverage – Assessing the Results. Retrieved from https://www.mahealthconnector.org/portal/binary/com.epicentric.contentmanagement.servlet.ContentDeliveryServlet/Health%2520Care%2520Reform/Overview/HealthReformAssessingtheResults.pdf

males; racial minorities, ethnic minorities, or non-citizens; unable to speak English well or very well; and/or living in a household with an adult unable to speak English well or very well.[9]

6. Utilization of Government Assistance Programs

Federal, state, and local governments provide assistance programs for low-income individuals and families. These programs include vouchers that subsidize housings costs, free and reduced-price lunches at public schools through the National School Lunch Program, the Supplemental Nutrition Assistance Program (SNAP), and Temporary Assistance for Needy Families (TANF).

Housing certificates and vouchers allow residents who meet certain eligibility criteria to receive monthly housing assistance under Section 8 of the Housing Act of 1937. Section 8 subsidies of rental and mortgage costs help make housing more affordable. Residents who apply may be placed on a waiting list before funds become available. Hampden County reported an average time on the waiting list for Section 8 housing certificates and vouchers that was shorter than the Massachusetts average. The average household federal contribution in Hampden County also is lower than the Massachusetts average (**Exhibit 21**).

Exhibit 21: Waiting Time for Section 8 Housing Certificates and Vouchers by County, 2009

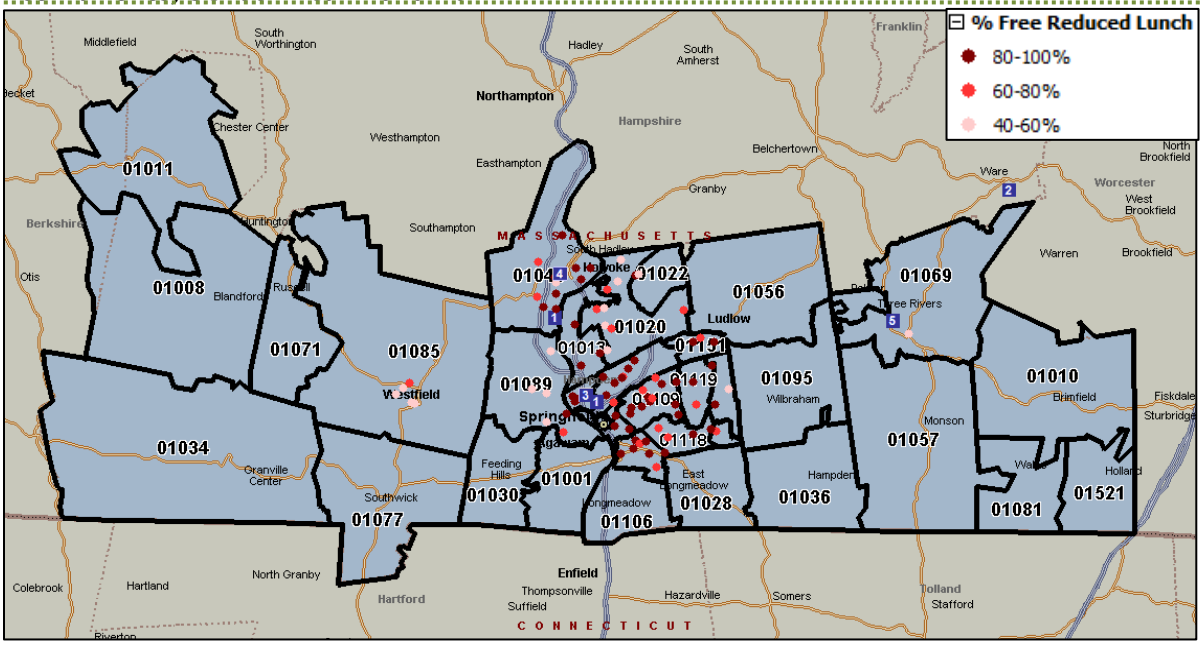
County	Number of Participating Households	Spending per Unit per Month		Average Months on Waiting List
		Average Household Contribution	Average Federal Contribution	
Hampden	8,040	$368	$594	11
Massachusetts	**72,369**	**$407**	**$907**	**15**
U.S.	**2,040,801**	**$319**	**$580**	**9**

Source: U.S. Department of Housing and Urban Development, 2012.

[9]State Health Access Data Assistance Center and Robert Wood Johnson Foundation. (2010, August). Massachusetts Health Reform in 2008: Who are the Remaining Uninsured Adults? Retreived from http://www.shadac.org/files/shadac/publications/MassReform2008UninsuredBrief.pdf

Schools participating in the National School Lunch Program are eligible to receive financial assistance from the USDA to provide free or reduced-price meals to low-income students. Schools with 40 percent or more of their student body receiving this assistance are eligible for school-wide Title I funding, designed to ensure that students meet grade-level proficiency standards. In the Mercy community, 87 of 143 schools were eligible for Title I funds (**Exhibit 22**).

Exhibit 22: Public Schools with Over 40 Percent of Students Eligible for Free or Reduced-Price Lunches, School Year 2010-2011



Sources: Microsoft MapPoint and National Center for Education Statistics, 2012.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

In 2011, 87 of 143 schools in Hampden County had over 40% of students eligible for free/reduced price lunches

Exhibit 23 shows the percent of the total population enrolled in the Supplemental Nutrition Assistance Program (SNAP). This U.S. Department of Agriculture program provides subsidies so low-income and no-income residents can purchase food. In 2011, 22.3 percent of Hampden County households participated in SNAP, a rate well above averages.

Exhibit 23: Supplemental Nutrition Assistance Program (SNAP) Enrollment, 2011

County	Households Enrolled in SNAP	Number of Households	Percent of Total Households
Hampden	39,319	176,575	22.3%
Massachusetts	**307,473**	**2,532,067**	**12.1%**
U.S.	**14,944,642**	**114,991,725**	**13.0%**

Source: U.S. Census Bureau, 2012.

Exhibit 24 shows the percent of the total population enrolled in cash public assistance, including the Temporary Assistance for Needy Families (TANF) program. TANF is a U.S. Department of Health and Human Services program that provides financial assistance to eligible low-and-no-income families with dependent children. About 4.5 percent of households in Hampden County received cash public assistance in 2011, again higher than Massachusetts and national averages.

Exhibit 24: Households Receiving Cash Public Assistance, 2011

County	Households Receiving Cash Public Assistance	Number of Households	Percent of Total Households
Hampden	8,014	176,575	4.5%
Massachusetts	**76,711**	**2,532,067**	**3.0%**
U.S.	**3,309,517**	**114,991,725**	**2.9%**

Source: U.S. Census Bureau, 2012.

7. Insurance Status

Exhibit 25 demonstrates that, in 2011, 4.8 percent of Hampden County's population lacked health insurance. This percentage was higher than the Massachusetts average but below the national average. Health reform in Massachusetts has significantly decreased uninsurance rates.

Exhibit 25: Uninsured Population by Age Cohort and County, 2011

County	Total Population	Population Under 18	Population 18-64			
	Percent Uninsured	Percent Uninsured	Percent Uninsured and Employed	Percent Uninsured and Unemployed	Percent Uninsured Not in Labor Force	Total Percent Uninsured
Hampden	4.8%	2.1%	6.5%	11.3%	6.7%	6.9%
Massachusetts	**4.3%**	**1.7%**	**5.2%**	**14.8%**	**5.4%**	**5.9%**
U.S.	**15.1%**	**7.5%**	**17.9%**	**46.0%**	**22.0%**	**21.0%**

Source: U.S. Census Bureau, 2012.

Exhibit 26 portrays the distribution of community-wide discharges by payer. Medicare and MassHealth (Medicaid) were the most common payers in the community. Springfield and Holyoke reported the highest percentage of MassHealth (Medicaid) discharges. Wilbraham, Brimfield, and East Longmeadow reported the highest percentage of Medicare discharges in the community.

Exhibit 26: Community-Wide Discharges[10] by Town/City and Payer, 2011

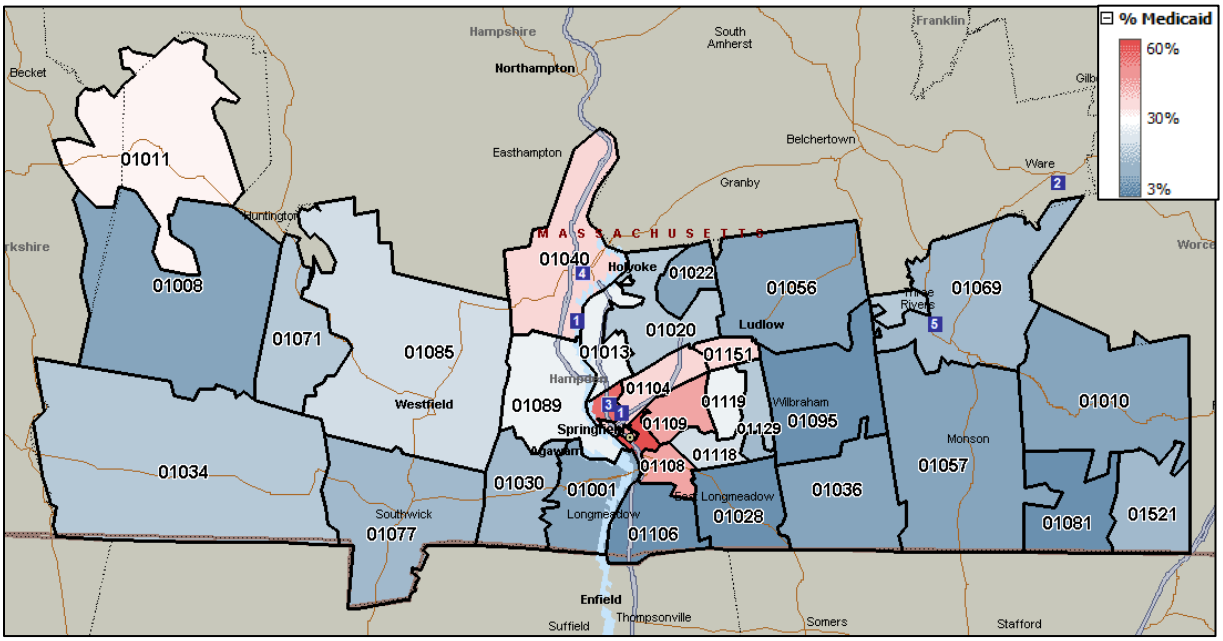
Town/City*	Discharges	MassHealth (Medicaid)	Medicare	Other	Private	Self-Pay
Agawam	3,346	11.8%	51.9%	5.3%	30.8%	0.2%
Blandford	40	10.0%	20.0%	5.0%	65.0%	0.0%
Brimfield	163	10.4%	59.5%	6.7%	23.3%	0.0%
Chester	52	30.8%	11.5%	5.8%	50.0%	1.9%
Chicopee	6,956	22.2%	43.9%	6.5%	26.8%	0.7%
East Longmeadow	1,750	6.3%	59.0%	2.9%	31.7%	0.2%
Granville	89	19.1%	28.1%	7.9%	44.9%	0.0%
Hampden	417	7.9%	53.5%	3.4%	34.8%	0.5%
Holland	23	13.0%	43.5%	8.7%	34.8%	0.0%
Holyoke	6,205	36.0%	40.7%	5.3%	17.4%	0.6%
Longmeadow	1,118	3.2%	57.8%	2.3%	36.6%	0.1%
Ludlow	1,881	9.6%	48.3%	6.5%	35.4%	0.2%
Monson	770	11.3%	46.2%	6.8%	35.1%	0.6%
Palmer	1,656	14.6%	55.1%	6.0%	24.0%	0.4%
Russell	89	18.0%	21.3%	6.7%	52.8%	1.1%
Southwick	496	13.7%	35.9%	5.6%	44.8%	0.0%
Springfield	19,992	41.2%	33.8%	5.2%	19.1%	0.7%
Wales	80	6.3%	56.3%	10.0%	27.5%	0.0%
West Springfield	3,145	25.6%	38.2%	6.0%	29.7%	0.5%
Westfield	2,414	23.7%	27.9%	6.2%	41.7%	0.6%
Wilbraham	1,522	4.8%	61.0%	3.2%	30.7%	0.2%
Total	**52,204**	**28.2%**	**40.9%**	**5.4%**	**25.0%**	**0.5%**

Source: Coalition of Western Massachusetts Hospitals, 2012.
*Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Exhibit 27, 28, and **29** illustrate the prevalence of MassHealth (Medicaid), Medicare, and private discharges in the community.

[10] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

Exhibit 27: MassHealth (Medicaid) Discharges[11] as a Percent of Total by ZIP Code, 2010-2011



Sources: Microsoft MapPoint and Coalition of Western Massachusetts Hospitals, 2012.

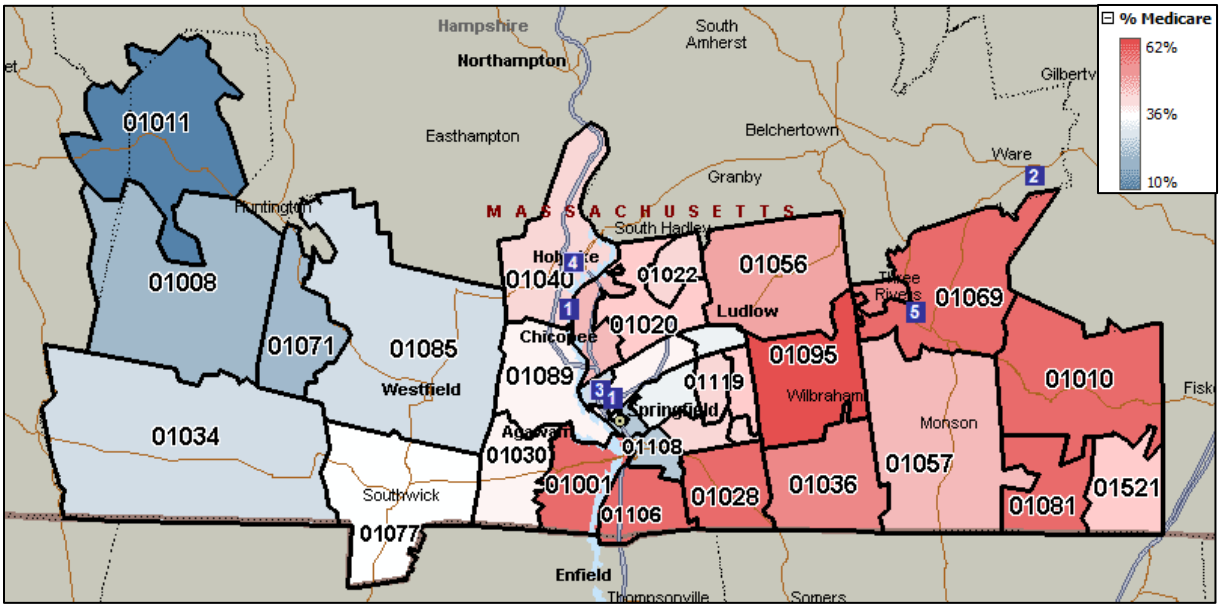
Data were not mapped for ZIP codes with fewer than 10 total discharges.

1 Mercy Medical Center
2 Baystate Mary Lane Hospital
3 Baystate Medical Center
4 Holyoke Medical Center
5 Wing Memorial Hospital

The Medicaid percent of discharges was highest in ZIP codes 01138, 01105, and 01107 (all in Springfield)

[11] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

Exhibit 28: Medicare Discharges[12] as a Percent of Total by ZIP Code, 2010-2011



Sources: Microsoft MapPoint and Coalition of Western Massachusetts Hospitals, 2012.

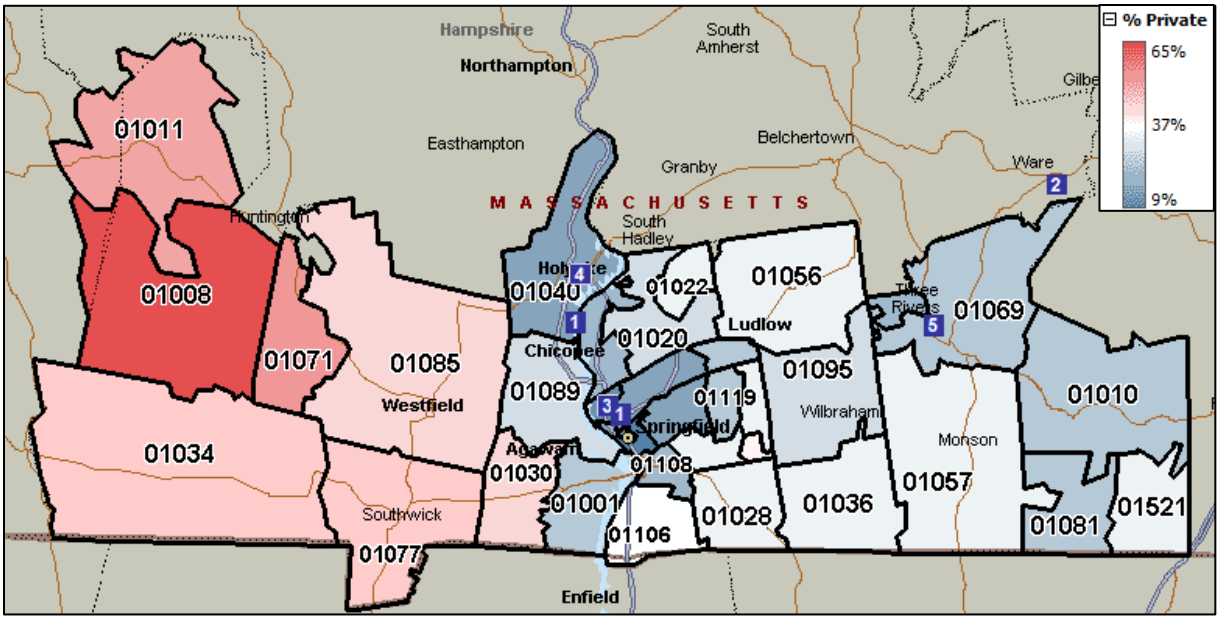
Data were not mapped for ZIP codes with fewer than 10 total discharges.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

The Medicare percent of discharges was highest in ZIP codes 01095 (Wilbraham), 01010 (Brimfield), 01028 (East Longmeadow)

[12] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

Exhibit 29: Private Discharges[13] as a Percent of Total by ZIP Code, 2010-2011



Sources: Microsoft MapPoint and Coalition of Western Massachusetts Hospitals, 2012.

Data were not mapped for ZIP codes with fewer than 10 total discharges.

The private percent of discharges was highest in ZIP codes 01008 (Blandford), 01071 (Russell), and 01011 (Chester)

Key insights: ***Economic Indicators***

- **Poverty is known to create barriers to access (to health services, quality education, healthy food, housing, and other basic needs and opportunities) and to contribute to poor health status. Hampden County reported a poverty rate well above the Massachusetts average.**
- **Hampden County reported significantly higher rates of crime than the Massachusetts averages in 2011. It also demonstrated higher utilization of government support programs (including SNAP and TANF).**
- **Health reform has meaningfully decreased uninsurance rates.**

[13] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

Local Health Status and Access Indicators

The following data sources have been accessed to examine health status and access to care indicators in the Mercy community: (1) County Health Rankings, (2) Community Health Status Indicators Project, (3) Massachusetts Department of Public Health (MassCHIP), and (4) the Behavioral Risk Factor Surveillance System.

1. County Health Rankings

County Health Rankings, a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, ranks each county within each state in terms of health factors and health outcomes. The health outcomes measure is a composite based on mortality and morbidity statistics, and the health factors measure is a composite of several variables known to affect health outcomes: health behaviors, clinical care, social and economic factors, and physical environment.

County Health Rankings is updated annually. *County Health Rankings 2013* relies on data from 2005 to 2012, with most data originating in 2009 to 2012. *County Health Rankings 2012* relies on data from 2002 to 2010, with most data originating in 2006 to 2009. *County Health Rankings 2011* relies on data from 2001 to 2009, with most data originating in 2006 to 2008. In all three years, *County Health Rankings* was able to rank all 14 of Massachusetts's counties.

Exhibits 31A and **31B** provide summary analysis of the rankings for Hampden County. Rankings for Massachusetts were divided into quartiles to indicate how each county ranks versus others in the commonwealth. **Exhibit 31A** illustrates the quartile into which each county fell by indicator in the 2012 edition, and also illustrates whether each county's ranking worsened or improved from 2011. For example, in the 2012 edition, Hampden County was in the bottom quarter (13th out of 14) of Massachusetts counties for the overall rate of morbidity; its ranking in 2012 fell for this indicator compared to the 2011 edition. **Exhibit 31B** uses a similar methodology; however, County Health Rankings' 2013 edition ranked fewer indicators.

Exhibit 30A: Hampden County Rank Among 14 Massachusetts Counties, 2011-2012

Indicator	Hampden	Rank Change
Health Outcomes		14 to 14
Mortality		14 to 14
Morbidity	↓	13 to 14
Health Factors		14 to 14
Health Behaviors		14 to 13
Tobacco Use		12 to 10
Diet and Exercise*[14]		N/A
Alcohol Use		8 to 7
Sexual Activity[15]		14 to 14
Clinical Care	↓	9 to 12
Access to Care[16]	↓	8 to 12
Quality of Care[17]	↓	7 to 9
Social & Economic Factors		14 to 14
Education		14 to 14
Employment		13 to 13
Income		14 to 13
Family and Social Support		13 to 13
Community Safety		13 to 13
Physical Environment		14 to 14
Environmental Quality[18]		14 to 14
Built Environment*[19]	↓	N/A

Hampden County ranked last for nine indicators

…

Access and Quality of Care rankings were more favorable than were health status categories

Source: *County Health Rankings*, 2011 and 2012.
*The 2012 edition of *County Health Rankings* used different data sources for the "Diet and Exercise" and "Built Environment" indicators than the 2011 edition. Therefore, it is not possible to draw comparisons between years for these indicators.

Key	
2012 County Ranking 1-7	
2012 County Ranking 8-10	
2012 County Ranking 11-14	
Ranks Not Comparable Between 2011 and 2012	N/A
Rank Worsened from 2011 to 2012	↓

In 2012, Hampden County ranked in the bottom quartile of Massachusetts counties for all but a few indicator categories.

[14] A composite measure that examines adult obesity and physical inactivity.
[15] A composite measure that examines the chlamydia rate per 100,000 population and the teen birth rate per 1,000 females ages 15 to 19.
[16] A composite measure that examines the percent of the population without health insurance and ratio of population to primary care physicians.
[17] A composite measure that examines the hospitalization rate for ambulatory care sensitive conditions, whether diabetic Medicare patients are receiving HbA1C screening, and percent of chronically ill Medicare enrollees in hospice care in the last 8 months of life.
[18] A composite measure that examines the number of air pollution-particulate matter days and air pollution-ozone days.
[19] A composite measure that examines access to healthy foods and recreational facilities and the percent of restaurants that are for fast food.

Exhibit 30B: Hampden County Rank Among 14 Massachusetts Counties, 2012-2013

Indicator	Hampden	Rank Change 2012 to 2013
Health Outcomes		14 to 14
Mortality		14 to 14
Morbidity		14 to 13
Health Factors		14 to 14
Health Behaviors		13 to 13
Clinical Care		N/A
Social & Economic Factors		14 to 13
Physical Environment		N/A

Hampden County ranked in the bottom quartile for all indicators

Source: *County Health Rankings*, 2012 and 2013.
*The 2013 edition of *County Health Rankings* used different data sources for "Clinical Care" and "Physical Environment" than the 2012 edition. Therefore, it is not possible to draw comparisons between years for these indicators.

Key	
2013 County Ranking 1-7	
2013 County Ranking 8-10	
2013 County Ranking 11-14	
Ranks Not Comparable Between 2012 and 2013	N/A
Rank Worsened from 2012 to 2013	↓

In 2013, Hampden County ranked in the bottom quartile for all indicators.

2. Community Health Status Indicators Project

The *Community Health Status Indicators* (CHSI) Project, provided by the U.S. Department of Health and Human Services through 2009, compared many health status and access indicators to both the median rates in the U.S. and to rates in "peer counties" across the U.S.

Counties are considered "peers" if they share common characteristics such as population size, poverty rate, average age, and population density. **Exhibit 31** highlights the analysis of CHSI health status indicators. Cells in the table are shaded if, on that indicator, a county compared unfavorably both to the U.S. as a whole and to the group of specified peer communities.

Exhibit 31: Unfavorable CHSI Indicators, 2009

Indicator	Hampden
Low Birth Weight Infants	
Very Low Birth Weight Infants	
Premature Births	
No Care in First Trimester	
Births to Women under 18*	
Births to Women age 40-54*	
Births to Unmarried Women*	
Infant Mortality	
Hispanic (or Latino) Infant Mortality	
White non-Hispanic (or Latino) Infant Mortality	
Black non-Hispanic (or Latino) Infant Mortality	
Neonatal Infant Mortality	
Post-neonatal Infant Mortality	
Breast Cancer (Female)	
Colon Cancer	
Lung Cancer	
Coronary Heart Disease	
Stroke	
Homicide	
Suicide	
Motor Vehicle Injuries	
Unintentional Injury	

Hampden County compared unfavorably for five indicators, all involving prenatal care and infant health

Source: The *Community Health Status Indicators* Project, 2010.
*The Community Health Status Indicators Project considers a high number of births to women age 18, age 40-54, or who are unmarried to be an unfavorable health indicator due to associations with increased risk of negative maternal and child health outcomes. Caution should be used when interpreting this indicator; women may be choosing to have children at these times or under these circumstances for a variety of reasons

Key	
	Unfavorable

Hampden County compared unfavorably for five indicators: No Care in First Trimester, Births to Women under 18, Births to Women age 40-54, Births to Unmarried Women, and Hispanic (or Latino) Infant Mortality.

3. Massachusetts Department of Public Health

The Massachusetts Department of Public Health (MDPH) maintains a publicly-available data warehouse, the Massachusetts Community Health Information Profile (MassCHIP),that includes indicators regarding a number of health issues.

Exhibits 32 and **33** display cancer incidence and mortality rates by race and ethnicity. **Exhibits 34, 35,** and **36** display mortality rates by race and ethnicity for a series of issues, including circulatory system, injuries, HIV/AIDs, respiratory diseases, and chronic liver disease. **Exhibit 37** displays incidence and/or prevalence of a variety of infectious diseases, including the most common sexually transmitted infections. **Exhibit 38** portrays rates of obesity and overweight health status for schoolchildren in the Mercy community**. Exhibits 39** and **40** display asthma-related data, including prevalence among schoolchildren and also hospitalizations by age group. **Exhibit 41** analyzes several infant and maternal health indicators.

Exhibit 32: Cancer Incidence Rates by Race/Ethnicity, 2008*

County and Race/Ethnicity	All Cancer	Breast (Female)	Colorectal	Esophagus	Leukemia	Lung	Non-Hodgkin Lymphoma	Ovary	Pancreas	Prostate	Stomach
Hampden											
Asian	361.3	N/A	N/A	0.0	0.0	N/A	N/A	0.0	N/A	N/A	0.0
Black	442.7	106.3	35.8	N/A	N/A	56.0	18.7	N/A	N/A	202.9	N/A
Hispanic (or Latino)	488.2	99.0	50.4	N/A	N/A	38.0	N/A	N/A	17.2	240.2	13.7
White	468.1	86.8	37.5	6.0	8.3	65.9	17.9	11.4	11.8	141.9	8.2
Total	**471.0**	**89.3**	**38.4**	**5.6**	**8.5**	**63.6**	**17.9**	**11.8**	**12.3**	**158.8**	**8.9**
Massachusetts											
Asian	326.2	65.8	42.7	3.2	8.5	45.0	11.8	9.3	4.6	89.6	11.2
Black	515.8	88.9	48.2	6.7	9.6	51.4	20.7	6.9	16.1	241.0	12.9
Hispanic (or Latino)	309.6	53.8	30.9	2.7	9.5	26.0	10.7	5.5	10.0	133.7	10.2
White	520.4	98.3	44.2	6.9	12.8	74.5	20.1	13.5	13.2	146.8	7.0
Total	**514.2**	**95.0**	**44.4**	**6.6**	**12.8**	**71.2**	**19.8**	**12.8**	**13.0**	**155.6**	**7.6**

Source: MassCHIP, 2012.
Rates are per 100,000 population and are age-adjusted.
*Caution should be used when interpreting these rates; many represent fewer than 20 instances of cancer.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Hampden County reported higher rates of prostate and stomach cancer for the general population than the Massachusetts average. The Hispanic (or Latino) population reported higher rates of seven cancers than the Massachusetts Hispanic (or Latino) average. The Black population reported higher rates of breast and prostate cancer than the White population (**Exhibit 32**).

Exhibit 33: Cancer Mortality Rates by Race/Ethnicity, 2009*

County and Race/Ethnicity	All Cancer Types	Breast (Female)	Colorectal	Esophagus	Leukemia	Lung	Non-Hodgkin Lymphoma	Ovary	Pancreas	Prostate	Stomach
Hampden											
Asian	93.0	0.0	0.0	0.0	0.0	22.1	0.0	0.0	56.8	0.0	0.0
Black	203.8	27.2	16.5	3.6	13.5	31.3	8.8	7.1	14.9	60.0	4.5
Hispanic	167.5	16.8	27.3	4.2	3.1	23.2	2.7	8.4	4.9	22.7	7.1
White	187.3	22.5	14.6	6.6	7.6	59.8	3.9	7.5	11.2	21.8	4.5
Total	**187.8**	**21.8**	**15.7**	**6.2**	**7.9**	**56.1**	**4.2**	**7.2**	**11.6**	**23.7**	**4.7**
Massachusetts											
Asian	95.7	9.4	12.4	2.9	5.0	22.3	2.4	2.1	6.7	6.5	4.0
Black	193.7	30.6	17.7	2.6	5.2	33.5	7.6	4.6	14.4	44.8	8.4
Hispanic	112.6	11.8	11.9	3.5	3.4	22.8	4.5	2.0	8.3	10.8	7.2
White	177.1	22.3	15.0	5.2	6.7	50.9	5.3	8.2	11.1	21.4	2.9
Total	**173.7**	**22.0**	**15.0**	**5.0**	**6.5**	**48.5**	**5.4**	**7.7**	**11.0**	**21.6**	**3.3**

Source: MassCHIP, 2012.
Rates are per 100,000 population and are age-adjusted.
*Caution should be used when interpreting these rates; many represent fewer than 20 instances of cancer.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Cancer mortality rates throughout the community were higher than commonwealth averages. The Hispanic (or Latino) population had mortality rates worse than the Massachusetts averages by more than 75 percent for colorectal cancer, prostate cancer, and cancer of the ovaries. The leukemia-related mortality rate for Black residents was more than 75 percent worse than the commonwealth average. The mortality rate for pancreatic cancer for Asian residents of Hampden County was also more than 75 percent worse than the Massachusetts average (**Exhibit 33**).

Exhibit 34: Circulatory System-Related Mortality by Race/Ethnicity, 2009*

County and Race/Ethnicity	All Circulatory System Diseases	Cerebrovascular Disease	Heart Disease	Myocardial Infarction
Hampden				
Asian	135.4	43.4	83.8	0.0
Black	267.8	60.4	174.2	45.0
Hispanic (or Latino)	209.1	34.6	150.7	33.5
White	202.3	30.2	156.6	29.2
Total	**208.4**	**32.9**	**158.1**	**30.1**
Massachusetts				
Asian	97.4	28.2	60.4	15.5
Black	250.2	43.0	182.4	27.4
Hispanic (or Latino)	114.9	20.3	84.0	17.0
White	202.7	31.7	156.8	29.6
Total	**200.2**	**31.9**	**153.9**	**28.9**

Source: MassCHIP, 2012.
Rates are per 100,000 population and are age-adjusted.
*Caution should be used when interpreting these rates; many represent fewer than 20 instances of the disease.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Significant racial disparities existed for both Black and Hispanic (or Latino) residents for circulatory system-related mortality. The Black population had higher mortality rates than any other group for all circulatory disease categories. Hispanic (or Latino) residents had mortality rates more than 75 percent worse than the Massachusetts average for all circulatory system diseases, heart disease, and myocardial infarction (**Exhibit 34**).

Exhibit 35: Injury-Related Mortality by Race/Ethnicity, 2009*

County and Race/Ethnicity	All Injuries	Unintentional Injury	Homicide	Suicide	Falls	Firearms	Poison	Opioid-Related Overdoses	Motor Vehicle
Hampden									
Asian	11.3	12.9	0.0	0.0	11.	0.0	0.0	0.0	0.0
Black	48.4	29.0	13.9	7.3	0.0	11.7	11.5	11.5	9.4
Hispanic (or Latino)	41.5	18.5	13.9	3.6	7.2	11.3	14.7	9.4	0.8
White	47.6	33.4	0.9	13.6	6.2	3.1	17.2	10.2	7.5
Total	**47.8**	**30.0**	**4.8**	**11.4**	**6.8**	**5.7**	**15.6**	**9.7**	**6.3**
Massachusetts									
Asian	24.4	11.3	1.1	5.2	6.5	1.0	1.2	0.8	5.7
Black	49.1	23.0	14.7	5.1	1.9	12.9	16.1	8.3	4.8
Hispanic (or Latino)	37.2	17.8	7.9	4.4	4.4	5.2	9.8	7.2	3.7
White	41.5	34.3	0.9	8.4	6.7	1.8	15.2	10.5	5.7
Total	**41.2**	**30.8**	**2.8**	**7.7**	**6.5**	**3.1**	**13.8**	**9.3**	**5.5**

Source: MassCHIP, 2012.
Rates are per 100,000 population; unintentional injuries are crude rates. All other rates are age-adjusted.
*Caution should be used when interpreting these rates; many represent fewer than 20 instances of the injury.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Unintentional injuries, poisoning, suicide, and opioid-related overdoses were the leading causes of injury-related death in Mercy's community. Hampden County reported higher rates of most injury-related mortalities than the Massachusetts average. Racial and ethnic disparities were present, with Hispanic (or Latino) and Black residents more often a victim of homicide and more likely to be killed by a firearm than White residents in Hampden County (**Exhibit 35**).

Exhibit 36: Additional Indicator Mortality by Race/Ethnicity, 2009*

County and Race/Ethnicity	All Respiratory System Diseases	Chronic Lower Respiratory Diseases (CLRD)	Emphysema	Pneumonia and Influenza	HIV / AIDS	Diabetes Mellitus	Chronic Liver Disease
Hampden							
Asian	40.0	40.0	0.0	0.0	0.0	0.0	25.0
Black	47.8	19.7	0.0	17.0	8.5	29.1	19.8
Hispanic (or Latino)	56.6	26.3	3.1	13.8	16.3	40.2	22.3
White	68.9	36.2	3.8	15.1	2.1	10.4	11.5
Total	**68.9**	**35.6**	**3.6**	**15.6**	**4.1**	**12.3**	**13.2**
Massachusetts							
Asian	36.9	13.7	2.2	14.8	1.5	9.2	4.0
Black	47.6	16.6	0.7	16.4	9.4	30.6	7.1
Hispanic (or Latino)	37.4	16.7	0.9	9.3	7.9	16.2	9.9
White	68.1	35.0	2.8	16.8	0.8	12.4	7.6
Total	**66.1**	**33.5**	**2.6**	**16.6**	**1.7**	**13.0**	**7.6**

Source: MassCHIP, 2012.
Rates are per 100,000 population and are age-adjusted.
*Caution should be used when interpreting these rates; many represent fewer than 20 instances of the disease.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

HIV/AIDS and chronic liver disease are of particular concern in Hampden County. The diabetes mortality rate was more than 75 percent worse than the Massachusetts average for the Hispanic (or Latino) members of the population. The chronic liver disease mortality rates for the Asian, Black, and Hispanic (or Latino) populations were also more than 75 percent worse than the Massachusetts averages (**Exhibit 36**).

Exhibit 37: Reported Disease Morbidity Rates by County, 2009-2010

Disease	Hampden	Massachusetts
Hepatitis B	10.9	11.3
Hepatitis C	103.5	68.0
Pertussis[20]	5.8	5.8
Giardia[21]	6.6	11.5
Animal Rabies	1.7	1.9
Salmonella[22]	10.3	17.7
Shigella[23]	1.9	3.7
Lyme Disease	42.2	61.5
Campylobacter[24]	12.0	17.2
Chlamydia**	610.8	322.1
Gonorrhea**	53.4	37.9
Syphilis**	6.9	9.4
HIV/AIDS*	342.8	261.0

Source: MassCHIP, 2012.
Rates are per 100,000 population and are not age-adjusted.
*The HIV/AIDS rate represents prevalence; all others represent incidence.
**Data on chlamydia, gonorrhea, and syphilis are from 2010; all other data are from 2009.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Hampden County compared unfavorably to the commonwealth average for five of 13 reported morbidity rates. The chlamydia rate was more than 75 percent worse than the Massachusetts average (**Exhibit 37**).

[20] Respiratory disease, also known as "whooping cough."
[21] Parasitic disease affecting the digestive tract.
[22] Infection caused by the bacteria *salmonella.*
[23] Fecal-orally transmitted bacterial infection of the intestines.
[24] Diarrheal illness caused by bacteria, often food-borne.

Exhibit 38: Prevalence of Pediatric Overweight and Obesity by School District, 2009-2011

School District	Total Number of Students Screened	Percent Overweight	Percent Obese	Percent Overweight or Obese
Chicopee	2,199	19.8%	22.0%	41.8%
East Longmeadow	857	17.9%	14.5%	32.3%
Hampden Charter School Of Science	84	11.9%	22.6%	34.5%
Hampden Wilbraham	1,105	15.7%	12.1%	27.8%
Holyoke	1,379	16.3%	21.3%	37.6%
Longmeadow	757	12.9%	9.4%	22.3%
Lower Pioneer Valley Educational Collaborative	10	N/A	N/A	N/A
Ludlow	894	18.2%	17.0%	35.2%
Monson	396	15.2%	12.4%	27.5%
Palmer	499	15.6%	21.4%	37.1%
Pathfinder Regional Vocational Technical School	170	22.9%	25.9%	48.8%
Sabis International Charter School	482	24.3%	21.6%	45.9%
Southwick-Tolland	511	16.4%	18.6%	35.0%
Springfield	6,551	17.6%	24.2%	41.8%
Westfield	1,683	14.6%	15.4%	30.1%
Hampden Average		**17.1%**	**18.5%**	**35.6%**
MA Schools Total	**205,975**	**16.7%**	**15.7%**	**32.3%**

Source: Massachusetts Department of Public Health, 2012.

The Pathfinder Regional Vocational Technical School District had the highest rate of obesity in the community (**Exhibit 38**).

Exhibit 39: Asthma Prevalence Among Schoolchildren, 2008-2009

Town/City*	Prevalence	Statistically Significant
Agawam	9.6%	Yes
Blandford	5.5%	
Brimfield	14.6%	Yes
Chester	12.0%	
Chicopee	12.3%	Yes
East Longmeadow	13.1%	Yes
Granville	7.3%	
Hampden	8.3%	Yes
Holland	21.7%	Yes
Holyoke	18.7%	Yes
Longmeadow	8.8%	Yes
Ludlow	13.0%	Yes
Monson	20.7%	Yes
Palmer	16.5%	Yes
Russell	6.8%	
Southwick	12.9%	
Springfield	17.2%	Yes
Wales	11.4%	
West Springfield	7.2%	Yes
Westfield	8.5%	Yes
Wilbraham	8.6%	Yes
Massachusetts	**10.9%**	**Yes**

Source: Massachusetts Department of Public Health, 2012.
*Data were available by community, not ZIP code.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Holland and Monson reported asthma rates that were significantly higher (statistically significant) and approximately double the Massachusetts rate (**Exhibit 39**).

Exhibit 40: Asthma-Related Hospitalizations by Age Group, 2009

County	0-19	20-44	45-64	65+	Total
Hampden	8.1	17.4	16.4	18.8	14.8
Massachusetts	**5.2**	**8.3**	**11.4**	**18.9**	**9.9**

Source: MassCHIP, 2012.
Population 2009-2011 estimates were obtained from the U.S. Census Bureau, ACS 3 Year Estimates 2009-2011. Rates were calculated by Verité.
Rates are per 1,000 people.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Hampden County reported higher rates of asthma-related hospitalizations than the Massachusetts average for most age groups. Residents age 20-44 reported rates of asthma-related hospitalization more than 75 percent worse than the commonwealth average (**Exhibit 40**).

Exhibit 41: Selected Maternal and Child Health Indicators by County, 2009/2010

County and Race/Ethnicity	Teen Birth Rate	Low or Very Low Birthweight*	No Prenatal Care in First Trimester	Inadequate or No Prenatal Care**	Infant Mortality Rate	Mother Smoked During Pregnancy
Hampden						
Asian	21.0	4.5%	24.9%	12.3%	N/A	3.3%
Black	58.5	11.4%	38.2%	22.0%	11.8	13.9%
Hispanic (or Latino)	124.4	9.7%	29.6%	15.7%	7.1	10.0%
White	15.6	7.2%	22.1%	10.0%	3.5	13.8%
Total	**45.7**	**8.4%**	**26.6%**	**13.5%**	**5.5**	**12.1%**
Massachusetts						
Asian	10.9	7.6%	19.7%	10.0%	3.2	1.6%
Black	32.3	10.8%	29.1%	16.8%	7.6	5.3%
Hispanic (or Latino)	63.1	8.6%	26.0%	11.7%	7.1	5.0%
White	11.5	7.1%	15.6%	7.0%	4.1	8.1%
Total	**19.6**	**7.7%**	**18.9%**	**8.9%**	**4.8**	**6.8%**

Source: MassCHIP, 2012.
All rates are per 1,000 births.
All indicators are from 2010 except the percentage of mothers who smoked during pregnancy, which is from 2009.
*Low and very low birthweight are defined as <2500 grams and <1500 grams, respectively.
**The Kotelchuck measure of Prenatal Care examines quality of care across two axes: adequacy of care initiation (how early in the pregnancy prenatal care began) and adequacy of received services (how many times the mother made a prenatal visit to a doctor as a percentage of how many prenatal visits are recommended over the same time period). The two scores are combined into one. Data are not available for individual axis scores, but Inadequate Care is defined in adequacy of care initiation as receiving care beginning in month 7 or later, and Inadequate Care for received services is defined as the mother making 50 percent or fewer of the recommended prenatal Doctor's visits.

Key	
	Better than MA Average
	<50% Worse
	50% to 75% Worse
	>75% Worse

Teen birth rates and smoking during pregnancy appear to be more problematic in Hampden Count (**Exhibit 41**).

4. Behavioral Risk Factor Surveillance System

Data collected by the Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) are based on a telephonic survey regarding various health issues, including risk behaviors, healthcare access, and preventive health measures. Data are collected for the entire U.S. at a county level of detail. **Exhibit 42** compares various BRFSS indicators for the Mercy community, Massachusetts, and the U.S. Indicators are shaded if Hampden County's values compared unfavorably to Massachusetts averages.

Exhibit 42: BRFSS Indicators and Variation from the Commonwealth of Massachusetts, 2011

Indicator		Hampden	Massachusetts	U.S.
Health Behaviors	Binge Drinkers*	12.6%	**13.1%**	**12.0%**
	Heavy Drinkers**	5.0%	**6.0%**	**5.3%**
	Current Smoker	18.5%	**16.3%**	**16.7%**
	No Physical Activity in Past 30 Days	29.7%	**23.8%**	**25.7%**
	Sometimes, Seldom, or Never Wear Seat Belt	9.1%	**8.9%**	**5.7%**
Access	Unable to Visit Doctor Due to Cost	10.3%	**8.4%**	**12.7%**
	No Personal Doctor/Healthcare Provider	10.0%	**7.9%**	**14.4%**
Health Conditions	Overweight or Obese	62.4%	**56.5%**	**60.6%**
	Told Have Asthma	17.8%	**14.7%**	**12.9%**
	Told Have Coronary Heart Disease or Angina	5.7%	**5.3%**	**6.0%**
	Told Have Diabetes	15.0%	**11.5%**	**12.4%**
Mental Health	Poor Mental Health > 21 Days/Month	8.5%	**6.8%**	**N/A**
Overall Health	Poor Physical Health > 21 Days/Month	11.5%	**8.6%**	**N/A**
	Limited by Physical, Mental, or Emotional Problems	28.9%	**23.8%**	**28.5%**
	Reported Poor or Fair Health	24.0%	**17.8%**	**19.6%**

Source: CDC BRFSS, 2012.
*Adult males having five or more drinks on one occasion; adult females having four or more drinks on one occasion.
**Adult men having more than two drinks per day; adult women having more than one drink per day.

Key	
	Better than MA
	0%-25% worse than MA
	25% to 75% worse than MA
	>75% worse than MA
N/A	Data Not Available

Thirteen of the 15 presented indicators compared unfavorably to Massachusetts averages. Hampden County reported four indicators more than 25 percent worse than the commonwealth average: those reporting they do not have a personal doctor, those told they have diabetes, those experiencing poor physical health for more than 21 days in a month, and those reporting poor or fair health. Obesity also appears to be unfavorably prevalent.

Massachusetts compared unfavorably to the U.S. for alcohol-related issues and for seat belt use.

5. Healthy People 2020 Goals

Healthy People 2020 (HP 2020) is a project of the U.S. Department of Health and Human Services (HHS). HP 2020 identifies national health priorities and works to improve public awareness regarding problematic health concerns.

Exhibit 43: Healthy People 2020 Indicators and Goals

Indicator	Hampden	Massachusetts	HP 2020 Goal
Percent of People with Health Insurance	95.2%	95.7%	100.0%
Percent of People with a Usual Source of Primary Care	90.0%	92.1%	83.9%
Cancer Mortality Rate	187.8	173.7	160.6
Lung Cancer Mortality Rate	56.1	48.5	45.5
Female Breast Cancer Mortality Rate	21.8	22.0	20.6
Colorectal Cancer Mortality Rate	15.7	15.0	14.5
Prostate Cancer Mortality Rate	23.7	21.6	21.2
Invasive Colorectal Cancer Incidence	38.4	44.4	38.6
Campylobacter Incidence	12.0	17.2	8.5
Salmonella Incidence	10.3	17.7	11.4
Stroke Mortality	32.9	31.9	33.8
Injury-Related Mortality Rate	47.8	41.2	53.3
Poison-Related Mortality Rate	15.6	13.8	13.1
Unintentional Injury-Related Mortality Rate	30.0	30.8	36.0
Fall-Related Mortality Rate	6.8	6.5	7.0
Homicide-Related Mortality Rate	4.8	2.8	5.5
Firearm-Related Mortality Rate	5.7	3.1	9.2
Infant Mortality Rate	5.5	4.8	6.0
Low Birth Weight Births (<2500 Grams)	8.4%	7.7%	7.8%
Very Low Birth Weight Births (<1500 Grams)	1.6%	1.3%	1.4%
Prenatal Care Beginning in First Trimester	73.4%	81.1%	77.9%
Pregnant Mothers Abstaining from Smoking	87.9%	93.2%	98.6%
Suicide Mortality Rate	11.4	7.7	10.2
Childhood Obesity*	18.5%	15.7%	14.6%
Percent of Adults Reporting No Leisure Physical Activity	29.7%	23.8%	32.6%
Binge Drinking	12.6%	13.1%	24.3%
Tobacco Use	18.5%	16.3%	12.0%

Sources: CDC BRFSS, 2012; Massachusetts Department of Health, 2012.
Rates are per 100,000 population, aside from infant mortality, which is per 1,000 live births.
*Childhood obesity is defined by HP 2020 as including ages 2-19; Verité's data are from school-aged children, which include most of these age groups.

Key	
	Better than HP 2020 Goal
	<50% Worse
	50% to 75% Worse
	>75% Worse

Exhibit 43 provides an array of health status and access indicators and compares Hampden County and Massachusetts values to HP 2020 goals.

Key insights:
Local Health Status Indicators

- **Hampden County demonstrated comparatively high rates of teen pregnancy and infant mortality.**
- **Hampden County ranks last for nine issues assessed by County Health Rankings.**
- **Indicators suggest the following issues are most problematic:**
  - **Tobacco/alcohol use**
  - **Maternal smoking during pregnancy**
  - **Chlamydia**
  - **Teen pregnancy**
  - **Diabetes**
- **Problematic disparities in mortality for the Black and Hispanic (or Latino) populations include:**
  - **Chronic liver disease**
  - **Breast cancer**
  - **Circulatory system diseases, including heart disease and heart attacks**
  - **Stroke**
- **Hampden County reported higher percentages of people indicating that they are overweight or obese, cannot afford doctor's visits, have poor physical health, and are limited by physical, emotional, or mental problems than the Massachusetts average.**

Ambulatory Care Sensitive Conditions

This section examines the frequency of discharges for Ambulatory Care Sensitive Conditions (ACSC) throughout Hampden County and at the hospital.

The methodologies for quantifying discharges for ACSC have been well-tested for more than a decade. The methodologies quantify inpatient admissions for diabetes, perforated appendixes, chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, asthma, and other conditions that, in theory, could have been prevented if adequate ambulatory (primary) care resources were available and accessed by those patients.[25]

Disproportionately large numbers of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory care services. The Agency for Healthcare Research and Quality (AHRQ), part of the U.S. Department of Health and Human Services, publishes software and methodologies for assessing discharges for ACSC. The AHRQ software was applied to analyze the prevalence of discharges for ACSC in geographic areas served by Mercy.

The ACSC analysis provides a single indicator of potential health problems - allowing comparisons to be made reliably across geographic areas and hospital facilities. This analysis also allows demonstrating a possible "return on investment" from interventions that reduce admissions (for example, for uninsured or MassHealth (Medicaid) patients) through better access to ambulatory care resources.

1. County-Level Analysis

Disproportionately large numbers of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory (primary) care services. **Exhibit 44** indicates how many discharges in the Mercy community from any of the Coalition hospitals were found to be for ACSCs by payer.

Exhibit 44: Community-Wide Discharges[26] for ACSC by Payer, 2010-2011

County	MassHealth (Medicaid)	Medicare	Other	Private	Self-Pay	Total
Hampden	8.9%	19.4%	9.6%	7.0%	11.6%	12.8%
Total	**8.9%**	**19.4%**	**9.6%**	**7.0%**	**11.6%**	**12.8%**

Source: Verité analysis of data from the Coalition of Western Massachusetts Hospitals using AHRQ software, 2012.

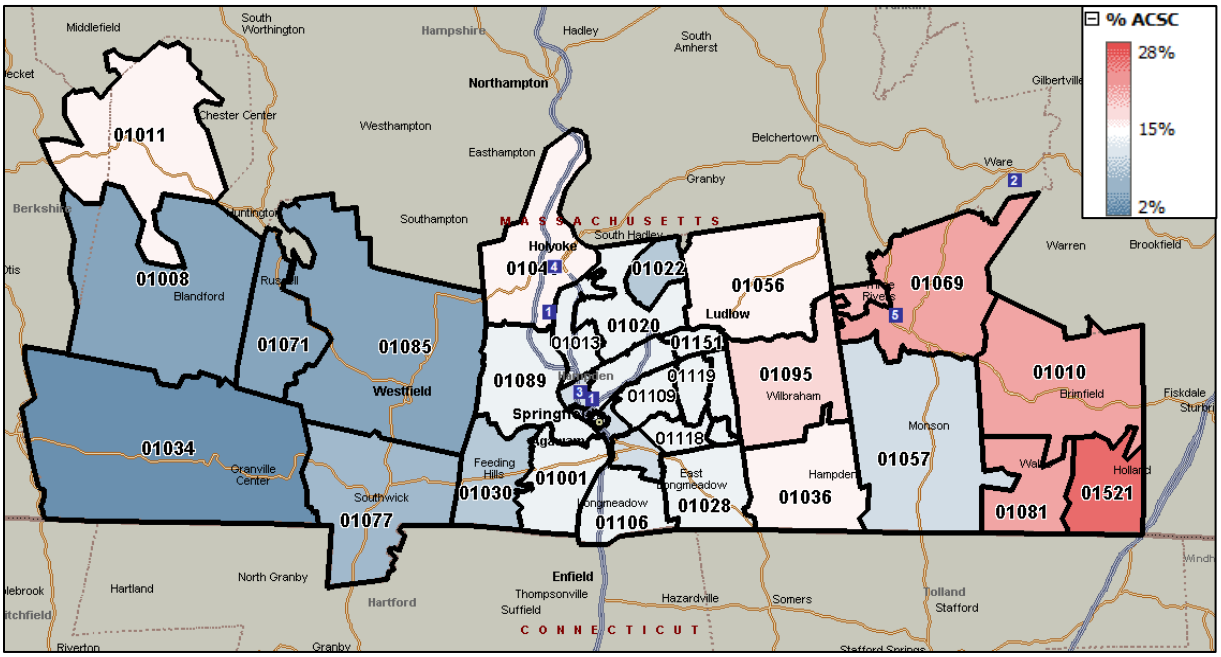
The table indicates that, for the 12 months ended September 2011, 12.8 percent of discharges were for ACSCs. Medicare patients had the highest proportion of discharges for ACSC, followed by self-pay patients.

[25] See: http://www.ahrq.gov/data/hcup/factbk5 for more information on this methodology.
[26] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

2. ZIP Code-Level Analysis

Exhibit 45 illustrates the percentage of discharges for all community residents that were for ACSCs by ZIP code.

Exhibit 45: Community-Wide Discharges[27] for ACSC by ZIP Code, 2010-2011



Sources: Microsoft MapPoint and Verité analysis of data from the Coalition of Western Massachusetts Hospitals using AHRQ software, 2012.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

ZIP codes 01521 (Holland), 01081 (Wales), and 01079 (Thorndike, a community in Palmer) had the highest percentage of discharges that were ACSC

ACSC discharges were most prevalent in the following ZIP codes: 01521 (Holland), 01081 (Wales), and 01079 (Thorndike, a community in Palmer).

[27] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

Exhibit 46 illustrates possible relationships between ACSC discharges, low-income households, and the percentage of the population aged 65+.

Exhibit 46: ACSC Discharges[28] by Town/City

Town/City**	Number of ACSC Discharges	Total Discharges*	Percent ACSC Discharges	Percent Households <$50,000	Percent Aged 65+
Holland	6	23	26.1%	33.4%	10.2%
Wales	17	80	21.3%	37.7%	11.7%
Brimfield	34	163	20.9%	41.0%	11.9%
Palmer	340	1,656	20.5%	52.0%	14.3%
Wilbraham	273	1,522	17.9%	31.3%	17.3%
Chester	8	52	15.4%	46.9%	12.9%
Hampden	63	417	15.1%	29.9%	14.7%
Holyoke	933	6,205	15.0%	66.1%	14.5%
Ludlow	266	1,881	14.1%	43.5%	15.3%
Longmeadow	150	1,118	13.4%	28.2%	17.3%
East Longmeadow	233	1,750	13.3%	31.1%	19.1%
Chicopee	895	6,956	12.9%	60.8%	16.8%
West Springfield	395	3,145	12.6%	53.1%	15.1%
Agawam	416	3,346	12.4%	41.4%	16.4%
Springfield	2,370	19,992	11.9%	66.3%	11.5%
Monson	90	770	11.7%	35.5%	11.6%
Southwick	39	496	7.9%	37.6%	11.9%
Westfield	142	2,414	5.9%	46.3%	12.9%
Russell	5	89	5.6%	41.9%	11.1%
Blandford	2	40	5.0%	30.5%	11.7%
Granville	3	89	3.4%	33.7%	12.4%
Total	**6,680**	**52,204**	**12.8%**	**54.0%**	**14.0%**

Sources: Verité analysis of data from The Coalition of Western Massachusetts Hospitals using AHRQ software, 2012, and The Nielsen Company and Truven Health Analytics via Mercy, 2012.
*Caution should be used when assessing towns with a small number of total discharges.
**Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

The town of Palmer has a comparatively high percentage of ACSC discharges, households with incomes under $50,000, and residents aged 65+. Wilbraham has comparatively high percentages of ACSC discharges and senior residents. Chester exhibits higher rates of ACSC discharges and low-income households (**Exhibit 46**).

[28] Discharges from all members of the Coalition of Western Massachusetts Hospitals.

3. Hospital-Level Analysis

For the 12 months ended September 2011, 10.3 percent of Mercy's discharges were for ACSCs. **Exhibit 47** indicates that the top four conditions were: bacterial pneumonia, chronic obstructive pulmonary disease or asthma, congestive heart failure, and urinary tract infection.

Exhibit 47: Discharges for ACSC by Condition, 2010-2011

Condition	Age Range				Total Discharges	% of Total Discharges
	0 to 17	18 to 39	40 to 64	65+		
Bacterial Pneumonia		6.8%	28.0%	65.2%	325	19.7%
COPD or Asthma in Older Adults			47.1%	52.9%	306	18.6%
Congestive Heart Failure		0.7%	19.3%	80.1%	296	18.0%
Urinary Tract Infection		6.8%	13.7%	79.5%	249	15.1%
Dehydration		6.0%	22.7%	71.3%	150	9.1%
Diabetes Long-Term Complication		3.8%	62.0%	34.2%	79	4.8%
Diabetes Short-Term Complication		43.9%	46.3%	9.8%	41	2.5%
Asthma in Younger Adults		100.0%			37	2.2%
Low Birth Weight	100.0%				35	2.1%
Hypertension		5.9%	55.9%	38.2%	34	2.1%
Perforated Appendix		30.8%	42.3%	26.9%	26	1.6%
Uncontrolled Diabetes		15.0%	60.0%	25.0%	20	1.2%
Angina Without Procedure			41.2%	58.8%	17	1.0%
Iatrogenic Pneumothorax		8.3%	33.3%	58.3%	12	0.7%
Accidental Puncture Or Laceration		9.1%	45.5%	45.5%	11	0.7%
Nosocomial Vascular Catheter Related Infections			100.0%		7	0.4%
Pediatric Perforated Appendix	100.0%				1	0.1%
Total	**2.2%**	**7.5%**	**30.0%**	**60.4%**	**1,646**	**100.0%**

Source: Verité analysis of discharge data from Mercy using AHRQ software, 2012.

Key insights: ***Ambulatory Care Sensitive Conditions***

- **ACSC discharges are viewed as preventable if patients had accessed primary care appropriately. High discharges may indicate the lack of access to or utilization of primary care services.**
- **Bacterial pneumonia, chronic obstructive pulmonary disease or asthma, congestive heart failure, and urinary tract infection were the most common ACSC discharges from Mercy.**

ZIP Code and Census Tract-Level Health Status and Access Indicators

ZIP code and census tract-level health status and access to care indicators have been reviewed from: (1) Dignity Health's Community Need Index, and (2) U.S. Department of Agriculture.

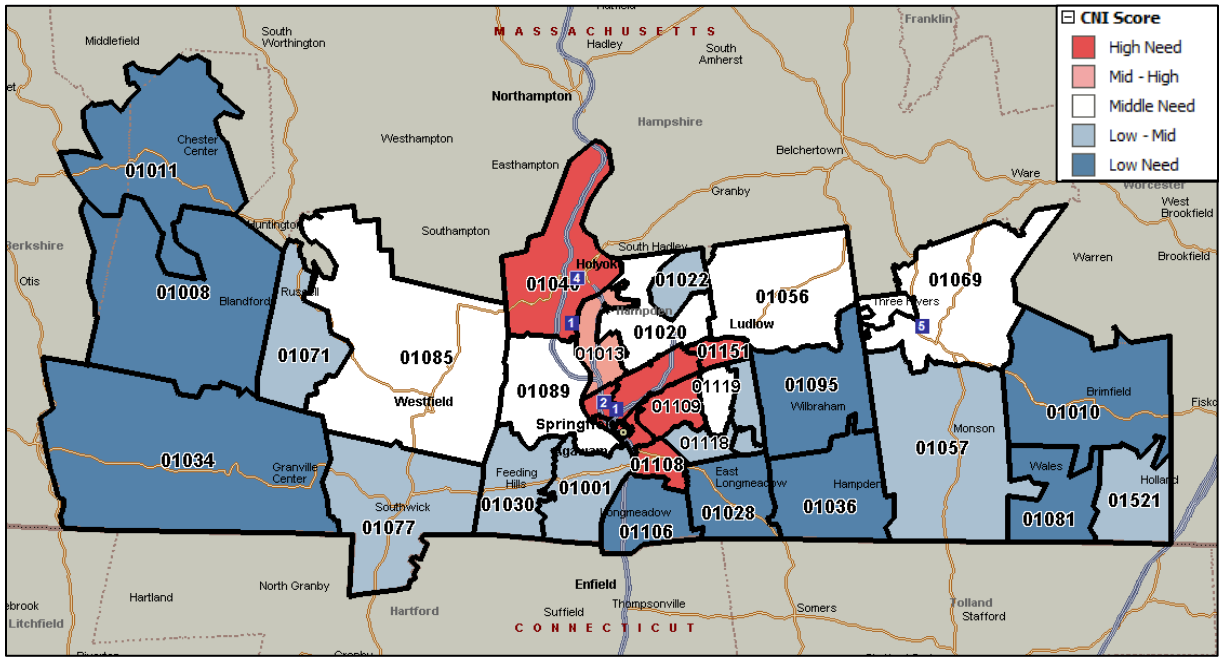
1. Dignity Health Community Needs Index

Dignity Health, a hospital system based in California, developed the *Community Needs Index*, a standardized index that measures barriers to healthcare access by county and ZIP code. The index is based on five social and economic indicators:

- The percentage of elderly, children, and single parents living in poverty;
- The percentage of adults over the age of 25 with limited English proficiency, and the percentage of the population that is non-White;
- The percentage of the population without high school diplomas;
- The percentage of uninsured and unemployed residents, and;
- The percentage of the population renting houses.

The *Community Needs Index* represents a score based on these indicators, assigned to each ZIP code. Scores range from "Lowest Need" (1.0-1.7), to "Highest Need" (4.2-5.0). **Exhibit 48** presents the *Community Needs Index* (CNI) score of each ZIP code in the Mercy community.

Exhibit 48: Community Needs Index Score by ZIP Code



Sources: Microsoft MapPoint and Dignity Health, 2012.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

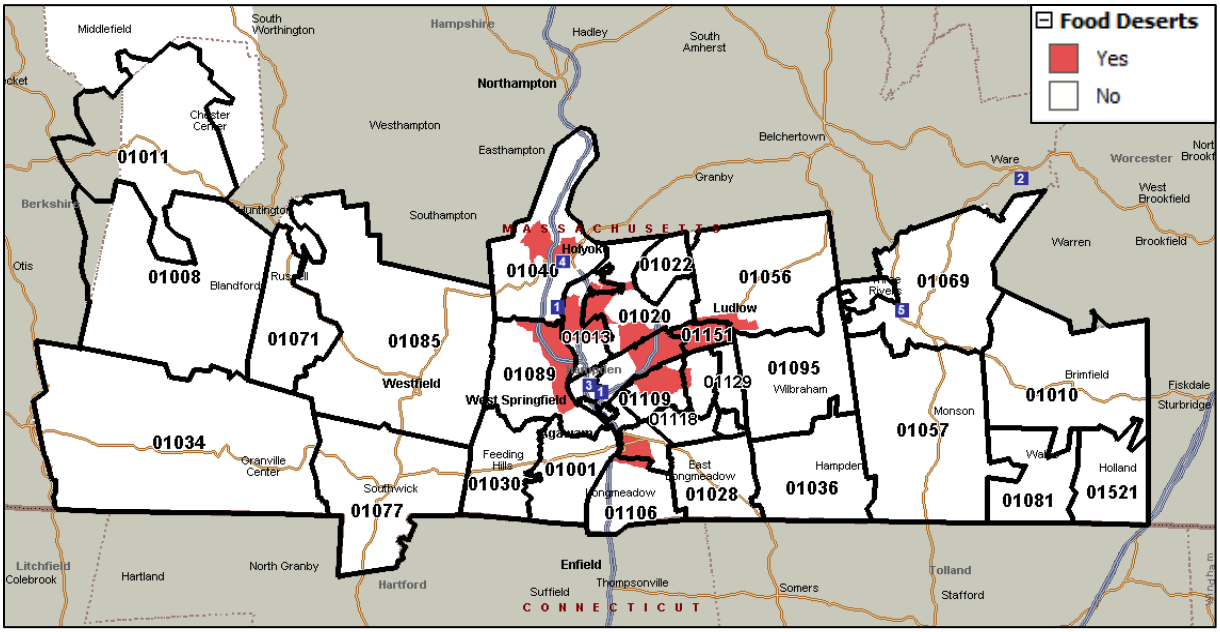
ZIP codes in Springfield, Holyoke, and Chicopee are "High Need" areas

ZIP codes 01013 (Chicopee), 01040 (Holyoke), 01103 (Springfield), 01104 (Springfield), 01105 (Springfield), 01107 (Springfield), 01108 (Springfield), 01109 (Springfield), and 01151 (Springfield) all scored in the "Highest Need" category (**Exhibit 48**).

2. Food Deserts

The U.S. Department of Agriculture's Economic Research Service estimates the number of people in each census tract that live "more than 1 mile from a supermarket or large grocery store in urban areas and more than 10 miles from a supermarket or large grocery store in rural areas."[29] Several government-led initiatives aim to increase the availability of nutritious and affordable foods to people living in these "food deserts." **Exhibit 49** shows the location of identified food deserts in Mercy's community.

Exhibit 49: Food Deserts by Census Tract



Source: Microsoft MapPoint and the Economic Research Service, U.S. Department of Agriculture, 2011.

1. Mercy Medical Center
2. Baystate Mary Lane Hospital
3. Baystate Medical Center
4. Holyoke Medical Center
5. Wing Memorial Hospital

The community contains 20 census tracts identified as "Food Deserts"

Mercy's community contains 20 census tracts defined as food deserts. These are located in Chicopee, Holyoke, Longmeadow, Ludlow, Springfield, and West Springfield (**Exhibit 49**).

[29] Economic Research Service (ERS). (n.d.). *Food Desert Locator.* U.S. Department of Agriculture. Retrieved 2012, from http://www.ers.usda.gov/data-products/food-desert-locator.aspx

Key insights:

ZIP Code and Census Tract-Level Indicators

- **Based on a composite measure of socio-economic need (Dignity Health's Community Needs Index), ZIP codes 01013 (Chicopee), 01040 (Holyoke), 01103, 01104, 01105, 01107, 01108, 01109, and 01151 (all in Springfield) scored "Highest Need."**
- **The community has 20 census tracts that have been classified as "food deserts."**

Overview of the Health and Social Services Landscape

This section identifies geographic areas and populations in the community that may be facing barriers to accessing care due to medical underservice or a shortage of health professionals.

The section then summarizes various assets and resources available to improve and maintain the health of the community.

1. Medically Underserved Areas and Populations

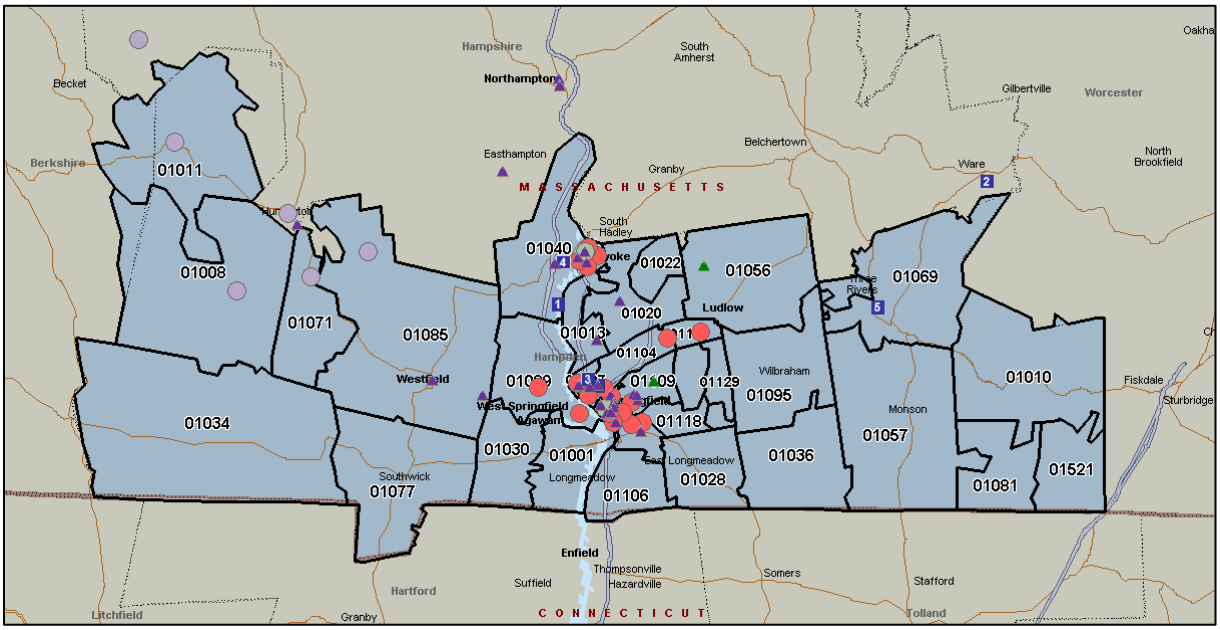
HRSA calculates an Index of Medical Underservice (IMU) score for communities across the U.S. The IMU score calculation includes the ratio of primary medical care physicians per 1,000 persons, the infant mortality rate, the percentage of the population with incomes below the poverty level, and the percentage of the population greater than age 64. IMU scores range from zero to 100 where 100 represents the least underserved and zero represents the most underserved.[30]

Any area or population receiving an IMU score of 62.0 or less qualifies for Medically Underserved Area (MUA) or Medically Underserved Population (MUP) designation. Federally Qualified Health Centers (FQHCs) may be established to serve MUAs and MUPs. Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. When a population group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP designation if "unusual local conditions which are a barrier to access to or the availability of personal health services exist and are documented, and if such a designation is recommended by the chief executive officer and local officials of the state where the requested population resides."[31]

Exhibit 50 shows areas designated by HRSA as medically underserved. Hampden County contains 17 MUAs.

[30] U.S. Health Resources and Services Administration. (n.d.) *Guidelines for Medically Underserved Area and Population Designation*. Retrieved 2012, from http://bhpr.hrsa.gov/shortage/muaps/index.html.
[31] *Ibid.*

Exhibit 50: Location of Federally Designated Areas in the Mercy Community, 2012



Sources: Microsoft MapPoint and HRSA, 2012.

- **MUA/MUP**
  - MUA
  - MUP
- **Type of HPSA**
  - Dental Health
  - Mental Dental
  - Mental Health
  - Primary Dental
- HPSA Facilities
- FQHC
- 1 Mercy Medical Center
- 2 Baystate Mary Lane Hospital
- 3 Baystate Medical Center
- 4 Holyoke Medical Center
- 5 Wing Memorial Hospital

Hampden County has 17 MUAs, all within the service area

…

The community has 3 FQHCs with 21 additional FQHC site partners

…

The community contains six HPSA facilities

2. Health Professional Shortage Areas

An area can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary medical care, dental care, or mental health care professionals is found to be present.

In addition to areas and populations that can be designated as HPSAs, a facility can receive federal HPSA designation and an additional Medicare payment if it provides primary medical care services to an area or population group identified as having inadequate access to primary care, dental, or mental health services.

HPSAs can be: "(1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility."[32]

Several areas and populations in Hampden County are designated as HPSAs (**Exhibit 50**). Gateway/Hampshire Regional is designated as a primary medical care HPSA, while the low-income populations in Holyoke and Springfield are designated as mental health HPSAs. The Hillstowns area is designated as a dental HPSA.

3. Description of Other Facilities and Resources within the Community

The Mercy community contains a variety of resources that are available to meet the health needs identified in this assessment. These resources include facilities designated as HPSAs, hospitals, FQHCs, health professionals, and other agencies and organizations.

There are six facilities in the community that also are designated as HPSAs (**Exhibit 51**).

Exhibit 51: List of HPSA Facilities in the Mercy Medical Center Community

County	HPSA Type	HPSA Name
Hampden	Primary Medical Care, Mental Health, Dental	Caring Health Center, Inc.
		Caring Health Center, Inc. – Forest Park
		Holyoke Health Center
		Springfield Public Health Department
	Primary Medical Care	Hampden County House of Corrections
	Mental Health	Springfield Southwest

Source: Health Resources and Services Administration, 2013.

The community contains six acute care hospital facilities (**Exhibit 52**).

[32] U.S. Health Resources and Services Administration, Bureau of Health Professionals. (n.d.). *Health Professional Shortage Area Designation Criteria*. Retrieved 2012, from http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/index.html

Exhibit 52: Information on Hospitals in the Mercy Medical Center Community

County	Hospital Name	ZIP Code
Hampden	Mercy Medical Center	01199
	Holyoke Medical Center	01040
	Mercy Medical Center	01104
	Noble Hospital	01085
	Shriner's Hospital for Children- Springfield	01104
	Wing Memorial Hospital And Medical Center	01069

Source: The Commonwealth of Massachusetts, Executive Office of Health and Human Services, Department of Public Health, Division of Health Care Quality, 2012, and the CMS Impact File, 2012.

Federally Qualified Health Centers (FQHCs) were created by Congress to promote access to ambulatory care in areas designated as "medically underserved." These clinics receive cost-based reimbursement for Medicare and many also receive grant funding under Section 330 of the Public Health Service Act. FQHCs also receive a prospective payment rate for Medicaid services based on reasonable costs.

There are 3 FQHCs located in the Mercy community with 21 additional FQHC site partners (**Exhibit 53**).

Exhibit 53: FQHCs in the Community

County	FQHC	FQHC Site Partner	ZIP Code
Hampden	Baystate Brightwood Health Center*		01107
	Caring Health Center, Inc.	Caring Health Center, Inc .- Forest Park	01108
		Caring Health Center, Inc.	01103
	City Of Springfield's Health Services for the Homeless	Annie's House	01109
		City Of Springfield Adolescent Health Center	01109
		Jefferson Shelter	01107
		Loretto House	01040
		Main Street Shelter	01040
		Massachusetts Career Development Center	01109
		New Resource Center	01105
		Open Door Social Services	01105
		Prospect House	01107
		Rutledge House	01105
		Safe Havens	01105
		Samaritan Inn	01085
		Springfield Rescue Mission Center	01105
		Teen Living Program	01107
		Worthington Shelter Dental Program	01105
		New England Farm Worker's Council	01103
	Holyoke Health Center	Chicopee Dental Center - All Care Dental Site	01020
		Chicopee Health Center	01013
		Holyoke Health Center, Inc.	01040
		Holyoke Soldier Home	01040
		Western Massachusetts Hospital	01085

Source: Health Resources and Services Administration, 2013.
*Baystate Brightwood Health Center is an FQHC site partner in the community.

Exhibit 54 presents the rates of primary care physicians, mental health providers, and dentists per 100,000 population. Provider availability in Hampden County is below the Massachusetts average.

Exhibit 54: Health Professionals Rates per 100,000 Population by County

County	Primary Care Physicians**		Mental Health Providers		Dentists**	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Hampden	424	90.4	164	35.0	223	48.3
Massachusetts	**8,810**	**134.6**	**6,514**	**99.5**	**4,560**	**64.5**

Source: Data provided by County Health Rankings, 2012
*Primary care physician data are from 2009; dentist data and mental health provider data are from 2007.
**Numbers of health professionals in Massachusetts calculated by Verité.

As of 2012, a range of other agencies and organizations are available in the county to assist in meeting health needs, including social service organizations and community coalitions.

Some of these include:

- Community organizations that focus on health and human services, including:
    - Behavioral Health Network
    - Center For Human Development
    - Community Foundation of Western MA
    - Community Survival Center
    - Davis Foundation
    - Food Bank of Western MA
    - Mason Square Health Task Force
    - North End Campus Coalition
    - Quaboag Hills Coalition
    - Springfield Cultural Council
    - United Way of Pioneer Valley
    - Urban League (of Springfield)
    - Western Mass Recovery Learning Community
- Community organizations that provide health and human services to specific populations, including:
    - Big Brothers Big Sisters of Franklin County
    - Canines Helping Autism and PTSD Survivors
    - Friends of the Homeless
    - Green Meadows Community Services, Inc.
    - Keystone Senior Center
    - Khalsa Learning Center, Inc.

    - Ludlow Boys & Girls Club
    - River Valley Counseling Center
    - Vietnamese American Civic Association
- Local chapters of national organizations, such as the Alzheimer's Association, American Cancer Association, American Heart Association, American Red Cross, Habitat For Humanity, La Leche League, United Farm Workers, YMCA, and YWCA
- Local first responders, including fire departments, police departments, and emergency medical services (EMS)
- Local FQHCs and HPSA facilities
- Local government agencies, Chambers of Commerce, Councils of Governments, and City Councils
- Local health departments and Boards of Health
- Local places of worship and related health and human services organizations such as Mission of Hope International, Inc.
- Local schools, colleges, and universities
- Representatives from community health network areas

Key insights:
Community Assets

- **Some residents in Mercy's community face barriers to accessing care as demonstrated by a shortage of some health professionals.**
- **Hampden County had fewer primary care providers, mental health professionals, and dentists per capita than Massachusetts averages.**
- **The community has hospitals, health and human services departments, and other community assets working to meet health needs.**
- **Six facilities in the Hampden community are HPSAs.**

Secondary Data Indicators Highlights

This assessment analyzed secondary data regarding demographics, social and economic factors, health behaviors, physical environment, care delivery, morbidity, and mortality. **Exhibits 55** through **57** highlight indicators that vary the most from national and Massachusetts benchmarks.

Exhibit 55A: Secondary Data Indicator Highlights

Category	Indicator	Location	Community Indicator	Benchmark	Data Format	Data Year(s)	Benchmark Definition
Demographics	Growth in Black Population	Hampden	3.7%	-1.9%	Percent	2012	White Population
	Growth in American Indian Population	Hampden	6.8%	-1.9%	Percent	2012	White Population
	Growth in Asian Population	Hampden	14.8%	-1.9%	Percent	2012	White Population
	Growth in Other Race Population	Hampden	12.5%	-1.9%	Percent	2012	White Population
	Growth in Two or More Races Population	Hampden	8.5%	-1.9%	Percent	2012	White Population
	Growth in Hispanic Population	Hampden	12.6%	-2.6%	Percent	2012	Non-Hispanic Population
	Growth in 65+ Population	Hampden	11.0%	-1.0%	Percent	2012	Non-65+ Population
Social and Economic Factors	Low Educational Achievement	Hampden	14	14	County Rank	2006-2010	Number Of Counties
	Unemployment	Hampden	13	14	County Rank	2010	Number Of Counties
	SNAP Enrollees	Hampden	22.3%	12.1%	Percent	2011	MA Average
Health Behaviors	Poor Diet and Lack of Exercise	Hampden	13	14	County Rank	2009	Number Of Counties
	Unsafe Sex	Hampden	14	14	County Rank	2002-2008, 2009	Number Of Counties
	Lack of Emotional and Social/Family Support	Hampden	13	14	County Rank	2006-2010	Number Of Counties
Physical Environment	Community Safety	Hampden	13	14	County Rank	2007-2009	Number Of Counties
	Murder and non-Negligent Manslaughter	Hampden	5.6	2.9	Rate per 100,000	2011	MA Average
	Environmental Quality	Hampden	14	14	County Rank	2007	Number Of Counties
	Built Environment	Hampden	12	14	County Rank	2006 and 2009	Number Of Counties
Access to Care	Access to Care	Hampden	12	14	County Rank	2009	Number of Counties

Source: Verité analysis of secondary data, 2012.

Exhibit 55B: Secondary Data Indicator Highlights

Category	Indicator	Location	Community Indicator	Benchmark	Data Format	Data Year(s)	Benchmark Definition
Health Outcomes: Morbidity	Overall Morbidity	Hampden	10	14	County Rank	2002-2010	Number Of Counties
	Asthma-Related Hospitalizations Age 20-44	Hampden	17.4	8.3	Rate per 1,000	2009	MA Average
	Chlamydia Incidence	Hampden	610.8	322.1	Rate per 100,000	2010	MA Average
Health Outcomes: Mortality	Overall Mortality	Hampden	14	14	County Rank	2006-2008	Number Of Counties
	Hispanic Circulatory Disease Mortality	Hampden	209.1	114.9	Rate per 100,000	2009	MA Average
	Black Heart Attack Mortality	Hampden	45.0	27.4	Rate per 100,000	2009	MA Average
	Hispanic Heart Disease Mortality	Hampden	150.7	84.0	Rate per 100,000	2009	MA Average
	Black Total Cancer Mortality	Hampden	4.5-60.0	2.6-44.8	Rate per 100,000	2009	MA Average
	Hispanic Total Cancer Mortality	Hampden	2.7-27.3	3.4-22.8	Rate per 100,000	2009	MA Average
	Suicide Mortality: White	Hampden	13.6	8.4	Rate per 100,000	2009	MA Average
	Hispanic Chronic Liver Disease Mortality	Hampden	22.3	9.9	Rate per 100,000	2009	MA Average
	Firearm Mortality	Hampden	5.7	3.1	Rate per 100,000	2009	MA Average
	Hispanic Firearm Mortality	Hampden	11.3	4.4	Rate per 100,000	2009	MA Average
	Hispanic Diabetes Mortality	Hampden	40.2	16.2	Rate per 100,000	2009	MA Average
Maternal Indicators	Teen Pregnancy: Total	Hampden	45.7	19.6	Rate per 1,000 Births	2009	MA Average

Source: Verité analysis of secondary data, 201

Disparities of Concern

Vulnerable populations often lack resources they need to maintain optimal health. Health indicators highlighting racial and ethnic disparities that appeared most unfavorable in the Mercy community are presented below in **Exhibit 56**.

Exhibit 56: Disparities of Concern

Category	Indicator	Location	Community Indicator	Benchmark	Data Format	Benchmark Definition
Social and Economic Factors	Black Unemployment	Hampden	10.5%	4.8%	Percent	White Population
	Hispanic Unemployment	Hampden	10.6%	4.8%	Percent	White Population
	Non-White Poverty	Hampden	38.3%	11.4%	Percent	White Population
Health Outcomes: Morbidity	Hispanic Breast Cancer Incidence	Hampden	99.0	50.4	Rate per 100,000	MA Average
	Hispanic Prostate Cancer Incidence	Hampden	240.2	158.8	Rate per 100,000	MA Average
Health Outcomes: Mortality	Black Heart Disease Mortality	Hampden	174.2	156.6	Rate per 100,000	White Population
	Hispanic Firearm Mortality	Hampden	11.3	3.1	Rate per 100,000	White Population
	Black Diabetes Mortality	Hampden	29.1	10.4	Rate per 100,000	White Population
	Hispanic Diabetes Mortality	Hampden	40.2	10.4	Rate per 100,000	White Population
	Black Stroke Mortality	Hampden	60.4	30.2	Rate per 100,000	White Population
Maternal and Infant Indicators	Black Infant Mortality	Hampden	11.8	3.5	Rate per 1,000 Births	White Population
	Hispanic Infant Mortality	Hampden	7.1	3.5	Rate per 1,000 Births	White Population
	Hispanic Teen Pregnancy	Hampden	124.4	15.6	Rate per 1,000 Births	White Population

Source: Verité analysis of secondary data, 2012.

Geographic Areas of Concern

Certain geographic areas within the Mercy community exhibited higher levels of need when compared to the community as a whole (**Exhibit 57**).

Exhibit 57: Geographic Areas of Concern

Category	Indicator	Location	Community Value	Benchmark	Data Format	Benchmark Definition
Social and Economic Factors	Low-Income Households	Hampden	13	14	County Rank	Number of Counties
	Low-Income Households	Chicopee	60.8%	51.8%	Percent	Percent Below $50,000 Income
	Low-Income Households	Springfield	66.3%	51.8%	Percent	Percent Below $50,000 Income
	Low-Income Households	Holyoke	66.1%	51.8%	Percent	Percent Below $50,000 Income
Physical Environment	Food Desert(s) Present	Chicopee	Present	N/A	N/A	Present or Not Present: No Benchmark
	Food Desert(s) Present	Holyoke	Present	N/A	N/A	Present or Not Present: No Benchmark
	Food Desert(s) Present	Springfield	Present	N/A	N/A	Present or Not Present: No Benchmark
	Food Desert(s) Present	West Springfield	Present	N/A	N/A	Present or Not Present: No Benchmark
Access to Care	Health Professional Shortage Areas	Holyoke	Present	N/A	N/A	Present or Not Present: No Benchmark
	Health Professional Shortage Areas	Springfield	Present	N/A	N/A	Present or Not Present: No Benchmark
	Health Professional Shortage Areas	Ludlow	Present	N/A	N/A	Present or Not Present: No Benchmark
	Medically-Underserved Areas/Populations	Holyoke	Present	N/A	N/A	Present or Not Present: No Benchmark
	Medically-Underserved Areas/Populations	Springfield	Present	N/A	N/A	Present or Not Present: No Benchmark
	Medically-Underserved Areas/Populations	West Springfield	Present	N/A	N/A	Present or Not Present: No Benchmark
Health Outcomes: Morbidity	Schoolchildren With Asthma	Holland	21.7%	10.9%	Percent	MA Average
	Schoolchildren With Asthma	Monson	20.7%	10.9%	Percent	MA Average

Source: Verité analysis of secondary data, 2012.

Findings of Other Recent Community Health Needs Assessments

Verité also considered the findings of other needs assessments published since 2007. Ten such assessments have been conducted in the Mercy area and are publicly available. Findings from these assessments have been incorporated into this assessment. Summary findings from these assessments are provided below.

1. Pioneer Valley Planning Commission, 2013

The 2013 *State of the People for the Pioneer Valley Assessment* was conducted by the Pioneer Valley Planning Commission to discuss health behaviors of the community.[33] Community health behaviors were categorized by letter grade. The findings cover behaviors that received the lowest grade, typically a D- or D for each category.

Health behaviors are categorized as follows: children and youth, the elderly, education, health and safety, economic security, housing, and environment. Findings in the report include an analysis of data from various public sources.

Findings from the report include:

Children and Youth

- In 2009, the Pioneer Valley as a whole had an infant mortality rate of 5.1 per 1,000 births, though some towns in the region, such as Westfield (Hampden County), had infant mortality rates as low as 2.3 per 1,000. The town of Shelburne (Franklin County) had the highest infant mortality rate at 55.6 per 1,000 births.
- In 2007 to 2009, the Pioneer Valley region had a 1.5 percent rate of very low birth weight babies. Fourteen towns and communities fell below this rate, though a few towns had extremely high rates, such as Granville (10.3 percent) in Hampden County and Northfield (8.6 percent) in Franklin County.
- For the 2010 to 2011 school year, the Pioneer Valley region had a high rate of enrollment in its free and reduced price lunch programs, at 47.8 percent. This rate was up for the Pioneer Valley; 2006 rates were around 38.0 percent. The city of Springfield (Hampden County) had the highest rate at 84.2 percent enrollment, while Longmeadow (Hampden County) had the lowest rate at 4.1 percent.

Elderly

- From 2006 to 2010, about 10.5 percent of the Pioneer Valley region's population were in situations where grandparents had to support their grandchildren, putting a unique level of stress on the family. The highest rates of this indicator were in Springfield, at 23.0

[33] Pioneer Valley Planning Commission. (2013, January). *State of the People for the Pioneer Valley Needs Assessment* .Retrieved from http://www.pvpc.org/activities/data-state-people-feb-2013.shtml

percent, compared to low rates in 27 communities in the region that had no grandparents raising grandchildren.

- In 2010, the Pioneer Valley had a population of 31.5 percent who were 65 years of age or older and lived alone. Leyden had the lowest rates of this population at 12.5 percent, while Monroe had the highest rates at 52.4 percent.
- Between 2005 and 2009, the Pioneer Valley reported a high percentage of individuals age 65 and older with access to a car, with an average of 83.0 percent for the region. Monroe had the lowest rate at 36.4 percent, while nine towns had 100.0 percent accessibility to cars.

Education

- Between 2006 and 2010, early education enrollment rates were around 44.9 percent for the Pioneer Valley. Some towns such as Hawley (Franklin County), Monroe (Franklin County), and Tolland (Hampden County) had a rate as low as zero percent, while other towns such as Leyden and Buckland (both in Franklin County) reported rates as high as 100.0 percent.
- The high school graduation rate in the Pioneer Valley was 75.2 percent, though the majority of towns in the region had over 90.0 percent graduation rates. The lowest rates were in Holyoke (73.1 percent) and Springfield (74.3 percent).
- In 2011, 28.5 percent of the population ages 25 years or greater held a Bachelor's degree or higher in the Pioneer Valley region. The town of Erving (Franklin County) had the lowest proportion at 15.4 percent, and Amherst (Hampshire County) had the highest at 68.0 percent.

Health and Safety

- In 2009, the Pioneer Valley region had a diabetes hospitalization rate of 30.8 per 1,000 people. There were three towns that had a zero percent rate of diabetes (Hawley, Leyden, and Tolland), while the town of Shelburne had the highest rate of diabetes at 60.2 per 1,000 people.
- The three year average for asthma hospitalizations between 2006 and 2008 was 13.0 hospitalizations per 1,000 people, Ashfield had 1.6 hospitalizations per 1,000, the lowest rate in the region, compared to the highest rate of 22.9 hospitalizations in Holyoke.
- In 2009, the Pioneer Valley region had 12.7 mental health hospitalizations per 1,000 people. Four towns had no hospitalizations, while Greenfield had the highest rate at 23.3 hospitalizations per 1,000 people.
- In 2009, the Pioneer Valley reported an HIV/AIDS prevalence of 2.6 per 1,000 people. Seven towns had no cases; Springfield and Holyoke reported the highest prevalence of HIV/AIDS, with 6.4 and 7.2 per 1,000 people, respectively.
- In 2010, the obesity rate was around 25.0 percent for the Pioneer Valley Region, up from the 17.0 to 20.0 percent range in the 1990s. The obesity rate was close to the commonwealth average, which was about 24.0 percent in 2010, but much lower than the national rate of 35.7 percent.

Economic Security

- From 2005 to 2009, the poverty rate for the Pioneer Valley region was 15.1 percent. Middlefield had the lowest poverty rate of 0.8 percent, while Amherst had the highest poverty rate at 29.3 percent.
- From 2005 to 2009, the self-sufficiency rate was measured as the percent of one parent/one child families that were not economically independent. In the Pioneer Valley, 56.8 percent of one parent/one child families were not self-sufficient. Eight towns reported no dependent one parent/one child families. Tolland and Heath reported 100.0 percent of one parent/one child families were economically dependent from 2005-2009.
- In 2010, 9.1 percent of the Pioneer Valley was unemployed. The town of Pelham (Hampshire County) had the lowest unemployment rate at 3.8 percent, while the town of Monroe had the highest unemployment rate in the region at 18.5 percent.

Housing

- In 2011, the Pioneer Valley had a higher rate of homeless individuals, at 3.7 per 1,000 people, than the Commonwealth of Massachusetts, at 2.5 per 1,000 people. Homelessness was an especially pressing issue in Springfield, which contained 40.0 percent of the regional homeless population in 2011. While this represents a decrease in proportion since 2005, when Springfield contained 53 percent of the regional homeless population, the number of homeless individuals from Springfield has actually grown to 1,025 people.
- Between 2005 and 2009, the availability of subsidized housing is of concern to households of low and moderate incomes. About 9.6 percent of housing units in the Pioneer Valley were designated as subsidized housing, while Springfield (16.4 percent) and Holyoke (20.7 percent) had much higher subsidized housing units.

Environment

- The Pioneer Valley had poor air quality on about 15.6 percent of the days in 2010. The range was 16.0 to 23.0 percent between 2002 and 2010.
- The average commute time within the Pioneer Valley region was below the commonwealth's average from 1990 to 2009. The Pioneer Valley region averaged 21.7 minutes of commute time. Amherst reported the lowest average commute time at 16.7 minutes; the town of Tolland had the highest commute time of 37.3 minutes. The commute time was within the range of 15 to 40 minutes for all the towns in Pioneer Valley.

2. Pioneer Valley Food Security Advisory Committee and the Pioneer Valley Planning Commission, 2012

This report was prepared by the Pioneer Valley Planning Commission (PVPC) with input from farmers, planners, advocates, Community Involved in Sustaining Agriculture (CISA), and the Food Bank of Western Massachusetts.[34] This report analyzed food security issues across Hampden, Hampshire, and Franklin counties and the Commonwealth of Massachusetts.

Findings include:

- In 2011, the food insecurity rate was 14.3 percent in Hampden County, compared to 10.2 percent in Hampshire County, 11.5 percent in Franklin County, and a Massachusetts average of 11.2 percent.
- The child food insecurity rate was highest for Hampden County, at 24.3 percent, compared to 16.3 percent in Hampshire County, 20.2 percent in Franklin County, and 18.1 percent in the commonwealth.
- Between 1995 and 2005, there was a 12.0 percent increase in the number of overweight adults in Western Massachusetts.
- Hampden County had a greater percentage of overweight males (72.8 percent) and females (55.4 percent) than Hampshire County (64.5 and 42.5 percent, respectively), Franklin County (67.5 and 50.2 percent, respectively), and Massachusetts (67.5 and 47.8 percent, respectively).

3. Springfield School District, Stop Access Springfield Coalition, and the Gandara Center, 2012

This report analyzed results from a survey of 1,225 eighth grade students in the Springfield School District.[35]

Findings for Springfield include:

- Comparatively high use of alcohol, cigarettes, and marijuana;
- Comparatively high rates of binge drinking; and
- Comparatively high percentages of students involved in gangs.

[34] Pioneer Valley Food Security Advisory Committee and the Pioneer Valley Planning Commission (2012, October). *The Pioneer Valley Food Security Plan.* Retrieved from http://www.smith.edu/food/documents/PV_Food_Security_Plan_10-12-12_DRAFT.pdf

[35] Stop Access Springfield Coalition and the Gandara Center. (2012). *2012 Massachusetts Prevention Needs Assessment Survey: Survey Results for Springfield School District.* Retrieved 2012 , from http://gandaracenter.org/wp-content/uploads/PNA_results.pdf

4. Springfield Partners for Community Action, 2012

The Springfield Partners for Community Action designed a community action plan for Springfield for 2012 through 2014.[36]

Findings from that assessment include:

- Children had a higher rate of poverty in Springfield (34 percent) compared to other regions in Massachusetts. For Latino children, the percent of all children in poverty was almost 60 percent, while nearly 75 percent of Latino children under the age of 5 were in poverty.
- Of the households in the Springfield community, 27 percent were in poverty. The rate was highest for single-parent households. About 62 percent of single-parent households were headed by women and included children under the age of five years making these the most likely households to be living in poverty.
- In 2010, the Springfield annual high school dropout rate was 11 percent, more than three times the Massachusetts average (three percent).
- In 2011, Springfield's unemployment rate was close to 13 percent, higher than the Massachusetts average rate (eight percent).

5. City of Springfield Community Survey, 2012

The city conducted a survey in June 2012 of residents living at Marble Street Apartments and Outing Park/Hollywood Apartments.[37] Approximately 70 percent, or 164 of 232 households, responded. Survey respondents answered questions about health behaviors, priorities, and needs.

Findings include:

- More than half (55 percent) of all residents indicated that their child had a problem with asthma. Only 70 percent were receiving treatment for the condition.
- About 35 percent of residents had a household member that suffered from depression. Sixty-four percent were seeking treatment.
- Around 14 percent of households were suffering from diabetes. Seventy percent were receiving treatment.
- Residents indicated a need for dental, eye care, and mental health services.
- Community safety was problematic due to the presence of gangs, guns, drugs, and violence as reported by respondents.

[36] Springfield Partners for Community Action. (2011). *Community Action Plan Report. 2012-2014.* Retrieved 2012, from http://www.springfieldpartnersinc.com/Data/aboutus/strategicplan2012/2012-2014capspfldpartners.pdf

[37] City of Springfield. (2012, June). *Springfield Choice Neighborhoods Resident Survey Results.*

6. Commonwealth of Massachusetts, House of Representatives, 2011

This report studied Lyme disease in Massachusetts. Data from the Massachusetts Department of Public Health indicate that the incidence of Lyme disease has increased in past years. The most recently reported data from the source suggested a total of 4,045 cases of Lyme disease in 2009, including 196 in Hampden County (an increase of 57 percent since 2005).[38]

7. Holyoke Youth Task Force and Bach Harrison, 2009

The report completed by the Holyoke Youth Task Force and Bach Harrison Survey Research L.L.C., analyzed results from a survey of students in Holyoke City, which is part of Hampden County.

Findings for Hampden County include:

- Decreases in cigarette consumption between 2007 and 2009;
- Increases in marijuana usage most dramatically for tenth graders;
- Comparatively low use of cocaine and inhalants for eighth, tenth, and twelfth grades;
- Comparatively lower family attachment than in 2007;
- Increases in the percentage of high risk youth in 2009; and
- Decreases in gang involvement for eight, tenth, and twelfth graders since 2007.

8. Cities of Holyoke, Northampton, and Springfield, MA and Family, Inc., 2008

The Pioneer Valley has experienced increases in its homeless populations. A report by the Cities of Holyoke, Northampton, and Springfield indicates that on January 30, 2007 there were more than 1,000 homeless individuals in Franklin, Hampshire, and Hampden counties, either on the streets or in shelters.

Some of the findings from the report include:

- Urban and rural homelessness are present. Rural homeless populations tend to be "hidden" and likely to be in "doubled-up" conditions compared to the homeless in urban settings.
- Springfield and Holyoke had large populations living in poverty and were noted as two of the "hotspots" for homelessness throughout the commonwealth ("hotspots" are communities with a large number of homeless families). Springfield had a poverty rate of

[38] Commonwealth of Massachusetts, House of Representatives. (2011, April). *Lyme Disease in Massachusetts: A Public Health Crisis (A Report Issued by the House Committee on Post Audit and Oversight).* Retrieved from http://www.malegislature.gov/Content/Documents/Committees/h46/LymeDiseaseReport.pdf

34 percent and Holyoke had a rate of 51 percent, which were some of the highest poverty rates in the U.S.

- Homeless children suffer high rates of chronic illness, such as asthma. The rates of such illnesses are typically four times the rate of housed children. More than 50 percent of homeless children had problems with depression and anxiety. They also had lower rates of school completion.
- In Springfield, hospital costs of high-need chronically homeless[39] individuals cost an average of $100,000 per person over the course of one year (as calculated by Mercy Hospital).
- Housing instability and chronic homelessness may lead to increased placement of children in foster care. Foster care in Massachusetts averaged $6,552 per child per year.

9. University of Connecticut Health Science Center, 2008

This report analyzed results from a survey created by the Holyoke Council on Aging and the University of Connecticut Health Science Center, including two main subgroup populations: "baby boomers" between the ages of 45 and 59 and older adults above the age of 60.[40] Results were reported by ethnicity (Hispanic or Latino and those not of Hispanic or Latino ethnicity).

The report highlighted the following issues (with ethnic disparities present):

- Transportation,
- Depression,
- Need for additional caregiving capacity,
- Poor health status,
- Community safety,
- Taxes, and
- Cost of living.

[39] Chronic homelessness is defined by the U.S. Substance Abuse and Mental Health Administration as being homeless for a year or longer. A *chronically homeless family* is one in which there is an adult with a disabling condition and has been *continuously homeless for six months*; or has had *two or more episodes of homelessness in the past two years*; or has had a *history of residential instability* (5 or more moves in the past two years).

[40] University of Connecticut Health Center on Aging. (2008, May). *City of Holyoke Services and Needs Assessment.* Retrieved 2012, from http://www.holyoke.org/~cityholy/images/stories/dept_council_on_aging/holyoke_executive_summary_only.pdf

10.Catalyst Institute, 2008

In January 2008, the Catalyst Institute studied the oral health of the children in Massachusetts.[41]

Key issues include:

- About 25.0 percent of kindergarten children and nearly 40.0 percent of children in the third grade experienced dental decay.
- For children between the ages of 6 and 8, 17.3 percent had untreated dental decay of their primary and permanent teeth; the Healthy People 2020 target was 21.0 percent.
- Disparities between Hispanic children and White children existed, as nearly 23.5 percent of Hispanic kindergarten children had untreated tooth decay, double the rate of untreated decay for White kindergarten children.
- Across Franklin, Hampden, Hampshire, and Worcester counties:
    - Hampden County's sixth graders had the most untreated decay at 23.0 percent, compared to the 12.0 percent of Worcester County sixth graders and 11.0 percent of the commonwealth's sixth graders.
    - Hampshire County had the most untreated decay for kindergartners, at 31.0 percent, compared to only 24.0 percent of Worcester County's kindergartners, and 17.0 percent of the commonwealth. The percentage of sixth graders with dental sealants was highest in Hampshire County, at 63.0 percent, compared to 42.0 percent of Worcester County sixth graders and 52.0 percent of Massachusetts sixth graders.

[41] White BA, Monopoli MP, Souza BS. Catalyst Institute. (2008, January). *The Oral Health of Massachusetts' Children*. Retrieved 2012, from http://www.deltadentalma.com/news/pdfs/reports/OralHealthOfMAChildren08.pdf

Key insights:
Other Recent CHNAs

- **Common themes among other recent needs assessments conducted in the area include:**
  - **Abuse of alcohol and drugs among adults and older children,**
  - **Poor mental health,**
  - **Low community safety (including gang activity), and**
  - **Basic needs insecurity (including healthy food and housing).**
- **Racial and ethnic minorities, low-income and homeless populations, and those with special needs generally face greater barriers to health compared to other cohorts. Other assessments found that these groups have greater difficulty accessing health care.**
- **Other assessments also show that social and economic disadvantages are associated with disparities in health status for vulnerable populations in the community. Low-income families and children typically have poorer diets, limited physical activity, higher rates of smoking and substance abuse, and higher rates of chronic diseases like asthma, obesity, and cardiovascular issues.**

Summary Of Mental Health Findings

Because Mercy operates Providence Behavioral Health Hospital (in Holyoke), this CHNA report includes a section that consolidates findings regarding mental health needs in the community.

1. Primary Data Summary

Mental health issues were raised by numerous people who provided input into this assessment.

Respondents to the community survey reported difficulty accessing needed mental health care services.

- Thirty-four percent of respondents indicated they are not always able to access needed mental health services. Respondents have better access to primary, vision, dental, and medical specialty care as well as medicine, medical supplies, and equipment.
- MassHealth (Medicaid) and Commonwealth Connector recipients and uninsured residents report the greatest access challenges.
- The majority of respondents indicating problems accessing mental health services were from Agawam, Holyoke, and Springfield.

Lack of insurance and cost were indicated as top access barriers. Lack of knowledge about available services and how to access them also was frequently mentioned.

When asked to identify "top health related issues," survey respondents ranked substance abuse/addition as third and mental health as sixth. Mental health was in the "top 5" for MassHealth (Medicaid) recipients.

Many interviewees also expressed concern regarding access to mental health and substance abuse treatment. Several suggested that alcohol and drug use, depression, and stress were prevalent problems in Springfield. Interviewees indicated that many with alcohol problems have difficulty accessing services.

Nearly all interviewees said that the community needs more alcohol and drug abuse prevention and treatment programs. There was uniform concern regarding a shortage of psychiatric care in the area, in particular child psychiatry.

2. Secondary Data Summary

Exhibit 58 presents secondary data indicators from various Massachusetts and national sources.

Exhibit 58: Summary of Mental and Behavioral Health Indicators

Indicator	Location	Community Indicator	Benchmark	Data Format	Benchmark Definition	Year	Source
Alcohol Use	Hampden County	8	14	County Rank	Number Of Counties	2004-2010	County Health Rankings
Suicide	Hampden County	10.0	10.9	Rate Per 100,000	U.S. Average	2005	CHSI
Suicide	Hampden County	11.4	7.7	Rate Per 100,000	MA Average	2008	MassCHIP
Binge Drinking	Hampden County	12.6%	13.1%	Percent	MA Average	2011	BRFSS
Heavy Drinking	Hampden County	5.0%	6.0%	Percent	MA Average	2011	BRFSS
Poor Mental Health > 21 Days/Month	Hampden County	8.5%	6.8%	Percent	MA Average	2011	BRFSS
Limited By Physical, Mental, Or Emotional Problems	Hampden County	28.9%	23.8%	Percent	MA Average	2011	BRFSS
Health Professional Shortage Area (HPSA) – Mental Health	Holyoke	Present	N/A	N/A	Present Or Not Present - No Benchmark	2012	HRSA
Health Professional Shortage Area (HPSA) – Mental Health	Springfield	Present	N/A	N/A	Present Or Not Present - No Benchmark	2012	HRSA

Several mental and behavioral health indicators benchmark unfavorably (**Exhibit 58**).

- In 2008, suicide rates in Hampden County were higher than the Massachusetts average.
- According to BRFSS, Hampden County had a higher percentage of residents than Massachusetts who reported binge drinking, having poor mental health greater than 21 days per month, and being limited by physical, mental, or emotional problems.
- Holyoke and Springfield areas were designated by HRSA as mental health HPSAs.

The Massachusetts Department of Mental Health (DMH) developed the State Mental Health Plan 2012-2014 as part of its application for a Mental Health Block Grant from the Center for Mental Health Services (CMHS) and the Substance Abuse and Mental Health Services Administration

(SAMHSA). This plan[42] describes the "public mental health system, available services, strengths and weaknesses, unmet needs, and the state's priorities."

The plan identified a number of mental health-related needs including:

- More services focusing on, and resulting in, positive outcomes for persons with mental health conditions, such as:
    - Increased employment; and
    - Health and wellness to impact conditions such as: tobacco dependency, chronic health problems, poor diet and nutrition, and a lack of physical activity.
- More services focusing on specific populations, including:
    - Culturally and linguistically diverse populations/minorities;
    - Seniors;
    - Gay, lesbian, bisexual, and transgender youth;
    - The deaf and hard of hearing; and
    - Veterans.
- More services focusing on peer support services.
- More access to affordable housing services and programs for the homeless through housing assessments and SAMHSA funded projects for Assistance in Transition from Homelessness (PATH).
- Additional workforce development that focuses on utilization of evidence based practices.
- Increased DMH staff safety.
- New research that focuses on youth, transition age youth/adults, and suicide prevention strategies.
- Improved funding, coordination, and collaboration between state agencies, mental health organizations, and providers of care.
- Increased access to and integration between primary care and behavioral health, mental health, and substance abuse services and between acute and continuing care services.

The following additional needs were identified for children:

- Increased linkages to school based services and systems, special education services, and other prevention based interventions.
- Increased availability of outpatient psychiatry services and child primary care providers.

[42] Massachusetts Department of Mental Health. (2011). *State Mental Health Plan 2012-2014.* Retrieved 2013, from: http://www.mass.gov/eohhs/gov/departments/dmh/state-mental-health-plan-2012-2013.html

The 2011 Consumer and Family Member Satisfaction (Adult Consumer) Survey[43] conducted by the Center for Mental Health Services Research (CMHSR) in the University of Massachusetts Medical School also identified mental health-related needs in Massachusetts, including improved education on medications and increased availability of transportation.

[43] University of Massachusetts Medical School . (2011). *Consumer and Family Member Satisfaction (Adult Consumer) Survey*. Retrieved 2013, from: http://www.mass.gov/eohhs/researcher/behavioral-health/mental-health/dmh-results-and-reports.html

PRIMARY DATA ASSESSMENT

Community input was gathered through interviews, a community survey, and community listening sessions.

Interviews were conducted with public health experts, representatives of health or other departments or agencies, community leaders, and persons representing the broad interests of the community. The interviews were structured to help identify the most pressing health status and access issues in the community.

Mercy also sought input from the public regarding the health of the community through an online and paper-based survey. A website link to the survey (in both English and Spanish) was made available from January through February 2013. Paper copies of the survey were distributed at various local organizations and clinics in multiple languages. Efforts were made to reach those without internet access as well as vulnerable populations such as racial and ethnic minorities, low-income groups, individuals with low literacy levels, and non-English speakers. The survey was publicized via flyers, social media, newspapers, email listservs, and other methods.

A listening session was held during which community members reviewed and discussed preliminary findings from this assessment.

Discussion at the listening session was helpful in that it validated assessment findings and contributed to the prioritization process.

Community Survey Findings

The survey consisted of 48 questions about a range of health status and access issues and regarding respondent demographic characteristics.

1. Respondent Characteristics

1,321 residents from the Mercy community completed the survey. Seventy-four percent of respondents were female and 49 percent were between the ages of 45 and 64. Seventy-two percent were White and 98 percent did not identify as Hispanic (or Latino). The majority of respondents reported being in good or very good overall health (70 percent), married (50 percent), employed full time (61 percent), privately insured (67 percent), and having an undergraduate degree or higher (53 percent). The majority (83 percent) of respondents speak English in the home. Spanish was the top non-English language reported. Seven percent of respondents reported that they spoke multiple languages at home. Survey responses were received from residents of 43 of the Mercy community's 51 ZIP codes.

Exhibit 59 presents the percentage of respondents by town. Springfield had the highest percent of respondents.

Exhibit 59: Survey Responses, 2012 – Respondents by Town

Town/City*	Number of Respondents	Percent of Respondents	Percent of Total Population
Agawam	43	3.3%	6.1%
Blandford	2	0.2%	0.3%
Brimfield	4	0.3%	0.8%
Chester	4	0.3%	0.3%
Chicopee	104	7.9%	11.9%
East Longmeadow	37	2.8%	3.4%
Granville	6	0.5%	0.4%
Hampden	17	1.3%	1.1%
Holland	2	0.2%	0.5%
Holyoke	159	12.0%	8.6%
Longmeadow	58	4.4%	3.5%
Ludlow	110	8.3%	4.6%
Monson	45	3.4%	1.8%
Palmer	106	8.0%	2.6%
Russell	2	0.2%	0.3%
Southwick	12	0.9%	2.1%
Springfield	438	33.2%	32.9%
Wales	3	0.2%	0.4%
West Springfield	45	3.4%	6.1%
Westfield	68	5.1%	9.1%
Wilbraham	56	4.2%	3.1%
Total	**1,321**	**100.0%**	**464,416**

A total of 1,321 residents from Mercy Medical Center's community participated in the survey

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
*Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Although the survey garnered many respondents, the sample is not representative of the community and the results are not generalizable to the community as a whole.

2. Access Issues

The majority of the survey respondents (as post-stratified) reported they visit a primary care provider regularly. Twenty percent did not. Eleven percent of the respondents reported not having a primary care provider.

Exhibit 60 shows that 56 percent of families received routine (non-emergency, non-specialty) healthcare services from a private doctor's office and 9 percent received routine care from an urgent care facility or store-based walk in clinic. Approximately 22 percent received services from a free or low-cost clinic or health center, hospital emergency room, homeless shelter, school-based clinic, or soup kitchen. Six percent reported not receiving routine care.

Exhibit 60: Locations Where Respondents from the Mercy Community Received Routine Healthcare

Response	Total Community (Post-Stratified)	Commonwealth Connector	MassHealth (Medicaid)	Medicare	No Health Care Insurance	Private / Commercial Insurance	Less Than College Education
No Routine Healthcare Received	6.1%	4.1%	7.6%	2.2%	31.6%	1.4%	5.2%
Free Or Low-Cost Clinic Or Health Center	13.1%	8.2%	30.7%	14.4%	21.1%	3.9%	16.4%
Private Doctor's Office	56.2%	57.1%	25.2%	58.9%	15.8%	77.6%	50.5%
Urgent Care Facility Or Store-Based Walk-In Clinic	9.3%	8.2%	8.4%	10.0%	3.5%	10.0%	8.0%
Hospital Emergency Room	7.0%	8.2%	12.2%	5.6%	10.5%	3.1%	8.8%
School-Based Clinic	0.4%	2.0%	0.8%	0.0%	0.0%	0.6%	8.8%
Soup Kitchen	0.3%	2.0%	0.8%	0.0%	0.0%	0.1%	0.5%
Homeless Shelter	1.5%	2.0%	5.9%	1.1%	1.8%	0.0%	2.7%
Other (Please Specify)	6.1%	8.2%	8.4%	7.8%	15.8%	3.4%	7.2%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013. Response numbers varied by response and healthcare type. All Responses (N=1,534).

When responses are arrayed by respondent source of insurance coverage and education level (not post-stratified), great variation in where various community members receive their routine healthcare services becomes evident. While 78 percent of respondents with "private/commercial insurance" visit private doctor's offices, only 16 percent of uninsured respondents and 25 percent of MassHealth (Medicaid) recipients access these settings. Uninsured and MassHealth (Medicaid) patients are more likely not to receive any routine healthcare. Respondents without insurance and those with Commonwealth Connector or MassHealth (Medicaid) were more likely to use the Emergency Room for routine healthcare than other groups.

Exhibit 61 indicates whether respondents feel that they are able to get needed care. **Exhibits 62** and **63** present respondents who were not always able to get needed care by town and by race.

Exhibit 61: Respondent Ability to Receive Needed Care in the Mercy Community

Response	Primary Care	Vision Care	Dental Care	Mental Health Care	Medical Specialty Care	Medicine, Medical Supplies, And Equipment	Prevention And Wellness Services
Total Community (Post-Stratified)							
Always	82.6%	77.6%	74.9%	66.0%	70.7%	76.5%	62.6%
Sometimes	12.9%	13.1%	14.3%	16.1%	17.3%	15.0%	16.5%
Rarely	3.0%	4.9%	7.2%	8.2%	6.5%	4.7%	9.9%
Never	1.5%	4.4%	3.6%	9.7%	5.6%	3.8%	11.1%
Commonwealth Connector							
Always	76.9%	59.4%	55.9%	39.1%	40.7%	46.4%	27.3%
Sometimes	17.9%	25.0%	26.5%	39.1%	33.3%	42.9%	36.4%
Rarely	2.6%	3.1%	5.9%	4.3%	11.1%	0.0%	4.5%
Never	2.6%	12.5%	11.8%	17.4%	14.8%	10.7%	31.8%
MassHealth (Medicaid)							
Always	80.1%	61.0%	56.7%	57.8%	57.8%	73.3%	50.0%
Sometimes	15.8%	23.5%	25.4%	21.1%	24.1%	17.0%	17.0%
Rarely	3.5%	9.6%	14.9%	11.0%	9.5%	7.4%	18.1%
Never	0.6%	5.9%	3.0%	10.1%	8.6%	2.2%	14.9%
Medicare							
Always	89.3%	87.7%	71.6%	82.4%	79.3%	84.7%	69.8%
Sometimes	9.3%	11.0%	14.9%	8.8%	17.2%	8.5%	14.0%
Rarely	1.3%	1.4%	9.0%	2.9%	3.4%	5.1%	14.0%
Never	0.0%	0.0%	4.5%	5.9%	0.0%	1.7%	2.3%
No health care insurance							
Always	35.7%	22.9%	23.1%	21.4%	19.2%	28.6%	25.8%
Sometimes	28.6%	22.9%	20.5%	3.6%	15.4%	25.0%	19.4%
Rarely	19.0%	22.9%	23.1%	25.0%	23.1%	14.3%	12.9%
Never	16.7%	31.4%	33.3%	50.0%	42.3%	32.1%	41.9%
Private / commercial insurance							
Always	89.1%	89.1%	86.5%	72.7%	80.8%	84.6%	69.9%
Sometimes	10.0%	8.5%	10.0%	18.1%	15.8%	13.0%	17.1%
Rarely	0.7%	1.9%	2.8%	7.0%	2.7%	1.9%	7.5%
Never	0.2%	0.5%	0.7%	2.2%	0.6%	0.4%	5.5%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
*N size varies for each insurance and care type.

Exhibit 61 suggests that, for each type of care, more than 60 percent of the total respondents (post-stratified) felt that they "always" received it, compared to those that felt they sometimes, rarely, or never received needed care. More residents responded that they always received primary care, vision care, medicine, medical supplies, and equipment, dental care, and medical specialty care. A higher percentage of respondents reported rarely or never being able to get needed prevention and wellness services (21 percent) and mental health care (18 percent) than primary care (4.5 percent).

Exhibit 62 presents the percentage of respondents who reported "not always" being able to get needed care by town. Data indicate that access varies by type of care and locality.

Exhibit 62: Respondents Not Always Able to Receive Care, By Town, in the Mercy Community

Town/City**	Primary Care	Vision Care	Dental Care	Mental Health Care	Medical Specialty Care	Medicine, Medical Supplies, and Equipment	Prevention and Wellness Services
Agawam	14.3%	14.0%	21.4%	61.1%	21.4%	24.2%	56.0%
Blandford*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%
Brimfield*	0.0%	25.0%	25.0%	0.0%	33.3%	33.3%	33.3%
Chester*	0.0%	0.0%	0.0%	-	50.0%	25.0%	100.0%
Chicopee	11.2%	10.1%	15.2%	25.5%	15.6%	18.8%	29.2%
East Longmeadow	16.2%	8.3%	5.6%	23.1%	19.2%	7.4%	31.8%
Granville*	0.0%	0.0%	0.0%	0.0%	20.0%	33.3%	28.6%
Hampden	6.7%	5.9%	17.6%	30.0%	30.8%	8.3%	30.8%
Holland*	0.0%	50.0%	50.0%	100.0%	100.0%	-	-
Holyoke	17.2%	26.8%	29.3%	41.1%	33.3%	22.8%	39.8%
Longmeadow	8.8%	5.6%	5.3%	22.7%	17.1%	10.0%	15.6%
Ludlow	10.8%	8.1%	11.0%	22.7%	15.5%	12.3%	21.3%
Monson	18.2%	7.1%	17.1%	30.0%	28.1%	28.6%	35.5%
Palmer	8.6%	10.7%	10.0%	9.1%	8.8%	7.5%	13.6%
Russell*	0.0%	100.0%	0.0%	-	0.0%	0.0%	-
Southwick	16.7%	9.1%	16.7%	25.0%	22.2%	10.0%	22.2%
Springfield	19.6%	28.1%	33.0%	43.0%	38.1%	28.0%	47.9%
Wales*	0.0%	0.0%	33.3%	-	0.0%	0.0%	0.0%
West Springfield	20.0%	16.7%	22.2%	5.6%	17.9%	21.2%	19.0%
Westfield	12.7%	17.5%	16.9%	31.4%	22.4%	20.4%	38.5%
Wilbraham	8.9%	7.3%	11.1%	28.6%	16.3%	13.3%	36.6%
Total	**14.9%**	**17.9%**	**21.5%**	**33.6%**	**26.4%**	**20.3%**	**36.0%**

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Primary Care (N=1,295), Vision Care (N=1,197), Dental Care (N=1203), Mental Health Care (N= 657), Medical Specialty Care (N=907), Medicine, Medical Supplies and Equipment (N= 981), Prevention and Wellness Services (N=808).
*Denotes a small sample size (N=10 or less).
**Data were available by ZIP code and are presented by each ZIP code's associated town name. A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Across all towns, more people were not always able to receive prevention and wellness services (36 percent) and mental health care (about 34 percent) than other services.

Among respondents not receiving prevention and wellness services, the largest percentages were in Agawam (56 percent) and Springfield (48 percent). The majority of those not receiving mental health care also were in Agawam (61 percent) and Springfield (43 percent). Primary, vision, and dental care service needs were not being met for populations in Holyoke, Springfield, and West Springfield (**Exhibit 62**).

Exhibit 63 indicates that Asian residents were the least likely to receive primary care (28 percent), followed by Hispanic (or Latino) respondents (19 percent). The Asian population also was less likely to receive vision, dental, and mental health care (50, 55, and 100 percent, respectively) compared to other races. White residents were most able to access care.

Exhibit 63: Respondents Not Always Able to Receive Care, By Race, in the Mercy Community

Race/Ethnicity	Primary Care	Vision Care	Dental Care	Mental Health Care	Medical Specialty Care	Medicine, Medical Supplies, and Equipment	Prevention and Wellness Services
Asian	28.0%	50.0%	54.5%	100.0%	35.0%	33.3%	46.7%
Black	16.8%	26.0%	35.2%	31.7%	31.1%	24.7%	40.3%
Hispanic (or Latino)	19.2%	38.6%	33.3%	54.5%	47.7%	33.3%	57.9%
Multiple	11.5%	28.8%	37.7%	52.5%	39.6%	30.6%	51.3%
All Other Races*	16.7%	10.0%	10.0%	33.3%	37.5%	33.3%	25.0%
White	13.7%	13.2%	16.7%	28.1%	21.2%	17.1%	31.6%
Total	**14.6%**	**17.0%**	**20.9%**	**33.1%**	**24.9%**	**19.8%**	**35.0%**

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Primary Care (N=1,228), Vision Care (N=1,140), Dental Care (N=1,144), Mental Health Care (N=626), Medical Specialty Care (N=858), Medicine, Medical Supplies, and Equipment (N=929), Prevention and Wellness Services (N=768).
*Other includes Native American/American Indian, East Indian, and "Other."

Respondents indicating that they were not always able to get care were asked to identify barriers to access (**Exhibit 64**). Cost and lack of insurance were the two most frequently reported barriers to care. Residents reported difficulty getting an appointment with a primary care doctor.

Exhibit 64: Barriers to Receiving Needed Care in the Mercy Community

Response	Primary Care	Vision Care	Dental Care	Mental Health Care	Medical Specialty Care	Medicine, Medical Supplies, and Equipment	Prevention and Wellness Services
I Don't Have Insurance	19.7%	28.3%	26.6%	16.4%	16.2%	19.5%	16.8%
I Can't Get an Appointment	17.9%	6.8%	6.4%	8.4%	10.6%	2.6%	4.6%
I Can't Afford It / Too Expensive	10.7%	21.7%	28.6%	16.2%	20.9%	30.5%	20.3%
The Hours Are Inconvenient	9.5%	6.6%	9.5%	7.7%	10.0%	4.3%	7.7%
These Services Are not Available in My Area	1.9%	1.5%	1.9%	4.3%	2.2%	3.4%	6.6%
I Don't Have Transportation	11.5%	9.6%	6.2%	5.1%	8.7%	6.9%	5.0%
I Don't Trust the Doctor	5.8%	3.2%	3.4%	4.6%	3.4%	3.3%	3.2%
The Doctors and Staff Do not Speak My Language	5.7%	4.5%	3.9%	3.3%	4.0%	4.1%	3.9%
I Can't Take Time Off From Work or From Caring for Others	7.0%	5.5%	5.2%	7.0%	6.2%	5.3%	7.2%
Other	10.4%	12.3%	8.2%	27.0%	17.8%	20.0%	24.7%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Primary Care (N=267), Vision Care (N=227), Dental Care (N= 303), Mental Health Care (N=311), Medical Specialty Care (N=261), Medicine, medical supplies, and equipment (N=201), Prevention and Wellness Services (N=290).

Key	
Top Two Barriers by Care Type	

3. Health Issues

When asked to identify the top health issues in the community, respondents most often chose low income / financial challenges, obesity, substance abuse / addiction, and diabetes (**Exhibit 65**).

Exhibit 65: Top Health Issues, By Insurer and Education, in the Mercy Community

Health Issue	Total Community (Post-Stratified)	Commonwealth Connector	MassHealth (Medicaid)	Medicare	No Health Care Insurance	Private / Commercial Insurance	Less Than College Education
Low Income / Financial Challenges	8.2%	8.8%	7.5%	7.8%	8.4%	9.0%	8.1%
Obesity	7.3%	4.8%	4.3%	9.0%	3.8%	8.4%	6.1%
Substance Abuse / Addiction	7.0%	6.6%	6.5%	6.8%	5.2%	7.7%	6.6%
Diabetes	6.4%	5.3%	6.4%	5.3%	8.0%	6.0%	6.0%
Unemployment	6.1%	5.3%	6.9%	4.0%	9.1%	5.4%	6.7%
Mental Health (Such as Depression, Bipolar, Autism)	5.9%	4.8%	5.4%	5.3%	4.9%	7.2%	5.7%
Cancer	5.7%	4.8%	5.3%	8.3%	4.9%	5.9%	5.6%
Not Enough Exercise	5.1%	7.5%	3.8%	6.0%	5.6%	5.5%	4.6%
Tobacco Use	5.0%	4.8%	4.4%	4.0%	6.3%	4.4%	4.9%
Poor Dietary Choices	4.9%	4.4%	3.4%	4.3%	4.5%	5.3%	4.1%
Heart Disease	4.2%	4.0%	2.8%	5.8%	3.8%	5.0%	3.9%
Affordable Housing	3.9%	4.4%	4.8%	5.5%	4.5%	3.4%	4.3%
Asthma	3.8%	2.2%	4.5%	2.5%	3.1%	4.1%	3.4%
Homelessness	3.6%	4.4%	5.0%	3.3%	2.1%	3.0%	4.2%
Unsafe Neighborhoods	3.3%	4.8%	4.3%	2.5%	2.8%	3.0%	3.8%
Limited Access to Healthy Food	3.3%	4.8%	3.7%	3.0%	4.5%	3.0%	3.6%
Dental Health Issues	3.2%	5.3%	3.7%	2.8%	4.5%	2.6%	3.6%
Domestic Violence	3.2%	3.1%	4.4%	2.5%	4.5%	2.6%	3.5%
Unsafe Sex	2.9%	1.8%	3.5%	2.0%	3.5%	2.4%	3.0%
Alzheimer's or Dementia	1.6%	2.6%	1.7%	2.0%	0.7%	1.7%	1.7%
Stroke	1.4%	0.9%	2.3%	2.5%	1.0%	1.0%	1.9%
Chronic Obstructive Pulmonary Disease (COPD)	1.3%	0.9%	1.8%	1.8%	1.4%	1.0%	1.7%
Poor Air Quality	1.3%	0.9%	2.3%	1.0%	0.7%	1.2%	1.6%
Birth Defects	0.7%	1.3%	1.2%	0.5%	0.7%	0.4%	0.9%
Other	0.7%	1.3%	0.2%	1.5%	1.4%	0.8%	0.5%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Total Community (N=7,357), Commonwealth Connector (N=227), MassHealth (Medicaid) (N=1,217), Medicare (N=398), No Healthcare Insurance (N=287), Private/Commercial Insurance (N=4,825), Less than College Education (N=3710).

Key	
Top Five Reasons for Not Receiving Care By Group	

Exhibit 66 indicates whether care was accessed for a variety of health conditions (post-stratified).

Exhibit 66: Receiving Care for Health Conditions in the Mercy Community

Health Condition	We Are Getting the Care We Need	We Choose Not to Get Care at This Time	We Don't Know Where or How to Get Care for This Condition
Asthma	95.7%	2.9%	1.4%
Alzheimer's / Dementia	77.2%	17.0%	5.8%
Cancer	91.8%	5.5%	2.7%
Chronic Obstructive Pulmonary Disease (COPD)	81.8%	13.8%	4.4%
Diabetes	93.6%	4.1%	2.3%
High Blood Pressure	95.8%	2.4%	1.8%
Heart Disease	92.8%	3.8%	3.4%
Mental Health Issues	82.9%	8.3%	8.8%
Obesity / Overweight	63.2%	20.3%	16.5%
Sexually Transmitted Diseases	58.3%	23.2%	18.6%
Substance Abuse /Addiction	64.9%	22.4%	12.6%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Asthma (N=416), Alzheimer's/Dementia (N=109), Cancer (N=218), Chronic Obstructive Pulmonary Disease (N=119), Diabetes (N=380), High Blood Pressure (N=692), Heart Disease (N=280), Mental Health Issues (N=391), Obesity/Overweight (N=499), Sexually Transmitted Diseases (N=35), Substance Abuse/Addiction (N=161).

Females age 65+ were most likely to report living alone …

Of males 65+ living alone, over 44 percent reported living without support

Care was accessed most for asthma (95.7 percent) and high blood pressure (95.8 percent) and least accessed for sexually transmitted diseases. Many respondents stated not wanting care and / or not knowing where to get care for obesity, sexually transmitted diseases, and substance abuse / addiction (**Exhibit 66**).

Exhibit 67 provides survey responses about members of the community who live alone and, of those, how many are without emotional and/or financial support. Females 65+ were most likely to report living alone.

Exhibit 67: Living Alone and Without Support in the Mercy Community

Age and Sex	Living Alone	Without Emotional and/or Financial Support
Female 15-34	10.7%	22.7%
Female 35-44	8.8%	15.4%
Female 45-54	14.7%	20.0%
Female 55-64	21.4%	22.9%
Female 65+	38.4%	15.0%
Male 15-34	15.6%	10.0%
Male 35-44	18.6%	40.0%
Male 45-54	28.2%	28.0%
Male 55-64	21.7%	20.0%
Male 65+	20.0%	44.4%
Total	**18.8%**	**22.4%**

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Living Alone (N=1,266), Without Emotional and/or Financial Support (N=227).

4. Health Behaviors

Exhibit 68 portrays various health behaviors in the Mercy community.

Exhibit 68: Health Behaviors in the Mercy Community

Health Behavior	Total Community (Post-Stratified)	MassHealth (Medicaid)	Medicare	Less Than College Education
Not Physically Active	27.3%	28.6%	32.9%	30.3%
Eat Less Than Recommended Amounts of Fruit	43.8%	48.9%	41.1%	46.7%
Eat Less Than Recommended Amounts of Vegetables	74.4%	78.9%	69.3%	79.2%
Never or Rarely Shop at Farmer's Market	78.6%	82.9%	73.0%	80.7%
Travel 5 Miles or More for Fresh Produce	14.3%	11.2%	6.8%	13.4%
Drank Alcohol 10+ Days in the Past Month	11.4%	3.9%	12.0%	6.9%
Usually have 4 or More Drinks on an Occasion	10.7%	23.1%	0.0%	11.9%
Use Tobacco a Few Times per Week or Daily	19.0%	36.7%	10.7%	24.1%
Primary Care Provider Not Aware of All Drugs taken	5.0%	8.5%	1.5%	5.7%
Ever Used Prescription Drugs Belonging to Others	17.7%	22.9%	6.8%	15.9%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
*N size varies for each cohort and each health behavior.

A large percentage of respondents reported that they were not eating the recommended amount of vegetables and that they never or rarely shopped at a farmer's market. MassHealth (Medicaid) recipients and/or those with less than a college education were less likely to eat the recommended amount of fruit and vegetables and shop at a farmer's market. MassHealth (Medicaid) recipients were more likely to have four or more drinks on one occasion and use tobacco a few times per week or on a daily basis (**Exhibit 68**).

The principal reason stated for not shopping at a farmer's market was that respondents accessed local produce in their own garden, grocery store, or Community-Supported Agriculture (CSA). The greatest reason for not eating the recommended amount of fruits and vegetables was cost. The majority of respondents (54 percent) reported purchasing their groceries in a grocery store, while respondents were least likely to buy groceries at an ethnic food store (5 percent).

Usage of alcohol and tobacco were problematic for certain cohorts and many respondents suggested that they were unable to reduce their use of alcohol and tobacco despite a desire to do so.

Exhibit 69 examines the health topics that respondents felt children need to know more about (post-stratified).

Exhibit 69: Improving Children's Health in the Mercy Community

Topic	Ages 0-5	Ages 6-10	Ages 11-15	Ages 16-19
Dental Hygiene	19.4%	9.7%	5.2%	5.2%
Nutrition	15.5%	10.5%	6.5%	6.4%
Getting Enough Sleep	10.8%	7.8%	6.1%	6.4%
Bullying	13.1%	11.0%	6.6%	6.3%
Asthma Management	6.7%	6.8%	4.3%	3.9%
Diabetes Management	5.1%	6.0%	4.8%	4.6%
Eating Disorders	4.0%	5.9%	6.8%	6.6%
Tobacco	5.4%	8.0%	7.6%	7.1%
Alcohol	4.2%	7.1%	7.7%	7.3%
Drug Abuse	4.1%	7.4%	7.6%	7.3%
Mental Health Issues	2.7%	5.2%	7.0%	7.2%
Suicide Prevention	2.3%	4.6%	7.2%	7.3%
Sexual Intercourse	1.9%	3.8%	8.2%	7.5%
Sexually Transmitted Diseases	1.9%	3.5%	8.2%	7.6%
Reckless Driving/Speeding	2.0%	1.9%	5.7%	8.6%
Other	0.9%	0.8%	0.6%	0.6%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Ages 0-5 (N=4218), Ages 6-10 (N=7886), Ages 11-15 (N=11381), Ages 16-19 (N=10689).

Key	
Top Three Issues by Age Group	

Among children aged 0 to 5 years and 6 to 10 years, health topics such as dental hygiene, nutrition, and bullying were seen as important. Sexual intercourse and sexually transmitted diseases were the primary suggested educational topics for children aged 11 to 19. In addition, respondents suggested information on alcohol should be taught to youth aged 11 to 15 years and reckless driving/speeding to youth aged 16 to19 years.

Key insights:
Community Survey

- **1,321 residents in Mercy's community responded to the community survey. Post-stratification weights were applied to reflect community demographics.**
- **78 percent of respondents with private insurance receive their routine healthcare in a private physician's office. Uninsured residents and MassHealth (Medicaid) recipients more often rely on free or low-cost clinics, urgent care facilities, hospital emergency rooms, and other settings – or they do not receive services on a routine basis.**
- **Area residents are most unable to receive needed prevention and wellness services, mental health care, dental care, and "medical specialty care". Difficulty accessing basic primary care appears most acute for residents of Springfield and West Springfield.**
- **Disparities in access are present – in particular for Hispanic (or Latino) people. Affordability (even after the Massachusetts health insurance expansion) remains a primary barrier.**
- **Respondents indicate that obesity, substance abuse/addiction, diabetes, mental health, and cancer are the top five health issues (other than financial and economic challenges). Top issues vary depending on insurance status (e.g., dental health issues for Commonwealth Connector recipients and cancer for Medicare beneficiaries).**
- **A number of community residents "don't know where or how" to receive care for obesity, sexually transmitted disease, or substance abuse issues. Primary, vision, and dental care service needs were not being met for populations in Holyoke, Springfield, and West Springfield. Among respondents not receiving prevention and wellness services as well as mental health care, the majority were in Agawam and Springfield.**

Summary of Interview Findings

Key informant interviews were conducted face-to-face and by telephone by Mark Rukavina, Principal at Community Health Advisors, LLC. The interviews were designed to gain perspective into health needs in the community served by Mercy.

A total of 39 local key informants, including external and internal stakeholders (those affiliated or employed by Mercy Medical Center/Providence Behavioral Health Hospital) were interviewed during December 2012 through February 2013. In addition, 10 staff members from the Massachusetts Department of Public Health regional office in Northampton also were interviewed as a part of this assessment.

These interviews were conducted using a structured questionnaire. Informants were asked to discuss community health issues and encouraged to look broadly at the social determinants of health. Interviewees were asked about issues related to health care access, changes in community population, prevalence of chronic health conditions, and health disparities.

The frequency with which community health issues was mentioned and the interviewees' perceptions of the significance of each concern were assessed. The following issues are considered of greatest concern, based on the interviews with key informants.

Social and Economic Issues

- **Poverty and Financial Hardship:** The issue of poverty was identified by nearly all interviewees as a significant factor in terms of community health. The City of Springfield reports a large percentage of residents living in poverty. The area has limited employment opportunities, especially for those with little formal education or training, but there are broad community efforts to bolster skill building and job training.
- **Education:** Related to the issue of poverty, many interviewees described an educational gap that is experienced by Springfield residents. In an effort to break the cycle of poverty, interviewees expressed the need to encourage the success of children in schools. Many people said that reading skills are a vital factor driving health. Others said that there is a need in the area to build trusting relationships between parents and schools as a strategy that enables children to reach their educational potential.
- **Safety:** The issue of public safety was raised as a concern by a number of interviewees. Many drew a link to between poverty and public safety. Several of the interviewees cited safety as a hindrance to physical activity.
- **Institutional Racism:** A number of interviewees raised the issue of institutional racism as a factor driving health disparities. They noted that many people of color and non-English speaking patients feel that they must take more steps in order to get care. Several said that institutional racism must be addressed in order for equitable services to be available to everyone in need.
- **Nutrition:** Interviewees expressed concern regarding proper nutrition and affordable healthy foods. In certain Springfield neighborhoods, it was noted that it's difficult to find

fresh fruits and vegetables. Many interviewees note that there are area efforts to address food deserts and food insecurity.

- **Physical Activity:** Many interviewees said that community health could be improved by increasing physical activity throughout Springfield. This issue was seen as overlapping with that of safety. Interviewees pointed to community efforts as demonstrations of commitment to address this issue. Examples include the projects funded under Mass in Motion grants, the "Walking School Bus," built environment improvements, the river walk, and other community enhancements.
- **Trust:** The issue of a lack of trust and connectivity, especially between some of the larger public and private institutions, was frequently noted as a problem. Tying this to health, a number of interviewees noted that interactions and relationships with medical providers can be intimidating and alienating. Several suggested that more efforts where there are interactions in community settings could help to build trusting relationships.

Access Issues

- **Substance Abuse Treatment:** Interviewees frequently said that Springfield has a serious problem with alcohol and drug use. Drug trafficking and misuse are seen as significant health and safety factors. A number of people expressed frustration with the difficulty of accessing treatment for people with alcohol problems. In general, on-demand treatment is seen as a challenge. Nearly all interviewees said that the area needs more alcohol and drug abuse prevention and treatment programs.
- **Mental Health:** Many of the interviewees expressed concern regarding access to mental health treatment. Several suggested that depression and stress are prevalent problems in Springfield. There was also an expressed concern regarding a shortage of psychiatric care in the area, in particular child psychiatry.
- **Inappropriate Use of Emergency Department**: The issue of people accessing non-emergent care in the emergency department was noted by a number of interviewees. Some felt that it indicated a shortage of primary care providers and others said that it was related to issues of convenience or a lack of understanding the various care options. Many people felt that it was an important issue that must be addressed.
- **Primary Care:** Several of the interviewees mentioned the need for more primary care providers. Others felt that while there may be sufficient primary care capacity, many residents have never had a primary care provider and/or need assistance in establishing a medical home.
- **Out of Pocket Costs:** A number of interviewees raised concerns that out of pocket costs were interfering with care. In particular, they saw copayments and deductibles as barriers to medications and ongoing treatment for chronic diseases. Several interviewees said that there is a lack of affordable insurance for small business owners.
- **Access for Culturally Diverse Populations:** Interviewees regularly raised the issue of access to care for culturally diverse populations. Some had concerns for limited English proficient populations and others felt that more education for health providers was needed to provide culturally competent care.

- **Dental Health:** Though the problem of dentists accepting MassHealth has improved in recent year, the issue of access to dental care was raised as a concern by a number of interviewees.
- **Transportation:** Transportation was cited as a problem by several interviewees. While Springfield is seen as having good public transportation, it can be a hardship for some residents, especially among low income residents and those with small children, to easily get to medical appointments.

Morbidity/Health Status Issues

- **Alcohol, Tobacco, and Other Drug Use:** A significant number of interviewees felt that the alcohol and substance abuse problems in Springfield were quite serious. The issues of alcohol and opiate abuse were frequently cited as major health problems in the area. Tobacco was raised as a concern, but by fewer of the interviewees. There were also concerns raised regarding HIV/AIDS related to the drug use.
- **Mental Health:** Several interviewees noted the problems related to depression, stress, and anxiety. They expressed a need for more affordable and timely mental health services.
- **Teen Pregnancy:** The issues of sexually active teens and teen pregnancy were seen as problems by many interviewees. Addressing the teen pregnancy problem was seen as crucial to breaking the cycle of poverty.
- **Chronic Disease Management:** Several interviewees noted concern regarding the management of chronic conditions such as diabetes, hypertension, asthma, and heart disease. They felt that the area would benefit from more related education and chronic disease management initiatives to support residents.
- **Obesity:** A number of interviewees saw obesity as a serious community health problem. The problems of proper nutrition and exercise were seen as contributing factors in terms of this problem.
- **Homelessness:** Many interviewees said the area has a problem with homelessness and expressed concern that Springfield shelters are housing the homeless from many other parts of the Commonwealth.
- **Care Coordination:** Many of the interviewees felt there is a need for better coordination of care across the various programs and providers serving the Springfield area. Successful efforts of care coordination within the Springfield Public School system as well as the Office of the Sheriff of Hampden County were cited as examples of effective care coordination. Many people cited the lack of care coordination as a serious barrier to improved community health.
- **Violence:** Violence and abuse were seen by interviewees as problems that need to be addressed in the Springfield area.

Key insights:
Interviews

- **Poverty manifests in a variety of community needs, including financial hardship, homelessness, and poor nutrition.**
- **Reducing teen pregnancy, which respondents view as crucial to breaking the cycle of poverty.**
- **Substance abuse (including alcohol, tobacco, and other drugs)**
- **Additional support for chronic disease management (including asthma, hypertension, and diabetes) is important for improving community health.**
- **Health system complexity and lack of integration across providers result in frustration for both patients and providers.**
- **Poor mental health impacts the entire family, and accessing treatment for these issues is difficult.**
- **Lack of understanding of appropriate use leads to insufficient primary care utilization and overuse of the emergency room for non-emergent conditions.**

Individuals Providing Community Input

The 49 stakeholders were comprised of public health experts; individuals from health or other departments and agencies; leaders or representatives of medically underserved, low-income, and minority populations; and other community members **(Exhibits 70, 71, 70, and 73**). Additionally, 18 community members participated in the CHNA listening sessions.

1. Public Health Experts

Individuals interviewed with special knowledge of or expertise in public health include (**Exhibits 70A** and **70B**).

Exhibit 70A: Public Health Experts Interviewed

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Tracy Osbahr	Director	Massachusetts Department of Public Health, Early Intervention Program	Ms. Osbahr has significant, specialized experience in public health due to her position as the director of the Early Intervention Program at the Massachusetts Department of Public Health.	Interview
Ben Wood	Healthy Community Design Coordinator	Massachusetts Department of Public Health, Division of Prevention and Wellness	Mr. Wood has special knowledge of public health due to his current position with the Massachusetts Department of Health's Division of Prevention and Wellness and his past work as Northampton's health director.	Interview
Donna Salloom	Community Liason	Massachusetts Department of Public Health, Division of Prevention and Wellness	As the community liaison for the Massachusetts Department of Health's Division for Prevention and Wellness, Ms. Salloom has important public health experience.	Interview
Ruth Jacobson-Hardy	Regional Manager	Massachusetts Department of Public Health, Substance Abuse Services	Ruth Jacobson-Hardy is the regional manager for the Massachusetts Department of Health's Bureau of Substance Abuse Services, giving her specific public health experience.	Interview
Molly Butler	Program Coordinator	Massachusetts Department of Public Health, Rural Health	Ms. Butler is the program coordinator for the State Office of Rural Health in the Massachusetts Department of Public Health and is experienced in public health.	Interview
Barbara Coughlin	Advisor	Massachusetts Department of Public Health, STD Program	Barbara Coughlin is an advisor with the STD Program at the Massachusetts Department of Public Health, a position which demonstrates her expertise in public health.	Interview
Charles Kaniecki	District Health Officer	Massachusetts Department of Public Health, Western Mass Region	As a district health officer in the Western Massachusetts region for the Massachusetts Department of Public Health, Charles Kaniecki has special expertise in public health.	Interview
Ronnie Rom	Coordinator	Massachusetts Department of Public Health, Rural Hospital Program	Ronnie Rom is a coordinator with the Massachusetts Department of Public Health's Rural Hospital Program, which requires specialized public health expertise.	Interview

Exhibit 70B: Public Health Experts Interviewed

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Amy Waldman	Project Director	Massachusetts Department of Public Health, Rural Domestic and Sexual Violence Project	As project director of the Rural Domestic and Sexual Violence Project at the Massachusetts Department of Public Health, Amy Waldman has specialized public health knowledge.	Interview
Cathy O'Conner	Director	Massachusetts Department of Public Health, Office of Healthy Communities	Ms. O'Connor is the director of the Office of Healthy Communities at the Massachusetts Department of Public Health, a position which emphasizes her public health expertise.	Interview
Helen Caulton-Harris	Director	City of Springfield, Dept of Health and Human Services	Ms. Caulton-Harris is the director of Springfield's Department of Health and Human Services, which demonstrates her expertise on public health issues.	Interview, Listening Session
Ben Cluff	Assistance Regional Manager	Bureau of Substance Abuse Services	Mr. Cluff is an assistance regional manager at the Bureau of Substance Abuse Services of the Massachusetts Department of Public Health, where he demonstrates his public health expertise.	Listening Session

2. Health or Other Departments or Agencies

Several interviewees were from departments or agencies with current data or other information relevant to the health needs of the Mercy community (**Exhibit 71**).This list excludes the public health experts identified in **Exhibit 70**.

Exhibit 71A: Individuals from Health Departments or Agencies Interviewed

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Michael Ashe	Hampden County Sheriff	Hampden County Corrections	As Hampden County Sheriff, Mr. Ashe has gained specialized expertise in the physician and mental health needs of Hampden County's inmate population.	Interview
Andrew Morehouse	Executive Director	Food Bank of Western Massachusetts	Mr. Morehouse is the executive director for the Food Bank of Western Massachusetts, a position which lends expertise on nutrition and food security.	Interview
Ann Awad	President/CEO	Caring Health Center (FQHC)	Ms. Awad is the president/CEO of Caring Health Center (a Federally-Qualified Health Center). This position gives her critical expertise on the health needs of the uninsured, racial/ethnic minorities, and underserved residents in the Springfield area.	Interview
Bill Miller	Executive Director	Friends of the Homeless	Bill Miller is the executive director of Friends of the Homeless, which demonstrates his significant expertise on homeless needs in the Springfield area.	Interview, Listening Session
Deleney McGoffin	Executive Assistant, Community Affairs at YMCA of Greater Springfield	YMCA of Greater Springfield	Through her position with the YMCA of Greater Springfield, Ms. McGoffin has an excellent understanding of the physical activity and health needs of the Springfield area.	Listening Session
Dora Robinson	President/CEO	United Way of Pioneer Valley	As the president/CEO of the United Way of the Pioneer Valley, Ms. Robinson has specialized knowledge of community health and the social determinants of health.	Interview
Elaine Massery	Executive Director	Greater Springfield Senior Services	Ms. Massery is the executive director of Greater Springfield Senior Services, which gives her expertise on the health needs of elderly residents in the Greater Springfield area.	Listening Session
Janet Denney	Director	City of Springfield, Elder Affairs	Ms. Denney has expertise in the needs of Springfield's elderly residents through her position as director at the Department of Elder Affairs for the City of Springfield.	Interview
Jeanne Clancy	Nursing Supervisor	Springfield Public Schools	Ms. Clancy is a nursing supervisor with Springfield Public Schools, which demonstrates her expertise in the physical and mental needs of school-aged children in the local school system.	Interview
John Roberson	Vice-President of Children and Family Services	Center for Human Development	Through his time at the Center for Human Development, Mr. Roberson has gained expertise in the behavioral health needs of children in families throughout Western MA.	Interview

Exhibit 71B: Individuals from Health Departments or Agencies Interviewed

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Juan Campbell	Vice-President of Sales	Health New England	As the Vice-President of Sales for Health New England, Mr. Campbell has significant knowledge about Greater Springfield's health needs.	Listening Session
Kathy Wilson	President / CEO	Behavioral Health Network	As president/CEO of Behavioral Health Network, Ms. Wilson has specialized knowledge of the behavioral health needs of children and families in Western MA.	Interview, Listening Session
Kristina Chapell	Development Officer	Alzheimer's Association	Ms. Chapell is a development officer with the Alzheimer's Association, which demonstrates her expertise in issues relating to Alzheimer's disease and dementia.	Interview
Mary Walachy	Project Director	Davis Foundation	As Project Director at the Davis Foundation, Ms. Walachy has expertise in community health and the social determinants of health.	Interview
Nanyamka Hales	Director for Health Initiatives	American Cancer Association	Ms. Hales is Director for Health Initiatives at the American Cancer Association, which demonstrates her expertise on cancer-related issues.	Interview
Nikki Burnett	Regional Vice President for Health Equity	American Heart Assocation	Ms. Burnett is the Regional Vice President for Health Equity at the American Heart Association, which emphasizes her knowledge of issues relating to stroke and heart disease, including racial and ethnic disparities.	Interview
Pamella Wells	Resident Services Manager	Springfield Housing Authority	Through her position as Resident Services Manager at the Springfield Housing Authority, Ms. Wells has expertise in the health needs of residents in publicly-supported housing.	Interview
Robert Marmor	President / CEO	Jewish Family Services	Mr. Marmor is president/CEO of Jewish Family Services; in this position, he has gained expertise in the health needs of families, elders, and racial/ethnic groups in Western Massachusetts.	Interview
Sally Fuller	Executive Director	Davis Foundation	Ms. Fuller is the executive director of the Davis Foundation, which emphasizes her knowledge of community health and social determinants of health.	Interview
Soloe Dennis	Emergency Preparedness Planner	Pioneer Valley Planning Commission	Mr. Dennis is the Emergency Preparedness Planner for the Pioneer Valley Planning Commission, highlighting his expertise in emergency preparedness.	Listening Session
Sr. Mary Caritas	Vice President	Sisters of Providence Health System	Sr. Caritas is part of the Sisters of Providence Health System, where she has gained significant knowledge about health needs in the Greater Springfield area.	Interview, Listening Session
Vickie Nelson	Associate Director of Development	YMCA of Greater Springfield	As the Associate Director of Development for the YMCA of Greater Springfield, Ms. Nelson has expertise in the physical activity and health needs of the Springfield area.	Listening Session
William Abrashkin	Judge	Springfield Housing Authority	Mr. Abrashkin is a judge with the Springfield Housing Authority, which highlights his expertise in the health needs of residents in publicly supported housing.	Interview

3. Community Leaders and Representatives

The following individuals were interviewed because they are leaders or representatives of medically underserved, low-income, and/or minority populations (**Exhibits 72A** and **72B**).This list excludes the public health experts identified in **Exhibits 70A** and **70B**.

Exhibit 72A: Community Leaders or Representatives Interviewed

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Jay Minkarah	President/CEO	Develop Springfield	Mr. Minkarah is the president/CEO of Develop Springfield, which highlights his knowledge of community needs.	Listening Session
Sarah Perez-McAdoo	Director	Youth Empowerment Adolescent Health (YEAH)	Ms. Perez-McAdoo is the director of Youth Empowerment Adolescent Health (YEAH), a position which emphasizes her knowledge of youth health needs in the Greater Springfield area.	Listening Session
Bill Ward	Executive Director	Regional Employment Board	As executive director of the Regional Employment Board, Mr. Ward has expertise in the health needs and employment opportunities in the Greater Springfield area.	Interview, Listening Session
Carlos Gonzalez	President/CEO	MA Latino Chamber of Commerce	Mr. Gonzalez is the president/CEO of the MA Latino Chamber of Commerce, which highlights his familiarity with healthcare and insurance issues.	Interview
Cindy Miller	Hampden County Health Services Manager, Tapestry Health	CHNA #4, Community Health Connections	Through her work with the Community Health Network Area #4, Ms. Miller has special knowledge of community health needs.	Interview
Giang Phan	Professor	University of Massachusetts Amherst, Vietnamese American Civic Association	Professor Phan is active at the University of Massachusetts at Amherst and with the Vietnamese American Civic Association. In those capacities, Professor Phan has gained expertise in immigrant and refugee health issues.	Interview
Henry Thoms	President	Urban League of Springfield	Mr. Thoms is the president of the Urban League of Springfield, which highlights his knowledge of community-based organizations and community needs.	Interview
Maly Son	Executive Director	Springfield Vietnamese American Civic Association	As the executive director of the Springfield Vietnamese American Civic Association, Mr. Son is an expert in immigrant and refugee health issues.	Interview
Mike Suzor	Assistant to the President	Springfield Technical Community College	Mr. Suzor is the assistant to the president at Springfield Technical Community College, a position in which he has demonstrated expertise in community issues.	Listening Session

Exhibit 72B: Community Leaders or Representatives Interviewed

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Mila Dubinchik	Regional Director	Russian Community Association of MA	Mr. Dubinchik is the regional director of the Russian Community Association of MA, highlighting his knowledge of immigrant and refugee health issues.	Interview
Sr. Maxyne Schneider	President	Sisters of St. Joseph	Sr. Schneider is a member of the Sisters of St. Joseph, which highlights her expertise in the basic needs of Springfield and Holyoke vulnerable populations.	Interview
Rev. Talbert Swan	Pastor	Spring of Hope Church	Rev. Swan is pastor of Spring of Hope Church, a position in which he demonstrates his expertise in community health needs, with a particular focus on racial/ethnic groups.	Interview
Theresa Glenn	-	CHNA #4, Community Health Connections	Through her work with the Community Health Network Area #4, Ms. Glenn has special knowledge of community health needs.	Interview, Listening Session
Timothy Paul Baymon, Ph.D.	Archbishop	Council of Churches of Greater Springfield	Archbishop Baymon's work with the Council of Churches of Greater Springfield highlights his understanding of the community's health needs.	Interview, Listening Session
Vanessa Otero	Director	North End Campus Coalition	As director of the North End Campus Coalition, Ms. Otero has expertise in migrant health and health disparities in the North End neighborhood of Springfield.	Interview
Wanda Givens	Director	Mason Square Health Task Force	Ms. Givens is the director of the Mason Square Health Task Force, which demonstrates her special knowledge of community health needs, particularly racial/ethnic disparities.	Interview

4. Persons Representing the Broad Interests of the Community

Exhibit 73: Other Interviewees Representing the Broad Interests of the Community

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Listening Session
Patrick McCarthy	Clinical Director	Hampden County Sheriff's Dept	Mr. McCarthy's work with the Hampden County Sheriff's Department has given him specialized knowledge of the community's health needs.	Listening Session
Shannon Giordano	Legislative Aide	Office of Rep. Coakley-Rivera	Through her work at the Office of Rep. Coakley-Rivera, Ms. Giordano is knowledgeable about community needs.	Listening Session
Domenic Sarno	Mayor	City of Springfield	Mr. Sarno is mayor of Springfield, a position in which he demonstrates his expertise in many community health and safety issues.	Interview
Jeff Ciuffreda	President	Affiliated Chambers of Commerce of Greater Springfield	Mr. Ciuffreda is president of the Affiliated Chambers of Commerce of Greater Springfield; in this capacity, he has demonstrated his familiarity with healthcare and insurance issues for the greater community.	Interview
John Barberi	Sergeant	City of Springfield Police Department	Sergeant Barberi is an expert on community issues and law enforcement, due to his service with the City of Springfield Police Department.	Interview
Kate Kane	Managing Director	Northwestern Mutual Financial Services	Ms. Kane is the managing director of Northwestern Mutual Financial Services. She has expertise in area health needs based on her experience as a business leader in the community.	Interview
Nicholas Fyntrilakis	Vice-President of Community Responsibility	MassMutual	As the Vice-President of Community Responsibility at MassMutual, Mr. Fyntrilakis shows expertise in community health and social determinants of health.	Interview
Shawn Sullivan	Communications and Infectious Control Officer	City of Springfield Police Department	As a communications and infectious control officer at the City of Springfield Police Department, Mr. Sullivan is an expert in community issues and law enforcement.	Interview
William Messner	President	Holyoke Community College	As president of Holyoke Community College, Mr. Messner is familiar with many community needs, particularly those of community college students.	Interview

APPENDIX

VILLAGES AND ZIP CODES WITHIN THE COMMUNITY

Mercy Medical Center's community is comprised of 51 ZIP codes in the 21 towns/cities in Hampden County.

Several of these towns/cities include other unincorporated areas or villages. For the purposes of this assessment, all data are presented at the town/city level. The following exhibit identifies the villages and ZIP codes that are part of each town/city assessed.

County, Town/City, and Villages	ZIP Code
Hampden Towns	
Agawam	
Agawam	01001
Feeding Hills	01030
Blandford	
Blandford	01008
Brimfield	01010
Chester	01011
Chicopee	01013
	01014
	01020
	01021
	01022
East Longmeadow	01028
Granville	01034
Hampden	01036
Holland	01521
Holyoke	01040
	01041
Longmeadow	01106
	01116
Ludlow	01056
Monson	01057
Palmer	
Palmer	01069
Bondsville	01009
Thorndike	01079
Three Rivers	01080
Russell	01071

County, Town/City, and Villages	ZIP Code
Hampden Towns	
Southwick	01077
Springfield	
Springfield	01101
	01102
	01103
	01104
	01105
	01107
	01108
	01109
	01115
	01118
	01119
	01128
	01129
	01138
	01139
	01199
Indian Orchard	01151
Wales	01081
West Springfield	01089
	01090
Westfield	
Westfield	01085
	01086
Woronoco	01097
Wilbraham	01095
	01195

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