Community Health Needs Assessment

Prepared for
HOLYOKE MEDICAL CENTER

By
VERITÉ HEALTHCARE CONSULTING, LLC

And
COMMUNITY HEALTH ADVISORS, LLC

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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 Holyoke 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

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INTRODUCTION

This community health needs assessment (CHNA) was conducted by Holyoke Medical Center (HMC 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.

HMC is a member of the Coalition of Western Massachusetts Hospitals (Coalition) which also includes Baystate Medical Center, Mercy Medical Center, Baystate Franklin Medical Center, Baystate Mary Lane Hospital, Cooley Dickinson Hospital, 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.

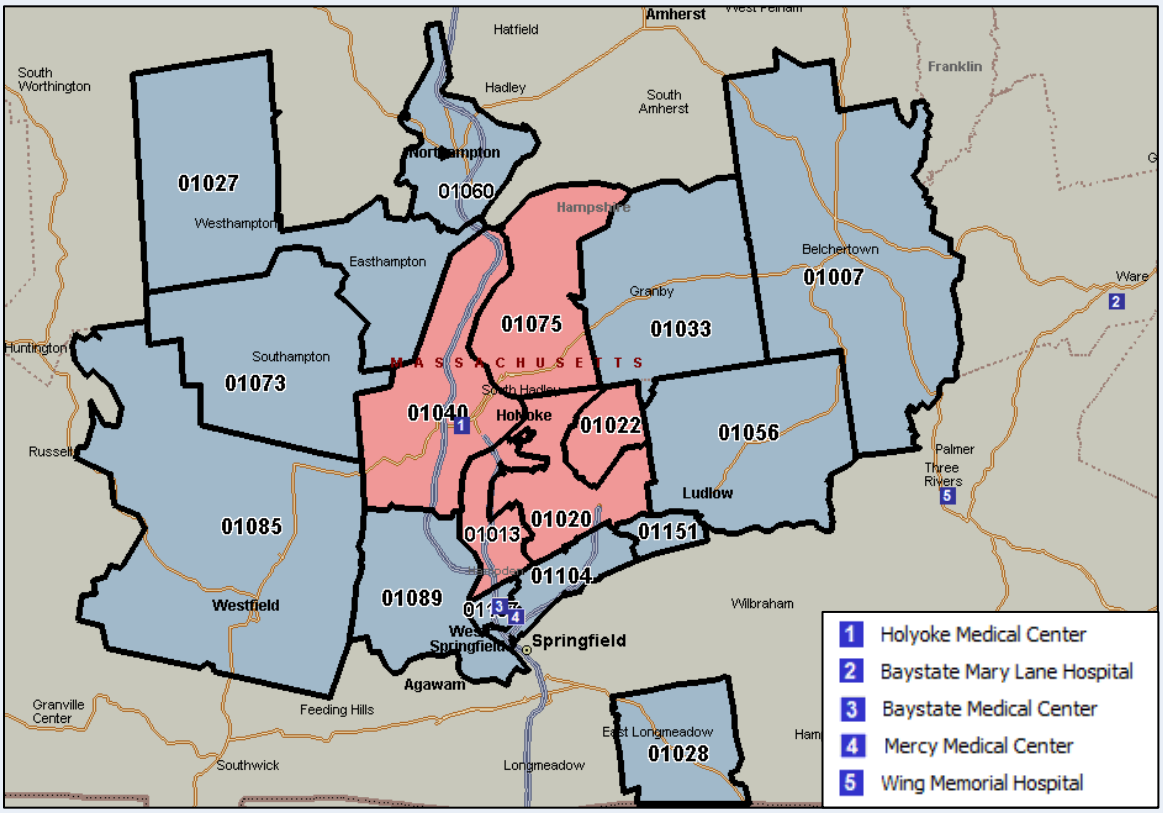
[1] Instructions for IRS Form 990, Schedule H, 2012.

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. HMC will be preparing an Implementation Strategy that describes how the hospital plans to address the identified needs.

EXECUTIVE SUMMARY



Areas in red include Holyoke, Chicopee, and South Hadley; these areas are most proximate to the hospital.
Maps show the location of other members of the Coalition of Western Massachusetts Hospitals.

HMC Community By the Numbers

- **18 ZIP codes in Hampden and Hampshire counties**
- **Population (2012): 323,993**
- **Projected population change (2012-2017):**
  - **Growth of 1% overall; 12% increase in the 65+ population**
- **18% of HMC's discharges for ambulatory care sensitive conditions (ACSC)**
- **ACSC discharges most common among Medicare patients**
- **Disparities for Black and Hispanic (or Latino) residents:**
  - **More likely to be living in poverty**
  - **Higher rates of chronic disease mortality in Hampden County**
- **Growing diversity:**
  - **Growing Asian, Black, and Hispanic (or Latino) populations**
  - **18% non-White in 2012; 20% non-White by 2017**

The HMC community, which contains 18 ZIP codes in 13 towns in Hampshire and Hampden counties, 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. 1,083 responses were received from residents of HMC'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 obesity, mental health, substance abuse/addiction, lack of exercise, and diabetes. Medicare beneficiaries identify cancer and those with Commonwealth Connector or without insurance identify tobacco use.

Following is a brief summary of health issues in the community served by Holyoke 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. Holyoke has a comparatively large Hispanic (or Latino) population, while Chicopee, East Longmeadow, and South Hadley have higher percentages of residents aged 65+. Hampshire County is growing at a slightly faster rate than Hampden County.

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, Holyoke, and Chicopee) are above the Massachusetts average. Additionally, comparatively high percentages of Medicaid discharges originated from Springfield and Holyoke.

Pediatric poverty and unemployment also are comparatively high. Unemployment disparities exist for Black, Asian, and Hispanic (or Latino) residents in Hampden and Hampshire counties.

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, healthy food and housing also are concerns for segments of the community.

Social Factors.
Language and cultural barriers between patients and providers prevent some residents from seeking timely and appropriate health services for themselves and their children, particularly for primary care.

Difficulty navigating a complex health system creates an additional barrier to access, particularly for vulnerable populations.

The community would benefit from increased integration and coordination of healthcare and related human services among providers and community organizations.

Behavioral Factors.
The HMC community reports high rates of teen pregnancy, with unsafe sex and chlamydia particularly prevalent in Hampden County. High rates of smoking during pregnancy and other infant health risk factors are present in Hampden County, while Hampshire County reports a comparatively high rate of births to women age 40-54. Low rates of healthy food consumption and exercise and above average rates of obesity and chronic diseases like diabetes also are problematic. Prevalent alcohol use in Hampden County and drug use in Hampden and Hampshire counties are complicated by resident difficulty in accessing substance abuse treatment.

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, particularly in Hampden County.

Poor mental and dental health affects 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 community health issues. Asthma is more prevalent in Hampden County across all age groups with Holyoke having the highest prevalence of asthma in schoolchildren.

Local Environment.
Poor built environment and low environmental quality are present in parts of the community. Several census tracts in or near Chicopee, Easthampton, Holyoke, Ludlow, and Springfield 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 in Hampden County, while forciple rape is comparatively high in Hampshire County.

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

Cost and an undersupply of healthcare providers in the HMC community are resulting in barriers to accessing primary care, mental health services, and dental care.

Discharges for Ambulatory Care Sensitive Conditions (ACSCs , which are potentially preventable if patients access primary care

resources at higher rates), were about 18 percent of HMC's discharges. The top four conditions were: bacterial pneumonia, chronic obstructive pulmonary disease or asthma in older adults, congestive heart failure, and urinary tract infection.

The community has a variety of resources working to address access barriers. There are 15 Federally Qualified Health Centers (FQHC) and FQHC site partners located in the community. All serve medically underserved areas and populations.

Priority Health Needs

This assessment begins by identifying the communities served by HMC. 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 Holyoke Medical Center. These needs are presented in alphabetical order, by category. The prioritized list identifies the 16 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 Culturally Sensitive Care
- Need for Increased Integration and Coordination of Health and Human Services

Dental Health

- Lack of Access to Dental Care

Health Behaviors

- High Rates of Alcohol (Hampden County) and Drug Use
- High Rates of Unsafe Sex (Hampden County), Teen Pregnancy, and Chlamydia (Hampden County)

Maternal and Child Health

- Prevalent Infant Health Risk Factors (e.g., smoking during pregnancy, births to women age 40-54)
- Pediatric Disability (Hampden County)

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) (Hampden County)

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 HMC. 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 HMC-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 HMC'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 HMC's ability to reach reasonable conclusions regarding priority community health needs.

Collaborating Organizations

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

HMC 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 HMC. Verité validated the community definition by analyzing the geographic origins of the hospital's discharges (**Exhibit 2**).

HMC's community is comprised of 18 ZIP codes in 13 towns: Belchertown, Chicopee, East Longmeadow, Easthampton, Granby, Holyoke, Ludlow, Northampton, South Hadley, Southampton, Springfield, West Springfield, and Westfield (**Exhibit 1**). The overall community encompasses parts of Hampden and Hampshire counties (**Exhibit 2)**. The hospital is located in Holyoke.

Exhibit 1: Community Population, 2012

County and Town/City*	Total Population 2012	Percent of Total Population
Hampden Towns	**245,963**	**75.9%**
Chicopee	55,453	17.1%
East Longmeadow	15,723	4.9%
Holyoke	40,073	12.4%
Ludlow	21,197	6.5%
Springfield	43,181	13.3%
West Springfield	28,292	8.7%
Westfield	42,044	13.0%
Hampshire Towns	**78,030**	**24.1%**
Belchertown	14,941	4.6%
Easthampton	17,824	5.5%
Granby	6,266	1.9%
Northampton	15,526	4.8%
South Hadley	17,528	5.4%
Southampton	5,945	1.8%
Total	**323,993**	**100.0%**

Source: The Nielsen Company and Truven Health Analytics via HMC, 2012.
*A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Chicopee in Hampden County is the most populous town in the HMC community

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Residents of Hampden County account for 76% of the community population

Some health indicators only are available at a county-wide level of detail. When assessing these indicators, it is important to take into account the percentage of the total community population that resides in each county. Residents in the HMC community represented roughly 53.0 percent of Hampden County's population and 48.4 percent of Hampshire County's population (**Exhibit 2).** Accordingly, caution should be used when assessing data available only for Hampden and Hampshire counties as a whole.

Exhibit 2: Community and County Overlap, 2012

County	Community Population	Percent of Total Community Population	Total County Population	Community Percent of Total County
Hampden	245,963	75.9%	464,416	53.0%
Hampshire	78,030	24.1%	161,179	48.4%
Total	**323,993**	**100.0%**	**625,595**	**51.8%**

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

In the 12 months ended September 2011, 90.8 percent of inpatients originated from the identified areas (**Exhibit 3**).

Exhibit 3: Inpatient Discharges by Town/City, 2010-2011

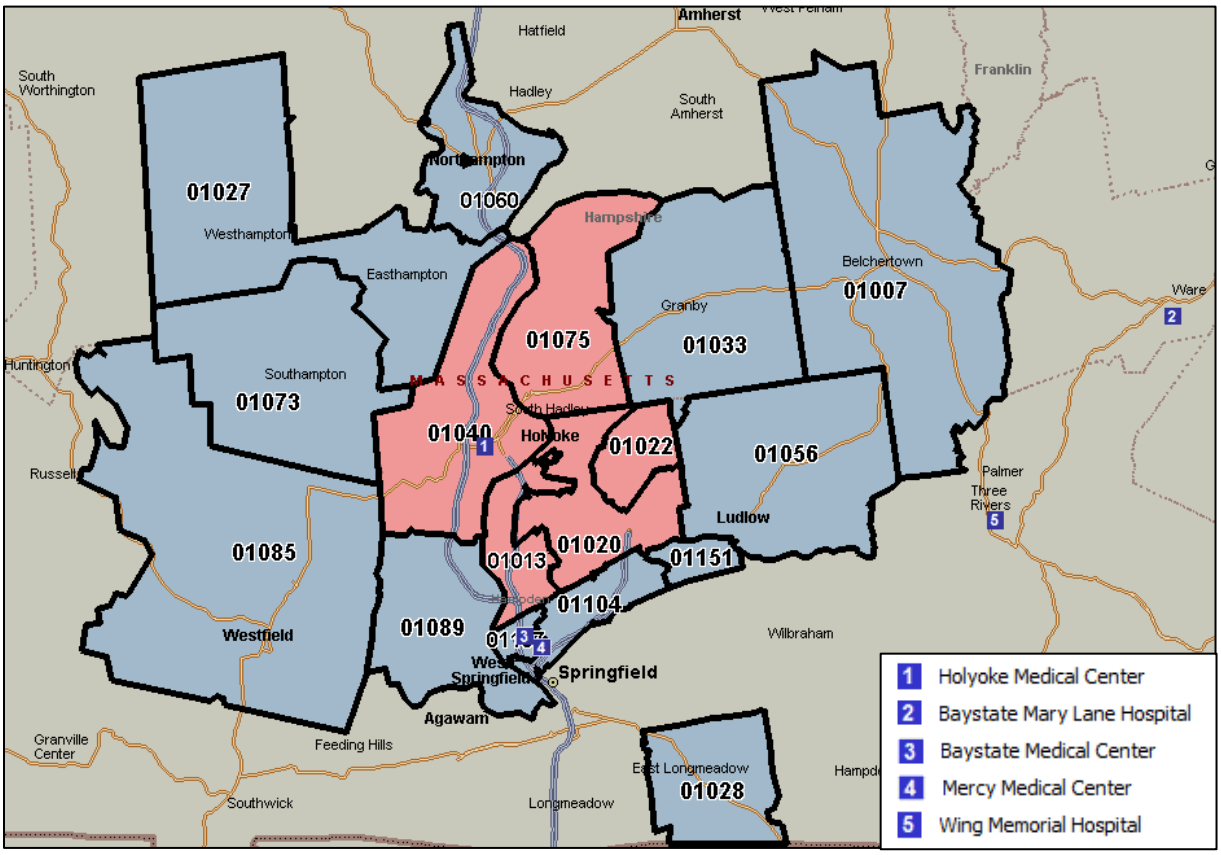
County and Town/City*	Number of Discharges	Percent of Total Discharges
Hampden Towns	**4,764**	**74.0%**
Chicopee	1,256	19.5%
East Longmeadow	11	0.2%
Holyoke	3,101	48.2%
Ludlow	41	0.6%
Springfield	90	1.4%
West Springfield	157	2.4%
Westfield	108	1.7%
Hampshire Towns	**1,078**	**16.7%**
Belchertown	37	0.6%
Easthampton	104	1.6%
Granby	179	2.8%
Northampton	40	0.6%
South Hadley	666	10.3%
Southampton	52	0.8%
Community Total	**5,842**	**90.8%**
Other Areas	**594**	**9.2%**
Total	**6,436**	**100.0%**

Source: Holyoke Medical Center, 2012.
*A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

The 13 towns in the community accounted for 91% of Holyoke's inpatient discharges; 48% of discharges originated in Holyoke

Exhibit 4 presents the ZIP codes that comprise HMC's community.

Exhibit 4: HMC Community



Source: Microsoft MapPoint and HMC, 2012.
Areas in red include Holyoke, Chicopee, and South Hadley; these areas are most proximate to the hospital.
Maps show the location of other members of the Coalition of Western Massachusetts Hospitals.

SECONDARY DATA ASSESSMENT

This section assesses secondary data regarding health needs in the HMC 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 1.1 percent between 2012 and 2017 (**Exhibit 5**).

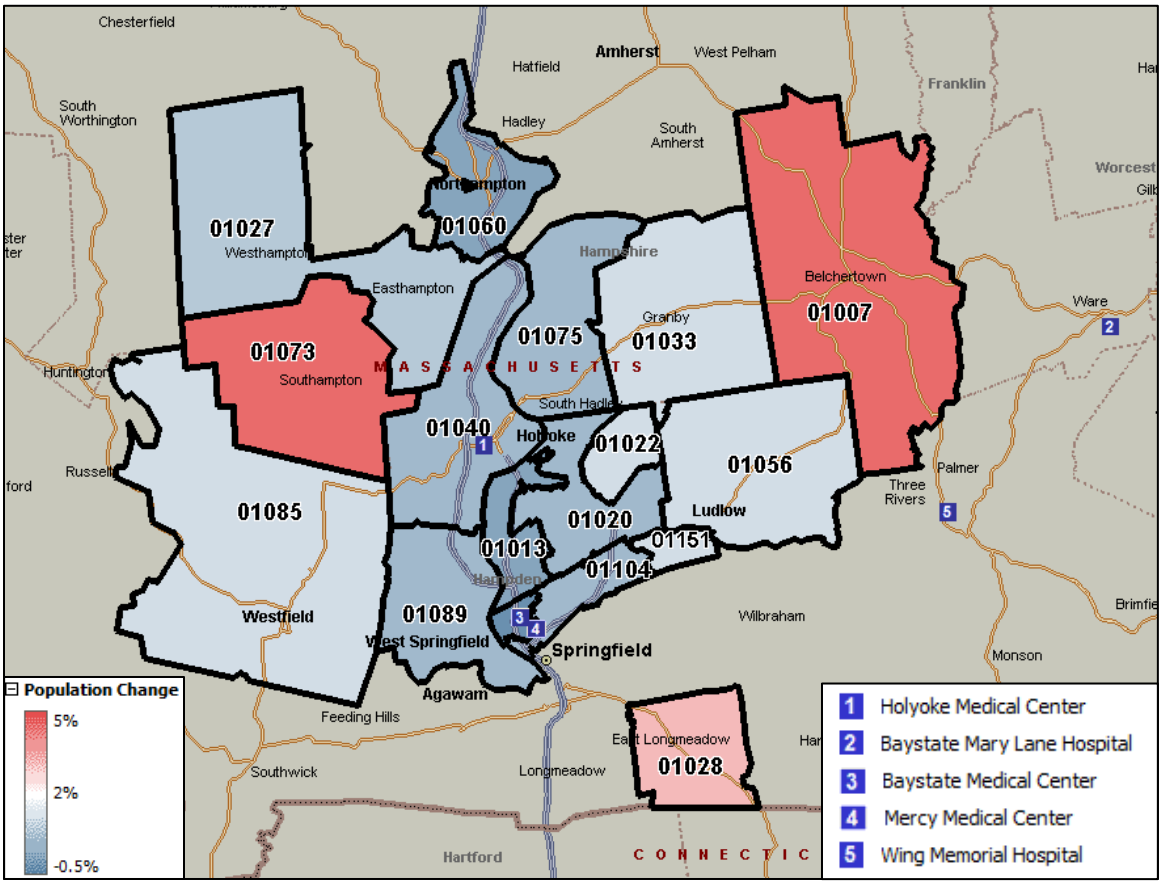
Exhibit 5: Percent Change in Population by County and Age, 2012-2017

County and Town/City*	Total Population 2012	Total Population 2017	Percent Change
Hampden Towns	**245,963**	**248,056**	**0.9%**
Chicopee	55,453	55,684	0.4%
East Longmeadow	15,723	16,250	3.4%
Holyoke	40,073	40,222	0.4%
Ludlow	21,197	21,445	1.2%
Springfield	43,181	43,405	0.5%
West Springfield	28,292	28,484	0.7%
Westfield	42,044	42,566	1.2%
Hampshire Towns	**78,030**	**79,394**	**1.7%**
Belchertown	14,941	15,610	4.5%
Easthampton	17,824	18,015	1.1%
Granby	6,266	6,357	1.5%
Northampton	15,526	15,573	0.3%
South Hadley	17,528	17,627	0.6%
Southampton	5,945	6,212	4.5%
Total	**323,993**	**327,450**	**1.1%**

Source: The Nielsen Company and Truven Health Analytics via HMC, 2012.
*A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

Projected population growth varies by town. ZIP codes 01007 (Belchertown) and 01073 (Southampton) are projected to experience a population increase of approximately 4.5 percent (**Exhibit 6**).

Exhibit 6: Population Change by ZIP Code, 2012-2017



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

Exhibit 7 indicates that the 65+ and 45 to 64 age cohorts are expected to increase while other age cohorts will see population declines.

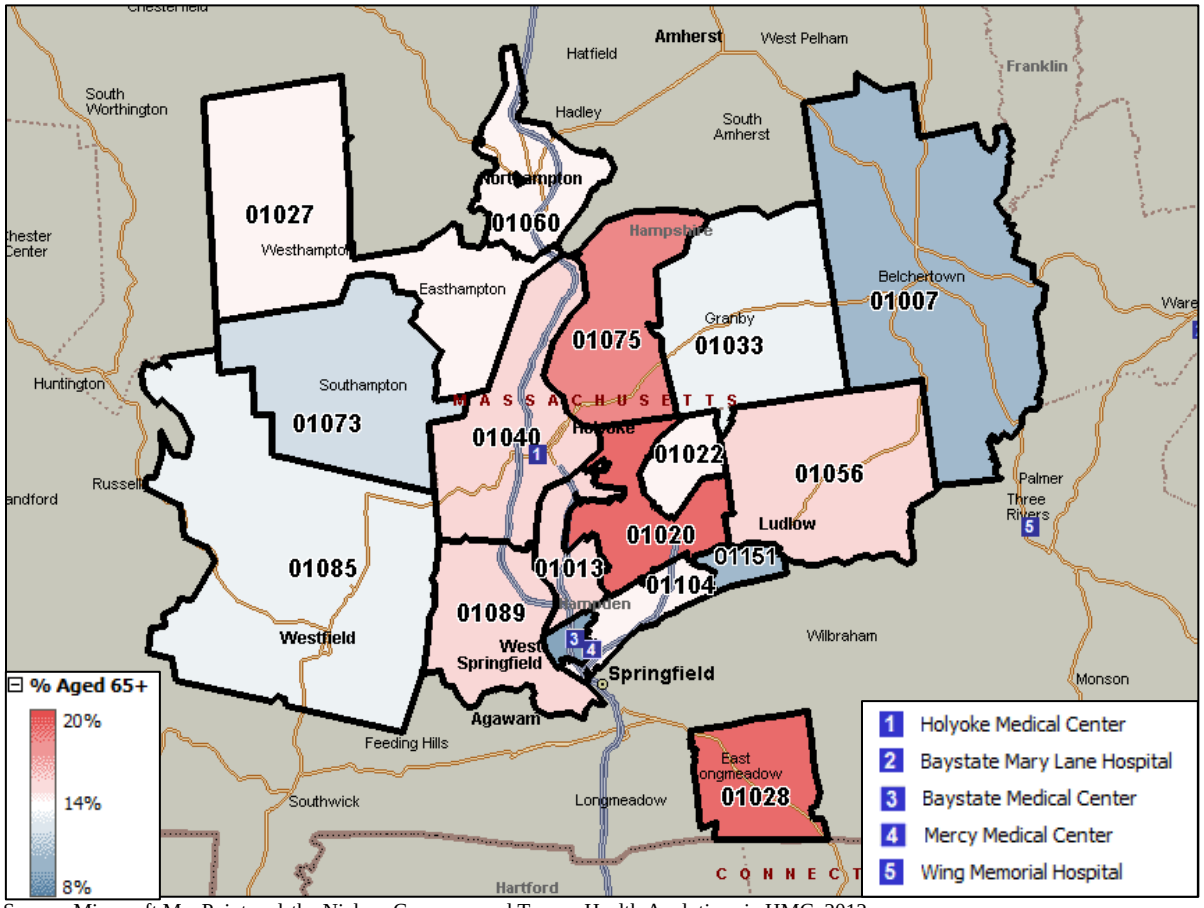
Exhibit 7: Percent Change in Population by Age/Sex Cohort, 2012-2017

Age/Sex Cohort	Community Population 2012	Community Population 2017	Percent Change
0-17	72,920	69,536	-4.6%
Female 18-44	59,543	58,134	-2.4%
Male 18-44	55,299	54,928	-0.7%
45-64	89,162	92,338	3.6%
65+	47,069	52,514	11.6%
Total	**323,993**	**327,450**	**1.1%**

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

The percentage of people aged 65+ is highest in ZIP codes 01020 (Chicopee), 01028 (East Longmeadow), and 01075 (South Hadley) (**Exhibit 8**).

Exhibit 8: Percent of Population Aged 65+ by ZIP Code, 2012



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

In 2012, about 82 percent of the community's population was White. Non-White populations are expected to grow faster than White populations in the community. The Black, Asian, and Other[3] populations and those who identify as two or more races are expecting the fastest growth (**Exhibit 9**). The growing diversity of the community is important to recognize given the presence of health disparities and the need to enhance cultural competency of health care providers.

Exhibit 9: Distribution of Population by Race[4], 2012-2017

Racial Cohort	Hampden Towns	Hampshire Towns	Total
2012			
White	79.0%	91.3%	82.0%
Black	5.2%	1.8%	4.3%
American Indian	0.4%	0.2%	0.4%
Asian	1.8%	3.2%	2.1%
Other Race	10.6%	1.4%	8.4%
Two or More Races	2.9%	2.1%	2.7%
Total	**45,963**	**8,030**	**323,993**
2017			
White	77.0%	90.2%	80.2%
Black	5.7%	2.1%	4.8%
American Indian	0.5%	0.2%	0.4%
Asian	2.1%	3.6%	2.5%
Other Race	11.5%	1.6%	9.1%
Two or More Races	3.2%	2.3%	3.0%
Total	**8,056**	**9,394**	**327,450**
Percent Change			
White	-1.7%	0.5%	-1.1%
Black	11.1%	16.6%	11.7%
American Indian	8.7%	-0.7%	7.6%
Asian	18.1%	13.6%	16.5%
Other Race	9.4%	17.5%	9.7%
Two or More Races	9.5%	14.5%	10.4%
Total	**0.9%**	**1.7%**	**1.1%**

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

Hampden County will see growth in all non-White populations between 2012 and 2017

…

The Asian population will grow by over 16%

Projections indicate that the Hispanic (or Latino) population is expected to increase more rapidly (approximately 11.5 percent between 2012 and 2017) than the non-Hispanic (or Latino) population (**Exhibit 10**).

[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: Distribution of Population by Ethnicity, 2012-2017

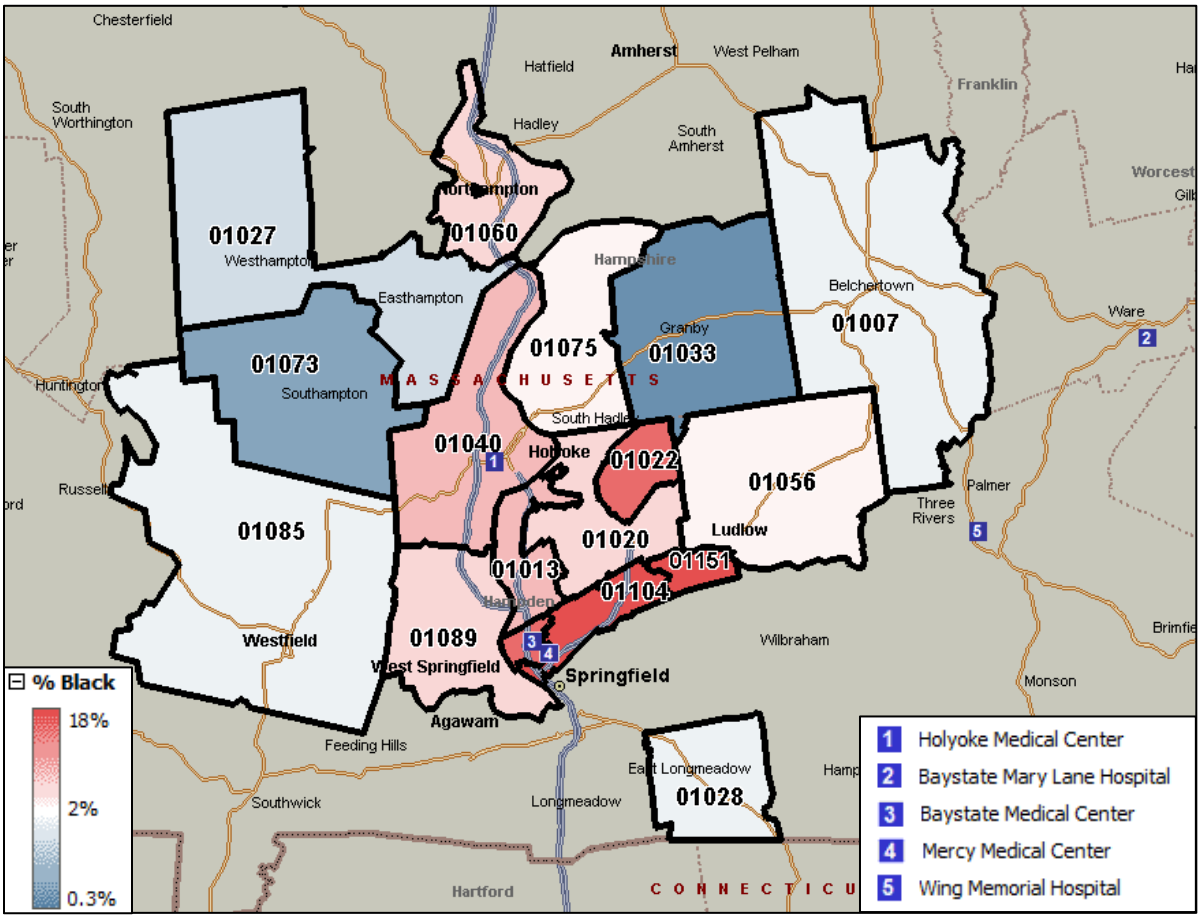
Ethnic Cohort	Hampden Towns	Hampshire Towns	Total
2012			
Hispanic (or Latino)	24.5%	4.2%	19.6%
Non-Hispanic (or Latino)	75.5%	95.8%	80.4%
Total	**245,963**	**78,030**	**323,993**
2017			
Hispanic (or Latino)	27.2%	4.9%	21.8%
Non-Hispanic (or Latino)	73.6%	96.8%	79.2%
Total	**248,056**	**79,394**	**327,450**
Percent Change			
Hispanic (or Latino)	11.2%	16.2%	11.5%
Non-Hispanic (or Latino)	-2.5%	1.1%	-1.5%
Total	**0.9%**	**1.7%**	**1.1%**

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

HMC's Hispanic (or Latino) population will increase 11.5% between 2012 and 2017

Exhibits 11, **12**, and **13** 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 01151 (Springfield); the percent of Asian residents is highest in ZIP codes 01060 (Northampton) and 01089 (West Springfield). The percent of Hispanic (or Latino) residents is highest in ZIP code 01107 (Springfield).

Exhibit 11: Percent of Population (Black), 2012



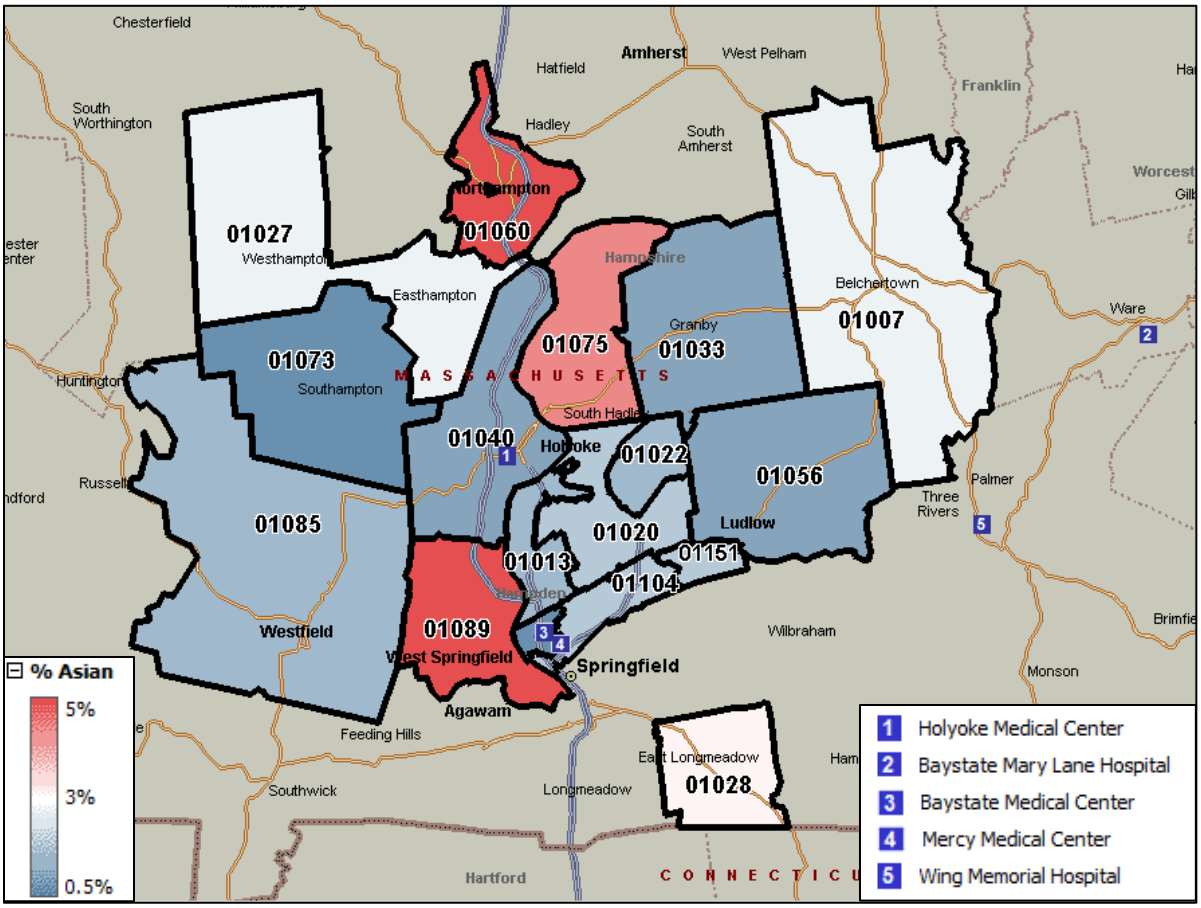
Sources: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via HMC, 2012.

Black residents make up the highest percentage of the population in ZIP codes 01151 and 01104 (Springfield)

…

4.8% of the population in ZIP code 01040 (Holyoke) is Black

Exhibit 12: Percent of Population (Asian), 2012



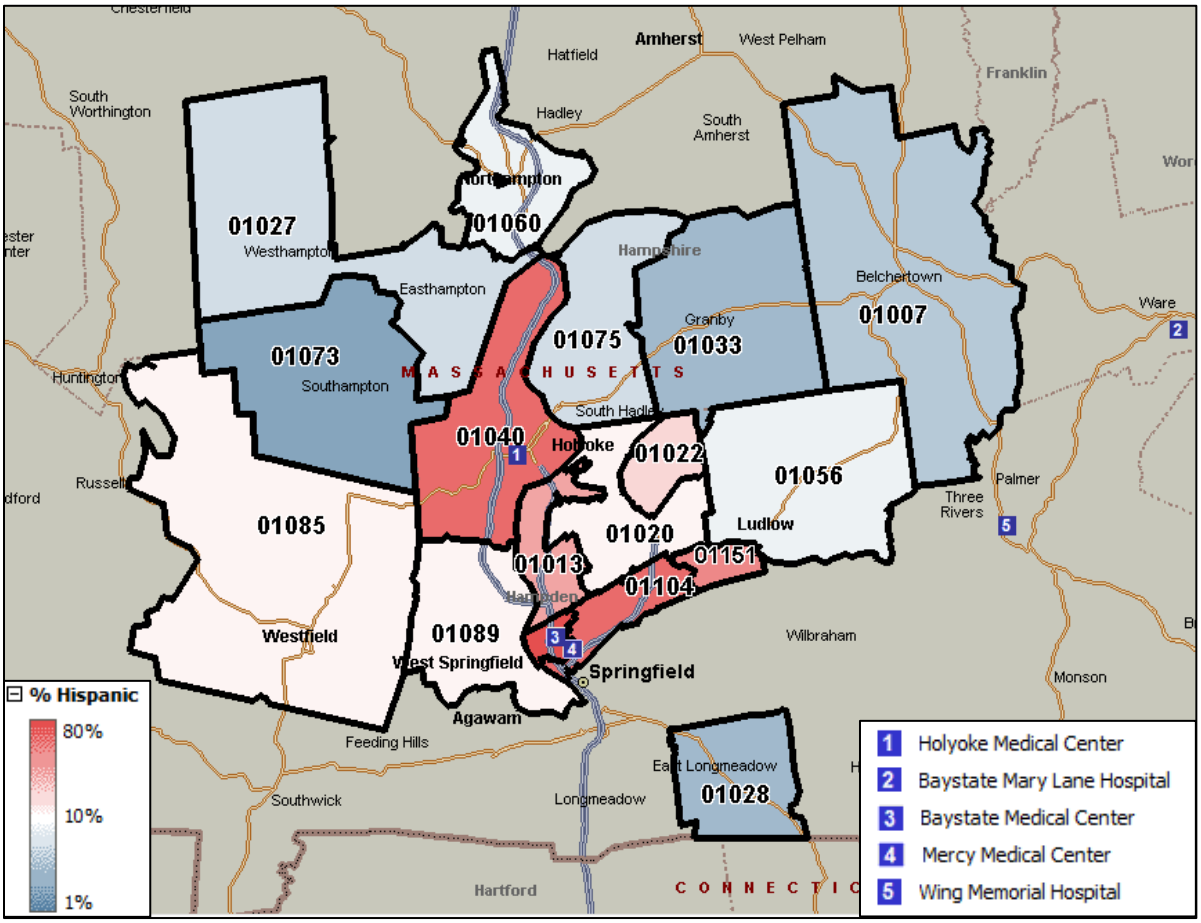
Sources: Microsoft MapPoint and the Nielsen Company and Truven Health Analytics via HMC, 2012.

Asian residents make up the highest percentage of the population in ZIP codes 01060 (Northampton) and 01089 (West Springfield)

...

1.2% of the population in ZIP code 01040 (Holyoke) is Asian

Exhibit 13: Percent of Population (Hispanic (or Latino)), 2012



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

About 78% of the population in ZIP code 01107 (Springfield) identified as Hispanic (or Latino)

…

49.6% of the population in ZIP code 01040 (Holyoke) identified as Hispanic (or Latino)

Other demographic characteristics are presented in **Exhibit 14**. Key findings include:

- Hampshire County benchmarked favorably compared to Massachusetts and national averages for all indicators except pediatric disability.
- 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. 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."

Exhibit 14: Other Demographic Indicators, 2011

Demographic Indicators	Hampden	Hampshire	Massachusetts	U.S.
Total Population With Any Disability*	16.8%	10.6%	**11.3%**	**12.1%**
Population 0-18 With Any Disability*	8.8%	6.8%	**4.5%**	**4.0%**
Population 18-64 With Any Disability*	14.9%	7.7%	**8.8%**	**10.2%**
Population 65+ With Any Disability*	39.3%	31.4%	**34.1%**	**36.6%**
Population 25+ Without High School Diploma	16.6%	7.4%	**10.8%**	**14.1%**
Population 5+ Who are Linguistically Isolated	9.3%	2.8%	**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. Holyoke has a high percentage of Hispanic (or Latino) residents.**
- **Hampden and Hampshire report higher rates of pediatric disability than the Massachusetts and national averages.**
- **Hampden County reports higher rates of linguistic isolation and low educational achievement than the Massachusetts and national averages.**

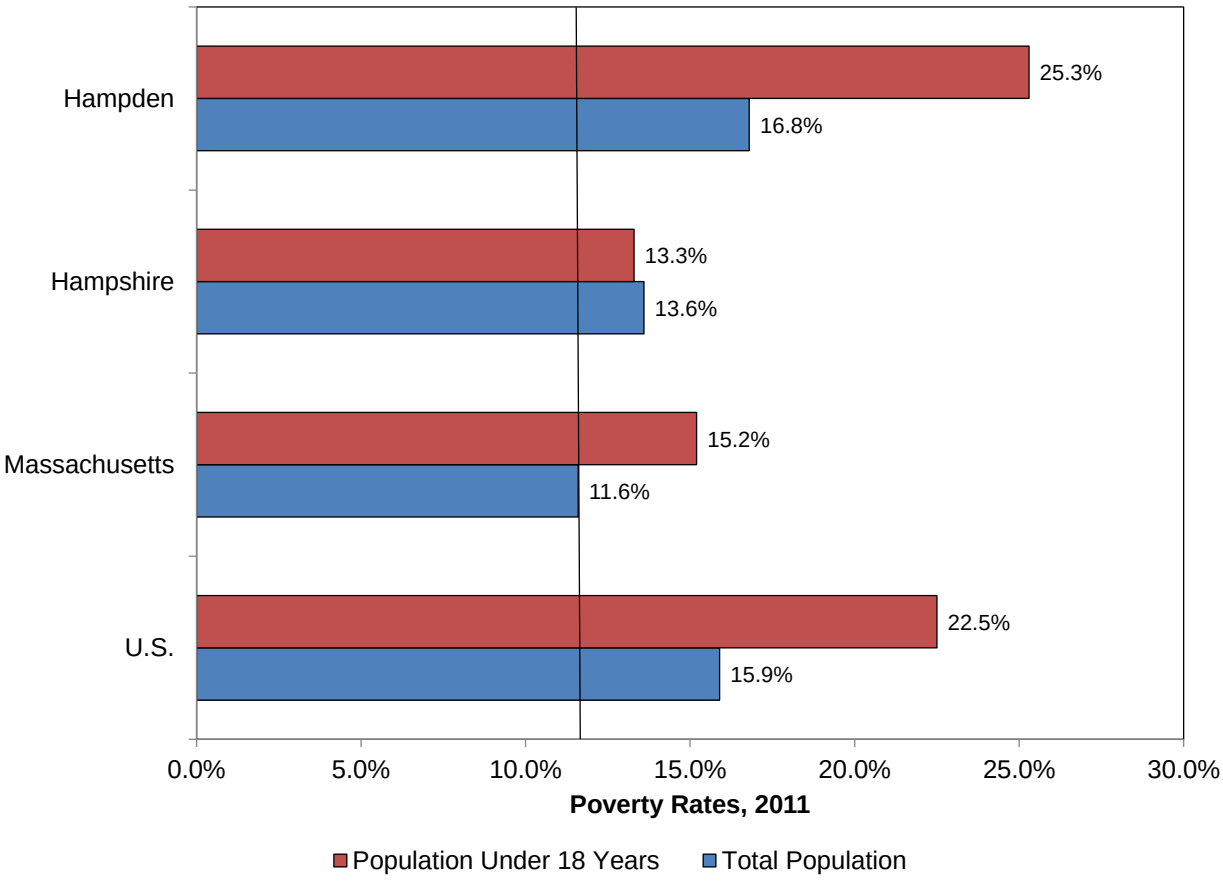
Economic Indicators

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 and Hampshire counties reported a poverty rate higher than the commonwealth average; Hampden County reported a rate higher than the national average (**Exhibit 15**). The pediatric population reported higher poverty rates than the total population in Hampden County.

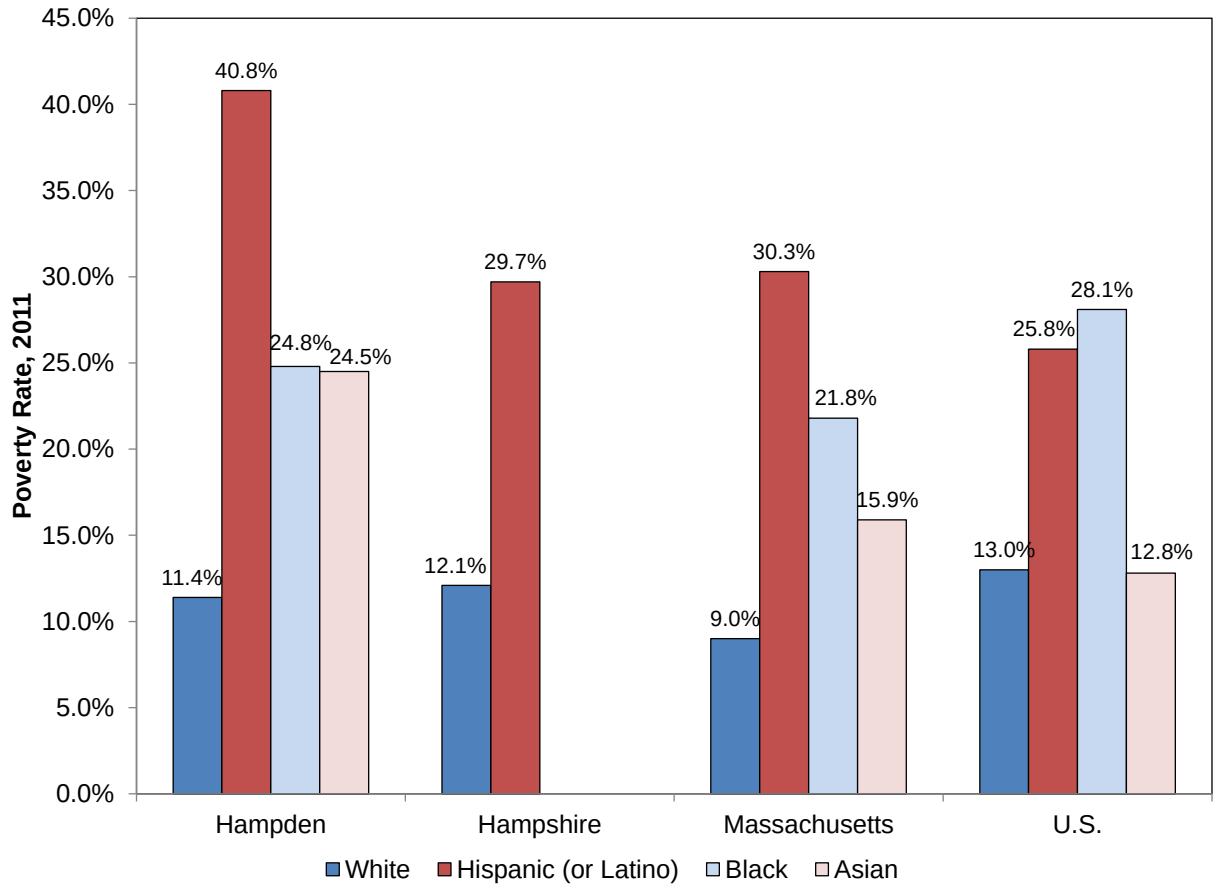
Exhibit 15: Percent of People in Poverty, 2011



Source: U.S. Census Bureau, 2012.

Exhibit 16 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. Hispanic (or Latino) populations in Hampden and Hampshire reported the highest poverty rates. Poverty rates for each racial/ethnic group in Hampden and Hampshire were roughly equivalent to or higher than comparable groups elsewhere in Massachusetts.

Exhibit 16: Percent of People in Poverty by Race/Ethnicity, 2011



Source: U.S. Census Bureau, 2012.
Data for Black and Asian residents in Hampshire County were not available.

2. Household Income

In the HMC community in 2012, 27.2 percent of all households had incomes below $25,000, an approximation of the federal poverty level (FPL) for a family of four; 53.7 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. Springfield in Hampden County reported the lowest average household income (**Exhibit 17**).

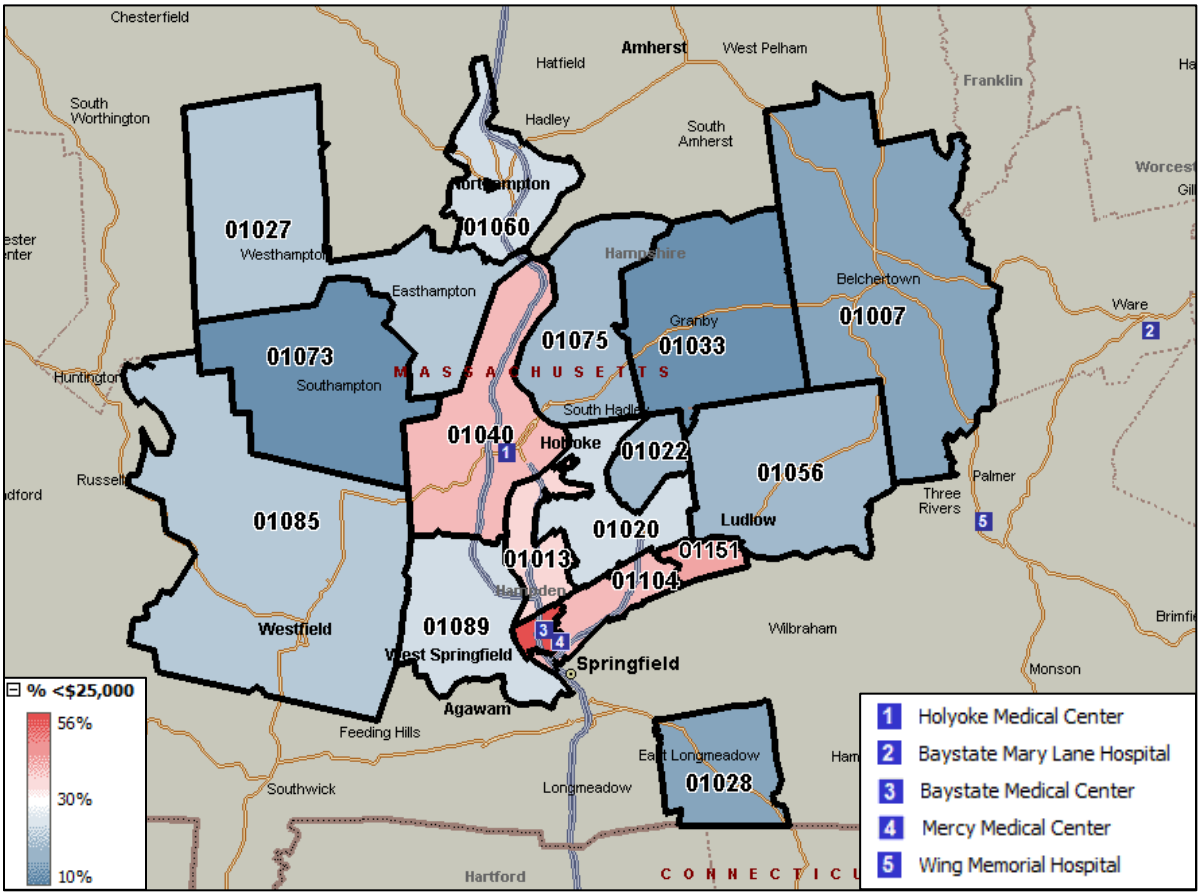
Exhibit 17: Percent Lower-Income Households by Town, 2012

County and Town/City*	Number of Households 2012	Average Income	Percent Less Than $25,000	Percent Less Than $50,000
Hampden Towns	**97,222**	**$54,657**	**29.8%**	**57.0%**
Chicopee	23,864	$49,929	28.5%	60.8%
East Longmeadow	5,859	$91,210	13.3%	31.1%
Holyoke	15,504	$45,543	38.8%	66.1%
Ludlow	8,162	$65,395	18.6%	43.5%
Springfield	15,981	$38,473	44.8%	72.3%
West Springfield	12,091	$58,115	26.2%	53.1%
Westfield	15,761	$65,389	22.4%	46.3%
Hampshire Towns	**31,890**	**$69,094**	**19.4%**	**43.7%**
Belchertown	5,708	$75,109	14.3%	35.5%
Easthampton	7,948	$62,081	21.6%	46.8%
Granby	2,394	$75,331	12.9%	34.3%
Northampton	6,689	$63,168	27.1%	54.6%
South Hadley	6,824	$70,972	18.8%	44.8%
Southampton	2,327	$83,401	11.2%	28.1%
Total	**129,112**	**$58,223**	**27.2%**	**53.7%**

Source: The Nielsen Company and Truven Health Analytics via HMC, 2012.
*A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

ZIP code 01107 (Springfield) had over 55 percent of households reporting incomes under $25,000 (**Exhibit 18**).

Exhibit 18: Percent of Households with Incomes Under $25,000 by ZIP Code, 2012



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

ZIP code 01107 (Springfield) reported over 55% of households earning less than $25,000 per year

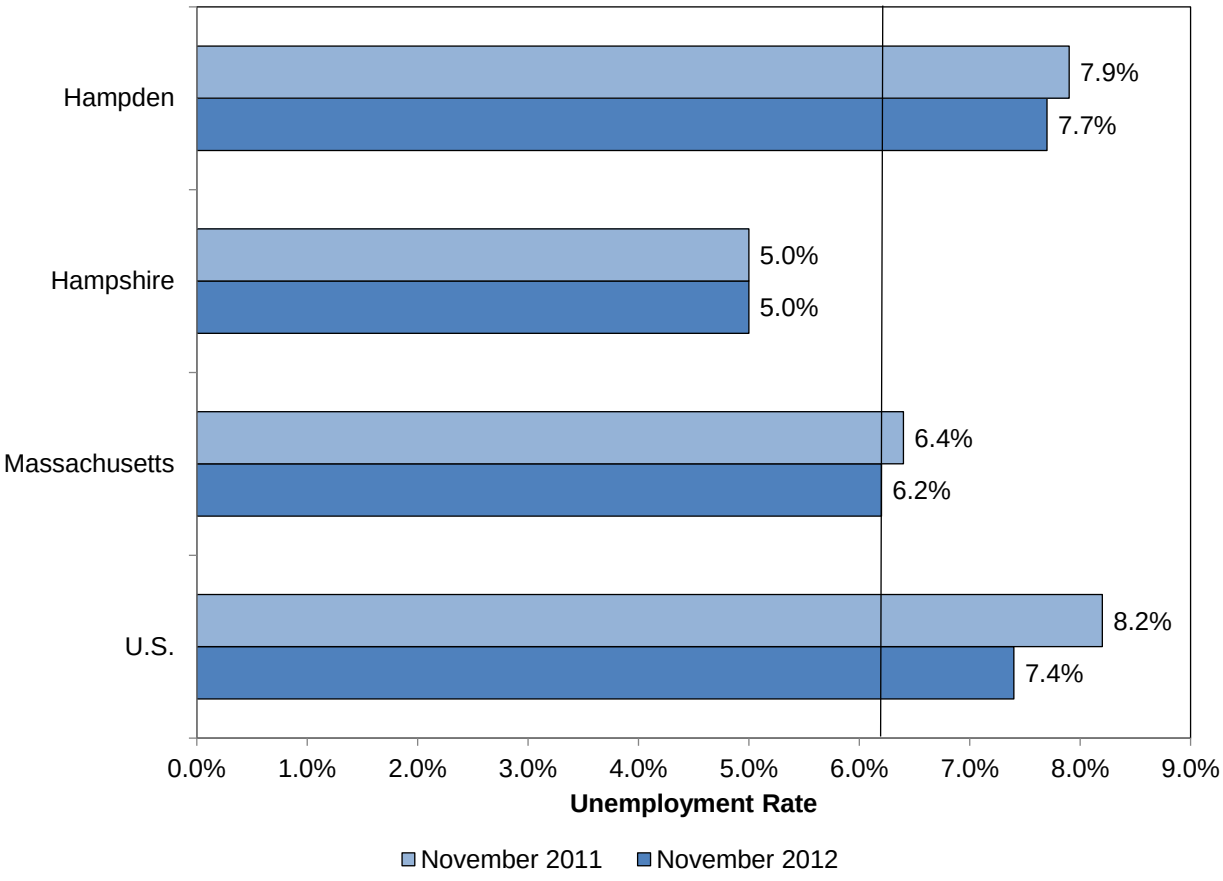
…

39% of households in ZIP code 01040 (Holyoke) earned less than $25,000 per year

3. Unemployment Rates

Exhibit 19 shows the unemployment rates for Hampden and Hampshire counties in November of 2011 and 2012, with Massachusetts and national averages for comparison. Hampden County reported unemployment rates above commonwealth averages.

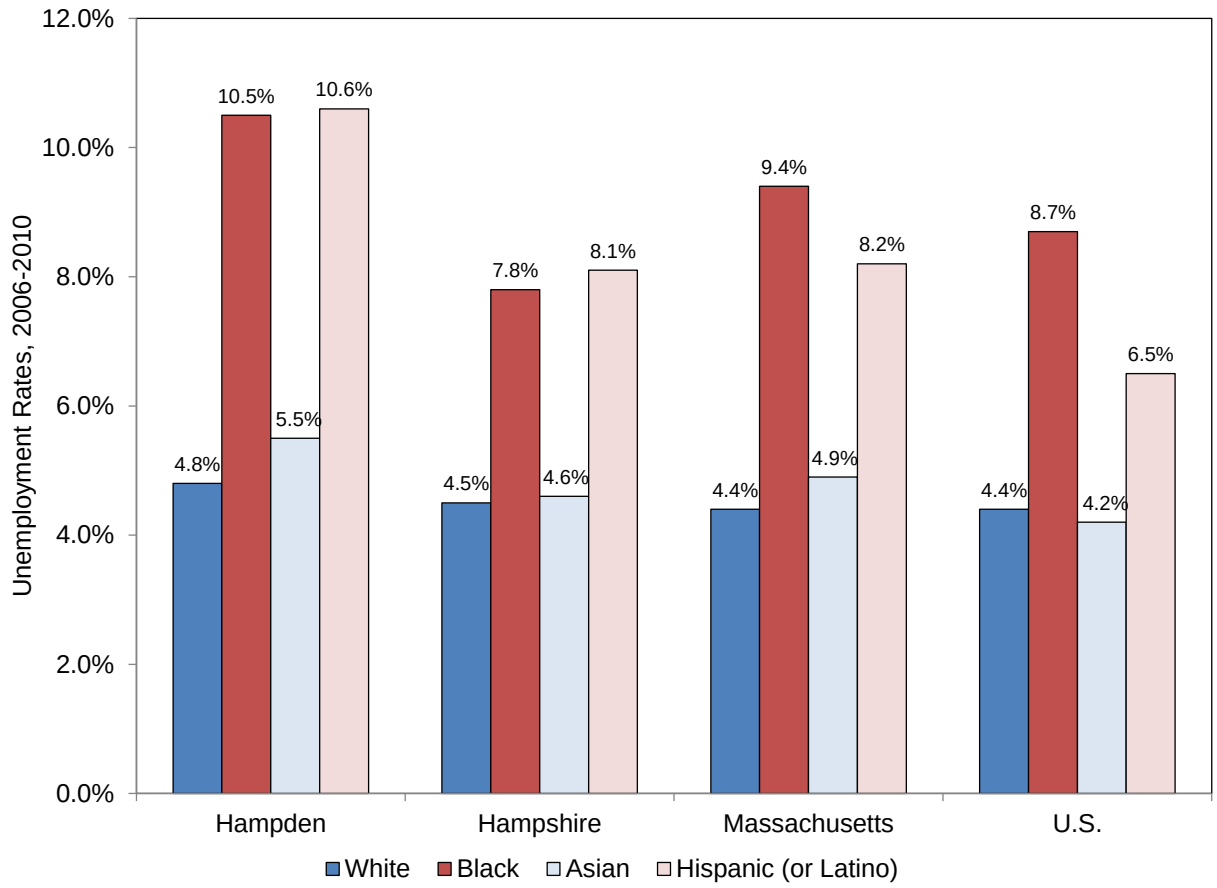
Exhibit 19: Unemployment Rates, 2011 and 2012



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 2006-2010 were disproportionately high for the Black and Hispanic (or Latino) populations in Hampden and Hampshire counties (**Exhibit 20**).

Exhibit 20: 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. Hampshire's forcible rape rate also was significantly higher than commonwealth and national averages (**Exhibit 21**).

Exhibit 21: 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
Hampshire	137,535	0.0	31.3	174.5	24.0	229.8	1,787.2
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 HMC'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.[5] 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.[6]

[5]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

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

Even after the reforms, however, low-income residents remain more likely to be uninsured than higher income residents.[7] Other characteristics of the remaining uninsured are: single, young, 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.[8]

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 and Hampshire counties reported an average time on the waiting list for Section 8 housing certificates and vouchers that was less than the Massachusetts average. The average household federal contribution in Hampden and Hampshire counties is noticeably lower than the Massachusetts average (**Exhibit 22**).

Exhibit 22: 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
Hampshire	1,179	$379	$607	11
Massachusetts	**72,369**	**$407**	**$907**	**15**
U.S.	**2,040,801**	**$319**	**$580**	**9**

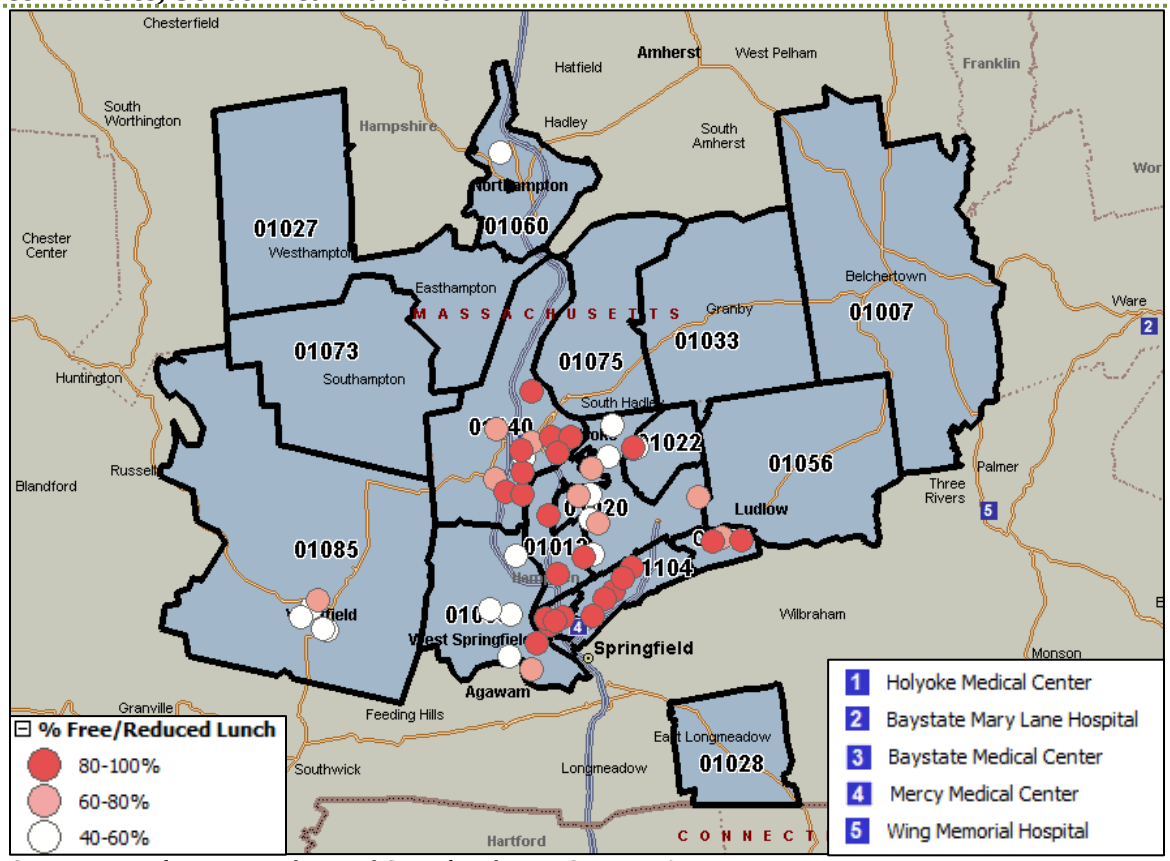
Source: U.S. Department of Housing and Urban Development, 2012.

[7] 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

[8] 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 HMC community, 53 of approximately 100 schools were eligible for Title I funds (**Exhibit 23**).

Exhibit 23: 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.

Exhibit 24 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 commonwealth and national averages. About 9.1 percent of Hampshire County households participated in SNAP.

Exhibit 24: 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%
Hampshire	5,387	58,971	9.1%
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 25 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. Hampshire County, at 2.2 percent enrollment, again was lower than commonwealth and national averages.

Exhibit 25: 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%
Hampshire	1,319	58,971	2.2%
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 26 demonstrates that, in 2011, 4.8 percent of Hampden County's population and 3.4 percent of Hampshire County's population lacked health insurance. Hampden County's percentage was higher than the Massachusetts average but below the national average. Health reform in Massachusetts has significantly decreased uninsurance rates.

Exhibit 26: 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%
Hampshire	3.4%	1.1%	4.4%	8.1%	4.1%	4.5%
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 27 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. East Longmeadow and South Hadley reported the highest percentage of Medicare discharges in the community.

Exhibit 27: Community-Wide Discharges[9] by County and Payer, 2011

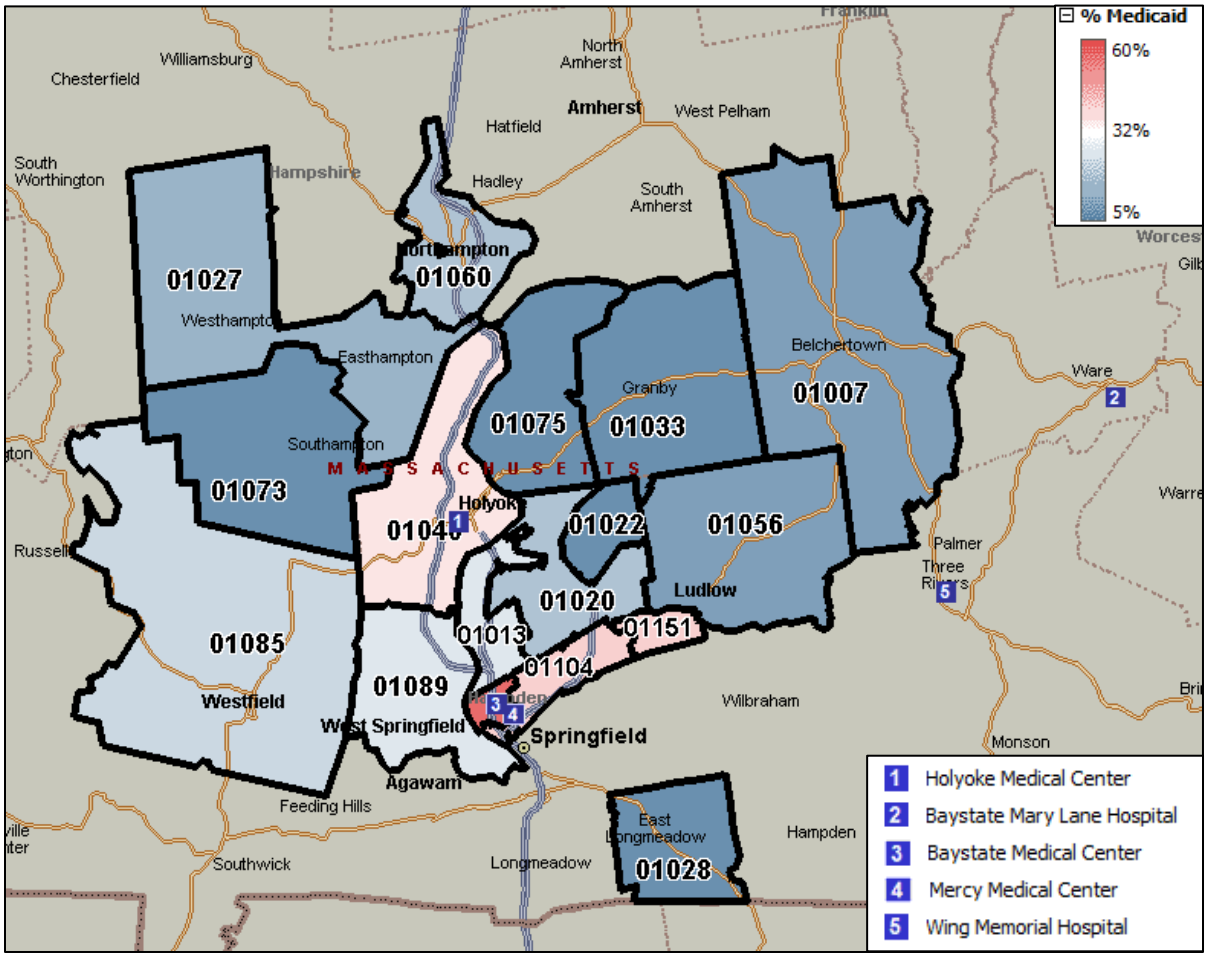
County and Town/City*	Discharges	MassHealth (Medicaid)	Medicare	Other	Private	Self-Pay
Hampden Towns	**28,030**	**28.1%**	**40.5%**	**5.7%**	**25.1%**	**0.6%**
Chicopee	6,884	22.2%	43.9%	6.4	26.7	0.7
East Longmeadow	1,750	6.3%	59.0%	2.9	31.7	0.2
Holyoke	6,108	36.0%	40.7%	5.3	17.4	0.6
Ludlow	1,881	9.6%	48.3%	6.5	35.4	0.2
Springfield	5,934	42.1%	34.8%	5.3	17.0	0.8
West Springfield	3,102	25.5%	38.3%	5.9	29.8	0.5
Westfield	2,371	23.7%	27.8%	6.2	41.7	0.6
Hampshire Towns	**7,454**	**12.0%**	**46.1%**	**6.0%**	**35.7%**	**0.2%**
Belchertown	1,139	9.0%	39.4%	5.3	46.2	0.2
Easthampton	1,902	14.5%	43.5%	6.5	35.3	0.2
Granby	552	8.7%	41.8%	6.0	43.3	0.2
Northampton	1,657	17.3%	49.6%	7.2	25.5	0.4
South Hadley	1,705	8.2%	52.9%	4.7	34.1	0.1
Southampton	499	7.8%	40.3%	6.4	44.9	0.6
Total	**35,484**	**24.7%**	**41.7%**	**5.7%**	**27.4%**	**0.5%**

Sources: Microsoft MapPoint and Coalition of Western Massachusetts Hospitals, 2012.
*A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

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

Exhibit 28, 29, and **30** illustrate the prevalence of MassHealth (Medicaid), Medicare, and private discharges in the community.

Exhibit 28: MassHealth (Medicaid) Discharges[10] by Payer and ZIP Code, 2010-2011

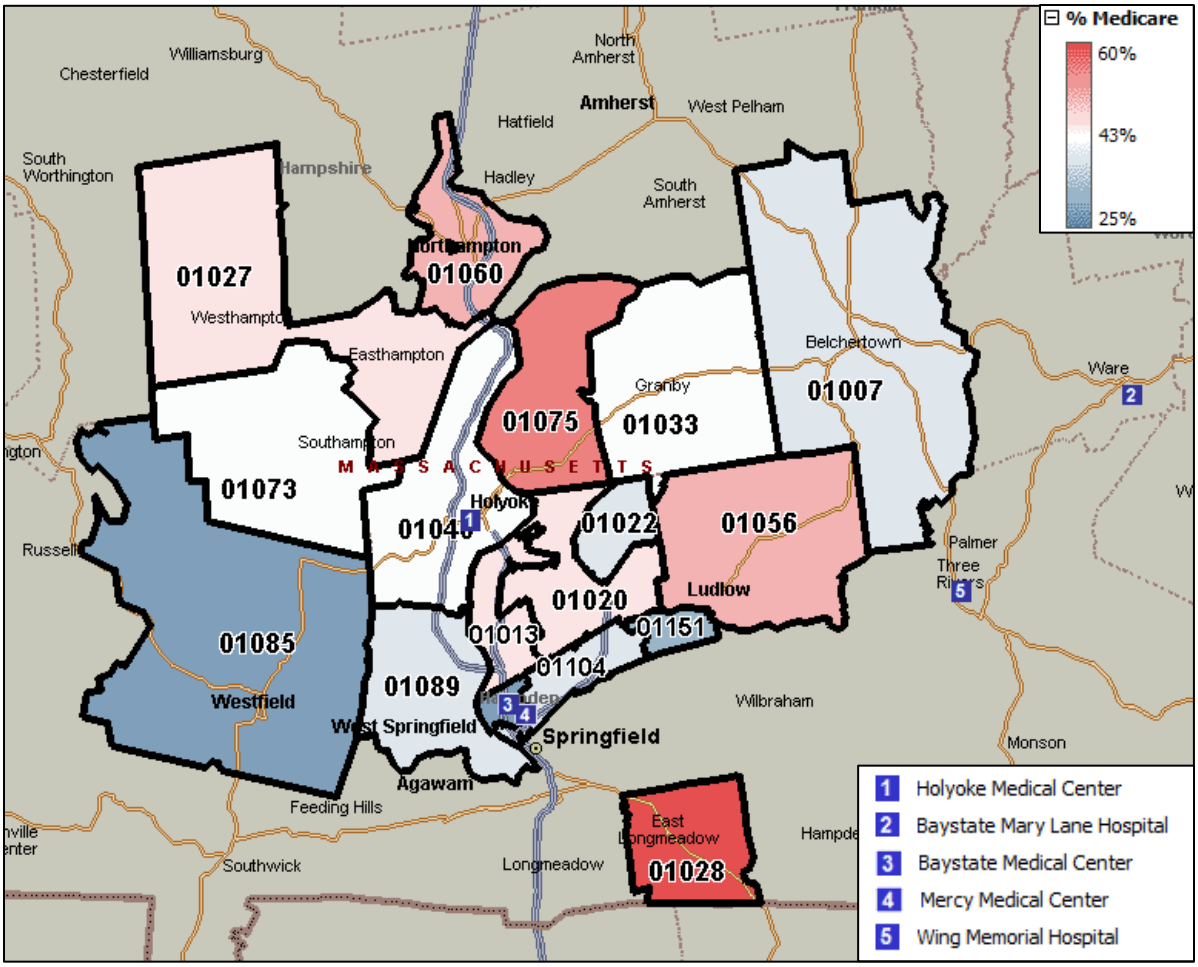


Sources: Microsoft MapPoint and Coalition of Western Massachusetts Hospitals, 2012.
Data were not mapped for ZIP codes with fewer than 10 total discharges.

The Medicaid percent of discharges was highest in ZIP codes 01107, 01151, 01104 (all in Springfield), and 01040 (Holyoke)

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

Exhibit 29: Medicare Discharges[11] by Payer and ZIP Code, 2010-2011

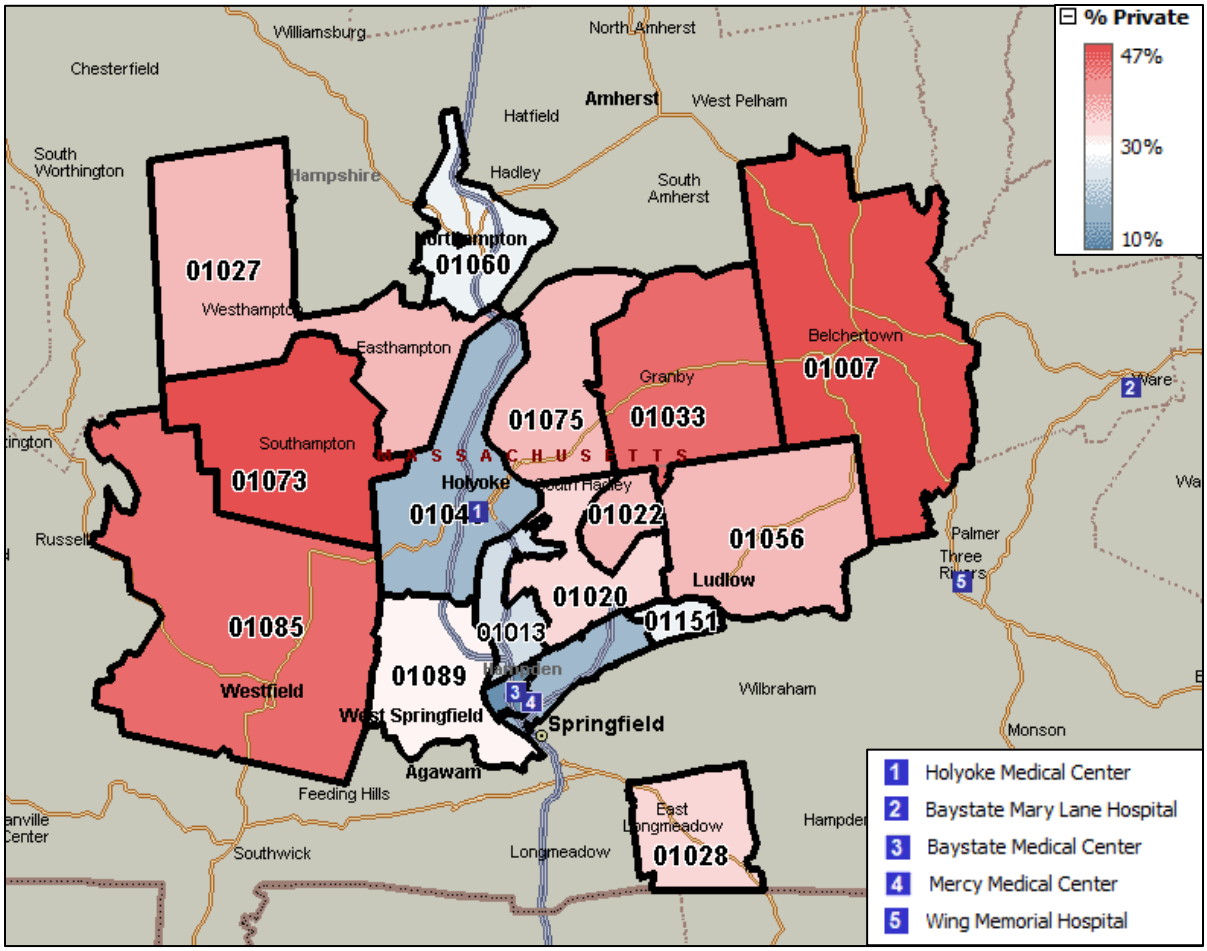


Sources: Microsoft MapPoint and Coalition of Western Massachusetts Hospitals, 2012.
Data were not mapped for ZIP codes with fewer than 10 total discharges.

The Medicare percent of discharges was highest in ZIP codes 01028 (East Longmeadow) and 01075 (South Hadley)

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

Exhibit 30: Private Discharges[12] by Payer and 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 percent of private discharges was highest in ZIP codes 01007 (Belchertown) and 01073 (Southampton)

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

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 and Hampshire counties reported poverty rates 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).** ▶ **High percentages of Medicaid discharges originated from Holyoke and Springfield.** ▶ **Health reform has meaningfully decreased uninsurance rates.**

Local Health Status and Access Indicators

The following data sources have been accessed to examine health status and access to care indicators in the HMC 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 and Hampshire counties. 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 31A: Hampden and Hampshire Counties Rank Among 14 Massachusetts Counties, 2012-2013

Indicator	Hampden	Rank Change 2011 to 2012	Hampshire	Rank Change 2011 to 2012
Health Outcomes		14 to 14		5 to 5
Mortality		14 to 14	↓	4 to 5
Morbidity	↓	13 to 14		6 to 4
Health Factors		14 to 14		3 to 2
Health Behaviors		14 to 13		3 to 2
Tobacco Use		12 to 10		3 to 3
Diet and Exercise*[13]		N/A		N/A
Alcohol Use		8 to 7		6 to 5
Sexual Activity[14]		14 to 14		2 to 2
Clinical Care	↓	9 to 12		2 to 1
Access to Care[15]	↓	8 to 12		3 to 2
Quality of Care[16]	↓	7 to 9		5 to 4
Social & Economic Factors		14 to 14		4 to 3
Education		14 to 14		4 to 3
Employment		13 to 13		1 to 1
Income		14 to 13		5 to 5
Family and Social Support		13 to 13		5 to 5
Community Safety		13 to 13		4 to 3
Physical Environment		14 to 14		10 to 10
Environmental Quality[17]		14 to 14		7 to 7
Built Environment*[18]		N/A		N/A

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	↓

Hampden County ranked in the bottom quartile of Massachusetts counties for all but a few indicator categories; Hampshire County ranked in the top half for most indicator categories.

[13] A composite measure that examines adult obesity and physical inactivity.
[14] 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.
[15] A composite measure that examines the percent of the population without health insurance and ratio of population to primary care physicians.
[16] 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.
[17] A composite measure that examines the number of air pollution-particulate matter days and air pollution-ozone days.
[18] A composite measure that examines access to healthy foods and recreational facilities and the percent of restaurants that are for fast food.

Exhibit 31B: Hampden and Hampshire Counties Rank Among 14 Massachusetts Counties, 2012-2013

Indicator	Hampden	Rank Change 2012 to 2013	Hampshire	Rank Change 2012 to 2013
Health Outcomes		14 to 14		5 to 5
Mortality		14 to 14		5 to 4
Morbidity		14 to 13		4 to 3
Health Factors		14 to 14		2 to 2
Health Behaviors		13 to 13		2 to 2
Clinical Care		N/A		N/A
Social & Economic Factors		14 to 13		3 to 3
Physical Environment		N/A		N/A

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, while Hampshire ranked in the top half 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 32** 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 32: Unfavorable CHSI Indicators, 2009

Indicator	Hampden	Hampshire
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		
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		

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. Hampshire County compared unfavorably for three indicators: Births to Women age 40-54, Breast Cancer (Female), and Colon Cancer.

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 33 and **34** display cancer incidence and mortality rates by race and ethnicity. **Exhibits 35, 36,** and **37** 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 38** displays incidence and/or prevalence of a variety of infectious diseases, including the most common sexually transmitted infections. **Exhibit 39** portrays rates of obesity and overweight health status for schoolchildren in the HMC community**. Exhibits 40** and **41** display asthma-related data, including prevalence among schoolchildren and also hospitalizations by age group. **Exhibit 42** analyzes several infant and maternal health indicators.

Exhibit 33: 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**
Hampshire											
Asian	641.5	N/A	N/A	0.0	0.0	N/A	0.0	0.0	0.0	N/A	N/A
Black	565.4	N/A	0.0	0.0	0.0	0.0	N/A	0.0	0.0	N/A	0.0
Hispanic (or Latino)	401.0	0.0	N/A	0.0	N/A	N/A	0.0	0.0	0.0	N/A	0.0
White	479.9	99.0	39.5	6.1	10.4	55.6	16.1	21.2	14.4	155.4	9.2
Total	**496.8**	**96.9**	**38.9**	**5.9**	**10.7**	**55.9**	**17.9**	**20.3**	**13.9**	**185.0**	**9.6**
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; Hampshire County reported higher rates of five cancers. The Hispanic (or Latino) population reported higher rates of seven cancers than the Massachusetts Hispanic (or Latino) average in Hampden County. The Black population reported higher rates of breast and prostate cancer than the White population in Hampden County (**Exhibit 33**).

Exhibit 34: 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 (or Latino)	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**
Hampshire											
Asian	222.3	0.0	67.5	0.0	0.0	67.5	0.0	0.0	34.6	0.0	0.0
Black	132.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hispanic (or Latino)	131.2	60.6	0.0	0.0	0.0	28.8	0.0	0.0	0.0	0.0	0.0
White	169.3	26.3	16.5	5.9	10.9	45.9	4.7	10.0	10.2	13.8	4.0
Total	**170.0**	**26.4**	**17.3**	**5.8**	**10.5**	**45.4**	**4.7**	**9.6**	**10.4**	**13.6**	**3.9**
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 (or Latino)	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 Massachusetts averages. In Hampden County, the Hispanic (or Latino) population had mortality rates worse than the Massachusetts averages by more than 75 percent for colorectal cancer, prostate cancer, and ovarian cancer. The leukemia-related mortality rate for Black residents and mortality due to pancreatic cancer for Asian residents also were more than 75 percent worse than the Massachusetts average. For Hampshire County, the Hispanic (or Latino) population had a female breast cancer mortality rate more than 75 percent higher than the Massachusetts average. Asian residents experienced particularly high mortality rates relating to overall cancer, colorectal cancer, lung cancer, and pancreatic cancer (**Exhibit 34**).

Exhibit 35: 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**
Hampshire				
Asian	356.8	0.0	178.4	0.0
Black	409.0	141.0	268.0	37.4
Hispanic (or Latino)	0.0	0.0	0.0	0.0
White	216.5	31.7	168.2	40.5
Total	**215.9**	**31.3**	**167.8**	**41.0**
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 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 in Hampden County; in Hampshire, the Black population had higher mortality rates for all diseases except myocardial infarction. 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 in Hampden County (**Exhibit 35**).

Exhibit 36: Injury-Related Mortality by Race/Ethnicity, 2009*

County and Race/Ethnicity	All Injuries	Unintentional Injuries	Homicide	Suicide	Falls	Firearms	Poison	Opioid-Related Overdoses	Motor Vehicle
Hampden									
Asian	11.3	12.9	0.0	0.0	11.3	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**
Hampshire									
Asian	0.0	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Black	0.0	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hispanic (or Latino)	72.0	34.8	0.0	0.0	43.1	0.0	0.0	0.0	28.8
White	44.6	28.2	1.5	13.3	6.0	2.7	18.3	7.4	6.1
Total	**42.4**	**26.6**	**1.4**	**12.3**	**6.4**	**2.6**	**16.8**	**6.7**	**6.0**
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

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. Hampshire County reported high mortality rates relating to overall injury, suicide, and poison. Hispanic (or Latino) residents had high mortality rates due to vehicles, falls, and unintentional injuries (**Exhibit 36**).

Exhibit 37: Additional Indicator Mortality by Race/Ethnicity, 2009*

County and Race/Ethnicity	All Respiratory System Diseases	Chronic Lower Respiratory Diseases (CLRD)	Emphysema	Pneumonia and Influenza	AIDS & HIV	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**
Hampshire							
Asian	34.6	0.0	0.0	0.0	0.0	0.0	0.0
Black	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hispanic (or Latino)	0.0	0.0	0.0	0.0	66.2	73.0	0.0
White	74.6	39.7	4.7	18.4	1.2	12.8	6.1
Total	**73.0**	**38.6**	**4.6**	**17.7**	**2.0**	**13.1**	**5.8**
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 is of particular concern in Hampden and Hampshire counties, particularly among the Hispanic (or Latino) population. The diabetes mortality rate was more than 75 percent worse than the Massachusetts average for the Hispanic (or Latino) members of the population in both counties. 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 in Hampden County (**Exhibit 37**).

Exhibit 38: Reported Disease Morbidity Rates by County, 2009-2010

Disease	Hampden	Hampshire	Massachusetts
Hepatitis B	10.9	3.9	**11.3**
Hepatitis C	103.5	29.9	**68.0**
Pertussis[19]	5.8	11.7	**5.8**
Giardia[20]	6.6	12.3	**11.5**
Animal Rabies	1.7	3.9	**1.9**
Salmonella[21]	10.3	14.9	**17.7**
Shigella[22]	1.9	0.0	**3.7**
Lyme Disease	42.2	78.6	**61.5**
Campylobacter[23]	12.0	12.3	**17.2**
Chlamydia**	610.8	216.9	**322.1**
Gonorrhea**	53.4	11.7	**37.9**
Syphilis**	6.9	4.6	**9.4**
HIV/AIDS*	342.8	90.9	**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
	<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. Hampshire County compared unfavorably to the commonwealth average for four of 13 reported morbidity rates; the pertussis and animal rabies rates were more than 75 percent worse than the Massachusetts average (**Exhibit 38**).

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

Exhibit 39: 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
Hampden School Districts				
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	170	22.9%	25.9%	48.8%
Sabis International Charter	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%**
Hampshire School Districts				
Amherst-Pelham	985	13.2%	12.4%	25.6%
Belchertown	782	18.4%	11.0%	29.4%
Easthampton	508	17.5%	16.7%	34.3%
Gateway	329	18.2%	12.2%	30.4%
Granby	331	13.6%	16.0%	29.6%
Hadley	207	13.0%	15.9%	29.0%
Hampshire (School Union 66)	528	16.5%	14.8%	31.3%
Hampshire Educational Collaborative	14	N/A	N/A	78.6%
Hatfield	144	19.4%	13.2%	32.6%
Hilltown Cooperative Charter	54	N/A	N/A	13.0%
Northampton	706	13.2%	14.2%	27.3%
Northampton-Smith Vocational Agricultural	108	20.4%	22.2%	42.6%
Pioneer Valley Chinese Immersion Charter	68	N/A	N/A	N/A
Pioneer Valley Performing Arts Charter	121	14.0%	14.9%	28.9%
South Hadley	599	15.7%	13.9%	29.5%
Ware	347	20.2%	21.3%	41.5%
Hampshire Average		**16.4%**	**15.3%**	**33.6%**
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 39**). The exhibits above represent all school districts in Hampden and Hampshire counties for which data were available.

Exhibit 40: Asthma Prevalence Among Schoolchildren, 2008-2009

Town/City*	Prevalence	Statistically Significant
Chicopee	12.3%	Yes
East Longmeadow	13.1%	Yes
Holyoke	18.7%	Yes
Ludlow	13.0%	Yes
West Springfield	7.2%	Yes
Westfield	8.5%	Yes
Belchertown	7.7%	Yes
Easthampton	9.0%	Yes
Granby	13.7%	Yes
Northampton	11.7%	
South Hadley	10.3%	
Southampton	11.9%	
Springfield	17.2%	Yes
Massachusetts	**10.9%**	

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

Holyoke, Springfield, Chicopee, East Longmeadow, Ludlow, and Granby reported asthma rates that were significantly higher (statistically significant) than the Massachusetts rate (**Exhibit 40**).

Exhibit 41: 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
Hampshire	3.3	5.5	8.2	17.7	7.3
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 41**).

Exhibit 42: 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%
Hampshire						
Asian	N/A	0.0%	17.0%	7.8%	N/A	0.0%
Black	N/A	0.0%	29.2%	0.0%	N/A	0.0%
Hispanic (or Latino)	24.8	0.0%	20.9%	10.3%	N/A	9.9%
White	6.0	7.0%	14.3%	7.4%	3.3	10.1%
Total	**6.5**	**5.9%**	**15.2%**	**7.5%**	**2.7**	8.9%
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 in Hampden County and smoking during pregnancy in both counties appear to be more problematic (**Exhibit 42**).

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 43** compares various BRFSS indicators for the HMC community, Massachusetts, and the U.S. Indicators are shaded if county values compared unfavorably to Massachusetts averages.

Exhibit 43: BRFSS Indicators and Variation from the Commonwealth of Massachusetts, 2011

Indicator		Hampden	Hampshire	Massachusetts	U.S.
Health Behaviors	Binge Drinkers*	12.6%	13.2%	**13.1%**	**12.0%**
	Heavy Drinkers**	5.0%	3.8%	**6.0%**	**5.3%**
	Current Smoker	18.5%	12.9%	**16.3%**	**16.7%**
	No Physical Activity in Past 30 Days	29.7%	17.3%	**23.8%**	**25.7%**
	Sometimes, Seldom, or Never Wear Seat Belt	9.1%	5.8%	**8.9%**	**5.7%**
Access	Unable to Visit Doctor Due to Cost	10.3%	8.5%	**8.4%**	**12.7%**
	No Personal Doctor/Healthcare Provider	10.0%	5.3%	**7.9%**	**14.4%**
Health Conditions	Overweight or Obese	62.4%	57.0%	**56.5%**	**60.6%**
	Told Have Asthma	17.8%	19.9%	**14.7%**	**12.9%**
	Told Have Coronary Heart Disease or Angina	5.7%	3.8%	**5.3%**	**6.0%**
	Told Have Diabetes	15.0%	9.4%	**11.5%**	**12.4%**
Mental Health	Poor Mental Health > 21 Days/Month	8.5%	7.3%	**6.8%**	**N/A**
Overall Health	Poor Physical Health > 21 Days/Month	11.5%	9.1%	**8.6%**	**N/A**
	Limited by Physical, Mental, or Emotional Problems	28.9%	28.7%	**23.8%**	**28.5%**
	Reported Poor or Fair Health	24.0%	17.0%	**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
	25% to 75% Worse
	>75% Worse
N/A	Data Not Available

Thirteen of the 15 presented indicators in Hampden and seven of 15 in Hampshire 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. Hampshire County reported one indicator more than 25 percent worse than the commonwealth average: those reporting they have asthma. Obesity also appears to be unfavorably prevalent in both counties.

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 44: Healthy People 2020 Indicators and Goals

Indicator	Hampden	Hampshire	Massachusetts	HP 2020 Goal
Percent of People with Health Insurance	95.2%	96.6%	95.7%	100.0%
Percent of People with a Usual Source of Primary Care	90.0%	94.7%	92.1%	83.9%
Cancer Mortality Rate	187.8	170.0	173.7	160.6
Lung Cancer Mortality Rate	56.1	45.4	48.5	45.5
Female Breast Cancer Mortality Rate	21.8	26.4	22.0	20.6
Colorectal Cancer Mortality Rate	15.7	17.3	15.0	14.5
Prostate Cancer Mortality Rate	23.7	13.6	21.6	21.2
Invasive Colorectal Cancer Incidence	38.4	38.9	44.4	38.6
Campylobacter Incidence	12.0	12.3	17.2	8.5
Salmonella Incidence	10.3	14.9	17.7	11.4
Stroke Mortality	32.9	31.3	31.9	33.8
Injury-Related Mortality Rate	47.8	42.4	41.2	53.3
Poison-Related Mortality Rate	15.6	16.8	13.8	13.1
Unintentional Injury-Related Mortality Rate	30.0	26.6	30.8	36.0
Fall-Related Mortality Rate	6.8	6.4	6.5	7.0
Homicide-Related Mortality Rate	4.8	1.4	2.8	5.5
Firearm-Related Mortality Rate	5.7	2.6	3.1	9.2
Infant Mortality Rate	5.5	5.3	4.8	6.0
Low Birth Weight Births (<2500 Grams)	8.4%	7.2%	7.7%	7.8%
Very Low Birth Weight Births (<1500 Grams)	1.6%	0.5%	1.3%	1.4%
Prenatal Care Beginning in First Trimester	79.1%	82.4%	100.0%	77.9%
Pregnant Mothers Abstaining from Smoking	87.9%	91.1%	93.2%	98.6%
Suicide Mortality Rate	11.4	12.3	7.7	10.2
Childhood Obesity*	18.5%	15.3%	15.7%	14.6%
Percent of Adults Reporting No Leisure Physical Activity	29.7%	17.3%	23.8%	32.6%
Binge Drinking	12.6%	13.2%	13.1%	24.3%
Tobacco Use	18.5%	12.9%	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 44 provides an array of health status and access indicators and compares Hampden and Hampshire counties and Massachusetts values to HP 2020 goals.

Key insights:
Local Health Status Indicators

- **Hampden County demonstrated comparatively high rates of teen pregnancy.**
- **Hampshire County exhibited comparatively high incidence rates of ovarian cancer, pertussis, and animal rabies and comparatively high leukemia and suicide mortality rates.**
- **Indicators suggest the following issues are most problematic:**
  - **Asthma**
  - **Chlamydia**
  - **Diabetes**
  - **Maternal smoking during pregnancy**
  - **Teen pregnancy**
  - **Tobacco/alcohol use**
- **Problematic disparities in mortality for the Black and Hispanic (or Latino) populations include:**
  - **Breast cancer**
  - **Chronic liver disease**
  - **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.**
- **Hampden County reported higher percentages of people with asthma with Holyoke reporting the highest prevalence of asthma in schoolchildren.**

Ambulatory Care Sensitive Conditions

This section examines the frequency of discharges for Ambulatory Care Sensitive Conditions (ACSC) throughout Hampden and Hampshire counties 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.[24]

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 HMC.

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 45** indicates how many discharges in the HMC community from any of the Coalition hospitals were found to be for ACSCs by payer.

Exhibit 45: Community-Wide Discharges[25] for ACSC by County and 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%
Hampshire	9.6%	18.6%	8.1%	6.7%	4.9%	12.6%
Total	**9.0%**	**19.2%**	**9.3%**	**7.0%**	**10.8%**	**12.8%**

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

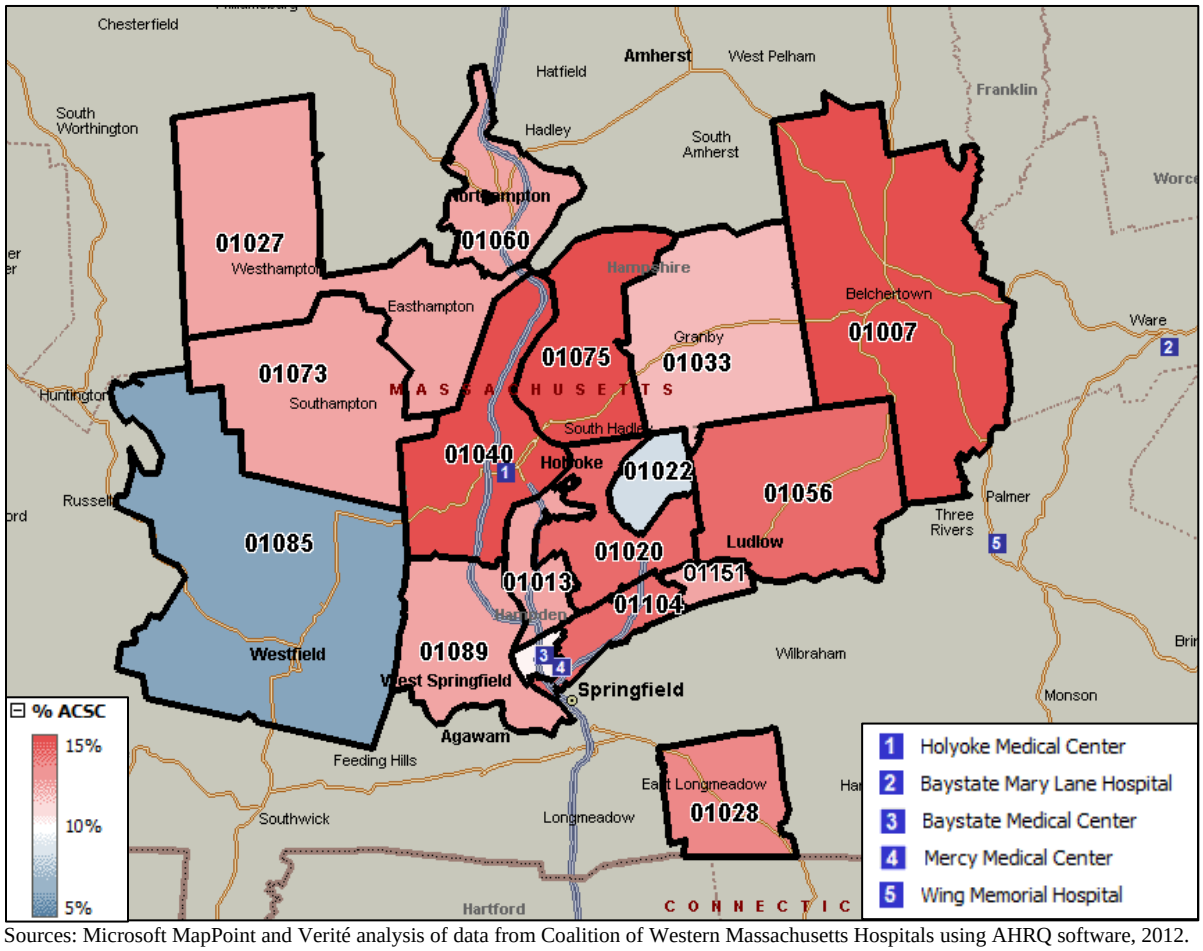
The table indicates that, for the 12 months ended September 2011, 12.8 percent of discharges were for ACSCs. Medicare patients had the highest proportion of discharges for ACSC, followed by self-pay patients.

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

2. ZIP Code-Level Analysis

Exhibit 46 illustrates the percentage of discharges for all community residents that were for ACSCs by ZIP code.

Exhibit 46: Community-Wide Discharges[26] for ACSC by ZIP Code, 2010-2011



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

ACSC discharges were most prevalent in the following ZIP codes: 01007 (Belchertown), 01040 (Holyoke), and 01075 (South Hadley).

Exhibit 47 illustrates possible relationships between ACSC discharges, low-income households, and the percentage of the population aged 65+. The town of Holyoke has a comparatively high percentage of ACSC discharges and households with incomes under $50,000. South Hadley and Ludlow have comparatively high percentages of ACSC discharges and senior residents.

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

Exhibit 47: ACSC Discharges[27] by Town/City

Town/City*	Number of ACSC Discharges	Total Discharges	Percent ACSC Discharges	Percent <$50,000	Percent 65+
Hampden Towns	**3,563**	**28,030**	**12.7%**	**57.0%**	**14.8%**
Holyoke	914	6,108	15.0%	66.1%	14.5%
Ludlow	266	1,881	14.1%	43.5%	15.3%
East Longmeadow	233	1,750	13.3%	31.1%	19.1%
Chicopee	887	6,884	12.9%	60.8%	16.8%
West Springfield	391	3,102	12.6%	53.1%	15.1%
Springfield	734	5,934	12.4%	72.3%	12.2%
Westfield	138	2,371	5.8%	46.3%	12.9%
Hampshire Towns	**986**	**7,454**	**13.2%**	**43.7%**	**13.7%**
South Hadley	253	1,705	14.8%	44.8%	18.2%
Belchertown	165	1,139	14.5%	35.5%	9.9%
Northampton	209	1,657	12.6%	54.6%	12.6%
Southampton	62	499	12.4%	28.1%	12.2%
Easthampton	233	1,902	12.3%	46.8%	14.1%
Granby	64	552	11.6%	34.3%	13.3%
Total	**4,549**	**35,484**	**12.8%**	**53.7%**	**14.5%**

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 HMC, 2012.
*A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

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

3. Hospital-Level Analysis

For the 12 months ended September 2011, 18.1 percent of HMC's total discharges were for ACSCs. **Exhibit 48** indicates that the top four conditions were: bacterial pneumonia, chronic obstructive pulmonary disease or asthma in older adults, congestive heart failure, and urinary tract infection.

Exhibit 48: Discharges for ACSC by Condition, 2010-2011

Condition	0 to 17	18 to 39	40 to 64	65+	Total Discharges	Percent of Total
Bacterial Pneumonia		6.2%	32.4%	61.5%	275	23.7%
COPD or Asthma in Older Adults			55.8%	44.2%	258	22.2%
Congestive Heart Failure		1.2%	25.4%	73.4%	173	14.9%
Urinary Tract Infection		8.1%	14.8%	77.0%	135	11.6%
Dehydration		3.9%	36.4%	59.7%	77	6.6%
Diabetes Long-Term Complication		14.9%	52.2%	32.8%	67	5.8%
Asthma in Younger Adults		100.0%			45	3.9%
Diabetes Short-Term Complication		55.6%	37.8%	6.7%	45	3.9%
Hypertension		4.2%	29.2%	66.7%	24	2.1%
Low birth Weight Rate	100.0%				18	1.5%
Angina Without Procedure			53.8%	46.2%	13	1.1%
Perforated Appendix		70.0%	20.0%	10.0%	10	0.9%
Uncontrolled Diabetes			71.4%	28.6%	7	0.6%
Accidental Puncture or Laceration		16.7%	50.0%	33.3%	6	0.5%
Iatrogenic Pneumothorax		16.7%	33.3%	50.0%	6	0.5%
Nosocomial Vascular Catheter Related Infections		50.0%	50.0%		2	0.2%
Pediatric Urinary Tract Infection	100.0%				1	0.1%
Total	**1.6%**	**10.7%**	**34.8%**	**52.9%**	**1,162**	**100.0%**

Source: Verité analysis of discharge data from HMC 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 frequent discharges for ACSC from HMC.**

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.

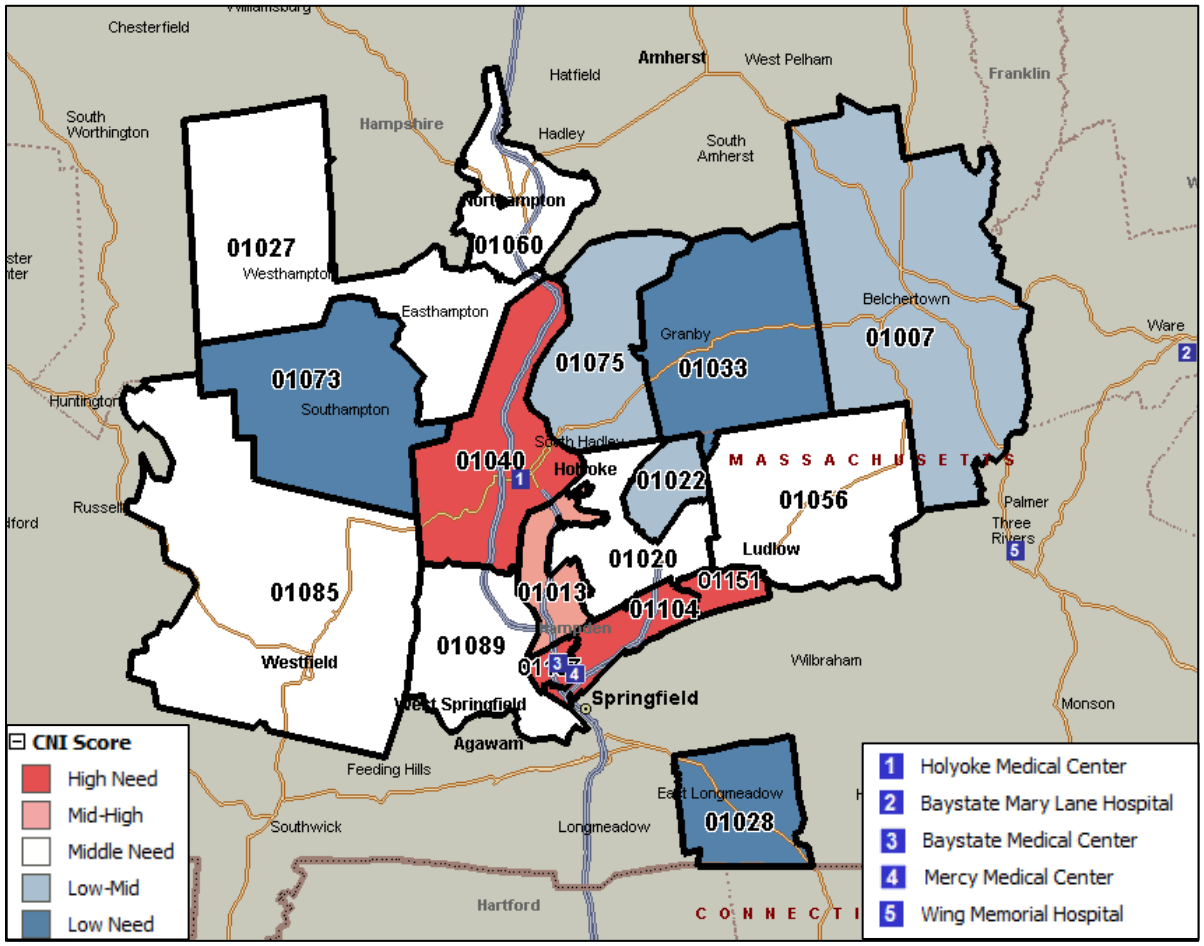
1. Dignity Health Community Needs Index

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 49** presents the *Community Needs Index* (CNI) score of each ZIP code in the HMC community.

Exhibit 49: Community Needs Index Score by ZIP Code



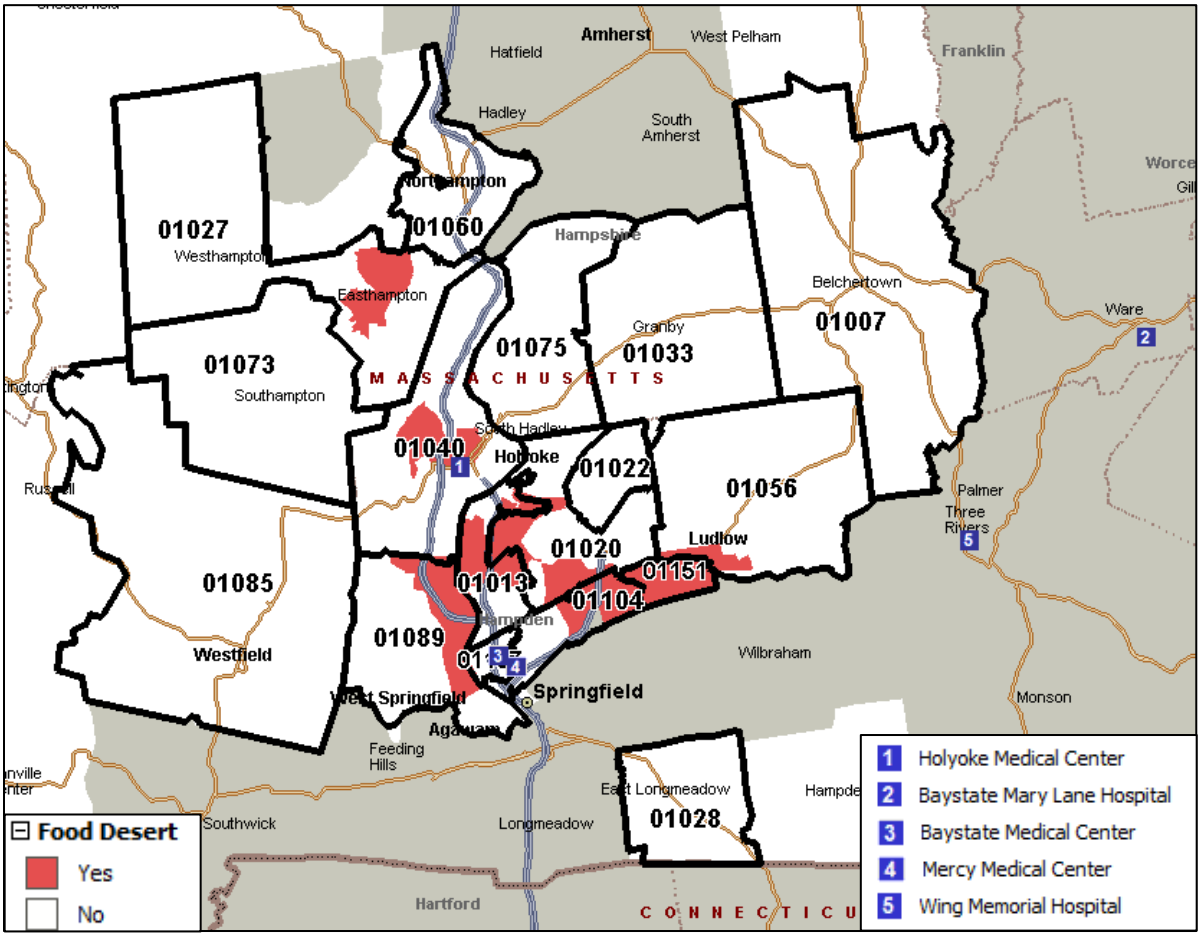
Sources: Microsoft MapPoint and Dignity Health, 2012.

ZIP codes 01040 (Holyoke), 01104, 01107, and 01151 (all in Springfield) scored "Highest Need" (**Exhibit 49**).

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."[28] Several government-led initiatives aim to increase the availability of nutritious and affordable foods to people living in these "food deserts." **Exhibit 50** shows the location of identified food deserts in HMC's community.

Exhibit 50: Food Deserts by Census Tract



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

HMC's community contains 15 census tracts defined as food deserts. These are located in Chicopee, Easthampton, Holyoke, Ludlow, Springfield, and West Springfield (**Exhibit 50**).

[28] 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 01040 (Holyoke), 01104, 01107, and 01151 (all in Springfield) scored "Highest Need."**
- **The community has 15 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

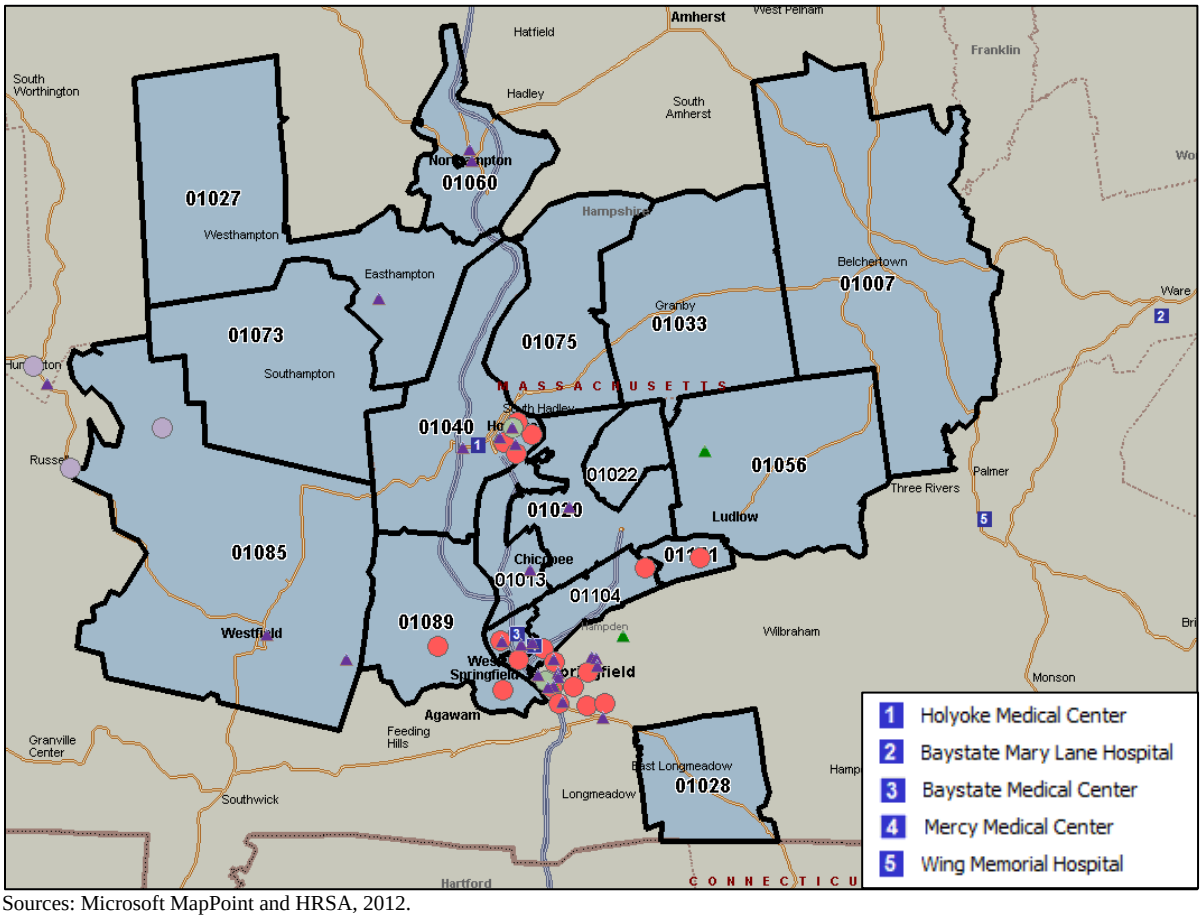
HRSA calculates an Index of Medical Underservice (IMU) score for communities across the U.S. The IMU score calculation includes the ratio of primary medical care physicians per 1,000 persons, the infant mortality rate, the percentage of the population with incomes below the poverty level, and the percentage 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.[29]

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."[30]

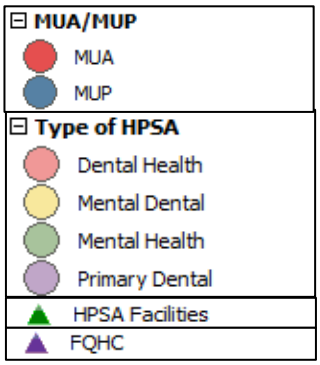
Exhibit 51 shows areas designated by HRSA as medically underserved. The HMC community contains 11 MUAs.

[29] 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.
[30] *Ibid.*

Exhibit 51: Location of Federally Designated Areas in the HMC Community, 2012



Sources: Microsoft MapPoint and HRSA, 2012.



The HMC community has 11 MUAs

…

Holyoke's community contains 15 FQHCs and FQHC site partners

…

The community has two HPSA facilities

…

Additional federal designations are present in surrounding areas

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."[31]

Several areas and populations in Hampden and Hampshire counties are designated as HPSAs (**Exhibit 51**). Gateway/Hampshire Regional, which spans Hampshire and Hampden counties, is designated as a primary medical care HPSA, while the low-income populations in Holyoke and Springfield are designated as mental health HPSAs. The Hilltowns area, which also spans Hampshire and Hampden counties, is designated as a dental HPSA.

3. Description of Other Facilities and Resources within the Community

The HMC 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 two facilities in the community that also are designated as HPSAs (**Exhibit 52**).

Exhibit 52: List of HPSA Facilities in the Holyoke Medical Center Community

County	HPSA Type	HPSA Name
Hampden	Primary Medical Care, Mental Health, Dental	Holyoke Health Center
	Primary Medical Care	Hampden County House of Corrections

Source: Health Resources and Services Administration, 2013.

[31] 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

The community contains five acute care hospital facilities (**Exhibit 53**).

Exhibit 53: Information on Hospitals in the Holyoke Medical Center Community

County	Hospital Name	ZIP Code
Hampden	Holyoke Medical Center	01040
	Mercy Medical Center	01104
	Noble Hospital	01085
	Shriner's Hospital for Children- Springfield	01104
Hampshire	Cooley Dickinson Hospital Inc.	01060

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 15 FQHCs and FQHC site partners located in the HMC community (**Exhibit 54**).

Exhibit 54: FQHCs in the Holyoke Medical Center Community

County	FQHC Name	FQHC Site Partner	ZIP Code
Hampden	Baystate Brightwood Health Center*		01107
	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
	City of Springfield's Health Services for the Homeless	Jefferson Shelter	01107
		Loretto House	01040
		Main Street Shelter	01040
		Prospect House	01107
		Samaritan Inn	01085
		Teen Living Program	01107
Hampshire	Drop In Center		01060
	Franklin County Emergency Shelter**		01060
	Wright Home For Women		01027

Source: Health Resources and Services Administration, 2013.
*Baystate Brightwood Health Center is an FQHC site partner in the community.
**The Franklin County Emergency Shelter is designated as an FQHC in Hampshire County due to ServiceNet's address in Northampton, MA. However, the shelter actually is located in Turner Falls, MA, in Franklin County.

Exhibit 55 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. Dental provider availability in Hampshire County also is below the commonwealth average.

Exhibit 55: 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
Hampshire	246	157.9	322	206.7	90	57.4
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 each county to assist in meeting health needs, including social services organizations and community coalitions.

Some of these include:

- Community organizations that focus on health and human services, including:
  - Amherst Survival Center
  - Community Foundation of Western MA
  - Community Survival Center
  - Crisis Services of Hampshire County
  - Mason Square Health Task Force
  - North End Campus Coalition
  - Northampton Survival Center
  - Quaboag Hills Coalition
  - Davis Foundation
  - Springfield Cultural Council
  - United Way of Pioneer Valley
  - Hampshire Care Martin
  - Urban League (of Springfield)
  - Valley Human Services
  - Western Mass Recovery Learning Community
  - Gathering Change, Inc.
  - Greater Springfield Mentoring Partnership, Inc.
  - Haven of Hope Missions, Inc.

- Community organizations that provide health and human services to specific populations, including:
    - Councils on Aging
    - DIAL/SELF Youth and Community Services
    - Friends of the Homeless
    - Gateway School-Based Health Center
    - Keystone Senior Center
    - Literacy Project
    - Ludlow Boys & Girls Club
    - River Valley Counseling Center
    - ServiceNet
    - Ware Adult Learning Center
    - A Place Called Ours, Inc.
    - Beacon of Hope Community Services, Inc.
    - Belchertown Family Center
    - Care Center-Community Adolescent Resources and Education Center, Inc.
    - Greater Springfield Mentoring Partnership, Inc.
    - Homeless Empowerment Project, Inc.
    - Katydid Foundation, Inc.
    - Manna Soup Kitchen, Inc.
    - Northeast Center for Youth and Families, Inc.
    - Northwestern Children's Advocacy Center
    - South Hadley Family Center, Inc.
    - South Hadley Youth Center, Inc.
    - Valley Opportunity Council
    - Willpower Foundation, Inc.
    - 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 the First Baptist Food Pantry, Providence Ministries, and Sisters of Providence-Ministries for the Needy
- Local schools, colleges, and universities
- Representatives from community health network areas

Key insights:
Community Assets

- **Some residents in HMC's community faces 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.**
- **Hampshire County had fewer dentists per capita than the commonwealth average.**
- **The community has hospitals, health and human services departments, and other community assets working to meet health needs.**
- **Two 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 56** through **58** highlight indicators that vary the most from national and Massachusetts benchmarks.

Exhibit 56A: Secondary Data Indicators Highlights

Category	Indicator	Location	Community Indicator	Benchmark	Data Format	Data Year	Benchmark Definition
Demographics	Growth in Black Population	Community	11.7%	-1.1%	Percent	2012	White Population
	Growth in American Indian Population	Community	7.6%	-1.1%	Percent	2012	White Population
	Growth in Asian Population	Community	16.5%	-1.1%	Percent	2012	White Population
	Growth in Other Race Population	Community	9.7%	-1.1%	Percent	2012	White Population
	Growth in Two or More Races Population	Community	10.4%	-1.1%	Percent	2012	White Population
	Growth in Hispanic Population	Community	11.5%	-1.5%	Percent	2012	Non-Hispanic Population
	Growth in 65+ Population	Community	11.6%	-0.7%	Percent	2012	Population 0-64
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	2002-2010	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, 2009	Number Of Counties

Source: Verité analysis of secondary data, 2012.

Exhibit 56B: Secondary Data Indicators Highlights

Category	Indicator	Location	Community Indicator	Benchmark	Data Format	Data Year	Benchmark Definition
Access to Care	Access to Care	Hampden	12	14	County Rank	2009	Number of Counties
Health Outcomes: Morbidity	Overall Morbidity	Hampden	10	14	County Rank	2002-2010	Number of Counties
	Age 20-44 Asthma Hospitalizations	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
	Pertussis Incidence	Hampshire	11.7	5.8	Rate Per 100,000	2009	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 Cancer Mortality	Hampden	4.5-60.0	2.6-44.8	Rate Per 100,000	2009	MA Average
	Hispanic Cancer Mortality	Hampden	2.7-27.3	3.4-22.8	Rate Per 100,000	2009	MA Average
	White Suicide Mortality	Hampden	13.6	8.4	Rate Per 100,000	2009	MA Average
	White Suicide Mortality	Hampshire	13.3	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 and Infant Indicators	Births to Women Age 40-54	Hampshire	5.0%	2.7%	Percent	1996-2005	MA Average
	Mother Smoked During Pregnancy	Hampden	12.1%	6.8%	Percent	2009	MA Average
	Teen Pregnancy	Hampden	45.7	19.6	Rate Per 1,000 Births	2009	MA Average
	Black Teen Pregnancy	Hampden	58.5	32.3	Rate Per 1,000 Births	2009	MA Average

Source: Verité analysis of secondary data, 2013

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 HMC community are presented below in **Exhibit 57**.

Exhibit 57: 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
	Hispanic Unemployment	Hampshire	8.1%	4.5%	Percent	White Population
	Non-White Poverty Rates	Hampden	38.3%	11.4%	Percent	White Population
	Non-White Poverty Rates	Hampshire	29.7%	12.1%	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		Rate Per 100,000	White Population
	Black Diabetes Mortality	Hampden	29.1		Rate Per 100,000	White Population
	Hispanic Diabetes Mortality	Hampden	40.2		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
	Hispanic Teen Pregnancy	Hampshire	24.8	6.0	Rate Per 1,000 Births	White Population

Source: Verité analysis of secondary data, 2013.

Geographic Areas of Concern

Certain geographic areas within the HMC community exhibited higher levels of need when compared to the community as a whole (**Exhibit 58**).

Exhibit 58: Geographic Areas of Concern

Category	Indicator	Location	Community Indicator	Benchmark	Data Format	Benchmark Definition
Social and Economic Factors	Financial Hardship	Hampden	13	14	County Rank	Number of Counties
	Financial Hardship	Chicopee	60.8%	51.8%	Percent	Percent Below $50,000 Income
	Financial Hardship	Springfield	66.3%	51.8%	Percent	Percent Below $50,000 Income
	Financial Hardship	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
	Food Desert(s) Present	Ludlow	Present	N/A	N/A	Present or Not Present: No Benchmark
	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

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. Fourteen such assessments have been conducted in the HMC 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.[32] 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 percent, compared to low rates in 27 communities in the region that had no grandparents raising grandchildren.

[32] 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

- 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.[33] 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. City of Springfield, 2012

The city conducted a survey in June 2012 of residents living at Marble Street Apartments and Outing Park/Hollywood Apartments.[34] 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 suffered 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.

[33] 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
[34] City of Springfield. (2012, June). *Springfield Choice Neighborhoods Resident Survey Results.*

4. 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.

5. 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).

6. Massachusetts Department of Mental Health, 2011

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

[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

[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

(SAMHSA). This plan[37] 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.

[37] 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

7. 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.[38] 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).

8. Community Action! of the Franklin, Hampshire, and North Quabbin Regions, 2011

The Needs Assessment and Community Action Plan for fiscal years 2012-2014 was published by Community Action! in August 2011.[39] Data for the needs assessment were collected from the 2010 U.S. Census, a community partner survey, an adult constituent survey, and a youth survey, discussed in Assessment #9.

Primary findings from the community partner survey and adult constituent survey are as follows:

- Disability was the most cited reason for being unemployed, with about half of Franklin County/North Quabbin's unemployed populace and half of Hampshire County's unemployed survey respondents reporting that they were disabled at the time.
- Teen birth rates were higher in the Franklin County/ North Quabbin region (seven percent) compared to Hampshire County (five percent).
- Of the respondents in Franklin County/ North Quabbin region and Hampshire County who responded to the adult survey, about 13 percent in both counties received WIC assistance.
- About nine percent of Hampshire County respondents and four percent of Franklin County/ North Quabbin region respondents received child care or subsidies.

9. The Western Massachusetts Center for Healthy Communities-Cooley Dickinson Hospital, 2011

In 2011, the Western Massachusetts Center for Healthy Communities at Cooley Dickinson Hospital created a community health assessment of Franklin and Hampshire counties. Sources such as the U.S. Census Bureau and the Massachusetts Department of Education were used in the assessment.

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[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

[39] Community Action! of the Franklin, Hampshire, and North Quabbin Regions. (2011, August). *Needs Assessment and Community Action Plan FY 2012-2014.* Retrieved from http://www.communityaction.us/tl_files/Community%20Action%20Content/About%20Us/Community%20Needs%20Assessment%20&%20Action%20Plan/CAP%202012.pdf?phpMyAdmin=802e059194fa0f51a04544a7e39807e1

The findings include the following:

- As of 2009, nearly 58.0 percent of adults in Franklin County were considered overweight or obese, compared to 51.3 percent of adults in Hampshire County and 57.5 percent in Massachusetts.
- In 2008, seven percent of Hampshire and Franklin county residents were diabetic, higher than the 2004 rate of 5.5 percent.
- In 2007, about 33.3 percent of Hampshire County and 31.5 percent of Franklin County consumed five or more fruits and vegetables a day, faring better than the Massachusetts average of 27.3 percent.
- Between 1999 and 2006, the incidence rate for prostate cancer (for men) was higher than that of any other cancer in both Franklin and Hampshire counties, followed by the age-adjusted lung and colon cancer rates (for men) in Franklin County and the colon cancer rate in Hampshire County.
- Between 1999 and 2007, lung and breast cancer deaths were the highest of all cancer related deaths for women.
- In 2006, the age-adjusted incidence of prostate cancer (for men) per 100,000 people in Hampshire County, at 219.0, was nearly double the rate in Franklin County, at 133.0, and higher than the Massachusetts average of 171.0.
- Between 2003 and 2007, forty percent of Franklin County male residents had high cholesterol, double the proportion of Hampshire County male residents.
- The age-adjusted incidence of stroke per 100,000 people in 2008 was higher for males than females for both counties; both counties had lower incidence rates than the Massachusetts wide average.

10. 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, a town in Hampden County.[40]

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

[40] Holyoke Youth Task Force. (2009). 2009 *Prevention Needs Assessment Survey Results Report for Holyoke District.* Retrieved from http://youthtaskforce.org/wp-content/uploads/2011/11/Holyoke-District-Assessment-Survey.pdf

- Decreases in gang involvement for eight, tenth, and twelfth graders since 2007.

11. Strategic Planning Initiative for Families and Youth (SPIFFY), the Hampshire Educational Collaborative, and Bach Harrison, 2009

The 2009 Prevention Needs Assessment for Hampshire County was conducted by Strategic Planning Initiative for Families and Youth (SPIFFY), the Hampshire Educational Collaborative, and Bach Harrison, L.L.C. which analyzed results from a survey of students in Hampshire County.[41]

Findings, compared to the nation, include:

- Comparatively higher rates of alcohol consumption for tenth and twelfth graders;
- Lower cigarette usage by eighth, tenth, and twelfth graders;
- Comparatively higher marijuana usage by tenth and twelfth graders;
- Comparatively lower usage of alcohol in the last 30 days for eighth graders, but higher usage of alcohol by tenth and twelfth grades;
- Comparatively lower usage of cigarettes in the last 30 days by eighth, tenth, and twelfth graders;
- Higher rates of binge drinking for Hampshire County twelfth graders;
- Lower rates of gang involvement for eighth, ninth, tenth, and eleventh graders;
- Comparatively lower rates of depressive symptoms for eighth, ninth, tenth, eleventh, and twelfth graders in Hampshire County; and
- Comparatively higher rates of illegal drugs usage by tenth and twelfth graders.

12. Catalyst Institute, 2008

In January 2008, the Catalyst Institute studied the oral health of the children in Massachusetts.[42]

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.

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[41] Strategic Planning Initiative for Families and Youth (SPIFFY) and the Hampshire Educational Collaborative. (2009). *2009 Prevention Needs Assessment Survey Results Report for Hampshire County*. Retrieved 2012, from http://spiffycoalition.org/wp-content/documents/2009hcprevent.pdf

[42] 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

- 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.

13. 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.[43]

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 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.

[43] Cities of Holyoke, Northampton and Springfield, MA and One Family, Inc. (2008, February). *All Roads Lead Home: Pioneer Valley's Plan to End Homelessness.* Retrieved from http://www3.springfieldma.gov/housing/fileadmin/housing/homelessness/All_Roads_Lead_Home.pdf

- In Springfield, hospital costs of high-need chronically homeless[44] individuals cost an average of $100,000 per person over the course of one year.
- 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.

14.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.[45] 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.

[44] 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).

[45] 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

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),**
  - **Basic needs insecurity (including healthy food and housing), and**
  - **High disability rates among the unemployed population.**
- **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.**
- **Hampshire County particularly demonstrates comparatively high prostate cancer incidence and a growing diabetic population.**

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.

HMC 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

1,083 residents from the HMC community participated in the survey. Seventy-five percent of respondents were female and 48 percent were between the ages of 45 and 64. Eighty-one percent were White and 15 percent identified as Hispanic (or Latino). The majority of respondents reported being in good or very good overall health (70 percent), married (53 percent), employed full time (62 percent), privately insured (74 percent), and having an undergraduate degree or higher (64 percent). The majority (86 percent) of respondents speak English in the home. Spanish was the top non-English language reported. Six percent of respondents reported that they spoke multiple languages at home. Survey responses were received from residents of 17 of the HMC community's 18 ZIP codes.

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

Exhibit 59: Survey Responses, 2012 – Respondents by Town

Town/City*	Number of Respondents	Percent of Respondents	Percent of Total Population
Hampden Towns			
Chicopee	104	9.6%	17.1%
East Longmeadow	37	3.4%	4.9%
Holyoke	158	14.6%	12.4%
Ludlow	110	10.2%	6.5%
Springfield	117	10.8%	13.3%
West Springfield	45	4.2%	8.7%
Westfield	66	6.1%	13.0%
Hampshire Towns			
Belchertown	96	8.9%	4.6%
Easthampton	96	8.9%	5.5%
Granby	22	2.0%	1.9%
Northampton	155	14.3%	4.8%
South Hadley	56	5.2%	5.4%
Southampton	21	1.9%	1.8%
Total	**1,083**	**100.0%**	**323,993**

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
*A list of included ZIP codes, villages, and other unincorporated areas is included in the Appendix.

A total of 1,038 residents from Holyoke Medical Center's community participated in the survey

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. Ten percent of the respondents reported not having a primary care provider.

Exhibit 60 shows that 62 percent of families received routine (non-emergency, non-specialty) healthcare services from a private doctor's office and nine percent received routine care from an urgent care facility or store-based walk in clinic. Approximately 17 percent received services from a free or low-cost clinic or health center, hospital emergency room, homeless shelter, school-based clinic, or soup kitchen. Seven percent reported not receiving routine care.

Exhibit 60: Locations Where Respondents from the HMC 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	6.5%	4.2%	11.3%	3.3%	39.5%	1.2%	7.0%
Free Or Low-Cost Clinic Or Health Center	8.9%	16.7%	33.3%	6.7%	18.4%	3.5%	16.1%
Private Doctor's Office	62.3%	54.2%	27.7%	66.7%	21.1%	78.5%	52.5%
Urgent Care Facility Or Store-Based Walk-In Clinic	8.7%	8.3%	6.4%	6.7%	0.0%	9.0%	7.8%
Hospital Emergency Room	5.8%	10.4%	8.5%	6.7%	5.3%	2.6%	8.3%
School-Based Clinic	0.9%	2.1%	0.7%	0.0%	0.0%	1.0%	8.3%
Soup Kitchen	0.3%	2.1%	0.7%	0.0%	0.0%	0.0%	0.7%
Homeless Shelter	0.7%	0.0%	3.5%	0.0%	0.0%	0.0%	1.3%
Other (Please Specify)	5.8%	2.1%	7.8%	10.0%	15.8%	4.2%	6.1%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013. Total community responses (N=1,205), Commonwealth Connector (N=48), MassHealth (Medicaid) (N=141), Medicare (N=60), No Health Care Insurance (N=38), Private/Commercial Insurance (912), Less Than College Education (459).

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 79 percent of respondents with "private/commercial insurance" visit private doctor's offices, only 21 percent of uninsured respondents and 28 percent of MassHealth (Medicaid) recipients access these settings. Uninsured and MassHealth (Medicaid) patients are more likely not to receive any routine healthcare. Respondents with less than a college education 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 HMC 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	84.8%	81.5%	75.7%	69.4%	73.9%	79.3%	63.9%
Sometimes	11.3%	10.5%	14.7%	17.2%	16.8%	14.1%	16.9%
Rarely	2.8%	4.7%	7.1%	7.2%	5.6%	4.4%	8.5%
Never	1.1%	3.3%	2.5%	6.3%	3.8%	2.2%	10.7%
Commonwealth Connector							
Always	78.9%	71.9%	62.9%	50.0%	46.4%	48.1%	30.4%
Sometimes	13.2%	12.5%	17.1%	39.3%	32.1%	40.7%	30.4%
Rarely	5.3%	9.4%	11.4%	3.6%	14.3%	0.0%	13.0%
Never	2.6%	6.3%	8.6%	7.1%	7.1%	11.1%	26.1%
MassHealth (Medicaid)							
Always	79.5%	64.5%	46.4%	60.8%	51.4%	70.0%	41.9%
Sometimes	16.2%	18.3%	29.9%	20.3%	29.2%	18.9%	27.4%
Rarely	3.4%	10.8%	18.6%	13.9%	11.1%	6.7%	12.9%
Never	0.9%	6.5%	5.2%	5.1%	8.3%	4.4%	17.7%
Medicare							
Always	96.2%	88.0%	76.0%	84.0%	90.2%	90.0%	76.0%
Sometimes	3.8%	10.0%	16.0%	0.0%	7.3%	10.0%	4.0%
Rarely	0.0%	2.0%	6.0%	12.0%	0.0%	0.0%	8.0%
Never	0.0%	0.0%	2.0%	4.0%	2.4%	0.0%	12.0%
No health care insurance							
Always	36.4%	24.0%	24.0%	31.6%	17.6%	15.8%	31.6%
Sometimes	33.3%	20.0%	24.0%	5.3%	11.8%	42.1%	15.8%
Rarely	18.2%	28.0%	32.0%	21.1%	29.4%	15.8%	10.5%
Never	12.1%	28.0%	20.0%	42.1%	41.2%	26.3%	42.1%
Private / commercial insurance							
Always	89.0%	89.1%	85.6%	74.3%	79.6%	84.5%	70.9%
Sometimes	10.0%	8.3%	10.5%	18.3%	16.8%	12.4%	16.8%
Rarely	0.9%	1.8%	3.1%	6.3%	3.3%	3.0%	7.3%
Never	0.1%	0.8%	0.8%	1.2%	0.3%	0.2%	5.1%

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 (19 percent) and mental health care (14 percent) than primary care (4 percent).

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

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

Town	Primary Care	Vision Care	Dental Care	Mental Health Care	Medical Specialty Care	Medicine, Medical Supplies, And Equipment	Prevention And Wellness Services
Belchertown	5.3%	7.5%	12.8%	20.5%	22.2%	16.7%	23.8%
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%
Easthampton	19.6%	14.1%	22.6%	36.7%	25.7%	24.3%	42.9%
Granby	8.7%	13.6%	18.2%	6.7%	15.0%	15.0%	27.8%
Holyoke	17.3%	27.0%	29.5%	41.1%	33.3%	22.8%	39.8%
Ludlow	10.8%	8.1%	11.0%	22.7%	15.5%	12.3%	21.3%
Northampton	16.1%	22.1%	30.3%	30.4%	30.4%	21.0%	41.7%
South Hadley	12.5%	13.0%	15.1%	31.3%	27.5%	20.9%	29.0%
Southampton	4.8%	5.3%	10.5%	37.5%	12.5%	0.0%	40.0%
Springfield	15.8%	20.2%	34.7%	35.9%	36.6%	29.3%	46.4%
West Springfield	20.0%	16.7%	22.2%	5.6%	17.9%	21.2%	19.0%
Westfield	12.9%	18.0%	17.5%	29.4%	22.9%	20.4%	36.8%
Total	**14.0%**	**16.0%**	**21.4%**	**30.0%**	**25.1%**	**19.9%**	**34.5%**

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Primary Care (N=1,073), Vision Care (N=995), Dental Care (N=1,008), Mental Health Care (N= 586), Medical Specialty Care (N=768), Medicine, Medical Supplies and Equipment (N= 806), Prevention and Wellness Services (N=649).

Across all towns, more people were not always able to receive prevention and wellness services (35 percent of the population) and mental health care (30 percent) than other services. Among respondents not receiving prevention and wellness services, the largest percentages were in Springfield (46 percent) and Easthampton (43 percent). The majority of those not receiving mental health care were in Holyoke (41 percent) and Southampton (38 percent). Primary, vision, and dental care service needs were not being met for populations in Holyoke, Springfield, and Northampton (**Exhibit 62**).

Exhibit 63 indicates that Hispanic or Latino residents were the least likely to receive primary and vision care (19 and 33 percent respectively). Those residents identifying as being of multiple races were less likely to receive mental health care, medical specialty care, and prevention and wellness services (53, 45, and 51 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 HMC Community

Race	Primary Care	Vision Care	Dental Care	Mental Health Care	Medical Specialty Care	Medicine, Medical Supplies, And Equipment	Prevention And Wellness Services
Black or African American	11.4%	27.6%	43.8%	47.6%	35.0%	33.3%	42.1%
Hispanic or Latino	18.5%	32.5%	34.1%	43.3%	38.7%	29.4%	50.0%
Multiple	17.6%	29.5%	38.6%	52.8%	45.2%	30.8%	51.4%
White / Caucasian	12.6%	12.4%	17.7%	24.9%	20.7%	16.6%	30.1%
All Other Races*	30.0%	47.1%	44.4%	75.0%	63.6%	53.3%	58.3%
Total	**13.5%**	**15.1%**	**20.7%**	**29.2%**	**23.9%**	**19.2%**	**33.2%**

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Primary Care (N=1,025) Vision Care (N=951), Dental Care (N=964), Mental Health Care (N=561), Medical Specialty Care (N=731), Medicine, Medical Supplies, and Equipment (N=766), Prevention and Wellness Services (N=617).
*Other races includes Native American/American Indian and Asian.

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 HMC 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	20.7%	28.8%	30.2%	15.1%	14.3%	19.1%	16.3%
I Can't Get An Appointment	19.9%	8.3%	8.3%	12.5%	14.4%	2.7%	3.5%
I Can't Afford It / Too Expensive	12.1%	24.7%	31.0%	17.3%	24.8%	38.6%	24.4%
The Hours Are Inconvenient	10.2%	4.5%	4.8%	6.4%	7.2%	3.4%	7.7%
These Services Are Not Available In My Area	1.3%	1.8%	3.8%	2.8%	4.0%	4.0%	7.8%
I Don't Have Transportation	9.4%	7.4%	4.2%	3.5%	5.2%	3.6%	3.1%
I Don't Trust The Doctor	4.4%	4.3%	4.4%	4.6%	4.4%	3.3%	2.9%
The Doctors And Staff Do Not Speak My Language	6.9%	5.7%	3.6%	3.6%	3.7%	4.1%	3.0%
I Can't Take Time Off From Work Or From Caring For Others	7.9%	4.5%	4.2%	6.9%	5.3%	3.8%	6.9%
Other	7.3%	10.0%	5.5%	27.4%	16.8%	17.4%	24.4%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Primary Care (N=190), Vision Care (N=159), Dental Care (N= 253), Mental Health Care (N=255), Medical Specialty Care (N=213), Medicine, medical supplies, and equipment (N=166), Prevention and Wellness Services (N=235).

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, mental health, substance abuse / addiction, and lack of exercise (**Exhibit 65**).

Exhibit 65: Top Health Issues, By Insurer and Education, in the HMC 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	8.7%	10.9%	8.3%	6.9%	10.6%	9.6%	8.1%
Obesity	7.4%	4.2%	4.8%	9.8%	4.2%	8.7%	6.0%
Mental Health (Such As Depression, Bipolar, Autism)	7.1%	6.3%	5.5%	7.3%	6.5%	8.3%	6.1%
Substance Abuse / Addiction	6.9%	5.2%	6.8%	6.9%	5.1%	7.8%	7.0%
Not Enough Exercise	5.9%	7.8%	3.8%	4.9%	6.0%	6.5%	4.7%
Diabetes	5.8%	4.7%	5.5%	5.3%	7.9%	5.4%	5.4%
Cancer	5.5%	5.7%	4.5%	7.7%	1.9%	6.0%	5.2%
Poor Dietary Choices	5.4%	4.2%	4.5%	2.8%	5.1%	5.7%	4.8%
Unemployment	5.2%	7.3%	5.6%	3.3%	7.4%	5.2%	6.3%
Tobacco Use	5.1%	6.3%	5.4%	4.1%	6.5%	4.2%	5.3%
Affordable Housing	4.1%	5.7%	4.6%	4.9%	5.1%	3.8%	4.0%
Heart Disease	4.1%	3.1%	2.5%	4.9%	3.7%	4.7%	3.6%
Asthma	4.0%	2.1%	4.5%	3.3%	3.7%	4.4%	3.4%
Homelessness	3.8%	4.7%	4.5%	4.9%	2.3%	3.1%	3.9%
Access To Healthy Food Is Limited	3.1%	3.1%	4.2%	3.3%	4.6%	2.3%	3.4%
Dental Health Issues	2.9%	5.7%	4.1%	2.8%	3.7%	2.4%	3.6%
Domestic Violence	2.8%	2.1%	4.1%	3.3%	4.6%	2.4%	3.7%
Unsafe Sex	2.4%	2.1%	3.3%	2.0%	3.2%	1.9%	3.1%
Unsafe Neighborhoods	2.3%	2.6%	3.4%	1.6%	3.2%	2.0%	3.4%
Alzheimer's Or Dementia	1.8%	1.6%	2.4%	2.4%	0.5%	1.6%	2.0%
Chronic Obstructive Pulmonary Disease (COPD)	1.5%	0.5%	1.6%	2.4%	1.4%	1.1%	1.8%
Poor Air Quality	1.4%	0.5%	2.1%	1.6%	0.5%	1.4%	1.6%
Stroke	1.2%	1.0%	2.1%	1.6%	0.5%	0.7%	1.7%
Birth Defects	0.7%	1.0%	1.6%	0.4%	0.9%	0.2%	1.2%
Other (Please Specify)	0.7%	1.6%	0.2%	1.6%	0.9%	0.6%	0.4%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Total Community (N=5,891), Commonwealth Connector (N=192), MassHealth (Medicaid) (N=871), Medicare (N=246), No Healthcare Insurance (N=216), Private/Commercial Insurance (N=4,216), Less than College Education (N=2508).

Key	
Top Five Health Issues 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 HMC 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	96.9%	2.5%	0.6%
Alzheimer's / Dementia	80.5%	14.8%	4.7%
Cancer	95.0%	3.6%	1.4%
Chronic Obstructive Pulmonary Disease (COPD)	85.0%	5.3%	9.7%
Diabetes	96.0%	2.5%	1.5%
High Blood Pressure	97.1%	2.2%	0.7%
Heart Disease	96.4%	3.0%	0.6%
Mental Health Issues	86.1%	4.2%	9.7%
Obesity / Overweight	65.7%	17.5%	16.8%
Sexually Transmitted Diseases	79.2%	9.6%	11.3%
Substance Abuse / Addiction	70.9%	22.5%	6.7%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Asthma (N=355), Alzheimer's/Dementia (N=92), Cancer (N=184), Chronic Obstructive Pulmonary Disease (N=90), Diabetes (N=270), High Blood Pressure (N=505), Heart Disease (N=196), Mental Health Issues (N=385), Obesity/Overweight (N=412), Sexually Transmitted Diseases (N=41), Substance Abuse/Addiction (N=120).

Care was accessed most for high blood pressure and asthma (97 percent) and least accessed for substance abuse/addiction. 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 HMC Community

Age And Sex	Living Alone	Without Emotional And / Or Financial Support
Female 15-34	13.8%	14.3%
Female 35-44	5.8%	22.2%
Female 45-54	15.7%	18.8%
Female 55-64	15.7%	20.7%
Female 65+	35.6%	12.5%
Male 15-34	15.8%	22.2%
Male 35-44	20.0%	33.3%
Male 45-54	22.2%	7.7%
Male 55-64	24.1%	38.5%
Male 65+	24.2%	37.5%
Total	**18.6%**	**20.8%**

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Living Alone (N=1,036), Without Emotional and/or Financial Support (N=166).

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

Males aged 55+ were most likely to be living without emotional and/or financial support

4. Health Behaviors

Exhibit 68 portrays various health behaviors in the HMC community.

Exhibit 68: Health Behaviors in the HMC Community

Health Behavior	Total Community (Post-Stratified)	MassHealth (Medicaid)	Medicare	Less Than College Education
Not Physically Active	27.2%	25.9%	22.0%	29.8%
Eat Less Than Recommended Amounts Of Fruit	42.6%	49.2%	44.2%	48.8%
Eat Less Than Recommended Amounts Of Vegetables	70.0%	79.7%	66.0%	79.6%
Never Or Rarely Shop At Farmer's Market	72.9%	82.2%	62.7%	80.7%
Travel 5 Miles Or More For Fresh Produce	11.0%	12.0%	0.0%	11.7%
Drank Alcohol 10+ Days In The Past Month	14.4%	3.3%	19.2%	6.8%
Usually Have 4 Or More Drinks On An Occasion	8.0%	18.4%	0.0%	11.8%
Use Tobacco A Few Times Per Week Or Daily	16.1%	38.1%	13.7%	24.3%
Primary Care Provider Not Aware Of All Drugs Taken	4.7%	9.1%	0.0%	5.9%
Ever Used Prescription Drugs Belonging To Friends Or Family	17.8%	24.0%	9.8%	17.8%

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, use tobacco a few times per week or on a daily basis, and to use prescription drugs belonging to friends or family (**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 (51 percent) reported purchasing their groceries in a grocery store, while respondents were least likely to buy groceries at a convenience 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.

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

Topic	Ages 0-5	Ages 6-10	Ages 11-15	Ages 16-19
Dental Hygiene	19.4%	9.5%	5.3%	5.2%
Nutrition	16.2%	10.6%	6.7%	6.7%
Getting Enough Sleep	9.9%	7.5%	6.2%	6.7%
Bullying	12.8%	11.2%	6.8%	6.5%
Asthma Management	6.8%	6.9%	4.4%	3.8%
Diabetes Management	5.0%	6.1%	4.6%	4.5%
Eating Disorders	3.9%	6.0%	6.8%	6.6%
Tobacco	5.8%	8.0%	7.3%	7.0%
Alcohol	4.0%	7.1%	7.6%	7.2%
Drug Abuse	3.7%	7.4%	7.5%	7.2%
Mental Health Issues	3.2%	5.4%	7.1%	7.3%
Suicide Prevention	2.1%	4.0%	7.1%	7.2%
Sexual Intercourse	1.9%	3.8%	8.0%	7.4%
Sexually Transmitted Diseases	1.9%	3.3%	8.0%	7.5%
Reckless Driving/Speeding	2.0%	2.1%	5.7%	8.3%
Other	1.4%	1.1%	0.8%	0.9%

Source: Coalition of Western Massachusetts Hospitals Community Survey, 2013.
Ages 0-5 (N=3,436), Ages 6-10 (N=6,726), Ages 11-15 (N=9,891), Ages 16-19 (N=9,275).

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

- **1,083 residents in HMC'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, and "medical specialty care". Difficulty accessing basic primary care appears most acute for residents of West Springfield and Easthampton.**
- **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, mental health, substance abuse/addition, lack of exercise, and diabetes are the top five health issues (other than financial and economic challenges). Top issues vary depending on insurance status (e.g., tobacco use for Commonwealth Connector recipients and uninsured residents and cancer for Medicare beneficiaries).**
- **A number of community residents "don't know where or how" to receive care for obesity, sexually transmitted disease, COPD, or substance abuse issues. Among respondents not receiving needed health care services, the majority were in Holyoke 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 HMC.

A total of 32 local key informants, including external and internal stakeholders (those affiliated or employed by Holyoke Medical Center) 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:** A key community health factor raised repeatedly by interviewees was poverty. The City of Holyoke has a significant percentage of residents living in poverty and this is seen as a serious barrier to good health. Problems attendant with poverty were also cited, such as a significant school drop-out rate and the lack of proper nutrition.
- **Safety:** Many interviewees raised concerns regarding public safety in Holyoke. They noted problems with violence and a high incidence of drug trafficking and drug use.
- **Physical Activity:** There are efforts organized by the city to increase physical activity and many interviewees noted the need to do so. Several interviewees mentioned the need for safe routes to schools so that families can feel comfortable having their children walk to school. Other barriers to physical activity include traffic congestion, a lack of pedestrian crosswalks and islands, and sidewalks that are in need of improvement. Plans for new parks, park improvements, and the development of a skateboard park are being considered.
- **Food Insecurity and Other Privations:** Many interviewees expressed concern regarding proper nutrition. They often link this problem to the lack of financial resources. Many noted that, for a significant number of Holyoke families, healthy food may be out of reach due to cost.
- **Literacy:** Interviewees raised concern regarding children's literacy. Several commented on the significant percentage of children in Holyoke not able to read at a third grade level. Many feel that literacy must be addressed in order to move people out of poverty and improve community health.

- **System Navigation:** There was frequent concern expressed regarding populations that may experience difficulty navigating what can be an intimidating and complex health and human service system. This was noted as a problem for program application, enrollment, and follow-through in terms of direct service.

Access Issues

- **Access to Primary Care:** Interviewees frequently mentioned the need for additional primary care services. The community is challenged to recruit and retain providers and new patients often have long waiting times before they are able to get appointments. The remaining uninsured patients often have a difficult time accessing timely care.
- **Cost of Care:** Out of pocket costs were raised as a concern by many interviewees. Given the lack of financial resources, even small copayments can be a barrier to care. Copayment costs were cited as a barrier to medications for patients. Several providers said that they experience difficulty collecting copayments, making it a growing problem. A number of interviewees felt that there is a lack of affordable insurance options for small businesses.
- **Mental Health and Psychiatric Care:** Many interviewees expressed concern regarding a shortage of psychiatric care in the area. They also described significant demand for mental health services and said that more mental health providers are needed. There often are long waiting times to be seen by mental health providers. Several interviewees stated frustration resulting from the lack coordination between behavioral health and primary care providers.
- **Substance Abuse Treatment:** Most interviewees said there is a significant problem with drug use, particularly opiates, in the Holyoke area. Drug trafficking is seen as creating an unsafe environment. Interviewees see the need for more drug prevention and treatment programs.
- **Specialty Care:** Though there are many specialists in area, several interviewees said that care from certain specialists, such as dermatologist and orthopedists, may be difficult to access. Several felt that this was a particular problem for those with MassHealth (Medicaid) coverage.
- **Dental Health:** The lack of dentists willing to treat MassHealth (Medicaid) patients was mentioned by a number of interviewees. Though dental services are available, more are needed in order to address the oral health needs of publicly insured and lower-income patients.
- **Access for Culturally Diverse Populations:** Several interviewees raised concern regarding access to care for diverse racial/ethnic populations. Some had concerns for limited English proficient populations, in particular Spanish speaking patients. People acknowledged that the issue goes beyond language and that there is a need for culturally competent care. Several interviewees cited the need to create an environment where trusting patient-provider relationships can be built over time.

Morbidity/Health Status Issues

- **Violence:** Violence and abuse were regularly raised as concerns by interviewees. Several felt that more needs to be done on the issue.

- **Teen Pregnancy:** Nearly all interviewees raised teen pregnancy as a problem. There is grave concern in the Holyoke area for teen mothers and their babies. This is seen as a problem that must be addressed to break the cycle of poverty.
- **Substance Abuse:** Most interviewees feel that Holyoke has a significant problem with substance abuse. Several cited concern about the high rates of intravenous drug use in the area. Many interviewees said that depression and physical pain are both factors that lead people to misuse or abuse drugs.
- **Chronic Disease:** Many interviewees expressed concern about the management of chronic conditions such as diabetes, hypertension, and asthma. They see the need for more disease management support groups and services that help to effectively manage chronic health conditions.
- **Obesity and Exercise:** Many interviewees identified obesity and the lack of exercise as problems. They also mentioned the lack of proper nutrition and felt that all of these issues are significant drivers of health problems.
- **Mental and Behavioral Health:** Many interviewees noted problems related to depression and anxiety. Stress resulting from a lack of financial resources was also seen as a prevalent problem. Many people believe that the area has a significant shortage of access to timely mental health services for both out-patient and in-patient services.
- **Coordination:** The need for better coordination of care across different programs and providers, as well as between behavioral health and primary care providers was expressed by many interviewees. They believe improved coordination is needed in order to show improvements in community health.
- **Homelessness:** A number of interviewees said there is a problem with homelessness in the area. There is concern that this is a growing problem plaguing younger adults in the area.

Key insights: ***Interviews***	▶ **Poverty manifests in a variety of community needs, including financial hardship, food insecurity, 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) and the need for additional treatment and support.** ▶ **Additional support for chronic disease management (including asthma, hypertension, and diabetes) is important for improving community health.** ▶ **Health system complexity, need for greater coordination across providers, and need for improved access for ethnically and culturally diverse populations result in frustration for both patients and providers.** ▶ **Poor mental health impacts the entire family, and accessing treatment for these issues is difficult.** ▶ **Prevalence of violence and abuse are concerns in the community.**

Individuals Providing Community Input

The 42 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, 72,** and **73**). Additionally, 11 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 or Expertise	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 substantial experience in public health due to his current position with the Massachusetts Department of Health's Division of Prevention and Wellness and his past experience 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, Donna Salloom has significant experience in public health.	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, a position which provides invaluable public health experience.	Interview
Molly Butler	Program Coordinator	Massachusetts Department of Public Health, Rural Health	As the program coordinator for the State Office of Rural Health in the Massachusetts Department of Public Health, Ms. Butler is experienced in public health needs.	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

Exhibit 70B: Public Health Experts Interviewed

Name	Title	Affiliation or Organization	Special Knowledge or Expertise	Interview or Listening Session
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
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 Heatlhy Communities	Cathy 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
Katie Gallagher	Assistant Director	Holyoke Board of Health	Ms. Gallagher is the assistant director of the Holyoke Board of Health, which demonstrates her knowledge of the public health needs of Holyoke residents.	Interview

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 HMC community (**Exhibits 71A** and **71B**).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 or Expertise	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
Anne Marie Martineau	Director	River Valley Counseling Center	As director of the River Valley Counseling Center, Ms. Martineau has specialized knowledge about Holyoke's behavioral health needs.	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
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
Jay Breines	Executive Director	Holyoke Health Center (FQHC)	As the executive director of the Holyoke Health Center (a Federally-Qualified Health Center), Mr. Breines has specialized knowledge about the health needs of the uninsured, racial/ethnic minorities, and underserved members of the populace.	Interview
John Roberson	Vice-President of Chidren and Family Services	Center for Human Development	Through his time a the Center for Human Development, Mr. Roberson has gained expertise in the behavioral health needs of children in families throughout Western Massachusetts.	Interview
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 Massachusetts.	Interview
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

Exhibit 71B: Individuals from Health Departments or Agencies Interviewed

Name	Title	Affiliation or Organization	Special Knowledge or Expertise	Interview or Listening Session
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
Patty Alford	Nursing Supervisor	Holyoke Public Schools	As a nursing supervisor at Holyoke Public Schools, Ms. Alford has special knowledge of the health needs of school-aged children throughout the area.	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
Sr. Mary Caritas	Vice President	Sisters of Providence	Sr. Caritas is part of the Sisters of Providence Health System, where she has gained significant knowledge about health needs in the Greater Holyoke area.	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 (**Exhibit 72**).This list excludes the public health experts identified in **Exhibit 70**.

Exhibit 72: Community Leaders or Representatives Interviewed

Name	Title	Affiliation or Organization	Nature of Leadership Role	Interview or 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
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, particular as relate to Latino-owned businesses.	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
Sr. Maxyne Schneider	President	Sisters of St. Joseph	Sr. Schneider is a member of the Sisters of St. Joseph, which highlights her expertise in basic needs of Springfield/Holyoke vulnerable populations.	Interview
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

4. Persons Representing the Broad Interests of the Community

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

Name	Title	Affiliation or Organization	Nature of Leadership Role	Interview or Listening Session
James Lavelle	President	Holyoke Gas and Electric	Mr. Lavelle, as president of Holyoke Gas and Electric, is a local business leader with knowledge of the HMC community and its needs.	Interview
Jeff Burkott	Holyoke City Planner	Local Government	As the Holyoke City Planner, Mr. Burkott is an expert in city planning and physical activity.	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
Rory Casey	Legislative Aide	Office of State Rep. Aaron Vega	Mr. Casey is a legislative aide at the Office of State Rep. Aaron Vega, a position in which he has demonstrated his understanding of community needs.	Listening Session
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
Dr. Jacqueline Spain	Medical Director	Holyoke Health Center (FQHC)	Through her work as medical director of the Holyoke Health Center, Dr. Spain has expertise in the health needs of the uninsured, racial/ethnic minorities, and underserved members of the population.	Interview
Baxter Chandler	HMC Center for Behavioral Health	Hospital	As a member of the Holyoke Medical Center's Center for Behavioral Health, Mr. Chandler is knowledgeable about the Holyoke area's behavioral health needs.	Interview, Listening Session
Brenda Fuller	Clinical Coordinator	Birthing Center	Through her work as the Clinical Coordinator at the Holyoke Medical Center's Birthing center, Ms. Fuller is knowledgeable about prenatal care and related needs.	Listening Session
Caron Lanouette	Community Benefit Consultant	Holyoke Medical Center	As a community benefit consultant, Caron Lanouette has significant, specialized knowledge about community benefit programming.	Listening Session
Clark Fenn	Vice-President, Quality / Risk / Compliance	Holyoke Medical Center	As Vice-President of Quality/Risk/Compliance at Holyoke Medical Center, Mr. Fenn has expertise in many areas of community need.	Listening Session
Eva Cavanaugh	Clinical Coordinator of Emergency Department	Holyoke Medical Center	Through her work as the Emergency Department's clinical coordinator, Ms. Cavanaugh has special knowledge of many community health needs as they relate to Holyoke Medical Center.	Listening Session

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

Name	Title	Affiliation or Organization	Nature of Leadership Role	Interview or Listening Session
Garry Bombardier	Medical Director	The Work Connection, Holyoke Medical Center	As medical director of the Work Connection at Holyoke Medical Center, Mr. Bombardier has specialized knowledge in occupational health-related issues.	Interview
Kathy Buckley	Vice-President of Support Services	Holyoke Medical Center	Ms. Buckley has expertise in health care due to her position as Vice-President of Support Services at Holyoke Medical Center.	Listening Session
Liza Winston	Certified Nurse Midwife	The Birthing Center, Holyoke Medical Center	As a Certified Nurse Midwife at Holyoke Medical Center's Birthing Center, Ms. Winston has expertise in the maternal and child health needs of the Holyoke area.	Interview
Melissa Perry	Director, Behavioral Health Nursing	HMC Behavioral Health	Ms. Perry is director of Behavioral Health Nursing at Holyoke Medical Center, which demonstrates her knowledge of the Holyoke area's behavioral health needs.	Interview, Listening Session
Nancy Coley	Public Relations Manager	Holyoke Medical Center	Ms. Coley is Holyoke Medical Center's Public Relations Manager, which gives her unique knowledge of the health needs in the community.	Listening Session
Rafael Mojica	Community Outreach coordinator	Holyoke Medical Center	As the community outreach coordinator at Holyoke Medical Center, Mr. Mojica has expertise in the health needs of racial/ethnic groups in Greater Holyoke.	Listening Session
Virginia Thomas	Nurse Manager	The Birthing Center, Holyoke Medical Center	As the nurse manager of the Holyoke Medical Center Birthing Center, Ms. Thomas has expertise in the maternal and child health needs of the Holyoke area.	Interview, Listening Session

APPENDIX

VILLAGES AND ZIP CODES WITHIN THE COMMUNITY

Holyoke Medical Center's community is comprised of 18 ZIP codes in 13 towns/cities in Hampden and Hampshire counties.

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	
Chicopee	01013 01020 01022
East Longmeadow	01028
Holyoke	01040
Ludlow	01056
Springfield	
Indian Orchard	01151
Springfield	01104
Springfield	01107
West Springfield	01089
Westfield	01085
Hampshire Towns	
Belchertown	01007
Easthampton	01027
Granby	01033
Northampton	01060 01063
Southampton	01073
South Hadley	01075

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SURVEY QUESTIONNAIRE

Your Voice is Important: Please Complete A Community Health Survey Today!

* * *

COMMUNITY HEALTH SURVEY, 2013
Conducted By:
The Coalition of Western Massachusetts Hospitals

The Coalition of Western Massachusetts Hospitals is conducting a community health needs assessment to help our seven member hospitals identify and address the most pressing public health needs in the Pioneer Valley.

Please take 15 minutes or less to complete this community survey by **February 15th** to let us know the health-related needs and issues that matter most to you and your community. Individual responses will be kept confidential.

All survey respondents may enter a drawing for an iPad Mini and several other gift cards by entering their contact information after completion of the survey. Personal contact information entered into the system to register you for the raffle will be kept completely confidential as well and will be used solely for the purpose of this raffle and not for any marketing purposes.

If you experience any difficulties, please contact: [Redacted]

Thank you for your time and your thoughts.

Baystate Franklin Medical Center

Baystate Mary Lane Hospital

Baystate Medical Center

Cooley Dickinson Hospital

Holyoke Medical Center

Mercy Medical Center / Providence Behavioral Health Hospital

Wing Memorial Hospital and Medical Centers

Introduction

You have been asked to participate in this survey because the Coalition of Western Massachusetts Hospitals (Baystate Medical Center, Baystate Franklin Medical Center, Baystate Mary Lane Hospital, Cooley Dickinson Hospital, Holyoke Medical Center, Mercy Medical Center / Providence Behavioral Health Hospital, and Wing Memorial Hospital) wants to identify the unique health-related concerns of people living in each hospital's community. Your answers will help your local hospital respond to needs in your community. There are no right or wrong answers to these questions. We know that this information is personal, but your answers will be kept confidential. Your decision to participate (or not) in this survey will in no way influence your relationship with your medical facility.

Help us get the word out! Please tell your friends, family, and neighbors about this survey.

Section 1

In this first section, we will be asking questions about how easy or difficult it is for you to get the care you need and whether you face any barriers when accessing care. Please answer each question to the best of your ability.

1. Do you have a primary care provider (doctor, nurse practitioner, or physician assistant) that you visit regularly (for annual check-ups and screenings and whenever you need treatment for an illness)?

- ☐ I do not have a primary care provider
- ☐ Yes, I visit my primary care provider regularly
- ☐ I have a primary care provider but I do not go regularly

2. Where do you and your family members receive routine (non-emergency, non-specialty) healthcare services? Please select all that apply.

- ☐ No routine healthcare received
- ☐ Free or low-cost clinic or health center
- ☐ Private doctor's office
- ☐ Urgent care facility or store-based walk-in clinic
- ☐ Other (please specify)

- ☐ Hospital emergency room
- ☐ School-based clinic
- ☐ Soup kitchen
- ☐ Homeless shelter

3. What kinds of health professionals do you visit regularly (for annual check-ups and screenings and whenever you need treatment for an illness)? Please select all that apply.

- ☐ Health care not received regularly
- ☐ Primary care doctor
- ☐ Eye doctor
- ☐ Dentist
- ☐ Mental health professional
- ☐ Other (please specify)

- ☐ Nurse practitioner
- ☐ Provider of alternative medicine (such as an acupuncturist or chiropractor)
- ☐ Specialist
- ☐ A nurse visits my home
- ☐ Home health aide

4. To whom do you feel most comfortable talking about your health? Please check all that apply.

- ☐ Family
- ☐ Friend
- ☐ Other (please specify)

- ☐ Primary care provider (doctor, nurse practitioner, physician assistant)
- ☐ Clergy member
- ☐ Senior center staff

5. Are you and all of your family members able to get needed care?

	Primary care	Vision care	Dental care	Mental health care	Medical specialty care	Medicine, medical supplies, and equipment	Prevention and wellness services (such as weight loss / nutrition, screenings, prenatal care, disabilities services, smoking cessation)
Always	☐	☐	☐	☐	☐	☐	☐
Sometimes	☐	☐	☐	☐	☐	☐	☐
Rarely	☐	☐	☐	☐	☐	☐	☐
Never	☐	☐	☐	☐	☐	☐	☐
I / we do not need these services	☐	☐	☐	☐	☐	☐	☐

6. If you did not answer "Always" to question 5, why? Please select all that apply.

	Primary care	Vision care	Dental care	Mental health care	Medical specialty care	Medicine, medical supplies, and equipment	Prevention and wellness services (such as weight loss / nutrition, screenings, prenatal care, disabilities services, smoking cessation)
I don't have insurance	☐	☐	☐	☐	☐	☐	☐
I can't get an appointment	☐	☐	☐	☐	☐	☐	☐
I can't afford it / too expensive	☐	☐	☐	☐	☐	☐	☐
The hours are inconvenient	☐	☐	☐	☐	☐	☐	☐
These services are not available in my area	☐	☐	☐	☐	☐	☐	☐
I don't have transportation	☐	☐	☐	☐	☐	☐	☐
I don't trust the doctor	☐	☐	☐	☐	☐	☐	☐
The doctors and staff do not speak my language	☐	☐	☐	☐	☐	☐	☐
I can't take time off from work or from caring for others	☐	☐	☐	☐	☐	☐	☐
Other (please specify)	☐	☐	☐	☐	☐	☐	☐

If you answered "Other," please specify below.

7. What would improve your health care services?

Section 2

Lifestyle choices, poverty, the local environment, and genetics, among other influences, can affect your health. In this section, we will be asking about health-related behaviors, your grocery shopping choices, and which health-related concerns you believe affect your community.

8. Choose the top five health-related concerns that you believe are the most common in the community where you live.

- ☐ Access to healthy food is limited
- ☐ Asthma
- ☐ Alzheimer's or dementia
- ☐ Affordable housing
- ☐ Birth defects
- ☐ Cancer
- ☐ Chronic Obstructive Pulmonary Disease (COPD)
- ☐ Dental health issues
- ☐ Other (please specify)
- ☐ Diabetes
- ☐ Domestic violence
- ☐ Heart disease
- ☐ Homelessness
- ☐ Low income / financial challenges
- ☐ Mental health (such as depression, bipolar, autism)
- ☐ Not enough exercise
- ☐ Obesity
- ☐ Poor air quality
- ☐ Poor dietary choices
- ☐ Stroke
- ☐ Substance abuse / addiction
- ☐ Tobacco use
- ☐ Unemployment
- ☐ Unsafe neighborhoods
- ☐ Unsafe sex

9. Please indicate whether you or anyone in your family have any of the conditions named below, and if so, whether you are receiving the care you need.

	No one in my family has this condition	We are getting the care we need	We don't know where or how to get care for this condition	We choose not to get care at this time
Asthma	☐	☐	☐	☐
Alzheimer's / dementia	☐	☐	☐	☐
Cancer	☐	☐	☐	☐
Chronic Obstructive Pulmonary Disease (COPD)	☐	☐	☐	☐
Diabetes	☐	☐	☐	☐
High blood pressure	☐	☐	☐	☐
Heart disease	☐	☐	☐	☐
Mental health issues	☐	☐	☐	☐
Obesity / overweight	☐	☐	☐	☐
Sexually transmitted diseases	☐	☐	☐	☐
Substance abuse / addiction	☐	☐	☐	☐

10. Physical activity can be defined as any activity that causes your body to work harder than normal. It can include any activities that happen during work, commuting by foot or bike, physically demanding household chores, or exercise. Given this definition, would you say you are physically active on a regular basis?

☐ Yes

☐ No

11. If you are physically active, how many days per week are you active?

☐ I am not physically active

☐ 1-2 days

☐ 3-4 days

☐ 5-7 days

12. On the days that you are physically active, for how many minutes are you active?

- ☐ I am not physically active
- ☐ Up to 30 minutes
- ☐ 30-60 minutes
- ☐ More than 60 minutes

13. When you do not exercise, what are the main reasons? Please select all that apply.

- ☐ My job is physical or hard labor
- ☐ Exercise is not important to me
- ☐ I don't have access to fitness facilities
- ☐ I don't have enough time to exercise
- ☐ Other (please specify)

- ☐ I would need child care and I don't have it
- ☐ I don't know how to find exercise partners
- ☐ I don't like to exercise
- ☐ It costs too much to exercise
- ☐ There is no safe place to exercise

- ☐ I'm too tired to exercise
- ☐ I have a health condition that prevents physical activity
- ☐ I don't know

14. The U.S. Department of Agriculture recommends that adult women eat 2 1/2 cups of vegetables per day and adult men eat 3 cups of vegetables per day. On an average day, how many cups of vegetables do you eat? Do NOT count french fries, potato chips, or lettuce that is on a sandwich or sub.

- ☐ I do not eat vegetables
- ☐ Less than 1 cup
- ☐ 1-2 cups
- ☐ 2-3 cups
- ☐ 3-4 cups
- ☐ More than 4 cups

15. The U.S. Department of Agriculture recommends that adult women eat 1 1/2 to 2 cups of fruit per day and adult men eat 2 cups of fruit per day. On an average day, how many cups of fruit do you eat?

- ☐ I do not eat fruit
- ☐ Less than 1 cup
- ☐ 1-2 cups
- ☐ 2-3 cups
- ☐ More than 3 cups

16. If you eat less than the recommended amount of fruits or vegetables per day, what are the main reasons? Please select all that apply.

- ☐ I eat the recommended amount of fruits and vegetables
- ☐ I don't like most fruits and vegetables
- ☐ My kids (or others in my household) won't eat them, so I don't prepare them
- ☐ Fruits and vegetables are too expensive
- ☐ Other (please specify)

- ☐ I can't get good quality fruits and vegetables where I usually shop
- ☐ Fruits and vegetables take too long to prepare
- ☐ I don't know how to prepare fruits and vegetables
- ☐ I don't have transportation to get to a store where I can buy fruit and vegetables

17. During the past year, did you shop at a farmer's market?

- ☐ No, never
- ☐ Yes, once or twice
- ☐ Yes, 1-3 times per month
- ☐ Yes, once a week or more

18. If you did not shop at a farmer's market this past year, or went infrequently, what are your reasons? Please select all that apply.

- ☐ I shopped at the farmer's market frequently
- ☐ The farmer's markets are too far away / too difficult to get to
- ☐ The hours are not good for me
- ☐ I don't know where the markets are
- ☐ Other (please specify)

- ☐ The food is too expensive at farmer's markets
- ☐ The farmer's markets don't take my food stamps / EBT
- ☐ I don't use the kind of food they sell at farmer's markets
- ☐ I get all the local produce I can use from my own garden, grocery store, or CSA

19. Where do you buy food most often? Please select all that apply.

- ☐ Grocery store
- ☐ Big box store (such as Walmart or Target)
- ☐ Convenience store (such as a gas station or corner store)
- ☐ Other (please specify)

- ☐ Ethnic food store (such as an Asian or Latin market)
- ☐ Health food store (such as Whole Foods or a co-op)
- ☐ Farmer's market

20. If you usually buy food at a grocery store, at which store do you shop?

- ☐ I do not usually buy food at a grocery store
- ☐ Aldi
- ☐ Big Y
- ☐ Other (please specify)

- ☐ PriceRite
- ☐ Save-A-Lot
- ☐ Stop & Shop

21. How far do you have to go to get fresh fruits and vegetables?

- ☐ 2 miles or less
- ☐ 3-5 miles
- ☐ 5-10 miles
- ☐ More than 10 miles

22. How many days did you drink alcohol in the past 30 days?

- ☐ 0 days
- ☐ 1 or 2 days
- ☐ 3 to 5 days
- ☐ 6 to 9 days
- ☐ 10 to 19 days
- ☐ 20 to 29 days
- ☐ All 30 days

23. How many drinks do you usually have on an occasion? (A drink is a can or bottle of beer, a glass of wine or a wine cooler, a shot of liquor, or a mixed drink with liquor in it.)

- ☐ I don't drink alcohol
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5 or more

24. If you want to cut down on or stop drinking and haven't, why not? Please select all that apply.

- ☐ I don't drink alcohol or I don't want to cut down on drinking
- ☐ I don't know where to go for help
- ☐ I don't know what to do
- ☐ Treatment is too expensive
- ☐ Other (please specify)

- ☐ I don't want people to know that I abuse alcohol
- ☐ I am afraid of getting in trouble with my job or the police
- ☐ It is hard to stop because my friends and / or family drink
- ☐ I have tried to stop and / or cut down, but I have been unsuccessful

25. How often do you use tobacco (cigarettes, chewing tobacco, snuff, cigars, or pipe tobacco)?

- ☐ I don't use tobacco
- ☐ Daily
- ☐ A few times per week
- ☐ A few times per month
- ☐ A few times per year

26. If you want to cut down on or stop your tobacco use and haven't, why not? Please select all that apply.

- ☐ I don't use tobacco or I don't want to cut down on tobacco use
- ☐ I don't know where to go for help
- ☐ I don't know what to do
- ☐ The patch / nicotine gum / group sessions / other aids are too expensive
- ☐ I don't want people to know that I use tobacco
- ☐ I am afraid of getting in trouble with my job or the police
- ☐ It is hard to stop because my friends and / or family smoke
- ☐ I have tried to stop and / or cut down, but I have been unsuccessful
- ☐ Other (please specify)

27. Are you taking any of the types of drugs listed below to manage your health? Please select all that apply.

- ☐ I'm not taking any drugs
- ☐ Prescription drugs
- ☐ Over-the-counter drugs
- ☐ Herbal supplements
- ☐ Vitamins

28. Does your primary care provider (doctor, nurse practitioner, or physician assistant) know all of the drugs (prescription, over-the-counter, herbal supplements, or vitamins) that you take?

- ☐ I'm not taking any drugs
- ☐ Yes
- ☐ No

29. Have you ever used prescription drugs that belonged to friends or family?

- ☐ Yes
- ☐ No

Section 3

The questions in this section ask about the health-related concerns and behaviors of children and families.

30. Which of the following health topics do you think children need to know more about? Please select topics based on age. Select all that apply.

	Ages 0-5	Ages 6-10	Ages 11-15	Ages 16-19
Dental hygiene	☐	☐	☐	☐
Nutrition	☐	☐	☐	☐
Getting enough sleep	☐	☐	☐	☐
Bullying	☐	☐	☐	☐
Asthma management	☐	☐	☐	☐
Diabetes management	☐	☐	☐	☐
Eating disorders	☐	☐	☐	☐
Tobacco	☐	☐	☐	☐
Alcohol	☐	☐	☐	☐
Drug abuse	☐	☐	☐	☐
Mental health issues (such as depression or anxiety)	☐	☐	☐	☐
Suicide prevention	☐	☐	☐	☐
Sexual intercourse	☐	☐	☐	☐
Sexually transmitted diseases	☐	☐	☐	☐
Reckless driving / speeding	☐	☐	☐	☐
Other (please specify)	☐	☐	☐	☐

31. Are you the parent / guardian of a child under the age of 19 in your household?

- ☐ Yes
- ☐ No

32. If you have children that attend school, do they walk or bike to school?

- ☐ Not applicable - I don't have children or my children don't attend school
- ☐ Yes, almost every day
- ☐ Yes, at least once a week
- ☐ Yes, occasionally
- ☐ No, never

33. If your children don't walk or bike to school, why not? Please select all that apply.

- ☐ Not applicable - I don't have children, my children don’t attend school, or my children walk or bike to school
- ☐ It is too far
- ☐ There are no sidewalks
- ☐ The intersections are busy
- ☐ Other (please specify)

- ☐ The neighborhood is not safe (due to violence, crime, or the like)
- ☐ The weather is poor
- ☐ They don't want to
- ☐ A bus or other transportation is provided for them

Section 4

Different communities have unique health needs. Your answers in this section will help us understand your region better. Personal information is collected for hospital use only. Individual responses will not be shared.

34. Do you live alone?

- ☐ Yes
- ☐ No

35. If you live alone, do you have friends, family, or caregivers who provide emotional and / or financial support?

- ☐ I don't live alone
- ☐ Yes
- ☐ No

36. With what gender do you identify?

- ☐ Female
- ☐ Male
- ☐ Transgender
- ☐ Other

37. How old are you?

- ☐ 15-24
- ☐ 25-34
- ☐ 35-44
- ☐ 45-54
- ☐ 55-64
- ☐ 65-74
- ☐ 75+

38. What is your relationship status?

- ☐ Divorced
- ☐ Living with a partner
- ☐ Married
- ☐ Separated
- ☐ Single
- ☐ Widowed

39. What is the highest level of education you have completed?

- ☐ I did not complete high school
- ☐ High school / vocational school
- ☐ Some college / trade school
- ☐ Undergraduate degree
- ☐ Postgraduate degree

40. What is your employment status?

- ☐ Full time
- ☐ Part time (one job)
- ☐ Part time (more than one job)
- ☐ Other (please specify)

- ☐ Homemaker
- ☐ Retired
- ☐ Student
- ☐ Unemployed

* 41. What type of health insurance do you have? *(The following question requires a response.)*

- ☐ No health care insurance
- ☐ Commonwealth Connector
- ☐ Other (please specify)

- ☐ MassHealth (Medicaid)
- ☐ Medicare
- ☐ Private / commercial insurance

* 42. Which categories describe your race? Please select all that apply. *(The following question requires a response.)*

- ☐ Asian
- ☐ Black or African American
- ☐ Native American / American Indian
- ☐ Other (please specify)

- ☐ Native Hawaiian or Pacific Islander
- ☐ White / Caucasian
- ☐ Declined
- ☐ Unavailable / Unknown

43. Do you think of yourself as Hispanic / Latino or of Spanish origin?

- ☐ No
- ☐ Yes, Mexican, Mexican American, Chicano(a)
- ☐ Yes, Puerto Rican
- ☐ Yes, Cuban
- ☐ Yes, other (please specify)

44. If you are not Hispanic / Latino or of Spanish origin, do you identify with a nationality?

- ☐ I am Hispanic / Latino or of Spanish origin
- ☐ I do not identify with a nationality
- ☐ Eastern European
- ☐ Western European
- ☐ Other (please specify)
- ☐ Middle Eastern
- ☐ South Asian
- ☐ Russian
- ☐ Somalian
- ☐ Cambodian
- ☐ Vietnamese
- ☐ Other African
- ☐ Other East Asian
- ☐ Declined

45. What language do you usually speak at home?

46. How would you describe your current health status?

- ☐ Excellent
- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor

47. What is your ZIP code? ***(The following question requires a response.)***

48. In the past year, where did you get health-related information? Please select all that apply.

- ☐ Pick up flyers and newsletters from the hospital
- ☐ Receive flyers and newsletters in the mail
- ☐ Doctor / nurse practitioner / physician assistant
- ☐ Pharmacist / drug store
- ☐ Church / mosque / synagogue
- ☐ Health department
- ☐ Internet
- ☐ Other (please specify)
- ☐ My child's school / day care center
- ☐ Help lines
- ☐ Facebook / Twitter
- ☐ Text message
- ☐ Radio commercials
- ☐ TV
- ☐ Newspaper / magazine
- ☐ Friends and family

Thank you for your responses. Help us get the word out! Please tell your friends, family, and neighbors about this survey.

All survey respondents may enter a drawing for an iPad Mini and several other gift cards by entering their contact information below. Personal contact information entered into the system to register you for the raffle will be kept completely confidential as well and will be used solely for the purpose of this raffle and not for any marketing purposes.

What are your first and last names?

What is your email address or phone number? (Please enter your preferred contact information.)