Lawrence General Hospital &
Greater Lawrence Family Health Center
Community Health Needs Assessment 2016

August 29, 2016

Lawrence General Hospital

Greater Lawrence Family Health Center

Health Resources in Action
Advancing Public Health and Medical Research

Table of Contents

EXECUTIVE SUMMARY

Background

The Lawrence General Hospital and Greater Lawrence Family Health Center undertook a joint Community Health Needs Assessment (Needs Assessment) in 2016 to ensure they are achieving their vision and meeting the needs of the community. Lawrence General Hospital is a private, non-profit community hospital providing the Merrimack Valley with high quality, high value medical care for the whole family. For nearly 140 years, the extremely dedicated doctors, nurses, and staff of Lawrence General Hospital have been committed to strengthening our hospital and our community. Similarly, the Greater Lawrence Family Health Center has been a community leader for over 35 years. Responsive to emerging needs of the community, Greater Lawrence Family Health Center designs programs and services for a unique patient population and the prevalent chronic diseases among them.

The Lawrence General Hospital and Greater Lawrence Family Health Center 2016 Needs Assessment focused on the hospital and health center's service areas, which are comprised of eight communities in Massachusetts and two Community Health Network Areas (CHNA). The two CHNAs are Greater Haverhill Community Health Network Area (CHNA 11) and Greater Lawrence Community Network Area (CHNA 12).

Community Health Needs Assessment Methods

The Needs Assessment incorporated data on important social, economic, and health indicators from various sources and administered a survey completed by 450 residents and 521 health/social service providers within the Merrimack Valley to understand public perceptions around health issues. Two focus groups and five interviews were also conducted with community members and leaders. In addition, the report integrated qualitative findings provided by a youth photovoice project led by Greater Lawrence Family Health Center as well as a Lawrence Public Health Delivery organizational assessment conducted by HRiA on behalf of the Mayor's Health Task force. **In total, over 1,000 individuals were engaged in the 2016 assessment process.**

Findings

The following provides a brief overview of key findings that emerged from this assessment.

<u>Demographics</u>

- ***Population:*** Since the 2013 Needs Assessment report, the overall service area population grew by 2.6% to a total population of approximately 276,263. Lawrence, remained the largest community in the service area, comprising 28% of the service area's population, followed by Haverhill and Methuen (22% and 17% of the service area's total population, respectively).

- ***Age Distribution:*** The Hospital and Health Center's service-area population had an age distribution similar to that of the state, over 60% of the population is between the ages of 18 and 64, 20-30% are under the age of 18 and 8-14% are over the age of 65.

  Qualitatively the aging population was identified as a trend by some and considered an important issue. According to the U.S. Census, since 2011, all towns experienced an increase in their elder population, except for Andover.

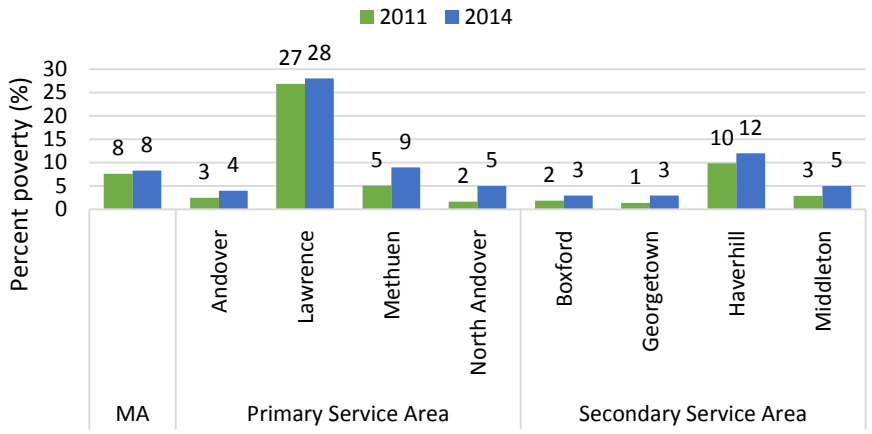
  > ***"The elder population is slipping through the cracks."***
  >
  > -Focus group participant

- ***Racial and Ethnic Diversity:*** Focus group and interview participants described Lawrence in particular as a very diverse community, primarily comprised of Spanish-speaking immigrants from various countries. Lawrence had the largest Hispanic population (76%), Middleton had the largest non-Hispanic Black population (3%) and Andover had the largest non-Hispanic Asian population (11%).

Social and Physical Environment

- ***Income and Poverty:*** While the household median income for the overall service area was higher than that of the state ($91,000 versus $68,000), there is great variability by community. Boxford remained the community with the highest median household income, though the median income declined from $137,000 to $128,000; Lawrence's median household income, while still the lowest, increased from $31,000 to $34,000. Coinciding with median household incomes, Lawrence (28%) had the highest percent of families living below poverty, while Boxford and Georgetown had the lowest percent of families below poverty (3%) (Figure A). Among the challenges faced by residents in the region, economic hardship was often mentioned by focus group and interview participants.

Figure A. Percent Families Below Poverty Level by State, Service Area and Community, 2011 and 2014



Data source: *2011 Census and American Community Survey 5-Year Estimates, 2007-2011; 2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

- ***Employment:*** The unemployment rate in the service area was higher than that of the state (9% versus 6%). Between the 2013 and 2016 Needs Assessment report, all communities experienced an increase in unemployment rate, except Georgetown and Middleton; Lawrence, which had the highest percent of unemployed, experienced an increase from 9% to 14%. Participants also reported a lack of job opportunities for residents.

- ***Educational Attainment:*** Interview and focus group participants reported low levels of education as a barrier for residents and indicated that educational quality in the community varied. While schools in Lawrence were seen to be of lower quality, those in surrounding communities were perceived to be better. As in the 2013 report, Andover had the highest percent of residents with a college degree or more (70.5%) and Lawrence had the largest percent of residents with a high school diploma (32%) and with no high school diploma (31.5%).

- ***Housing:*** Housing was also reported to be a challenge for some community members. Several participants noted that rents in the region are high and there is little quality affordable housing. In Lawrence, nearly half of renters (48%) contributed 35% or more of their household income towards housing. Related to the high housing cost, several participants expressed concerns about the rise in homelessness in their communities.

- ***Transportation:*** The Hospital and Health Center's overall service area population indicated they were generally more likely to have access to a vehicle than those statewide. However, the proportion of individuals with access to a vehicle for commuting to work (alone) ranged from 65% in Lawrence to 87% in Georgetown, compared to 72% across the state. Qualitatively it was found that for some, transportation was reported to be a challenge, especially for those who commute to Boston and for seniors on fixed incomes.

- ***Crime and Safety:*** Concerns about violence in the community were expressed by several participants. Quantitatively, crime rates showed that Lawrence had the highest rate of violent crimes (1,094 offenses per 100,000 population) followed by Haverhill (697 offenses per 100,000 population), both of which are above the statewide rate (392 offenses per 100,000 population). Additionally, rates of violent crime rose in these two communities between the 2013 and 2016 Needs Assessment reports.

Community Strengths and Assets

Key strengths of the community, according to focus group and interview participants, were the family and community bonds among residents. Several participants specifically identified the cohesion among different ethnic groups. A similar perspective was shared about organizations working in the community and high levels of volunteerism within the community.

> ***"I appreciate the friendliness that is part of the bigger picture. I've lived in other places with racial diversity that didn't have the cohesiveness that I do see here."***
>
> -Focus group participant

Community Health Issues

- ***Perceived Community and Individual Health Status:*** In 2016, 32% of resident's reported their community's health as good (down from 40% in 2013) and 47% reported their community's health as fair (up from 26% in 2013). From the provider's perspective a similar trend was seen. Provider's perceived 30% of the community to be in good health (down from 37% in 2013) and 49% perceived the community to have fair health (up from 30% in 2013). Drug use, access to health care, obesity, and mental health issues were identified as top community health concerns across the region among both resident and provider respondents.

- ***Premature Death:*** Compared to the 2013 Needs Assessment report, premature mortality appears to have decreased for the secondary service area (with the exception of Middleton) and increased for the primary service area. Looking at rates by community, Middleton, Lawrence and Methuen reported the highest premature mortality rates and all three were above the state rate of 269 deaths per 100,000 population.

- ***Chronic Disease and Related Risk Factors:*** Similar to the 2013 Needs Assessment Report, chronic disease was identified as a concern for the community, including obesity, diabetes and asthma; although it was discussed less often than mental health and substance use.
  - *Overweight/Obesity:* Several participants noted that obesity was very prevalent in their communities. At the CHNA level, rates of obesity were slightly higher in CHNA 11 compared to CHNA 12, but both were similar to the state level of 23%.
  - *Healthy Eating and Physical Activity:* Participants attributed obesity and chronic disease in their community to poor food options, lack of physical activity, and personal choices. In addition, 20% of adults in CHNA 12 consumed the recommended number of fruit and vegetables servings, which is similar statewide, compared to 13% of residents in CHNA 11 and 27% of adults in CHNA 11 lacked daily exercise compared to 20% in CHNA 12.
  - *Diabetes:* Focus group participants noted high prevalence of diabetes in their community, much of which they reported was untreated. The percent of adults statewide who reported having been diagnosed with diabetes was 8%. CHNA 11 and 12 had a higher proportions of adults diagnosed with diabetes (9% and 11%, respectively) than the state.
  - *Asthma:* High rates of asthma were also mentioned by a couple of participants, and attributed to poor air quality. Quantitatively, when looking at rate of asthma emergency department (ED) visits per 10,000 people, Haverhill had the highest rate of asthma-related ED visits (94 visits per 10,000 population) and Boxford has the lowest (23 visits per 10,000 population).
  - *Cardiovascular and Cerebral Health:* In terms of heat attack, all service area towns had greater rates of heart attack hospitalization compared to the state (31 hospitalizations per 10,000 population) except for

Andover, Middleton and Boxford. When examining heart disease and stroke at the community level, Lawrence, Haverhill and Methuen had higher rates of coronary heart disease hospitalization than the state and Lawrence, North Andover and Georgetown had higher rates of stroke hospitalizations than the state.

- *Cancer:* At the town level, Middleton had the highest all-site cancer death rate (724 deaths per 100,000 population) followed by Andover (527 deaths per 100,000 population). Cancer was also mentioned by a couple of assessment participants as a community concern.

- ***Behavioral health:*** Mental health was frequently mentioned in interviews and focus groups as a health issue of great concern in the community. Participants stated that the community lacks mental health care providers and reported long waitlists for services, which exacerbates conditions for those in need of critical care. Closely related to the issue of mental health in the community was concern about substance use. Focus group and interview participants mentioned that opiates are a rising concern in the community but members also struggle with abuse of alcohol, marijuana, and cocaine.

  "A whole generation is missing, usually aged 28-35, who either end up in jail or dead [due to drugs]."

  -Focus group participant

  Quantitatively, Lawrence and Haverhill (7,131 hospitalizations per 100,000 population and 7,013 hospitalizations per 100,000 population, respectively) had mental disorder hospitalization rates above the statewide rate (5,673 hospitalizations per 100,000 population). Additionally, as reported by the MA Bureau of Substance Abuse Services, when examining the percent distribution of primary drug use for the service area communities, from 2012 to 2014 the distribution of alcohol as a primary substance use decreased across communities (with the exception of Boxford) and Heroin use has nearly doubled across communities.

- ***Maternal and Child Health:*** Maternal and child health was not raised as a concern in focus groups or interviews. In 2014, of the 3,377 births in the service area, 14% of infants were born with low birthweight. In addition, Lawrence had a teen birth rate three-times higher that the state (36 teen births compared to 11 teen births per 100,000 population) and Haverhill had a teen birth rate over two-times higher than the state (23 teen births per 100,000).

- ***Infectious Diseases:*** Infectious diseases were not mentioned in interviews or focus groups. Rates of sexually transmitted infections (STIs) are higher in some communities within the service area than statewide. Compared to the state, rates of Gonorrhea were lower in the CHNA 11 and 12 region, yet CHNA 11 had higher rates of Chlamydia compared to the state. In addition, while Hepatitis data were suppressed for some communities, overall rates of Hepatitis B and C for the service area were lower than the state; however, Lawrence had incidence rates above the state rate.

<u>Health Care Access and Utilization</u>

Similar to the 2013 Needs Assessment, access to health care was also raised as a concern among interview and focus group participants; they identified several barriers to accessing care, including cost, insurance, quality, language and transportation.

- ***Use of Health Care Services:*** Compared to 2013 survey results, a lower percent of residents indicated they had at least one person or facility they consider as their personal health care provider (95% in 2013 compared to 65% in 2016). A higher

Many residents use the hospital as their primary source of health care; the challenge with this is having patients discharged from the hospital with lack of access or ability to carry out follow-up care."

-Interviewee

percent of providers indicated their patients had at least one person or facility they considered as their main medical provider (13% in 2013 compared to 26% in 2016).

- ***Challenges to Accessing Health Care Services:*** Those survey respondents who indicated that they or their patients/clients did not have one person as a health care provider were then asked what barriers were inhibiting the establishment of this kind of consistent provider-patient relationship. For residents the primary reasons for not having one consistent health care provider were: inability to communicate with providers (from a language perspective), lack of evening and weekend services, and insurance problems. According to provider respondents, primary reasons were insurance problems/lack of coverage, cost of care and patient's lack of awareness.

- ***Quality of Care:*** Considering the likelihood of seeking health/medical services in the Merrimack Valley, residents indicated that they were very likely to seek primary care (73%) and emergency care services in Merrimack Valley and not likely to seek brain care/neurosurgery and cancer care (49%) in Merrimack Valley. When survey respondents were asked why they would not seek services locally in the Merrimack Valley, both residents and providers indicated they were most likely to seek services outside the Merrimack Valley due to questioning the quality of the local services. Several focus group participants also spoke about quality of care and shared differing perspectives.

- ***Health Information Sources:*** When resident respondents were asked the sources from which they receive the majority of their health information, they were more likely to report doctors or other health providers, the internet and hospital. The majority of providers perceived their patient's health information to come from health providers, family members and friends.

Vision for the Future

When asked to identify areas considered to be priorities for addressing in the future, resident survey respondents identified offering more programs or services focusing on obesity/weight control and providers identified providing more counseling or mental health services as a top priority. When focus group and interview participants were asked about needed services, several themes emerged, including a need for mental health services, more outreach and education, and enhanced collaboration among organizations in the community.

Conclusions

The following hey health issues emerged as areas of potential concern in the assessment – supported by secondary data and consistently mentioned in the community survey, interviews and focus groups: behavioral health (mental health and drug addiction services), chronic disease (obesity and diabetes, and health care access Overarching conclusions that cut across multiple topic areas include:

- The service area is demographically and economically diverse and in the past three years the service area has grown modestly and at the same rate of the state.
- Behavioral health, specifically mental health and drug addiction, are growing concerns among residents and providers where demand is exceeding available services.
- The impact of chronic disease on the community was noted as a family concern for residents.
- Residents continue to face barriers accessing care and having varying perceptions of quality of care.
- The community has assets that can be leveraged and benefits from residents, providers and leaders striving to improve the health of the community.

INTRODUCTION

Background

Lawrence General Hospital and Greater Lawrence Family Health Center undertook a joint Community Health Needs Assessment (Needs Assessment) in 2016 to ensure they are achieving their vision and meeting the needs of the community. Health Resources in Action (HRiA), a non-profit public health consultancy organization, was engaged to conduct the Needs Assessment. The Needs Assessment included reviewing existing social, economic, and health data of the Merrimack Valley region as well as conducting a survey and in-depth discussions with providers, community-based organizational leaders, and residents to identify perceived health needs of the community, challenges to accessing services, current strengths and assets, and opportunities for action.

Lawrence General Hospital is a private, non-profit community hospital providing Merrimack Valley with high quality, high value medical care for the whole family in a broad range of primary and specialty areas. For nearly 140 years, the dedicated doctors, nurses, and other staff of Lawrence General have been committed to strengthening the hospital and the community. Lawrence General's vision for the hospital is to become a stellar regional health system known for the highest quality, highest value, service, efficiency, and compassionate care. In recent years, Lawrence General has been a trail blazer in building community coalitions of providers to improve the care of those with chronic illness, comorbidities and challenging social determinants of health to increase quality of life and reduce the need for hospitalization. Lawrence General is actively involved in accountable care transformation work, and improving care through shared quality goals and data sharing. The hospital is clinically affiliated with Beth Israel Deaconess Medical Center and Floating Hospital for Children at Tufts Medical Center. These affiliations ensure Lawrence General's patients have an expanded roster of specialty services and clinics available locally, greatly decreasing the need to travel to Boston for quality care.

Similarly, Greater Lawrence Family Health Center has been a community leader for over 35 years. Responsive to emerging needs of the community, the health center designs programs and services for a unique patient population and the prevalent chronic diseases among them. The mission of Greater Lawrence Family Health Center is *"to improve and maintain the health of individuals and families in the Merrimack Valley by providing a network of high quality, comprehensive health care services and by training health care professionals who can respond to the needs of a culturally diverse population."* The health center accomplishes this mission through the provision of high-quality, comprehensive primary medical care, prenatal care, obstetrics, pediatrics, elderly care, gynecology, internal medicine, disease prevention and health education, nutrition counseling, case management, family planning, and HIV/AIDS outreach, education, and social services, for 60,000 patients in the Merrimack Valley. These services are provided at four neighborhood clinics in Lawrence, two school-based health centers, two sites based in local hospitals, and the only federally-funded Health Care for the Homeless Program in the Merrimack Valley. Greater Lawrence Family Health Center owns and operates the Lawrence Family Medicine Residency Program, the first of its kind in the nation, which aims to address the primary care shortage by training Family Practice Clinicians in community medicine.

Previous Needs Assessment and Review of Initiatives

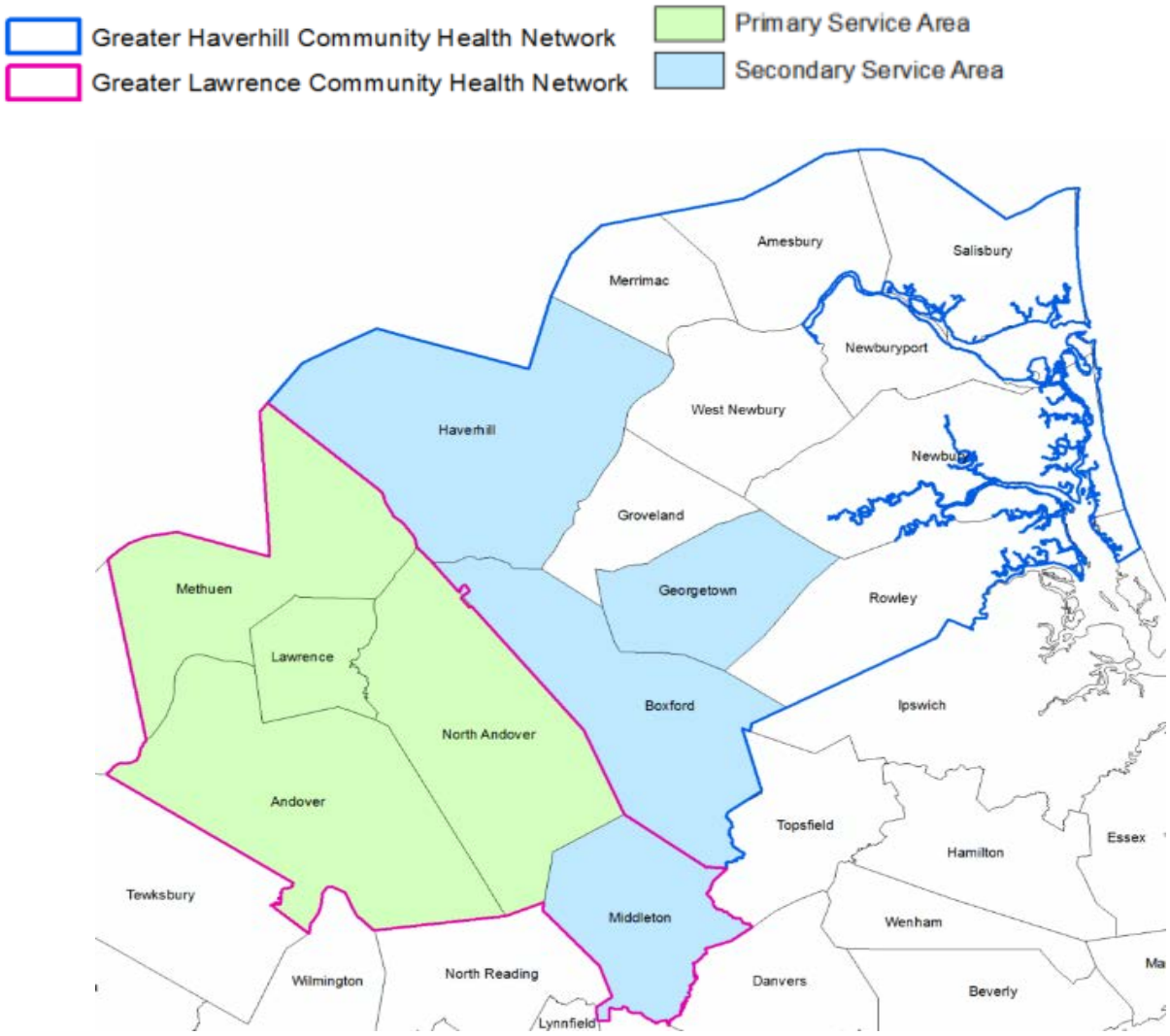
Lawrence General Hospital conducted its previous Needs Assessment in 2013, which identified key health issues and informed the hospital's program planning; the process culminated in the development of an implementation plan to address the identified community health needs of residents. As a result of key findings from the 2013 Needs Assessment, Lawrence General Hospital identified three priority areas, each of which aligned with an identified community health need: 1) obesity and chronic disease, including cancer needs and asthma; 2) mental health and substance abuse; and 3) access to health care. Since the 2013 Needs Assessment, Lawrence General has provided a variety of services and programming to address these needs in the community. Appendix A details the priority areas and progress of the initiatives listed in the 2013

implementation plan. For an overview of health priorities and programming identified in the previous Needs Assessment, please see the 2013 report on the Hospital's website: ttps://www.lawrencegeneral.org/uploads/CHNA%20%20Assessment_Final.pdf

Definition of Community

The Lawrence General Hospital and Greater Lawrence Family Health Center 2016 Needs Assessment focused on the hospital and health center's service areas, which are comprised of eight communities in Massachusetts and two Community Health Network Areas (CHNA). The two CHNAs are Greater Haverhill Community Health Network Area (CHNA 11) and Greater Lawrence Community Network Area (CHNA 12). Figure 1 identifies all communities that fall within the Lawrence General Hospital and Greater Lawrence Family Health Center's service areas (primary and secondary) and identifies all communities that comprise the Greater Haverhill Community Health Network Area (CHNA 11) and Greater Lawrence Community Network Area (CHNA 12).

Figure 1
Service Area overlap with Community Health Network Areas



Data source: *Map created by Health Resources in Action using 2010 data from the U.S. Department of Commerce, Bureau of the Census*

METHODS

The following section describes how data for the Needs Assessment were compiled and analyzed, as well as the broader lens used to guide this process. Specifically, the Needs Assessment defines health in the broadest sense and recognizes that numerous factors at multiple levels impact a community's health. The beginning discussion of this section discusses the larger social determinants of health framework which helped guide this overarching process.

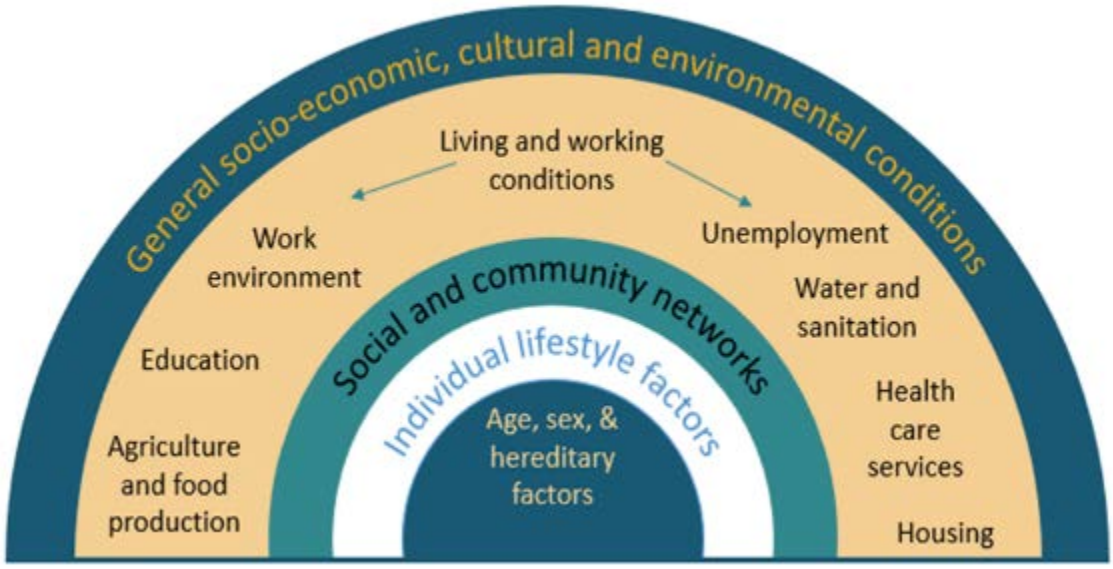
Approach and Community Engagement Process

So that the process was informed by diverse perspectives, the Need Assessment employed a participatory approach, when possible. This approach helps guide the methods and questions so they are salient to the community as well as aids in building support and buy-in at the community level for both the assessment and subsequent planning processes. As part of this effort, the Hospital and Health Center sought input from a 47-member Advisory Committee – that included local health department representation - at several stages of the assessment (see Appendix B). The Advisory Committee participated in a kick-off meeting to brainstorm and prioritize a list of potential stakeholders followed by a presentation of preliminary findings to gather inform the report, including identification of additional data sources. A steering committee of Hospital and Health Center representatives was engaged in bi-weekly conference calls and e-mails throughout assessment planning and implementation, finalized the list of potential stakeholders for interviews and focus groups, provided suggestions on who to engage, and gave feedback data collection instruments.

Social Determinants of Health Framework

It is important to recognize that multiple factors have an impact on health and that there is a dynamic relationship between real people and their lived environments. The following diagram provides a visual representation of this relationship, demonstrating how individual lifestyle factors, which are closest to health outcomes, are influenced by more upstream factors such as educational opportunities and the built environment.

Social Determinants of Health Framework



Data Collection Methods and Information Sources

Reviewing Existing Secondary Data

The Needs Assessment incorporates data on important social, economic, and health indicators from various sources, including the U.S. Census, U.S. Bureau of Labor, Massachusetts Department of Public Health (MASSCHIP) and Centers for Disease Control and Prevention (CDC). Types of data included self-report of health behaviors from large, population-based surveys such as the Behavioral Risk Factor Surveillance System (BRFSS), as well as vital statistics based on birth and death records.

Community and Provider Survey

Similar to 2013 Needs Assessment methods, in order to gather quantitative data that were not provided by secondary sources as well as to understand public perceptions around health issues, a brief survey was developed and administered to residents and health/social service providers within the Merrimack Valley. The survey was administered online and hard copy in both English and Spanish. The survey included a skip pattern where community residents were taken to one section of the survey to answer questions about their perceptions of community health needs and priorities, while health and social service providers were taken to a different section to answer similar questions about their patients, rather than themselves.

The Lawrence General Hospital and Greater Lawrence Family Health Center Steering Committee reviewed and provided feedback on the survey and disseminated the survey link via their organizational networks. The advisory committee also played a key role in disseminating the survey. The survey was administered during the first three weeks of April 2016. The survey used a convenience sample for gathering information but strong efforts were made to disseminate the survey through multiple venues and media to yield a broad cross-section of respondents from the region. The Needs Assessment report provides findings of the survey among the overall resident and overall provider samples. Due to sample sizes, analyses do not focus on distinctions by specific community.

A total of 971 respondents (450 residents and 521 providers) who either live or work in the Lawrence General Hospital and Greater Lawrence Family Health Center service area completed the survey—up from 387 respondents in 2013. Table 1 shows the distribution of resident and provider survey respondents by demographic characteristics and survey year.

Table 1
Community Health Needs Assessment Survey Respondent Characteristics by Respondent Role, 2013 and 2016

	Resident		Provider	
	2013 (N=156)	2016 (N=450)	2013 (N=231)	2016 (N=521)
Age				
Under 18 years old	0%	1%	0%	0%
18-29 years old	6%	7%	12%	19%
30-49 years old	37%	27%	38%	40%
50-64 years old	47%	37%	47%	36%
65 years or older	10%	28%	3%	5%
Gender				
Male	27%	24%	9%	20%
Female	73%	75%	91%	80%
Race/Ethnicity				
White, non-Hispanic	71%	50%	63%	71%
Black, non-Hispanic	1%	1%	1%	1%
Hispanic	15%	47%	16%	23%
Asian, non-Hispanic	1%	1%	1%	3%
Other race, non-Hispanic	1%	1%	2%	2%
Two or more races, non-Hispanic	1%	0%	0%	1%
Educational Attainment				
HS diploma or less	15%	33%	4%	2%
Some college	31%	24%	25%	21%
College graduate or more	55%	43%	71%	77%
City/Town of Residence				
Andover, MA	8%	6%	8%	7%
Atkinson, NH	1%	-	2%	-
Boxford, MA	3%	1%	1%	0%
Georgetown, MA	0%	0%	1%	1%
Haverhill, MA	19%	8%	23%	10%
Lawrence, MA	33%	45%	25%	18%
Methuen, MA	16%	13%	16%	11%
Middleton, MA	0%	0%	0%	0%
North Andover, MA	10%	4%	11%	6%
Plaistow, NH	1%	-	5%	-
Salem, NH	9%	-	8%	-
Tewksbury, MA	2%	-	1%	-
Other	-	23%	-	47%
City/Town of Employment				
Andover, MA	5%	5%	2%	3%
Atkinson, NH	0%	-	0%	-
Boxford, MA	0%	0%	0%	1%

Table 1
Community Health Needs Assessment Survey Respondent Characteristics by Respondent Role, 2013 and 2016

	Resident		Provider	
	2013 (N=156)	2016 (N=450)	2013 (N=231)	2016 (N=521)
Georgetown, MA	0%	0%	0%	0%
Haverhill, MA	4%	1%	1%	3%
Lawrence, MA	82%	68%	95%	86%
Methuen, MA	3%	13%	0%	4%
Middleton, MA	0%	0%	0%	0%
North Andover, MA	5%	2%	1%	2%
Plaistow, NH	0%	-	0%	-
Salem, NH	1%	-	0%	-
Tewksbury, MA	1%	-	0%	-
Other	-	10%	-	2%
Work for Lawrence General Hospital*				
Yes	-	-	-	48%
Work for Greater Lawrence Family Health Center*				
Yes	-	-	-	29%

Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*
Notes: *Asterisk denotes addition to the 2016 survey*

Focus Groups and Interviews

The advisory committee was engaged to provide guidance on identify key informant interviewees and focus group audiences. To aid in the facilitation of these interviews and focus groups, a semi-structured guide was used across interviews and focus groups to ensure consistency in the topics covered. Each focus group and interview was facilitated by a trained moderator, and detailed notes were taken during conversations.

During May-June 2016, two focus groups, including one in Spanish, and five key informant interviews were conducted in the region to gather feedback on people's priority health concerns, community challenges to addressing these concerns, current strengths of the area, and opportunities for the future; a total of 21 community members and/or leaders participated in the interviews and focus groups. The participants were represented many different sectors and voices including, schools, faith community, first responders, homeless, court system, healthcare home team, and seniors.

The collected qualitative data were coded and analyzed thematically, where data analysts identified key themes that emerged across all groups and interviews. Frequency and intensity of discussions on a specific topic were key indicators used for extracting main themes. While town differences are noted where appropriate, analyses emphasized findings common across the region. Selected quotes – without personal identifying information – are presented in the narrative of this report to further illustrate points within topic areas.

Youth Photovoice Project and Lawrence Public Health Delivery Assessment

In addition to the qualitative data conducted by HRiA for this Needs Assessment, the report integrates qualitative findings provided by a youth photovoice project led by Greater Lawrence Family Health Center as well as a Lawrence Public Health Delivery organizational assessment conducted by HRiA on behalf of the Mayor's Health Task force.

Youth Photovoice Project: High school juniors or seniors recruited into the Merrimack Valley Area Health Education Center (AHEC) Student Intern Program participated in three sessions: 1) an introduction to photovoice and the project including the subject theme, discussion of any questions, and distribution of information and consent forms; 2) an introduction to photography workshop by a local professional photographer and a group discussion about ethical issues in photography of subject, privacy, permission, and safety; and 3) students presented one to three photos using the SHOWED method. The rest of the group was then invited to participate in a facilitator led discussion of each photo for 5 to 10 minutes. Between the second and the third sessions, participants were asked to take photographs with their cell phones addressing one or more of the following questions: What does health and healthcare mean to you? What does it look like in the Lawrence community? What are barriers to "good health" in Lawrence? What are the assets in Lawrence?

Lawrence Public Health Delivery Assessment: An organizational assessment was conducted to a) provide recommendations for organizational structure for the Lawrence Board of Health/Health Department and b) define the needs and interventions necessary to formulate a fully functional Board of Health that can sustain effective population health management for the City of Lawrence. As part of this assessment, HRiA conducted 14 key informant interviews and 3 focus groups representing a variety of sectors and organizations, including nonprofits, education, state agencies, faith-based, and health care.

Limitations

As with all research efforts, there are several limitations related to the health assessment's research methods that should be acknowledged. There were several instances when secondary data sources did not provide community-level data or reported inconsistent geographic scopes. For example, data were sometimes available for each service-area community, while in other cases, data were available only for CHNA 11 or CHNA 12.

Likewise, self-reported data should be interpreted with particular caution. In some instances, respondents may over report or under report behaviors and illnesses based on fear of social stigma or misunderstanding the question being asked. In addition, respondents may be prone to recall bias—that is, they may attempt to answer accurately, but they remember incorrectly. In some surveys, reporting and recall bias may differ according to a risk factor or health outcome of interest. Despite these limitations, most of the self-report surveys included in this report benefit from large sample sizes and repeated administrations, enabling comparison over time. However, it is important to note that the Needs Assessment survey– also self-reported data–used a non-random sampling method and therefore results may not be representative of the larger population. Additionally, because the 2016 Needs Assessment survey reached a wider and varied audience than the 2013 survey, it is important to exercise caution when comparing the two time points

Similarly, while focus groups and interviews conducted for this study provide valuable insights, results are not statistically representative of a larger population due to non-random recruiting techniques and a small sample size. Lastly, it is important to note that data were collected at one point in time, so findings, while directional and descriptive, should not be interpreted as definitive.

FINDINGS

This section of the Needs Assessment describes the demographic and other health-related characteristics of the service area. There are numerous factors associated with the health of a community including what resources and services are available to community residents. While individual characteristics such as age, gender, race, and ethnicity have an impact on resident's health, the distribution of these characteristics across a community is also critically important and can affect the services and resources available.

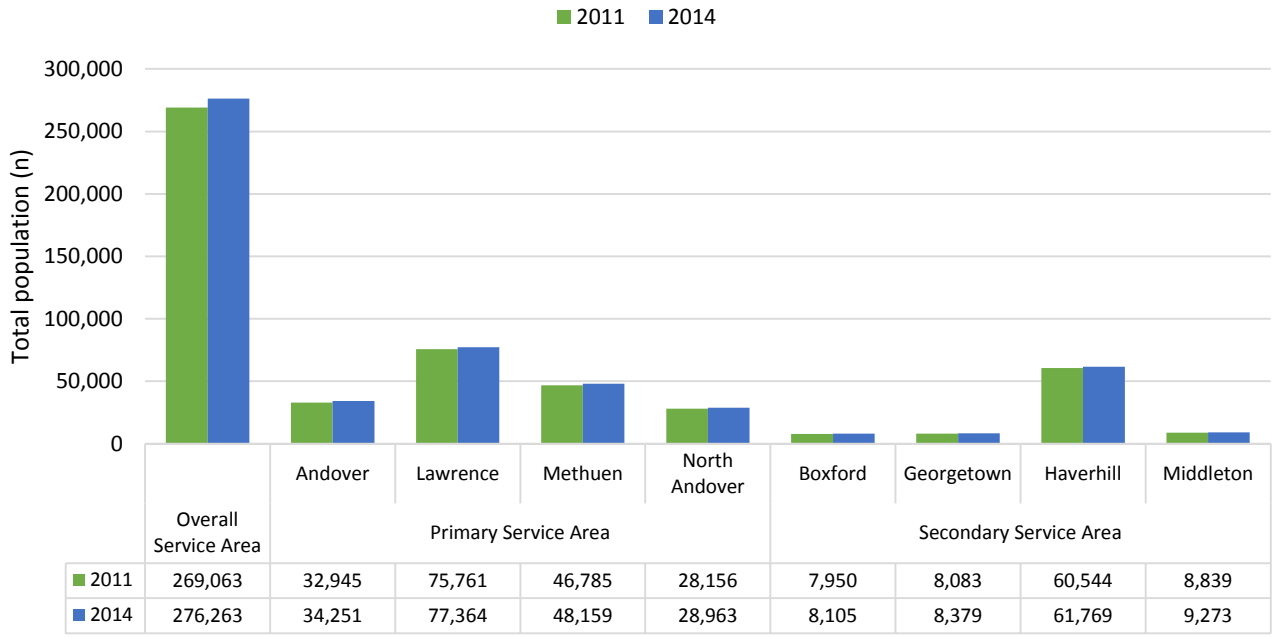
Demographics

Population

Between 2011 and 2014, the overall service area population grew by 2.6% to a total population of approximately 276,263 (Figure 2). Lawrence, remained the largest community in the service area, comprising 28% of the service area's population in 2014, followed by Haverhill and Methuen (22% and 17% of the service area's total population, respectively). The smallest community in the service area, Boxford, with a population of 8,105 in 2014, comprised about 2% of the total service area population.

Figure 2

Population by Service Area and Community in 2011 and 2014

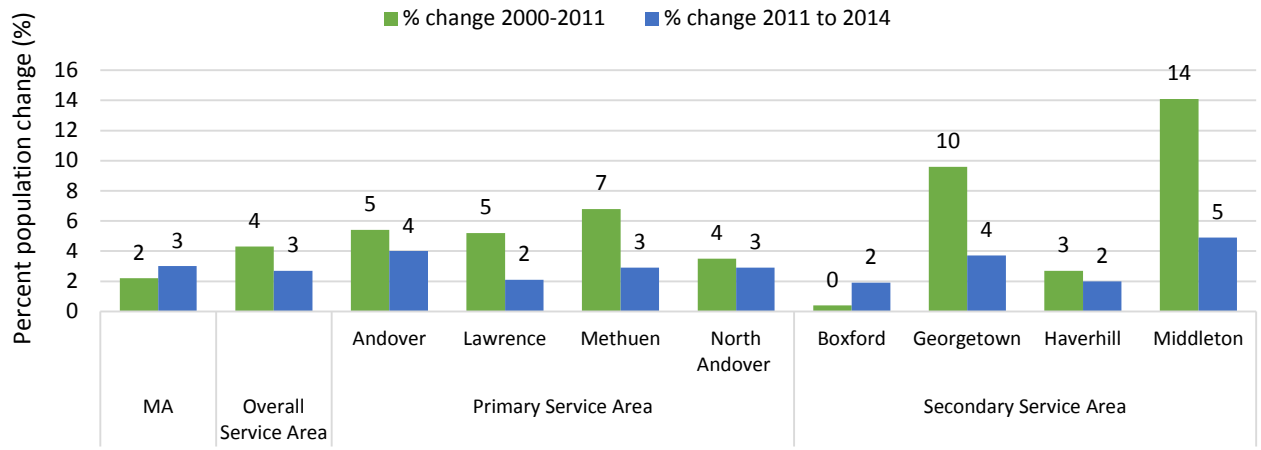


	Overall Service Area	Primary Service Area				Secondary Service Area			
		Andover	Lawrence	Methuen	North Andover	Boxford	Georgetown	Haverhill	Middleton
2011	269,063	32,945	75,761	46,785	28,156	7,950	8,083	60,544	8,839
2014	276,263	34,251	77,364	48,159	28,963	8,105	8,379	61,769	9,273

Data source: *2011 American Community Survey 5-Year Estimates, 2007-2011; 2014 American Community Survey 5-Year Estimates, 2010-2014*

In terms of population growth, between the 2013 and 2016 report (data years 2011 and 2014), Middleton saw the largest growth by nearly 5%, followed by Andover and Georgetown (4%). Comparatively, growth in this three-year timeframe was much smaller than what was observed from 2000 to 2011; however, the communities which experienced population growth remained consistent (Figure 3).

Figure 3
Percent Population Change between 2011 and 2014 by State, Service Area and Community

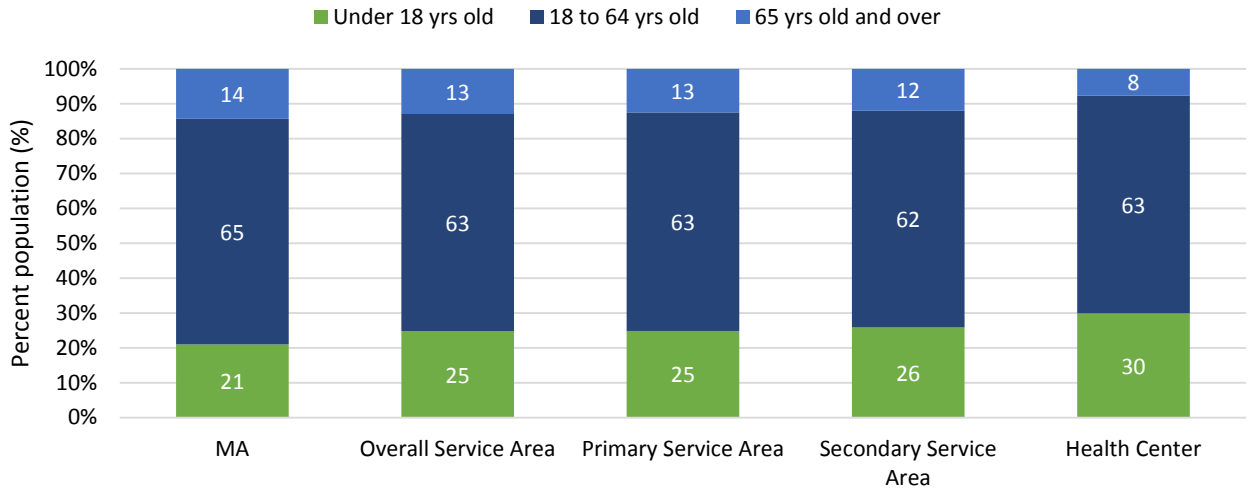


Data source: *2000 U.S. Census; 2011 American Community Survey 5-Year Estimates, 2007-2011; American Community Survey 5-Year Estimates, 2010-2014*

Age Distribution

The Hospital and Health Center's service-area population had an age distribution similar to that of the state, over 60% of the population is between the ages of 18 and 64, 20-30% are under the age of 18 and 8-14% are over the age of 65 (Figure 4). Lawrence (28%) and Georgetown (27%) had the highest proportions of children under age 18; these proportions slightly decreased from the 2013 report (29% and 28%) (Table 2). Conversely, Boxford had the largest proportion of residents age 65 and over (15%), replacing Andover. The age distribution of health center patients was similar to that of the overall service-area population (63%) (Figure 4). Differences are primarily seen in the children and senior populations. The Health Center had a much younger patient population in comparison to the overall service area population (30% compared to 25%) and served fewer seniors in comparison (8% compared to 13%).

Figure 4
Percent Age Distribution by State, Service Area and Health Center, 2014 and 2016



Data source: *2014 American Community Survey 5-Year Estimates, 2010-2014; Greater Lawrence Family Health Center, UDS Summary Report, 2016*

Table 2
Percent Age Distribution by Service Area and Community, 2011 and 2014

	Under 18 yrs. Old		18 to 24 yrs. Old		25 to 44 yrs. Old		45 to 64 yrs. old		65 yrs. old and over	
	2011	2014	2011	2014	2011	2014	2011	2014	2011	2014
Primary Service Area										
Methuen	23.8	23.5	8.4	8.7	18.6	25.5	36.0	28.2	13.4	14.3
North Andover	25.4	23.5	9.7	9.4	15.1	23.3	36.4	29.5	13.4	14.4
Andover	27.0	26.4	6.4	8.6	20.4	19.8	31.7	31.3	14.5	13.9
Lawrence	28.8	28.0	12.1	12.5	21.7	28.3	28.7	22.3	8.7	8.9
Secondary Service Area										
Middleton	22.1	19.9	7.7	8.0	17.7	28.6	39.9	29.2	12.6	14.4
Haverhill	23.7	22.9	7.4	8.5	21.7	27.9	35.1	27.7	12.1	13.0
Boxford	28.5	25.4	5.0	4.5	9.4	21.0	44.9	34.1	12.2	15.2
Georgetown	27.9	26.9	5.6	5.9	15.3	20.7	40.1	32.4	11.1	14.1

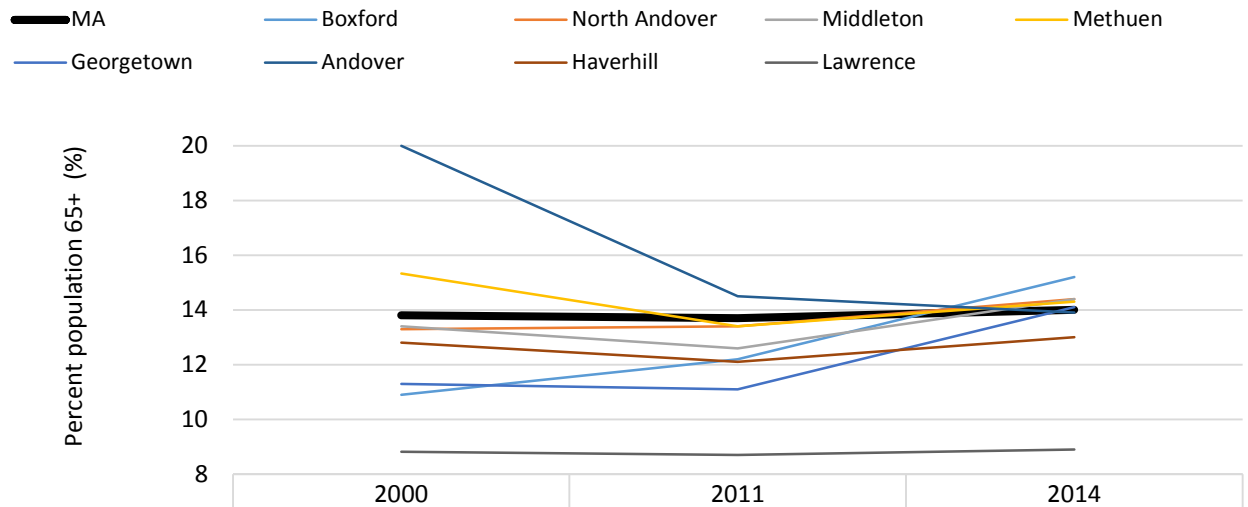
Data source: *2011 American Community Survey 5-Year Estimates, 2007-2011; 2014 American Community Survey 5-Year Estimates, 2010-2014*

Although not a consistent theme across all interviews and focus groups, the aging population was identified as a trend by some and considered an important issue. The aging population in North Andover was specifically mentioned. Examining the quantitative data further, since 2000 the population aged 65 years and older has increased across all communities except for Methuen, Andover and Lawrence. Specifically, Boxford experiences a 4% increase, Georgetown a 3% increase and North Andover a 1% increase in its elder population since 2000, while Andover has seen a 6% decrease and Methuen a 1% decrease in its elder population (Figure 5).

"The elder population is slipping through the cracks."
-Focus group participant

"The boomer population is aging quickly without their children."
-Focus group participant

Figure 5
Percent Population 65 Years of Age and Older by State and Community, 2000-2014



	2000	2011	2014
MA	13.8	13.7	14.0
Boxford	10.9	12.2	15.2
North Andover	13.3	13.4	14.4
Middleton	13.4	12.6	14.4
Methuen	15.3	13.4	14.3
Georgetown	11.3	11.1	14.1
Andover	20.0	14.5	13.9
Haverhill	12.8	12.1	13.0
Lawrence	8.8	8.7	8.9

Data source: *2000 U.S. Census, 2011 American Community Survey 5-Year Estimates, 2007-2011; 2014 American Community Survey 5-Year Estimates, 2010-2014*

Racial and Ethnic Diversity

As in the 2013 Needs Assessment, the growing Latino population and overall diversity of the region were notable themes during focus group and interview discussions in 2016. Focus group and interview participants described Lawrence in particular as a very diverse community, primarily comprised of Spanish-speaking immigrants from various countries.

Lawrence had the largest Hispanic population (76%), Middleton had the largest non-Hispanic Black population (3%) and Andover had the largest non-Hispanic Asian population (11%) (Table 3). Compared to 2013, Lawrence's Hispanic population grew from 73% to 76%, Middleton replaced Haverhill for having the largest non-Hispanic Black population (3%) and Andover retained the largest proportion of the non-Hispanic Asian population (10% to 11%). In addition, as reported by the Health Center, the racial and ethnic diversity of patients served has increased throughout the years. In 2014, 97% of patients were considered to be from a racial and/or ethnic minority group and 93% were Hispanic (Table 4).

Table 3
Percent Racial/Ethnic Composition by State, Service Area and Community, 2011 and 2014

	White		Black		Asian		Hispanic		Other	
	2011	**2014**	**2011**	**2014**	**2011**	**2014**	**2011**	**2014**	**2011**	**2014**
Massachusetts	76.9	75.0	6.1	6.4	5.3	5.7	9.3	10.2	2.4	3.4
Primary Service area										
North Andover	89.1	85.4	1.2	1.6	5.4	6.5	2.9	5.1	1.4	1.5
Andover	83.4	80.8	1.1	1.7	9.6	11.4	4.1	4.3	1.8	1.8
Methuen	75.1	72.2	1.9	0.8	4.6	3.2	17.6	21.4	0.8	1.3
Lawrence	21.5	17.7	1.6	2.3	3.1	3.3	72.9	75.7	0.9	1.0
Secondary Service area										
Georgetown	97.8	95.4	0.3	0.5	0.1	0.6	1.2	1.0	0.6	2.6
Boxford	96.9	92.4	0.0	0.0	1.5	4.1	0.6	1.8	1.0	1.8
Middleton	85.2	81.9	0.4	3.0	5.5	4.8	7.2	9.0	1.7	1.2
Haverhill	79.0	76.8	2.8	2.0	2.0	1.3	14.0	17.4	2.2	2.5

Data source: *2011 American Community Survey 5-Year Estimates, 2007-2011; 2014 American Community Survey 5-Year Estimates, 2010-2014*
Note: *White, Black, and Asian include only individuals that identify as one race; Hispanic/Latino include individuals of any race*

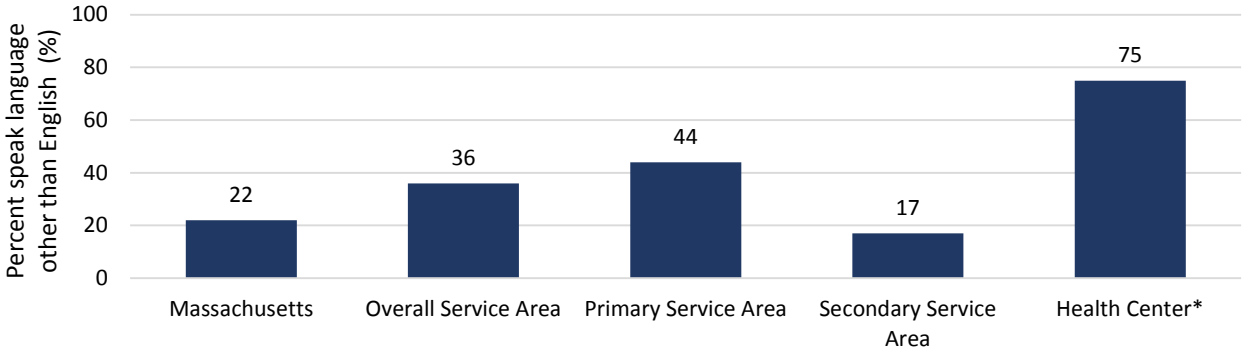
Table 4
Percent Racial/Ethnic Composition for Greater Lawrence Family Health Center Patients, 2012-2014

	2012	**2013**	**2014**
Total Patients	42,554	46,001	49,785
Patients By Race (% known)			
Non-Hispanic White	55.7	52.0	38.0
Black/African American[1]	8.7	8.4	9.5
Asian[1]	9.3	4.8	9.1
American Indian/Alaska Native[1]	1.5	3.0	2.2
Native Hawaiian / Other Pacific Islander[1]	0.2	4.5	0.0
More than one race[1]	21.4	23.3	32.7
Patients by Ethnicity (%)			
Racial and/or Ethnic Minority	93.9	94.0	97.2
Hispanic/Latino Ethnicity	81.9	82.4	93.4

Data source: *Greater Lawrence Family Health Center, UDS Summary Report, 2016*
Note: [1] *Includes Hispanic/Latino and Non-Hispanic Latino*

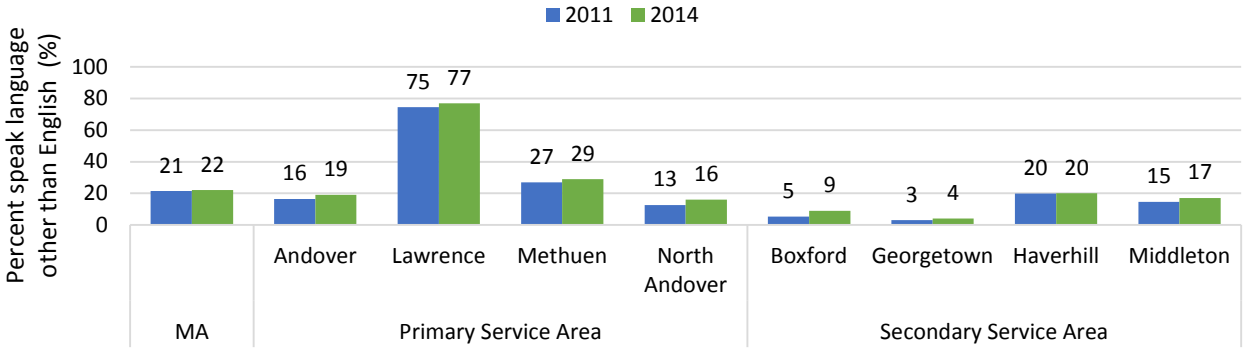
Telling of the racial and ethnic diversity of the Hospital and Health Center's service population, 36% of the population spoke a language other than English (Figure 6) and the U.S. Census reported the most spoken non-English language is Spanish. Over three-quarters (77%) of the Lawrence population reported speaking a language other than English at home (up from 75% in 2013) and 4% of Georgetown residents reported speaking a language other than English the least (up from 3% reported in 2013) (Figure 7). In regards to the Health Center, 75% of their patient population indicated being best served in a language other than English.

Figure 6
Percent Population Who Speak Language Other Than English at Home by State, Service Area and Health Center, 2014



Data source: *U.S. Department of Commerce, Bureau of the Census, 2014 Census and American Community Survey 5-Year Estimates, 2010-2014; Greater Lawrence Family Health Center, UDS Summary Report, 2016*
Note: *Asterisk denotes percent patient population best served in another language*

Figure 7
Percent Population Who Speak Language Other Than English at Home by State, Service Area and Community, 2011 and 2014



Data source: *2011 Census and American Community Survey 5-Year Estimates, 2007-2011; 2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

Social and Physical Environment

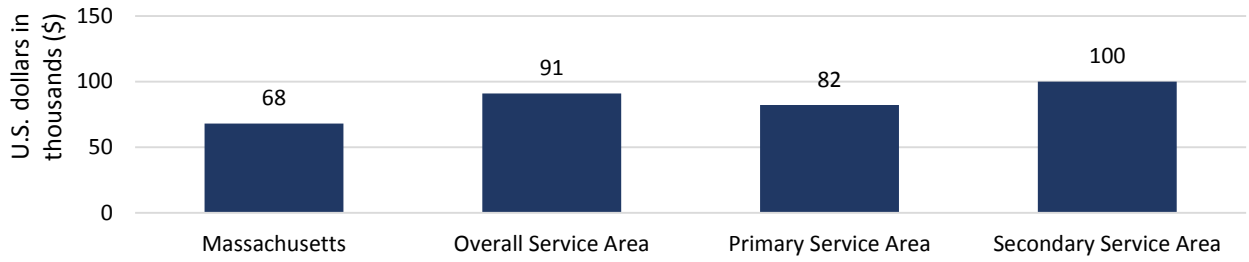
Income and Poverty

Among the challenges faced by residents in the region, economic hardship was often mentioned by focus group and interview participants. These 2016 findings were similar to 2013 findings as well. Residents described the region as economically diverse, including a mix of middle class families and families living in poverty.

> ***"Lawrence is an impoverished city with challenges in providing opportunity for its residents which affects the health of community members."***
> -Interviewee

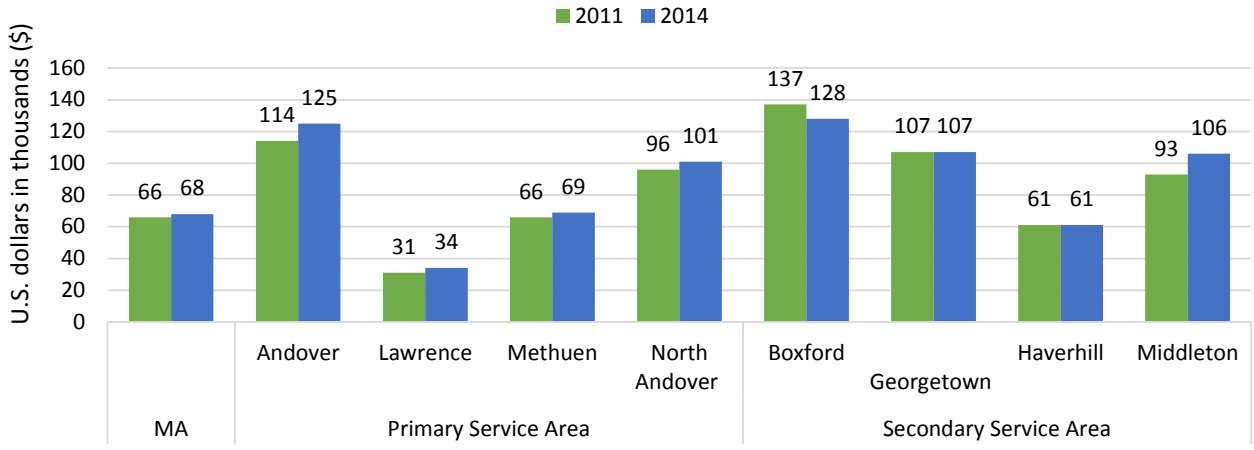
While the household median income for the overall service area was higher than that of the state ($91,000 versus $68,000) (Figure 8), there is great variability by community. Compared to 2011, Boxford remained the community with the highest median household income, though the median income declined from $137,000 to $128,000; Lawrence's median household income, while still the lowest, increased from $31,000 to $34,000 (Figure 9).

Figure 8
Median Household Income by State and Service Area, 2014



Data source: *U.S. Department of Commerce, Bureau of the Census, 2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

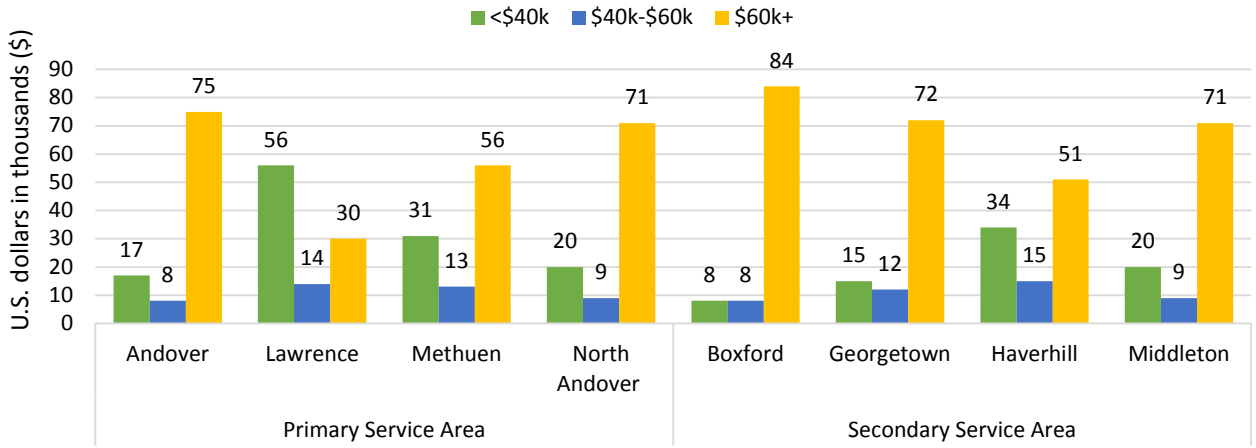
Figure 9
Median Household Income by State, Service Area and Community, 2011 and 2014



Data source: *2011 Census and American Community Survey 5-Year Estimates, 2007-2011; 2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

In addition, when looking at the percent distribution of household income by community (Figure 10), Lawrence (56%), Haverhill (34%) and Methuen (31%) had the highest percent of residents with a household income below $40,000 compared to Boxford (84%), Andover (75%) and Middleton (71%) which had household incomes above $60,000.

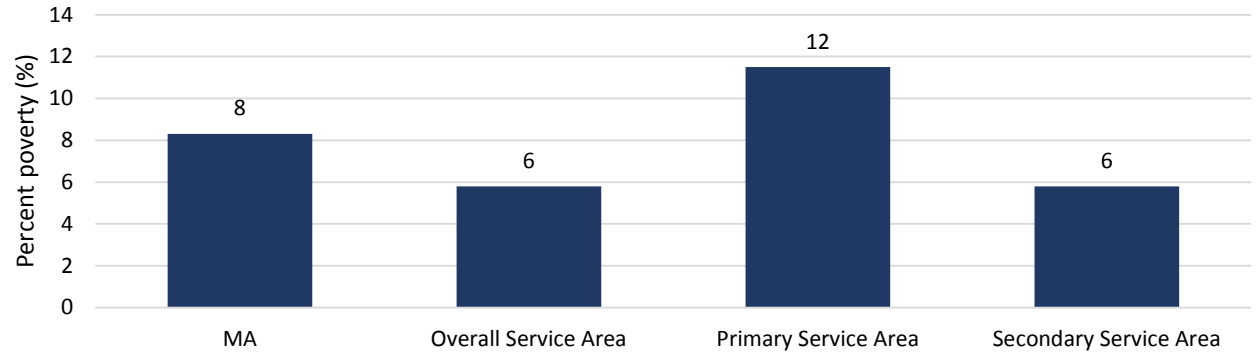
Figure 10
Percent Distribution of Household Income by Service Area and Community, 2014



Data source: *U.S. Department of Commerce, Bureau of the Census, 2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

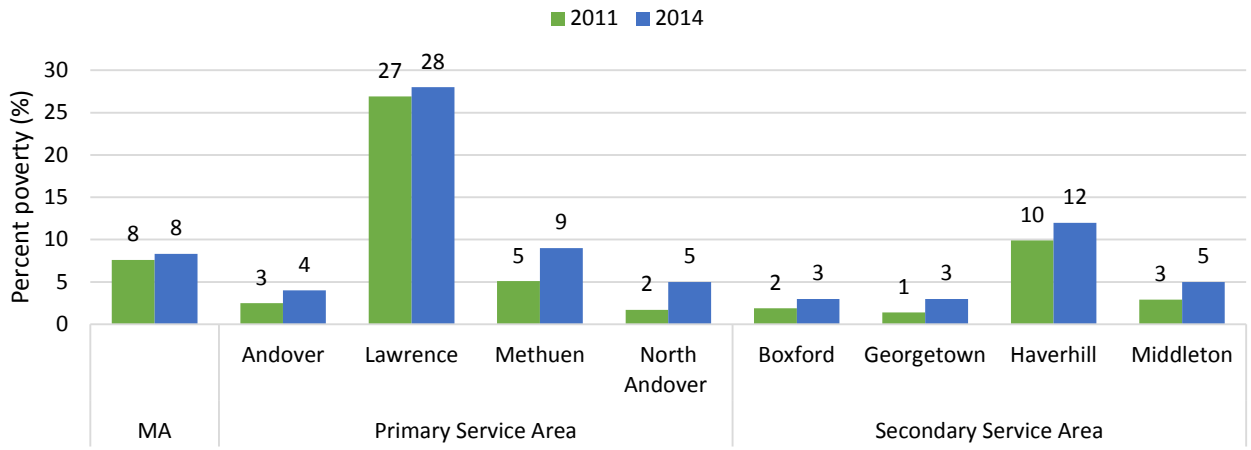
Overall, the primary service area had a larger proportion of families below the poverty line (12%), double that of the overall service area (6%) (Figure 11). Coinciding with median household incomes, Lawrence (28%) and Haverhill (12%) had the highest percent of families living below poverty, while Boxford and Georgetown had the lowest percent of families below poverty (3%) (Figure 12). All communities experience an increase in the proportion of families living in poverty between 2011 and 2014. Regarding the Health Center's population, 98% of the patients are at or below the 200% poverty level.

Figure 11
Percent Families Below Poverty Level by State and Service Area, 2014



Data source: *U.S. Department of Commerce, Bureau of the Census, 2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

Figure 12
Percent Families Below Poverty Level by State, Service Area and Community, 2011 and 2014

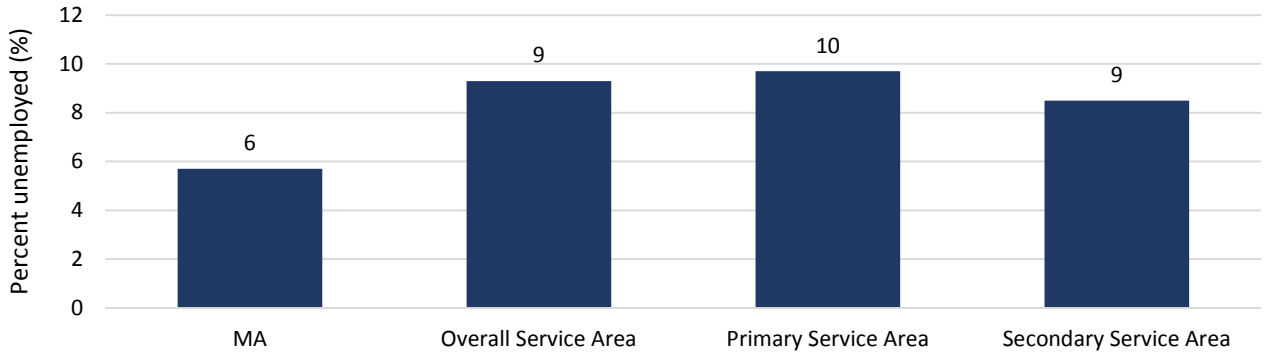


Data source: *2011 Census and American Community Survey 5-Year Estimates, 2007-2011; 2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

Employment

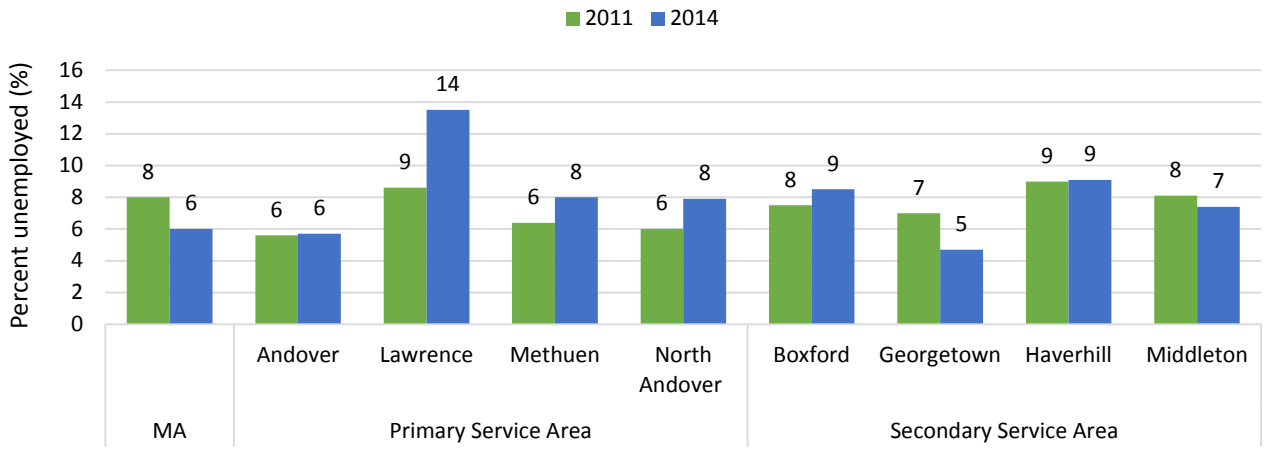
Participants also reported a lack of job opportunities for residents. The unemployment rate in the service area was higher than that of the state (9% versus 6%) (Figure 13). Between 2011 and 2014, all communities experienced an increase in unemployment rate, except Georgetown and Middleton; Lawrence, which had the highest percent of unemployed, experienced an increase from 9% to 14% (Figure 14).

Figure 13
Percent Population Age 16+ Years Unemployed by State and Service Area, 2014



Data source: *U.S. Department of Commerce, Bureau of the Census, 2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

Figure 14
Percent Population Age 16+ Years Unemployed by State, Service Area and Community, 2011 and 2014



Data source: *2011 American Community Survey 5-Year Estimates, 2007-2011; 2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

Educational Attainment

Overall, interview and focus group participants reported low levels of education as a barrier for residents and indicated that educational quality in the community varied. While schools in Lawrence were seen to be of lower quality, those in surrounding communities were perceived to be better. These findings align with those of the 2013 asessment; there were also varying opinions on school-systems quality and overall success of students; participants expressed concerns regarding the high school dropout rate, and indicated that the quality of education could improve.

The proportion of residents with a college degree or higher in the overall service area was higher than that of the state (43% compared to 35%) and similar across the primary and secondary service area (Figure 15).

"We have a good public school system along with other private resources. We are a town that places a high value on education."
- Focus group participant

"I see a lot of discos and bars but not a lot of cultural centers. There are book stores, but no centers of culture. There are bars and alcohol places but not cultural centers."
-Focus group participant

As in the 2013 report, Andover had the highest percent of residents with a college degree or more (70.5%) and Lawrence had the largest percent of residents with a high school diploma (32.0%) and with no High School diploma (31.5%). Comparison in education attainment between the 2011 and 2014 can be seen in Table 5.

Table 5
Percent Educational Attainment Adults 25 Years and Older by Service Area and Community, 2011 and 2014

	No H.S. Diploma		H.S. Diploma		Some College/Associates		College Degree or More	
	2011	**2014**	**2011**	**2014**	**2011**	**2014**	**2011**	**2014**
Primary Service area (%)								
Andover	3.6	2.8	12.4	11.4	17.0	12.3	67.1	70.5
Lawrence	35.4	31.5	30.0	32.0	23.0	24.6	11.7	12.0
Methuen	11.4	11.7	32.3	31.2	28.4	28.3	27.9	28.8
North Andover	4.5	3.0	17.8	19.6	21.7	19.9	56.0	57.5
Secondary Service area (%)								
Boxford	1.2	2.1	16.2	15.2	22.2	23.2	60.4	59.7
Georgetown	2.0	2.5	21.9	22.1	27.8	26.0	48.2	49.4
Haverhill	12.2	12.5	28.5	28.3	29.3	30.5	30.1	28.7
Middleton	9.9	8.5	33.0	31.0	21.5	24.6	35.5	35.9

Data source: *2011 American Community Survey 5-Year Estimates, 2007-2011; 2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

Housing

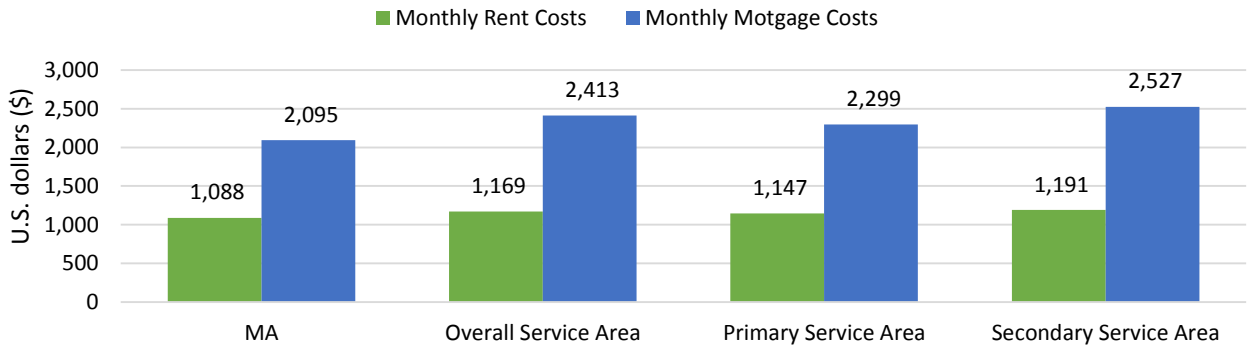
Housing was also reported to be a challenge for some community members. Several participants noted that rents in the region are high and there is little quality affordable housing. Poor quality housing was also identified as a community concern by Photovoice participants.

"Everyday people get hurt walking up and down stairs. In our homes, something is always falling apart. [In this picture] a piece of wood is missing from the stairs which can be dangerous because someone can hurt themselves really bad. People have to be more cautious with stairs. This is an unsafe zone; people need to take precautions before walking down stairs. Without looking ahead, they can trip and fall. This relates to our lives today because many accidents happen due to falling from stairs. [This problem] still exist because many landlords do not take the time to fix the simple problem. Also, people do not tell their landlord what is going on. We need to start using safety precautions when it comes to walking up and down stairs to help decrease the number of deaths involving stairs."

-Photovoice participant

Quantitatively, data from the American Community Survey highlights median housing cost for the service area and communities. As shown in Figure 16, residents in the overall service area spent more on housing compared to the state overall and costs were slightly higher among residents of the secondary service area.

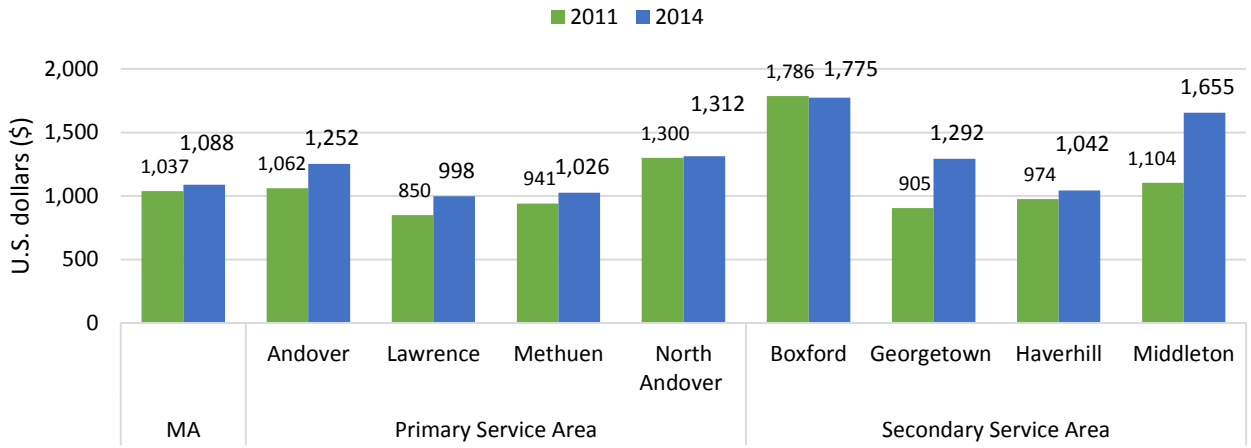
Figure 16
Monthly Median Housing Costs for Owners and Renters by State and Service Area, 2014



Data source: *2014 American Community Survey 5-Year Estimates, 2010-2014*

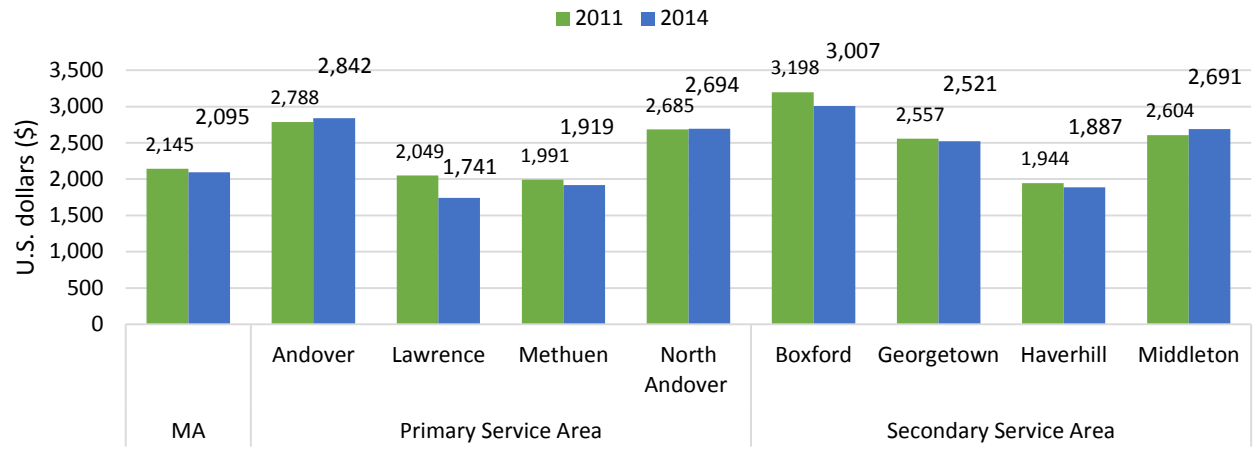
Monthly rental ranged from $775/month in Boxford to $1,655/month in Middleton and monthly mortgage costs ranged from $1,741/month in Lawrence to $3,007/month in Boxford. Figure 17 and Figure 18 provide an overview of rent and mortgage cost across the communities for 2011 and 2014.

Figure 17
Monthly Median Housing Costs for Renters by State, Service Area and Community, 2011 and 2014



Data source: *2011 American Community Survey 5-Year Estimates, 2007-2011; 2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

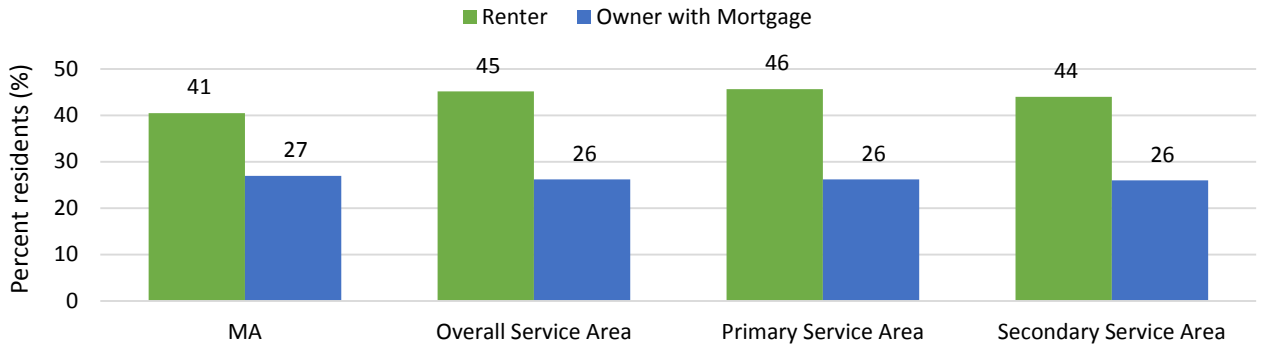
Figure 18
Monthly Median Housing Costs for Home Owners by State, Service Area and Community, 2011 and 2014



Data source: *2011 American Community Survey 5-Year Estimates, 2007-2011; 2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

Figure 19 shows the percent of renters and owners whose housing costs comprised 35% or more of their household income. Overall residents who rent spend slightly less than those statewide and homeowners spend slightly more than those statewide.

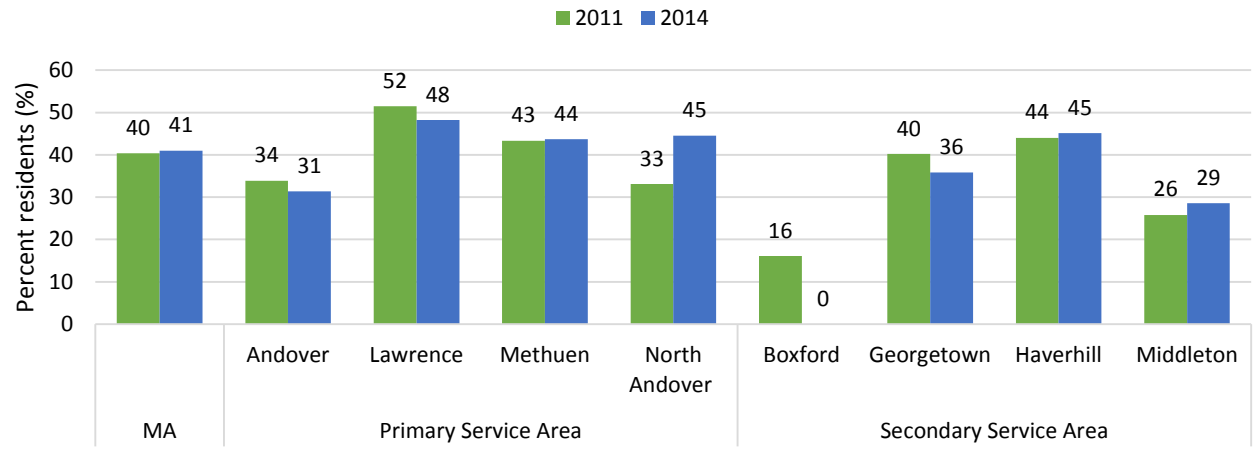
Figure 19
Percent Residents Whose Housing Costs are 35% or more of Household Income by State and Service Area, 2014



Data source: *2014 American Community Survey 5-Year Estimates, 2010-2014*

In Lawrence, nearly half of renters (48%) contributed 35% or more of their household income towards housing; North Andover experience the greatest increase in the percent of renters whose housing costs are 35% or more of their household income (Figure 20).

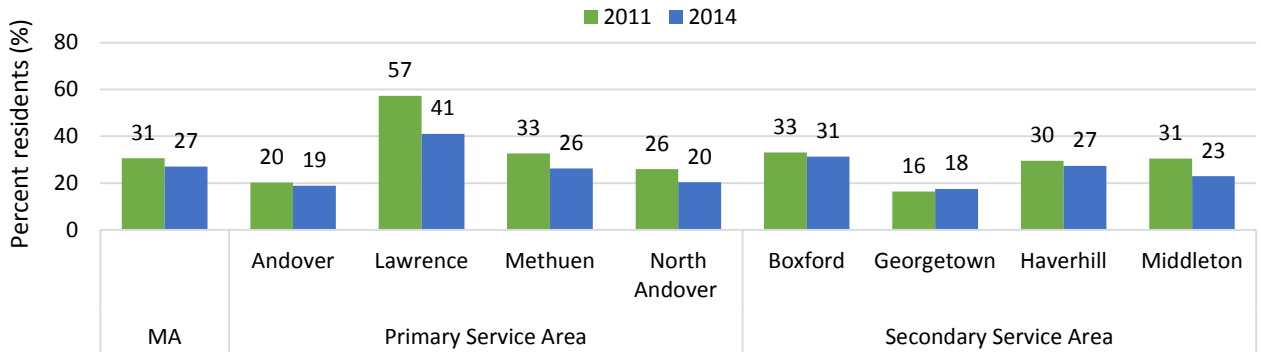
Figure 20
Percent Renters Whose Housing Costs are 35% or more of Household Income by State, Service Area and Community, 2011 and 2014



Data source: *2011 American Community Survey 5-Year Estimates, 2007-2011; 2014 Census and American Community Survey 5-Year Estimates, 2010-2014*
Note: *Boxford data not available for 2014*

The percent of homeowners who spent 35% or more of their household income on their mortgage ranged from 18% to 41%, all of which have decreased between 2011 and 2014 (Figure 21).

Figure 21
Percent Homeowners Whose Housing Costs are 35% or more of Household Income by State, Service Area and Community, 2011 and 2014



Data source: *2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

Homelessness

Related to the high housing cost, several participants expressed concerns about the rise in homelessness in their communities. These qualitative findings are supported by the Comprehensive Housing Study released in 2015 for the city of Lawrence. This report noted that homelessness in the state of Massachusetts has increased 40% over the past seven years—more than 21,000 Massachusetts residents are homeless. Within the community of Lawrence, a point-in-time census was conducted in February 2015 and found that in addition to those counted at the shelter, there were 47 homeless families living in hotels that included 111 children. The authors of this report conducted interviews with those who serve the homeless and reported that a lack of education, language barriers, and getting too far in arrears on rent were the most common reasons for homelessness.[1]

"Poverty is a huge situation people faced in the past and are still facing in the present. I see homeless people living under the bridge. All around the world, there are many children and adults who do not have a home, food or belongings. People do not have a place to live and so they look for anything they can shelter at. This situation still exists because homeless people do not get as much help as they need from the government. Also, when a person sees a homeless person they tend to not help them out because the person tends to think about negative things. Instead of hearing them out. People should not judge from what they see but what they learn about someone. We need to start thinking about others not just about ourselves. Everyone should help those in need to bring a change into this world. Our lives would be so much better if everyone helped out a little."

-Photovoice participant

[1] Comprehensive Housing Report, City of Lawrence, Massachusetts. http://www.cityoflawrence.com/SharedFiles/Download.aspx?pageid=537&mid=1174&fileid=14639

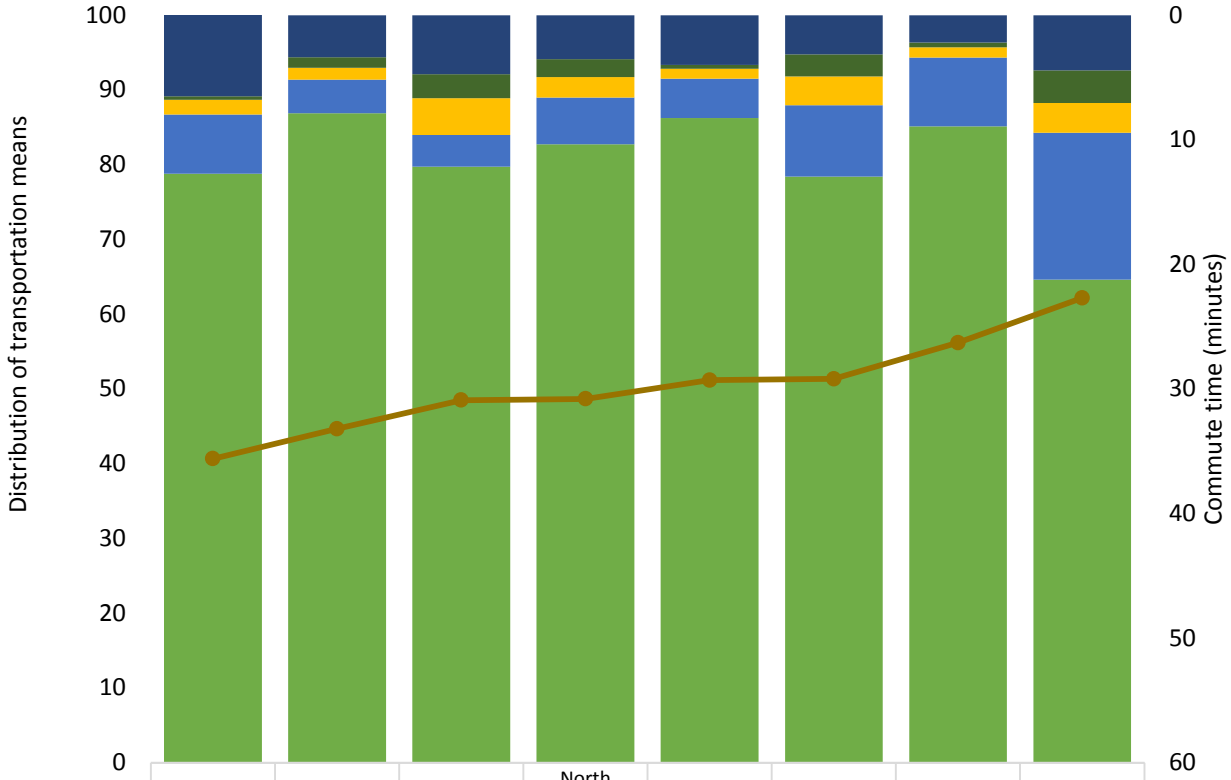
Transportation

In terms of transportation and commuting, the Hospital and Health Center's overall service area population indicated they were generally more likely to have access to a vehicle than those statewide. However, the proportion of individuals with access to a vehicle for commuting to work (alone) ranged from 65% in Lawrence to 87% in Georgetown, compared to 72% across the state (Figure 23). In addition, as shown in Figure 22, Boxford residents had the longest commute time (36 minutes) and Lawrence residents had the shortest commute time (23 minutes).

Qualitatively it was found that for some, transportation was reported to be a challenge, especially for those who commute to Boston and for seniors on fixed incomes. As one interviewee shared, *"when discharged from the hospital in particular, many do not have a means to get to their house or seek the care needed—this leads to patients not filling prescriptions and missed appointments."*

Figure 22

Means of Transportation to Work for Workers Aged 16+ by Community, 2014



	Boxford	Georgetown	Andover	North Andover	Middleton	Haverhill	Methuen	Lawrence
Other	10.9	5.6	7.9	5.9	6.6	5.2	3.7	7.4
Walk	0.5	1.4	3.2	2.4	0.5	3.0	0.7	4.4
Public Transit	2.0	1.6	5.0	2.8	1.3	3.9	1.4	4.0
Carpool	7.9	4.5	4.2	6.3	5.3	9.5	9.2	19.7
Alone	78.8	86.9	79.8	82.7	86.2	78.4	85.1	64.6
Commute Time	35.6	33.2	30.9	30.8	29.3	29.2	26.3	22.7

Data source: *2014 Census and American Community Survey 5-Year Estimates, 2010-2014*

"Here we see a picture overlooking and MVRTA station Lawrence. We see the cage built around the elevated sidewalk to protect our fellow people from any harm or danger. This can show how Lawrence is looking out for our best health they are trying to protect us by creating less harmful ways. This relates to our lives because sometimes we don't see it but there is something always out there protecting us for a better health."

-Photovoice participant

Crime and Safety

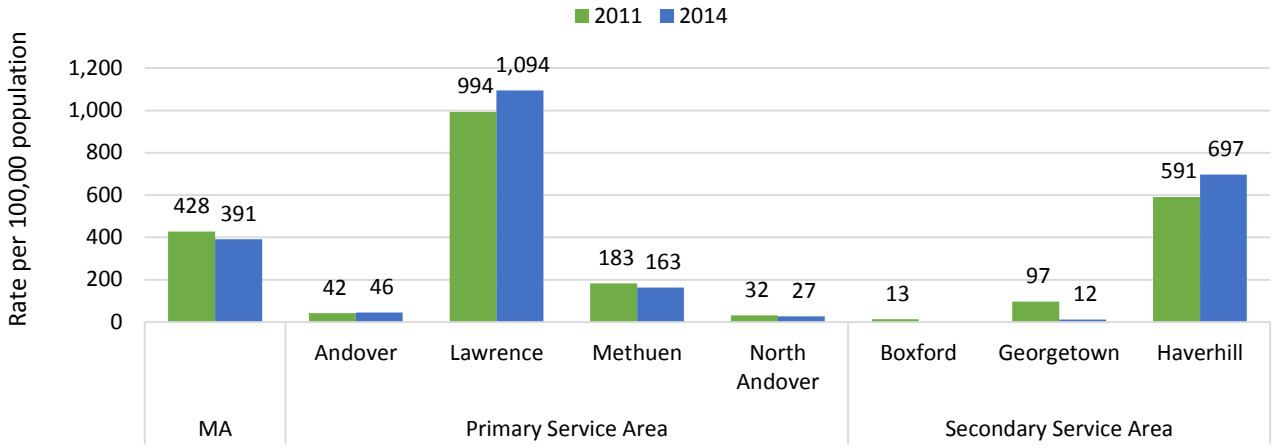
Concerns about violence in the community were expressed by several participants. One individual observed a rise in house break-ins in the neighborhood, while another shared that domestic violence and the breakdown of marriages has been growing. In terms of Lawrence, interviewees and focus group participants described the community as one with high crime, violence, drug issues and problems with access to education, healthcare and jobs. Concerns about children's safety were also shared by a couple of participants who noted that few children go outside to play, which also impacts health. These concerns were echoed in 2013; several key informants and focus group participants also cited crime in the region as a major concern and stressor for residents and an issue that contributes to negative perceptions of communities in the region.

"The majority [of children] are staying home, not going outside because it is unsafe outside."

-Focus group participant

Quantitatively, crime rates reported by the FBI's uniform crime report showed that Lawrence had the highest rate of violent crimes (1,094 offenses per 100,000 population) followed by Haverhill (697 offense per 100,000 population), both of which are above the statewide rate (392 offenses per 100,000 population). Additionally, rates of violent crime rose in these two communities between the 2013 and 2016 Needs Assessment reports (Figure 23).

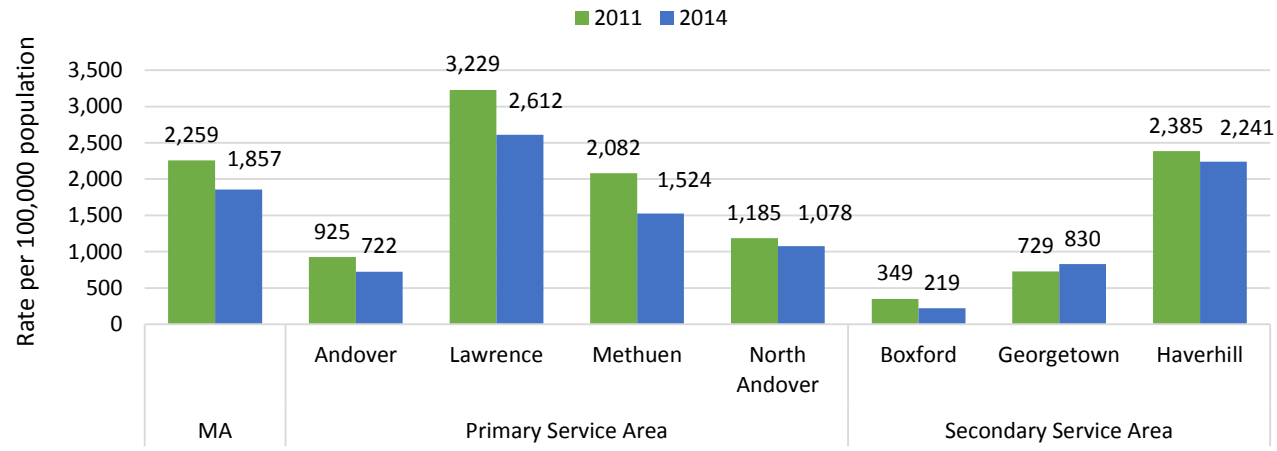
Figure 23
Violent Crime Offenses Known to Law Enforcement per 100,000 Population by State and Service Area, 2011 and 2014



Data source: *Federal Bureau of Investigation, Uniform Crime Reports, Offenses Known to Law Enforcement, by State, by City, 2011 and 2014*
Note: *Data for Middleton unavailable for 2011 and 2014; Data for Boxford unavailable in 2014*

Similar to violent crime, Lawrence and Haverhill had the highest rates of property crime but both experienced declines in rates between the 2013 and 2016 Needs Assessment reports (Figure 24). Overall this decline in property rates was seen across all communities except for Georgetown.

Figure 24
Property Crime Offenses Known to Law Enforcement per 100,000 Population by State and Service Area, 2011 and 2014



Data source: *Federal Bureau of Investigation, Uniform Crime Reports, Offenses Known to Law Enforcement, by State, by City, 2011 and 2014*
Note: *Data for Middleton unavailable for 2011 and 2014*

Community Strengths and Assets

Key strengths of the community, according to focus group and interview participants, were the family and community bonds among residents. Several participants specifically identified the cohesion among different ethnic groups. For example, a focus group participant shared, *"what gets my attention is the diversity of nationalites. There are many Hispanics from different countries and I like to see us all together and we get along well."*

A similar perspective was shared about organizations working in the community. Participants described high levels of volunteerism within the community as well as a strong service network. As one interviewee described, *"there is a level of trust within the community members and organizations that provide services."* This was attributed by some, to the social bonds created through involvement with faith institutions.

Another identified strength of community members was that they are hard working. As one focus group participant stated, *"my community is hard working. We are always working."*

"Lawrence has a high level of volunteerism; its strength is the people. The people support each other are connected and willing to help the community. Overall Lawrence is a strong community."

-Interviewee

"I appreciate the friendliness that is part of the bigger picture. I've lived in other places with racial diversity that didn't have the cohesiveness that I do see here."

-Focus group participant

"Families are large and interconnected. Those networks are important."

-Focus group participant

"Faith is the largest net here. Most people belong, even tangentially, to a church."

-Focus group participant

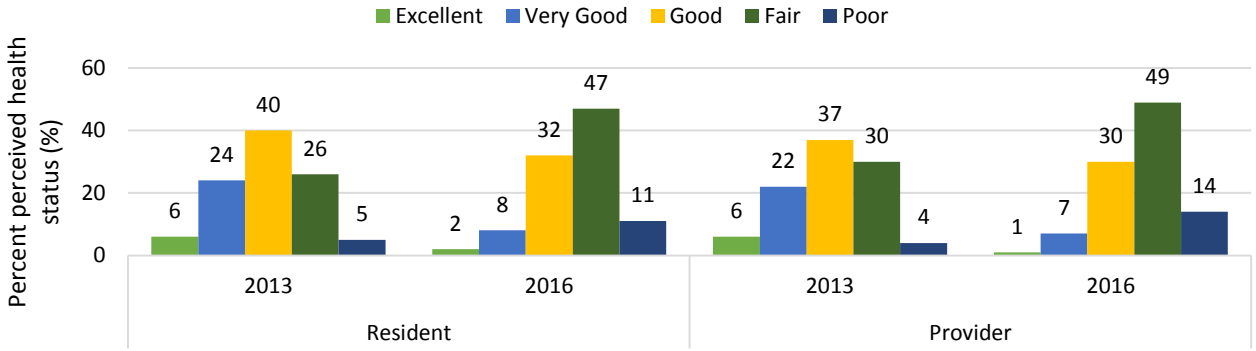
Community Health Issues

This section of the report provides an overview of leading health conditions in the service areas by examining self-reported behaviors, incidence rates, hospitalization rates, and mortality-rate data, as well as discussing the pressing concerns that stakeholders identified during interviews, focus groups, and the survey. Due to availability of secondary data, this section reports data at either the community level and/or Community Health Network Areas (CHNAs) level which encompass both the primary and secondary service areas (Figure 1).

Perceived Community and Individual Health

In the Needs Assessment survey, residents were asked to describe the health of their community, while providers were asked to comment on the health of their patient's overall community. In 2016, 32% of resident's reported their community's health as good (down from 40% in 2013) and 47% reported their community's health as fair (up from 26% in 2013) (Figure 25). From the provider's perspective a similar trend was seen. Provider's perceived 30% of the community to be in good health (down from 37% in 2013) and 49% perceived the community to have fair health (up from 30% in 2013).

Figure 25
Perceived Community Health Status by Survey Respondent Role, 2013 and 2016



Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*

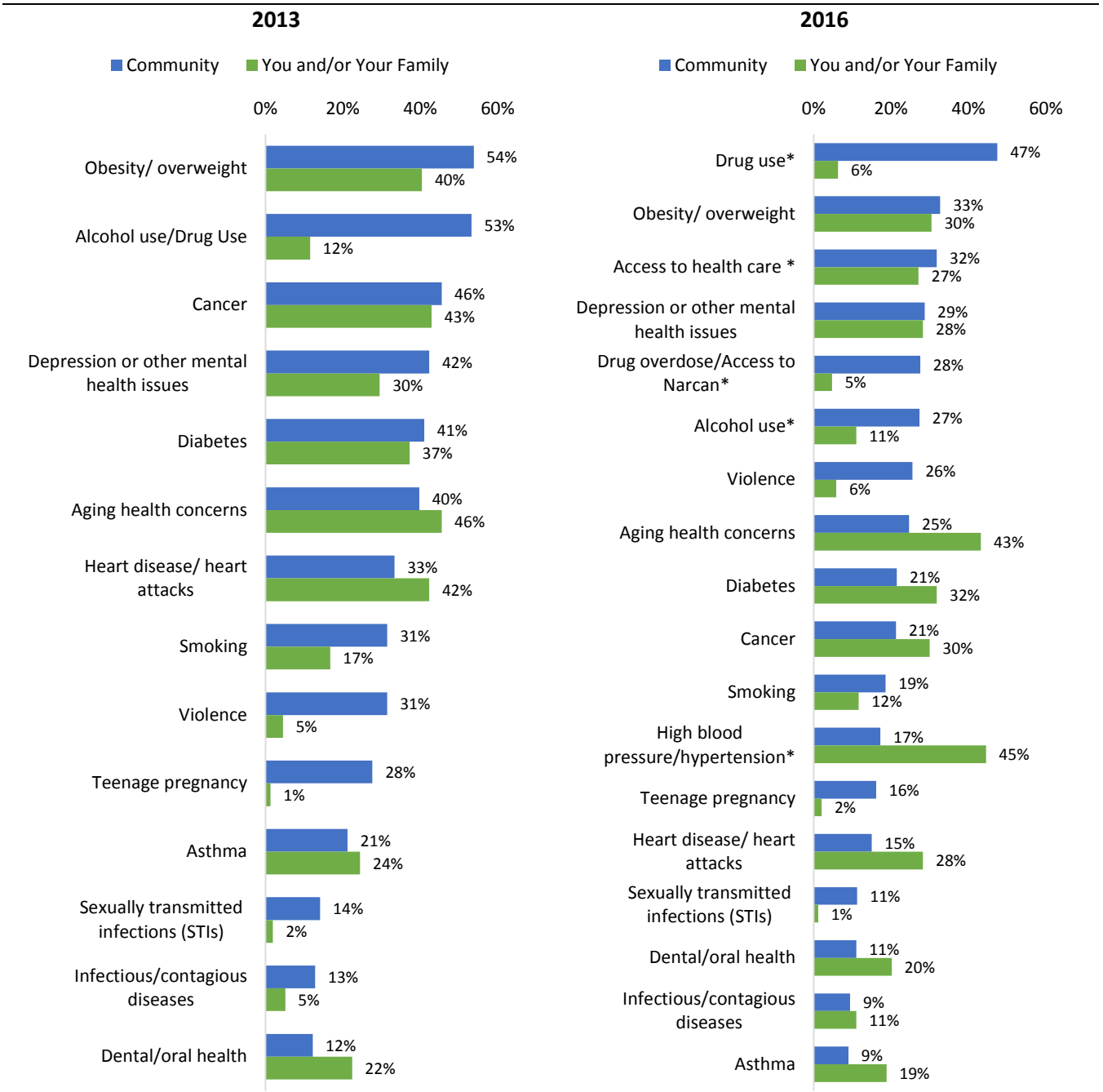
Residents who responded to the survey were also asked about the primary issues that have the largest impact on their community and themselves/their family, while providers were asked about the top issues of their patients/the community (Figure 26 and Figure 27). There were some differences between respondents' personal health issues and perceived community health issues. While some topics such as drug use and obesity/overweight were key concerns at the community level, other health issues—such as aging and hypertension—were more likely to be personal/family concerns. Overall, top community health concerns across the service area for survey respondents remained of great importance between 2013 and 2016, are seen below.

Resident Community Concerns		Provider Community Concerns	
2013	**2016**	**2013**	**2016**
1. Obesity/overweight	1. Drug use	1. Diabetes	1. Drug use
2. Alcohol use/drug use	2. Obesity/overweight	2. Obesity/overweight	2. Depression or other mental health issues
3. Cancer	3. Access to health care	3. Alcohol use/drug use	3. Access to health care
4. Depression and other health issues	4. Depression and other health issues	4. Depression or other mental health issues	4. Obesity/overweight
5. Diabetes	5. Drug overdose/access to Narcan	5. Heart disease/heart attacks	5. Diabetes

Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*

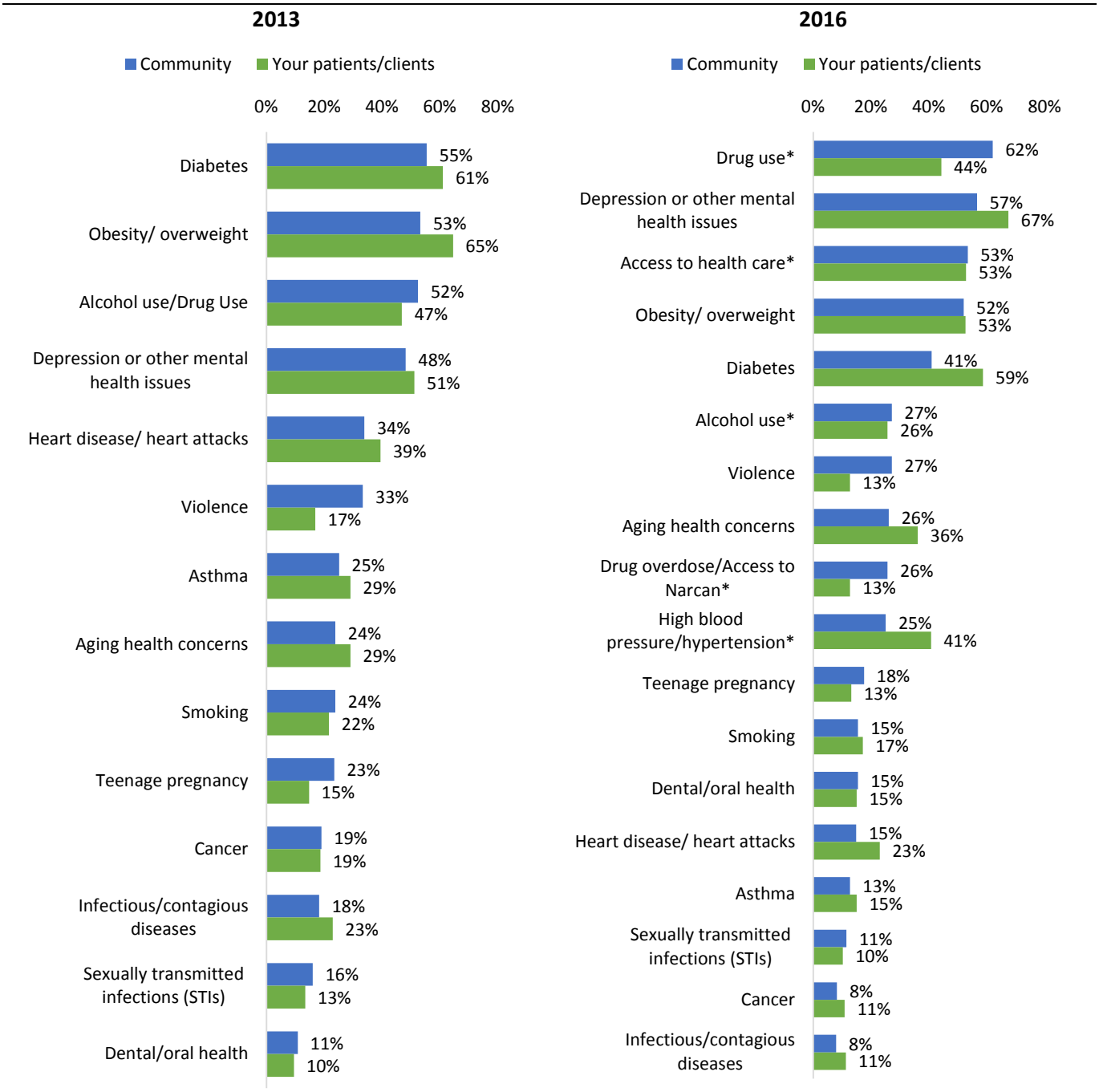
As shown in Figure 26, obesity/overweight and depression and other health issues remained important community concerns for residents and new to 2016, drug use, and access to care rose to the top. For providers (Figure 27), obesity and diabetes remained as top health concerns but drug use rose to the top as the leading health concern for the community in addition to depression and other mental health issues. While the prioritization of these communities' concerns may have differed slightly for residents and providers there was overlap in the top concerns.

Figure 26
Top Health Issues with the Largest Impact on the Community and for the Respondent/Family **by Resident**, 2013 and 2016



Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*
Notes: *Sorted by community in descending order; High blood pressure, Drug overdose/Access to Narcan and Access to health care added in the 2016 survey. Alcohol use/Drug use separated in the 2016 survey*

Figure 27
Top Health Issues with the Largest Impact on the Community and for the Respondent/Family **by Provider**, 2013 and 2016



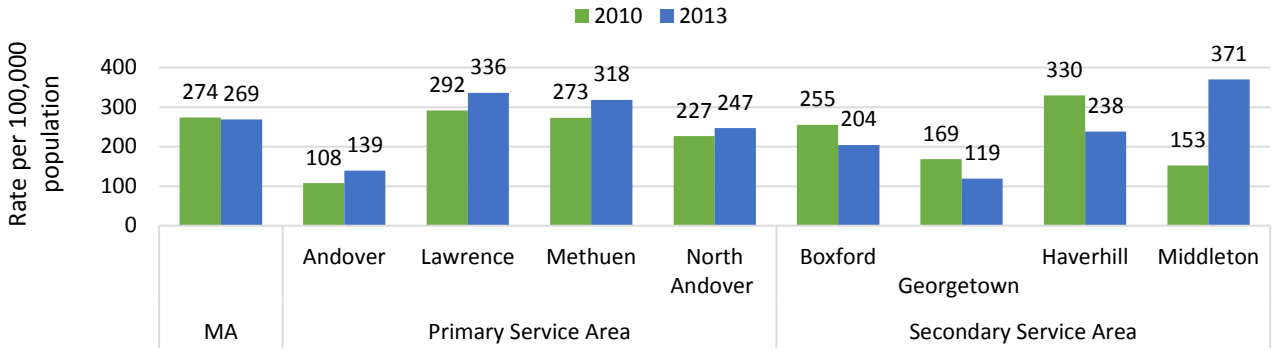
Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*
Notes: *Sorted by community in descending order; *High blood pressure, Drug overdose/Access to Narcan and Access to health care added in the 2016 survey. Alcohol use/Drug use separated in the 2016 survey*

Premature Death

Quantitative data for premature death show variability across the service area communities. Compared to the 2013 Needs Assessment report, premature mortality appears to have decreased for the secondary service area (with the exception of Middleton) and increased for the primary service area. Looking at rates by community, Middleton, Lawrence and Methuen reported the highest premature mortality rates and all three were above the state rate of 269 deaths per 100,000 population (Figure 28). In contrast, Georgetown and Andover had the lowest rates of premature mortality in 2013.

Figure 28

Premature Mortality Rate per 100,000 Population by State, Service Area and Community, 2010 and 2013



Data source: *Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluations, Massachusetts Deaths*

Note: *Premature Mortality Rate is defined as deaths that occur before the age of 75 years per 100,000, age-adjusted to the 2010 U.S. standard population under 75 years of age*

Chronic Disease and Related Risk Factors

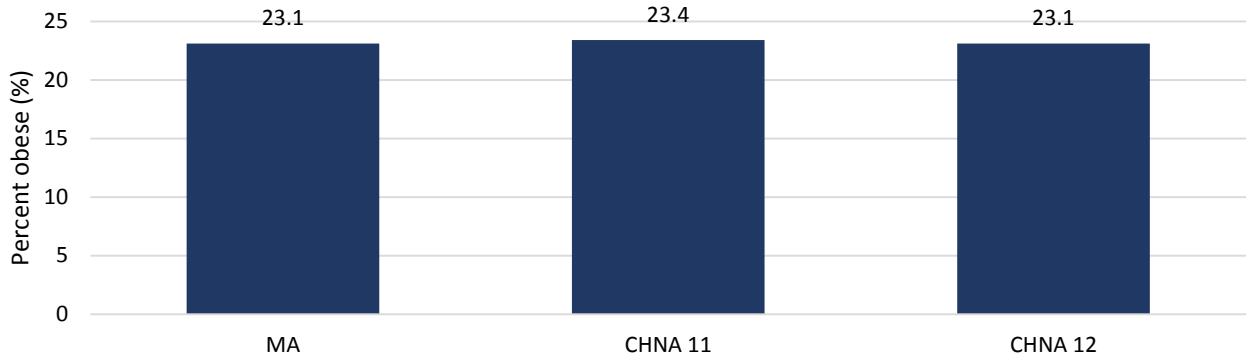
Similar to the 2013 Needs Assessment Report, chronic disease was identified as a concern for the community, including obesity, diabetes and asthma; although it was discussed less often than mental health and substance use.

Overweight/Obesity

Several participants noted that obesity was very prevalent in their communities. When examining this quantatively, at the CHNA level, rates of obesity were slightly higher in CHNA 11 compared to CHNA 12, but both were similar to the state level of 23% (Figure 29).

Figure 29

Percent of Obese Adults by State and Community Health Network Area, 2011-2013

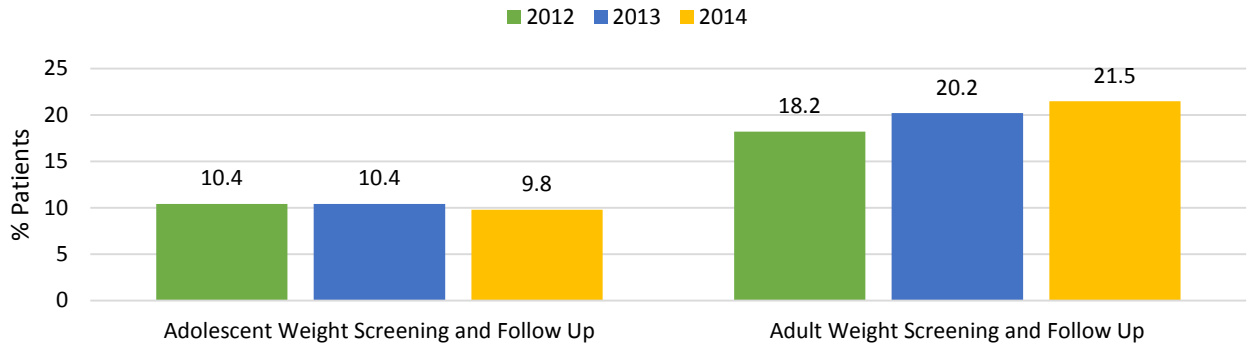


***Data source**: Massachusetts Department of Public Health, Behavioral Risk Factor Surveillance Survey Data*

Figure 30 presents the Health Center's preventive health screening and services related to obesity. In 2013 and 2014 at least 20% of their adult patient population received weight screening and follow up compared to 18% in 2012. For the adolescent patient population, the number of patients remained relatively stable.

Figure 30

Obesity Prevention and Counseling among Adolescent and Adult Greater Lawrence Family Health Center Patients, 2012-2014



***Data source:** Greater Lawrence Family Health Center, UDS Summary Report, 2016*

Diabetes

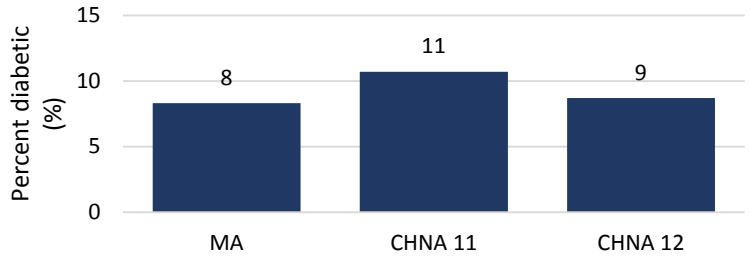
Focus group participants noted high prevalence of diabetes in their community, much of which they reported was untreated. As illustrated in Figure 31, the percent of adults statewide who reported having been diagnosed with diabetes was 8%. CHNA 11 and 12 had a higher proportions of adults diagnosed with diabetes (9% and 11%, respectively) than the state.

"Lots of people know that they are diabetic but they still go crazy with the sugar and the grease. So their diabetes gets out of hand and it brings a whole host of new problems. In the short amount of time I've lived here, I've seen so many people I suspect are diabetic."

-Focus group participant

Figure 31

Percent of Adults Who Reported Having Been Diagnosed with Diabetes by State and Community Health Network Area , 2011-2013

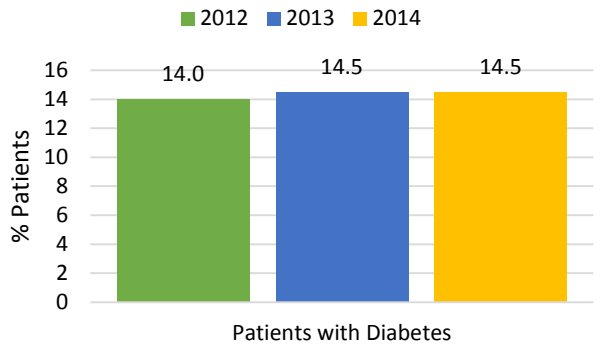


***Data source**: Massachusetts Department of Public Health, Behavioral Risk Factor Surveillance Survey Data*

Figure 32 provides data on the percent of Health Center patients with diabetes between 2012 and 2014. Overall, diabetes diagnoses' have increased from 14% in 2012 to 15% in 2013 and 2014—higher than the overall state and CHNA regions. Additionally, while approximately 15% of the Health Center's population had a diagnoses of diabetes, the Health Center reports that on average 75% of patients are controlling their diabetes (Figure 33).

Figure 32

Percent of Greater Lawrence Family Health Center Patients with Diabetes, 2012-2014

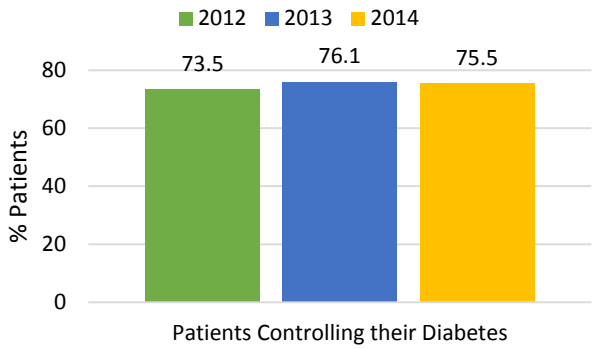


***Data source:** Greater Lawrence Family Health Center, UDS Summary Report, 2016*

Notes: Diabetic adults as a percent of estimated adult medical patients of ages 18-75.

Figure 33

Percent of Greater Lawrence Family Health Center Patients Controlling their Diabetes, 2012-2014



***Data source:** Greater Lawrence Family Health Center, UDS Summary Report, 2016*

Healthy Eating and Physical Activity

Participants attributed obesity and chronic disease in their community to poor food options, lack of physical activity, and personal choices. Several participants shared that there is a lack of opportunities for physical activity in the community. In particular, a couple of interviewees commented on the role physical inactivity played on influencing children's weight status. Other interviewees mentioned that opportunities for physical activity within schools have decreased. As one participant shared, *"schools would send parents information about how their kids were doing. Now you see how difficult it is for kids to do push-ups and other typical exercises."*

Focus group participants also noted that access to healthy food was a challenge in the community. While focus group participants indicated healthy food choices were not easily accessible, one interviewee pointed out that there were changes taking place to improve access to healthy foods for community residents. Similarly, as one participant stated, *"There are healthy living initiatives and grassroots movements that are starting to take shape."* The role of crime also fed into focus groups thoughts on reduced physical activity and engagement in the community. Concerns about children's safety were also shared by a couple of participants who noted that few children go outside to play, which also impacts health.

"There is a need for recreation space for the children which usually is rented at a premium and very expensive. Most gyms are inaccessible to the neighborhood. There are a large number of children who don't do physical activities."

-Focus group participant

"In the bodegas, they sell fried chicken; there aren't healthy options in the bodegas."

-Focus group participant

Quantitatively, results from the BRFSS indicated that 20% of adults in CHNA 12 consumed the recommended number of fruit and vegetables servings, which is similar statewide, compared to 13% of residents in CHNA 11 (Figure 34). In regards to physical activity, 27% of adults in CHNA 11 lacked daily exercise compared to 20% in CHNA 12 (Figure 35).

Figure 34
Percent of Adults who do not Consume Five Servings of Fruits and Vegetables by State and Community Health Network Area, 2011-2013

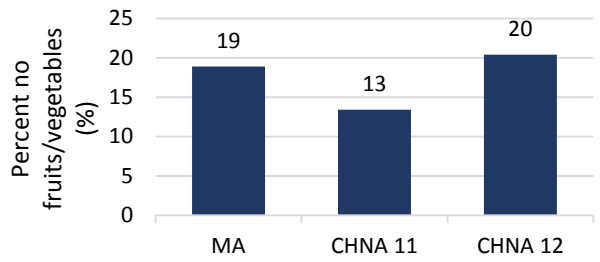
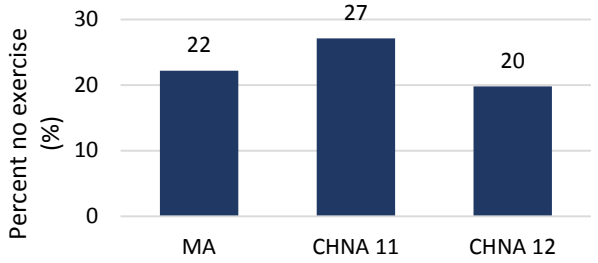


Figure 35
Percent of Adults Lacking Daily Exercise by State and Community Health Network Area, 2011-2013



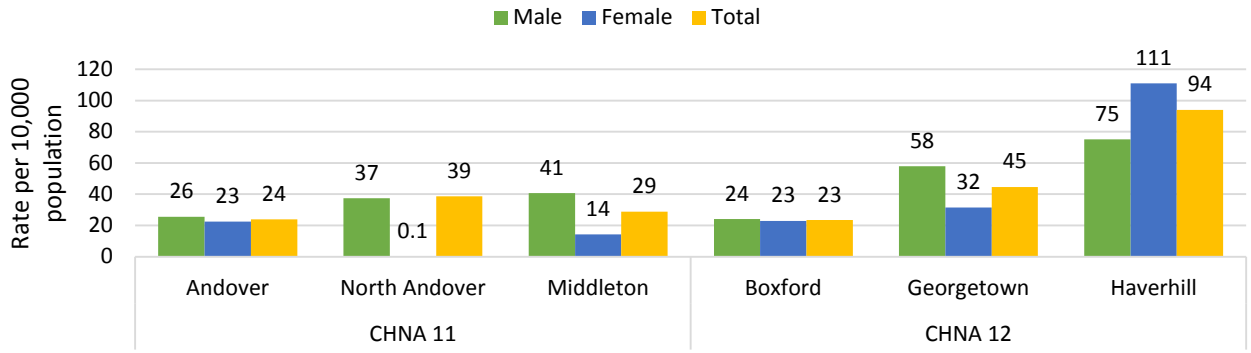
***Data source**: Massachusetts Department of Public Health, Behavioral Risk Factor Surveillance Survey Data*

Asthma

High rates of asthma were also mentioned by a couple of participants, and attributed to poor air quality. One person suggested that more trees are needed to keep the air in the community clean. Quantitatively, CHNA 12 had the same proportion of adults with asthma as the state (11%) and CHNA 11 had a slightly lower proportion of adults with asthma (7%). Additionally, when looking at rate of asthma emergency department (ED) visits per 10,000 people (Figure 36), Haverhill had the highest rate of asthma-related ED visits (94 visits per 10,000 population) and Boxford has the lowest (23 visits per 10,000 population). Across all communities, males had higher rates of asthma than females, except for in Haverhill, where females had higher asthma rates.

Figure 36

Rate of Asthma Emergency Department Visits per 10,000 People by Community Health Network Area and Community, 2012

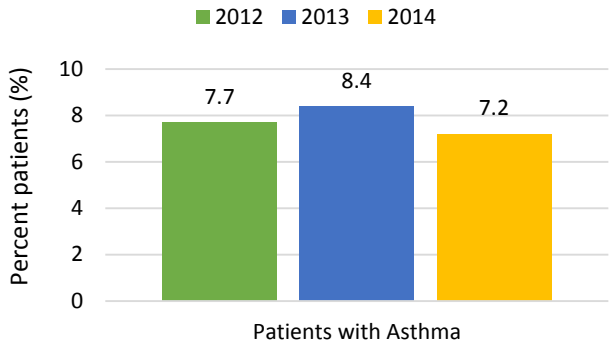


***Data source**: Massachusetts Center for Health Information and Analysis (CHIA)*
***Note:** Data for Methuen unavailable*

Figure 37 provides data on the percent of Health Center patients with asthma between 2012 and 2014. Overall, asthma diagnoses' have ranged between 7% and 8% of patients. Additionally, while approximately 8% of the Health Center's population had a diagnosis of asthma, the Health Center reported that 84% of patients were managing their asthma treatment (Figure 38).

Figure 37

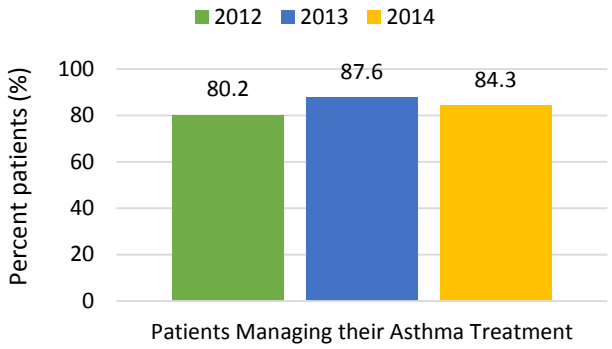
Percent Greater Lawrence Family Health Center Patients with Asthma, 2012-2014



***Data source:** Greater Lawrence Family Health Center, UDS Summary Report, 2016*

Figure 38

Percent Greater Lawrence Family Health Center Patients Managing Asthma Treatment, 2012-2014



***Data source:** Greater Lawrence Family Health Center, UDS Summary Report, 2016*

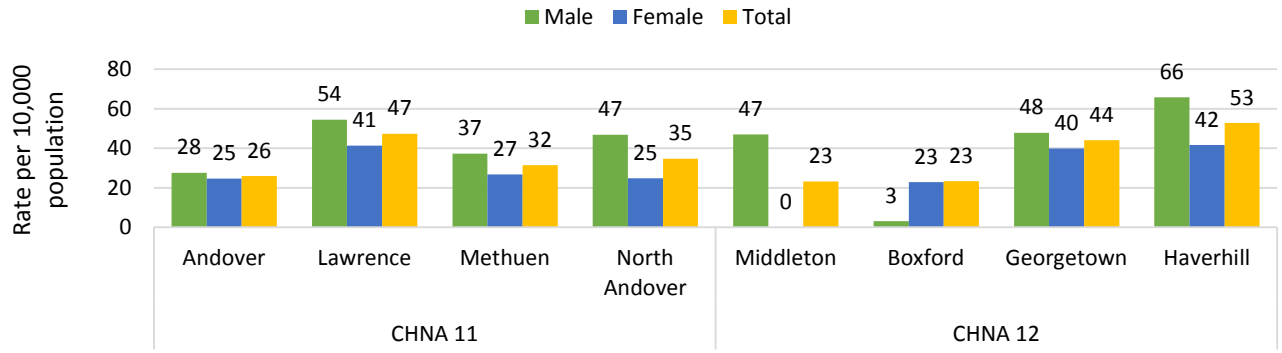
Cardiovascular and Cerebral Health

Quantitative data show rates for heart attacks are somewhat higher in certain communities of the service area. In 2012, the service area heart attack hospitalization rate ranged from 23 hospitalizations per 10,000 population in Boxford to 53 hospitalizations per 10,000 population in Haverhill, with much variability by sex (Figure 39). All service area towns had greater rates of heart attack hospitalization compared to the state (31 hospitalizations per 10,000 population) except for Andover, Middleton and Boxford. From a gender perspective, across the service area males had higher rates of heart attack hospitalizations compared to females.

In terms of coronary heart disease, CHNA 11 (396 hospitalizations per 100,000 population) and CHNA 12 (354 hospitalizations per 100,000 population) had higher rates of hospitalization compared to the state (265 hospitalizations per 100,000 population) (Figure 40). Reports from 2012 indicated that CHNA 11 and CHNA 12 (261 and 254 hospitalizations per 100,000 population, respectively) had higher rates of stroke hospitalization compared to the state (220 hospitalizations per 100,000 population) (Figure 41).

Figure 39

Rate of Heart Attack Hospitalization per 10,000 Population by Community Health Network Area and Community, 2012



***Data source**: Massachusetts Center for Health Information and Analysis (CHIA)*

Figure 40

Age Adjusted Rate of Coronary Heart Disease Hospitalizations Per 100,000 by State and Community Health Network Area, 2012

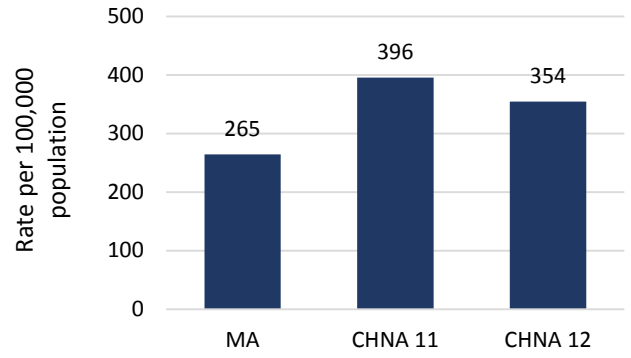
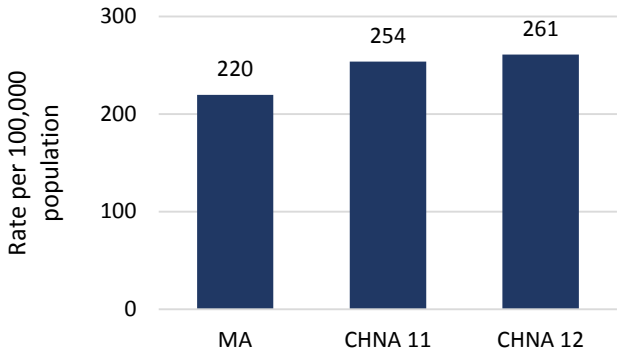


Figure 41

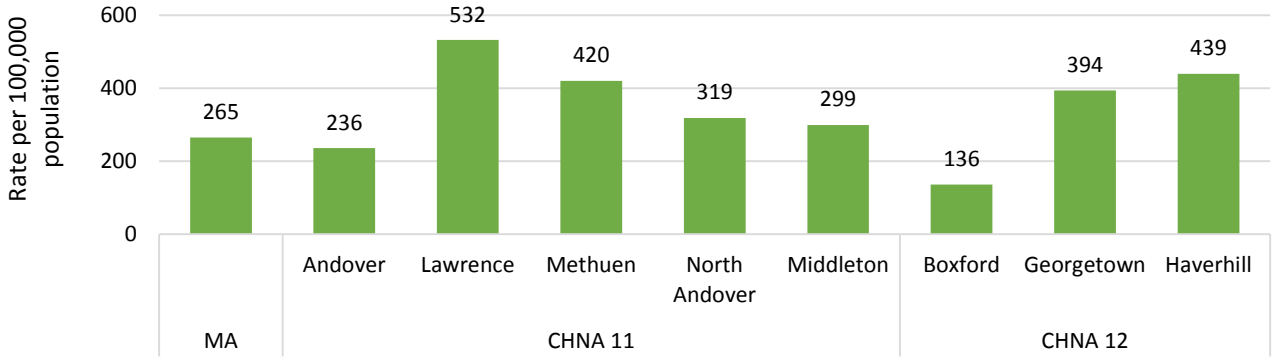
Age Adjusted Rate of Stroke Hospitalization per 100,000 Population by State and Community Health Network Area, 2012



***Data source**: Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluations*

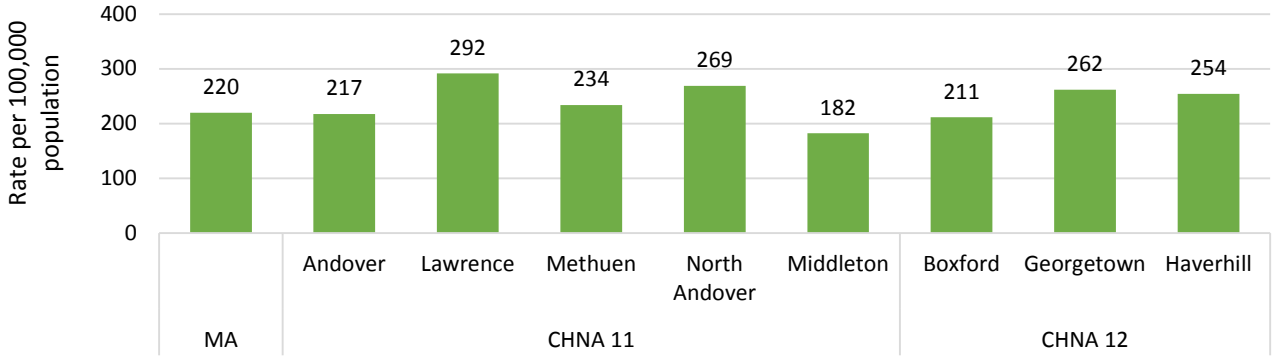
When examining heart disease and stroke at the community level, Lawrence, Haverhill and Methuen had higher rates of coronary heart disease hospitalization than the state (Figure 42) and Lawrence, North Andover and Georgetown had higher rates of stroke hospitalizations than the state (Figure 43).

Figure 42
Age Adjusted Rate of Coronary Heart Disease Hospitalizations Per 100,000 by State, Community Health Network Area and Community, 2012



***Data source**: Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluations*

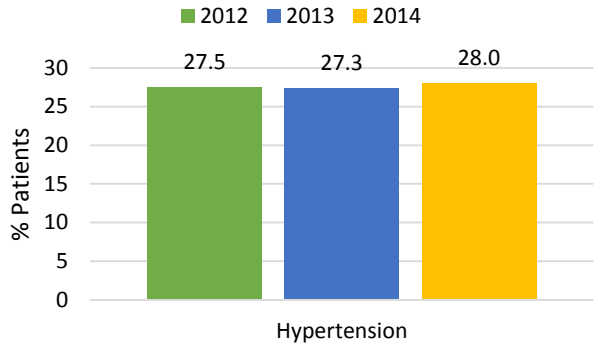
Figure 43
Age Adjusted Rate of Stroke Hospitalization per 100,000 Population by State, Community Health Network Area and Community, 2012



***Data source**: Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluations*

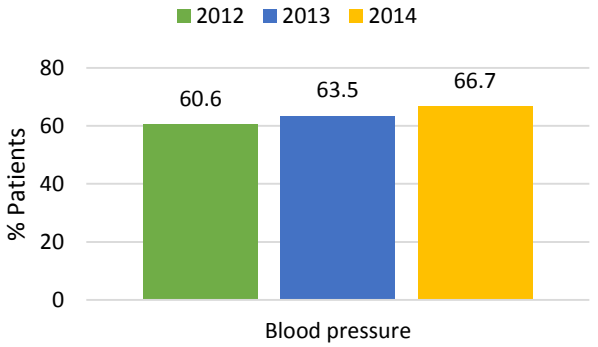
Related to cardiovascular disease, Figure 44 provides data on the percent of Health Center patients with hypertension between 2012 and 2014. While 28% of the Health Center's population had a diagnoses of hypertension, the Health Center reported that two-thirds of patients are managing their hypertension (Figure 45). In comparison,

Figure 44
Percent of Greater Lawrence Family Health Center Patients with Hypertension, 2012-2014



Data source: *Greater Lawrence Family Health Center, UDS Summary Report, 2016*
Notes: Hypertensive adults as a percent of estimated adult medical patients of ages 18-85

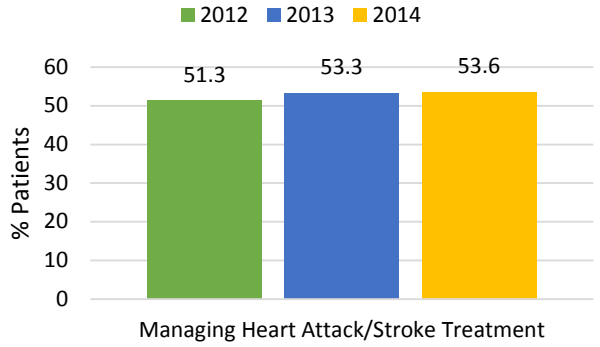
Figure 45
Percent of Greater Lawrence Family Health Center Patients managing their Hypertension, 2012-2014



Data source: *Greater Lawrence Family Health Center, UDS Summary Report, 2016*

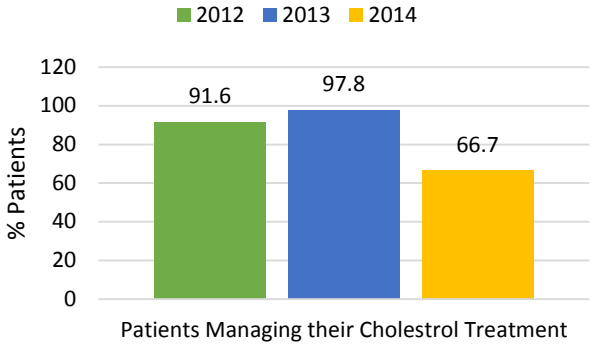
In addition, as shown in Figure 46, around half of patients with a history of heart attack and/or stroke are managing their treatment; whereas, over half of health center patient's diagnosed with high cholesterol are managing their treatment, which has decreased between 2012 and 2014 (Figure 47).

Figure 46
Percent of Greater Lawrence Family Health Center Patients Managing Heart Attack/Stroke, 2012-2014



Data source: *Greater Lawrence Family Health Center, UDS Summary Report, 2016*

Figure 47
Percent of Greater Lawrence Family Health Center Patients managing their Cholesterol, 2012-2014



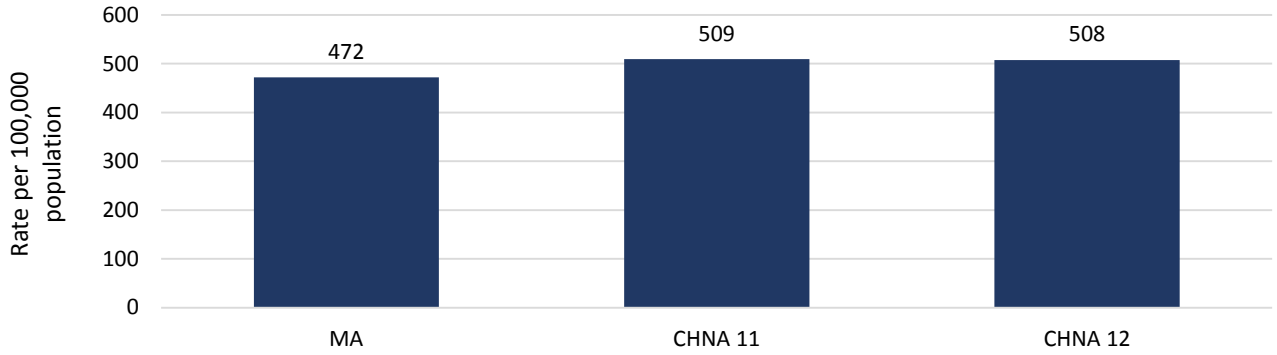
Data source: *Greater Lawrence Family Health Center, UDS Summary Report, 2016*

Cancer

All-site cancer death rates for CHNA 11 and CHNA 12 were similar and higher than the state rate (Figure 48). At the town level (Figure 49), Middleton had the highest rate (724 deaths per 100,000 population) of all-site cancer deaths followed by Andover (527 deaths per 100,000 population) and Boxford had the lowest rate (437 deaths per 100,000 population). Cancer was also mentioned by a couple of assessment participants as a community concern.

Figure 48

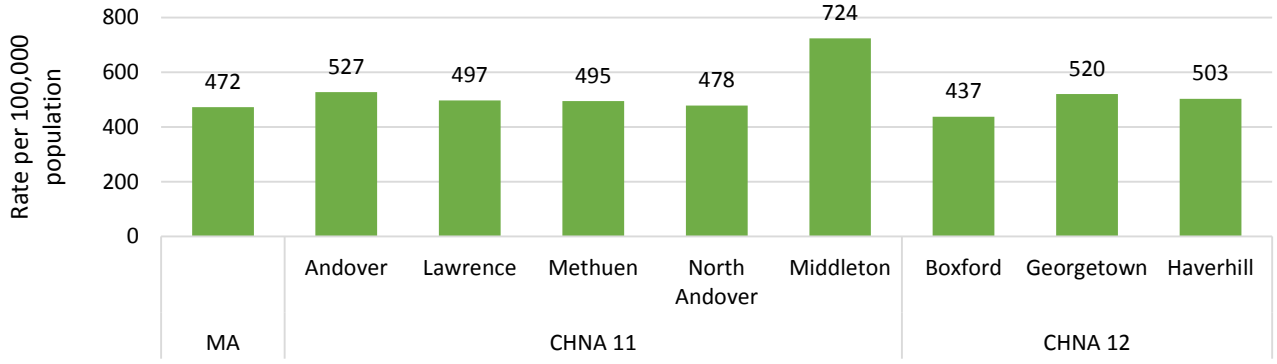
All-Site Cancer Death Rate per 100,000 Population by State and Community Health Network Area, 2012



***Data source**: Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluations, Massachusetts Deaths*

Figure 49

All-Site Cancer Death Rate per 100,000 Population by State, Community Health Network Area and Community, 2012



***Data source**: Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluations, Massachusetts Deaths*

From a cancer-prevention screening perspective, data from the 2011-2013 BRFSS indicated that approximately 58% of adults over the age of 50 in CHNA 11 had received a colonoscopy or sigmoidoscopy in the past five years, as compared to 53% in CHNA 12 (Figure 50). In terms of breast cancer, approximately 88% of women over the age of 40 in CHNA 11 has received a mammogram in the past two years, as compared to 85% statewide, and 87% in CHNA 12 (Figure 51).

Figure 50
Percent of Adults Ages 50+ who Reported Having had a Colonoscopy or Sigmoidoscopy in the Past Five Years by State and Community Health Network Area, 2011-2013

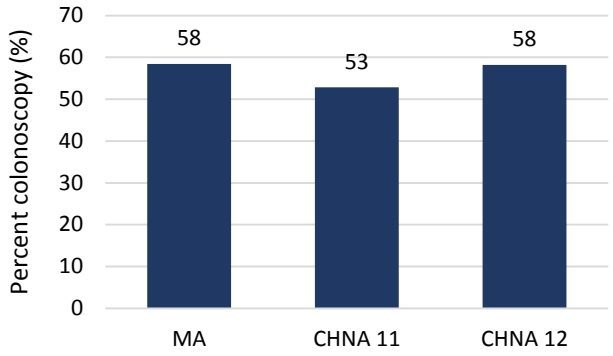
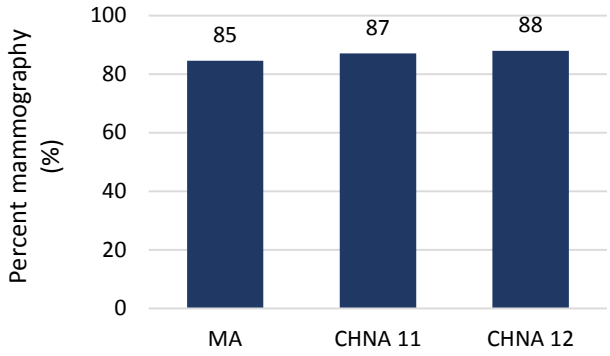


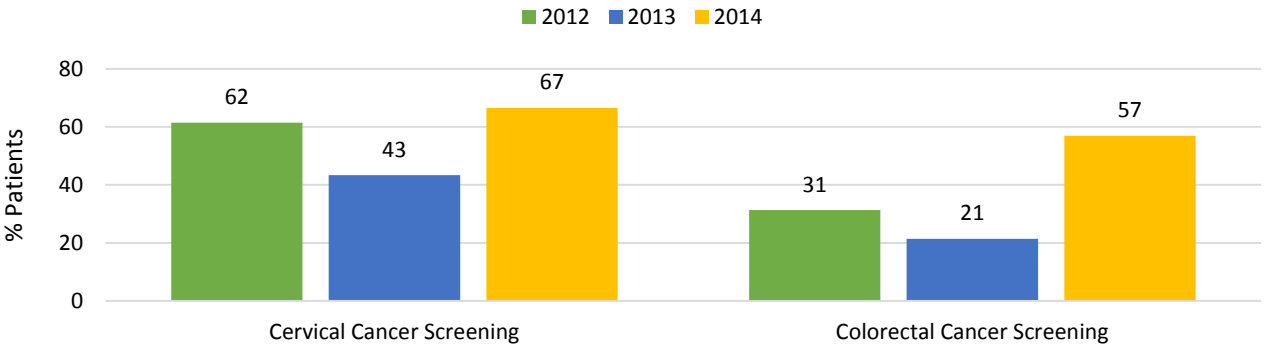
Figure 51
Percent of Women Ages 40+ Who Reported Having Had a Mammogram in the Past Two Years by State and Community Health Network Area, 2011-2013



***Data source**: Massachusetts Department of Public Health, Behavioral Risk Factor Surveillance Survey*

Quantitative data show that around two-thirds of female Health Center patients have been screened for cervical cancer (Figure 52). Colorectal cancer screening among health center patients has increased from 31% in 2012 to 57% in 2014.

Figure 52
Cancer Screening among Greater Lawrence Family Health Center Patients, 2012-2014



***Data source:** Greater Lawrence Family Health Center, UDS Summary Report, 2016*

Behavioral Health

Mental Health

As in 2013, mental health was frequently mentioned in interviews and focus groups as a health issue of great concern in the community. Participants shared stories of family members, friends and constituencies struggling with mental health issues. Those working in emergency medicine reported a rise in calls for mental or emotional disturbances.

Participants stated that the community lacks mental health care providers—those who provide counseling services as well as in-patient beds. They reported long waitlists for services, which exacerbates conditions for those in need of critical care. Others expressed concern about patients being released too soon into the community, with too few supports. Several participants mentioned that help for children and adolescents was particularly needed. Another interviewee discussed the growing need for mental health services for the aging population; there is a lack of resources, but even fewer resources and professionals who know how to serve the elderly with mental health needs.

An additional barrier cited by focus group and interview participants was the lack of support for families struggling with mental health issues. As one interviewee described, *"kids are struggling. Parents are struggling too. Parents who have [mental health] issues don't know how to support their kids."* The stigma associated with mental illness was also identified as a concern, leading people to not seek treatment. As one focus group participant stated, *"there is a stigma around that. If I feel that I am unsafe, and a fear of what is going to happen when you admit? There isn't support for families and people with mental health issues."*

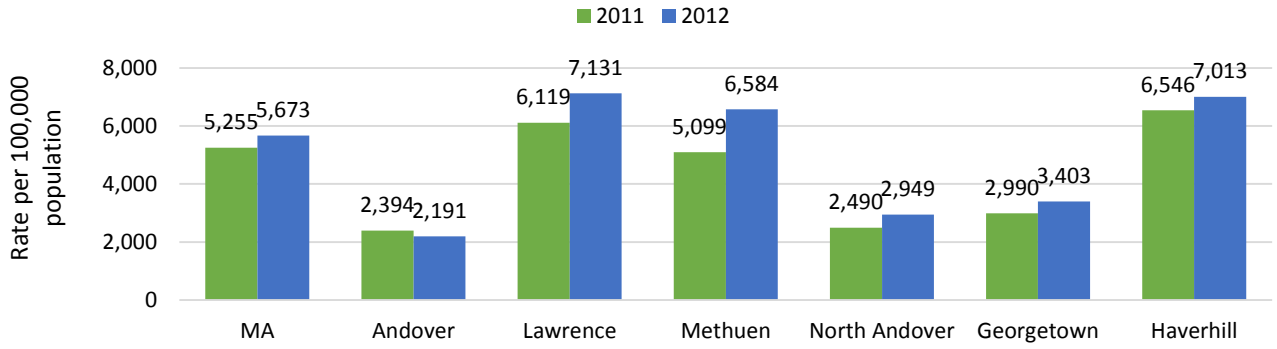
Quantitatively, Figure 53 illustrates the age-adjusted mental disorder hospitalization rate per 100,000 population in Massachusetts and cities in the primary service area for which data were available. In 2012, Lawrence and Haverhill (7,131 hospitalizations per 100,000 population and 7,013 hospitalizations per 100,000 population, respectively) had rates above the statewide rate (5,673 hospitalizations per 100,000 population).

"For me, the mental health is hurting a lot of people."
-Focus group participant

"We work with the same patients. They can see the same patient repeatedly. Is there some way to legitimately help this person? I've seen this person in downtown Lawrence in the street. He has been referred but when the funds run out, they are back on the street."
-Focus group participant

"There is a snowballing effect occurring from a health perspective due to the lack of behavioral health care available for the aging population."
-Interviewee

Figure 53
Age-Adjusted Mental Disorder Hospitalization Rate per 100,000 Population by State and Select Communities, 2011 and 2012



Data source: *Holy Family Hospital, Community Health Needs Assessment, 2015*

Substance Use and Abuse

Closely related to the issue of mental health in the community was concern about substance use. As in 2013, focus group and interview participants mentioned that opiates are a rising concern in the community but members also struggle with abuse of alcohol, marijuana, and cocaine; for example, it was noted that marijuana use among youth was rising. Substance abuse, for some participants, was seen as closely linked to mental health issues. Similar to mental health services, participants identified a need for more services to treat those in the community with substance abuse issues. Additionally, as with mental health concerns, stigma prevents the problem from being addressed.

Alcohol and Tobacco

According to the 2011-2013 Behavioral Risk Factor Surveillance System survey, CHNA 12 reported slightly higher smoking rates than that of the state (18% versus 17%), while the rate for CHNA 11 was lower at 15% (Figure 54). Further, 4% of health center patients received tobacco screening and counseling in 2014.

As illustrated in Figure 55, CHNA 12 has higher percent of binge drinkers (23%) compared to the state (20%), while CHNA 11 had lower percent at 17%.

"There is a great imbalance between the need for services and the ability to provide services."

-Interviewee

"Lack of mental health care is leading them to continue to use substances."

-Interviewee

"I have seen many people on the street asking for money, walking by here and their look, you can tell they are drug addicted or they have bad mental health and I don't know everything, but you can identify them."

-Focus group participant

Figure 54
Percent of Adult Smokers by State and Community Health Network Area, 2011-2013

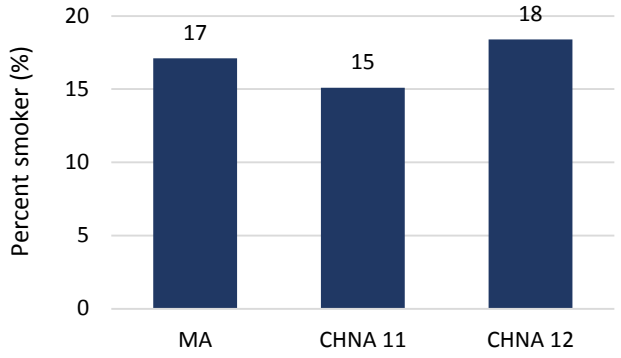
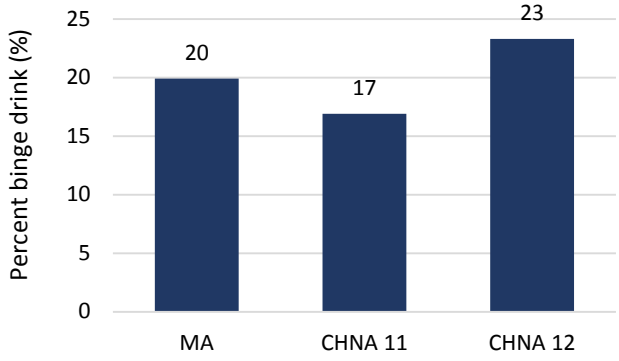


Figure 55
Percent of Adults Who Reported Binge Drinking by State and Community Health Network Area, 2011-2013



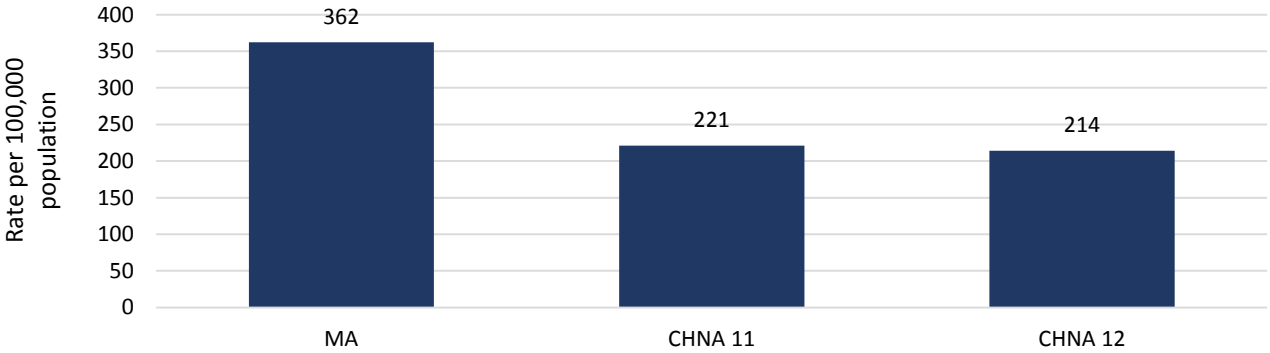
***Data source**: Massachusetts Department of Public Health, Behavioral Risk Factor Surveillance Survey Data*

Illicit drugs

> ***"A whole generation is missing, usually aged 28-35, who either end up in jail or dead [due to drugs]."***
>
> -Focus group participant

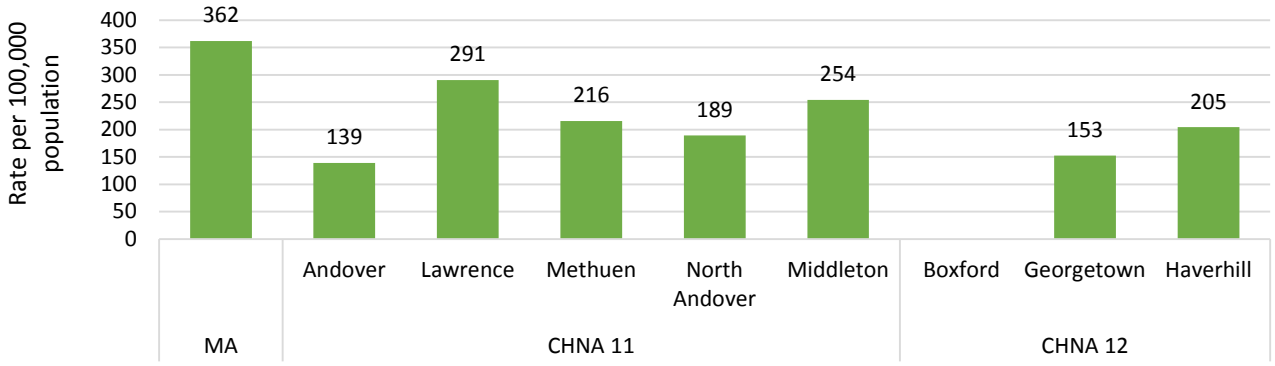
As shown in Figure 56, the service area communities, experienced lower rates of substance abuse hospitalization compared to the state. These rates are several years old and it is likely the rates have increased since 2011. At the community level, substance abuse hospitalization rates varied widely across the primary service area towns and CHNAs, though all rates remained below the statewide rate (362 hospitalizations per 100,000 population). The substance abuse hospitalization rate was highest in Lawrence (291 hospitalizations per 100,000 population) and lowest in Andover (139 hospitalizations per 100,000 population) (Figure 57).

Figure 56
Rate of Substance Abuse Hospitalization per 100,000 Population by State and Community Health Network Area, 2011



***Data source**: Massachusetts Department of Public Health*

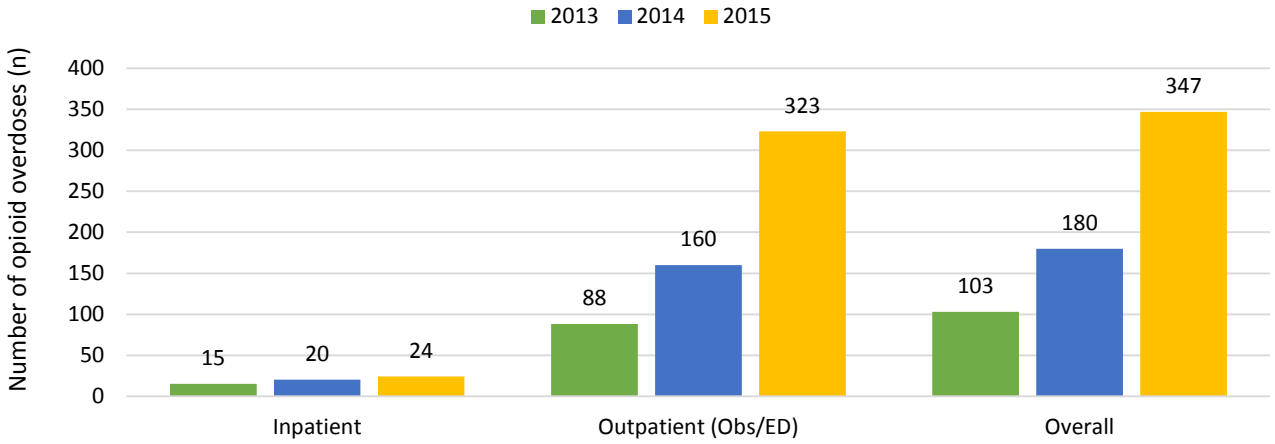
Figure 57
Rate of Substance Abuse Hospitalization per 100,000 Population by State, Community Health Network Area and Community, 2011



***Data source**: Massachusetts Department of Public Health*
***Note:** Boxford rate suppressed for patient confidentiality*

Reflecting the rising opioid problem, data from the Hospital show an increase in the number of patients with a principle diagnosis of opioid overdose. The numbers have tripled between 2013 and 2015 (Figure 58).

Figure 58
Lawrence General Hospital Opioid Overdose by Principle Diagnosis, 2013-2015



***Data source**: Lawrence General Hospital*

Additionally, as reported by the MA Bureau of Substance Abuse Services, when examining the percent distribution of primary drug use for the service area communities (Table 6) it is seen that from 2012 to 2014 the distribution of alcohol as a primary substance use decreased across communities (with the exception of Boxford) and Heroin use has nearly doubled across communities.[2] In terms of confirmed opioid overdose deaths (Figure 59), while the data present some limitations overall, the number of deaths have increased, particularly in the more populous communities.

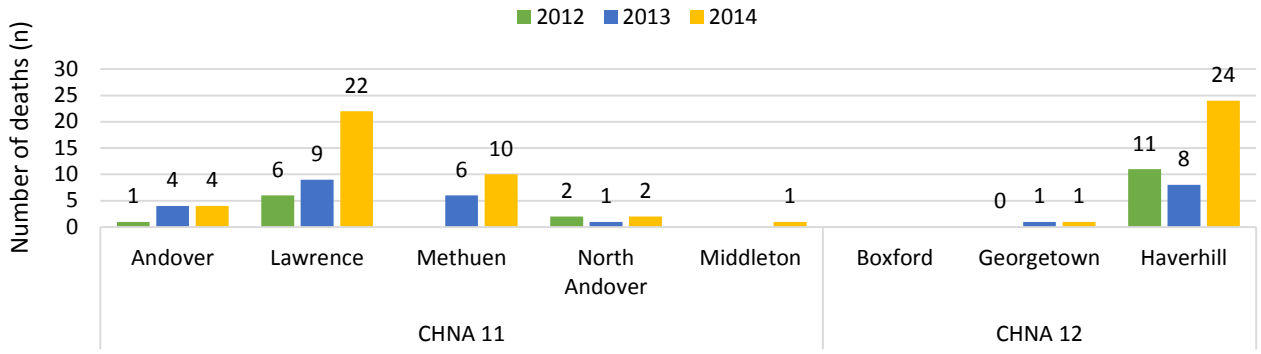
[2] At admission clients identify a "primary drug" of use which is the substance for which they seek treatment.

Table 6
Primary Substance Use, Percent Distribution by Primary Drug, Community Health Network Area and Community, 2012-2014

	2012					2013					2014				
	Alcohol	All Other Opioids	Crack/Cocaine	Heroin	Marijuana	Alcohol	All Other Opioids	Crack/Cocaine	Heroin	Marijuana	Alcohol	All Other Opioids	Crack/Cocaine	Heroin	Marijuana
Massachusetts	35.3	10.5	4.3	43.4	4.5	33.6	7.5	3.6	48.7	4.5	31.9	5.8	3.4	53.1	4
CHNA 11															
Andover	59.7	8.1	---	19.4	10.5	46.6	8.7	---	31.7	9.3	45.4	---	---	44.8	4.6
Lawrence	32.7	4.9	4.5	49.9	7	27.4	5.6	2.9	55.7	7.3	19.5	3.4	2.3	70.5	3.9
Methuen	35.2	12.2	3.2	41.2	6.5	36.8	8.1	2.2	46.2	3.8	23.2	8.8	1.4	60	4.2
North Andover	43.1	12.4	---	33.7	3.5	42	9.8	---	38.9	7.8	36.3	6.8	---	52.1	---
Middleton	59.6	---	---	23.6	11.2	59.3	9.7	---	27.4	---	38.1	---	---	57.1	---
CHNA 12															
Boxford	51.3	---	---	23.1	15.4	48.4	---	---	---	---	58.6	---	---	31	---
Georgetown	50	18.8	---	27.1	---	41.4	14.3	---	30	8.6	42.4	---	---	50	---
Haverhill	39.1	12	3.6	34.9	8.9	35	9.1	2.9	42	10.1	29.3	7.2	2.7	54.9	5.1

***Data source**: Description of Admissions to MA Bureau of Substance Abuse Services Contracted Programs FY 2014*
***Note:** Missing values suppressed for patient confidentiality*

Figure 59
Number of Confirmed Unintentional Opioid Overdose Deaths by Community Health Network Area and Community, 2012-2014



***Data source**: Massachusetts Department of Public Health, Number of Confirmed Unintentional/Undetermined Opioid-related Overdose Deaths by City/Town, MA Residents January 2012- December 2014*
***Notes:** Unintentional poisoning/overdose deaths combine unintentional and undetermined intents to account for a change in death coding that occurred in 2005. Suicides are excluded from this analysis. Opioids include heroin, opioid-based prescription painkillers, and other unspecified opioids. 2014 death data are preliminary and subject to updates. Case reviews of deaths are evaluated and updated on an ongoing basis. A large number of death certificates have yet to be received from the municipalities and some have yet to be assigned cause-of-death codes. The information presented in this report only includes confirmed cases. Data updated on 10/15/2015.*

Maternal and Child Health

Maternal and child health was not raised as a concern in focus groups or interviews. Overall in 2014, there were 3,377 births in the service area with the majority in the CHNA 11 region. Of these births, 14% of infants were born with low birthweight. Table 7 provides low birthweight counts by community.

Table 7
Resident Births and Low Birthweight counts by State and Community, 2014

	Total Birth	Low Birthweights
Massachusetts	71,867	5,394
CHNA 11	2,474	200
Andover	268	19
Lawrence	1,347	123
Methuen	531	37
North Andover	264	21
Middleton	64	--
CHNA 12	903	283
Boxford	64	7
Georgetown	73	--
Haverhill	766	76

Data source: *Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluations, Massachusetts Births, 2014*
Note: *Due to small numbers (N=1-4), exact count not provided therefore rate could not be tabulated*

Teen pregnancy rates were available for the more populous communities. Lawrence had a teen birth rate three-times higher that the state (36 teen births compared to 11 teen births per 100,000 population) and Haverhill had a teen birth rate over two-times higher than the state (23 teen births per 100,000) (Table 8).

Table 8
Birth Rate to Teenage Mothers (15-19 years) per 100,000 by State and Community, 2014

	Birth Rate per 100,000
Massachusetts	10.6
CHNA 11	
Lawrence	35.6
Methuen	9.2
CHNA 12	
Haverhill	22.9

Data source: *Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluations, Massachusetts Births, 2014*

Prenatal Care and Birth Outcomes

Health Center data show that prenatal patients comprised less than 4% of the total patient population from 2012 through 2014 (Table 9). Of these patients, the majority had their first prenatal visit in the first trimester; this proportion has fluctuated over the past four years from 74% in 2012 to 81% in 2014 (Table 10).

Table 9
Greater Lawrence Family Health Center Prenatal Data, 2012-2014

	2012	2013	2014
Prenatal Patients	1,391	1,549	1,818
Prenatal patients who delivered	732	740	795

Data source: *Greater Lawrence Family Health Center, UDS Summary Report, 2016*

Table 10
Greater Lawrence Family Health Center Perinatal Health Data, 2012-2014

	2012	2013	2014
Access to prenatal care (first prenatal visit in 1st trimester)	74.4	81.8	80.8
Low birth weight	5.8	6.2	6

Data source: *Greater Lawrence Family Health Center, UDS Summary Report, 2016*

Infectious Diseases

Infectious diseases were not mentioned in interviews or focus groups. Rates of sexually transmitted infections (STIs) are higher in some communities within the service area than statewide. The figures below show the rates of various STIs for the state and CHNA. Compared to the state, rates of Gonorrhea were lower in the CHNA 11 and 12 region (Figure 60), yet CHNA 11 had higher rates of Chlamydia compared to the state (Figure 61).

Figure 60
Rate of Gonorrhea per 100,000 Population by State and Community Health Network Area, 2010

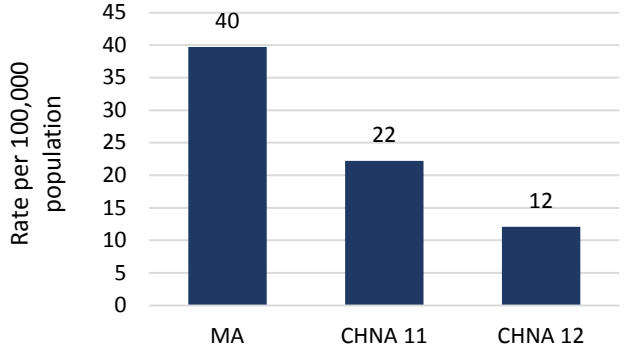
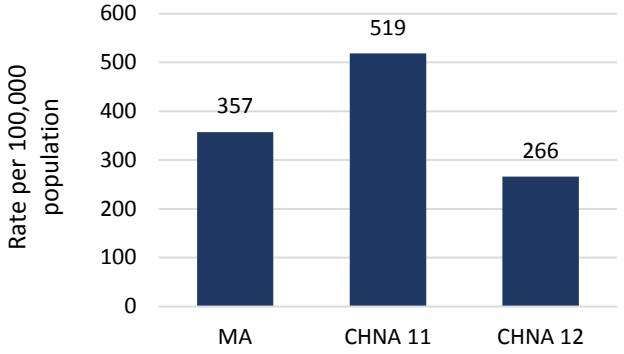


Figure 61
Rate of Chlamydia per 100,000 Population by State and Community Health Network Area, 2010



Data source: *Massachusetts Department of Public Health, Division of Sexually Transmitted Disease Prevention*

Rates of Syphilis were lower in both regions compared to the state (Figure 62). CHNA 11 had a higher rate of HIV compared to the state, while CHNA 12 a lower rate of HIV compared to the state (Figure 63).

Figure 62
Rate of Syphilis per 100,000 Population by State and Community Health Network Area, 2010

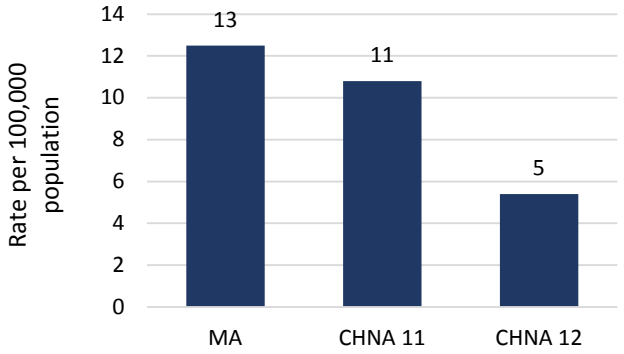
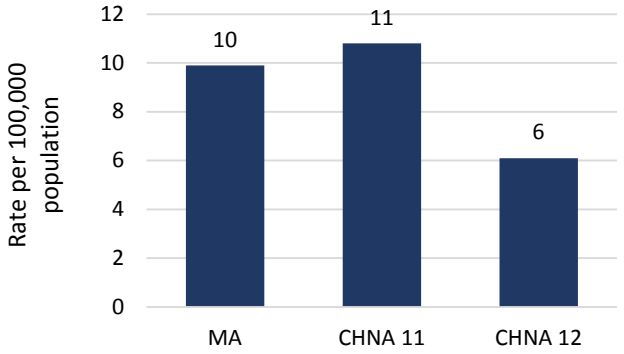


Figure 63
Rate of HIV by State and Community Health Network Area, 2010



Data source: *Massachusetts Department of Public Health, Division of Sexually Transmitted Disease Prevention*

In addition, while Hepatitis data were suppressed for some communities, overall rates of Hepatitis B and C for the service area were lower than the state (Table 11). However, Lawrence and Haverhill had incidence rates of Hepatitis C at or above the state rate.

Table 11
Rate of Hepatitis Incidence per 100,000 Population by State and Community, 2013

	Hepatitis B	Hepatitis C
Massachusetts	24.52	118.9
CHNA 11	23.18	93.23
Andover	--	30.13
Lawrence	34.05	157.13
Methuen	19.05	69.84
North Andover	--	38.81
Middleton	--	--
CHNA 12	8.75	77.41
Boxford	--	--
Georgetown	--	61.1
Haverhill	16.43	118.27

Data source: *Massachusetts Department of Public Health, Division of Sexually Transmitted Disease Prevention*

Health Care Access and Utilization

Similar to 2013, access to health care was also raised as a concern among interview and focus group participants; they identified several barriers to accessing care, including cost, insurance, quality, language and transportation.

Use of Health Care Services

Compared to 2013 survey results, a lower percent of residents indicated they had at least one person or facility they consider as their personal health care provider (95% in 2013 compared to 65% in 2016). A higher percent of providers indicated their patients had at least one person or facility they considered as their main medical provider (13% in 2013 compared to 26% in 2016) (Table 12). In addition, a greater proportion of residents indicated they received primary medical care from a health center (5% in 2013 to 27% in 2016) and a smaller proportion of providers indicated their patients received primary medical care from a health center (70% in 2013 to 60% in 2016).

Qualitatively, some focus group and interview participants shared that getting and using insurance was a barrier to care. They talked about difficulty understanding what is covered by insurance and finding providers who accept their insurance. Focus group participants stressed the need for self-advocacy.

"I really feel like patients need to advocate for themselves to a certain extent too. You have to keep trying."
-Focus group participant

"I have to wait so long it is ridiculous. One time I went, they give you a pill and send you home and say don't worry. They don't give you the attention one feels like they need."
– Focus group participant

"I know someone who grew up in Lawrence, they bring their kids to the ER. You are supposed to call your pediatrician."
– Focus group participant

Table 12
Providers of Survey Respondents' Personal (by Resident) or Patient's/Client's (by Provider) Provider of Main Medical Care, 2013 and 2016

	Residents		Providers	
	2013	**2016**	**2013**	**2016**
Private doctor's office/primary care physician	95%	65%	13%	26%
Community health center/clinic (i.e., Greater Lawrence Family Health Center or similar)	5%	27%	70%	60%
Hospital-based Emergency Room	0%	3%	16%	11%
Urgent Care Center (i.e., Doctors Express or similar)	1%	2%	2%	0%
Veteran's Affairs (VA)	0%	0%	0%	0%
Other	-	3%	-	3%

Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*
Notes: *Arranged in descending order by "2016 Resident;" Other category added to 2016 survey*

Furthermore, 64% of 2016 resident respondents indicated their primary health care coverage was private down from 91% in 2013 (Table 13). Similarly, 4% of providers said their patient's primary health care coverage was private down from 13% in 2013. In contrast, the majority of providers (74%) indicated their patient's health care coverage was provided from a government plan as did residents (22%) (Table 13).

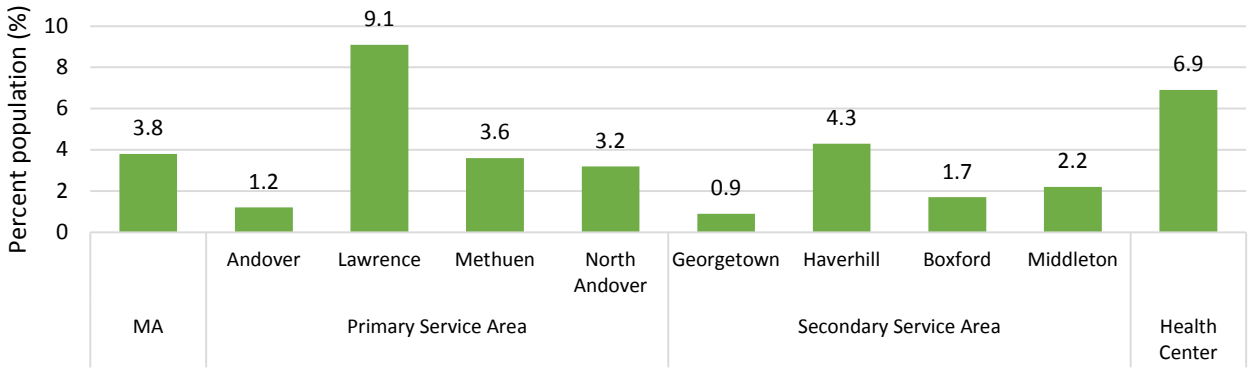
Table 13
Providers of Survey Respondents' Personal (by Resident) or Patient's/Client's (by Provider) Health Care Coverage, 2013 and 2016

	Residents		Providers	
	2013	**2016**	**2013**	**2016**
Yes, private insurance (through employer/spouse's employer/parents)	91%	64%	13%	4%
Yes, Medicare	8%	11%	10%	16%
Yes, other government plan (Medicaid/MassHealth or other)	1%	22%	73%	74%
No health insurance	0%	2%	4%	1%
Other	-	1%	-	4%

Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*
Notes: *Arranged in descending order by "2016 Resident;" Other category added to 2016 survey*

In addition, data from the American Community Survey indicate that two of the eight service area communities had uninsured populations greater than the state (Figure 64). The percent of uninsured in Lawrence was three times higher than that of the state.

Figure 64
Percent Uninsured Population by State, Community and Health Center, 2014



Data source: *2014 American Community Survey 5-Year Estimates, 2010-2014; Greater Lawrence Family Health Center, UDS Summary Report, 2016*

Table 14 shows the percent of patients using specific services at the Health Center from 2012-2014. In 2014, the most widely used service among patients was the medical service (94%) followed by enabling service (18%)—non-clinical services that are specifically linked to a medical encounter or the provision of medical services for a patient at a health center—and substance abuse services (2%).

Table 14
Percent of Patients at Greater Lawrence Family Health Center Using Specific Services, 2012-2014

	2012	2013	2014
Medical	100.0	98.1	94.4
Dental	0.0	0.0	0.0
Mental Health	0.1	0.2	0.2
Substance Abuse	1.2	0.8	1.5
Vision	0.0	0.0	0.0
Enabling	21.5	19.0	18.0

Data source: *Greater Lawrence Family Health Center, UDS Summary Report, 2016*

Challenges to Accessing Health Care Services

Those survey respondents who indicated that they or their patients/clients did not have one person as a health care provider were then asked what barriers were inhibiting the establishment of this kind of consistent provider-patient relationship. For residents the primary reasons for not having one consistent health care provider was due to inability to communicate with providers (from a language perspective), lack of evening and weekend services and insurance problems. According to provider respondents, primary reasons were insurance problems/lack of coverage, cost of care and patient's lack of awareness. From a provider perspective there was not much change from the 2013 survey; however, for residents, there were notable shifts on reasons for not having primary care—See figure 65.

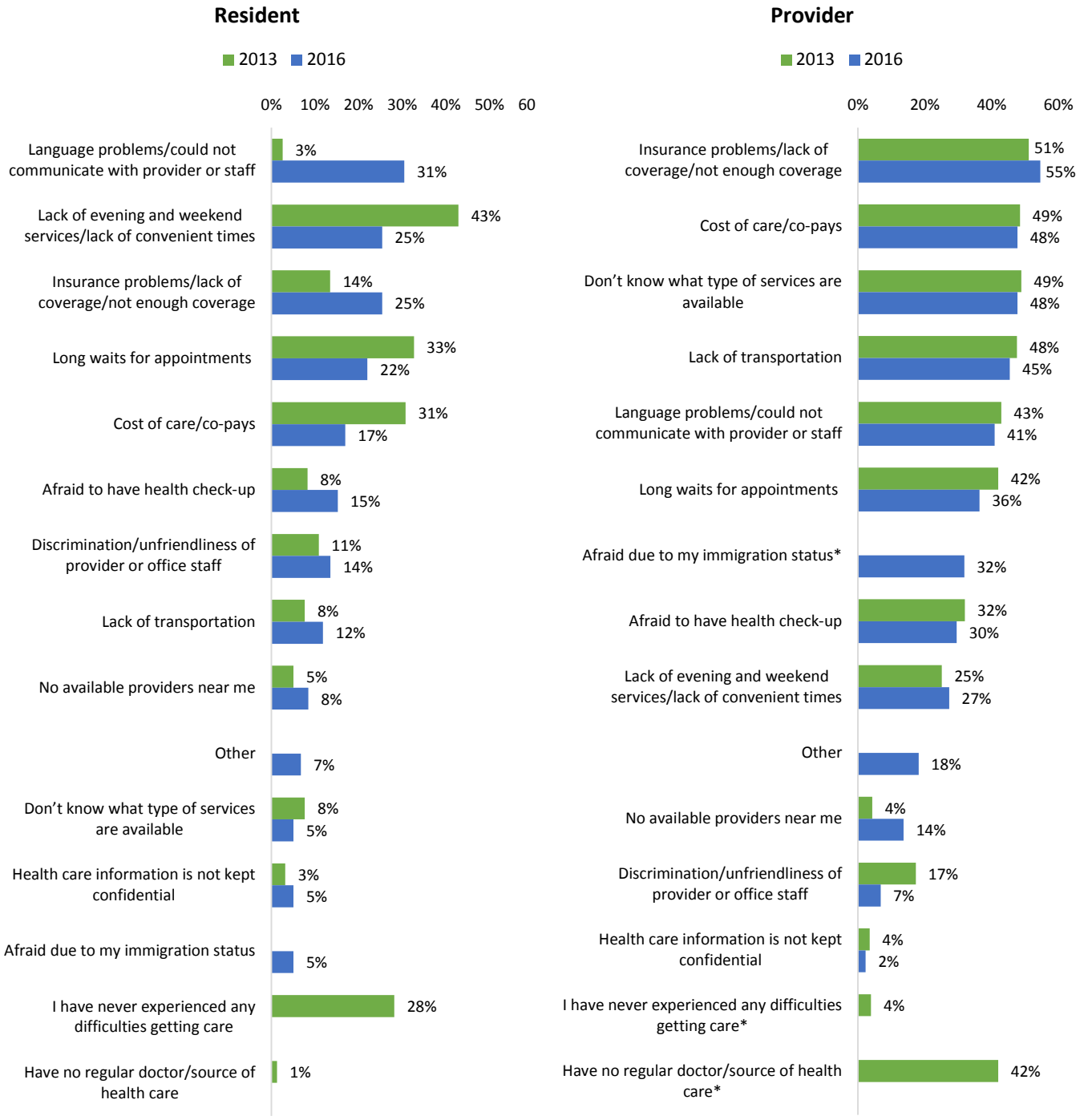
In addition, focus group and interview participants indicated barriers to accessing health care contributed to extensive use of the ER for non-emergent care.

"The ER is overwhelmed, it is the third busiest one in the state, close to number two."
-Interviewee

"I know someone who grew up in Lawrence, they bring their kids to the ER. You are supposed to call your pediatrician."
– Focus group participant

"Many residents use the hospital as their primary source of health care; the challenge with this is having patients discharged from the hospital with lack of access or ability to carry out follow-up care."
-Interviewee

Figure 65
Survey Respondents' Personal (by Resident) or Patient's/Client's) Reasoning for Not Having One Consistent Health Care Provider, 2013 and 2016



Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*
Note: *Sorted by community in descending order by 2016 survey year; *afraid due to immigration status not asked to providers in 2013. I have never experienced any difficulties getting care and have no regular doctor/source of health care not asked to providers in 2016.*

Availability of Services

Survey respondents were also asked to comment on either their level of satisfaction or their perceptions of their patient's /client's level of satisfaction with the availability of services (Table 14). Resident respondents were least satisfied with the availability of alcohol and drug treatment services (29%), cost of medicine (29%) and housing assistance (32%). Conversely, residents were very satisfied with the overall health or medical services in the area (53%), dental services (55%) and the health or medical providers who take their insurance (52%); similar satisfaction with services were reported in 2013.

Similar to residents, providers perceived their clients to be least satisfied with the availability of alcohol or drug treatment services (58%), availability of counseling or mental health services (60%) and housing assistance (32%). Providers also perceived their clients to be most satisfied with the overall health or medical services in the area (44%), primary care providers (57%) and health or medical providers who take your insurance (43%).

Table 15
Survey Respondents' Personal (by Resident) and Perceived Client (by Provider) Satisfaction with the Availability of Services by Role, 2013 and 2016

	Resident		Provider	
	2013	**2016**	**2013**	**2016**
Overall health or medical services in the area				
Not satisfied at all	3%	3%	3%	3%
Somewhat satisfied	40%	44%	42%	53%
Very satisfied	57%	53%	55%	44%
Alcohol or drug treatment services				
Not satisfied at all	34%	29%	53%	58%
Somewhat satisfied	38%	50%	39%	35%
Very satisfied	28%	21%	8%	7%
Counseling or mental health services				
Not satisfied at all	22%	28%	47%	60%
Somewhat satisfied	46%	46%	40%	31%
Very satisfied	32%	26%	13%	9%
Public transportation to area health services				
Not satisfied at all	28%	22%	19%	26%
Somewhat satisfied	40%	47%	48%	51%
Very satisfied	33%	31%	33%	23%
Birth control/sexual health services for youth				
Not satisfied at all	22%	18%	15%	11%
Somewhat satisfied	56%	45%	57%	50%
Very satisfied	22%	36%	28%	38%
Dental services in the area				
Not satisfied at all	5%	14%	19%	25%
Somewhat satisfied	32%	31%	45%	41%
Very satisfied	63%	55%	37%	34%
Programs or services to help people quit smoking				
Not satisfied at all	11%	17%	21%	20%
Somewhat satisfied	57%	47%	56%	51%
Very satisfied	31%	36%	23%	29%

Table 15
Survey Respondents' Personal (by Resident) and Perceived Client (by Provider) Satisfaction with the Availability of Services by Role, 2013 and 2016

	Resident		Provider	
	2013	**2016**	**2013**	**2016**
Primary care providers				
Not satisfied at all	-	7%	-	4%
Somewhat satisfied	-	42%	-	39%
Very satisfied	-	51%	-	57%
Health or medical providers who take your insurance				
Not satisfied at all	3%	9%	11%	8%
Somewhat satisfied	30%	38%	42%	50%
Very satisfied	67%	52%	47%	43%
Cost of medicine (e.g., medicine assistance, low-cost medicine)				
Not satisfied at all	-	29%	-	30%
Somewhat satisfied	-	41%	-	50%
Very satisfied	-	30%	-	21%
Medical specialists in the area (e.g., cancer care, orthopedics)				
Not satisfied at all	10%	14%	8%	11%
Somewhat satisfied	34%	47%	42%	50%
Very satisfied	56%	39%	50%	39%
Interpreter services during medical visits and when receiving health information				
Not satisfied at all	14%	15%	12%	16%
Somewhat satisfied	40%	41%	37%	41%
Very satisfied	46%	43%	51%	42%
Food assistance (e.g., food stamps/SNAP)				
Not satisfied at all	-	18%	-	8%
Somewhat satisfied	-	39%	-	58%
Very satisfied	-	43%	-	35%
Access to healthy foods (e.g., Meals on Wheels, access to fruits and vegetables)				
Not satisfied at all	-	18%	-	24%
Somewhat satisfied	-	43%	-	51%
Very satisfied	-	40%	-	25%
Housing assistance (e.g., Section 8)				
Not satisfied at all	-	32%	-	32%
Somewhat satisfied	-	41%	-	50%
Very satisfied	-	27%	-	17%
Other				
Not satisfied at all	-	44%	-	50%
Somewhat satisfied	-	31%	-	35%
Very satisfied	-	25%	-	15%

Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*

Note: *Primary care provider, Health or medical providers who take your insurance, Cost of medicine (e.g., medicine assistance, low-cost medicine), Food assistance (e.g., food stamps/SNAP), Housing assistance (e.g., Section 8), Housing assistance (e.g., Section 8) and Other added to the 2016 survey*

Survey respondents were also asked more targeted true/false questions on barriers to accessing care in the community (Table 16). From a resident perspective, residents responded true that health care institutions in their community could provide more education on the prevention of diseases/health care (87%) and similar to 2013, 86% responded true to the statement "If I needed medical services I would know where to go for them". Similar to residents, providers indicated that more education would be helpful and new to the 2016 survey, 81% of provider's perceived availability of medical services location to be convenient for their patients.

Table 16
Percent of Respondents who Perceived the Following Statements to be True about their (their Patient/Client's) Community by Role, 2013 and 2016

	Resident		Provider	
	2013	**2016**	**2013**	**2016**
The health care institutions in my (my patient's/client's) community should provide more education on prevention of diseases or health conditions	82%	87%	93%	87%
If I needed medical services I (my patient/client) would know where to go for them	87%	87%	55%	58%
Medical services are available at convenient locations	-	83%	-	81%
Medical services are available at convenient times	-	77%	-	75%
Public transportation is not always convenient when trying to get to medical/dental services *	42%	69%	37%	75%
I (my patient/client) or someone in my (my patient's/client's) household has not received the medical care needed because the costs were too high	36%	38%	42%	45%
When trying to get medical care, I (my patient's/client's) have had a negative experience with office staff	29%	38%	27%	43%
When trying to get medical care, I have felt discriminated against because of my income	15%	17%	25%	28%
When trying to get medical care, I have felt discriminated against because of my race, ethnicity, or language	6%	9%	17%	27%

Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*
Note: *Sorted in descending order by 2016 Resident column. Asterisk denotes slight change in wording from 2013 to 2016. Medical services are available at convenient times and Medical services are available at convenient locations added to the 2016 survey*

Health Care Cost

Focus group and interview participants reported that the cost of care poses a challenge to accessing health care, which was also raised as a barrier in 2013. Similarly, from a transportation perspective—especially for those who commute to Boston and for seniors on fixed incomes—the cost of transportation was a barrier. As one interviewee shared, *"when discharged from the hospital in particular, many do not have a means to get to their house or seek the care needed—this leads to patients not filling prescriptions and missed appointments."*

> ***"When you have a child with a food allergy who has an episode, you give them an Epi pen and then you are supposed to go to the emergency room. People will wait in the parking lot and don't go in. We have seniors who refuse ambulance rides due to costs. There are decisions between medicine and food."***
>
> – Focus group participant

Language Access and Cultural Competency

As in 2013, language access and cultural competence were discussed in focus groups and interviews in 2016. Perspectives on language access in health care differed across participants. Some praised language access in local organizations and reported that there are sufficient bi-lingual providers; However, others reported challenges. One focus group participant stated, *"diversity is a strength, especially when they speak the same lanaguage as you. It builds trust."* Conversly, another focus group participant stated, *"I feel uncomfortable with interpreters, especially involving health."* And, as one interviewee stated, *"there is a cultural disconnect between the population served and the population providing services."* Many providers speak Spanish, but not all, so some people reported that they faced challenges with language when seeking health care and support from social service agencies.

Quality of Care

In 2013 and 2016, several focus group participants spoke about quality of care and shared differing perspectives. Some reported that they have faced long wait times for appointments. As one participant shared, *"you have to wait for a long time because it is so full and they don't have time to see everyone. The ERs are so full. The hospitals so full. The clinics are so full."* Others reported feeling rushed during appointments. As one focus group participant stated, *"sometimes they don't even touch you. They don't take time to talk to you or look at you."* One interviewee attributed this to systemic issues: *"[it's] an organizational based model, not a client based model. They think first about the organization, second about client."* However, other participants reported very positive experience with healthcare providers. A focus group participant shared, *"my doctor treats me very well. The services in Lawrence are high quality. He treats me well ...and he is young, but he is very friendly. He talks to you, he asks you things."*

Considering the likelihood of seeking health/medical services in the Merrimack Valley, residents indicated that they were very likely to seek primary care (73%) and emergency care services in Merrimack Valley and not likely to seek brain care/neurosurgery and cancer care (49%) in Merrimack Valley. For providers, similar services and percentages were reported—see Table 17.

Table 17
Survey Respondents' Likelihood of Personally Seeking Health/Medical Services in the Merrimack Valley by Role, 2013 and 2016

	Residents	Providers

	2013	2016	2013	2016
Primary care				
Not likely at all	12%	12%	8%	13%
Somewhat likely	11%	15%	15%	18%
Very likely	77%	73%	78%	69%
Emergency care				
Not likely at all	8%	11%	6%	12%
Somewhat likely	15%	19%	18%	23%
Very likely	78%	70%	76%	65%
Pediatric/Child care and surgeries				
Not likely at all	22%	24%	24%	36%
Somewhat likely	30%	30%	32%	34%
Very likely	48%	46%	44%	30%
OB/GYN Services (Including child birth)				
Not likely at all	18%	13%	10%	21%
Somewhat likely	16%	29%	26%	26%
Very likely	66%	58%	64%	53%
Orthopedic care and surgeries				
Not likely at all	15%	25%	19%	23%
Somewhat likely	28%	29%	34%	34%
Very likely	57%	46%	48%	42%
Cancer care				
Not likely at all	32%	49%	43%	52%
Somewhat likely	30%	25%	36%	31%
Very likely	38%	26%	22%	17%
Cardiac/Heart care and surgeries				
Not likely at all	32%	44%	40%	48%
Somewhat likely	30%	27%	31%	33%
Very likely	38%	29%	29%	18%
Mental/behavioral health treatment/counseling				
Not likely at all	-	18%	-	28%
Somewhat likely	-	34%	-	35%
Very likely	-	48%	-	38%
Alcohol and drug abuse treatment/counseling				
Not likely at all	-	18%	-	31%
Somewhat likely	-	34%	-	34%
Very likely	-	47%	-	35%
Chronic conditions such as heart problems. Lung problems, diabetes, asthma				
Not likely at all	-	23%	-	26%
Somewhat likely	-	32%	-	33%
Very likely	-	45%	-	41%
Chronic infections such as HIV/Hepatitis C				

Table 17
Survey Respondents' Likelihood of Personally Seeking Health/Medical Services in the Merrimack Valley by Role, 2013 and 2016

	Residents		Providers	
	2013	**2016**	**2013**	**2016**
Not likely at all	-	25%	-	30%
Somewhat likely	-	33%	-	33%
Very likely	-	42%	-	37%
Other minor surgeries				
Not likely at all	8%	17%	12%	18%
Somewhat likely	24%	33%	26%	34%
Very likely	68%	51%	62%	48%
Neurosurgery/brain care				
Not likely at all	49%	56%	70%	68%
Somewhat likely	28%	21%	19%	20%
Very likely	24%	23%	11%	12%

Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*
Note: *Mental/behavioral health treatment/counseling, Alcohol and drug abuse treatment/counseling, Chronic conditions such as heart problems. Lung problems, diabetes, asthma and Chronic infections such as HIV/Hepatitis C added to the 2016 survey*

When survey respondents were asked why they would not seek services locally in the Merrimack Valley, responses differed slightly by role (i.e., resident versus provider) (Table 18). Similar to 2013 survey results, both residents and providers indicated they were most likely to seek services outside the Merrimack Valley due to questioning the quality of the local services. Residents also indicated there aren't enough specialty services available locally and family and friends have recommended services outside of the service area. Providers had similar responses.

Table 18
Survey Respondents' Personal (by Resident) or Perceived Patient's/Client's (by Provider) Reasoning for Not Seeking Services in the Merrimack Valley, 2013 and 2016

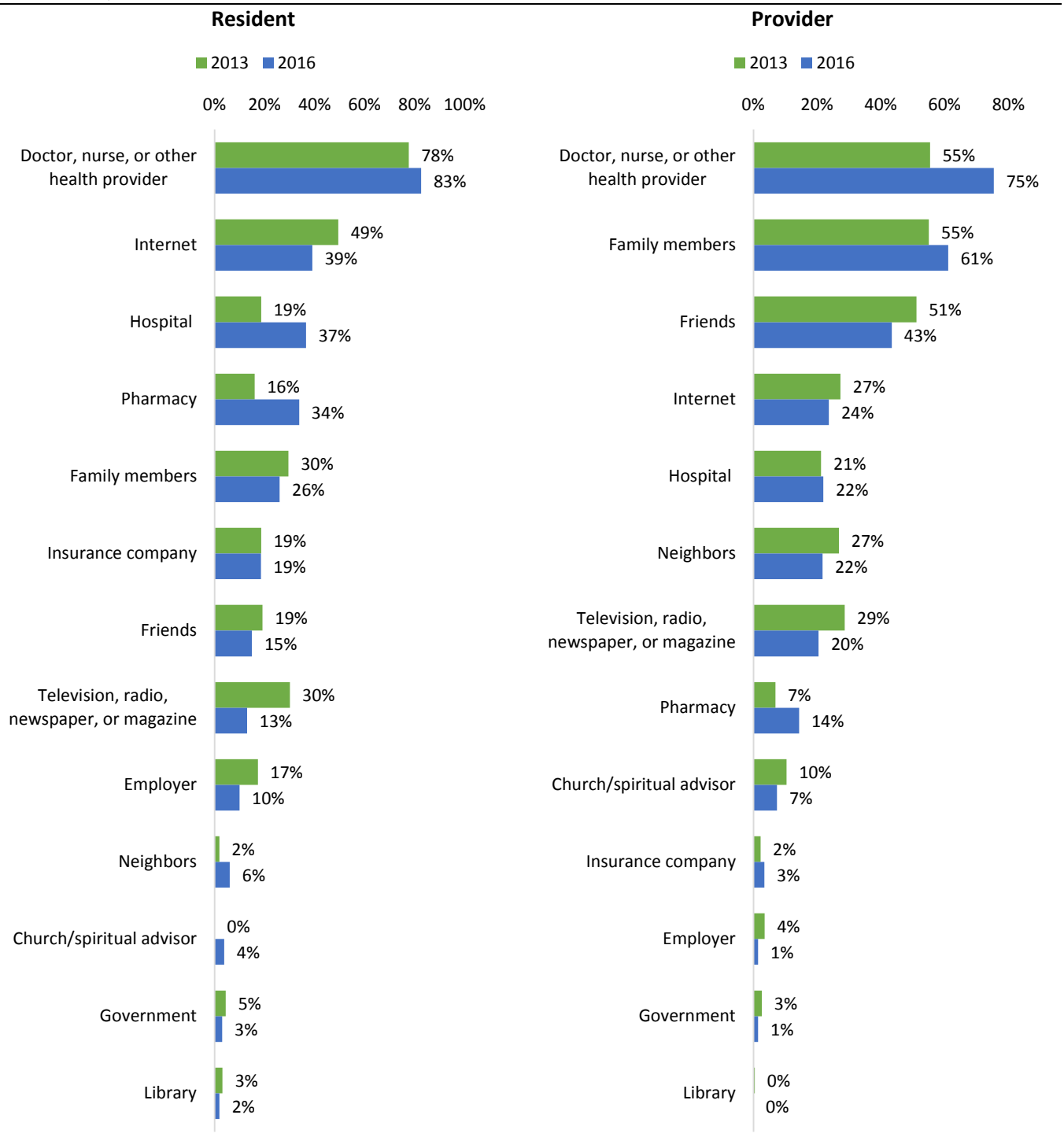
	Residents		Providers	
	2013	**2016**	**2013**	**2016**
I question the quality of services locally	35%	43%	31%	48%
There aren't enough specialty services available locally	8%	31%	25%	33%
Others (e.g., friends, family members) have recommended services outside of the Merrimack Valley	33%	31%	24%	24%
My primary care doctor refers me outside of the Merrimack Valley	13%	25%	15%	22%
Long wait times to get an appointment	-	24%	-	16%
I have transportation problems locally	-	7%	-	2%
My health insurance is only accepted outside of the Merrimack Valley	2%	5%	1%	4%
Other	-	18%	-	22%

Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*
Notes: *Arranged in descending order by "2016 Resident". Long wait times and transportation problem added to the 2016 survey. Other added to the 2016 survey*

Health Information Sources

Residents look to a variety of sources for their information on health. When resident respondents were asked the sources from which they receive the majority of their health information, they were more likely to report doctors or other health providers, the internet and hospital. While the sources for health information did not change between 2013 and 2016, the distribution of where participants received their information shifted (Figure 66). In 2016, the majority of providers perceived their patient's health information to come from health providers, family members and friends. For providers the greatest shift in perceived sources of information were from health providers, which increased from 55% in 2013 to 75% in 2016.

Figure 66
Survey Respondents' Personal (by Resident) or Perceived Patient's/Client's (by Provider) Sources of Health Information, 2013 and 2016



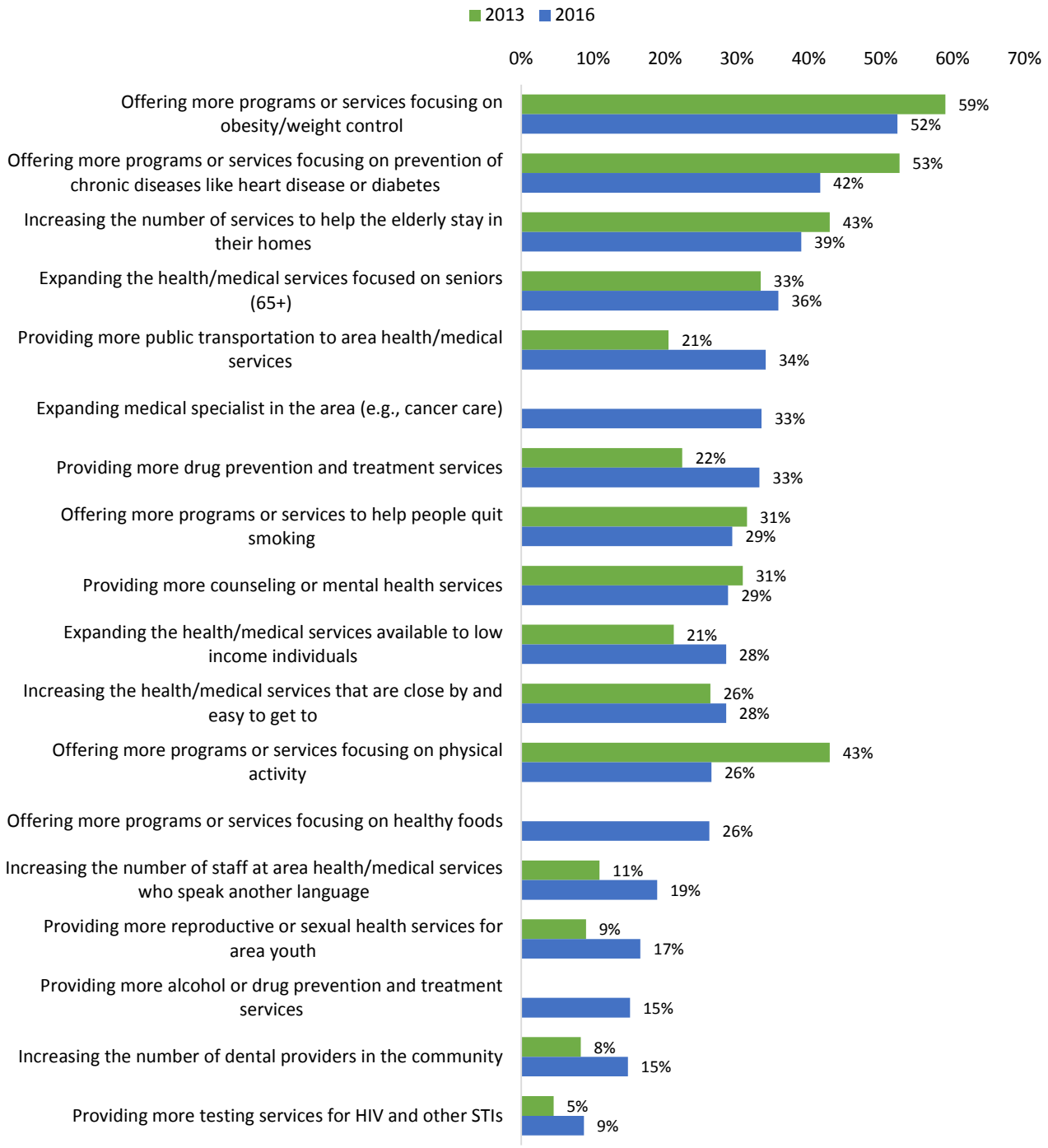
Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*
Note: *Arranged in descending order by "2016 Resident" and "2016 Provider"*

Vision for the Future

As shown in Figures 67 and 68, survey respondents were asked to identify the areas they considered to be priorities for addressing in the future. Resident respondents identified offering more programs or services focusing on obesity/weight control as the top areas of focus and providers identified providing more counseling or mental health services as a top priority. The top priority identified for residents did not change between 2013 and 2016 however the distribution of the priorities shifted. For providers however, there was a shift in top priority. In 2013, the top priority—as perceived by the provider—was offering programs focused on heart disease and diabetes but in 2016 it shifted to providing more mental health services.

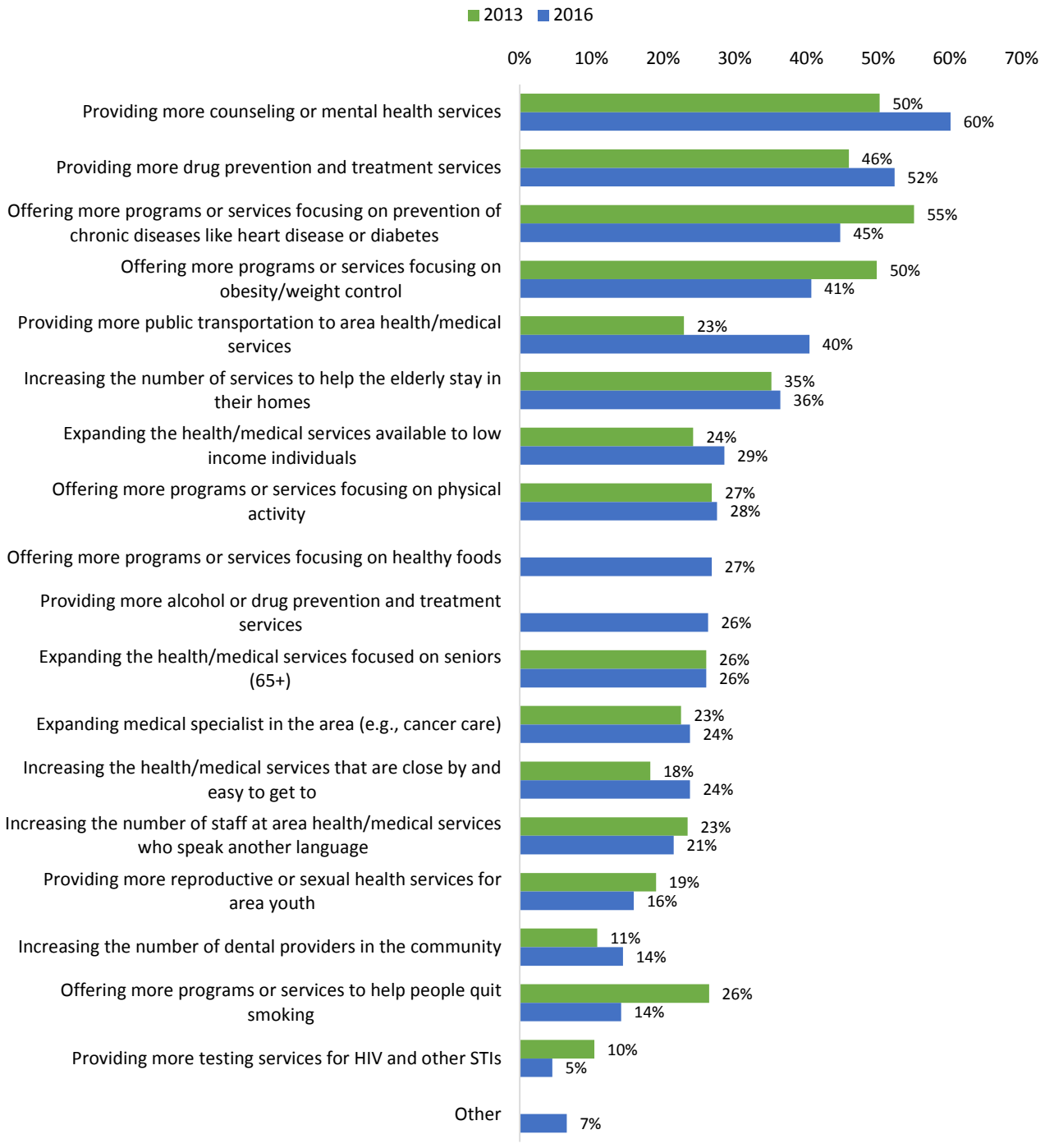
For residents, other notable changes in terms of prioritization between 2013 and 2016 were increased interest in providing more public transportation to area health/medical services, providing more drug prevention and treatment services and increasing the number of staff at area health/medical services who speak another language. For providers changes were seen in providing more public transportation to area health/medical services, providing more drug prevention and treatment services and increasing the health/medical services that are close by and easy to get to.

Figure 67
Residents' Top Priority Areas for the Future, 2013 and 2016



Data source: Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016
Notes: Arranged in descending order by "2016 Resident." Expanding medial specialist in the area, offering more programs or service to help quit smoking, more programs focused on healthy food and providing more alcohol or drug treatment services added to 2016 survey

Figure 68
Providers' Top Priority Areas for the Future, 2013 and 2016



Data source: *Lawrence General Hospital Community Health Needs Assessment Survey, 2013; Lawrence General Hospital and Greater Lawrence Family Health Center Community Health Needs Assessment, 2016*
Notes: Arranged in descending order by "2016 Resident". Expanding medial specialist in the area, offering more programs or service to help quit smoking, more programs focused on healthy food and providing more alcohol or drug treatment services added to 2016 survey

Community Participant Recommendations

When focus group and interview participants were asked about needed services, several themes emerged, including a need for mental health services, more outreach and education, and enhanced collaboration among organizations in the community.

Increased behavioral health services: The unmet need for behavioral health services emerged as a prominent theme across focus groups and interviews. The need for mental health and substance abuse services was also identified as a top health priority in the 2016 Lawrence Public Health Delivery System Organizational Assessment.[3] Participants reported that the community needs more mental health providers and substance use counselors in order to reduce wait times and ensure that those who most need services are able to access them; this included enhanced follow up care for mental health issues. Others stated that more in-patient beds, especially for children and youth, were needed in the community. Detox services are also needed, according to participants. As one focus group participant stated, *"[we] need a rehab center for these people. It's not just hygiene and food and somewhere to sleep, it's also the way to break from this cycle of life, to break the cycle of drug use."*

Additionally, reducing stigma and educating parents about mental illness and the importance of keeping mental health care appointments for their children was also identified as a need.

More health outreach and education: Although most participants reported that health education and related classes are available in the community, they also indicated that more should be done to ensure those who need it most are aware of and able to access health education. This theme is consistent with findings from the 2016 Organizational Assessment in which education and community outreach was identified as a top priority for public health services in Lawrence.[4]

Ensuring that education goes out into the community was reported to be important. As one person shared, *"[LGH] provides a lot of education but it's internal so they have to go there to get. It would be great if they did more… but I think the health center does this."* Additional outreach suggestions included collaborating with the faith community, and promoting health education and services

"The gaps are in mental and behavioral health—there is an imbalance with supply and demand with services."

– Interviewee

"Someone who is having a mental health episode, they end up in the hospital. The longer-term piece is not there. You are stable, then they send you out the door."

– Focus group participant

"There are many people that have diabetes and they have high blood pressure and they are obese and they can't control it or themselves. And so these people, they need someone to help so they can learn how to control it and they can learn about their health."

– Focus group participant

[3] *Presentation of Key Findings to the Mayor's Health Task Force, Lawrence Public Health Delivery System Organizational Assessment*. May 2016. Health Resources in Action.

[4] *Presentation of Key Findings to the Mayor's Health Task Force, Lawrence Public Health Delivery System Organizational Assessment*. May 2016. Health Resources in Action.

through ethnic radio and TV channels. As one focus group participant stated, *"outreach should be targeted to families, also churches. They should improve accessibility of the service, outreach to residents."*

Enhanced collaboration with community-based organizations: Perspectives about level of coordination and collaboration across community organizations was mixed. Some reported strong collaboration, while others disagreed, such as a focus group participant who shared, *"resources are very splintered and not well coordinated. Nonprofits don't talk to each other, hospitals don't talk to nonprofits, you know who you need to talk to so why hasn't this happened?"* Several participants saw a need for greater partnership across organizations in the community. According to participants, faith-based organizations and schools are important partners and are already involved in providing services in the community, such as for mental health and housing. According to participants, schools in the community already provide some health education, including a grant-funded program about healthy eating for parents. Both schools and the faith community were also identified as key potential partners for the Lawrence Board of Health/Health Department.

Additional needs: Other gaps in services identified by interviewees and focus group members included services to address elder abuse and transportation resources for the elderly. Ineffective snow and ice removal was cited as a safety concern by a couple of focus group participants. This was also identified as a community concern in the youth Photovoice Project in which the young photographer noted, *"we must keep our streets and sidewalks clean of snow and ice during the winter season for our people in community."*

"Here we see a sidewalk full of snow and ice and to me this is a typical scenery here in Lawrence during the winter time. This picture not only represents a beautiful image during the winter time but it shows the dangers that come along with the season here in the New England area. This can become a situation and should be a concern to us, people may fall and hurt themselves just trying to walk by. We have to do something as a community in order to keep our people safe. We must keep our streets and sidewalks clean of snow and ice during the winter season for our people in community."

-Photovoice participant

Perceptions of Lawrence General Hospital and Greater Lawrence Family Health Center

When focus group participants and interviewees were asked about their perceptions of the Hospital and Health Center, opinions were mixed. Many reported a positive view of the hospital, such as one who stated, *"when people are [at Lawrence General Hospital], they like the care they get... Those who have shifted [from other hospitals], they think they receive better care [at Lawrence General Hospital]."* However, a couple participants shared negative views of the hospital. One focus group participants stated, *"It is not particularly well regarded."* Another noted, *"You don't go to LGH, even for routine tests."*

Perceptions of GLFHC were overwhelmingly positive. Community participants consistently spoke positively of the health clinic and the services they received there, including health education.

Few participants indicated awareness of LGH programming in the community. As one focus group participant stated, *"I don't know of any initiatives that LGH has taken in the community."* In contrast, focus group and interview participants reported awareness of community initiatives led by GLFHC. They mentioned nutrition classes, health fairs, programs for those experiencing loss, blood drives, and programs to promote healthy lifestyles among youth. Community residents shared that these programs have been both good and helpful. As one community member described*, "every Tuesday we have a doctor that tells us how to take pills, the healthy weight, they teach us to do exercise, and we need to move, but we need to eat better…The Greater Lawrence Family Health Center has all of these programs."*

"I've always had great experiences at Lawrence. From the medics, to therapy, everything. They treated me really well."
– Focus group participant

"For a little community hospital you get great service over there, really comprehensive services from cardiac to trauma to diabetes."
– Focus group participant

"People all know what the clinic is, what they do. They respect it."
– Focus group participant

"It is really important to have the emergencies labeled around the city. In order for us to be safe there should always should be directions on how to get there. Fortunately, in Lawrence there is, at most of the places where is most crowed there are directions on how to get to the emergency room. Also we should always keep the area around the emergency room clean so we do not help diseases to develop."

-Photovoice participant

Role for Lawrence General Hospital and the Greater Lawrence Family Health Center

Overall, participants saw a leadership role for the Hospital and Health Center on the issue of population health.

Prevention: Participants expressed the importance of the community taking a preventative approach to health in order to improve the overall health of residents. As one interviewee explained, *"for me, there's a lot of other resources here that are dealing with the immediate issues but not underlying issues."* Participants saw a need for both the Hospital and Health Center to educate the community to be proactive about their health.

Behavioral Health: Another participant suggested the Hospital could play a leadership role in addressing the community's opioid and behavioral health problems. Increasing the Hospital and Health Centers involvement in mental health issues was suggested by a couple of participants; this included enhanced mental health services at the health clinic and more community outreach to identify those in greatest need of mental health services. Similarly, increased counseling and outreach services for homeless individuals in the community was suggested.

Collaboration: Others saw a need for greater collaboration between the Hospital and Health center with other community organizations, including schools. One interviewee expressed the importance of organizations being *"seamless with [LGH] and collaborating so that parents and families aren't getting mixed messages from different people."* Another interviewee shared a similar view saying, *"the health center needs to collaborate with the faith-based community more."*

Availability of healthcare services: A couple of participants suggested changes to enhance the availability of healthcare services in the community. One interviewee suggested increasing the number of clinics and hours of operation for these clinics to reduce the burden of non-emergencies at the hospital. Finally, a couple of participants provided suggestions related to the Hospital's practices. This included more work be done to discuss informed consent and better education on end-of-life care. Several focus group participants saw a need for enhanced spiritual care at the hospital. As one participant remarked, *"the patients collectively do want more of it."* The suggestion was made to hire a full-time chaplain, ideally one who speaks Spanish.

"They should be the ones getting all the key players to the table. The mayor's office or other nonprofits have done this but nobody has the resources that the hospitals have. They have the manpower. Not just the power but the responsibility to bring all the key players to the table. It's not a very big place, someone just has to take the lead."

– Focus group participant

"Taking the point and leading it, not necessarily specifically addressing the cost, but taking the lead from the health perspective would be a welcome relief."

– Focus group participant

CONCLUSIONS

This report provides an overview of the health environment of the Lawrence General Hospital and Greater Lawrence Family Health Center service area. The findings presented in this report integrate available secondary data, a community resident and provider survey, and interviews and focus groups with community residents and community leaders. Overall this report provides a portrait of the health conditions and behaviors affecting the service area residents and perceived strengths and challenges in the current environment.

Key health issues emerged as areas of potential concern in the assessment. These health issues and concerns were consistently mentioned in the community survey, interviews and focus groups, and supported by secondary data. Many of the following 2016 themes resonate with the 2013 assessment findings:

- Behavioral health
    - Mental health
    - Drug addiction services
- Chronic disease
    - Obesity
    - Diabetes
- Health care access

Overarching conclusions that cut across multiple topic areas include the following:

- **The service area is demographically and economically diverse and in the past three years the service area has grown modestly and at the same rate of the state.** While the majority of the service are is Non-Hispanic White and between the ages of 18-64 years, there are communities like Lawrence, Haverhill and Methuen which have large segments of the minority (in particular Hispanic) and under 18 population. The distribution of these demographics also have clear economic relationships. For example, Lawrence, Haverhill and Methuen have the lowest median-household incomes and highest number of families in poverty in the service area while Boxford, Andover and Georgetown have the highest median incomes, lowest number of families in poverty and some of the largest 65 and older population segments. Generally, these trends were seen in the 2013 report as well.

  Race/ethnicity, age, education and income have all been associated with health disparities—the findings of this report further exemplify this association for the region's residents. As was presented in the 2013 report, the cultural, language, and economic diversity of area residents presents significant challenges when delivering services and care that aim to meet the multitude of needs across the region.

- **Behavioral health, specifically mental health and drug addiction, are growing concerns among residents and providers where demand is exceeding available services.** While behavioral health was identified in 2013, its impact on the health care system (as measured by hospitalizations) and region has increased substantially across certain communities in particular, Lawrence, Methuen. Participants and interviewees also noted the link between mental illness and drug abuse. Community specific data highlighted the growing opioid use, overdose and -related death in the service area—these concerns were raised by several participants as well; especially noted were the shortage of programs and services to address these growing behavioral health issues.

- **The impact of chronic disease on the community was noted as a family concern for residents.** Obesity and diabetes were considered highly prevalent in interview and focus group discussions. The accessibility to healthy foods were noted by some as a barrier to eating healthier foods and crime and busy work schedules were mentioned as barriers to being physically active. The role of resident health behaviors was present in the data that were available. Middleton, Lawrence and Methuen had the highest rates of premature mortality; Haverhill, Lawrence and Georgetown saw the most heart-attack hospitalizations; Lawrence, Haverhill and Methuen experienced the most coronary heart disease hospitalizations and Lawrence, North Andover and Georgetown saw the most stroke hospitalizations.

- **Residents continue to face barriers accessing care and having varying perceptions of the quality of care.** The community survey, focus groups and interviews, which focused on top health concerns and health priorities, also explored resident and provider use of health care services and perceived quality of those services. These findings identified language and cultural barriers to accessing care, lack of weekend/evening hours, in addition to overall perceptions of the types of services provided – while the perceived quality of primary care was high, specialty care services were perceived as lower quality.

- **The community has assets that can be leveraged and benefits from residents, providers and leaders striving to improve the health of the community.** Participants cited multiple assets of the region, including racial and ethnic diversity, social cohesion, and a strong service network. Participants wanted to see more of these strengths leveraged to achieve a vision of a community with increased mental health services, more outreach and education, and enhanced collaboration among organizations in the community.

HEALTH NEEDS OF THE COMMUNITY

In August 2016, members of Lawrence General Hospital steering committee reviewed the needs identified by the community health needs assessment, including the magnitude and severity of these issues and their impact on the most vulnerable populations. This included mapping current and emerging programs and initiatives against these needs. The process determined that all of the needs identified in the CHNA are being addressed by Lawrence General in collaboration with community partners and will be included in the Implementation strategy in the following clustered priority categories:

- Behavioral health
    - Mental health
    - Drug addiction services
- Chronic disease
    - Obesity
    - Diabetes
- Health care access

APPENDIX A. Review of Initiatives

Lawrence General Hospital 2016 Review of Initiatives

As a result of the key findings from the 2013 Community Health Needs Assessment (Needs Assessment), Lawrence General Hospital identified three priority areas, each of which aligned with an identified community health need: 1) obesity and chronic disease, including cancer needs and asthma; 2) mental health and substance abuse; and 3) access to health care. Since the 2013 Needs Assessment, Lawrence General Hospital has provided a variety of services and programming to address these specific needs in the community.

Activities, Services and Programs listed in 2013 Implementation Strategy	Comment on Activity, Service and/or Program	Number of Community Residents Served, Number of Classes Offered, etc.		
		FY 2013	FY 2014	FY 2015
Priority Area: Obesity and Chronic Disease				
The Heart Depot program		Over 300 attendees	Over 200 attendees, families and children who participated in the distribution of materials, community lectures, screenings/assessments, and demonstrations	200+ attendees, families and children visited the many booths at the event, participating in screenings, taking materials, and receiving education.
Collaborate with YMCA and Other Community Based Organizations to improve health and wellness directly at the community level.	To improve physical activity, LGH supports and sponsors all of the YMCA's Youth Basketball activities for children throughout Merrimack Valley region	Over 1,000 kids participate in the Youth Basketball League at all 3 YMCA branches Over 1,000 kids participate in the Itty Bitty Baseball League at all 3 YMCA branches Over 800 kids participate in the Smart Hoops Program at all 3 YMCA branches	Over 1,000 kids participate in the Youth Basketball League at all 3 YMCA branches Over 1,000 kids participate in the Itty Bitty Baseball League at all 3 YMCA branches Over 800 kids participate in the Smart Hoops Program at all 3 YMCA branches	Continue to sponsor the Y's Youth Basketball League at all locations— 1,000+ kids Have onsite rehab staff at Andover Y holding educational programs on injury prevention, strengthening, etc. Have opened a primary care location in the new Andover YMCA to serve health needs
Provide diabetes self-management education to the community through Lawrence General Hospital's Diabetes Education Center.		606 patients served	569 patients served	567 patients served
Provide diabetes awareness events onsite via Lawrence General Hospital's Diabetes Education Center.		Diabetes Risk Assessments.	Diabetes Risk Assessment. Healthy Eating/Sugar content in drinks,	Diabetes Risk Assessments. Participation in Wellness Fairs

Activities, Services and Programs listed in 2013 Implementation Strategy	Comment on Activity, Service and/or Program	Number of Community Residents Served, Number of Classes Offered, etc.		
		FY 2013	FY 2014	FY 2015
			food.	
Participation by clinicians from Lawrence General Hospital's Diabetes Education Center in a number of community events.		*Participation by Nancy Masys in Heart Depot, Fiesta De Salud, ADA Walk for Diabetes*	*Participation by Nancy Masys in Heart Depot, Fiesta De Salud, ADA Walk for Diabetes*	*Participation by Nancy Masys in Heart Depot, Fiesta De Salud, ADA Walk for Diabetes*
Offer free monthly support groups for people with diabetes and their family members.		*10 sessions Approximately 10-12 participants per session*	*10 Sessions Approximately 12 participants per session*	*10 Sessions. Approximately 12-14 participants per session.*
Develop diabetes educational materials specifically to improve diabetes education for hospitalization follow-up for inpatients.		Participation in Patient Education Packets for inpatients/ Consultant to staff nurses	Participation in Patient Education Packets for inpatients/ Consultant to staff nurses	Participation in Patient Education Packets for inpatients/ Consultant to staff nurses
Lawrence General Hospital to provide major sponsorship and support for the newly-opened Spicket River Greenway.				Sponsored Spicket River Greenway 5K and Spicket River clean up. Provide EMS coverage for both events and first aid kits for participants.
Provide services via Lawrence General Hospital's *Weight Management and Bariatric Center*.		140 individuals served	134 individuals served	135 individuals served
Participate in *large community events*, advancing health knowledge and access in communities we serve	Varied presence and contributions at local events, including diabetes education, trauma prevention information, bike helmet giveaways and fittings, breast health information and blood pressure screenings, etc.	Fiesta de Salud – 2,000+ event attendees Por Tu Familia – 80+ attendees National Night Out Ciclovia Andover Day	Fiesta de Salud – annual event with 2,000+ attendees Por Tu Familia – annual event with over 100 attendees National Night Out Ciclovia Andover Day	Fiesta de Salud – annual event with 2,000+ attendees Por Tu Familia – annual event with over 100 attendees National Night Out Ciclovia Andover Day
Provide direct to consumer mailer containing educational information regarding health issues to our hospital service area	In 2015, we converted our 4 page consumer direct mail piece from 4 pages to and 8-12 page magazine depending on the issue, mailed twice a year, fall and spring.	3 issues mailed	2 issues mailed	Two issues 120,733 copies mailed each, with additional 750 for distribution at public events

Activities, Services and Programs listed in 2013 Implementation Strategy	Comment on Activity, Service and/or Program	Number of Community Residents Served, Number of Classes Offered, etc.		
		FY 2013	FY 2014	FY 2015
Encourage inclusion of fresh food and availability of fresh food in local diet			Sponsor Groundwork Lawrence Farmer's Market in Lawrence	Continue to sponsor the farmers market in Lawrence
Work closely with the Mayor's Health Task Force	Participate in the MHTF steering committee, having committed to a $2.4 million donation to their programming over six years.			Healthy on the block Bodega project, mental health intervention, Lawrence Youth Council and Senior Center weekly exercise classes
Sub-Priority Area: Cancer Needs				
Offer *Community Cancer Program*	Average annual cancer caseload* is 390 per LGH Cancer Registry. Includes patients diagnosed, have first course surgery, and/or present with recurrence or persistence of known cancer. *Certain low risk cancers of skin and cervix are not reportable and not reflected here			
Collaborate *with YWCA and Other Community Based Organizations* to improve health and wellness directly at the community level.			Sponsored annual Breast Cancer Awareness Month Kick-off Breakfast Lawrence Senior Center *Taking Control in the Fight Against Breast Cancer* October 7, 2014 approx 250 included survivors	PCP and rehab located at the YMCA to influence health and wellness. Have opened several other new PCP offices in underserved areas in 2015.
Offer *Cancer screenings* held at LGH in conjunction with local physicians. - Oral, Head, and Neck Screenings - Prostate Health Screening - Breast Health Screening		Oral, Head, and Neck Screenings – 57 patients screened	Breast Health Screening – A total of 283 referrals were made to LGH, with 247 women having received their mammograms Prostate Health Screening – 30 males took part in	Oral, Head, and Neck Screenings – 16 patients screened Prostate Health Screening – 13 patients screened Opened second Women's Health Imaging site in

Activities, Services and Programs listed in 2013 Implementation Strategy	Comment on Activity, Service and/or Program	Number of Community Residents Served, Number of Classes Offered, etc.		
		FY 2013	FY 2014	FY 2015
			the community free screening Oral, Head, and Neck Screenings – 14 patients screened	Andover. Invested in Breast Tomosynthesis technology in 2015 Screening Mammography: Lawrence: Andover:
Recognition of May's Skin Cancer Prevention month.		Print awareness in newsletters and safety tips/resources	70 people attended Skin Cancer Prevention Fair	Social media and electronic web campaign
Host *I Can Cope Cancer Support Group*.		2 sessions	No longer offered Replaced with Relay for Life Merrimack Valley participation	N/A
Host *Look Good Feel Better.*		16 sessions	No longer offered Replaced with Relay for Life Merrimack Valley participation	N/A
Relay for Life Team and sponsorship			Fielded first team in Relay for Life	Hospital sponsored and fielded team second year
Priority Area: Mental Health and Substance Abuse				
Behavioral health or substance abuse response.	Continues to be a significant area of need in our region, as in all of Massachusetts. Resources for mental health and substance abuse treatment do not meet current need.		Recruited Psychiatrist to employment through Community Medical Associates and initiated more developed outpatient and group program in cooperation with Greater Lawrence Family Health Center.	Initiated an inpatient psychiatric consult service in addition to the outpatient services being jointly offered through Greater Lawrence Family Health Center.Service has an MD and a NP doing rounds on patients in house with psych consult needs. The program has plans to continue to grow to meet needs of the community.
Enhance specific outreach to LGH's local providers of all levels of substance abuse and behavioral health to learn about	.		Narcan training for local EMS crews	Employed psychiatrist continues to do outreach and group work with patients at GLFHC

Activities, Services and Programs listed in 2013 Implementation Strategy	Comment on Activity, Service and/or Program	Number of Community Residents Served, Number of Classes Offered, etc.		
		FY 2013	FY 2014	FY 2015
these services and to address the issues of access.				
Priority Area: Access to Health Care				
Assist patients in accessing and navigating the health care delivery system in our community			Offer *ED Patient Case manager* program to help patients understand and access care they need	*ED Patient Case manager* program helps ED patients obtain community based medical care to support their health.
Partner *with Greater Lawrence Family Health Center (GLFHC)* to reduce unnecessary Emergency Department visits.	Opened on-site GLFHC clinic on the 4th floor of the hospital as part of a new program, where low-risk, non-acute patients are being referred for more appropriate primary care to reduce unnecessary use of the emergency department.	Ongoing	Ongoing	ongoing
Collaborate *with Floating Hospital for Children at Tufts Medical Center and Beth Israel Deaconess Medical Center* offers enhanced clinical programs in the greater Merrimack Valley.		Over 22,000 pediatric patients served in collaboration with Floating Hospital for children. Renovated inpatient unit, pediatric hospitalist program,	Opened outpatient pediatric specialty center at Marston Street to help keep pediatric consulting care local in cooperation with Floating Hospital for children	Outpatient clinic busy and serving patients in our region locally
Offer *Pediatric After Hours in the Emergency Center*.		16,514 children served	15,541 children served	15,016 children served
Create *an Integrated Care Department* to improve access and coordinate care, particularly of complex cases with difficult social determinants of health and uncontrolled chronic illness.			LGH has developed an integrated physician-hospital organization (PHO) with over 340 physician members	Enhanced role of Integrated Care department into community based care, working closely with community care providers to meet patient needs and care plans outside the hospital setting.
Partner *with Greater Lawrence Family Medicine Residency Program & Health*		Provide financial and clinical support to the residency program	ongoing	Participating with GLFHC to improve residency program. Pilot four year

Activities, Services and Programs listed in 2013 Implementation Strategy	Comment on Activity, Service and/or Program	Number of Community Residents Served, Number of Classes Offered, etc.		
		FY 2013	FY 2014	FY 2015
Center, which expands the network of high quality, comprehensive health care services in the Merrimack Valley by training health care professionals to respond to the needs of a culturally diverse population.				Family Medicine residency planned
Increase *local access to specialty care providers*. Examples include: *Andover Medical Center*	Providing the community access to unparalleled medical services such as primary care, urgent care, mammograms, pediatric neurology and specialty care in a convenient location for residents of the Andover, North Andover and Tewksbury areas. LGH is looking to open a similar center with Pentucket Medical in Methuen, MA.	Plans completed to provide enhanced full service primary care site for Andover residents in partnership with Pentucket Medical Associates.	Building one of the Andover Medical Center is opened and seeing a growing number of patients with a focus on the primary needs of well families over the course of a lifetime. (Pediatric and adult primary care, Urgent care, women's health imaging and OB/GYN care)	Second care building is planned at Andover Medical Center to keep care local. Will continue to focus on the typical needs of families over the life span (ie. Orthopedics, Rehabilitation, imaging and selected surgical subspecialty clinic)
Expanded Primary Care Practice in Lawrence through Community Medical Associates (CMA)		New office open at Marston Street	New PCP recruited in mid-2014	Two more new physicians recruited in 2015
Injury prevention programming	Trauma Program nurse manager works with community members in a variety of settings regarding personal safety and injury prevention, i.e. car seat installation and checks, rape prevention and response, bike helmet giveaways and fittings, etc.	Car seat installation and checks – 53 total vehicles inspected Rape crisis trainings/seminars – 26 RCC staff led trainings for emergency respond to sexual assaults; 35 EMS participants	Car seat installation and checks – 35 total vehicles inspected; 24 car seats installed Rape crisis trainings/seminars – 10 RCC staff led training for emergency respond to sexual assaults	Car seat installation and checks – 91 total vehicles inspected; 42 car seats installed; 9 car seats given Rape crisis trainings/seminars – 10 RCC staff led training for emergency respond to sexual assaults Bike helmet giveaways – 220 helmets given
Implement *new LGH Master Plan.*		Finalize Master Facility Plan and	Renovation begun on inpatient adult	New replacement surgical building

Activities, Services and Programs listed in 2013 Implementation Strategy	Comment on Activity, Service and/or Program	Number of Community Residents Served, Number of Classes Offered, etc.		
		FY 2013	FY 2014	FY 2015
		arrange financing	medical/surgical units, with plans to renovate all such units by 2016	construction begun in 2015
Begin process of creating a *Health Information Exchange (HIE) initiative to improve coordination of services across sites*.	LGH is working to finalize plans for an HIE collaborative in the Merrimack Valley consisting of Home Health VNA, Greater Lawrence Family Health Center, Pentucket Medical Associates, and Lawrence General Hospital. The Merrimack Valley HIE Collaborative will be a multi-year effort with the aim of changing the landscape of how organizations, providers, and patients communicate and interact			Organizing plan for collaborative selection process for Health Information Exchange
Continuation of interpreter and transportation services for vulnerable populations.		16,967 interpreter sessions completed	29,544 interpreter sessions completed	89,238 interpreter sessions completed

APPENDIX B. Advisory Committee Members

Name			Organization	Title
	Gia	Angluin*	Greater Lawrence Family Health Center	Development Associate
	Joanne	Belanger	Town of Andover - Andover Health Division	Assistant Director of Public Health
	Tom	Carbone	Town of Andover	Director of Public Health
	Dean	Cleghorn	Greater Lawrence Family Health Center	Chief Quality Officer
	Steve	Crowell	Greater Lawrence Family Health Center	PICSR Program Supervisor
	Deanna	Cruz	Lawrence/Methuen Community Coalition	Director, Substance Abuse Prevention & Education Task Force
	Donna	Deveau	Home Health Foundation	Vice President of External Relations
Dr.	Heling	Dilone-Arellano	Community Medical Associates	Primary Care Physician
	Beth	Dimitruk	Home Health Foundation	Communications and Grants Manager
	Peg	Doherty	Home Health Foundation	Senior Vice President of Operations and Strategic Planning
	Kimberly	Downer	Lawrence General Hospital	Director, Emergency Department
Dr.	Pracha	Eamranond	Lawrence General Hospital	Sr. Vice President, Medical Affairs and Population Health
	Amy	Ewing	Town of Methuen	Public Health Nurse
	Gerry	Foley	Mary Immaculate Health/Care Services	President/CEO
	Nicole	Garabedian	Lawrence General Hospital	Director, Case Management
	Michelle	Grant	Town of North Andover	Health Inspector
Dr.	Eduardo	Haddad	Lawrence General Hospital	President, Medical Staff
	Paul	Hollings	Mary Immaculate Health/Care Services	Administrator of Mary Immaculate Nursing/Restorative Center
	Elizabeth	Huey	Pentucket Medical Associates	Behavioral Health Program Manager
	Robin	Hynds*	Lawrence General Hospital	Vice President, Care Continuum
Dr.	Zandra	Kelley	Greater Lawrence Family Health Center	Medical Director
Dr.	George	Kondylis	Lawrence General Hospital	Chief, Emergency Department
	Brian	LaGrasse	Town of North Andover	Director of Public Health
	Vilma	Martinez-Dominguez	City of Lawrence	Coordinator, Mayor's Health Task Force
	Lisa	Luz	Lawrence General Hospital	Director, Ambulatory
	Jill	McDonald Halsey*	Lawrence General Hospital	Chief Marketing Officer
Dr.	Neil	Meehan	Lawrence General Hospital	Chief Medical Officer
	Marissa	Melendez	Greater Lawrence Community Action Council	Program Director, Community Service Center

Name			Organization	Title
	Fran	Moss	Lawrence General Hospital	PHO Referral Member Services Manager
	Rich	Napolitano	Greater Lawrence Family Health Center	Chief Development Officer
	Margaret	Nelson	Community Medical Associates	Family Nurse Practitioner
Dr.	Ayobami	Ojutalayo	Access Primary Care	Primary Care Physician
	Elizabeth	Pahigian	Lawrence General Hospital	Trauma Manager
	Greg	Parsons*	Lawrence General Hospital	Controller, Fiscal Services
	Theresa	Petrie	Home Health Foundation	Vice President of HomeCare, Inc.
	Debra	Ralls	Lawrence General Hospital	Director, Radiology
Dr.	John	Raser	Greater Lawrence Family Health Center	Physician
	Donna	Rivera*	Greater Lawrence Family Health Center	Chief of Community Support Services
	Deborah	Scionti	Mary Immaculate Health/Care Services	Director of Mission Integration
	Janet	Sheehan	Lawrence General Hospital	Director, Occupational Health
	Beth	Short*	Greater Lawrence Family Health Center	Manager of Grants Administration
	Sandra	Silva	Greater Lawrence Family Health Center	Director, Community Support Services
	Arlene	Tarantino	Lawrence General Hospital	Senior Director, Human Resources
	Christine	Tardiff	Elder Services of the Merrimack Valley	Director of Nursing & Community Health Programs
	Martha	Velez	Council on Aging/Lawrence Senior Center	Executive Director
	Paula	Wright	Lawrence General Hospital	Clinical Nurse Leader/Waiver Specialist

*Steering Committee Members