Norwood Hospital

A STEWARD FAMILY HOSPITAL

Steward®

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Executive Summary

While the full effects of health reform in the United States have yet to be realized, one thing is certain: from the largest teaching hospital to the smallest rural clinic, the assumptions that drive care delivery are changing. No longer will a patient's immediate condition be treated without consideration of the factors that have given rise to that situation - the external determinants that drive either health or illness and overpower the impact of a discrete prescription or an isolated emergency room visit. The results of such a myopic approach are evidenced in the status quo: fragmentation of care, disconnect between providers, duplication of services, and an overuse of resources.

Recognition of this critical situation has produced a renewed commitment across the US health system to focusing on three principal issues: improving the experience of patient care, providing care that improves the health of whole populations, and reducing the per capita cost of health care. Collectively referred to as the Triple Aim, these three goals create a roadmap for health systems to look both internally and externally at the conditions and drivers of health, and by innovation, to discover new ways of addressing those factors. The aim of this Population Health Improvement Report (PHIR) is to present the areas of opportunity for Norwood Hospital to optimize health system quality and address cost while confronting the pressing health concerns impacting the populations in its community.

This report details the most imminent concerns that arose from the examination of health related data in Norwood Hospital's (Norwood) service area population retrieved from sources such as the US Census Bureau and the Boston Public Health Commission's Health of Boston 2011 Report. We also collected primary data through a survey of Norwood's Community Benefits Advisory Committee and focus group discussions with local residents. Internally, discussion with hospital staff and leadership and directors of patient services and systems at Norwood were done and examined for areas of action for improvement in quality and cost. Five areas of opportunity emerged:

Chronic Disease

Chronic disease is a major problem. Circulatory disease, cancer, and respiratory disease are the top three causes of death. Most of the Primary Service Area (PSA) chronic disease rates are above the state average. Input from service providers and focus group participants also reflected concern for chronic disease as a serious community health issue. Community members voiced the need for increased education and preventative interventions.

Obesity

Obesity rates in the service area are high. Most of the service area towns have a population that is at least 20% obese. Obesity is a major contributing factor to other chronic conditions like coronary heart disease, stroke, and high blood pressure. Community input suggested a need for more education on nutrition and access to healthy foods.

Access to Health Care

Though the population has relatively high rates of insured, there is a need for better health outreach as well as better coordination of care. Some of the major obstacles to health care access are lack of health referral sources, language disparities, difficulties navigating health insurance enrollment process, and transportation.

Behavioral Health

Behavioral health discharge rates for the PSA are well above the state average. This problem is apparent to both community service providers and residents. A contributing factor to the behavioral health problem is mental health stigma. Mental health stigma has been identified as one of the major obstacles to accessing behavioral health resources.

Substance Abuse

Service area data show increasing alcohol or substance-related hospitalizations for eight of fifteen towns from 2008 and 2009. Six of the towns (Norwood, Walpole, Dedham, Westwood, and Stoughton, and Norton) were above the state rate for alcohol or substance-related hospitalizations. Community feedback also indicated that substance abuse was perceived as a major health issue within the community. Participants expressed that ease of access, lack of knowledge of the harmful effects of substance dependencies, and the normalization of drug use as contributive causes to the substance abuse problem.

Recommended Actions for the Health System

Chronic Disease

- Increase education on chronic disease maintenance in community spaces.
- Utilize small media to inform and remind patients to get screened for chronic disease.
- Gather information on potential chronic disease support groups that would be most effective for the population.

Obesity

- Implement nutrition education initiatives.
- Offer education on healthy food preparation on-site at the farmers' market and through partnerships with local community organizations.
- Promote and sponsors physical activity and education programs to address childhood obesity.
- Prescribe farmers' market vouchers to diabetic patients who are at risk for obesity.

Access to Health Care

- Recruit more primary care physicians to handle patient demand.
- Provide information on and assistance with enrolling in the state's insurance exchange plans to working populations through partnerships with community service organizations.
- Increase community outreach efforts utilizing multiple media channels.

Behavioral Health

- Provide education to front-line caregivers and community leaders on the signs of mental illness and how to access necessary resources.

Substance Abuse

- Implement substance abuse education.
- Collaborate with community-based programs to develop education for front-line workers and advocates on red flags of substance abuse.
- Gather information on potential cessation groups that would be most effective for the population.

Introduction

Norwood Hospital (Norwood) is a 264-bed acute care community hospital located in Norwood, Massachusetts. Norwood has state-of-the-art medical technology and a highly-skilled staff. The hospital's major clinical services include advanced surgical services, obstetrics, cardiology, neurology, orthopedics, gastroenterology, psychiatry, cancer care, and pediatrics. Norwood Hospital is a member of Steward Health Care System, the largest fully integrated community care organization in New England.

Norwood maintains a Community Health Department that focuses on integrating care across the spectrum of hospital, primary, and community-based care. A Community Benefits Advisory Committee comprised of hospital leadership, representatives of local health and human service organizations, city health and public works departments, community centers, churches, and schools guides the planning and execution of the community health initiatives.

This report details the health conditions and social factors affecting the people living in the fifteen towns surrounding Norwood as well as the key issues the hospital needs to address to improve quality and address cost. Evaluation of both the needs of the community and the needs of the hospital furthers the prospect of working collectively to improve both the health system and the health of the population. Opportunities are realized at the intersection of the hospital's strengths, the community's needs, and the new direction of health care in the United States (US).

The current US health care system, characterized by fee for service payment models and widely condemned for its exorbitant per capita costs and less than optimal health outcomes, is faced with an opportunity for transformation at a critical moment of unprecedented policy change. The prospect of shifting from a system that rewards providers for volume of services to one that rewards health systems based on the end goals of healthy populations is a highly attractive solution to the current state of affairs.

Health care transformation is also highly debated, particularly in terms of means and methods. Long-standing practices and cultures must be shifted to embrace the idea of caring for populations instead of individuals alone and of examining medical practices with the aim of reducing health care costs.

The Institute for Healthcare Improvement's Triple Aim framework is a widely recognized model for health care transformation. It is a paradigm that calls for improving simultaneously the experience of care, the per capita costs of health care, and the health of populations.[1] While these pursuits are all necessary to improve the current health care system, they are interrelated and must be considered in balance.[2] The challenges of widespread change, including developing infrastructure to support new models of caring for populations, require thoughtful planning, determined execution, and intentional learning from experience. This report aims to answer the call for thoughtful planning by using the triple aim framework to reveal the opportunities for health care transformation within Steward Health Care System hospitals and their communities. The results and recommendations here are designed to be the basis for strategic actions for Norwood and its community partners.

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[1] *Donald M. Berwick, Thomas W. Nolan, and John Whittington, The Triple Aim: Care, Health, And Cost, Health Affairs 27 3 (2008).*
[2] *Ibid.*

Methods

The approach for the Population Health Improvement Report (PHIR) consisted of the following steps, each of which is briefly described in the order they were implemented.

1. Extensive public data was collected and key findings were derived from the research of online data sources such as the U.S. Census and the Massachusetts Community Health Information Profile (MassCHIP). Online research of Administrative policies and legal ordinances were done to identify and analyze policies and regulations that affect population health status.
2. A Community Provider Survey was distributed to Norwood's Community Benefits Advisory Committee and other key community-based organizations. Local health and human service organizations, government agencies, boards of health, community centers, and churches were among the organizations that were surveyed.
3. A focus group was conducted to capture community data on perceived health issues and barriers to health resources.

From these sources, data on health behaviors, health conditions (also referred to as health outcomes), access to and utilization of health services, and health care costs were examined for opportunities where the hospital, in partnership with local community service providers, could make a difference in lowering per capita health care costs, improving quality, and improving the health of populations.

The priority concerns to be addressed were selected based on the following criteria:

- Disease or condition rates higher than the state average
- Disease or condition rates increasing over time
- Identified as concerns by focus group participants and provider survey respondents
- Aligns with the strategic goals and objectives of Norwood
- Availability of potential resources to address the issue/problem identified
- Ability to reduce per capita costs

A detailed version of the methods is available in Appendix A. Data on demographics and additional health indicators are available in Appendix B.

Results

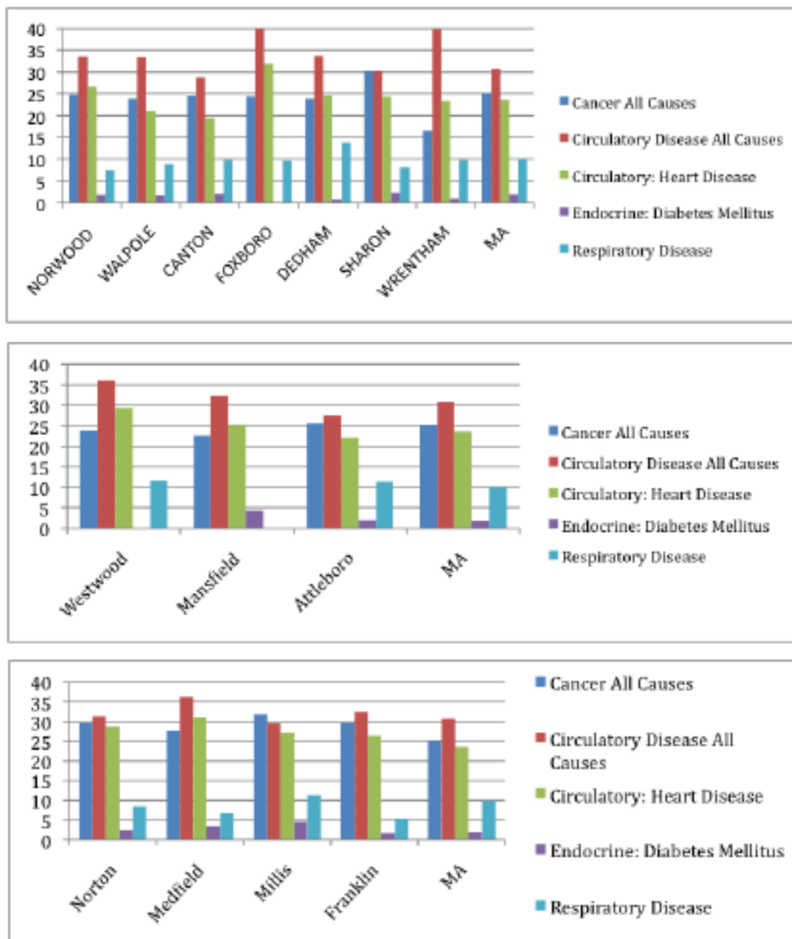
Analysis of the primary and secondary data reveals several areas of concern for the Norwood Hospital primary service area, including chronic disease, obesity, access to health care, behavioral health, substance abuse, sexual and reproductive health, obesity, and crime.

Chronic Disease

In most of the service area towns, circulatory disease was the number one cause of death and cancer was the second most frequent cause of death. Heart disease made up the majority of the circulatory diseases deaths. Age-adjusted service area mortality rates for circulatory were in line with the state average, though Foxboro, Dedham, Wrentham, and Norton had higher rates of circulatory disease deaths. Asthma rates were also high within all service area towns, demonstrating higher asthma-related hospitalizations than the state average for 2007, 2008, and 2009.

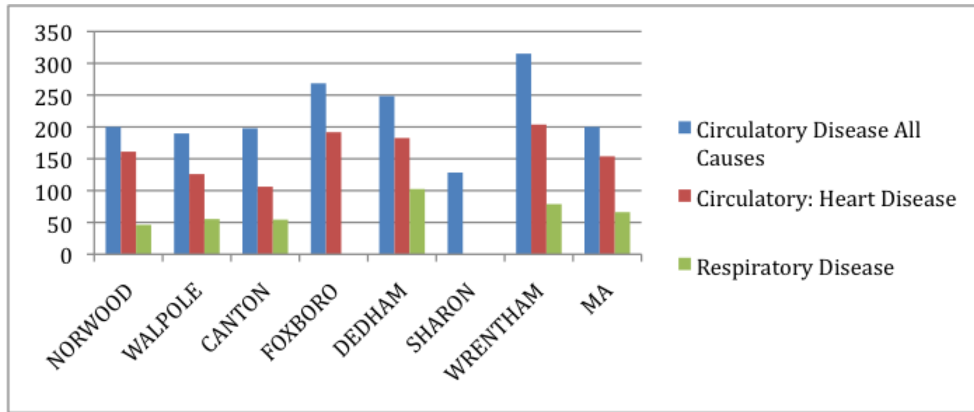
Primary data from the community reflected a need for chronic disease interventions. Community provider input cited chronic disease as a major health issue within the community. The focus group named nutrition and obesity as main health issues. Participants in the focus group suggested more education on healthy lifestyles choices.

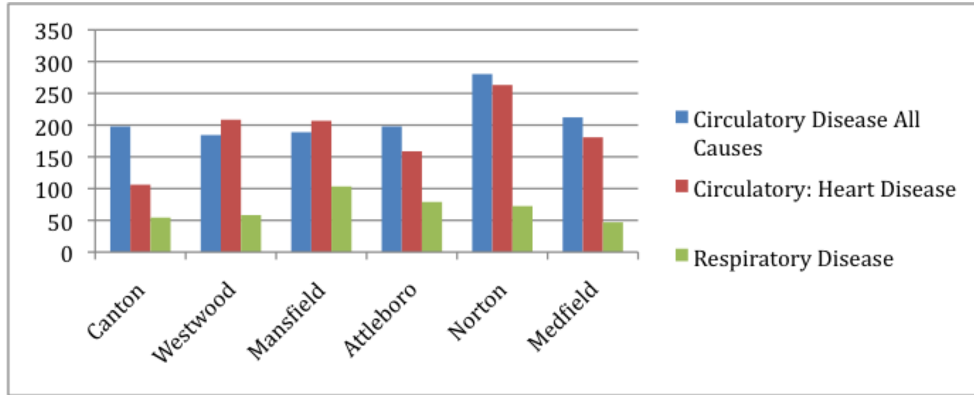
Figure 1: Mortality percentage- All causes (2009)



(SOURCE: MASSCHIP)

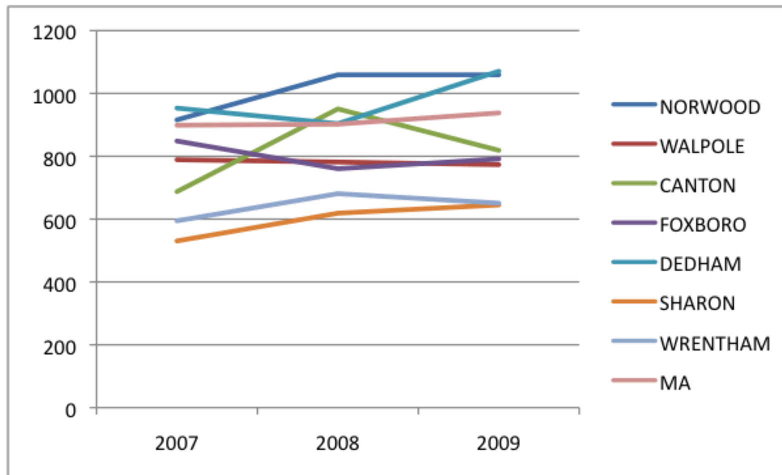
Figure 2: Age Adjusted Mortality Rates per 100,000 (2009)





(SOURCE: MASSCHIP)

Figure 3: Asthma Related-Hospitalizations Age Adjusted Rate per 100,000



(SOURCE: MASSCHIP)

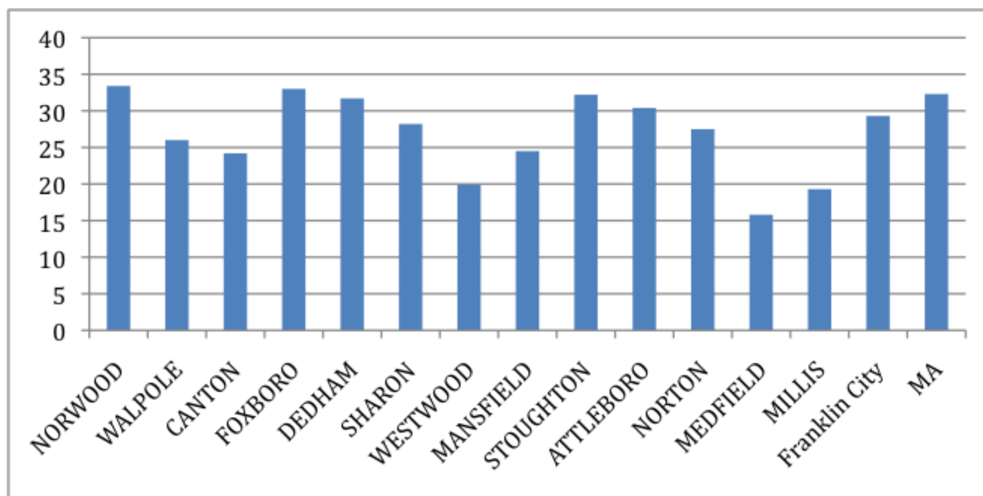
There are an estimated 90 million Americans living with at least one chronic disease. Chronic disease contributes to over 70% of deaths in the US each year. The majority of adults in the US with high cholesterol and about half of adults with high blood pressure do not have their conditions under control.[3] Despite the relatively low cost and proven effectiveness of treatments for these common and preventable - but potentially deadly - conditions, many Americans are not getting better.

People with chronic disease are more likely to go to hospitals, emergency rooms, and long-term care facilities.[4] Transitioning from one care setting to another, they are more susceptible to the inefficiencies of a fragmented care system. Such inefficiencies manifest in a number of ways, including misunderstood discharge instructions, lack of transportation to health services, and lack of communication between care settings. They are also likely to need continual supportive services to help them with daily life and to rely on an informal caregiver (a spouse, relative, or friend).[5]

Obesity

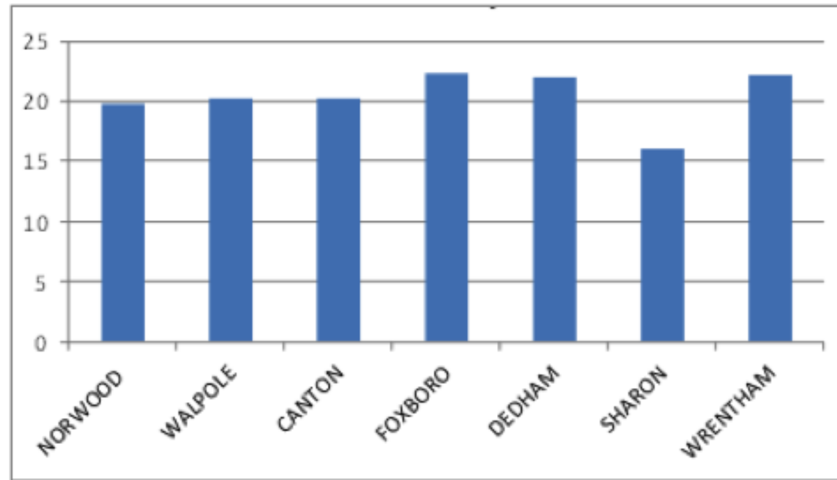
There are higher proportions of overweight or obese children and young adults in the community surrounding Norwood than within the state population. Approximately 25% of children in Grades 1, 4, 7, 10 in the hospital's service area are overweight or obese. Most of the primary service area has high adult obesity rates as well. Norwood, Walpole, Canton, Foxboro, Dedham, Wrentham, Mansfield, Attleboro, Norton, Millis, and Franklin all have adult obesity rates above 20%. Accordingly, community input mentioned obesity as a major community health concern. Interventions cited to address obesity were nutrition education programs, exercise programs, and programs promoting lifestyle changes.

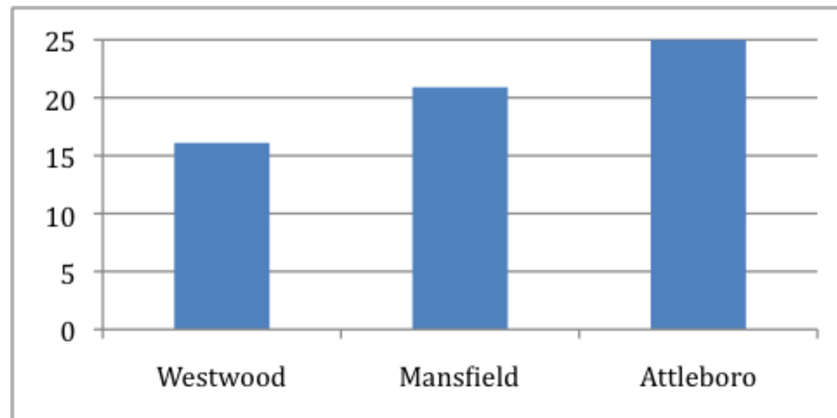
Figure 4: Grades 1, 4, 7, 10 - Percent Overweight or Obese Males and Females (2011)

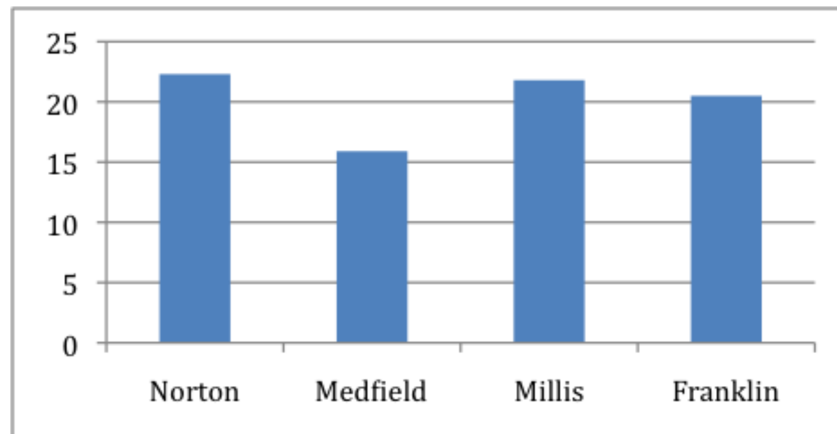


(SOURCE: Executive Office of Health and Human Services (EOHHS)-Publications)
Status of Childhood Weigh)

Figure 6: Adult Obesity Rate 2009







(SOURCE: Small-Area Estimation and Prioritizing Communities for Obesity Control in Massachusetts, American Journal of Public Health March 2009)

Obesity has reached epidemic proportion in the United States. The prevalence of obesity in the US has increased during the last decades of the 20th century.[6] More than 35% of men and women in the US were obese in 2009–2010.[7] Overall, adults aged sixty and over were more likely to be obese than younger adults.[8] Since 1980, the prevalence of obesity among children and adolescents has almost tripled.[9] In 2009–2010, 16.9% of children and adolescents in the US were obese.[10] In 2009–2010, over 78 million adults and about 12.5 million children and adolescents were obese.[11]

Obesity increases the risk of a number of health conditions including hypertension, adverse lipid concentrations, and type 2 diabetes.[12] It is estimated that 300,000 deaths per year may be attributable to obesity.[13] Additionally, obesity has been shown to reduce life expectancy.[14] One study revealed that people who are severely obese live up to twenty years less than people who are not overweight.[15]

One report estimated obesity to cost $190 billion on obesity-related health care expenses in 2005.[16] Healthcare spending on obesity-related conditions is estimated to be 8.5% of Medicare spending, 11.8% of Medicaid spending, and 12.9% of private-payer spending.[17] Costs are only expected to rise as rates of obesity are increasing.

Access to Health Care

The town of Norwood makes up a large part of the Norwood Hospital discharges (20.14). Health insurance coverage for Norwood is relatively good. Norwood has an uninsured population of 1.5% as compared to 4.1% for the state. When stratifying the population by sex, a larger proportion of males are uninsured when compared to females. However, this rate is in line with the rest of the state.

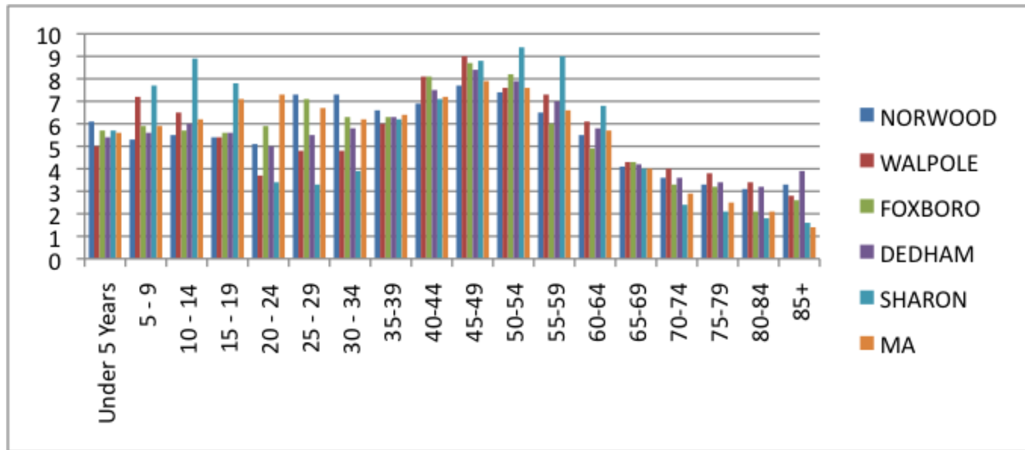
When the question of what is most needed in the community was posed to the focus group, there was a consistent response of increased access to health care services. The focus group participants felt there was a lack of access to primary care services. They expressed a need for more health clinics and primary service resources within the community. Long appointment scheduling times and tightly timed visits once in the physician's office were mention as barriers to access.

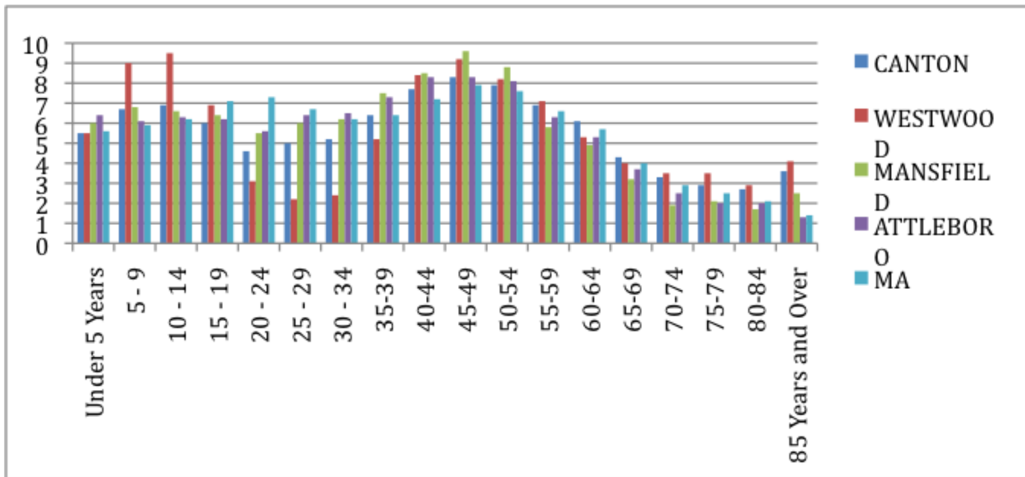
Service provider input named lack of health insurance coverage and difficulty in insurance enrollment as the biggest obstacles to health access. Providers surveyed also expressed a need for increased hospital outreach to the community.

Transportation was also a major concern. Focus group participants stated that there is only one train and one bus that run through the area, making getting to and from health services difficult without a car. Affordability of health insurance was also mentioned, especially pertaining to senior residents.

In Norwood, Walpole, Dedham, and Foxboro, residents sixty and over make up more than 20% of the population (Figure 5). Senior access to health was a constantly identified as an issue in the focus group. The focus group also mentioned the elderly as a population that is underserved. Senior transportation to access health services was regularly mentioned as well as isolation, nutrition, and mental health issues.

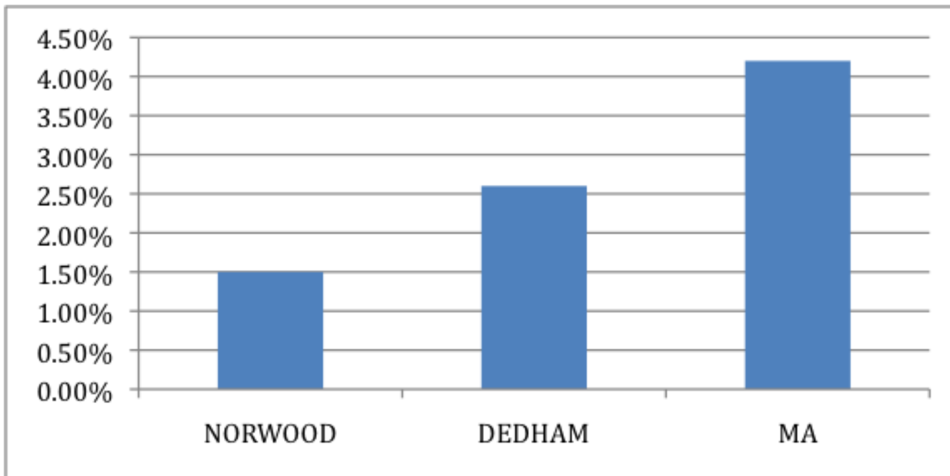
Figure 5: Population by Age Group





(SOURCE: US CENSUS BUREAU)

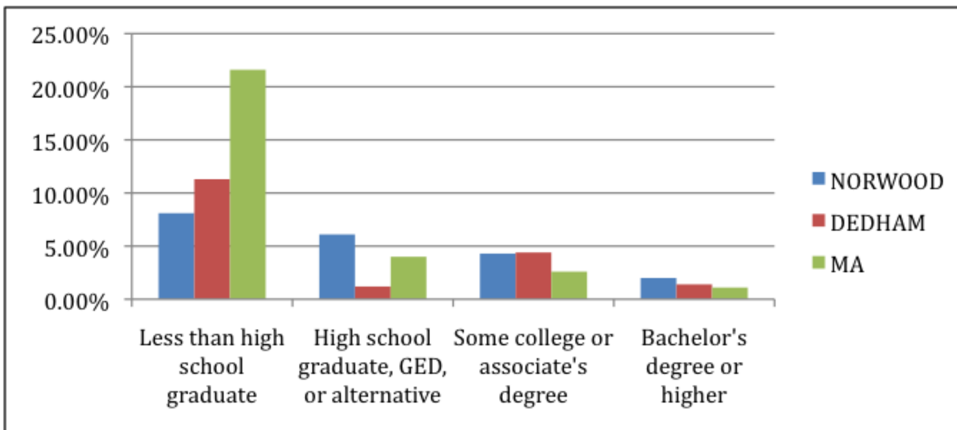
Figure 6: Uninsured Population Percentage (2010)



(SOURCE: US CENSUS)

The service area data demonstrate that people within the category of "Less than a High School Graduate" have the highest rates of uninsured out of all education groups. The group with low rates of uninsured in all the service areas is the "Bachelor's Degree or Higher group". It should be noted that, though rates of uninsured are higher for the "Less than High School" group, it is still below the state rate.

Figure 7: Uninsured (ages 18-64), by Education (2008)



(SOURCE: US CENSUS BUREAU)

The ability to access health resources has a profound effect on every aspect of health, yet almost one in four Americans do not have a Primary Care Provider (PCP) or health center where regular medical services can be received.[18] Approximately one in five Americans do not have medical insurance.[19] People without medical insurance are more likely to lack a usual source of medical care, such as a PCP. These individuals are more likely to skip routine medical care due to costs, increasing their risk for serious and disabling health conditions.[20] When they do access health services, they are often burdened with large medical bills and out-of-pocket expenses.[21]

The lack of health care coverage in a community also has negative effects on health care costs. A Kaiser Family Foundation report found that nationally, 65% of health care costs for the uninsured adult are not reimbursed, despite safety net programs (2004).[22] When hospitals seek compensation for care and do not receive it, the charges are considered bad debt. The impact of bad debt on a hospital impedes its ability to reduce costs.

Behavioral Health

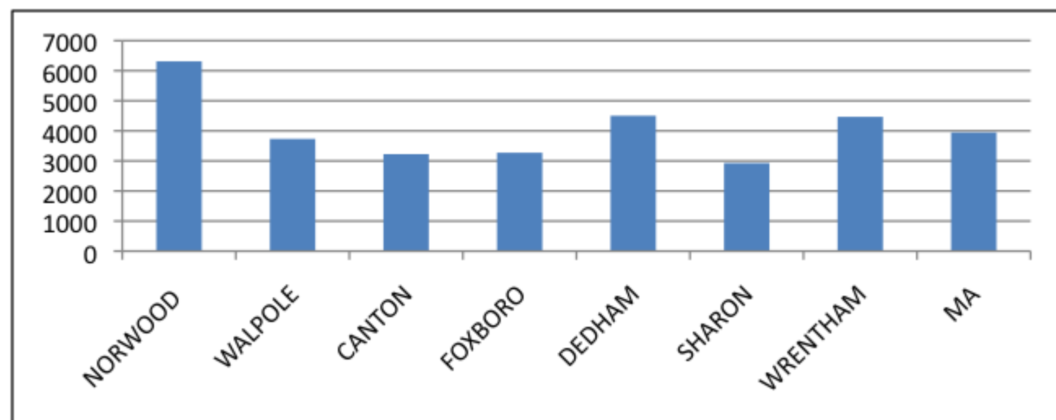
The mental health discharge rates for three towns (Norwood, Dedham, and Wrentham) are higher than the state average, with Norwood running at the highest level. Norwood and Walpole demonstrated high rates of mental disorder-related discharges. These high rates indicate a need to work on behavioral health outcomes in the area.

This issue was reflected in the community-based organization survey, which named behavioral health as a serious community health issue. Suggestions to combat this problem included education regarding mental health issues and a behavioral health resource for those with behavioral health concerns as well as their friends and families.

Every participant in the focus group also agreed that behavioral health is a major issue within the community. Focus group participants voiced the need for more interventions such as community outreach, education, student awareness of behavioral issues, and mental health stigma education.

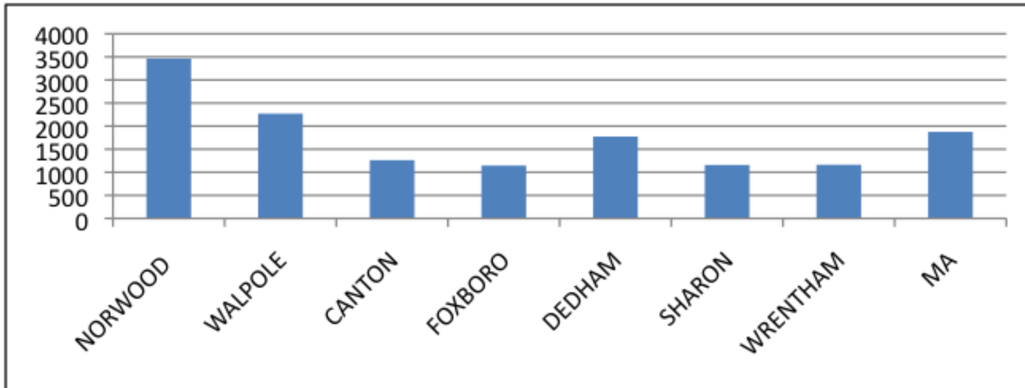
Behavioral health patients face great obstacles in receiving behavioral health services. Behavioral health stigma is a main barrier preventing patients who might otherwise seek health resources from doing so from fear of social ostracism or discrimination. Additionally, behavioral health patients face difficulty in accessing social services, including adequate housing, proper health insurance, and employment support, which are known social determinants of health.

Chart 8: Mental Health All-Related Discharges (2009)



(SOURCE: MASSCHIP)

Figure 9: Mental Health All-Related Hospitalizations to Emergency Departments (2009)



(SOURCE: MASSCHIP)

Behavioral health issues have a serious impact on overall health. Behavioral health is associated with the prevalence, progression, and outcome of some of today's most pressing chronic diseases, including diabetes, heart disease, and cancer. On average, people with serious behavioral health illness die twenty-five years earlier than the general population. Behavioral health disorders can have harmful and long-lasting effects—including high psychosocial and economic costs—not only for people living with the disorder, but also for their families, schools, workplaces, and communities.[23]

Behavioral health issues cause indirect costs that accumulate through reduced labor supply, public income support payments, reduced educational attainment, and costs associated with other consequences such as incarceration or homelessness.[24] Additionally, people with behavioral health conditions are at higher risk than others for physical illness and disability. The cost of medical care for this population is, on average, much higher than the cost of medical care for people without behavioral health conditions.[25] Better behavioral health services for this population would be likely to reduce the costs of their physical health care and produce significant overall savings in health spending.[26]

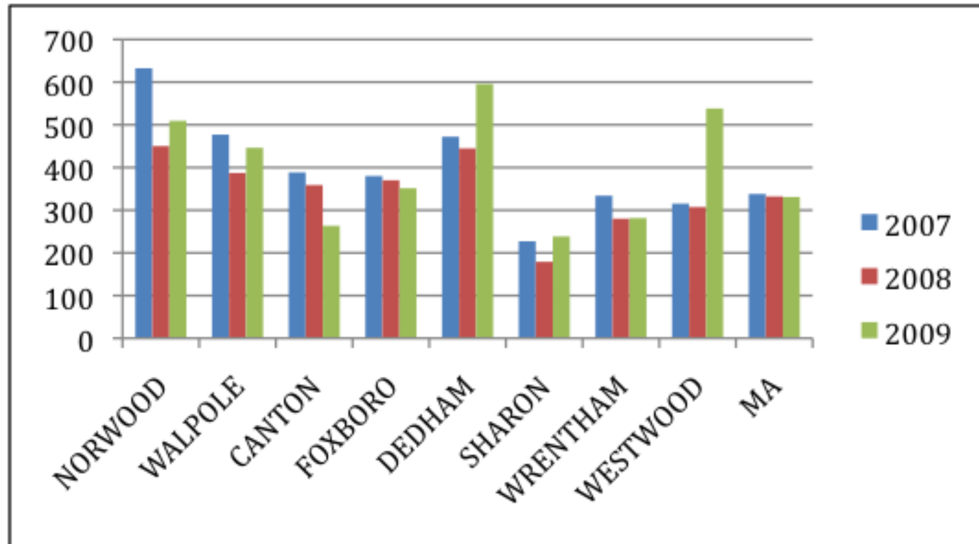
Substance Abuse

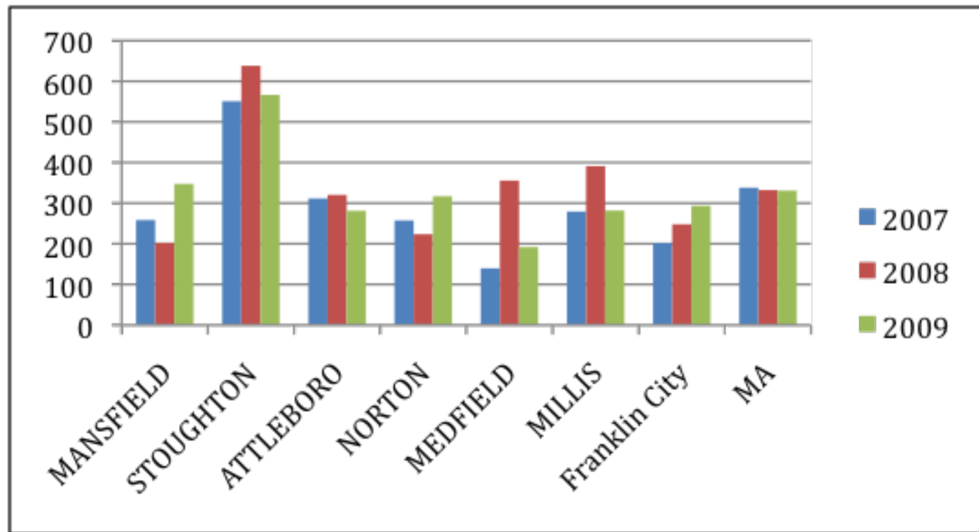
Substance abuse may directly involve the misuse of drugs and alcohol, but it is also associated with a range of destructive social conditions. Such conditions include family disruptions, financial problems, lost productivity, and failure in school, domestic violence, child abuse, and crime. Moreover, both social attitudes and legal responses to the consumption of alcohol and illicit drugs make substance abuse one of the most complex public health issues.

The data reflect an increase in alcohol or substance-related hospitalizations for eight of fifteen towns from 2008 and 2009. Norwood, which made up 20% of total hospital discharges in 2010, is among the towns with high alcohol or substance-related hospitalizations. Westwood had the highest jump in hospitalizations from an age-adjusted rate of 207.56 to 546.01. Six of the towns (Norwood, Walpole, Dedham, Westwood, Stoughton, and Norton) were above the state rate for alcohol or substance-related hospitalizations. The data also show a general increase in twelve of fifteen towns for hospitalization injuries related to opioids during the same time frame of 2008 and 2009. Six of the towns were above the state rate for opioid-related hospitalizations.

Community input also cited substance abuse as an issue within the community. Focus group participants expressed low ease of access, lack of harmful effects, and the normalization of drug use as contributive causes of the substance abuse problem. Providers surveyed suggested increased substance abuse education, which includes increased health education at an earlier age (late elementary and middle school), with regards to effects of drug use.

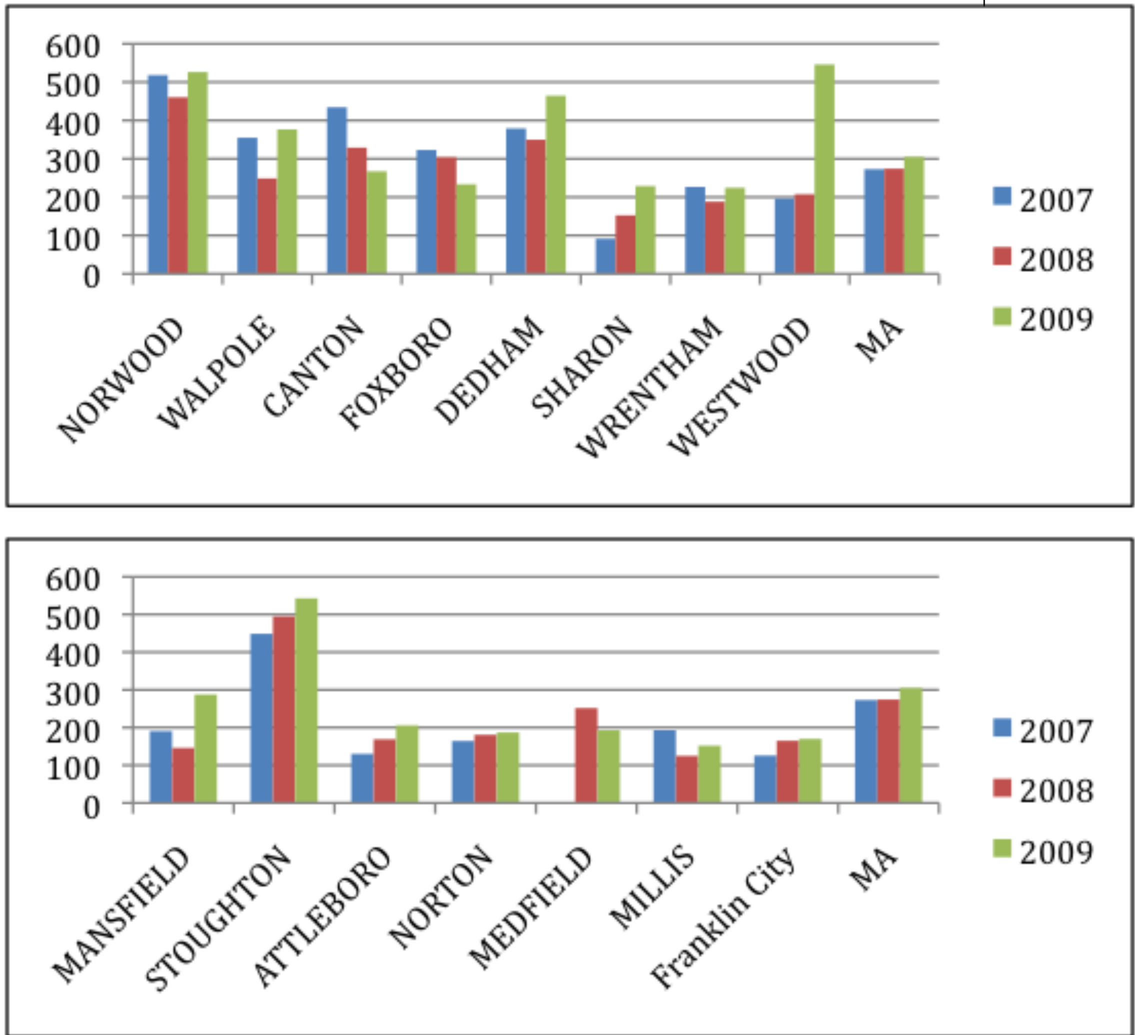
Figure 10: Alcohol / Substance Related –Age Adjusted Hospitalizations Rate (2007-2009)





(SOURCE: MASSCHIP)

Figure 11: Injuries: Opioid-related - Age Adjusted Hospitalizations Rate (2007-2009)



(SOURCE: MASSCHIP)

Local Policies Affecting Health

Table 1: Ordinances affecting health (2010)

	Obesity	Tobacco	Schools	Zoning
Norwood		No sales to minors, smoke free bars, private clubs		
Dedham			Nutrition and activity resource website	Hiking trails, open spaces, buffer zones, Planned Residential Development: higher density residential.
Dover		No smoking in public places, except designated areas; certain exceptions for private entities.		
Foxboro			Wellness policy promoting healthy eating, education and physical activity.	Lighting to enhance public safety, open space, buffer zones, Open Space Residential Development and Chestnut-Payston Overlay District: discourage sprawl while save open space.
Franklin		No smoking in restaurants of 50 people or more, but owner can designate smoking area, no more than 50% of restaurant. No sales to minors.	Wellness policy promoting healthy eating, education and physical activity.	Open Space and Recreation Plan – more green spaces, bike lanes, increase walkability of town.
Mansfield		No smoking in restaurants, public places, retail store, private clubs. Some exceptions.		Buffer strips, Downtown Mixed Use District.
Norfolk		Limited tobacco use in public places and work.		Buffer zones, farm stands, open space preservation.
North Attleboro		No sales to minors	Wellness policy promoting healthy eating, education and physical activity	Farm stands and markets, open space provisions

	Obesity	Tobacco	Schools	Zoning
Norton		No sales to minors, no free packages, no vending machines		Encourage higher density construction where transportation is available, open space promotion.
Plainville				Open space and recreation plan
Sharon			Wellness policy promoting healthy eating, education and physical activity.	Conservation Subdivision Design: less sprawl, more open space, Open Space, Mixed Use Overlay District, Sharon Commons Smart Growth Overlay District.
Walpole				Open Space Development, Farmer's Market.
Westwood		Restrictions on public smoking and smoking in the workplace; certain exceptions apply	Westwood Schools Wellness Committee.	Buffer Zones, Mixed Use Overlay District, Flexible Multi Use Overlay District, outdoor lighting to promote safety.
Wrentham		No sales to minors; no smoking in bars, health care facilities, public places, public transportation, restaurants, retail, stores, retail food stores and workplaces, some exceptions		Open Space Preservation Districts.

Source: City and public school websites.

Discussion and Recommendations

The previous section identifies the major public health issues within the Norwood Hospital primary service area. In the following section this report identifies which needs are most pressing. The hospital is well positioned to address the following areas:

- Chronic Disease
- Obesity
- Access to Healthcare
- Behavioral Health
- Substance Abuse
- Crime

These areas represent opportunities for Norwood to take the lead in addressing population health, improving the experience of care and reducing per capita cost. The remaining health topics detailed in the results section of this report are significant and should be addressed. Norwood should look for ways to collaborate with community partners to support efforts to impact and improve on these areas.

Recommendations for the health system are given below for these areas. Where appropriate, community-wide recommendations are given, representing actions that are beyond the scope of the hospital but efforts in which the hospital can play a part.

Chronic Disease

Health System Recommendations

- Increase education on chronic disease maintenance at community spaces.
- Utilize small media to inform and remind patients to get screened for chronic disease.
- Survey potential chronic disease support groups that would be most effective in the community.

Combating chronic disease requires education and modification of health behaviors.[27] Promoting healthy behaviors such as an active life, healthy eating, and disease self-management are important to chronic disease maintenance. Norwood Hospital has collaborations with social service organizations, food pantries, senior centers, and religious organizations. The hospital should increase education on healthy living, chronic disease prevention, and disease management with these community partners. Such interventions would increase awareness of preventative self-management and promote healthy behavior changes.

Additionally, using letters, brochures, newsletters, and other small media to inform and motivate patients to be screened for chronic disease has been demonstrated to be effective.[28] The hospital should do further research in the form of community surveys or focus groups on what types of education are most needed and on which topics.

Focus group input suggested resources to promote lifestyle changes as a way to improve chronic disease outcomes. Support group sessions promote healthy behavioral changes by providing information and support for patients. Currently, the hospital offers a cancer support group. These groups provide members with an excellent opportunity to learn more about their health and well-being as well as receive support from others in similar situations. The hospital should do further research in the form of a community survey on what types of cessation groups is most needed and would be most effective for Norwood's patient population.

Obesity

Community-wide Recommendations

- Add bicycle lanes to roads in service area neighborhoods to increase physical activity.
- Ensure walkable sidewalks on streets.

Health System Recommendations

- Implement nutrition education initiatives.
- Offer education on healthy food preparation on-site at the farmers' market and through partnerships with local community organizations.
- Promote and sponsors physical activity and education programs to address childhood obesity.
- Prescribe farmers' market vouchers to diabetic patients who are at risk for obesity.

Focus group input cited nutrition and obesity as major health issues. Additionally, service provider input named poor eating habits, lack of healthy eating knowledge, and lack of affordable health foods as issues that needed to be addressed. Promoting healthy behaviors such as an active life and healthy eating is important to combating obesity.[29] Norwood should leverage its collaborations with schools, social service organizations, food pantries, senior centers, and religious organizations to implement educational community sessions on healthy food and behavioral choices.

To increase education, the hospital should work with local farmers' markets to support and promote their programs. Hospital support can include on-site cooking classes and nutrition education workshops during the farmers' markets. Additionally, a majority of service area student obesity rates show rates at above 25% or higher. Supporting schools in implementing class curricula or workshops on obesity, healthy food, and lifestyle choices would be an important step in reducing school age rates of obesity.

Physical activity can help prevent unhealthy weight gain and obesity.[30] Implementing city infrastructure that includes sidewalks and bicycle lanes has been shown to promote physical activity and reduce obesity.[31] Community efforts to implement health promoting city infrastructure would help reduce service area obesity rates.

Access to Health Care

Community-wide Recommendations

- Advocacy for greater public transportation options in service areas.
- Advocacy for a community health center.

Health System Recommendations

- Recruit more primary care physician to handle patient demand.
- Provide information on and assistance with enrolling in state insurance exchange plans to working populations through partnerships with community service organizations.
- Increase community outreach efforts utilizing multiple media channels.

A lack of primary care services was cited as a major obstacle to health access. Focus group input cited difficulty in arranging timely appointments and brief visit times with primary care providers as consistent issues in accessing primary care services. In order to address this issue, the hospital should focus efforts in recruiting more physicians to take on primary service demands in its service area.

Focus group input cited affordability as a major obstacle to health access. Additionally, community providers surveyed named insurance enrollment and coverage as issues that needed to be improved. The Community Benefits Advisory Committee members and other community based organizations provide avenues for outreach to the working community in order to address this issue. The hospital is partnered with faith-based organizations, social service organizations, and other community-based organizations. These connections represent an opportunity to present information about enrollment and navigation of state-subsidized health insurance to the working population. Recommended venues include community club meetings, neighborhood council meetings, and community events, coupled with follow up from community health workers to ensure that the necessary documentation is completed. In addition, Norwood Hospital can assist community members with in linking with primary care provider practices. Linking the uninsured with health coverage and a usual source of health care is one of the primary building blocks of the triple aim.

Input from the focus group reflected a lack of information on health resources offered by the hospital. Norwood Hospital should develop media-disseminating initiatives to engage and inform the community of services offered by the hospital. By utilizing web resources, social media, and collaborating with community-based organizations, the hospital can bring awareness of health resources that are available to the community. Such initiatives can take the form of information distributed through the hospital website, Facebook, brochures, and health fairs. Focus group input or a community survey data should be gathered to inform the hospital of which form of media is most effective.

Community input also showed a major concern for the lack of transportation available for patients to access health resources. Norwood should do a feasibility study in order to develop streamlined uses of hospital transportation vehicles for use by patients within the hospital programs. Norwood can seek to initiate transportation between health centers and hospital-affiliated sites in order to increase transportation resources for its patients.

Behavioral Health

Community-wide Recommendations

- Include Behavioral Health education within school curricula.
- Create collaborations to decrease stigma attached to mental health.

Health System Recommendations

- Provide education to front-line caregivers and community leaders on the signs of mental illness and how to access necessary resources.

Studies have demonstrated that educational programs designed to prevent behavioral problems in children and adolescents have been effective in reducing behavioral health issues.[32] Through including a behavioral health component in middle and high school curricula, schools can decrease behavior issues within the student body and better equip them to deal with mental stress as adults.

Focus group input revealed a consistent concern for a lack of supportive services related to behavioral health. Through equipping front-line providers with training on recognizing the signs of deteriorating behavior health conditions and information on available resources, Norwood can increase its support to local residents.

Mental health stigma has been identified as a major barrier to behavioral resources. Norwood should support collaborations with community-based organizations in implementing educational initiatives on topic such as understanding behavior health, ways to improve behavioral health status, and treatment options for behavioral health issues. Given the significant senior population and focus group input citing senior mental health as a concern, particular focus should be directed toward that population.

Substance Abuse

Health System Recommendations

- Implement substance abuse education.
- Collaborate with community-based programs to develop education for front-line workers and advocates on red flags of substance abuse.
- Gather information on potential cessation support groups that would be most effective in the community.

Community input cited the normalization of substance abuse as a contributor to the substance abuse issue. Substance abuse education was identified as an important intervention to combat these perceptions. Norwood Hospital should conduct collaborative programs with community partners to conduct “Substance Abuse Education.” These programs could focus on deterring initiation into substance use by providing education on the detrimental effects of substance abuse. Training on recognizing signs of substance abuse for front-line workers can also be helpful in ensuring access to timely treatment and resources. Spaces where this education could take place include community spaces, schools, food pantries, and libraries.

In order to reduce substance abuse use within the service area, Norwood Hospital should promote substance abuse cessation programs that provide support to patients. By promoting substance abuse cessation programs, Norwood can provide patients with an excellent opportunity to receive group counseling and encouragement from others in similar situations. The hospital should do further research in the form of a community survey on what types of cessation groups is most needed and would be most effective for Norwood’s patient population.

Limitations

Thorough data collection was done on the primary service area; however some secondary data sources lacked information on certain PSA towns. Often, these were towns that had smaller populations. In such cases, we could only collect data where it existed. In order to compensate for the lack of secondary data, we tried to collect primary data that represented the smaller towns. Moving forward, we will collect more detailed quantitative data and continue to research available secondary data sources to fill the data gaps.

Focus group data was collected for the PHIR. Though a focus group informs the report with essential primary data from the community, there are some limitations. Focus group data is qualitative because it is based on the opinions of a very small number of participants. The small sample size means the groups may not fully represent the entire population.

Members of Norwood's Community Benefits Advisory Committee were surveyed to gather input on the hospital's service area. Many of these board members are affiliated with local community based organizations. A major limitation is that organizations focus on their mission and constituents, which may not directly align with or be representative of the community as a whole. Additionally, a sampling of community-based organizations many not accurately represent the larger population.

Appendices

Appendix A: Methods

Appendix B: Other Indicators and Recommendations

Appendix C: Community Provider Survey

Appendix D: Focus Group Protocol and Questions

Appendix E: References

Appendix A: Methods

The Massachusetts Department of Public Health-defined service area for Norwood Hospital was used as the geographical area for this report.

Secondary data was collected by Steward Health Care community health managers for the hospital primary service area as defined by the Massachusetts Department of Public Health. Sources included:

- United States Census Bureau www.census.gov
- US Census Bureau American Community Survey www.factfinder2.census.gov
- Massachusetts Community Health Information Profile (MassCHIP), available at http://www.mass.gov/eohhs/researcher/community-health/masschip/
- Federal Reserve Bank of Boston website http://www.bos.frb.org/
- Massachusetts Department of Elementary and Secondary Education school district profiles http://www.doe.mass.edu/
- Massachusetts Department of Public Health Bureau of Health Information, Statistics, Research and Evaluation
- Status of Childhood Weight in Massachusetts, 2011 www.mass.gov/eohhs/docs/dph/.../status-childhood-obesity-2011.pdf
- A Profile of Health Among Massachusetts Adults, 2010 BRFSS results http://www.mass.gov/eohhs/docs/dph/behavioral-risk/report-2010.pdf
- Massachusetts State Crime Reporting Unit http://www.ucrstats.com/

Norwood gathered primary data through a survey to community providers and opinion leaders and through a focus group (which contained a demographic survey, an evaluation survey and a consent form).

A community provider survey was sent out to members of the Norwood Community Benefits Advisory Committee and other community-based organizations. The survey consisted of fourteen questions aimed at capturing information on health status and issues that the community faced. Over 150 surveys were distributed and eighteen completed surveys were received back. These organizations were social service, religious, governmental, and health based organizations. The Community Provider Survey can be found in Appendix C.

A focus group was held on November 29th, 2012. The event was advertised via a flyer, and through email distributed to members of the Norwood Community Benefits Advisory Committee and other community based organizations. In gathering participants for the focus group, facilitators aimed at recruiting participants that would be representative of a cross-section of the community served by the hospital. The inclusion criteria for the focus group were participants who live within the hospital primary service area. A total of nineteen focus group participants attended.

Characteristics of Focus Group Participants:

1. What is your current age?	
18 - 25	1
26 - 35	0
36 - 45	2
46 - 55	3
56 - 65	5
66 - 75	7
76+	1
2. What is your biological sex?	
Male	4
Female	15
3. What is your gender identity?	
Male	4
Female	15
4. Which group below most accurately describes your racial background (check all that apply)?	
Alaskan Native/Native American/Indigenous	
Asian	1
Black/African American	1
Latino(a)/Hispanic (Non-white)	0
Pacific Islander/Native Hawaiian	0
White	17
Multiracial	0
Other/Please specify:	0
5. What is the highest grade in school, year in college or post-college degree work you've completed?	
Less than High School	0
9th to 12th Grade (No Diploma)	0
High School Graduate or equivalency	2
Some College (No Degree)	2
Associates' Degree	3
Bachelor's Degree	5
Graduate/Professional Degree	7
Other/Please specify:	

Appendix B: Additional Demographics and Indicators

Table 1: General Population – Race % (2010)

Table 2: Hispanic Population

Table 3: Public School Population

Figure 1: Population by Age Group (2010)

Figure 2: Median Household Income (Inflated Adjusted Dollars)

Figure 3: Annual Unemployment Rate 16 years and over (2010)

Figure 4: Foreclosure Rates 2007 - 2009

Figure 5: Poverty Rate

Figure 6: Born within the state 2009

Figure 7: World Region of Birth of Foreign-Born Residents (2005-2009)

Figure 8: English Language Indicators

Figure 9: Highest Educational Attainment Population Age 25+ (2009)

Figure 10: High School Adjusted Drop-out Rates (2007-2010)

Figure 11: Types of Household

Figure 12: Median Gross Rent (2008)

Figure 13: Chlamydia Incidence Crude Rate Per 100,000 (2010)

Figure 14: HIV/AIDS: Prevalence Crude Rate Per 100,000 (2009)

Figure 15: Childbirth, Pregnancy, Puerperium: All Hospitalizations Age-Adjusted Rate per 100,000 (2009)

Figure 16: Total Crime 2010 –Violent and Property Crime

Figure 17: Mortality Homicide Age Adjusted (2007 - 2009)

Race

Table 1: General Population – Race % (2010)

General Population	NORWOOD	WALPOLE	FOXBORO	DEDHAM	SHARON	MA
White	85%	92.6%	90.26%	88.39%	87.52%	75.00%
Black or African American	5.2%	0.80%	2.83%	5.43%	3.23%	6.10%
American Indian and Alaska Native	0.2%	0.20%	0.25%	0.26%	0.05%	0.10%
Asian	5.9%	0.70%	4.11%	2.59%	6.95%	5.50%
Native Hawaiian and Other Pacific Islander	0%	0.00%	0.07%	0.02%	0.00%	1.00%
Some Other Race	1.7%	0.30%	1.03%	1.63%	0.53%	0.70%
Two or More Races	1.9%	0.2%	1.46%	1.68%	1.71%	1.70%

General Population	FOXBORO	MANSFIELD	ATTLEBORO	NORTON	MED-FIELD	MILLIS	Franklin City
White	90.30%	92.6%	87.1%	88.5%	94.4%	92.9%	93.30%
Black or African American	2.8%	2.6%	3%	3.6%	0.9%	1%	1.00%
American Indian and Alaska Native	0.2%	0.1%	0.2%	0.1%	0.1%	0.4%	0.30%
Asian	4.1%	2.8%	4.5%	3.5%	3.2%	3.7%	3.80%
Native Hawaiian and Other Pacific Islander	1%	0	0.1%	0.1%	0	0	0.00%
Some Other Race	1.5%	0.6%	2.8%	1.7%	0.2%	0.5%	0.50%
Two or More Races	1.9%	1.2%	2.2%	2.4%	1.2%	1.4%	0.01%

(SOURCE: US CENSUS)

Table 2: Hispanic Population

Norwood	Walpole	Foxboro	Dedham	Mansfield	MA
3.4%	0.3%	2.9%	4.6%	4.4%	9.3%
Attleboro	Norton	Medfield	Millis	Cumberland RI	
6.2%	2.0%	0.5%	3.3%	1.3%	

(SOURCE: US CENSUS)

Table 3: Public School Population

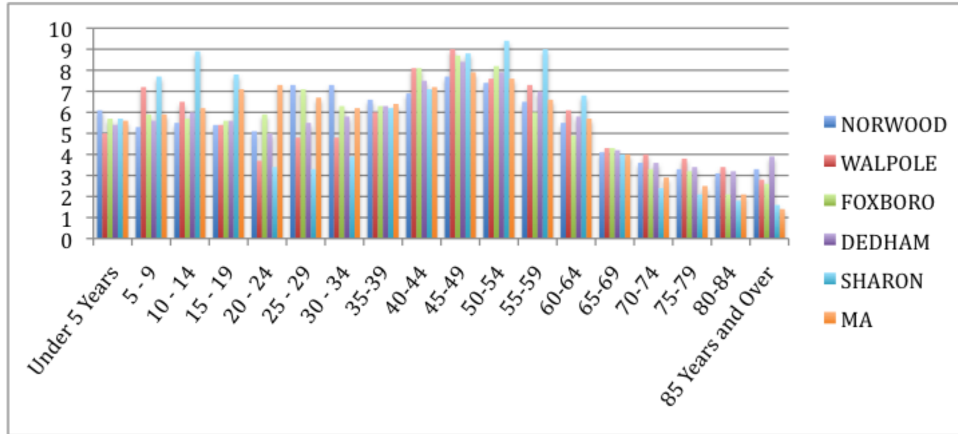
RACE	Norwood %	Walpole %	Canton %	Foxboro %	Dedham %	Sharon %	Wrenthem %	MA %
White, non-Hispanic	88.3	74.7	93.5	92.5	90.8	90.6	94.2	68.0
Black/ African-American	2.8	8.3	1.3	0.6	1	1.5	0.4	8.3
Hispanic	2.6	16.1	1.7	1.3	2.9	2.0	2.3	16.1
Asian	3.5	5.7	1.5	3.5	2.3	3.9	1.1	5.7
Multi-Race	2.4	0.2	1.9	1.9	2.2	1.6	0	0.3

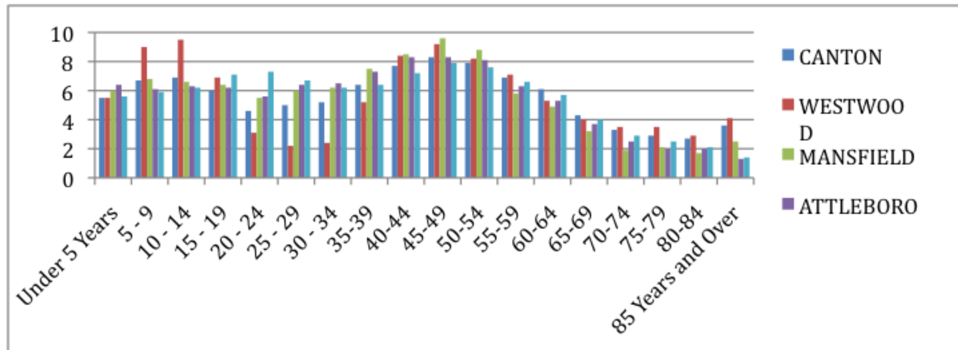
RACE	Mansfield %	Attleboro %	Norton %	Medfield %	Millis %	Franklin City %
White, non-Hispanic	88.3	74.7	93.5	92.5	90.8	90.6
Black/ African-American	2.8	8.3	1.3	0.6	1	1.5
Hispanic	2.6	16.1	1.7	1.3	2.9	2.0
Asian	3.5	5.7	1.5	3.5	2.3	3.9
Multi-Race	2.4	0.2	1.9	1.9	2.2	1.6

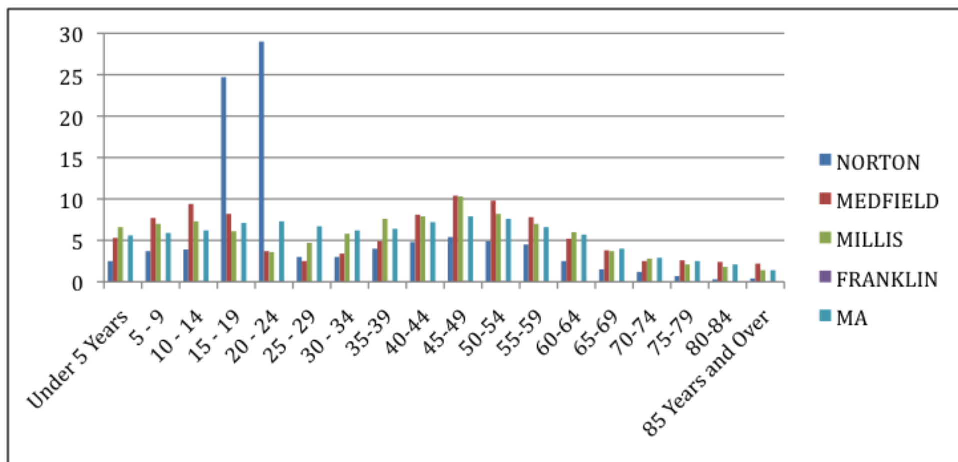
(SOURCE: MASSACHUSETTS DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION, SCHOOL AND DISTRICT PROFILES)

Age

Figure 1: Population by Age Group (2010)



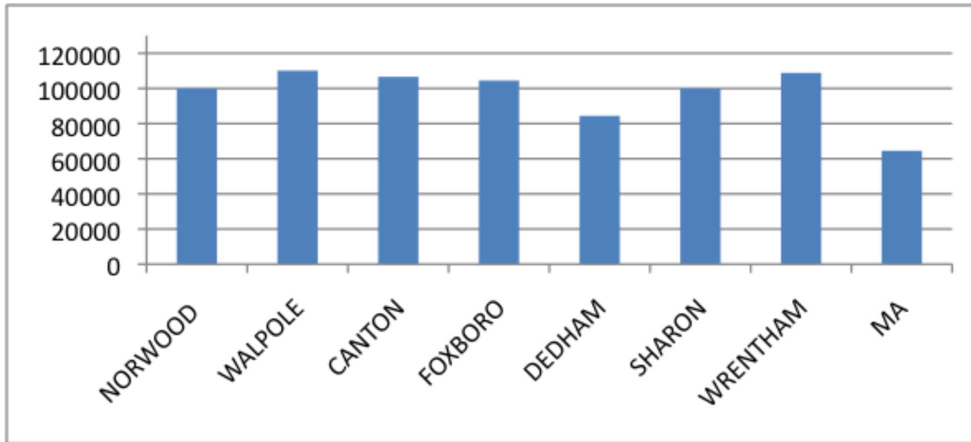


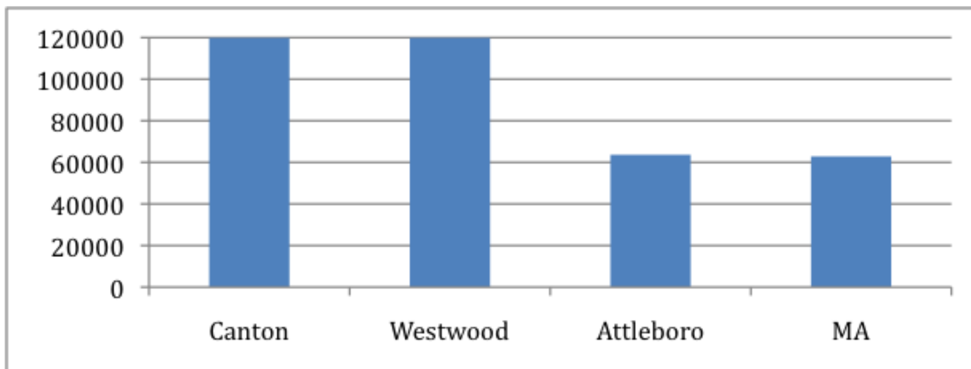


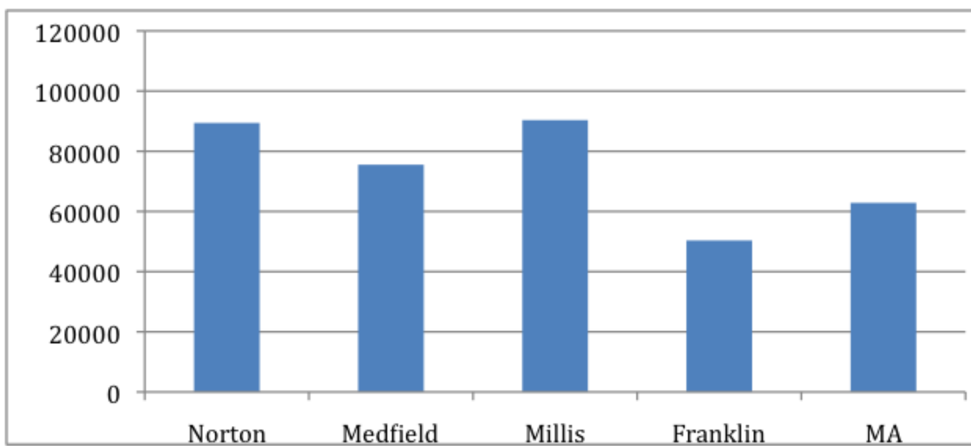
(SOURCE: US CENSUS BUREAU)

Income

Figure 2: Median Household Income (Inflated Adjusted Dollars)

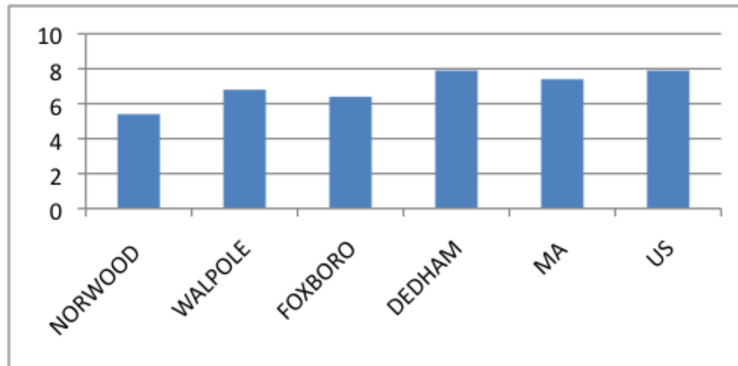






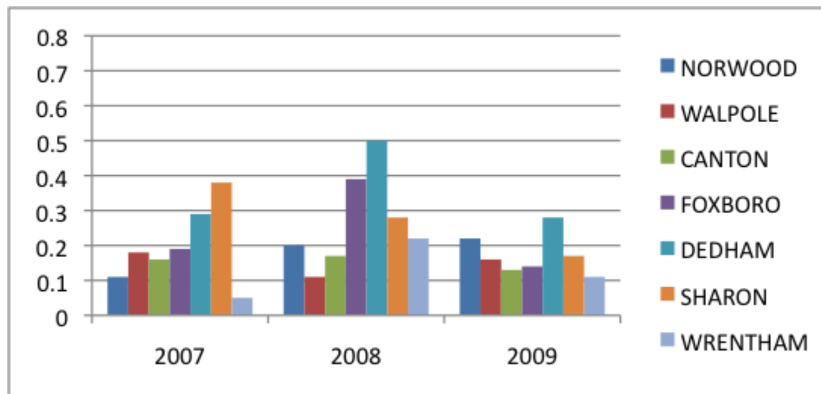
(SOURCE: US CENSUS)

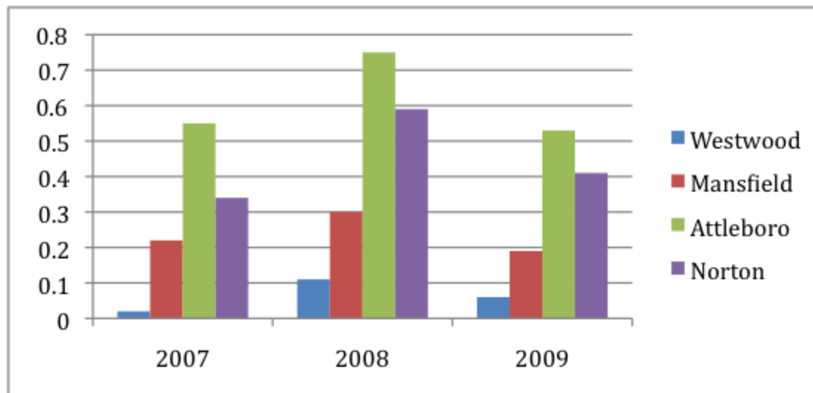
Figure 3: Annual Unemployment Rate 16 years and over (2010)

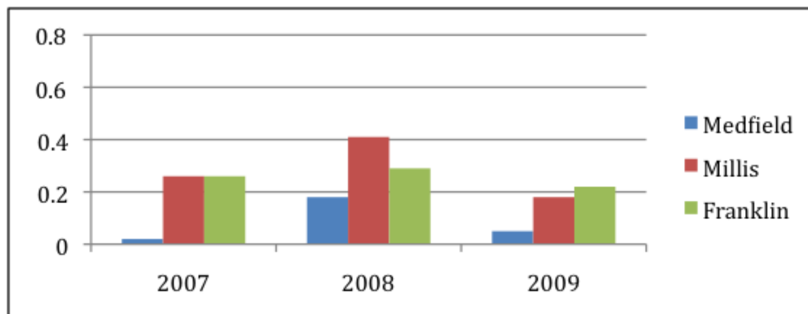


(SOURCE: CENSUS)

Figure 4: Foreclosure Rates 2007 - 2009

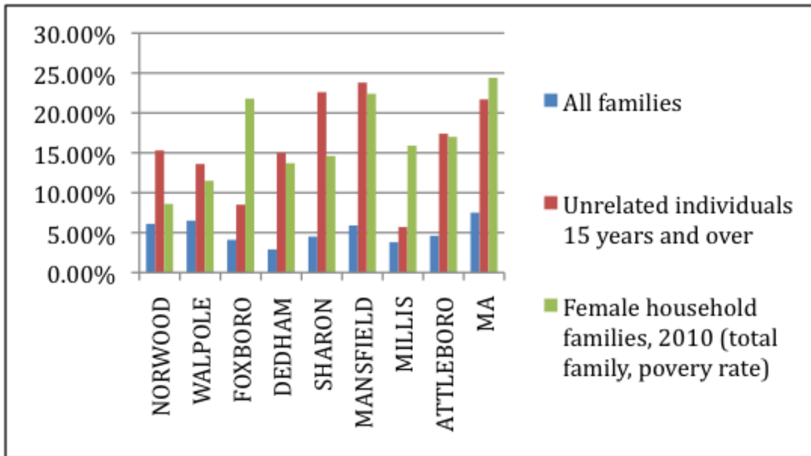






(SOURCE: FEDERAL RESERVE BANK OF BOSTON, RESEARCH DEPARTMENT)

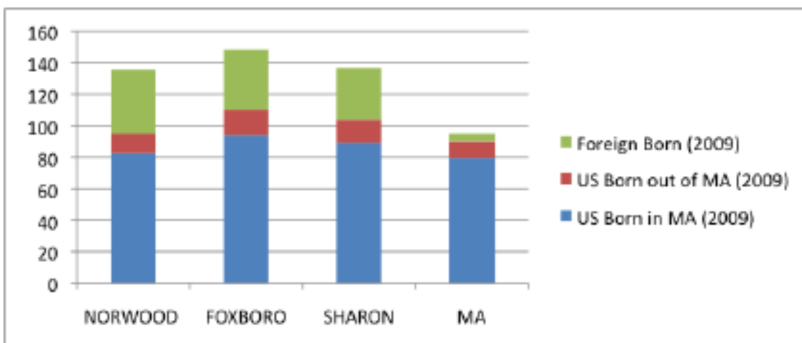
Figure 5: Poverty Rate



(SOURCE: US CENSUS)

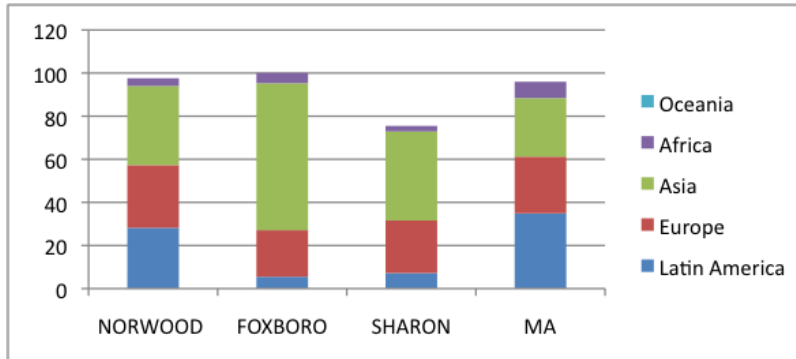
Nativity

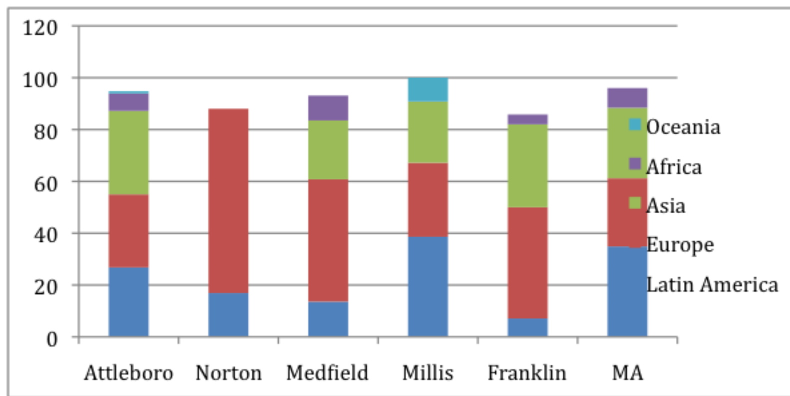
Figure 6: Born within the state 2009



(SOURCE: US CENSUS BUREAU)

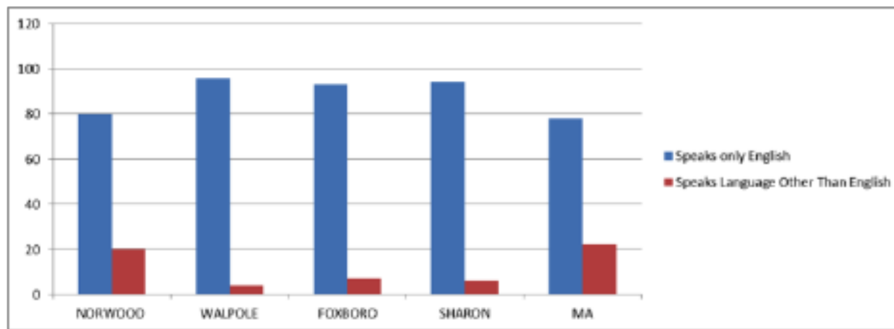
Figure 7: World Region of Birth of Foreign-Born Residents (2005-2009)





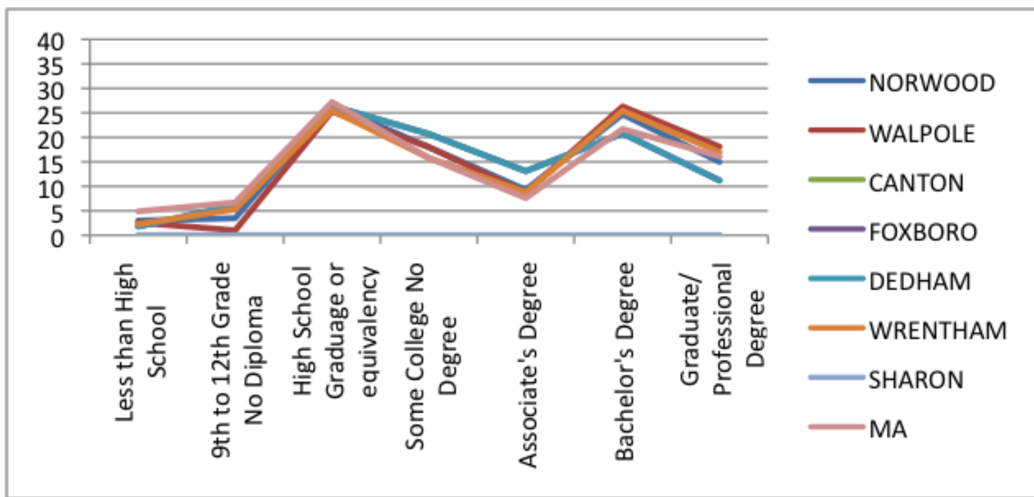
Language

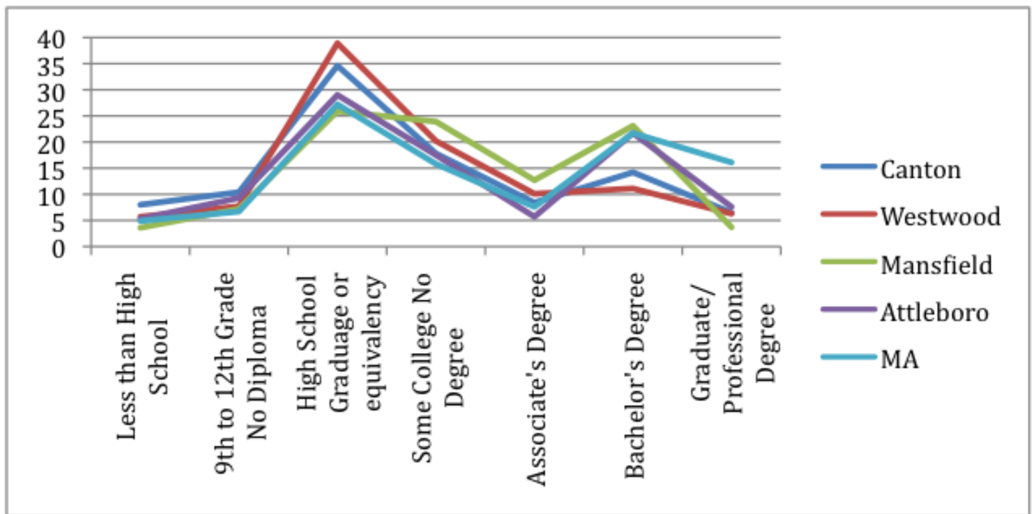
Figure 8: English Language Indicators

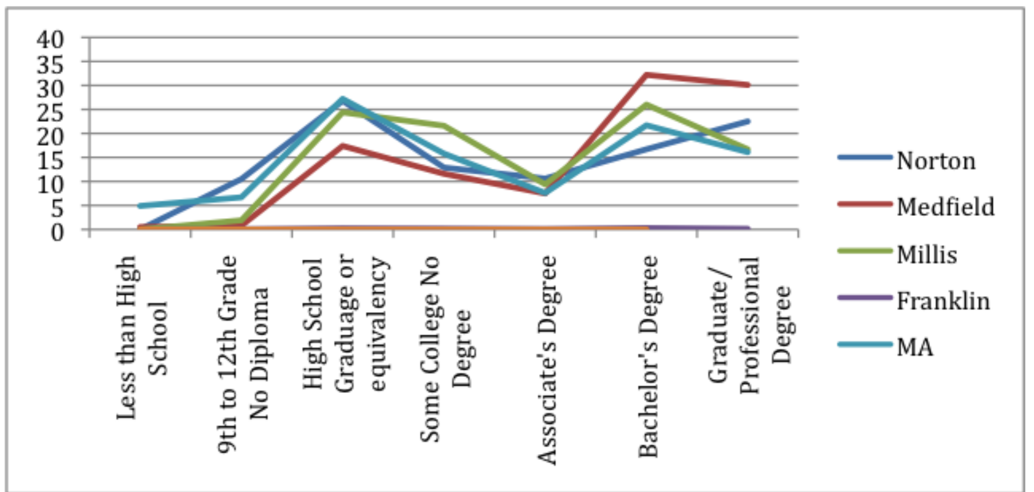


(SOURCE: US CENSUS BUREAU)

Figure 9: Highest Educational Attainment Population Age 25+ (2009)

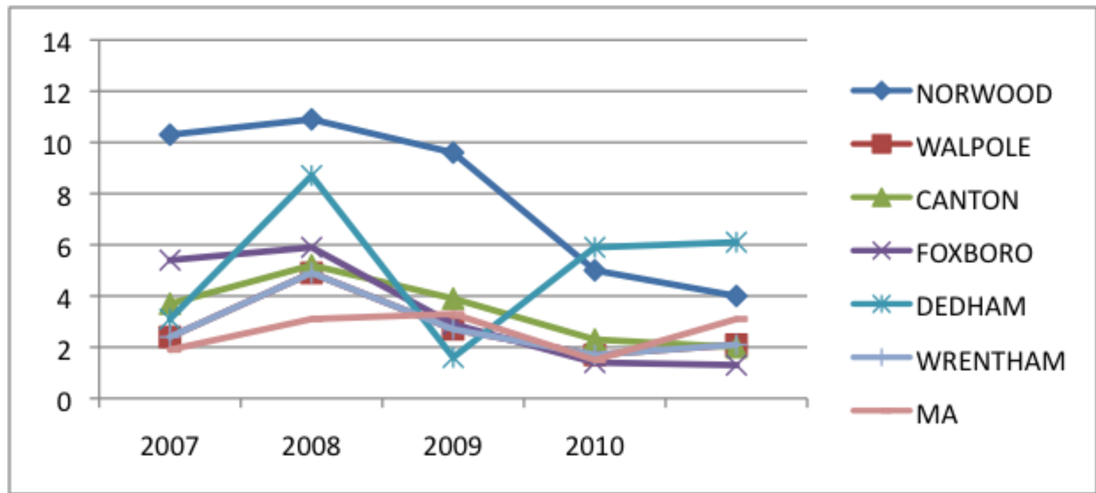


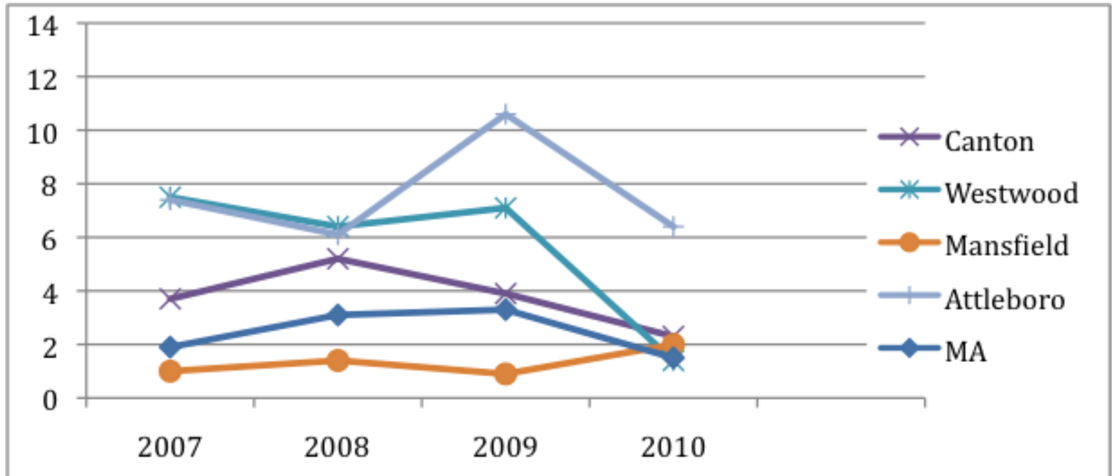


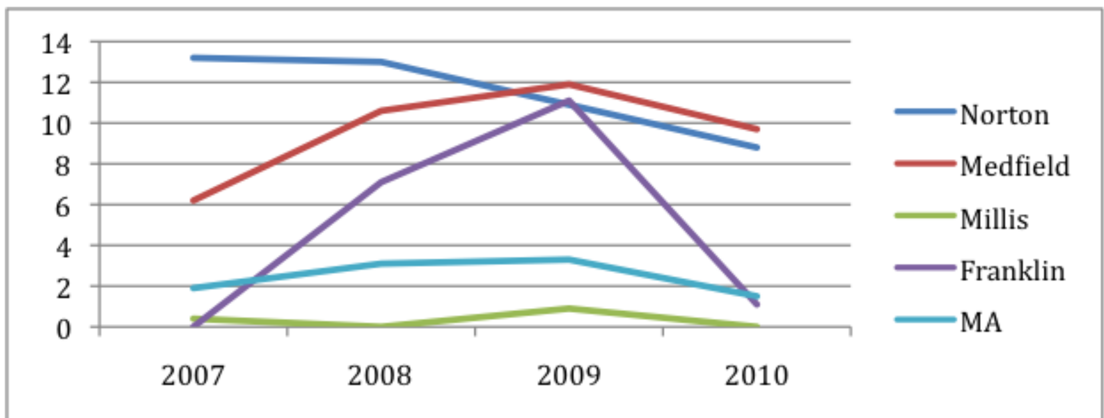


(SOURCE: CENSUS)

Figure 10: High School Adjusted Drop-out Rates (2007-2010)



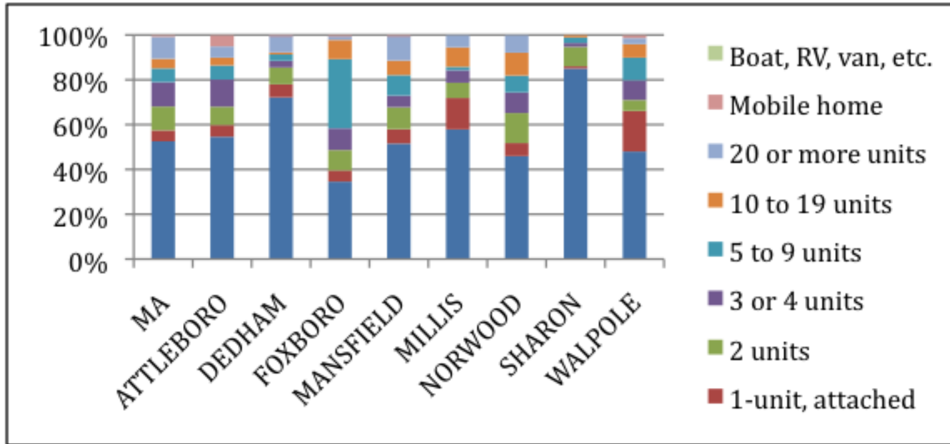




(SOURCE: DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION, SCHOOL AND DISTRICT PROFILES)

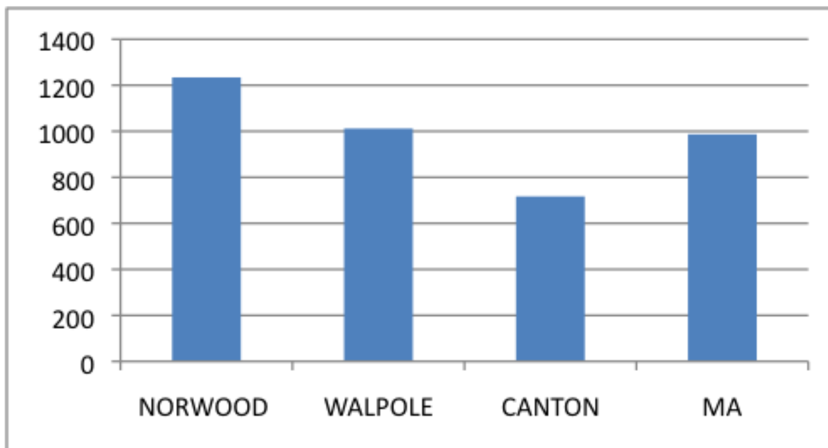
Housing

Figure 11: Types of Household



(SOURCE: US CENSUS)

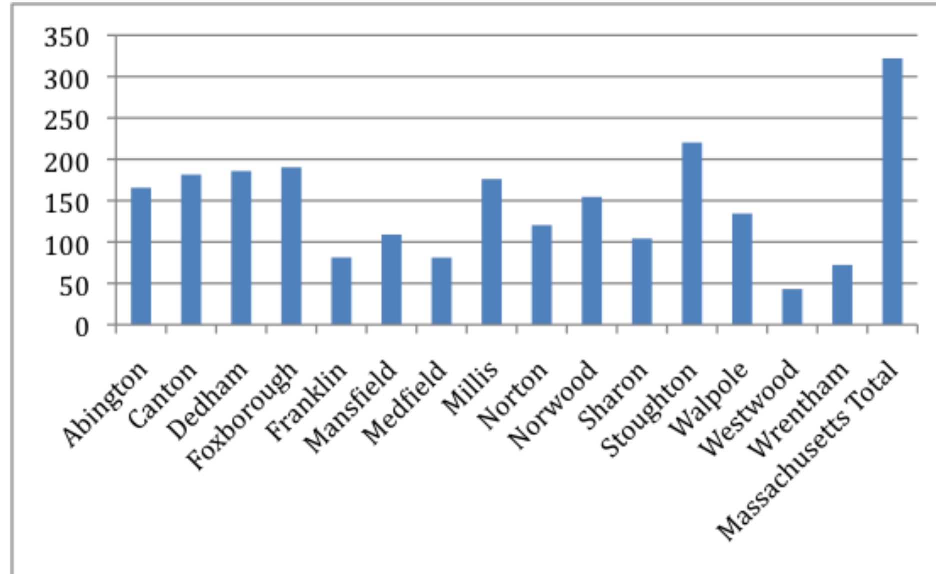
Figure 12: MEDIAN GROSS RENT (2008)



(SOURCE: US CENSUS)

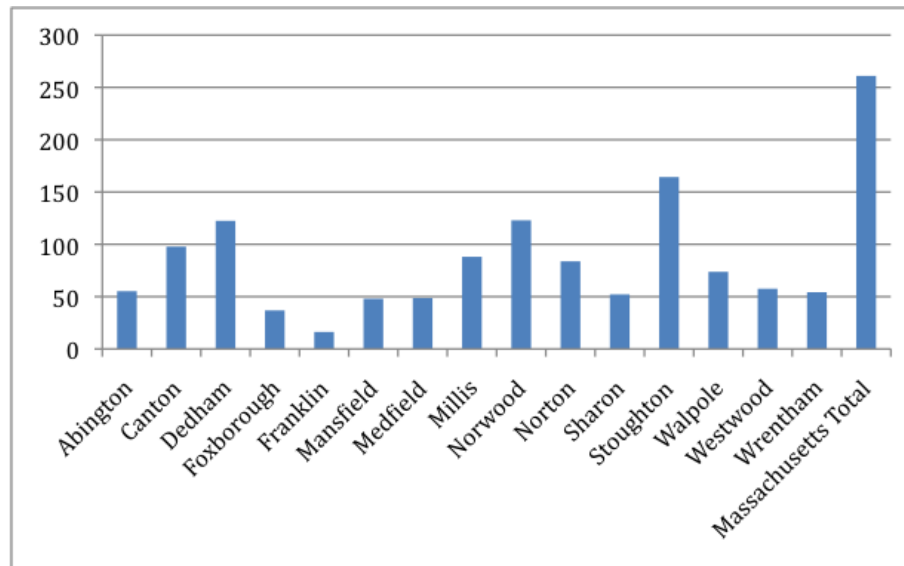
Reproductive & Sexual Health

Figure 14: Chlamydia Incidence Crude Rate Per 100000 (2010)



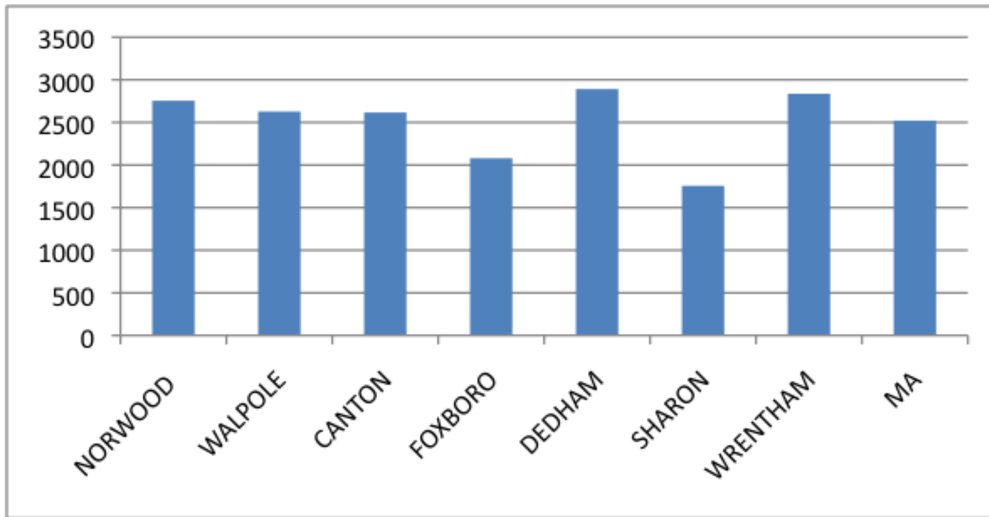
(Source: MASSCHIP)

Figure 15: HIV/AIDS: Prevalence Crude Rate Per 100000 (2009)



(Source: MASSCHIP)

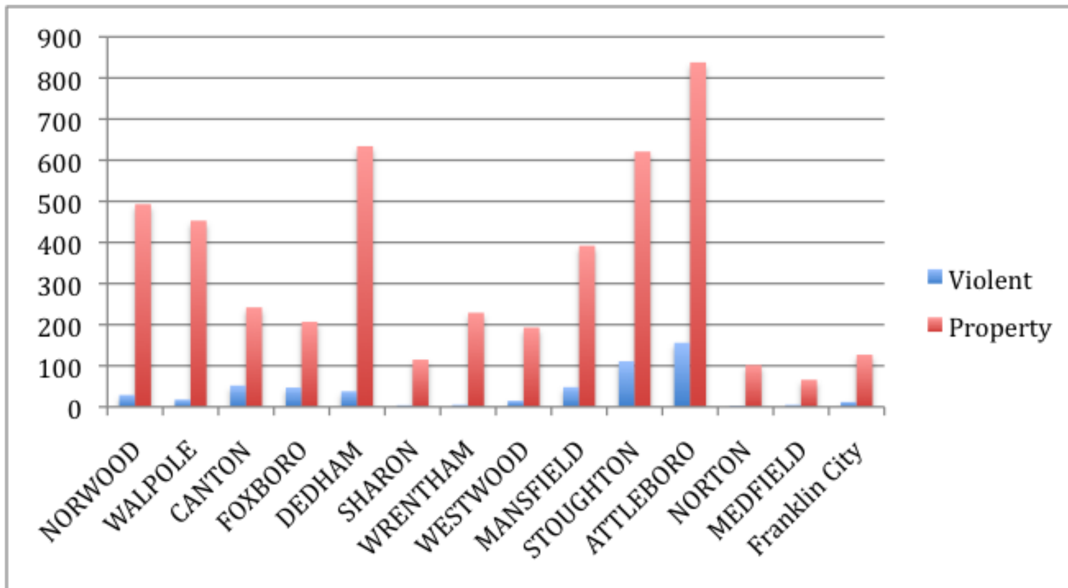
Figure 16: Childbirth, Pregnancy, Puerperium: All Hospitalizations Age-Adjusted Rate per 100000 (2009)



(SOURCE: MASSCHIP)

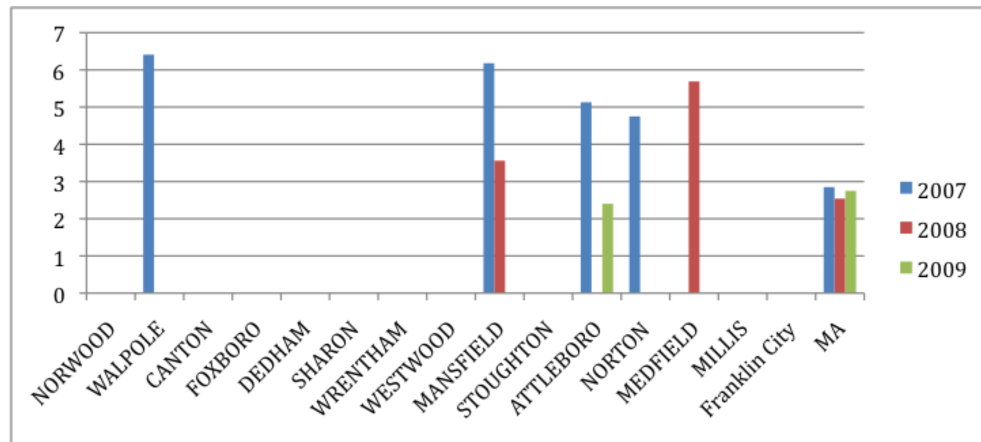
Crime

Figure 17: Total Crime 2010 –Violent and Property Crime



(SOURCE: MASSACHUSETTS CRIME REPORTING UNIT WEB SITE)

Figure 18: Mortality Homicide Age Adjusted (2007 – 2009)



(SOURCE: MASSCHIP)

Appendix C: Community Provider Survey

1. How would you identify your geographic service area (town, city, zip code, etc.)?

2. How would you identify the community that you work with?

3. What is healthy about the community you work with?

a. What is unhealthy?

4. What are the top three areas of concern within the community that you work with?

   a.

   b.

   c.

   d. What are some strategies that could address these concerns?

      i.

      ii.

      iii.

5. What are the top three health concerns within the community you work with?

   a.

   b.

   c.

   d. What are some strategies that could address these concerns?

      i.

      ii.

      iii.

6. What do you feel are the biggest obstacles to health access within the community you work with?
7. What populations would you identify as underserved or underrepresented within the community?
8. What services do you perceive as being most needed within the community?
   a. Which population would most benefit from this service?
9. In what ways is Norwood Hospital serving the community well?
10. In what ways could Norwood Hospital serve the community better?
11. What is the number one thing that Norwood Hospital can do to improve the health and quality of life of the community?
12. Is mental health a primary concern within the community?
   a. What about mental health is a concern?
   b. How might this concern be addressed?
13. Is nutrition a primary concern within the community?
   a. What about nutrition is a concern?
   b. How might this concern be addressed?
14. Is there any other concern that you would like to address?

Appendix D: Focus Group Questions

1. Is there a sense of community where you live?
   a. Why or why not?
2. What is healthy about your community?
3. What are the top three areas of health concern within the community?
   a. What are some strategies that could address these concerns?
4. What populations would you identify as underserved or underrepresented within the community?
5. What do you feel are the biggest obstacles to health access for your community?
6. Is mental health a major issue within your community?
   a. Do you know a lot of people with mental health issues?
7. Do you have issues with chronic disease (Chronic disease are health issues like diabetes, hypertension, obesity which require continuous monitoring and treatment)?
   a. How do these issues affect the way you live work play? (to the moderator look for possible issues that chronic disease causes – asthma preventing school attendance, diabetes hindering job prospects)
8. Do you have or do you know of anybody with issues of Dementia or Alzheimer?
   a. Do you see this issue as increasing, decreasing or staying the same?
9. When was the last time you had dental work done?
   a. What was it?

10. How often do you have your teeth cleaned and checked?
11. How easy or hard is it to access dental health resources/services?
12. What services do you perceive as being most needed within the community?
13. In what ways is Norwood Hospital serving the community well?
14. In what ways can Norwood Hospital serve the community better?
15. What is the number one thing that Norwood Hospital can do to improve the health and quality of life of the community?

Appendix E: References

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