2016

Lahey Hospital & Medical Center Community Health Needs Assessment

Produced by John Snow, Inc.

Lahey Hospital & Medical Center

JSI

Executive Summary

Purpose and Background

Lahey Hospital & Medical Center (LHMC) is a world-renowned academic medical center with a reputation for clinical excellence and is the leading provider of health care services for residents and visitors of Middlesex and Essex counties in Massachusetts. LHMC is a physician-led, nonprofit group practice providing quality health care in virtually every specialty and subspecialty, from primary care to cancer diagnosis and treatment to kidney and liver transplantation. The LHMC health care system comprises medical centers in Burlington, Lexington, and Peabody, Massachusetts, as well as more than a dozen community primary care and satellite specialty care locations throughout northeastern Massachusetts and southern New Hampshire. LHMC has more than 500 physicians, 5,000 employees, and 1,100 volunteers.

This Community Health Needs Assessment (CHNA) report, along with the associated Community Health Improvement Plan (CHIP), is the culmination of nearly a year of work. LHMC conducted the assessment to better understand and address the health-related needs of those living in its primary service area, with an emphasis on those who are most vulnerable. This project also fulfills Massachusetts Attorney General's Office and federal Internal Revenue Service (IRS) requirements mandating that LHMC assess community health need, engage the community, and identify priority health issues every three years. The commonwealth and federal requirements further direct LHMC to create a community health improvement plan that will guide how LHMC, in collaboration with the community, its network of health and social service providers, and the local health departments, will address the identified needs and priorities.

With respect to community benefits, LHMC works with these partners and collaborators to increase access to hospital emergency and inpatient services, specialty care services, primary care, behavioral health services, and other needed community services. In addition, LHMC supports or implements community health programs that promote health education and reduction of health care risk factors (e.g., poor nutrition, lack of physical activity, tobacco use, alcohol abuse), as well as ensure that those in its primary service area are provided chronic disease management services. LHMC also works with partners to reduce the burden of mental illness and substance use. This work is done in partnership with an extensive array of health, social service, public health, and other community-based organizations throughout LHMC's primary service area.

Demographically and socio-economically, LHMC focuses its activities to meet the needs of all segments of the population, but it focuses its efforts particularly on those who may face disparities due to socio-economic status, race/ethnicity, age, or other demographic and social characteristics.

Approach and Methods

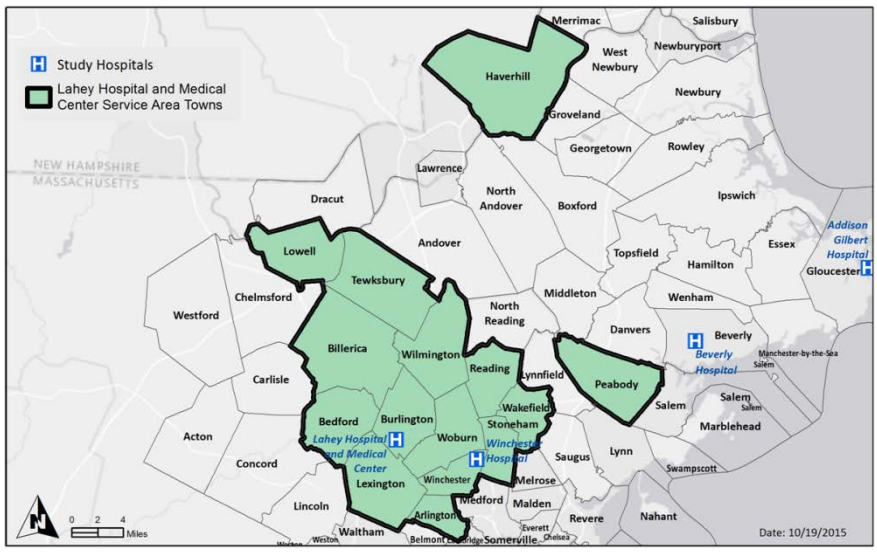
The CHNA was conducted in three phases, which allowed LHMC to 1) compile an extensive amount of quantitative and qualitative data; 2) engage and involve key stakeholders, LHMC clinical and administrative staff, and the community at large; 3) develop a report and detailed strategic plan; and 4) comply with all commonwealth Attorney General and federal IRS community benefits requirements. Data sources included a broad array of publicly available secondary data, key informant interviews, community forums, and the 2015 LHMC Community Health Survey, which captured information from hundreds of random households in LHMC's primary service area.

Phase 1	Phase 2	Phase 3
Identify health needs	*Engage key stakeholders*	*Develop Community Health Needs Assessment and Improvement Plan*
Quantitative data • Vital statistics, Cancer Registry, Communicable Disease Registry, etc. (MassCHIP) • Behavioral Risk Factor Surveillance Survey (MA DPH) • American Community Survey (US Census) • Claims data (CHIA) **Qualitative data** • Community interviews	**Quantitative data** • Community Health Survey • Additional quantitative data **Qualitative data** • Internal Key informant interviews • Community listening sessions **Analysis** • Comparative / benchmarking • GIS mapping	**Planning & Reporting** • Strategic Planning Retreat • Share Key Findings from Planning Retreat • Development of Community Health Needs Assessment • Development of Community Health Improvement Plan

LHMC Community Benefits Service Area

LHMC serves individuals who come from throughout the United States and from nations throughout the world. With respect to community benefits, LHMC focuses its efforts more narrowly on the communities in its primary, local service area. More specifically, LHMC's community benefits investments are focused on expanding access, addressing barriers to care, and improving the health status of residents living in the following 13, mostly contiguous, municipalities located in Middlesex and Essex counties: Arlington, Bedford, Billerica, Burlington, Lexington, Peabody, Reading, Stoneham, Tewksbury, Wakefield, Wilmington, Winchester, and Woburn. LHMC also serves patients from Lowell and Haverhill due to long-standing program affiliations in these cities/towns and as a result has collected health status information from these communities. However, because these communities are included in other hospitals' community benefits service areas, they have not been included in LHMC's Community Health Improvement Plan.

LHMC Community Benefits Service Area



Demographically and socio-economically, LHMC focuses its community benefits activities to meet the needs of all segments of the population with respect to age, race/ethnicity, income, and the broad range of other ways that populations characterize themselves, to ensure that all residents have the opportunity to live healthy, happy, and fulfilling lives. However, per federal status and commonwealth guidelines, LHMC's community benefits activities are focused particularly on those population segments identified by the needs assessment as being most at risk — more specifically, low-income individuals and families, youths and adolescents, older adults, and other vulnerable populations. The body of evidence and academic literature have shown that these populations are more likely to face disparities with respect to social determinants of health, access to care, and health outcomes. A map showing the hospital locations and the specific cities and towns that are part of LHMC's community benefits service area is included above.

Key Health-Related Findings

Following are the key health-related findings drawn from the assessment's interviews and community forums, as well as a review of the existing quantitative data.

- **Social Determinants of Health Have a Major Impact on Many Segments of the Service Area's Population.** Relative to the commonwealth overall, most of the communities in LHMC's primary service area are affluent and fare well with respect to the leading health indicators. However, there are segments of the population that struggle to access needed health services and experience disparities in health outcomes. One of the dominant themes from the assessment's key informant interviews and community forums was the impact that the underlying social determinants of health have on the primary service area, particularly on low-income, racially/ethnically diverse, and older adult cohorts. Social determinants such as poverty, lack of employment opportunities, limited transportation, limited health literacy, linguistic barriers, lack of social support, and domestic violence limit many people's ability to care for their own and their family's health.
    - **Low Income.** Lowell was the only town involved in the assessment that had a statistically higher percentage of both persons living in poverty and persons living in low-income households (households earning less than 200% of the federal poverty level) than the commonwealth overall.. In Lowell, 19% were living in poverty, compared to 11% for the commonwealth, and 38.7% were living in low-income households earning less than 200% of the federal poverty level, compared to 25% for the commonwealth.[1]
    - **Economic Challenges.** Other than Lowell, the cities/towns in LHMC's primary service area with the highest proportions of low-income individuals were Billerica (13.4%), Haverhill (28.4%), Peabody (18.1%), and Woburn (22%).[2]
    - **Older Adults.** Ten out of the 15 cities/towns in LHMC's community benefits service area had a higher percentage of older adults (65+), compared to the commonwealth overall. Towns in LHMC's primary service area with the highest percentages of residents 65 or older were Bedford, Burlington, Peabody, and Stoneham.[3]

[1] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[2] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[3] 2009-2013 U.S. Census Bureau American Community Survey (ACS)

- **Adolescents.** Five of 15 cities/towns in LHMC's community benefits service area had a higher percentage of youths ages 10-14. Bedford, Billerica, Lexington, Reading, and Winchester all had higher percentages of residents ages 10-14 than the commonwealth average.[4]
- **Foreign Born.** Nineteen percent of Middlesex County reported as being foreign residents, compared to 15% of residents of the commonwealth overall. Towns with the largest percentages of foreign-born populations in the primary service area were Arlington, Burlington, Lexington, and Lowell, which all reported higher percentages of foreign born. Only Lexington and Lowell had higher than average levels of residents speaking languages other than English, with all other towns not reporting levels higher than the commonwealth average of 22%.[5]

- **Limited Access to Primary Care, Oral Health, and Behavioral Health Services for Low-Income, Medicaid-Insured, Uninsured, and Other Vulnerable Population Segments.** Massachusetts has one of the highest rates of health insurance coverage and one of the strongest, most robust health service systems in the nation. Nonetheless, there are still pockets of low-income, Medicaid-insured, uninsured, and underinsured residents in the service area who have limited access to needed services and/or are not properly engaged in essential medical, oral, and behavioral health services. Behavioral health and oral health services are a particular concern. As will be discussed below, these populations are, in turn, more likely to use the emergency room and more likely to have health risk factors such as obesity, poor fitness, and risky alcohol use, and be more prone to diabetes, hypertension, and asthma.
  - **High Insurance Coverage Rates Commonwealth-wide.** Massachusetts leads the nation with the lowest commonwealth/state uninsurance rates in the nation. In 2014, only 4% of residents in the commonwealth lacked medical health insurance, compared to 10% nationally, due to the state's early health care reform efforts, which began in 2006.[6] The largest group of uninsured residents in the commonwealth is undocumented immigrants, followed by those struggling with administrative and policy barriers related to retaining coverage.
  - **High Uninsurance Rates in Low-Income Populations.** Low-income residents are much more likely to be uninsured than residents in middle- and upper-income brackets. According to the 2015 LHMC Community Health Survey, 2.7% of all respondents from LHMC's primary service area were uninsured, compared to 8.1% of low-income respondents.[7]
  - Key informants and community forum participants stressed the fact that despite the relative affluence of the area, there were pockets of service area residents who struggled

[4] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[5] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[6] Kaiser Family Foundation, Health Insurance Coverage of the Total Population. http://kff.org/other/state-indicator/total-population/
[7] 2015 Lahey Health Medical Center (LHMC) Community Health Survey. In order to ensure an appropriate, statistically sound sample size, all low-income respondents from each of the surveys conducted by Lahey Health System's three hospital partners were aggregated.

with poor health outcomes and faced significant barriers to accessing care.[8] These populations were more likely to be low income, older adults, or foreign born.

- **Lack of Access to Primary Care.** According to the 2015 LHMC Community Health Survey, 72.9% of all respondents from LHMC's primary service area had seen a primary care provider in the past 12 months, compared to only 65.7% of low-income respondents.[9]
- **Higher Emergency Department Utilization.** According to the 2015 LHMC Community Health Survey, 21.7% of all respondents from LHMC's primary service area had at least one hospital emergency department visit in the past 12 months, compared to 29.1% of low-income respondents.
- **Lack of Access Due to Cost of Care.** Three in 10 (30.1%) of those living at or below 138% of the federal poverty level reported not getting needed dental care due to cost, and 1 in 5 (19.3%) were not able to fill a needed drug prescription due to cost.[10]

- **High Rates of the Leading Health Risk Factors.** Another leading finding drawn from the assessment's quantitative data was the fact that many cities and towns in LHMC's primary service area have rates of chronic physical and behavioral health conditions that are higher than commonwealth averages. In some people, these conditions have underlying genetic and biological causes that are difficult to counter. However, most of these conditions are considered preventable or at least manageable. Addressing the leading health risk factors (i.e., obesity, lack of fitness, poor nutrition, tobacco use, and alcohol abuse) is critical to chronic disease prevention and management efforts. It should be noted that most cities and towns in LHMC's primary service area fare well as a whole compared with commonwealth averages for these risk factors. However, there are cities/towns whose rates are not as favorable and segments of populations in all municipalities that do not fare as well and have major risk factors. As stated above, those at risk are more likely to be low income, older adults, or foreign born.
  - **Overweight/Obese.** Based on responses from the 2015 LHMC Community Health Survey, the percentage of adult respondents (18+) who reported as either obese or overweight was higher (60.8%) than the percentage for the commonwealth (58%). Even more notably, adults in households earning below 200% of the federal poverty level were even more likely to be overweight or obese, with 72% of low-income individuals reporting as either overweight or obese.[11]
  - **Cigarette Smoking.** According to the 2015 LHMC Community Health Survey, 10% of adult respondents (18+) reported as current cigarette smokers, compared to 22% of low-income respondents. commonwealth-wide, 16.6% of adults reported as current cigarette smokers.[12]
  - **Alcohol Use.** According to the 2015 LHMC Community Health Survey, 10% of adult respondents reported as heavy drinkers, defined as more than 60 drinks a month for

[8] 2015 LHMC Key Informant Interviews and Community and Provider Forums
[9] 2015 LHMC Community Health Survey
[10] Center for Health Information and Analysis. Findings from the 2014 Massachusetts Health Insurance Survey. May 2015. Accessed at: http://www.chiamass.gov/assets/docs/r/pubs/15/MHIS-Report.pdf
[11] 2015 LHMC Community Health Survey; 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[12] 2015 LHMC Community Health Survey; 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)

men and 30 drinks a month for women, compared to only 8% of adults in the commonwealth overall. Similarly, 23% of respondents reported "binge drinking" — more than five alcoholic drinks at any one sitting for men and more than four drinks for women — compared to only 18.4% for commonwealth residents overall.[13]

- **High Rates of Substance Use and Mental Health Issues.** One of the leading findings from the assessment was the profound impact that substance use and mental health are having on individuals, families and communities throughout LHMC's primary service area. Depression/anxiety, suicide, alcohol abuse, opioid and prescription drug abuse, and marijuana use among youths are major health issues. Numerous residents and area service providers spoke passionately during interviews and community forums about the tremendous impact that these issues have on many individuals and families in the primary service area. Opioid abuse was a particular concern for residents and service providers in LHMC's primary service area, and all segments of the population (by age and income) called for greater outreach, education, screening, and treatment services.
    - **Substance Use Deaths.** Middlesex County experienced more than a 200% increase in opioid overdose deaths between 2001 and 2014. Specifically, in 2001, 76 deaths were reported due to opioid abuse in Middlesex County. By 2013 this number had risen to 147, and between 2013 and 2014 the figure rose to 257 deaths.[14]
    - **Substance Use-related ED Visits.** Startlingly, 10 out of the 15 cities/towns in LHMC's primary service area had statistically higher rates of opioid-related emergency department visits per 100,000 population than the commonwealth or Middlesex County, with Wakefield posting the highest rate at 518 visits per 100,000, followed by Peabody (479), Haverhill (461), Stoneham (398), Wilmington (384), Tewksbury (372), Billerica (364), Reading (333), Woburn (332), and Lowell (307). The commonwealth rate for opioid-related emergency department visits was 260 per 100,000 population, and the Middlesex County rate was 227.[15]
    - **Substance Use-related Hospitalizations.** Stoneham (367) and Lowell (356) each had rates of opioid-related hospitalizations per 100,000 population that were significantly higher than the rates for Middlesex County (208) and the commonwealth overall (316).[16]
    - **Alcohol Use.** According to the 2015 LHMC Community Health Survey, approximately 10% of adults reported as heavy drinkers, compared to only about 8% for the commonwealth overall.[17]
    - **Binge Drinking.** According to the 2015 LHMC Community Health Survey, 23% of respondents reported "binge drinking" — more than five alcoholic drinks at any one

[13] 2015 LHMC Community Health Survey; 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[14] Massachusetts Department of Public Health. Data Brief: Fatal Opioid-related Overdoses among Massachusetts Residents. 2015.
[15] 2008-2012 Massachusetts Hospital Emergency Visit Discharges
[16] 2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS)
[17] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)

sitting for men and more than four drinks for women — compared to only 16% for low-income respondents and 18.4% for commonwealth residents overall.[18]

- **Mental Health.** According to the 2015 LHMC Community Health Survey, approximately 6% of adult respondents (18+) reported as being in poor mental or emotional health more than 15 days per month, compared to approximately 10% for low-income individuals. commonwealth-wide, 11% of adults reported as being consistently in poor mental or emotional health.[19]
- **Mental Health-related Hospitalization Rates.** Haverhill (4,973), Lowell (4,752), and Peabody (4,270) had statistically higher hospitalization rates for all mental health-related disorders per 100,000 population than Middlesex County (3,266) and the commonwealth (3,840).[20]
- **Mental Health-related ED Visits.** With respect to mental health-related emergency department visits per 100,000 population, Haverhill (7,078), Lowell (5,614), and Peabody (5,795) also had statistically higher rates than Middlesex County (4,074) and the commonwealth (4,990).[21]

- **High Rates of Chronic and Acute Physical Health Conditions, Particularly for Low-Income Populations (e.g., heart disease, hypertension, cancer, and asthma).** The assessment's quantitative data show that LHMC's service area fares better than the commonwealth overall with respect to chronic disease rates, but a number of towns fare less favorably, and the rates for low-income and older adult populations are very high. It should be noted that even for those communities that do not have rates that are statistically higher than the commonwealth's, these conditions are still the leading causes of premature death.
  - **Diabetes.** Among 2015 LHMC Community Health Survey respondents, 7.6% of all respondents reported that they had been told that they have diabetes, compared to 8.5% of adults (18+) in the commonwealth overall. However, among low-income respondents to the Community Health Survey, 12.1% reported that they had been told they have diabetes.[22]
  - **Hypertension.** Twenty-five percent of respondents from the 2015 LHMC Community Health Survey reported being told that they have hypertension, compared to 29% for the commonwealth overall. However, among low-income respondents, 32% reported that they had been told they have hypertension.[23]
  - **Asthma.** Fourteen percent of the 2015 LHMC Community Health Survey respondents reported being told they have asthma, compared to 17% for the commonwealth overall. The percentage for low-income respondents in this case was actually lower at 13%; however, low-income respondents were considerably more likely to be seen in the hospital emergency department for urgent care. For the entire survey sample, 8% of

[18] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[19] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[20] 2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS)
[21] 2008-2012 Massachusetts Hospital Emergency Visit Discharges
[22] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[23] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)

asthmatics had an emergency department visit, compared to 19% of low-income respondents.[24]

- **Chronic Disease "Hotspots."** Residents of Billerica, Haverhill, Lowell, Peabody, Tewksbury, and Woburn were more likely than those of other towns in LHMC's primary service area to be hospitalized for or die from chronic conditions such as diabetes, hypertension, cardiovascular disease, cerebrovascular disease, asthma, and COPD. Each of these cities/towns had rates of hospitalization or death that were statistically higher than the commonwealth for at least three of these six conditions. Lowell had statistically higher rates for six of the six conditions; Haverhill and Peabody had statistically higher rates for five of six conditions.[25]

- **High Rates of Cancer, Particularly for Low-Income, Racially/Ethnically Diverse, and Otherwise At-risk Population Segments.** Many of the communities that are part of LHMC's primary service area have high cancer incidence, hospitalization, or mortality rates. This is particularly true for certain cancers in specific communities. Myriad factors are associated with cancer, and many of them are very difficult to assess completely or to address. However, at the root of addressing cancer and high mortality are screening, early detection, peer support, and access to timely, supportive, quality treatment.

  - **Cancer.** Seven of the 15 towns that are part of LHMC's primary service area (Billerica, Burlington, Peabody, Reading, Tewksbury, Wilmington, and Woburn) reported statistically higher cancer incidence rates (all cancer types) than did the commonwealth. The highest cancer incidence rate per 100,000 population was in Wilmington (588), followed by Burlington (579), Peabody (575), Reading (561), Tewksbury (578), and Woburn (562). These rates compare to 509 for the commonwealth and 531 for Essex County.[26]

    Of all respondents to the 2015 LHMC Community Health Survey, 11.6% reported that they had been told they have cancer, compared to 11.1% for residents of the commonwealth; 17% of low-income respondents to the survey had been told they have cancer.[27]

  - **Lung Cancer.** Lung cancer rates were most likely to be higher than other cancer rates in the commonwealth. The following towns had higher lung cancer rates than the commonwealth (70 per 100,000 population) and county (68): Billerica (100), Peabody (87), Wilmington (95), and Woburn (89).[28]

  - **Breast Cancer.** Hospitalization rates for breast cancer in women were statistically higher than the commonwealth's across nearly all of the primary service area's cities/towns. However, only Reading (179) had an incidence rate per 100,000 population that was statistically higher than the commonwealth's (135).[29]

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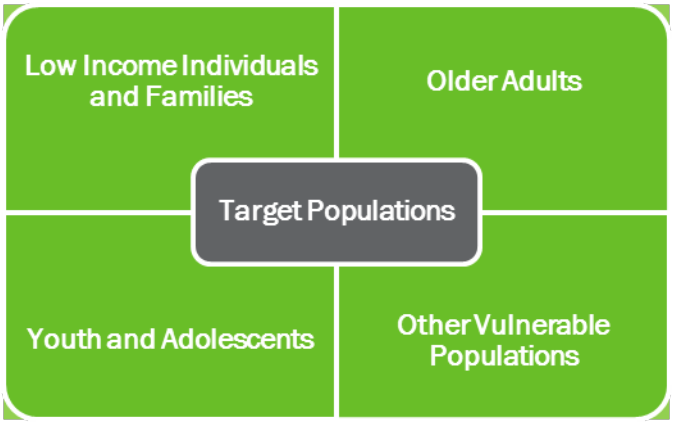
[24] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[25] 2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS); 2008-2012 Massachusetts Vital Mortality
[26] 2007-2011 Massachusetts Cancer Registry
[27] 2015 LHMC Community Health Survey; 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[28] 2007-2011 Massachusetts Cancer Registry
[29] 2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS)

- **Cancer Screening.** According to the 2015 LHMC Community Health Survey, there were lower rates of mammography screening for women 40+ within the past two years — 80% in LHMC's primary service area, compared to 85% commonwealth-wide.[30]

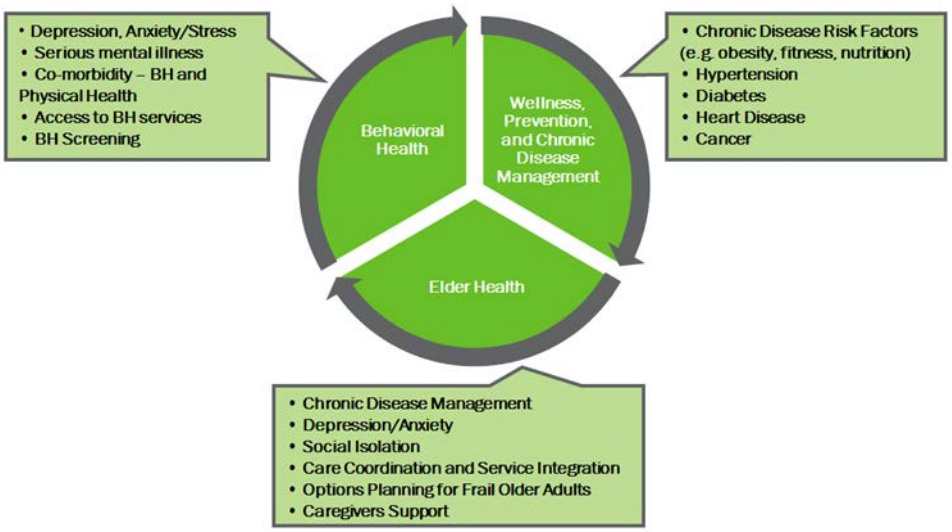
Priority Target Populations



LHMC focuses its activities to meet the needs of all segments of the population with respect to age, race, ethnicity, income, gender identity, and sexual orientation to ensure that all residents have the opportunity to live healthy lives. However, based on the assessment's quantitative and qualitative findings, there was broad agreement that LHMC's CHIP should target low-income populations (low-income individuals/families, older adults on fixed incomes, and homeless), older adult populations (e.g., frail, isolated older adults), youths/adolescents (e.g., 13-18 year-olds, those in middle school and high school), and other vulnerable populations (e.g., diverse racial/ethnic minority and linguistically isolated populations) that are more likely than other cohorts to face disparities in access and health outcomes.

Community Health Priorities

The LHMC CHNA's approach and process provided ample opportunity to vet the quantitative and qualitative data compiled during the assessment. LHMC has framed the community health needs in three priority areas, which together encompass the broad range of health issues and social determinants of health facing LHMC's community benefits service area. These three areas are 1) Wellness, Prevention, and Chronic Disease Management; 2) Elder Health; 3) Behavioral Health (mental health and substance use). LHMC already has a robust Community Health Improvement Plan that has been addressing all of the issues identified. However,



[30] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)

this CHNA has provided new guidance and invaluable insight on quantitative trends and community perceptions that can be used to inform and refine LHMC's efforts. The following are the core elements of LHMC's updated Community Health Improvement Plan.

Summary Community Health Improvement Plan

The following outlines LHMC's goals for addressing the target populations and community health priorities identified above.

Priority Area 1: Wellness, Prevention, and Chronic Disease Management
Goal 1: Promote Wellness, Behavior Change, and Engagement In Appropriate Care (physical, mental, emotional, and behavioral health)
Goal 2: Increase Physical Activity and Healthy Eating
Goal 3: Identify Those with Chronic Conditions or at Risk; Screen, and Refer for Counseling/Treatment
Goal 4: Promote Stanford Model Chronic Disease Self-Management Program (for cardiovascular disease, diabetes, cancer, etc.)
Goal 5: Enhance Care Coordination, Counseling, and Referral Services During/After Hospital Discharge
Priority Area 2: Elder Health
Goal 1: Promote General Health and Wellness
Goal 2: Improve Access to Care
Goal 3: Enhance Access to Health and Wellness Services Through Improved Transportation
Goal 4: Improve Chronic Care Management
Goal 5: Reduce Falls
Goal 6: Enhance Care Coordination, Counseling, and Referral Services During/After Hospital Discharge
Goal 7: Enhance Caregiver Support and Reduce Family/Caregiver Stress
Goal 8: Decrease Depression and Social Isolation
Priority Area 3: Behavioral Health (Mental Health and Substance Use)
Goal 1: Promote Outreach, Education, Screening, and Treatment for Those with Mental Health and Substance Use Issues in Clinical and Community-based Settings
Goal 2: Increase Access to Mental Health and Substance Abuse (MH/SA) Services
Goal 3: Improve Integration of MH/SA and Primary Care Medical Services
Goal 4: Increase Awareness of and Screening for Domestic Violence (DV) Throughout LHMC

Acknowledgments

This Community Health Needs Assessment (CHNA) was developed through a collaborative assessment process with the three hospital systems that are part of Lahey Health — Northeast Health Corporation (Beverly Hospital and Addison Gilbert Hospital), Winchester Hospital, and Lahey Hospital Medical Center.

Lahey Hospital Medical Center (LHMC) would like to acknowledge the great work, support, and commitment of the Lahey Health CHNA Advisory Committee and the LHMC Community Benefits Committee, which met periodically throughout the assessment in order to keep abreast of the assessment's progress and to provide important feedback on the process.

Since the beginning of the assessment in April 2015, dozens of individuals have participated in interviews and community forums, including representatives from health and social services organizations, public health departments, community advocacy groups, and community businesses, as well as from the community at large. This information gathering process allowed LHMC to engage the community and gain a better understanding of community capacity, strengths, and challenges as well as community health status, barriers to care, service gaps, underlying determinants of health, and overall community need. In addition, hundreds of community members from LHMC's primary service area completed lengthy community health surveys. The information gathered through this survey was critical to assessing need and will be an important source of information moving forward to target LHMC's community benefits strategies.

LHMC would like to thank everyone who was involved in this assessment, but particularly the region's service providers, health departments, advocacy groups, and community members who invested their time, effort, and expertise through interviews, surveys, and community forums to ensure the development of a comprehensive, thoughtful, and quality assessment. While it was not possible for this assessment to involve all of the community's stakeholders, care was taken to ensure that a representative sample of key stakeholders was engaged. Those involved showed a real commitment to strengthening the region's system of care, particularly for those segments of the population who are most at risk. This assessment would not have been possible or nearly as successful without the support of all of those who were involved. Please accept our heartfelt appreciation and thanks for your participation in this assessment.

John Snow, Inc. (JSI)

John Snow, Inc., and our nonprofit JSI Research & Training Institute, Inc., form a public health management consulting and research organization dedicated to improving the health of individuals and communities throughout the world. JSI's mission is to improve the health of underserved people and communities and to provide a place where people of passion and commitment can pursue this cause.

For over 35 years, Boston-based JSI and our affiliates have provided high-quality technical and managerial assistance to public health programs worldwide. JSI has implemented projects in 106 countries, and currently operates from eight U.S. and 81 international offices, with more than 500 U.S.-based professionals and 1,600 host-country staff.

JSI is deeply committed to improving the health of individuals and communities worldwide. We work in partnership with governments, organizations, and host-country experts to improve the quality, access, and equity of health systems worldwide. We collaborate with government agencies, the private sector, and local nonprofit and civil society organizations to achieve change in communities and health systems.

Table of Contents

Executive Summary 2
Acknowledgements 12
John Snow, Inc. (JSI) 13
List of Tables, Figures, and Maps 15
Introduction 16
Overview of Community Benefits Service Area and Target Population 17
Approach and Methods 18
Leading CHNA Findings 22
Population Characteristics, Determinants of Health, and Health Equity 22
Major Findings by the Leading Areas of Health-Related Need 28
Insurance Coverage and Usual Source of Primary Care 29
Health Risk Factors 31
Mortality and Premature Mortality 34
Health Care Utilization 37
Chronic Disease 38
Cancer 39
Behavioral Health 41
Elder Health 44
Maternal and Child Health 46
Youth and Adolescents 47
Target Populations Most At-risk 48
Community Health Priorities 48
LHMC's Summary Community Health Improvement Plan 49

List of Tables, Figures, and Maps

TABLES	PAGE
Figure 1: Commonwealth and Federal Community Benefits Requirements	16
Figure 2: Lahey Hospital & Medical Center Service Area	17
Figure 3: CHNA Approach and Methods	18
Figure 4: CHNA Data Sources by Level of Geography	19
Figure 5: Community and Provider Forums	20
Figure 6: Demographic/Socio-Economic Characteristics of the LHMC Service Area	27
Figure 7: Percent with Routine Checkup in Past 12 Months, 2015	29
Figure 8: Percent Overweight or Obese, 2015	31
Figure 9: Percent Current Smokers, 2015	32
Figure 10: Percent Binge Drinkers, 2015	33
Figure 11: Deaths from Selected Causes in Massachusetts, 1842-2012	34
Table 12: Leading Causes of Death in Massachusetts and the United States, 2012	35
Figure 13: Cardiovascular Disease Hospitalizations (Per 100,000 Population)	36
Figure 14: Hypertension Hospitalizations (Per 100,000 Population)	37
Figure 15: Percent Ever Been Told Had Hypertension, 2015	38
Figure 16: Cancer Incidence (All Cancer Types) (Per 100,000 Population)	40
Figure 17: Mental Health Emergency Department Discharges (Per 100,000 Population)	41
Figure 18: Alcohol/Substance Abuse-Related Emergency Department Discharges (Per 100,000 Population)	42
Figure 19: Unintentional Opioid Overdose Death Rate by County, Jan. 2013-Sept. 2015	44
Figure 20: Percent Older Adults (65 Years Old or Older)	44
Figure 21: Percent Ever Been Told Had Hypertension by Age, 2015	45
Figure 22: LHMC Community Benefits Target Population	48
Figure 23: LHMC Community Health Priorities	49

Introduction

Tax-exempt hospitals like Lahey Hospital & Medical Center (LHMC) play essential roles in the delivery of health care services and as a result are afforded a range of benefits, including commonwealth and federal tax-exempt status. With this status come certain fiduciary and public obligations. The primary obligation of tax-exempt hospitals is that they provide charity care to all qualifying individuals. Another obligation is that they conduct periodic Community Health Needs Assessments (CHNAs) to support the implementation of community-based programs geared to improving health status and strengthening the health care systems in which they operate. More specifically, the IRS requires tax-exempt hospitals to conduct a CHNA and to develop an associated Community Health Improvement Plan (CHIP) every three years. Finally, it is expected that these activities be done in close collaboration with the area's health and social services providers, the local public health departments, other key stakeholders, and the public at large.

Figure 1: Commonwealth and Federal Community Benefits Requirements

Massachusetts Voluntary Guidelines

Hospitals are required to provide charity care as a condition of Massachusetts licensure – maintaining or increasing the percentage of patient revenues allocated to free care

The Attorney General's Office has developed a set of Voluntary Guidelines for non-profit hospitals and health plans. Specifically, non-profit hospitals are expected to:

- Affirm and publicize a community benefits mission statement
- Demonstrate institutional support / involvement
- Demonstrate involvement of the community
- Involve local public health departments
- Conduct a Community Health Needs Assessment
- Identify target populations, specific programs that meet identified need, and measurable goals
- Submit a community benefits report to the AG's office

Federal IRS Requirements

The Patient Protection and Affordable Care Act (PPACA) established requirements for non-profit hospitals under § 501(r) of the Internal Revenue Code. The federal code requires that tax-exempt hospitals:

Conduct a Community health needs assessment

- Engage community stakehodlers including local health departments
- Prioritize leading health issues
- Conduct evidence-based planning activities addressing key health issues
- Implement a community health improvement strategy

Community Benefits expenditure categories include:

- Uncompensated Care
- Medical, Education & Training
- Medical Research
- Community Health Programming

LHMC recognizes the merit and importance of these activities and, as such, LHMC's efforts over the past year extend far beyond meeting commonwealth expectations or federal regulatory requirements. A robust, comprehensive, and objective assessment of community health need and service capacity, conducted collaboratively with key stakeholders and the community at large, allows LHMC not only to fulfill its public obligations, but also to explore ways to more effectively leverage its community benefits activities and resources and align these with the organization's broader business and strategic objectives. The CHNA process facilitates community partnerships and fosters broad community engagement. These efforts can promote the development of more targeted, integrated, and sustainable community benefits activities.

This report along with the associated CHIP is the culmination of more than a year of work. It summarizes the findings from LHMC's CHNA and provides the core elements of LHMC's CHIP,

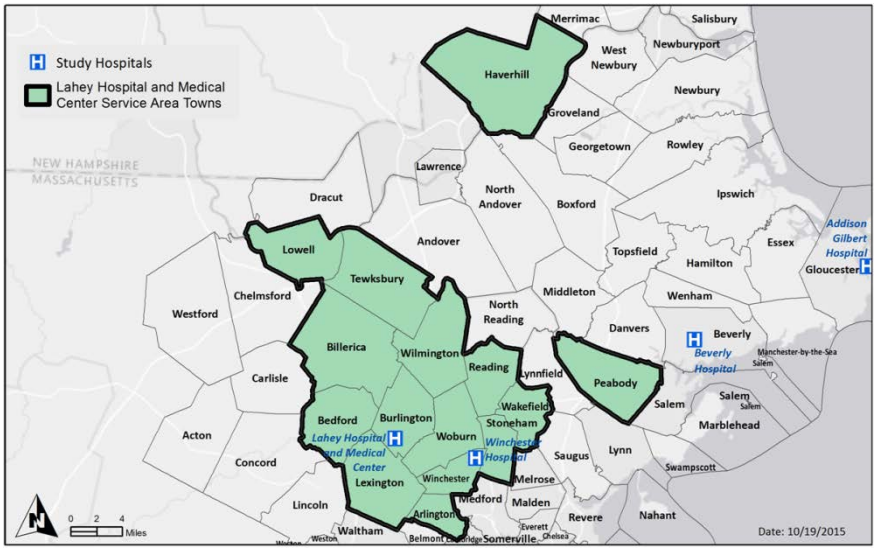
including the major goals that will guide the plan. LHMC's Community Relations Department, with the full support of LHMC's Board of Directors, clinicians, and administrators, looks forward to working with community partners, local health departments, and community residents to address the issues that arose from the CHNA and to implement the CHIP.

Included below are further details regarding LHMC's community benefits service area and target population as well as detailed descriptions of how the CHNA was completed and the CHIP developed.

Overview of Community Benefits Services Area and Target Population

LHMC is a world-renowned academic medical center with a reputation for clinical excellence and is the leading provider of health care services for residents and visitors of Middlesex and Essex counties in Massachusetts. LHMC is a physician-led, nonprofit group practice providing quality health care in virtually every specialty and subspecialty, from primary care to cancer diagnosis and treatment to kidney and liver transplantation. The LHMC health care system comprises medical centers in Burlington, Lexington, and Peabody, Massachusetts, as well as more than a dozen community primary care and satellite specialty care locations throughout northeastern Massachusetts and southern New Hampshire. LHMC has more than 500 physicians, 5,000 employees, and 1,100 volunteers.

Figure 2: Lahey Hospital & Medical Center Service Area



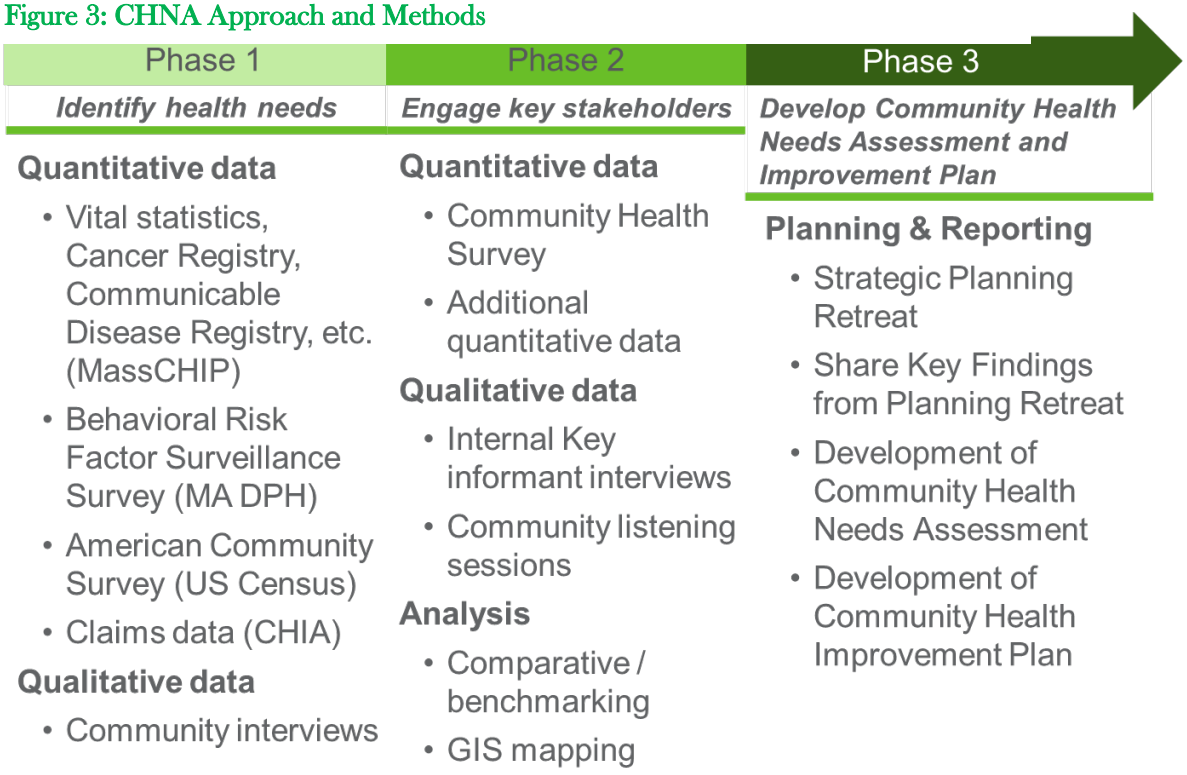
LHMC serves individuals who come from throughout the United States and from nations throughout the world. With respect to community benefits, LHMC focuses its efforts more narrowly on the communities in its primary, local service area. More specifically, LHMC's community benefits investments are focused on expanding access, addressing barriers to care, and improving the health status of residents living in 13 mostly contiguous municipalities located in Middlesex and Essex counties: Arlington, Bedford, Billerica, Burlington, Lexington, Peabody, Reading, Stoneham, Tewksbury, Wakefield, Wilmington, Winchester, and Woburn. LHMC also serves patients from Lowell and Haverhill due to long-standing affiliations in these cities/towns, and as a result has collected health status information from these communities. However, because these communities are included in other hospitals' community benefits service areas, they have not been included in LHMC's Community Health Improvement Plan.

Demographically and socio-economically, LHMC focuses its community benefits activities to meet the needs of all segments of the population with respect to age, race/ethnicity, income, and the broad range of other ways that populations characterize themselves, to ensure that all residents have the opportunity to live healthy, happy, and fulfilling lives. However, its community benefits activities are

focused particularly on low-income individuals and families, racial/ethnic minorities, older adults, and those who are geographically or otherwise isolated. The body of evidence and academic literature has shown that these populations are more likely to face disparities with respect to social determinants of health, access to care, and health outcomes. A map showing the hospital locations and the specific cities and towns that are part of LHMC's community benefits service area is included above in Figure 2.

Approach and Methods

Figure 3: CHNA Approach and Methods



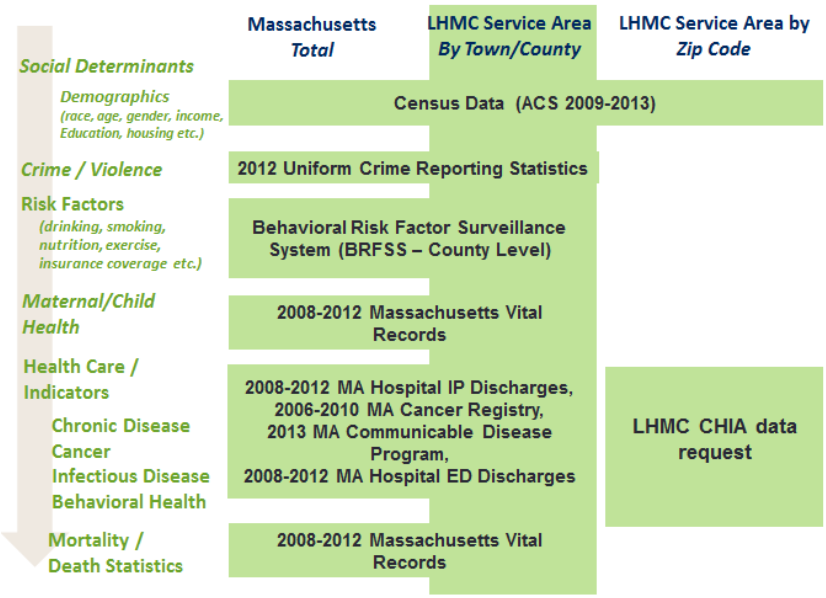
The CHNA was conducted in three-phases. Phase I involved a rigorous and comprehensive review of existing quantitative data along with qualitative interviews with key stakeholders to characterize community needs. Phase II involved a more targeted assessment of need and broader community engagement activities that included additional interviews and community listening sessions with health, social services, and public health service providers, as well as forums that included the community at large. Another major component of Phase II was the implementation of the 2015 LHMC Community Health Survey, which collected information directly from community residents through a random household mail survey. Finally, Phase III involved a series of strategic planning and reporting activities that involved a broad range of internal and external stakeholders. This phase also included a range of community forums, whereby LHMC communicated the results of the CHNA and outlined the core elements of its current and revised CHIP. Figure 3 provides a visual of the approach's key components. Following is a more detailed discussion of these components.

Characterize Population and Community Need

In Phase I and Phase II, the JSI Project Team strived to gain an understanding of health-related characteristics of the region's population, including demographic, socio-economic, geographic, health status, care seeking, and access to care characteristics. This involved quantitative and qualitative *data analysis, including, to the extent possible, an analysis of changes over time using trend data and information from previous assessments.*

Community-specific health data analysis. *JSI* characterized health status and need at the town, zip code, and census tract level. JSI collected data from a number of sources to ensure a comprehensive understanding of the issues. The primary source of secondary, epidemiologic data was the Massachusetts Community Health Information Profile (MassCHIP) data system.[31] Tests of significance were performed, and statistically significant differences between values are noted when applicable. More specifically, data provided by the MassCHIP resource is typically provided along with the 95% confidence interval for any given statistic. A confidence interval measures the probability that a population parameter will fall between two set values. Throughout our assessment, statistical significance is defined as two values with non-overlapping, 95% confidence intervals. JSI produced GIS maps that facilitated analysis and helped the Project Team visually present the data.

Figure 4: CHNA Data Sources by Level of Geography



These are the sources JSI used:

- U.S. Census Bureau, American Community Survey 5-Year Estimates (2009-2013)
- Behavioral Risk Factor Surveillance System (BRFSS) (2013-2014 aggregate)
- CHIA Inpatient Discharges
- Massachusetts Health Data Consortium (MHDC) Hospital Emergency Department Visits
- MA Hospital IP Discharges (2008-2012)
- MA Cancer Registry (2007-2011)

[31] Massachusetts Community Health Information Profile (MassCHIP) system. http://www.mass.gov/eohhs/researcher/community-health/masschip/

- MA Communicable Disease Program (2011 - 2013)
- MA Hospital ED Discharges (2008-2012)
- Massachusetts Vital Records (2008-2012)
- Massachusetts Bureau of Substance Abuse Services (BSAS) (2013)

Random household survey. *To obtain targeted, quantitative data directly from residents of LHMC's primary service area, JSI conducted a random household mail survey, which captured information from community residents on health status and overall well-being, barriers to care, service gaps, and perception of wellness in the community. A randomly generated sample of approximately 1,500 households was drawn from the LHMC primary service area. Selected households then received pre-notification letters seven to 10 days in advance of receiving surveys. Survey packets included postage-paid return envelopes and $5 cash incentives. Spanish versions were mailed upon request to respondents who called an 800 number set up for the survey. Reminder letters and additional survey packets were sent out in two-week intervals, while an online version was provided to non-respondents after eight weeks. In all, 1,137 community residents responded to the survey. A more detailed description of our survey approach and methods is included in the report's appendices.*

Key informant interviews with stakeholders. *JSI conducted* 28 external stakeholder interviews in the hospital's primary service area. Interviewees included staff at each participating hospital, primary care providers, behavioral health and mental health providers, community-based service organizations, community leaders, and local health officials. Interviews were conducted using a standard interview guide, and information was gathered related to major health issues, mortality/morbidity, barriers to care, underlying determinants of health, and service gaps that could not be identified through quantitative data. The goals of these interviews were 1) to understand what health issues were perceived by service providers and policymakers to be most critical and 2) to develop an inventory of resources in the region. One JSI staff person was the lead on all hospital interviews to ensure continuity of understanding of the hospitals' needs and resources. Interview notes were reviewed and extracted into a Google spreadsheet. A list of the interviewees is included in the report's appendices.

Capture Community Input

JSI conducted a series of community and provider forums in the hospital's primary service area to gather community input. During the community forums, JSI discussed findings from the assessment and posed a range of questions that solicited input on community need, perceptions, and attitudes, including 1) Does the data reflect what you see as the major needs and health issues in your community? Are the identified gaps the right ones? What segments of the populations are most at risk? What are the underlying social determinants of health status? 2) What strategies would be most effective to improve health status and outcomes in these areas?

The provider forums captured similar information, but more time was dedicated to discussing service gaps and strategies for improving health status and outcomes. The community and provider forums and their locations are listed in Figure 5.

Figure 5: Community and Provider Forums

Date	Event	Audience
Jan 18, 2016	LHMC Physician Leadership Committee	LHMC Clinicians/ Staff
Jan 19, 2016	Burlington Community Forum	Community
Jan 26, 2016	Peabody Community Forum	Community

Use Data to Prioritize Needs and Set Goals

The goal of the final phase of the assessment was to review the results, identify priorities, review existing community benefits activities, and determine a range of proven, feasible, evidence-based interventions that hospitals and other key providers believed would address the issues that identified community health priorities. One of the major goals of this phase was to develop a community benefits strategic framework that would clarify community health priorities and identify the range of health issues and subcomponents within each priority area. Drawing on the information gathered in Phases I and II, JSI presented CHNA findings, reviewed the breadth of LHMC's current community benefits programming, and explored how LHMC could refine or augment what it is currently doing to better address community need. These strategic planning activities involved LHMC's and Lahey Health's clinical and administrative leadership, the LHMC Board of Directors, community service providers, local public health officials, and other community leaders.

Data Limitations

Assessment activities of this nature nearly always face data limitations with respect to both quantitative and qualitative data collection. With respect to the quantitative data compiled for this project, the most significant limitation is the availability of timely data. Relative to most states and commonwealths throughout the United States, Massachusetts does an exemplary job at making comprehensive data available at the commonwealth, county, and municipal level. This data is made available through the Massachusetts Community Health Information Profile (MassCHIP) data system,[32] which is an internet-based resource provided by the Massachusetts Department of Public Health (MDPH).[33] MassCHIP makes a broad range of health-related data available to health and social services providers and the public at large. The data compiled for this assessment represented nearly all of the health-related data that was made available through MassCHIP.

The breadth of available demographic, socio-economic, and epidemiologic data was more than adequate to facilitate an assessment of community health need and support the CHIP development process, particularly as it was augmented by health status data captured by the 2015 LHMC

[32] Massachusetts Community Health Information Profile (MassCHIP) system. http://www.mass.gov/eohhs/researcher/community-health/masschip/

[33] The MassCHIP portal was down due to technical difficulties at the Massachusetts Department of Public Health, but JSI staff made a formal, comprehensive request in writing, which was met by staff at MDPH. This process limited our ability to do multiple, iterative data draws, but the JSI staff still was able to capture ample data through the MassCHIP system.

Community Health Survey. Nonetheless, the value of the data from MassCHIP was to some extent limited due to the fact that the information was often four to five years old. The list of data sources included in this report indicates the dates for each of the major data sets provided by the commonwealth. The data was still valuable and allowed us to identify health needs relative to the commonwealth and specific communities. However, older data sets may not reflect recent trends in health statistics. The age of the data also hindered trend analysis, as trend analysis required the inclusion of data up to 10 years old, which challenged any current analysis.

With respect to the random household mail survey, great efforts were made to ensure a representative sample and maintain the analytic power of our analysis. Our sampling strategy was driven by household address data collected at the municipality and census tract levels. A certain number of households was selected in each census tract based on the size of the municipality to ensure an appropriate distribution of households across the primary service area. In addition, we invested substantial resources to maximize our response rate, which ranged from 35% to more than 50% across the primary service area, with a total response rate for the LHMC primary service area of ~45%.

With respect to qualitative data, information gathered through interviews and community forums engaging service providers, health department officials, other community stakeholders, and/or community residents provided invaluable insights on major health-related issues, barriers to care, service gaps, and at-risk target populations. Overall, nearly 100 people were involved through our interviews, community forums, and strategic planning sessions. This is a considerable achievement but is still a relatively small sample, compared to the size of the resident and service provider populations overall. While every effort was made to advertise the community forums and to select a broadly representative group of stakeholders to interview, the selection or inclusion process was not random. In addition, the community forums did not exclude participants if they did not live in the particular region that the meeting was held, so feedback by meeting does not necessarily reflect needs or interests of the area in which the meeting was held.

Leading CHNA Findings

Population Characteristics, Determinants of Health, and Health Equity

An understanding of community need and health status in LHMC's community benefits service area must begin with an understanding of the population's characteristics as well as the underlying social, economic, and environmental factors that impact health status and health equity. This information is critical to 1) recognizing disease burden, health disparities and health inequities; 2) identifying target populations and health-related priorities; and 3) targeting strategic responses. The assessment captured a wide range of quantitative and qualitative data related to age, gender, race/ethnicity, income, poverty, family composition, education, violence, crime, unemployment, access to food and recreational facilities, and other determinants of health. This data provided valuable information that characterized the population as well as provided insights into the leading determinants of health and health inequities.

The following is a summary of key findings related to community characteristics and the social, economic, and environmental determinants of health for LHMC's community benefits service area. Conclusions were drawn from quantitative data and qualitative information collected through

interviews and community/provider forums. Summary data tables are included below, and more expansive data tables are included in the LHMC CHNA Data Appendices included with this report.

- **Age and Gender.** Age and gender are fundamental factors in determining community need. With respect to age, more densely populated geographies typically have younger populations than do suburban or rural geographies. LHMC's primary service area is a relatively suburban area, and these trends certainly apply in this case.
    - 10 out of the 15 cities/towns that were included in LHMC's assessment had a higher percentage of older adults (65+), compared to the commonwealth overall.[34]
    - Towns in LHMC's primary service area with the highest percentages of residents 65 or older were Bedford, Burlington, Peabody, and Stoneham.[35]
    - At the same time, many of the primary service area towns also had higher than average percentages of youth and young adults. Bedford, Billerica, Lexington, Reading, and Winchester all had higher percentages of residents ages 10-14 than the commonwealth average.[36]

  It should also be noted that a common theme throughout the stakeholder interviews and community/provider forums was that older adults (~65+ years old) and youth (~12-18 years old) represented two of the most vulnerable populations in the primary service area. This is not to say that young and middle-aged adults, 19-65 years of age, do not face important health issues. However, when community participants were asked to identify demographic segments of the population that were most at risk, they were more likely to cite adolescent (13-18 years old) and older adult (65 years old or older) populations than other cohorts.[37] The specific needs of these populations will be discussed in greater detail later in the report.

  With respect to gender, the primary service area's distribution mirrors that in the commonwealth, with all towns reporting 50-53% female and 47-50% male.[38] See Figure 6 for specific age distributions at the local, county, and commonwealth levels.

- **Race/Ethnicity, Foreign Born Status, and Language.** There is an extensive body of research and evidence that illustrates the health disparities that exist for racial/ethnic minorities, foreign born populations, and individuals with limited English language proficiency.[39] Overall, the primary service area has a relatively homogeneous, white, non-Hispanic population, although pockets of diversity do exist in selected communities. Burlington, Lexington, Lowell, and Winchester, for example, all had more non-Hispanic Asians than the commonwealth and county averages. Lowell and Haverhill also had higher percentages of Hispanic residents than did the commonwealth.[40]

[34] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[35] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[36] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[37] 2015 LHMC Key Informant Interviews and Community and Provider Forums
[38] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[39] Institute of Medicine. Coverage Matters: Insurance and Health Care. Accessed 6/2/16. http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2003/Coverage-Matters-Insurance-and-Health-Care/Uninsurance8pagerFinal.pdf
[40] 2009-2013 U.S. Census Bureau American Community Survey (ACS)

- 19.3% of the population living in Middlesex County was foreign born, compared to 14.9% for Essex County and 15.0% for the commonwealth.[41]
- Towns with the largest percentages of foreign born individuals in the primary service area were Arlington, Burlington, Lexington, and Lowell. Only Lexington and Lowell, however, had higher than average levels of residents speaking languages other than English, with all other towns not reporting levels higher than the commonwealth level of 21.9%.[42]

According to information gathered from our interviews and community forums, foreign born and racial/ethnic minority populations (e.g., Hispanics, Black/African Americans, Asian-Indians, Portuguese-speaking Brazilians) represent some of the most at-risk populations in the primary service area. A number of these interviewees or meeting participants cited the fact that often those most at risk are the older adult parents of those living in the region, who come to the area to live with or to visit their adult children.[43]

It should be noted that just because someone is foreign born, it does not mean that they face disparities in health outcomes or barriers to care. In fact, some foreign born cohorts are known to have generally better outcomes than the population overall. However, it does mean that they are more likely to face cultural, linguistic, or health literacy barriers that require a more tailored response.

- **Income, Education, and Employment.** Socio-economic status has long been recognized as a critical determinant of health. Higher socio-economic status, as measured by income, employment status, occupation, education, and the extent to which one lives in areas of economic disadvantage, is closely linked to health status, overall well-being, and premature death. Research shows that communities with lower socio-economic status bear a higher disease burden and have lower life expectancy. Residents of these communities are less likely to be insured, less likely to have a usual source of primary care, more likely to use the emergency department for emergent and non-emergent care, and less likely to access health services of all kinds, particularly routine and preventive services. Moreover, research shows that children born to low-income families are, as they move into adulthood, less likely to be formally educated, less likely to have job security, more likely to have poor health status, and less likely to rise to higher socio-economic levels.[44] A recent article published in the Journal of the American Medical Association (JAMA) studied life expectancy across the United States and identified demographic and socio-economic factors that were correlated more or less strongly with low life expectancy. Two of the strongest determinants of low life expectancy were whether individuals were immigrants or foreign born or whether they lived in low income communities. Those living in communities with a larger proportion of low-income

[41] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[42] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[43] 2015 LHMC Key Informant Interviews and Community and Provider Forums
[44] Alexander, K., Entwistle, D., and Olson, L. *Family Background, Disadvantaged Urban Youth, and the Transition to Adulthood, Russell Sage Foundation.* June 2014.

residents were much more likely to face disparities in life expectancy and other leading health indicators.[45]

- Between 2009 and 2013, Lowell was the only town involved in the assessment that had a statistically higher percentage of persons living in poverty and in low-income households earning less than 200% of the federal poverty level than did the commonwealth. In Lowell, 19% were living in poverty, compared to 11% for the commonwealth, and 38.7% were living in low-income households earning less than 200% of the federal poverty level, compared to 25% for the commonwealth.[46]
- Other than Lowell, the cities/towns in LHMC's primary service area with the highest proportions of low-income individuals were Billerica (13.4%), Haverhill (28.4%), Peabody (18.1%), and Woburn (22%).[47]

It is important to note that there are pockets of people living in poverty or low-income brackets in all communities, and there are also individuals who are temporarily unemployed, as well as disabled or older adults who struggle due to high housing or other living expenses. Often these individuals and their families struggle to pay for essential household items or are forced to make hard choices about what they live with and without.

With respect to education, only Haverhill, Lowell, and Peabody had higher percentages of residents with less than a high school diploma or GED equivalency than did the commonwealth overall.

- All other towns had at least 93% of residents with a high school diploma or GED.[48]
- Unemployment rates were lower in Middlesex County, compared to the commonwealth overall. As of April 2015, 3.3% of the population in Middlesex County was unemployed, compared to 4.7% for the commonwealth.[49]

- **Crime, Violence, and Community Cohesion.** Crime and violence are major issues in some communities, and these issues can have intense and far-reaching impacts on health status. In their extreme, these impacts can include death, injury, and economic loss, but they also include emotional trauma, anxiety, isolation, lack of trust, and an absence of community cohesion. Overall, according to quantitative data from the Massachusetts Department of Public Health and anecdotal information from key informants, crime and violence were not a leading health concern in LHMC's primary service area.[50]

[45] McGinnis J. Income, Life Expectancy, and Community Health: Underscoring the Opportunity. *JAMA*. 2016;315(16):1709-1710. doi:10.1001/jama.2016.4729.
[46] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[47] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[48] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[49] Bureau of Labor Statistics. http://www.bls.gov/cps/cps_htgm.htm
[50] 2015 LHMC Key Informant Interviews and Community and Provider Forums; 2012 Uniform Crime Reporting Statistics

- Crime rates were relatively low, compared to the commonwealth overall, and no one in our interviews or community forums mentioned that crime was a major health concern.[51]
- Data on domestic violence was limited, but there was information on child abuse. In this case, only two towns — Lowell and Haverhill — had rates of child abuse or maltreatment/neglect that were higher than commonwealth levels.[52]
- Bedford and Woburn had crime rates that were higher than the county average, but the rates were not higher than the commonwealth average.

It should be noted that elder abuse and neglect was mentioned by a number of key informants as one of a handful of health issues pertaining to older adult populations,[53] but there was no quantitative data to support this finding.

[51] 2015 LHMC Key Informant Interviews and Community and Provider Forums
[52] 2011 Massachusetts Department of Children and Families
[53] 2015 LHMC Key Interviews and Community and Provider Forums

Figure: 6: Demographic and Socio-Economic Characteristics of the LHMC Service Area

(Source: U.S. Census Bureau American Community Survey (ACS, 2009-2013)

= Statistically Higher than Commonwealth & County = Statistically Higher than Commonwealth = Statistically Higher than County[54]

		Benchmarks		Service Area														
	Indicators	State	Middlesex County	Arlington	Bedford	Billerica	Burlington	Haverhill	Lexington	Lowell	Peabody	Reading	Stoneham	Tewksbury	Wakefield	Wilmington	Winchester	Woburn
	Total Population	6,605,058	1,522,533	43,308	13,557	40,932	24,875	61,335	31,886	107,466	51,522	24,957	21,498	29,429	25,400	22,656	21,621	38,528
Gender	Male	48.4%	48.7%	48.5%	50.0%	49.3%	49.1%	48.3%	48.4%	48.8%	47.4%	48.1%	47.6%	48.1%	49.1%	49.2%	46.8%	49.0%
	Female	51.6%	51.3%	51.5%	50.0%	50.7%	50.9%	51.7%	51.6%	51.2%	52.6%	51.9%	52.4%	51.9%	50.9%	50.8%	53.2%	51.0%
Age	0-9 Years	11.3%	11.6%	12.4%	11.6%	12.0%	10.3%	13.6%	11.5%	13.6%	9.5%	12.7%	9.0%	10.9%	11.8%	14.4%	15.5%	10.8%
	10-19 Years	13.0%	12.4%	9.9%	14.3%	12.9%	11.9%	11.8%	17.1%	13.3%	11.6%	14.6%	11.4%	12.4%	10.6%	14.5%	14.6%	10.8%
	20-24 Years	7.2%	6.7%	3.5%	4.2%	5.4%	5.5%	5.8%	2.4%	8.6%	5.9%	4.2%	5.1%	5.0%	5.6%	4.2%	3.3%	4.7%
	25-64 Years	54.2%	56.1%	59.2%	52.5%	57.1%	54.8%	56.6%	50.2%	53.7%	52.7%	53.2%	56.0%	56.5%	57.7%	53.7%	50.3%	58.7%
	65+ Years	14.1%	13.4%	15.0%	17.3%	12.7%	17.7%	12.2%	18.8%	10.7%	20.3%	15.3%	18.4%	15.3%	14.4%	13.3%	16.4%	15.0%
	Population 18 years and older	78.7%	78.9%	78.8%	76.3%	77.2%	79.5%	76.9%	74.1%	77.1%	81.4%	74.8%	81.7%	78.6%	79.1%	73.7%	71.5%	80.0%
Race/ Ethnicity/ Foreign Born/ Language	Non-Hispanic White	75.7%	76.3%	83.5%	81.1%	89.0%	78.2%	77.4%	72.2%	51.9%	86.5%	91.3%	91.2%	91.7%	93.1%	90.9%	83.4%	83.7%
	Non-Hispanic Black	6.3%	4.4%	1.6%	1.6%	1.7%	3.2%	2.0%	1.0%	6.5%	1.9%	1.0%	0.8%	1.8%	0.4%	1.0%	0.9%	4.0%
	Hispanic	9.9%	6.8%	3.3%	4.2%	3.1%	1.5%	17.0%	2.2%	17.6%	7.8%	2.8%	3.1%	1.8%	1.8%	1.6%	1.9%	4.3%
	Non-Hispanic Asian	5.5%	9.7%	8.9%	11.6%	4.8%	15.5%	1.2%	21.5%	19.7%	2.6%	4.1%	3.1%	3.0%	4.0%	4.3%	11.6%	6.1%
	Foreign Born	15.0%	19.3%	16.8%	15.8%	9.8%	20.0%	9.9%	23.0%	24.8%	15.0%	7.5%	9.7%	6.9%	7.1%	7.0%	14.5%	15.1%
	Linguistically Isolated	21.9%	25.0%	19.5%	19.9%	13.6%	22.3%	20.9%	28.8%	41.9%	21.0%	9.6%	14.2%	9.1%	10.2%	8.5%	18.7%	19.6%
Education/ Income	High School Graduates	89.4%	92.1%	95.7%	97.4%	92.8%	93.2%	87.7%	97.3%	78.8%	89.9%	97.7%	93.5%	94.7%	94.9%	94.8%	97.1%	93.4%
	Living in Poverty	11.4%	8.1%	3.9%	4.1%	6.3%	4.4%	11.9%	3.9%	19.0%	6.3%	1.7%	4.4%	3.1%	4.1%	2.4%	3.4%	6.2%
	Renter Occupied Housing	37.3%	37.3%	38.4%	27.4%	17.7%	30.7%	38.1%	17.9%	54.6%	36.6%	18.9%	30.8%	13.7%	25.4%	12.3%	16.5%	39.6%
	House Poor (>35% of Income)	40.5%	36.5%	30.9%	38.4%	31.5%	33.4%	43.1%	40.8%	40.5%	43.1%	28.1%	43.3%	39.2%	27.6%	32.6%	46.7%	36.5%

[54] Data provided by the Massachusetts Department of Health through the MassCHIP resource is typically provided along with the 95% confidence interval for any given statistic. A confidence interval measures the probability that a population parameter will fall between two set values. Throughout our assessment, statistical significance is defined as two values with non-overlapping, 95% confidence intervals.

- **Unstable Housing and Homelessness.** An increasing body of evidence suggests that poor housing is associated with a wide range of health conditions, including asthma and other respiratory conditions, exposure to environmental toxins, injury, and the spread of communicable diseases. These health issues are more common among low income (<200% FPL) segments of the population, who often struggle to afford safe housing, healthy food, and basic needed health care services. However, there are also population segments who may not be in low-income brackets but due to the high cost of their housing still struggle to pay for food, other essential household items, and often needed health care services.

  Nearly all residents in Middlesex and Essex counties live in safe housing, and homelessness is not a major concern in LHMC's primary service area. However, homelessness does exist, and there are pockets of residents who struggle with their housing costs.

  - A lower proportion of residents in the primary service area lived in rental units, compared to the commonwealth.[55]
  - In Lowell and Winchester, residents who lived in rental units were more likely than residents in the rest of Middlesex County to pay 35% or more of their total income on rent (40.5% in Lowell, 46.7% in Winchester, compared to 36.5% in Middlesex County).[56]
  - Qualitative interviews suggested the high home values and cost of living in many of these areas made it difficult for many residents to make ends meet. Older adults living on fixed incomes were identified as particularly at risk.[57]

- **Food Access.** "Food is one of our most basic needs. Along with oxygen, water, and regulated body temperature, it is a basic necessity for human survival. But food is much more than just nutrients. Food is at the core of humans' cultural and social beliefs about what it means to nurture and be nurtured."[58] Issues related to food insecurity, food scarcity, hunger, and the prevalence and impact of obesity are at the heart of the public health discourse in urban and rural communities across the United States.

  While we were unable to capture quantitative data on this topic, many interviewees and participants in the community forums identified lack of access to healthy foods as a major health issue for segments of the population in this region. Low-income individuals and families, as well as low-income and/or isolated older adults, were identified as at risk with respect to food access. Interviewees and community forum participants reported that significant numbers of people struggled to buy fresh produce and other nutritional foods, and referred to food insecurity and food scarcity as major contributors to obesity and chronic disease.

Major Findings by the Leading Areas of Health-Related Need

At the core of the CHNA process is an understanding of access to care issues, the leading causes of illness and death, and the extent to which population segments and communities participate in

[55] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[56] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[57] 2015 LHMC Key Informant Interviews and Community and Provider Forums
[58] Feeding America. Child Development. http://feedingamerica.org/SiteFiles/child-economy-study.pdf.

certain risky behaviors. This information is critical to assessing health status, clarifying health-related disparities, and identifying community health priorities. The assessment captured a wide range of quantitative data from federal, commonwealth, and local sources, including from the U.S. Census Bureau and the Massachusetts Department of Public Health. An immense amount of information was also compiled through the 2015 LHMC Community Health Survey, which augmented the data collected through the Massachusetts Department of Public Health and allowed for the identification of "geographic hotspots" and demographic/socio-economic population segments most at risk. Qualitative information gathered from the assessment's interviews and community forums greatly informed this section by providing perceptions on the confounding and contributing factors of illness, health priorities, barriers to care, service gaps, and possible strategic responses to the issues identified.

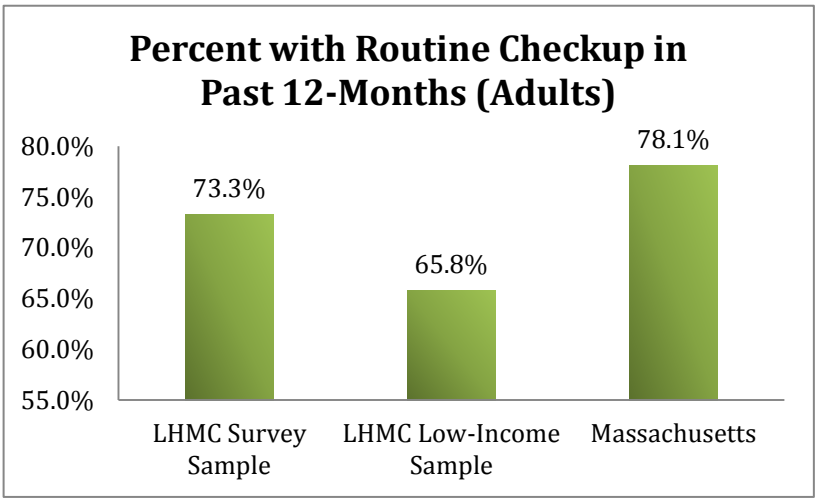
The following are key findings related to health insurance coverage and access to primary care, health risk factors, overall mortality, health care utilization, chronic disease, cancer, infectious disease, behavioral health (mental health and substance use), elder health, and maternal and child health.

Summary data tables/graphs are included below, along with a narrative review of the assessment's qualitative findings. More expansive data tables and summaries of findings from the assessment's interviews and forums are included in the LHMC CHNA Data Appendices.

Insurance Coverage and Usual Source of Primary Care (including medical, oral health, and behavioral health services)

The extent to which a person has insurance that helps to pay for needed acute services, as well as access to a full continuum of high-quality, timely, and accessible preventive care and disease management or follow-up services, has been shown to be critical to overall health and well-being. Access to a usual source of primary care is particularly important as it greatly impacts one's ability to receive regular preventive, routine, and urgent care, and chronic disease management services for those in need.[59]

Figure 7: Percent with Routine Checkup in Past 12 Months, 2015 (Source: LHMC Community Health Survey, 2015)



Eastern Massachusetts, including Middlesex and Essex counties, has a robust health care system that provides comprehensive services spanning the full health care continuum, including outreach and screening services, primary medical care, medical specialty care, hospital emergency and trauma services, inpatient care, and outpatient surgical and post-acute/long-term care services.

[59] Institute of Medicine. Coverage Matters: Insurance and Health Care. September 2001. Accessed at: http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2003/Coverage-Matters-Insurance-and-Health-Care/Uninsurance8pagerFinal.pdf

There are no absolute gaps in any components of the system, except possibly in the area of behavioral health and oral health services. Some of the assessment's findings indicated that access to behavioral and oral health services is problematic for some population segments, but the reality is that relative to other geographies in the commonwealth, LHMC's primary service area is well-situated.

Based on information gathered from interviews and the community or provider forums, large proportions of the population struggle to access behavioral and oral health services. These barriers are partly due to shortages of service providers willing to accept certain types of health insurance, particularly Medicaid. Many residents also struggle to pay for services, particularly those who have to pay out of pocket for co-pays or pay for the full cost of care. While behavioral health services are typically covered by most health plans, the benefits are not always as robust, and the co-pays can be high. Interviewees and forum participants said that there were particular gaps in behavioral health services for children and youth.

- **High Insurance Rates Commonwealth-wide.** Massachusetts leads the nation with the lowest commonwealth/state uninsured rates in the nation. In 2014, only 4% of residents in the commonwealth lacked medical health insurance, compared to 10% nationally, due to the state's early health reform efforts, which began in 2006.[60] The largest group of uninsured residents in the commonwealth is undocumented immigrants, followed by those struggling with administrative and policy barriers related to retaining coverage.

- **High Uninsured Rates in Low-Income Populations.** Low-income residents are much more likely to be uninsured than residents in middle- and upper-income brackets. According to the 2015 LHMC Community Health Survey, 2.7% of all respondents from LHMC's primary service area were uninsured, compared to 8.1% of low-income respondents.[61]

  Key informants and community forum participants stressed the fact that despite the relative affluence of the primary service area, there were pockets of service area residents who struggled with poor health outcomes and faced significant barriers to access. These populations were more likely to be low income, older adult, and foreign born.

- **Lack of Access to Primary Care.** According to the 2015 LHMC Community Health Survey, 72.9% of all respondents from LHMC's primary service area had seen a primary care provider in the past 12 months, compared to only 65.7% of low-income respondents drawn from across Lahey Health System's entire service area in Northeastern Massachusetts.[62]

- **Higher Emergency Department Utilization.** According to the 2015 LHMC Community Health Survey, 21.7% of all respondents from LHMC's primary service area had at least one hospital emergency department visit in the past 12 months, compared to 29.1% of low-income respondents drawn from across Lahey Health System's entire service area in Northeastern Massachusetts.[63]

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[60] Kaiser Family Foundation, Health Insurance Coverage of the Total Population. http://kff.org/other/state-indicator/total-population/

[61] In order to ensure an appropriate, statistically sound sample size, all low-income respondents from each of the surveys conducted by Lahey Health System's three hospital partners were aggregated.

[62] 2015 LHMC Community Health Survey

[63] 2015 LHMC Community Health Survey

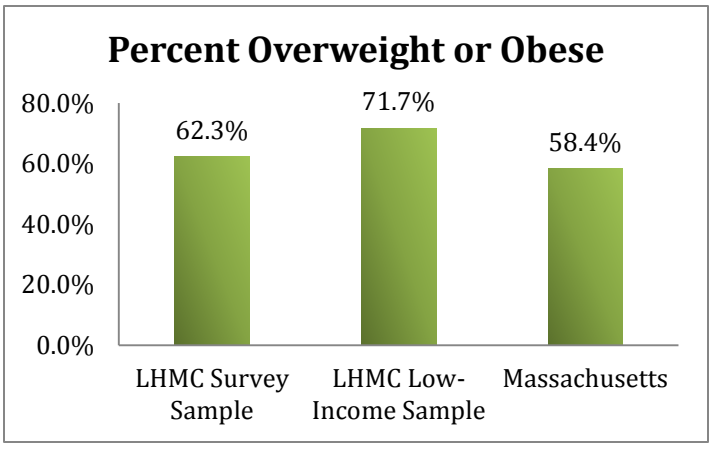
- **Lack of Access Due to Cost of Care.** According to the 2014 Massachusetts Health Insurance Survey, conducted by the Massachusetts Center for Health Information and Analysis (CHIA), 3 in 10 (30.1%) of those living at 138% of the federal poverty level or below reported not getting needed dental care due to cost, and 1 in 5 (19.3%) were not able to fill a needed drug prescription due to cost.[64]
- **Lack of Access Due to Cost of Care.** According to the 2015 LHMC Community Health Survey, only 4.77% of survey respondents reported not being able to see a provider due to cost in the past year, compared to 9% commonwealth-wide.[65]

While these findings are positive, the data should not be interpreted to suggest that everyone in LHMC's primary service area receives the highest-quality services when and where they want them. In fact, despite these strong statistics and the overall success of the commonwealth's health reform efforts, data captured for this assessment showed that substantial segments of the population — particularly low-income, racial/ethnic minorities, and older adults — face significant barriers to care and struggle to access services due to lack of insurance, cost, transportation, cultural/linguistic barriers, and shortages of providers willing to serve Medicaid-insured or low-income, uninsured patients. More importantly, these challenges often lead to poor health status and disparities in health outcomes.

Health Risk Factors

There is a growing appreciation for the effects that certain health risk factors, such as obesity, lack of physical exercise, poor nutrition, tobacco use, and alcohol use have on health status, the burden of physical chronic conditions, and cancer, as well as mental health and substance use problems. A discussion and review of available data and information drawn from quantitative and qualitative sources from this assessment is below.

Figure 8: Percent Overweight or Obese, 2015
(Source: LHMC Community Health Survey, 2015)

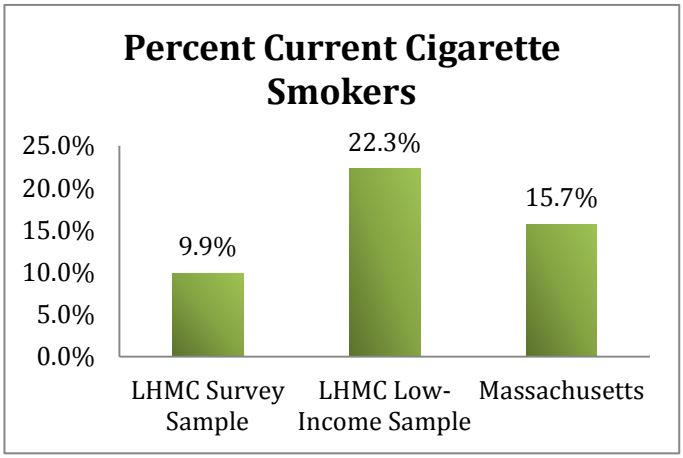


- **Overweight/Obesity.** Over the past two decades, obesity rates in the United States have doubled for adults and tripled for children.[66,67] These trends have spanned all segments of the population, regardless of age, sex, race, ethnicity, education, income, or geographic region. While some segments have struggled more than others, no segment has been unaffected.

[64] Center for Health Information and Analysis. Findings from the 2014 Massachusetts Health Insurance Survey. 2015. Accessed at: http://www.chiamass.gov/assets/docs/r/pubs/15/MHIS-Report.pdf
[65] 2015 LHMC Community Health Survey
[66] Fryar DC, Carroll MD, Ogden CL. Prevalence of overweight, obesity, and extreme obesity among adults: United States, 1960-1962 through 2011-2012. National Center for Health Statistics Health E-Stat. 2014. Odgen CL. Childhood Obesity in the United States: The Magnitude of the Problem. PowerPoint.
[67] The State of Obesity. Obesity Rates and Trends Overview. Accessed July 19, 2016. Accessed from: http://stateofobesity.org/obesity-rates-trends-overview/

- More than one-half of Massachusetts adults (18+) (58%) and, according to the 2014 Massachusetts Youth Risk Behavior Survey (YRBS), nearly one-quarter (23%) of children and youth (0-18) are either obese or overweight.[68]
- Based on responses from the 2015 LHMC Community Health Survey, the percentage of adults (18+) reporting in either obese or overweight categories was even higher than for the commonwealth at 61%.[69]

Figure 9: Percent Current Smokers, 2015
(Source: LHMC Community Health Survey, 2015)



- Data for children and youth from the MA Youth Risk Behavior Surveillance System (YRBSS) was not available for Middlesex and Essex counties but, anecdotally, the JSI Project Team learned though interviews and the community forums that this is a major health issue.[70]

- Physical Fitness and Nutrition. Lack of physical fitness and poor nutrition are among the leading risk factors associated with obesity and chronic health issues, such as heart disease, hypertension, diabetes, cancer, and depression. Adequate nutrition helps prevent disease and is essential for the healthy growth and development of children and adolescents. Overall fitness and the extent to which people are physically active reduce the risk for many chronic conditions and are linked to good emotional health.
  - Approximately 1 in 5 adults (18+) (19%) ate the recommended five servings of fruits and vegetables per day, and roughly the same proportion (21%) reported getting no physical activity in the past 30 days.[71]
  - According to the 2015 LHMC Community Health Survey, 39% of respondents did not eat at least five servings of fruits and vegetables per day, and 41% did not have any physical activity other than their jobs.[72]
  - According to data collected through the 2015 LHMC Community Health Survey, adults in LHMC's primary service area fare much better than the adults commonwealth-wide with respect to eating the recommended number of servings of

[68] 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS). 2013 Youth Risk Behavior Survey (YRBS) for 9th-12th graders
[69] 2015 LHMC Community Health Survey
[70] 2015 LHMC Key Informant Interviews and Community and Provider Forums
[71] 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)

[72] 2015 LHMC Community Health Survey

fruits and vegetables, but a considerably larger percentage of respondents reported not getting any physical activity other than their job.[73]

- **Tobacco Use.** Tobacco use is the single most preventable cause of death and disease in the United States. Each year, approximately 443,000 Americans die from tobacco-related illnesses. For every person who dies from tobacco use, 20 more people suffer with at least one serious tobacco-related illness, such as chronic airway obstruction, heart disease, stroke, or cancer.[74]

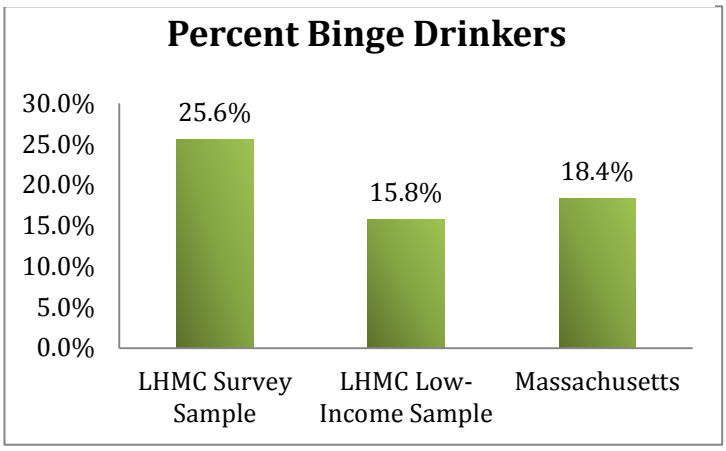
  Massachusetts and Middlesex and Essex counties had lower rates of tobacco use than many geographies throughout the United States, but given that tobacco use is still the leading cause of illness and disease in the United States, it is important that work be done to lower these rates further.

  - According to the 2015 LHMC Community Health Survey, 12% of adults used tobacco, and 9.9% reported as current cigarette smokers, compared to 18% current tobacco users commonwealth-wide and 16.6% current cigarette smokers.[75]

- **Alcohol Abuse.** Risky behaviors related to alcohol are strongly correlated with chronic medical and mental health issues. Alcohol abuse raises the risk of developing chronic illness and increases the severity of illnesses once they emerge.

  - In 2013, approximately 8% of adults in Massachusetts reported heavy drinking, defined as more than 60 drinks a month for men, and 30 drinks a month for women. According to the 2015 LHMC Community Health Survey, 11% of adults reported as heavy drinkers.76
  - According to the 2015 LHMC Community Health Survey, 25.6% of respondents reported "binge drinking," more than five alcoholic drinks at any one sitting for men and more than four drinks at any one sitting for women, compared to 19.4% for commonwealth residents overall.77

Figure 10: Percent Binge Drinkers, 2015
(Source: LHMC Community Health Survey, 2015)



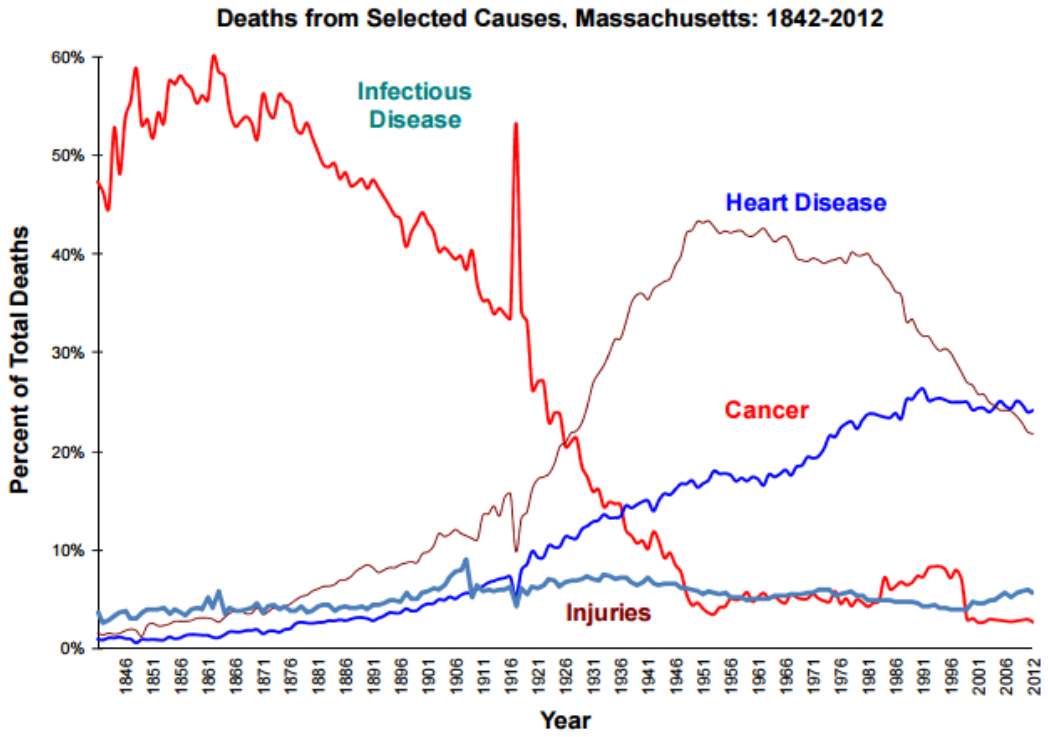
[73] 2015 LHMC Community Health Survey
[74] Office of Disease Prevention and Health Promotion. Tobacco Use. Accessed at: http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=41#five. Accessed on: July 20, 2016.
[75] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[76] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[77] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)

This finding was confirmed by key informant interviews and participants in the community forums, as a major theme from the qualitative information was the impact and burden of substance use, particularly alcohol, on the primary service area's population. A majority of the key informants who were part of this assessment cited alcohol abuse as a major health concern for all segments of the population.[78]

Mortality and Premature Mortality

In 2012, the life expectancy for a resident in the commonwealth of Massachusetts was 81 years. In 1950, it was 70 years, and in 1900 it was 45 years.[79] This change is dramatic and is due largely to improvements in the ability to prevent maternal/child deaths at pregnancy and manage infectious diseases, such as influenza. In 1900, cancer was the known cause of death in only 4-5% of deaths; today nearly 25% of all deaths can be attributed to cancer. See Figure 11 below.

Figure 11: Deaths from Selected Causes in Massachusetts, 1842 – 2012



Since 1950, there have been major improvements in the ability to prevent premature deaths due to heart disease, stroke, and even cancer. However, there is still a great deal of work to do in this area, as these diseases are still the top three causes of premature death. Even if city- or town-level rates of illness are not higher than the county, commonwealth, or national benchmarks, it is still important that LHMC and its community health partners address these issues if they are to improve health status and well-being.

[78] 2015 LHMC Key Informant Interviews and Community and Provider Forums
[79] Massachusetts Department of Public Health. *Massachusetts Deaths 2012: Data Brief.* January 2015. http://www.mass.gov/eohhs/docs/dph/research-epi/death-data/death-databrief-2012.pdf. Accessed 5/11/2016

According to data from the Massachusetts Department of Public Health, in 2012 cancer, cardiovascular disease (heart disease), cerebrovascular disease (stroke), and chronic lower respiratory disease (COPD) were the leading causes of death for the primary service area. Other leading causes of death include diabetes, influenza/pneumonia, opioid-related issues, homicide, suicide, and motor vehicle accidents.

As discussed above, there is a strong correlation between income and where one lives on the one hand and life expectancy, death, and overall health status on the other. According to a study published in April 2016 in the Journal of the American Medical Association, Middlesex County residents living in households earning less than $100,000 per year are expected to die about seven years before their wealthier counterparts. That's roughly equivalent to the difference in life expectancy between an average man in the United States and one in Egypt. The report underscores the role of geography and wealth in attaining longevity. The essential point is that those who live in communities with a large proportion of low-income residents are less healthy and a shorter life expectancy.[80]

Table 12: Leading Causes of Death in Massachusetts and the United States, 2012

(Source: Massachusetts Deaths 2012: Data Brief. Boston, MA: Office of Data Management and Outcomes Assessment, Massachusetts Department of Public Health. January 2015. http://www.mass.gov/eohhs/docs/dph/research-epi/death-data/death-databrief-2012.pdf)

U.S. Leading Cause of Death	Death Rate in MA	Total Deaths in MA	State Rank	U.S. Rate	U.S. Ranking
Cancer	159.6	12,858	31	163.2	2
Heart Disease	141.5	12,023	43	169.8	1
Accidents	32.5	2,393	45	39.4	4
Chronic Lower Respiratory Diseases	31.7	2,572	46	42.1	3
Stroke	27.7	2,354	47	36.2	5
Alzheimer's Disease	19.4	1,699	38	23.5	6
Influenza/Pneumonia	18	1,551	16	15.9	8
Kidney Disease	15.1	1,261	18	13.2	9
Diabetes	14.1	1,142	50	21.2	7
Suicide	8.2	572	48	12.6	10

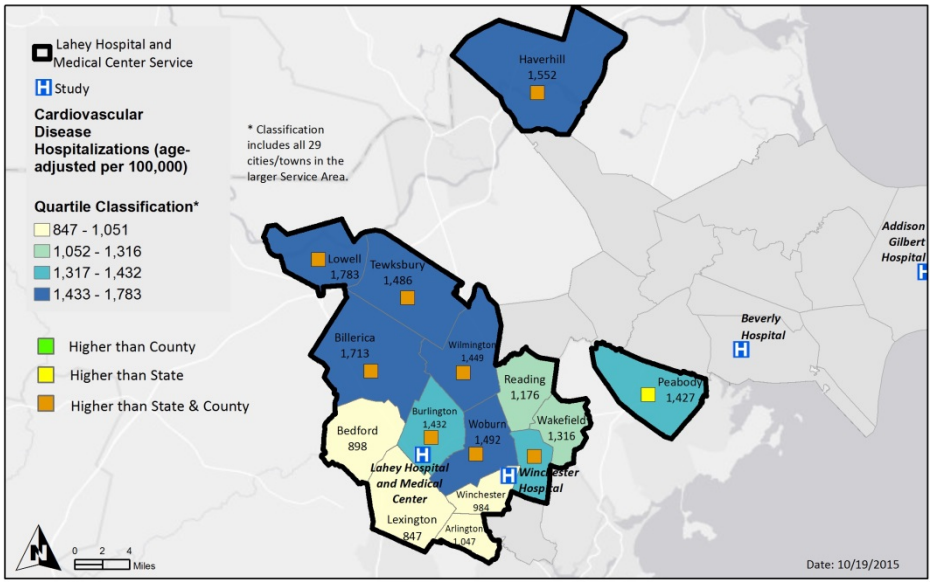
All of these leading causes of death, individually and collectively, have a major impact on people living in the primary service area, but cancer, cardiovascular disease (heart disease), cerebrovascular disease (stroke), chronic lower respiratory disease (COPD), and diabetes are the most important for LHMC to consider as they are the most prevalent conditions and are, to a large

[80] The Health Inequality Project. How can we reduce disparities in health? Accessed at https://healthinequality.org Accessed 6/2/16

extent, preventable. All of these chronic conditions also share the health risk factors discussed above — obesity/overweight, lack of physical exercise, poor nutrition, tobacco use, and alcohol abuse.

It should be noted that throughout the United States, including Massachusetts, there were major health disparities across all of these conditions among low-income, racial/ethnic minority, and other subgroups. Rates of illness and death vary by condition, but overall non-Hispanic, white populations are less likely to have chronic health conditions than are low-income segments and most racial/ethnic minority segments. This puts a disproportionate burden on communities with a high proportion of low-income and racial/ethnic populations. In LHMC's primary service area, the cities/towns of Burlington, Billerica, Lowell, Peabody, and Woburn were the communities with the greatest proportion of low-income and racial/ethnic minority populations.

Figure 13: Cardiovascular Disease Hospitalizations (Per 100,000 Population) (Source: Massachusetts Department of Public Health, MassCHIP; 2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS))



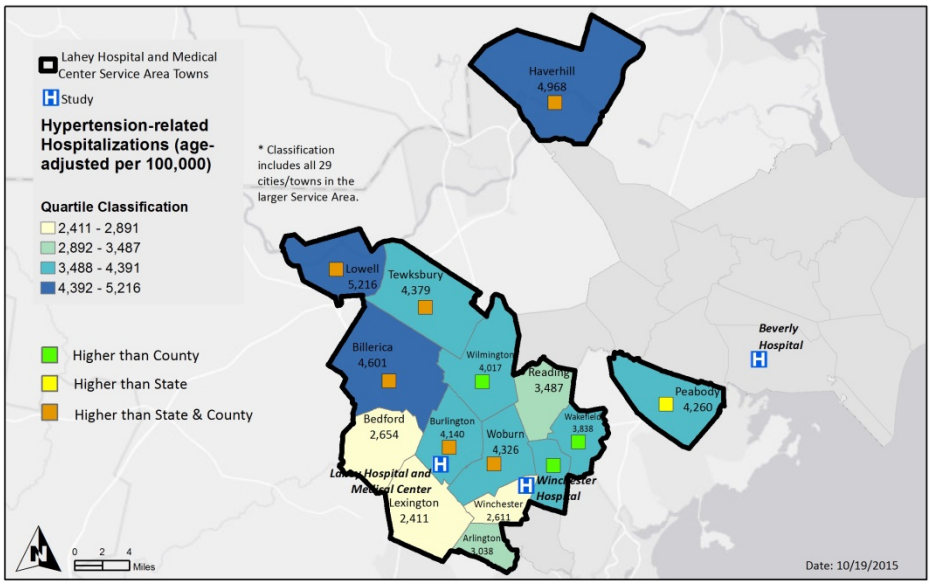
The leading causes of premature death[81] in Massachusetts are similar to those for mortality overall, but there are important differences. The first and second leading causes of premature death in Massachusetts are cancer and heart disease. Unintentional injuries, respiratory disease, and diabetes are ranked third, fourth, and fifth, respectively, and each has a considerable impact on the premature death rate overall. With respect to the CHNA, premature death is more relevant than overall mortality as the focus of the community benefits program is health improvement and the prevention of disease. Putting greater emphasis on premature death, rather than overall mortality, supports the intention of the community benefits program to improve health status and focus attention on the morbidity and mortality that can be prevented. In the LHMC service area, several towns had a statistically higher rate of premature death than the commonwealth rate of 275.9 per 100,000.[82] Billerica, Haverhill, Lowell, and Woburn were all above commonwealth levels, and Tewksbury and Wilmington were both above the Middlesex County rate of 245.85 per 100,000.[83]

[81] Premature deaths are deaths that occur before a person reaches an expected age, for instance, age 75; many of these deaths are considered preventable.
[82] 2009-2012 Massachusetts Vital Records Mortality
[83] 2009-2012 Massachusetts Vital Records Mortality

Health Care Utilization

Increasing health care costs combined with poor health outcomes have encouraged a close review of the utilization of health care services. At the core of recent health reform efforts in Massachusetts and throughout the nation is the idea of promoting a focus on prevention and the reduction of health care utilization rather than on the treatment of disease. Hospital community benefits programs are geared toward supporting preventive services; strengthening community health, social services, and public health programs; and ensuring that the population has access to high-quality primary care services, including primary medical care, behavioral health, and oral health services.

Figure 14: Hypertension Hospitalizations (Per 100,000 Population) (Source: Massachusetts Department of Public Health, MassCHIP; 2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS))



With respect to health care utilization, there has been a substantial focus on strategies to reduce costly hospital emergency department and inpatient care utilization, particularly service utilization that is preventable or avoidable with proper education and screening as well as timely primary care and outpatient services. The federal Agency for Healthcare Research and Quality (AHRQ) has identified a series of measures that apply hospital discharge codes designed to identify when people are seen in the hospital emergency department or inpatient setting for conditions that are preventable or avoidable. These measures are called Preventable Quality Indicators (PQIs), and when the rates of these specific hospital discharge codes are high, it suggests that consumers need to be more engaged in or have better access to preventive, primary care, and care management services.

- Of the five PQI measures reported by MDPH, which are reported for all towns in Massachusetts, several towns reported consistently higher levels, compared to the commonwealth or county levels, of congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD) and asthma admissions in patients younger than 20 .[84]
- Towns reporting consistently higher than average rates on these indicators were Billerica (CHF and COPD), Burlington (CHF, hypertension admissions and COPD), Haverhill (asthma and COPD), Lowell (asthma, COPD, CHF, and hypertension), Peabody (CHF and COPD),

[84] 2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS)

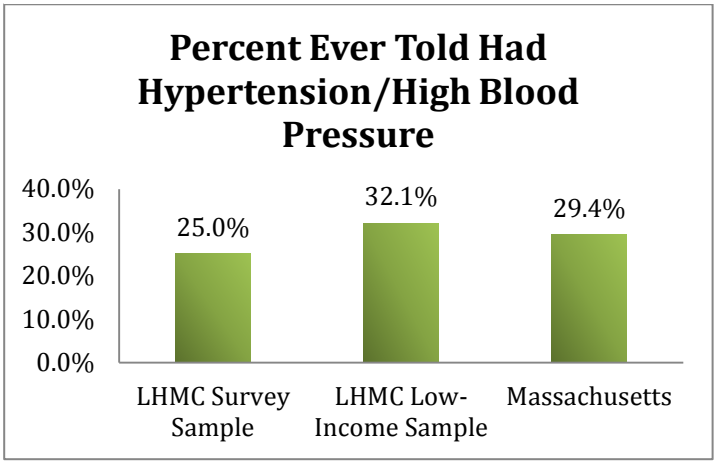
Stoneham (COPD and CHF), Tewksbury (CHF and COPD), and Woburn (asthma, CHF and COPD).[85]

More generally, MDPH reports data on hospital emergency department discharges. Across the LHMC primary service area, the most common disease-specific measures that were statistically higher than average involved mental health, substance use, and asthma. Service area towns with consistently higher rates across these measures than average were Bedford, Haverhill, Lowell, Peabody, Stoneham, Wakefield, and Woburn.[86]

Chronic Disease

Throughout the United States, chronic diseases such as heart disease, stroke, cancer, respiratory diseases, and diabetes are responsible for approximately 7 of 10 deaths each year, and treating people with chronic diseases accounts for 86% of our nation's health care costs. Half of all American adults have at least one chronic condition, and almost 1 in 3 have multiple chronic conditions.[87] Perhaps most significantly, despite the high prevalence and dramatic impact of the most prevalent chronic diseases, they are largely preventable, which underscores the need to focus on the health risk factors, primary care engagement, and evidence-based chronic disease management.

Figure 15: Percent Ever Been Told Had Hypertension, 2015 (Source: LHMC Community Health Survey, 2015)



In the LHMC primary service area, certain towns had consistently higher rates of chronic disease hospitalizations or mortality than the commonwealth overall. Chronic health conditions, such as asthma, cardiovascular disease, cerebrovascular disease (stroke), chronic lower respiratory disease (most notably COPD), diabetes, heart failure, and hypertension arose as the most common afflictions. Billerica, Burlington, Haverhill, Lowell, Peabody, Stoneham, Tewksbury, Wilmington, and Woburn all reported higher than commonwealth or county averages on two or more of these chronic disease indicators.[88]

Even in towns where hospitalization or death rates for these chronic conditions were not higher than commonwealth or county averages, qualitative interviews and forums indicated that these diseases were of utmost concern to local health officials. At-risk sub-populations such as low-income or elderly were more likely to be afflicted with one or more of these conditions and to require hospitalization as a result.

[85] 2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS)
[86] 2008-2012 Massachusetts Hospital Emergency Department Discharges
[87] A chronic condition is a human health condition or disease that lasts a year or more and requires ongoing medical attention or that limits activities of daily living. http://www.cdc.gov/chronicdisease/overview/.
[88] 2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS). 2008-2012 Massachusetts Vital Records Mortality

Data from the 2015 LHMC Community Health Survey confirms that these chronic physical health conditions are a substantial issue. However, it is important to note that according to comparison data from the Massachusetts Department of Public Health's Behavioral Risk Factor Survey System collected in 2012-2013, the prevalence rates for the overall respondent population are generally not higher for the leading conditions than the rates for the commonwealth overall.

- **Diabetes.** Among 2015 LHMC Community Health Survey respondents, 7.6% reported that they had been told they have diabetes, compared to 8.5% of adults 18+ in the commonwealth overall.[89] Among low-income respondents, 12.1% reported that they had been told they have diabetes.[90]
- **Hypertension.** Twenty-five percent of respondents from the 2015 LHMC Community Health Survey reported being told they have hypertension, compared to 29% for the commonwealth overall. Among low-income respondents, 32% reported they had been told they have hypertension.[91]
- **Asthma.** Fourteen percent of 2015 LHMC Community Health Survey respondents reported being told they have asthma, compared to 17% for the commonwealth overall. The percentage for low-income respondents in this case was actually lower at 13%. However, low-income respondents were considerably more likely to be seen in the hospital emergency department for urgent care. For the entire survey sample, 8% of asthmatics had had an emergency department visit, compared to 19% of low-income respondents.[92]
- **Chronic Disease "Hotspots."** Residents of Billerica, Haverhill, Lowell, Peabody, Tewksbury, and Woburn were more likely than those of other towns in LHMC's primary service area to be hospitalized for or to die from chronic conditions such as diabetes, hypertension, cardiovascular disease, cerebrovascular disease, asthma, and COPD. Each of these cities/towns had rates of hospitalization or death that were statistically higher than the commonwealth for at least three of these six conditions. Lowell had statistically higher rates for six of the six conditions, while Haverhill and Peabody had statistically higher rates for five of the six conditions.

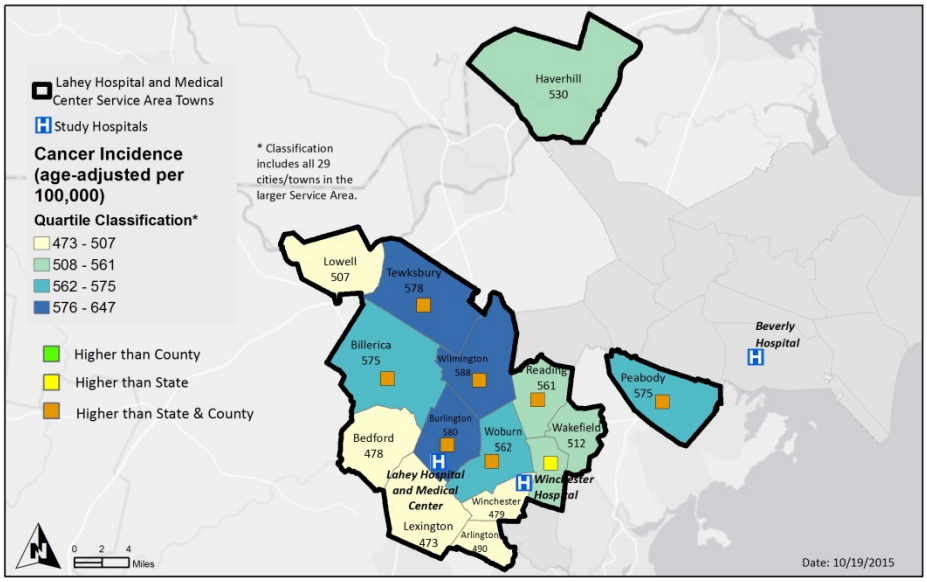
Cancer

Cancer is the second leading cause of death in the United States and the top cause of death in the commonwealth. While experts have an idea of the risk factors and causal factors associated with cancer, more research is needed as there are still many unknowns. The majority of cancers occur in people who do not have any known risk factors. The major known risk factors for cancer are age, family history of cancer, smoking, overweight/obesity, excessive alcohol consumption, excessive exposure to the sun, unsafe sex, exposure to fumes, secondhand cigarette smoke, and other airborne environmental and occupational pollutants. As with other health conditions, there are major disparities in outcomes and death rates across all forms of cancer, which are directly associated with

[89] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[90] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[91] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[92] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)

race, ethnicity, income, and whether one has comprehensive medical health insurance coverage. In 2015, nationally, 163.2 people per 100,000 died of cancer, and in Massachusetts this figure was 159.6 deaths per 100,000.[93]

Figure 16: Cancer Incidence per 100,000 Residents (All Cancer Types) (Source: 2007-2011 Massachusetts Cancer Registry)



- **Cancer.** In the LHMC service area, seven of the 15 towns that are part of LHMC's primary service area reported statistically higher incidence rates of cancer (all cancer types) than the commonwealth. The highest cancer incidence rate per 100,000 population was in Wilmington (588), followed by Burlington (579), Tewksbury (578), Billerica (575), Peabody (575), Woburn (562), and Reading (561). These rates compare to 509 for the commonwealth and 531 for Essex County.[94]
    - Of all respondents to the 2015 LHMC Community Health Survey, 11.6% reported that they had been told they have cancer, compared to 11.1% for residents of the commonwealth; 17% of low-income respondents had been told they have cancer.[95]
- **Lung Cancer.** Out of all the cancer types assessed, lung cancer rates were most likely to be higher in the LHMC service area than in the commonwealth (70 per 100,000 population), specifically in Billerica (100), Peabody (87), Wilmington (95), and Woburn (89).[96]
- **Breast Cancer.** Hospitalization rates for breast cancer in women were statistically higher than the commonwealth's across nearly all the primary service area's cities/towns. However, only Reading (179) had an incidence rate per 100,000 population that was statistically higher than the commonwealth's (135).[97]
    - **Cancer Screening.** According to the 2015 LHMC Community Health Survey, rates of mammography screening for women 40+ were lower within the past two years than they

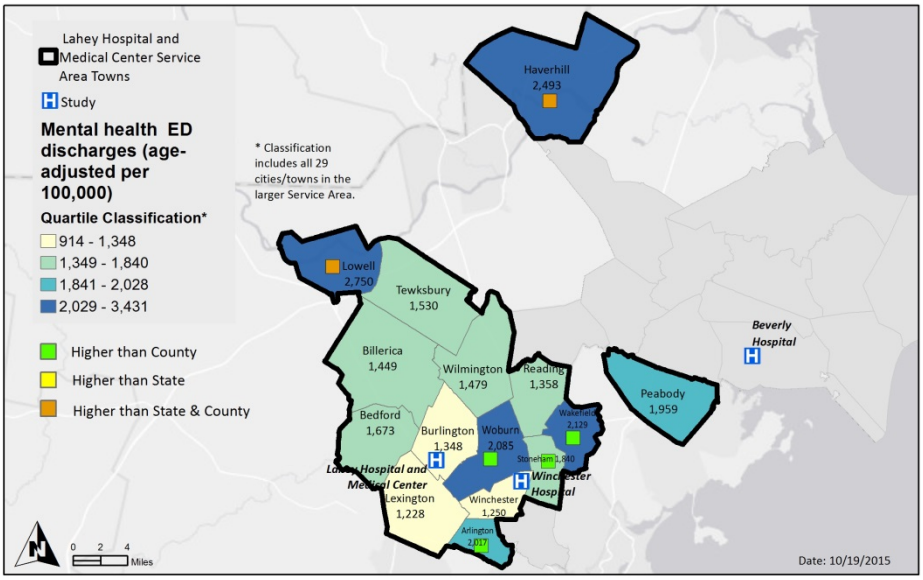
[93] Centers for Disease Control and Prevention. Stats for the State of Massachusetts. Accessed at: http://www.cdc.gov/nchs/pressroom/states/MA_2015.pdf
[94] 2007-2011 Massachusetts Cancer Registry
[95] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[96] 2007-2011 Massachusetts Cancer Registry
[97] 2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS); 2007-2011 Massachusetts Cancer Registry

had been in the past: 80% in LHMC's primary service area, compared to 85% in the commonwealth.[98]

Behavioral Health

Mental illness and substance use have a profound impact on the health of people living throughout the United States. Data from the Centers for Disease Control and Prevention suggests that approximately 1 in 4 (25%) adults in the United States has a mental health disorder,[99] and an estimated 22 million Americans struggle with drug or alcohol problems.[100] Depression, anxiety, and alcohol abuse are directly associated with chronic disease, and a high proportion of those living with these issues also have a chronic medical condition. The impact of mental health and substance use on the residents of Middlesex and Essex counties was particularly profound. There is ample quantitative and qualitative information to show this impact.

Figure 17: Mental Health Emergency Department Discharges (Per 100,000 Population) (Source: Massachusetts Department of Public Health, MassCHIP; 2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS))

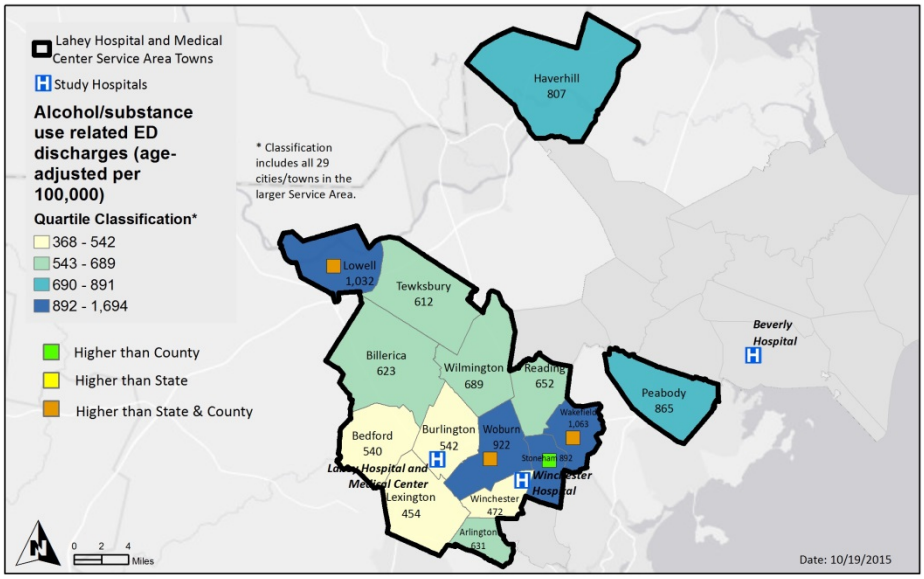


- **Opioid Abuse Overdoses.** Middlesex County experienced more than a 200% increase in opioid abuse overdose deaths between 2001 and 2014. Specifically, in 2001, 76 deaths were reported due to opioid abuse in Middlesex County. By 2013 this number had risen to 147, and between 2013 and 2014 the figure rose to 257 deaths.[101]

[98] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[99] National Institute of Mental Health. Statistics. Accessed at http://www.nimh.nih.gov/health/publications/the-numbers-count-mental-disorders-in-america/index.shtml. Accessed 7/19/2016
[100] Office of Disease Prevention and Health Promotion. HealthyPeople.gov. Substance Abuse. Accessed at http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=40. Accessed on 7/19/2016
[101] Massachusetts Department of Public Health. Data Brief: Fatal Opioid-related Overdoses among Massachusetts Residents. Accessed at: http://www.mass.gov/eohhs/docs/dph/quality/drugcontrol/county-level-pmp/data-brief-aug-2015-overdose-county.pdf

- **Opioid-related Emergency Department Visits.** Startlingly, 10 out of the 15 cities/towns in LHMC's primary service area had statistically higher rates of opioid-related emergency department visits per 100,000 population than the commonwealth or Middlesex County, with Wakefield posting the highest rate at 518 visits per 100,000, followed by Peabody (479), Haverhill (461), Stoneham (398), Wilmington (384), Tewksbury (372), Billerica (364), Reading (333), Woburn (332), and Lowell (307). The commonwealth rate for opioid-related emergency department visits was 260 per 100,000 population, and the Middlesex County rate was 227.[102]

Figure 18: Alcohol/Substance Abuse-Related Emergency Department Discharges (Per 100,000 Population) (Source: Massachusetts Department of Public Health, MassCHIP; 2008-2012 Massachusetts Hospital Inpatient Discharges)



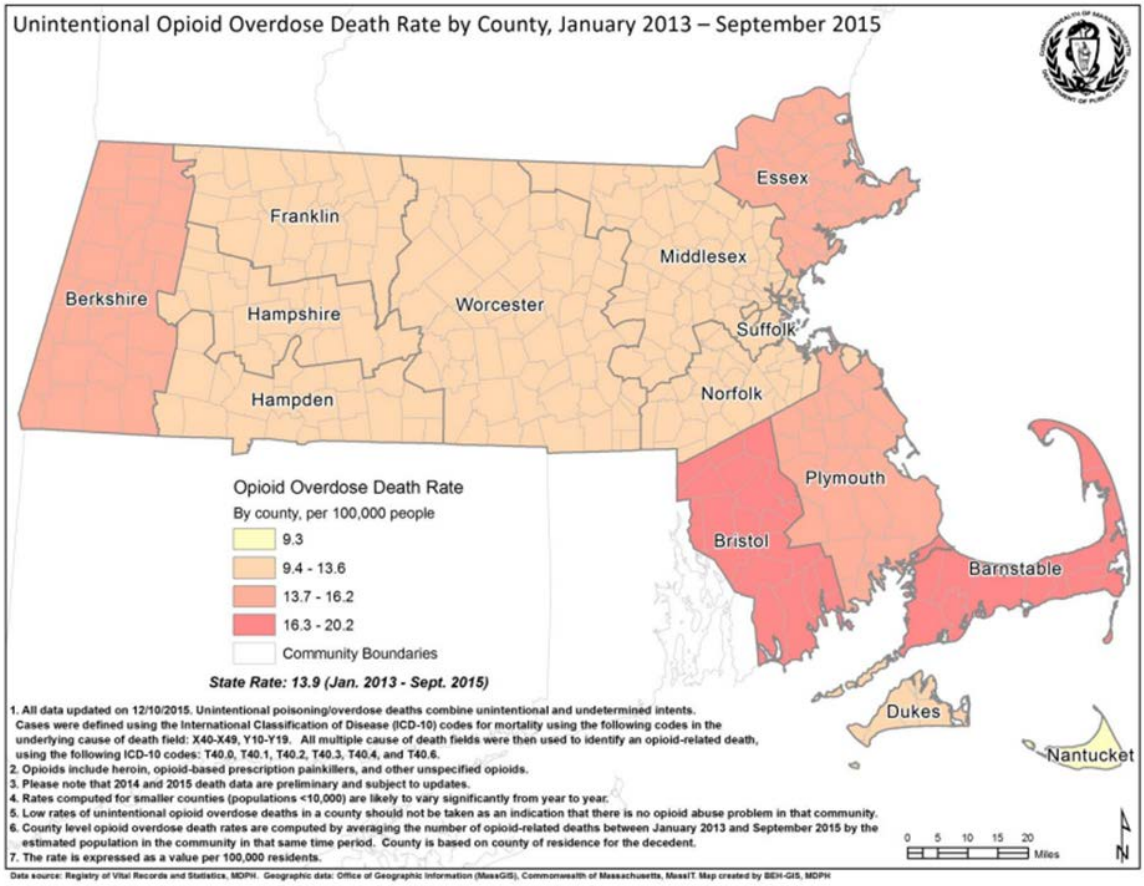
- **Opioid-related Hospitalizations.** Stoneham (367) and Lowell (356) each had rates of opioid-related hospitalizations per 100,000 population that were significantly higher than the rates for Middlesex County (208) and the commonwealth overall (316).[103]
- **Alcohol Use.** According to the 2015 LHMC Community Health Survey, approximately 10% of adults reported as heavy drinkers, compared to approximately 8% for the commonwealth overall.[104]
- **Binge Drinking.** According to the 2015 LHMC Community Health Survey, 23% of respondents reported "binge drinking" — more than five alcoholic drinks at any one sitting for men and more than four drinks for women — compared to 15.8% for low-income respondents and 19.4% for commonwealth residents overall.[105]
- **Poor Mental Health.** According to the 2015 LHMC Community Health Survey, approximately 6% of adult respondents (18+) reported as being in poor mental or emotional health more than 15 days per month, compared to approximately 10% of low-

[102] 2008-2012 Massachusetts Hospital Emergency Visit Discharges
[103] 2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS);
[104] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[105] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)

income individuals. commonwealth-wide, 11.2% of adults reported as being consistently in poor mental or emotional health.[106]

- **Mental Health-related Disorders.** Haverhill (4,973), Lowell (4,752), and Peabody (4,270) had statistically higher hospitalization rates for all mental health-related disorders per 100,000 population than Middlesex County (3,266) and the commonwealth (3,840).[107]
- **Mental Health-related Emergency Department Visits.** With respect to mental health-related emergency department visits per 100,000 population, Haverhill (7,078), Lowell (5,614), and Peabody (5,795) also had statistically higher rates than Middlesex County (4,074) and the commonwealth (4,990).[108]

Figure 19: Unintentional Opioid Overdose Death Rate by County, Jan. 2013 – Sept. 2015
(Source: MA Department of Public Health)



The burden of mental health in the primary service area is well understood, and mental health was one of the leading themes in the assessment's stakeholder interviews and community/provider forums. There was an overwhelming sentiment across all the community forums that mental health

[106] 2015 LHMC Community Health Survey. 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS)
[107] 2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS)
[108] 2008-2012 Massachusetts Hospital Emergency Visit Discharges

issues were one of the major health issues facing the community. The clear sentiment was that mental health concerns affect all segments of the population, from children and youths to young and middle-aged adults to elders.

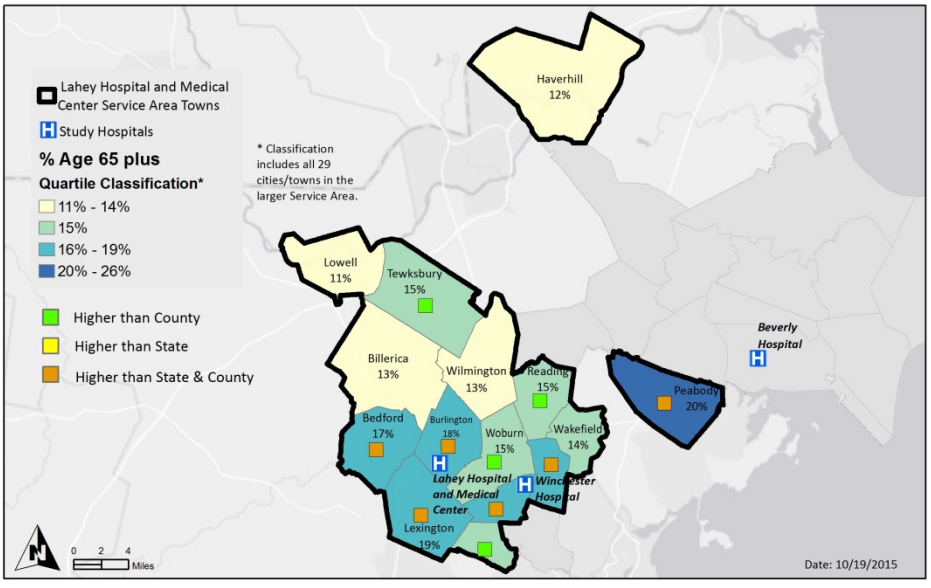
With respect to youths, interviewees and meeting participants discussed the stresses that youths face related to family, school, and their social lives with peers. These stresses often lead to depression, low self-esteem, and isolation, as well as substance use, risky sexual behaviors, and, in extreme cases, suicide. A number of stakeholders and forum participants also referenced ADHD, autism, and developmental delays in children and youths. With respect to adults and older adults, the issues are similar in many ways. Stakeholders and forum participants cited depression/ anxiety/stress often coupled with isolation, particularly in older adults. In older adults, mental health issues are often exacerbated by lack of family/caregiver support, lack of mobility, and physical health conditions.

These issues have a major impact on a small but very-high-need group of individuals and families. Community forum participants and interviewees cited substantial gaps in behavioral health services and family/child support services, particularly for low-income individuals and families. Stakeholders advocated strongly for expansion of mental health services, particularly care/case management services, as well as other supportive services that this population needs to manage their conditions and improve health status and overall well-being.[109]

Elder Health

In the United States, in the commonwealth, and in Middlesex and Essex counties, older adults are among the fastest growing age groups. The first "baby boomers" (adults born between 1946 and 1964) turned 65 in 2011, and over the next 20 years these baby boomers will gradually enter the older adult cohort. Older adults are much more likely to develop chronic illnesses and related disabilities such as heart disease, hypertension, and diabetes as well as congestive heart failure, depression, anxiety, Alzheimer's, Parkinson's disease, and dementia. By

Figure 20: Percent Older Adults (65 Years Old or Older)
(Source: U.S. Census Bureau American Community Survey (ACS, 2009-2013)



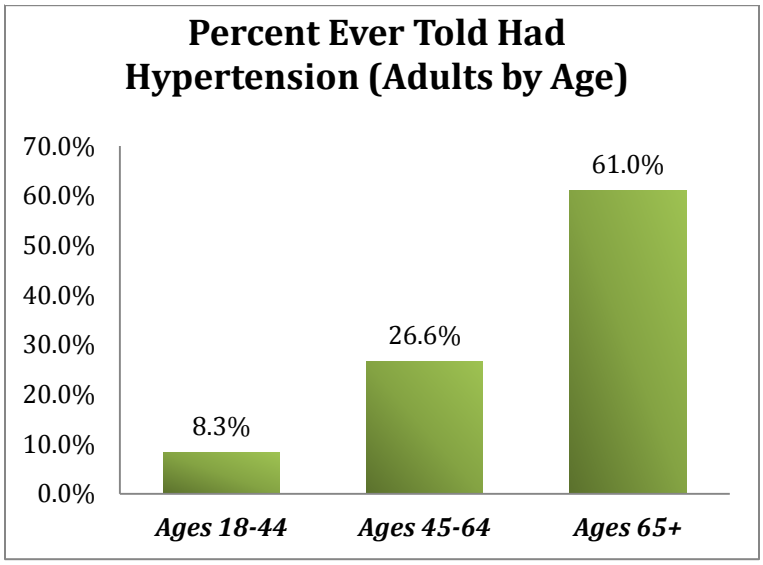
[109] 2015 LHMC Key Informant Interviews and Community and Provider Forums

2030, the CDC and the Healthy People 2020 Initiative estimate that 37 million people nationwide (60% of the older adult population 65+) will manage more than one chronic medical condition. Many experience hospitalizations, nursing home admissions, and low-quality care. They also may lose the ability to live independently at home. Chronic conditions are the leading cause of death among older adults.[110]

According to qualitative information gathered through interviews and community forums, elder health is one of the highest priorities for the LHMC primary service area. Chronic disease, depression, isolation, and fragmentation of services were identified as some of the leading issues facing the area's senior population. Demographically, 10 out of 15 towns in the primary service area have higher percentages of residents 65 or older than commonwealth or county averages, with the highest percentages of seniors in Burlington, Lexington, Peabody, and Winchester.[111]

When considering elder health, it is important to understand that rates of chronic disease by age are much higher for elders 65+, compared to rates for the adult population overall. The older you are the more likely it is that you have one or more chronic conditions. As an elderly person, it is not rare to have two to three or more chronic health conditions.

Figure 21: Percent Ever Been Told Had Hypertension by Age, 2015 (Source: LHMC Community Health Survey, 2015)



- **Hypertension.** According to the 2015 LHMC Community Health Survey, 61% of adult respondents 65 years old or older had ever been told they have hypertension, compared to only 24.5% for survey respondents overall.[112]

- **High Blood Cholesterol.** Similarly, of the respondents who were 65 years old or older who had ever had their blood cholesterol levels checked, 52.7% had been told their blood cholesterol levels were high, compared to only 33.3% for survey respondents overall.[113]

- **Alzheimer's Disease.** One of the leading findings with respect to elder health is that according to vital statistics data from the MDPH, older adults in Middlesex and Essex counties are statistically more likely to die of Alzheimer's disease than adults in the commonwealth overall. In the LHMC primary service area, Billerica, Lowell, and Tewksbury all

[110] Office of Disease Prevention and Health Promotion. HealthyPeople.gov. Older Adults. Accessed at https://www.healthypeople.gov/2020/topics-objectives/topic/older-adults#two. Accessed on 7/19/2016
[111] 2009-2013 U.S. Census Bureau American Community Survey (ACS)
[112] 2015 LHMC Community Health Survey
[113] 2015 LHMC Community Health Survey

had age-adjusted rates of Alzheimer's deaths per 100,000 above the 20.6 commonwealth average.

- **Cancer.** With respect to cancer, 27.5% of adults 65 years old or older had ever been told they have cancer, compared to only 11.6% for survey respondents overall.[114]

As some of the highest utilizers of health services and specialty care, seniors are more at risk of being affected by gaps in the health care infrastructure.

- **Specialty Care Utilization.** According to 2015 LHMC Community Health Survey respondents, 79% of older adults (65+) reported seeking specialty care within the past year, compared to 61% of all respondents.[115]

- **Care Coordination and Fragmentation of Services.** While clinical integration and care coordination efforts have made great strides, fragmentation of care persists as a serious issue affecting seniors in particular. Older adults in the LHMC primary service area may find themselves seeing a number of different specialty care doctors, following entirely separate care plans, and attempting to fill and manage multiple prescription drugs without any coordinated direction or support.

While social determinants of health affect all populations, community and organizational experts expressed concern that seniors may feel these effects more acutely. Many older adults live on fixed incomes with limited funds for medical expenses, leaving them less able to afford the high costs associated with negative health outcomes. Transportation was also consistently mentioned as a major barrier to senior well-being, as many elders no longer drive and find themselves with fewer transportation options in LHMC's suburban setting.

Caregiver support was consistently brought up as a serious issue in community interviews and forums, as many elders rely on family members or aides to manage their care. Between navigating the health system, organizing appointments and medications, and making major medical decisions on behalf of their loved one, stress and burnout among caregivers was reported by stakeholders as one of the greatest threats to senior well-being.

Maternal and Child Health

Maternal and child issues are of critical importance to the overall health and well-being of a geographic region and are at the core of what it means to have a healthy, vibrant community. Infant mortality, childhood immunization, rates of teen pregnancy, rates of low birth weight, and rates of early, appropriate prenatal care for pregnant women are among the most critical indicators of maternal and child health.

Data compiled on maternal and child health from the MDPH showed that most communities in the LHMC primary service area were not worse off than the commonwealth on leading maternal and child health indicators. By and large, towns in LHMC's primary service area fare better than the commonwealth average across the following indicators: 1) teen births, 2) low birth weight, 3)

[114] 2015 LHMC Community Health Survey
[115] 2015 LHMC Community Health Survey

premature births, and 4) infant mortality.[116] This is not to say that there are not segments of the population who struggle with these issues, but overall it is not a priority health concern for the region.

Youths and Adolescents

There is an unfortunate lack of data available on youths and adolescents at the county and town levels. commonwealth-level data is available through the Massachusetts Youth Risk Behavior Survey, which provides critical information about substance use, mental health and stress, sexual activity, and other risky behaviors, but it does not provide a complete picture of youth/adolescent health and is not collected for all cities and towns in LHMC's primary service area.[117] Nonetheless, a number of areas of concern were highlighted by the commonwealth-level data, and these same concerns were passionately confirmed by qualitative comments from the interviews and community forums.

- **Mental Health.** In 2013, 1 in 5 high-school youth (22%) in the commonwealth felt sad or hopeless, and 6% had attempted suicide in the past year.[118] One in 5 (17%) reported being bullied at school. Exposure to stressors may explain, in part, why certain groups suffer from poorer mental and physical health outcomes than others. Stress related to school, family issues, or social situations with peers can have detrimental effects on mental health.

- **Overweight/Obesity, Physical Activity, and Healthy Eating.** In 2013, 25% of high-school youth in the commonwealth were overweight or obese. Just 15% reported eating at least five servings of fruits and vegetables each day, whereas a quarter (25%) reported watching at least three hours of TV on an average school day.[119]

- **Alcohol and Substance Use.** In 2013, almost a quarter (23%) of high-school youth in the commonwealth reported that they were offered, sold, or given drugs in the past year. One in 10 (11%) reported current cigarette use, and a third (36%) reported current alcohol use.[120]

These issues were discussed passionately by educators, service providers, and community members through the interviews and community forums, and in fact, they were the basis for one of a few dominant discussions at all the forums organized for this assessment.

Community Health Priorities and Target Populations

Once all of the assessment's findings were compiled, hospital and community stakeholders participated in a strategic planning process that integrated data findings from Phases I and II of the

[116] 2008-2012 Massachusetts Vital Records Natality and Infant Deaths
[117] Massachusetts Department of Elementary and Secondary Education & Massachusetts Department of Public Health. Health and Risk Behaviors of Massachusetts Youth, 2013. http://www.doe.mass.edu/cnp/hprograms/yrbs/2013report.pdf
[118] Massachusetts Department of Elementary and Secondary Education & Massachusetts Department of Public Health. Health and Risk Behaviors of Massachusetts Youth, 2013. http://www.doe.mass.edu/cnp/hprograms/yrbs/2013report.pdf
[119] Massachusetts Department of Elementary and Secondary Education & Massachusetts Department of Public Health. Health and Risk Behaviors of Massachusetts Youth, 2013. http://www.doe.mass.edu/cnp/hprograms/yrbs/2013report.pdf
[120] Massachusetts Department of Elementary and Secondary Education & Massachusetts Department of Public Health. Health and Risk Behaviors of Massachusetts Youth, 2013. http://www.doe.mass.edu/cnp/hprograms/yrbs/2013report.pdf

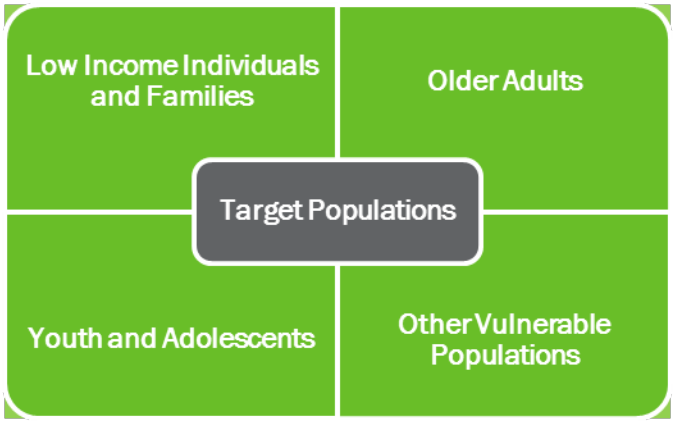
project, including information gathered from the interviews, community forums, and the 2015 LHMC Community Health Survey. Participants engaged in a discussion of 1) the assessment findings, 2) current community benefits program activities, and 3) emerging strategic ideas that could be applied to refine their community benefits strategic response. From this meeting, community health priorities were identified, as were target populations and core strategies to achieve health improvements.

Following is a brief summary of the target populations and community health priorities that were identified with the support of community stakeholders. Also included below is a review of the goals, objectives, and core elements of LHMC's Community Health Improvement Plan (CHIP).

Target Populations Most at Risk

LHMC, along with its other health, public health, social services, and community health partners, is committed to improving the health status and well-being of all residents living throughout its community benefits primary service area. LHMC's CHIP, summarized in the next section, includes many activities that will support residents. However, based on the assessment's quantitative and qualitative findings, there was broad agreement that LHMC's CHIP should target low-income populations (e.g., low-income individuals/families, older adults on fixed incomes, homeless), older adult populations (e.g., frail, isolated older adults), youths/adolescents (e.g., 13-18-year-olds, those in middle-school and high-school), and other vulnerable populations (e.g., diverse racial/ethnic minority and linguistically isolated populations). These demographic and socio-economic target populations have complex needs and face barriers to care and service gaps as well as other adverse social determinants of health that can put them at greater risk, limit their access to needed services, and often lead to disparities in health outcomes.

Figure 22: LHMC Community Benefits Target Population



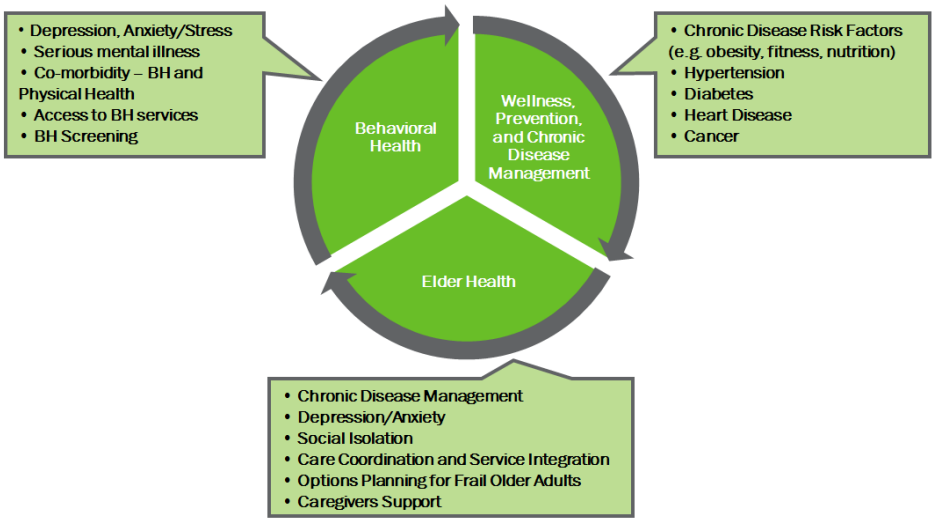
Community Health Priorities

LHMC's CHNA approach and process provided ample opportunity to vet the quantitative and qualitative data compiled during the assessment. LHMC has framed the community health needs in three priority areas, which together encompass the broad range of health issues and social determinants of health facing residents living in LHMC's community benefits service area. These three areas are 1) Wellness, Prevention, and Chronic Disease Management; 2) Elder Health; and 3) Behavioral Health (mental health and substance use). LHMC already has a robust community health improvement plan that has been working to address all of the identified issues. However, this CHNA has provided new guidance and invaluable insight on quantitative trends and community perceptions that can be used to inform and refine LHMC's efforts. The following are the core elements of LHMC's updated CHIP.

LHMC's Summary Community Health Improvement Plan

Given the complex health issues in the community, LHMC has been strategic in identifying its priority areas in order to maximize the impact of its community benefits program and its work to improve the overall health and wellness of residents in its community benefits service area. The community health priorities identified above have guided LHMC's community health improvement planning process. The priorities are designed to promote community-based wellness and disease prevention, and ensure ongoing self-management of chronic diseases and behavioral health disorders. The goals and activities drawn from these priorities will make extensive use of existing partnerships, resources, and programs in order to facilitate the largest possible health impact.

Figure 23: LHMC Community Health Priorities



The following goals address the existing issues of access, care coordination, barriers, and targeted service gaps identified through the CHNA process.

Priority Area 1: Wellness, Prevention, and Chronic Disease Management
Goal 1: Promote Wellness, Behavior Change, and Engagement in Appropriate Care
Goal 2: Increase Physical Activity and Healthy Eating
Goal 3: Identify Those with Chronic Conditions or at Risk; Screen, and Refer for Counseling/Treatment
Goal 4: Promote Stanford Model Chronic Disease Self-Management Program
Goal 5: Enhance Care Coordination, Counseling, and Referral Services During/After Hospital Discharge
Priority Area 2: Elder Health
Goal 1: Promote General Health and Wellness
Goal 2: Improve Access to Care
Goal 3: Enhance Access to Health and Wellness Services Through Improved Transportation
Goal 4: Improve Chronic Care Management
Goal 5: Reduce Falls in Elders
Goal 6: Enhance Care Coordination, Counseling, and Referral Services During/After Hospital Discharge
Goal 7: Enhance Caregiver Support and Reduce Family/Caregiver Stress
Goal 8: Decrease Depression and Social Isolation
Priority Area 3: Behavioral Health
Goal 1: Promote Outreach, Education, Screening, and Treatment for Those with Mental Health and Substance Use Issues in Clinical and Community-based Settings
Goal 2: Increase Access to Mental Health and Substance Abuse (MH/SA) Services
Goal 3: Improve Integration of MH/SA and Primary Care Medical Services
Goal 4: Increase Awareness and Screening for Domestic Violence (DV) Throughout LHMC

Appendices

Appendix A – Massachusetts Community Health Information Profile Epidemiological Data

Appendix B – American Community Survey Demographic and Socioeconomic Data

Appendix C – LHMC Community Health Survey Data

Appendix D- Key Informant Interview Guide

Appendix E – Key Informant Interview Summary

Appendix F – Community and Provider Forum Summaries

Appendix G – Lahey Health Community Health Survey

Appendix H – Lahey Health Community Health Survey Methods

Appendix A – Massachusetts Community Health Information Profile Epidemiological Data

Arlington: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		Service Area
Indicators	**State**	**Middlesex County**	**Arlington**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	595.25 (522.41 - 668.10)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	212.42 (168.82 - 256.02)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	245.10 (198.28 - 291.93)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	282.45 (232.20 - 332.71)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	249.80 (227.56 - 272.04)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	695.56 (657.01 - 734.11)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	2817.36 (2749.80 - 2884.92)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	165.54 (146.20 - 184.87)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	631.25 (591.40 - 671.10)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	2016.63 (1946.76 - 2086.51)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	3680.74 (3590.94 - 3770.54)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	199.45 (176.77 - 222.13)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	8.52 (4.20 - 12.83)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	44.62 (37.52 - 51.72)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	2,971

Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	7.1% (6.1-8%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	13.5% (12.3-14.7%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	9.8% (8.8-10.9%)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		**Service Area**
Indicators	**State**	**Middlesex County**	**Arlington**
Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	3.03 (1.05 - 5.01)
Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	320,847	9,166
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	167
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	18.2 (15.5-21)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	31
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	18.6 (12.7-24.5)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	14
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	45.2 (27.6-62.7)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	93.37 (64.45 - 122.30)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	74.70 (48.83 - 100.57)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	28.01 (12.16 - 43.86)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	269.48 (249.04 - 289.93)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	13.56 (9.59 - 17.53)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	14.01 (2.80 - 25.21)
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	137.72 (102.61 - 172.84)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	NA
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	17.40 (12.11 - 22.69)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	0.00 (0.00 - 0.00)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	23842.91 (23652.03 - 24033.79)

Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	631.25 (591.40 - 671.10)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	2016.63 (1946.76 - 2086.51)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	3680.74 (3590.94 - 3770.54)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	199.45 (176.77 - 222.13)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	266.43 (241.87 - 290.99)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	827.90 (785.26 - 870.54)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		**Service Area**
Indicators	**State**	**Middlesex County**	**Arlington**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	55.07 (43.82 - 66.33)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	220.37 (176.57 - 264.18)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	111.70 (90.93 - 132.46)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	389.11 (359.26 - 418.97)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	41.31 (31.56 - 51.05)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	323.26 (296.04 - 350.48)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	247.24 (223.42 - 271.05)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	490.24 (463.23 - 517.26)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	353.59 (330.50 - 376.68)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	159.45 (144.74 - 174.16)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	154.53 (133.94 - 175.13)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	46.17 (34.76 - 57.58)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	17.56 (11.01 - 24.11)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	41.55 (33.95 - 49.16)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	35.59 (28.53 - 42.65)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	11.13 (7.33 - 14.94)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	61.80 (52.36 - 71.23)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	33.20 (26.22 - 40.19)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	37.28 (30.13 - 44.43)

Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	127.30 (106.29 - 148.31)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	59.32 (45.34 - 73.31)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	24.43 (15.21 - 33.66)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	105.88 (91.73 - 120.04)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	1166.90 (1126.36 - 1207.45)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	7.94 (4.70 - 11.18)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		**Service Area**
Indicators	**State**	**Middlesex County**	**Arlington**
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	24.41 (18.63 - 30.19)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	3037.57 (2978.06 - 3097.08)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	3.55 (1.51 - 5.58)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	1047.06 (1009.79 - 1084.32)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	159.33 (145.52 - 173.14)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	185.00 (168.92 - 201.07)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	24.56 (19.19 - 29.93)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	204.94 (186.56 - 223.31)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	22.96 (17.57 - 28.36)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	90.58 (77.27 - 103.88)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	579.64 (547.32 - 611.95)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	0.33 (0.00 - 0.98)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	22.27 (17.24 - 27.29)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	6.06 (3.36 - 8.77)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			

All cause			
Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	581.88 (555.03 - 608.73)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	697.91 (649.72 - 746.10)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	497.69 (466.61 - 528.78)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	10042.51 (9923.73 - 10161.29)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	9404.69 (9240.21 - 9569.18)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	10808.85 (10636.95 - 10980.76)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	220.23 (200.92 - 239.53)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	754.90 (719.94 - 789.87)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	36.55 (28.48 - 44.63)

Bedford: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Bedford**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	368.09 (265.21 - 470.96)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	127.70 (67.04 - 188.37)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	172.78 (102.23 - 243.33)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	165.26 (96.26 - 234.27)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	284.75 (237.67 - 331.83)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	760.48 (684.49 - 836.47)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	2792.20 (2663.98 - 2920.42)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	182.59 (139.31 - 225.87)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	539.93 (471.84 - 608.01)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1672.74 (1556.93 - 1788.56)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	4398.66 (4217.10 - 4580.21)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	217.84 (170.20 - 265.48)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	5.14 (0.00 - 11.21)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	61.11 (47.28 - 74.94)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	683
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	8.5% (6.4-10.6%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	18.4% (15.5-21.4%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	16.5% (13.8-19.3%)
Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	4.39 (0.00 - 9.35)

Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	320,847	3,219
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Bedford**
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	151
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	46.9 (39.6-54.2)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	34
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	22.5 (15.9-29.2)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	20
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	58.8 (42.3-75.4)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	157.75 (90.33 - 225.17)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	NA
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	97.66 (44.60 - 150.72)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	270.90 (234.10 - 307.71)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	14.71 (7.72 - 21.70)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	0.00 (0.00 - 0.00)
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	NA
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	0.00 (0.00 - 0.00)
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	NA
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	0.00 (0.00 - 0.00)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	32735.18 (32363.79 - 33106.57)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	539.93 (471.84 - 608.01)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1672.74 (1556.93 - 1788.56)

Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	4398.66 (4217.10 - 4580.21)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	217.84 (170.20 - 265.48)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	381.51 (326.33 - 436.69)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	1552.37 (1442.62 - 1662.11)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Bedford**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	75.68 (51.30 - 100.05)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	156.09 (94.95 - 217.22)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	98.10 (61.12 - 135.09)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	335.44 (284.19 - 386.69)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	36.82 (19.81 - 53.82)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	327.26 (276.63 - 377.88)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	302.71 (254.02 - 351.41)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	478.35 (431.66 - 525.05)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	351.47 (311.19 - 391.75)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	152.09 (127.79 - 176.38)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	134.16 (98.30 - 170.03)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	38.36 (19.44 - 57.29)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	20.45 (8.06 - 32.84)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	42.81 (29.25 - 56.37)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	38.10 (24.55 - 51.64)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	8.30 (2.98 - 13.61)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	59.53 (43.42 - 75.64)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	40.98 (27.65 - 54.31)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	37.40 (25.10 - 49.69)

Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	143.68 (108.37 - 179.00)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	71.81 (47.54 - 96.09)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	14.83 (4.39 - 25.28)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	81.58 (60.33 - 102.83)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	1089.33 (1020.52 - 1158.14)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	11.66 (5.01 - 18.30)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Bedford**
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	19.48 (10.17 - 28.79)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	2654.14 (2555.23 - 2753.06)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	6.28 (1.49 - 11.06)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	897.73 (837.64 - 957.83)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	147.74 (125.22 - 170.27)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	166.14 (140.34 - 191.95)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	25.72 (16.90 - 34.54)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	203.56 (172.01 - 235.10)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	40.23 (28.12 - 52.34)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	91.19 (67.86 - 114.52)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	670.09 (604.92 - 735.26)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	1.23 (0.00 - 3.65)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	19.28 (11.54 - 27.02)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	8.93 (3.25 - 14.62)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			

All cause			
Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	605.80 (559.38 - 652.22)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	666.81 (595.61 - 738.02)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	538.28 (478.78 - 597.78)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	10965.64 (10720.12 - 11211.16)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	8688.71 (8400.64 - 8976.78)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	13077.47 (12693.66 - 13461.28)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	223.89 (189.86 - 257.91)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	719.52 (655.29 - 783.74)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	29.32 (16.61 - 42.04)

Billerica: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Billerica**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	1511.01 (1391.81 - 1630.21)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	417.52 (354.51 - 480.52)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	765.45 (680.29 - 850.60)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	844.97 (755.54 - 934.41)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	249.19 (227.16 - 271.22)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	536.70 (503.70 - 569.70)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	3765.81 (3681.63 - 3849.98)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	281.66 (257.61 - 305.71)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	622.94 (587.53 - 658.35)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1449.31 (1395.53 - 1503.08)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	2984.69 (2908.22 - 3061.16)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	364.34 (336.36 - 392.32)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	6.34 (2.83 - 9.84)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	60.22 (47.67 - 72.78)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	2,226
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	7% (5.9-8%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	15.5% (14-17%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	19.5% (17.9-21.1%)

Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	4.04 (1.41 - 6.68)
Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	320,847	9,315
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Billerica**
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	230
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	24.7 (21.5-27.8)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	89
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	38.7 (32.4-45)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	61
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	68.5 (58.9-78.2)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	198.82 (155.29 - 242.34)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	101.89 (70.72 - 133.07)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	67.10 (41.80 - 92.40)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	372.55 (343.77 - 401.32)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	17.65 (10.89 - 24.41)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	NA
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	99.41 (68.62 - 130.20)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	NA
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	18.62 (13.07 - 24.18)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	0.42 (0.00 - 1.24)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	26019.69 (25826.76 - 26212.63)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	622.94 (587.53 - 658.35)

Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1449.31 (1395.53 - 1503.08)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	2984.69 (2908.22 - 3061.16)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	364.34 (336.36 - 392.32)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	274.51 (250.99 - 298.02)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	916.01 (873.24 - 958.78)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Billerica**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	97.40 (81.50 - 113.30)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	165.73 (130.94 - 200.53)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	100.59 (81.26 - 119.91)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	443.71 (409.83 - 477.59)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	68.99 (55.61 - 82.38)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	307.76 (279.52 - 335.99)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	382.16 (350.71 - 413.61)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	574.61 (538.55 - 610.66)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	426.11 (396.96 - 455.25)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	208.35 (186.83 - 229.87)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	116.15 (95.31 - 137.00)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	23.37 (14.56 - 32.17)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	18.87 (10.45 - 27.29)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	48.29 (37.52 - 59.06)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	39.01 (29.81 - 48.21)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	15.65 (9.74 - 21.55)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	100.21 (84.57 - 115.85)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	63.11 (51.56 - 74.66)

Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	71.03 (58.44 - 83.62)
Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	140.70 (113.52 - 167.89)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	51.77 (38.54 - 65.01)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	12.81 (2.19 - 23.44)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	149.15 (131.59 - 166.71)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	2107.88 (2043.52 - 2172.24)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	12.52 (7.01 - 18.03)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Billerica**
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	53.89 (43.18 - 64.60)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	4600.86 (4514.92 - 4686.79)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	9.16 (4.40 - 13.93)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	1712.92 (1654.26 - 1771.58)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	243.25 (219.09 - 267.42)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	317.48 (290.62 - 344.34)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	31.54 (22.63 - 40.44)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	354.39 (326.73 - 382.04)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	41.81 (31.59 - 52.04)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	122.40 (106.37 - 138.44)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	775.49 (736.04 - 814.94)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	0.00 (0.00 - 0.00)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	40.13 (29.75 - 50.51)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	4.86 (1.42 - 8.29)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			

All cause			
Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	827.83 (785.22 - 870.44)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	1003.99 (927.90 - 1080.08)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	706.50 (655.53 - 757.48)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	12339.87 (12203.29 - 12476.44)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	11553.42 (11371.05 - 11735.79)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	13490.75 (13286.63 - 13694.87)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	302.60 (278.36 - 326.84)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	934.83 (890.11 - 979.56)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	39.98 (30.74 - 49.22)

Burlington: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Burlington**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	522.58 (432.28 - 612.87)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	163.31 (112.74 - 213.87)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	261.29 (197.36 - 325.22)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	273.54 (208.13 - 338.95)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	204.46 (178.50 - 230.42)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	482.37 (442.40 - 522.35)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	3240.60 (3147.09 - 3334.10)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	196.05 (169.45 - 222.66)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	541.63 (496.67 - 586.59)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1348.11 (1278.35 - 1417.88)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	2681.24 (2585.94 - 2776.54)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	229.10 (198.65 - 259.55)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	8.20 (2.99 - 13.41)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	61.47 (48.16 - 74.78)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	1,505
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	7.5% (6.2-8.8%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	17.1% (15.2-19%)

Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	20.9% (18.9-23%)
Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	1.99 (0.00 - 4.25)
Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	320,847	5,110
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Burlington**
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	153
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	29.9 (25.3-34.6)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	43
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	28.1 (21-35.2)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	28
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	65.1 (50.9-79.4)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	200.05 (144.09 - 256.01)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	77.57 (42.70 - 112.44)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	28.58 (7.41 - 49.75)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	338.06 (306.77 - 369.35)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	21.21 (13.36 - 29.05)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	NA
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	114.31 (72.00 - 156.63)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	NA
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	11.25 (5.48 - 17.02)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	0.00 (0.00 - 0.00)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	24177.70 (23931.83 - 24423.57)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	541.63 (496.67 - 586.59)

Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1348.11 (1278.35 - 1417.88)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	2681.24 (2585.94 - 2776.54)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	229.10 (198.65 - 259.55)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	244.98 (215.45 - 274.51)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	882.95 (827.86 - 938.03)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Burlington**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	103.24 (82.38 - 124.10)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	214.06 (160.84 - 267.29)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	130.42 (101.11 - 159.72)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	497.53 (451.83 - 543.24)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	79.08 (60.82 - 97.34)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	365.74 (326.53 - 404.95)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	419.55 (377.57 - 461.54)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	579.98 (538.51 - 621.45)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	415.18 (381.84 - 448.52)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	185.94 (163.72 - 208.17)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	164.38 (134.08 - 194.67)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	35.95 (21.90 - 50.01)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	19.99 (10.10 - 29.88)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	42.25 (30.97 - 53.54)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	40.33 (29.84 - 50.82)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	20.30 (12.85 - 27.75)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	77.00 (61.75 - 92.25)

Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	52.26 (40.67 - 63.85)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	50.99 (39.24 - 62.73)
Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	152.77 (121.70 - 183.84)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	65.00 (46.47 - 83.53)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	18.64 (7.25 - 30.02)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	113.78 (95.82 - 131.74)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	1762.84 (1696.80 - 1828.88)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Burlington**
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	12.55 (6.74 - 18.35)
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	52.85 (40.51 - 65.20)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	4140.22 (4048.31 - 4232.14)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	2.92 (0.03 - 5.81)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	1431.55 (1371.93 - 1491.17)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	231.74 (206.60 - 256.88)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	257.06 (230.70 - 283.43)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	37.67 (27.40 - 47.93)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	327.32 (296.52 - 358.12)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	37.54 (27.32 - 47.76)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	131.33 (110.36 - 152.30)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	608.90 (565.49 - 652.32)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	0.80 (0.00 - 2.36)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	27.72 (18.80 - 36.64)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	5.59 (1.72 - 9.46)
Other Hospitalizations and Mortality: All Cause and Injuries			

(age-adjusted rates per 100,000)			
All cause			
Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	770.80 (726.60 - 815.01)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	897.30 (821.10 - 973.50)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	670.73 (617.59 - 723.86)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	11568.60 (11406.14 - 11731.07)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	10677.48 (10463.29 - 10891.67)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	12603.12 (12360.34 - 12845.90)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	225.39 (200.23 - 250.55)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	839.45 (790.33 - 888.56)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	35.49 (24.98 - 45.99)

Haverhill: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Haverhill**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	2027.07 (1915.12 - 2139.02)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	612.72 (550.73 - 674.71)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	772.06 (702.53 - 841.59)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	878.84 (804.69 - 952.98)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	222.84 (206.24 - 239.44)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	1179.64 (1141.32 - 1217.97)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	4973.47 (4898.65 - 5048.28)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	283.20 (264.46 - 301.93)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	807.33 (775.51 - 839.16)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	2492.88 (2437.08 - 2548.68)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	7077.34 (6986.16 - 7168.53)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	461.35 (437.22 - 485.47)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	10.70 (7.08 - 14.32)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	49.35 (42.14 - 56.56)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	4,218
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	6.6% (5.9-7.4%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	14.3% (13.2-15.4%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	21.9% (20.7-23.2%)
Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	4.03 (2.12 - 5.94)

Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	320,847	14,151
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Haverhill**
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	1,300
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	91.9 (87.1-96.6)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	304
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	23.4 (21.1-25.7)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	174
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	57.2 (51.7-62.8)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	409.03 (358.33 - 459.73)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	118.27 (90.97 - 145.58)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	36.14 (21.04 - 51.24)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	412.24 (389.83 - 434.66)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	13.31 (9.58 - 17.05)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	NA
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	190.55 (155.91 - 225.20)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	9.45 (6.05 - 12.84)
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	29.43 (23.44 - 35.41)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	1.42 (0.17 - 2.67)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	44796.11 (44624.00 - 44968.21)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	807.33 (775.51 - 839.16)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	2492.88 (2437.08 - 2548.68)

Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	7077.34 (6986.16 - 7168.53)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	461.35 (437.22 - 485.47)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	824.90 (792.29 - 857.51)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	2762.64 (2703.47 - 2821.82)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Haverhill**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	205.86 (187.06 - 224.65)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	159.02 (131.28 - 186.77)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	149.32 (130.52 - 168.12)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	455.12 (427.21 - 483.03)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	65.78 (55.15 - 76.42)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	466.75 (438.49 - 495.02)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	596.98 (565.04 - 628.92)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	530.37 (504.51 - 556.23)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	417.58 (394.97 - 440.19)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	189.06 (173.98 - 204.14)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	132.53 (114.87 - 150.19)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	39.98 (30.40 - 49.56)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	21.51 (14.82 - 28.19)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	50.50 (42.53 - 58.47)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	43.20 (35.93 - 50.48)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	18.25 (13.57 - 22.93)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	79.63 (69.51 - 89.76)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	61.63 (52.76 - 70.50)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	60.06 (51.37 - 68.74)

Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	156.93 (135.30 - 178.57)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	56.80 (44.39 - 69.20)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	13.94 (7.42 - 20.45)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	157.25 (143.17 - 171.32)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	2338.16 (2286.27 - 2390.05)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	15.03 (10.76 - 19.30)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Haverhill**
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	45.39 (37.98 - 52.80)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	4968.35 (4898.25 - 5038.46)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	3.72 (1.65 - 5.79)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	1551.57 (1509.49 - 1593.64)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	239.54 (223.20 - 255.87)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	254.22 (236.70 - 271.74)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	27.85 (22.13 - 33.56)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	466.43 (442.35 - 490.51)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	36.99 (30.22 - 43.76)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	192.26 (176.62 - 207.89)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	1169.95 (1131.70 - 1208.20)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	0.44 (0.00 - 1.05)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	22.62 (17.78 - 27.46)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	3.04 (1.10 - 4.99)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			

All cause			
Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	756.37 (727.43 - 785.31)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	887.24 (837.26 - 937.21)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	656.90 (622.12 - 691.68)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	13736.39 (13621.22 - 13851.55)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	12446.12 (12287.48 - 12604.77)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	15038.61 (14871.68 - 15205.55)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	353.97 (332.19 - 375.76)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	969.24 (935.12 - 1003.36)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	46.23 (38.83 - 53.63)

Lexington: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lexington**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	267.59 (210.44 - 324.74)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	70.08 (40.81 - 99.36)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	159.28 (115.17 - 203.40)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	156.10 (112.42 - 199.77)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	169.06 (141.33 - 196.80)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	512.27 (468.52 - 556.01)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	2160.71 (2085.36 - 2236.06)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	117.27 (91.54 - 142.99)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	453.97 (405.70 - 502.23)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1227.77 (1154.28 - 1301.26)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	2781.88 (2673.25 - 2890.52)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	151.52 (120.70 - 182.34)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	7.68 (0.73 - 14.64)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	45.02 (37.38 - 52.67)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	1,046
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	8% (6.4-9.7%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	15.8% (13.6-18%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	13.6% (11.5-15.7%)
Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	Missing

Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	320,847	8,269
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lexington**
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	133
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	16.1 (13.4-18.8)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	10
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	7.5 (3-12)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	NA
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	NA
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	101.94 (66.64 - 137.24)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	22.30 (5.78 - 38.82)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	79.64 (48.43 - 110.85)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	215.34 (194.82 - 235.87)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	8.67 (5.40 - 11.94)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	NA
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	57.34 (30.86 - 83.82)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	NA
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	15.00 (6.94 - 23.06)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	0.00 (0.00 - 0.00)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	20042.50 (19807.40 - 20277.61)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	453.97 (405.70 - 502.23)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1227.77 (1154.28 - 1301.26)

Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	2781.88 (2673.25 - 2890.52)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	151.52 (120.70 - 182.34)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	203.45 (174.17 - 232.74)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	765.66 (711.15 - 820.17)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lexington**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	48.82 (35.92 - 61.72)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	136.75 (101.58 - 171.92)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	94.69 (70.74 - 118.64)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	379.89 (343.97 - 415.81)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	45.27 (32.85 - 57.69)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	358.59 (323.68 - 393.49)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	185.51 (160.38 - 210.63)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	473.38 (442.14 - 504.62)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	319.78 (294.67 - 344.89)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	117.76 (103.34 - 132.19)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	161.27 (135.47 - 187.08)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	46.25 (30.98 - 61.51)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	15.24 (8.45 - 22.02)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	34.20 (26.49 - 41.90)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	30.42 (23.23 - 37.61)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	9.79 (5.70 - 13.88)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	42.37 (33.79 - 50.96)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	33.46 (25.79 - 41.13)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	26.03 (19.45 - 32.62)

Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	147.20 (122.92 - 171.47)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	67.92 (51.88 - 83.96)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	16.47 (8.60 - 24.35)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	43.27 (32.78 - 53.76)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	757.95 (721.08 - 794.83)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	7.06 (3.62 - 10.49)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lexington**
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	20.54 (14.77 - 26.31)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	2411.44 (2351.35 - 2471.53)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	4.06 (1.58 - 6.54)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	847.01 (809.29 - 884.73)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	117.59 (104.78 - 130.40)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	187.83 (169.89 - 205.77)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	21.56 (15.91 - 27.20)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	136.43 (118.53 - 154.33)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	11.83 (7.73 - 15.92)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	71.10 (57.09 - 85.10)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	477.00 (440.42 - 513.59)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	0.00 (0.00 - 0.00)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	20.85 (15.64 - 26.05)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	9.26 (5.69 - 12.84)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			

All cause			
Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	450.08 (423.41 - 476.75)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	530.80 (485.70 - 575.89)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	391.09 (358.60 - 423.58)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	8146.45 (8002.22 - 8290.68)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	7171.30 (6992.21 - 7350.39)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	9044.49 (8824.93 - 9264.04)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	138.67 (119.97 - 157.38)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	663.06 (621.90 - 704.23)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	27.08 (17.69 - 36.47)

Lowell: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lowell**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	2591.14 (2495.73 - 2686.55)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	794.24 (740.93 - 847.55)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	1058.05 (996.60 - 1119.49)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	1284.30 (1216.68 - 1351.92)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	325.71 (310.06 - 341.37)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	790.14 (766.00 - 814.28)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	4751.68 (4693.47 - 4809.89)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	355.66 (339.59 - 371.72)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	1031.86 (1004.61 - 1059.10)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	2750.08 (2706.14 - 2794.02)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	5613.84 (5552.05 - 5675.63)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	306.90 (292.23 - 321.58)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	13.71 (10.52 - 16.90)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	51.13 (44.84 - 57.43)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	8,541
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	8.8% (8.2-9.4%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	17.5% (16.7-18.3%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	28.7% (27.8-29.7%)
Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	6.32 (4.64 - 8.00)

Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	320,847	24,577
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lowell**
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	2,319
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	94.4 (90.7-98)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	1,146
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	49.4 (47.4-51.5)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	722
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	63 (60.2-65.8)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	626.19 (578.82 - 673.56)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	214.99 (187.17 - 242.80)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	11.27 (4.89 - 17.64)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	422.25 (404.00 - 440.51)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	20.07 (16.08 - 24.05)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	22.53 (13.52 - 31.55)
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	453.45 (413.10 - 493.80)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	17.92 (14.25 - 21.58)
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	78.28 (70.54 - 86.01)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	5.31 (3.25 - 7.36)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	47478.95 (47346.75 - 47611.14)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	1031.86 (1004.61 - 1059.10)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	2750.08 (2706.14 - 2794.02)

Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	5613.84 (5552.05 - 5675.63)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	306.90 (292.23 - 321.58)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	747.44 (724.25 - 770.64)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	1492.61 (1460.03 - 1525.20)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lowell**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	188.77 (174.93 - 202.60)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	345.54 (316.12 - 374.97)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	210.57 (194.74 - 226.40)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	513.95 (491.16 - 536.74)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	75.88 (67.10 - 84.65)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	369.34 (350.00 - 388.67)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	581.90 (557.66 - 606.14)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	506.79 (486.29 - 527.29)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	406.73 (388.47 - 424.98)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	196.06 (183.21 - 208.91)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	106.26 (93.54 - 118.99)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	28.63 (22.06 - 35.19)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	16.46 (11.52 - 21.41)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	47.69 (41.35 - 54.03)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	42.56 (36.62 - 48.50)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	16.54 (12.84 - 20.24)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	77.76 (69.53 - 85.99)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	61.31 (53.99 - 68.62)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	58.12 (51.04 - 65.19)

Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	131.26 (114.96 - 147.56)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	47.92 (38.66 - 57.19)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	18.54 (11.85 - 25.23)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	226.44 (213.09 - 239.80)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	3005.64 (2958.21 - 3053.06)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	19.93 (15.80 - 24.06)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lowell**
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	61.86 (54.73 - 68.98)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	5215.70 (5156.59 - 5274.82)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	6.02 (3.73 - 8.31)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	1782.95 (1745.76 - 1820.13)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	246.71 (232.65 - 260.76)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	336.98 (320.34 - 353.63)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	35.28 (29.98 - 40.58)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	563.75 (542.55 - 584.96)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	41.47 (35.47 - 47.47)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	242.00 (228.50 - 255.50)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	1083.06 (1054.51 - 1111.61)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	0.40 (0.00 - 0.96)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	34.02 (28.86 - 39.19)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	5.22 (3.11 - 7.34)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			
All cause			

Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	858.64 (832.86 - 884.43)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	1073.32 (1027.10 - 1119.54)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	706.00 (675.65 - 736.36)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	14498.50 (14407.11 - 14589.89)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	13496.10 (13368.08 - 13624.11)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	15831.17 (15698.47 - 15963.87)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	425.50 (406.35 - 444.66)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	989.90 (962.46 - 1017.33)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	55.42 (48.94 - 61.90)

Peabody: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Essex County***	**Peabody**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1576.93 (1548.61 - 1605.26)	1785.26 (1670.62 - 1899.90)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	505.19 (489.07 - 521.31)	680.94 (609.74 - 752.13)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	632.90 (614.87 - 650.93)	665.33 (594.94 - 735.71)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	709.61 (690.52 - 728.69)	747.27 (672.71 - 821.83)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	296.47 (290.96 - 301.98)	306.10 (284.55 - 327.64)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	1030.62 (1020.30 - 1040.94)	931.23 (893.28 - 969.19)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	4197.68 (4178.21 - 4217.16)	4270.26 (4197.99 - 4342.54)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	335.29 (329.24 - 341.33)	340.17 (316.39 - 363.96)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	871.26 (861.66 - 880.85)	865.35 (827.41 - 903.28)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	2126.51 (2111.60 - 2141.43)	1959.24 (1902.69 - 2015.79)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	5708.86 (5685.11 - 5732.62)	5795.13 (5701.91 - 5888.36)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	392.26 (385.61 - 398.91)	478.86 (449.67 - 508.05)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	9.01 (8.03 - 10.00)	7.91 (4.37 - 11.45)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	54.88 (52.81 - 56.95)	69.79 (62.37 - 77.21)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	42,998	2,565
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.1% (6.9-7.3%)	6.7% (5.7-7.6%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.5% (15.2-15.8%)	16.3% (14.9-17.8%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	27.9% (27.4-28.3%)	28% (26.3-29.8%)
Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	4.21 (3.60 - 4.82)	3.90 (1.49 - 6.31)

Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	170,835	9,586
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Essex County***	**Peabody**
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	8,831	484
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	51.7 (50.6-52.7)	50.5 (46.1-54.9)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	1,853	62
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	21 (20.1-21.8)	12.8 (9.8-15.8)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	1,126	43
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	60.8 (58.5-63)	69.4 (57.9-80.8)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	366.04 (352.31 - 379.77)	222.43 (181.64 - 263.21)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	96.49 (89.43 - 103.55)	93.65 (67.17 - 120.14)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	54.91 (49.58 - 60.23)	60.48 (39.20 - 81.77)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	351.49 (345.74 - 357.24)	357.65 (337.05 - 378.25)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	15.36 (14.23 - 16.48)	17.15 (13.27 - 21.02)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	6.73 (4.86 - 8.59)	0.00 (0.00 - 0.00)
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	200.38 (190.21 - 210.55)	91.70 (65.50 - 117.91)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	10.85 (9.80 - 11.90)	5.81 (2.90 - 8.72)
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	33.23 (31.42 - 35.04)	18.61 (13.66 - 23.57)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	1.17 (0.84 - 1.49)	1.12 (0.00 - 2.43)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	39239.72 (39190.87 - 39288.56)	38780.89 (38590.24 - 38971.54)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	871.26 (861.66 - 880.85)	865.35 (827.41 - 903.28)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	2126.51 (2111.60 - 2141.43)	1959.24 (1902.69 - 2015.79)

Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	5708.86 (5685.11 - 5732.62)	5795.13 (5701.91 - 5888.36)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	392.26 (385.61 - 398.91)	478.86 (449.67 - 508.05)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	621.75 (613.49 - 630.00)	547.16 (516.18 - 578.14)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1930.62 (1916.24 - 1945.01)	1849.78 (1794.10 - 1905.46)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Essex County***	**Peabody**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	144.95 (140.45 - 149.45)	152.41 (135.29 - 169.53)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	193.69 (184.99 - 202.39)	174.37 (139.88 - 208.86)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	138.48 (133.17 - 143.79)	119.21 (99.19 - 139.24)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	464.85 (456.81 - 472.90)	663.28 (627.65 - 698.90)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	67.29 (64.23 - 70.36)	64.17 (53.06 - 75.29)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	412.44 (404.86 - 420.02)	537.44 (505.35 - 569.52)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	491.88 (483.61 - 500.15)	547.97 (515.57 - 580.36)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	531.37 (524.35 - 538.38)	575.18 (549.78 - 600.59)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	393.28 (387.28 - 399.28)	374.78 (354.17 - 395.40)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	170.20 (166.31 - 174.10)	186.97 (173.39 - 200.55)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	137.12 (132.25 - 141.99)	130.17 (113.11 - 147.23)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	39.84 (37.18 - 42.49)	36.84 (27.18 - 46.50)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	22.45 (20.55 - 24.36)	24.47 (17.59 - 31.36)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.96 (41.95 - 45.96)	48.88 (41.61 - 56.16)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.15 (36.29 - 40.01)	37.00 (30.68 - 43.32)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	14.12 (13.00 - 15.24)	14.72 (11.05 - 18.40)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	72.07 (69.46 - 74.67)	86.61 (76.92 - 96.30)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	52.08 (49.88 - 54.28)	55.17 (47.55 - 62.80)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	45.60 (43.56 - 47.63)	53.62 (46.23 - 61.01)

Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	167.02 (161.10 - 172.94)	169.48 (148.95 - 190.01)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	70.46 (66.83 - 74.08)	71.77 (58.82 - 84.71)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	19.82 (17.72 - 21.93)	23.44 (16.25 - 30.62)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	131.74 (128.16 - 135.33)	130.70 (117.69 - 143.71)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1919.03 (1906.14 - 1931.93)	1912.24 (1867.70 - 1956.77)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	13.22 (12.13 - 14.31)	14.81 (10.88 - 18.75)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Essex County***	**Peabody**
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	44.37 (42.33 - 46.41)	36.22 (29.69 - 42.75)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	4268.89 (4251.09 - 4286.68)	4259.62 (4198.66 - 4320.57)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.78 (4.16 - 5.41)	5.62 (3.34 - 7.89)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1436.08 (1425.05 - 1447.10)	1427.32 (1389.96 - 1464.69)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	197.06 (193.05 - 201.07)	215.70 (201.95 - 229.45)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	252.75 (248.01 - 257.50)	275.08 (258.42 - 291.74)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	31.07 (29.47 - 32.68)	41.47 (35.44 - 47.50)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	375.07 (369.10 - 381.05)	347.14 (326.44 - 367.83)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	33.81 (32.08 - 35.53)	34.60 (28.92 - 40.29)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	154.19 (150.21 - 158.18)	143.03 (128.23 - 157.83)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	961.94 (952.10 - 971.78)	956.21 (919.40 - 993.03)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.73 (0.47 - 0.98)	0.17 (0.00 - 0.52)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	21.08 (19.80 - 22.36)	16.30 (12.70 - 19.90)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.77 (5.06 - 6.47)	6.97 (4.57 - 9.37)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			
All cause			

Deaths - age adjusted rate	671.77 (669.23 - 674.30)	674.19 (666.75 - 681.63)	722.18 (696.53 - 747.83)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	808.50 (795.62 - 821.37)	907.72 (862.78 - 952.66)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	576.32 (567.41 - 585.23)	597.06 (566.91 - 627.21)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	12310.97 (12279.63 - 12342.31)	12136.60 (12019.13 - 12254.06)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	11457.97 (11415.27 - 11500.67)	11631.24 (11473.01 - 11789.46)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	13260.96 (13215.20 - 13306.72)	12872.53 (12699.51 - 13045.55)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	276.51 (271.20 - 281.82)	288.52 (268.93 - 308.11)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	934.19 (924.82 - 943.55)	956.64 (922.63 - 990.65)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	41.25 (39.23 - 43.27)	37.63 (30.50 - 44.77)

Reading: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Reading**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	755.95 (648.01 - 863.89)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	194.04 (139.20 - 248.88)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	460.85 (376.45 - 545.25)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	489.15 (402.20 - 576.09)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	197.69 (170.21 - 225.16)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	534.54 (490.70 - 578.38)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	2854.42 (2764.31 - 2944.53)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	190.35 (161.88 - 218.81)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	651.56 (599.03 - 704.09)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1358.12 (1284.79 - 1431.46)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	2590.78 (2492.04 - 2689.52)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	332.80 (292.98 - 372.63)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	5.34 (0.38 - 10.29)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	51.70 (40.86 - 62.54)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	1,272
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	6.5% (5.2-7.9%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	14.7% (12.8-16.6%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	12.7% (10.8-14.5%)
Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	2.36 (0.00 - 5.02)

Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	320,847	6,291
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Reading**
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	96
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	15.3 (12.2-18.3)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	28
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	29.2 (20.1-38.3)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	22
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	78.6 (63.4-93.8)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	121.28 (77.90 - 164.65)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	52.55 (23.99 - 81.11)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	80.85 (45.43 - 116.27)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	299.69 (270.59 - 328.79)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	10.51 (5.47 - 15.54)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	NA
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	76.81 (42.28 - 111.33)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	NA
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	11.04 (5.13 - 16.95)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	0.00 (0.00 - 0.00)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	20487.31 (20251.15 - 20723.47)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	651.56 (599.03 - 704.09)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1358.12 (1284.79 - 1431.46)

Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	2590.78 (2492.04 - 2689.52)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	332.80 (292.98 - 372.63)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	137.18 (114.54 - 159.82)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	526.87 (481.97 - 571.76)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Reading**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	92.08 (72.04 - 112.13)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	135.09 (95.20 - 174.98)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	99.19 (73.45 - 124.93)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	410.40 (368.15 - 452.65)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	46.61 (32.35 - 60.87)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	372.88 (332.60 - 413.16)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	351.28 (312.18 - 390.38)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	560.87 (521.18 - 600.55)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	391.25 (358.13 - 424.37)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	186.44 (164.12 - 208.76)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	179.04 (148.68 - 209.40)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	45.84 (30.67 - 61.01)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	34.02 (21.44 - 46.60)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	56.44 (44.01 - 68.88)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	40.95 (30.46 - 51.43)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	16.11 (9.74 - 22.47)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	69.71 (55.69 - 83.73)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	55.92 (43.59 - 68.25)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	46.47 (35.17 - 57.77)

Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	136.99 (107.56 - 166.41)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	57.81 (39.55 - 76.06)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	20.98 (8.97 - 32.99)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	90.24 (74.45 - 106.03)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	1355.13 (1296.49 - 1413.77)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	16.22 (9.50 - 22.93)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Reading**
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	27.40 (18.93 - 35.88)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	3486.57 (3399.79 - 3573.35)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	0.56 (0.00 - 1.67)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	1175.77 (1121.11 - 1230.43)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	167.49 (147.28 - 187.71)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	199.58 (176.63 - 222.54)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	28.42 (20.04 - 36.80)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	258.10 (230.76 - 285.43)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	40.15 (29.88 - 50.42)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	98.26 (80.63 - 115.89)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	565.57 (522.97 - 608.17)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	0.00 (0.00 - 0.00)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	10.20 (5.33 - 15.07)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	10.65 (5.52 - 15.77)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			
All cause			

Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	636.14 (596.53 - 675.75)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	774.56 (704.40 - 844.71)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	537.81 (491.48 - 584.14)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	10257.70 (10096.59 - 10418.81)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	9267.01 (9054.04 - 9479.99)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	11258.63 (11020.19 - 11497.07)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	229.11 (202.20 - 256.02)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	791.46 (743.68 - 839.23)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	31.43 (20.83 - 42.02)

Stoneham: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Stoneham**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	1035.93 (900.37 - 1171.50)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	237.98 (172.75 - 303.22)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	517.97 (421.86 - 614.08)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	601.96 (498.39 - 705.53)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	312.31 (278.37 - 346.25)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	750.02 (697.44 - 802.61)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	3640.21 (3538.07 - 3742.34)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	367.30 (329.00 - 405.60)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	891.77 (831.64 - 951.91)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1839.62 (1753.65 - 1925.60)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	3891.50 (3770.55 - 4012.44)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	398.26 (356.40 - 440.12)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	12.70 (5.34 - 20.05)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	42.83 (33.30 - 52.36)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	1,138
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	5.7% (4.4-7.1%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	14.6% (12.5-16.6%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	14.6% (12.5-16.6%)

Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	3.51 (0.08 - 6.95)
Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	320,847	3,938
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Stoneham**
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	136
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	34.5 (28.8-40.2)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	33
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	24.3 (17.1-31.5)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	20
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	60.6 (43.9-77.3)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	163.32 (109.26 - 217.39)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	116.66 (70.96 - 162.36)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	32.66 (8.47 - 56.86)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	342.69 (311.72 - 373.65)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	10.46 (5.91 - 15.01)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	0.00 (0.00 - 0.00)
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	121.33 (74.72 - 167.93)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	NA
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	23.88 (15.40 - 32.37)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	0.00 (0.00 - 0.00)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	30952.05 (30667.76 - 31236.34)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	891.77 (831.64 - 951.91)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1839.62 (1753.65 - 1925.60)

Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	3891.50 (3770.55 - 4012.44)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	398.26 (356.40 - 440.12)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	281.41 (247.01 - 315.81)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	899.28 (839.24 - 959.31)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Stoneham**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	148.63 (122.59 - 174.66)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	183.97 (129.03 - 238.91)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	121.86 (90.52 - 153.21)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	573.10 (522.08 - 624.12)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	59.45 (42.98 - 75.92)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	505.33 (457.40 - 553.25)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	505.33 (457.40 - 553.25)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	551.07 (512.39 - 589.75)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	398.75 (366.07 - 431.43)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	158.45 (138.88 - 178.02)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	169.61 (139.37 - 199.84)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	60.15 (41.13 - 79.17)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	16.75 (8.20 - 25.29)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	47.58 (36.48 - 58.67)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	41.85 (31.41 - 52.29)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	10.19 (5.18 - 15.19)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	71.46 (58.08 - 84.85)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	40.43 (30.33 - 50.54)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	41.73 (31.60 - 51.86)

Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	143.11 (113.96 - 172.26)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	48.38 (31.70 - 65.05)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	24.00 (12.24 - 35.76)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	100.69 (83.95 - 117.44)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	1794.81 (1730.36 - 1859.26)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	8.17 (3.81 - 12.52)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Stoneham**
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	34.59 (24.94 - 44.23)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	4105.89 (4014.18 - 4197.59)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	3.02 (0.33 - 5.70)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	1415.66 (1358.41 - 1472.91)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	179.64 (160.10 - 199.18)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	226.88 (203.72 - 250.03)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	33.80 (25.46 - 42.14)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	340.38 (308.42 - 372.34)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	28.86 (20.86 - 36.87)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	146.25 (123.19 - 169.31)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	795.37 (744.10 - 846.63)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	0.00 (0.00 - 0.00)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	20.57 (14.39 - 26.75)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	3.78 (1.15 - 6.40)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			
All cause			

Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	616.17 (578.83 - 653.51)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	785.77 (719.17 - 852.37)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	495.77 (452.90 - 538.64)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	11917.89 (11740.09 - 12095.69)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	11205.41 (10965.07 - 11445.76)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	12766.24 (12505.21 - 13027.27)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	265.74 (236.81 - 294.66)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	868.81 (819.01 - 918.61)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	44.25 (31.84 - 56.65)

Tewksbury: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Tewksbury**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	1633.68 (1487.66 - 1779.70)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	466.27 (387.80 - 544.74)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	794.39 (692.13 - 896.65)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	880.74 (773.11 - 988.36)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	223.67 (198.18 - 249.16)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	561.57 (521.49 - 601.66)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	3917.92 (3822.30 - 4013.54)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	294.86 (264.05 - 325.67)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	612.15 (568.27 - 656.03)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1529.62 (1461.99 - 1597.25)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	3117.00 (3022.99 - 3211.01)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	371.95 (336.25 - 407.65)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	11.52 (5.40 - 17.65)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	59.54 (47.37 - 71.70)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	1,441
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	7.8% (6.5-9.2%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	16.2% (14.3-18.1%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	14.9% (13-16.7%)
Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	3.47 (0.43 - 6.51)

Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	320,847	6,292
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Tewksbury**
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	221
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	35.1 (30.6-39.7)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	88
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	39.8 (33.4-46.3)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	56
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	63.6 (53.6-73.7)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	169.24 (121.89 - 216.59)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	103.62 (66.56 - 140.68)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	48.35 (23.03 - 73.68)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	345.71 (316.18 - 375.24)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	22.41 (14.95 - 29.87)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	NA
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	55.26 (28.19 - 82.33)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	NA
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	17.09 (10.77 - 23.41)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	0.53 (0.00 - 1.56)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	27116.38 (26885.84 - 27346.92)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	612.15 (568.27 - 656.03)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1529.62 (1461.99 - 1597.25)

Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	3117.00 (3022.99 - 3211.01)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	371.95 (336.25 - 407.65)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	298.61 (268.45 - 328.77)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	658.71 (614.21 - 703.22)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Tewksbury**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	95.29 (76.89 - 113.68)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	144.24 (105.43 - 183.04)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	105.73 (81.49 - 129.98)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	440.36 (400.88 - 479.83)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	47.18 (34.24 - 60.13)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	395.95 (358.51 - 433.39)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	429.25 (390.28 - 468.23)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	577.77 (539.72 - 615.82)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	437.69 (405.76 - 469.63)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	214.76 (191.97 - 237.55)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	122.83 (99.26 - 146.41)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	33.14 (21.30 - 44.98)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	17.11 (8.95 - 25.28)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	43.15 (32.61 - 53.70)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	37.71 (28.13 - 47.29)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	18.54 (11.84 - 25.24)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	82.55 (67.77 - 97.32)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	62.88 (50.61 - 75.14)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	64.59 (51.92 - 77.25)

Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	170.23 (139.90 - 200.56)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	56.39 (40.82 - 71.96)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	30.19 (16.15 - 44.22)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	122.89 (105.19 - 140.59)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	1976.10 (1909.99 - 2042.21)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	13.54 (7.81 - 19.26)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Tewksbury**
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	31.04 (22.39 - 39.68)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	4379.35 (4288.89 - 4469.81)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	5.22 (1.59 - 8.85)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	1485.57 (1427.81 - 1543.34)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	196.34 (174.57 - 218.10)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	249.15 (224.61 - 273.68)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	24.37 (16.60 - 32.13)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	333.10 (304.09 - 362.11)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	42.02 (31.63 - 52.41)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	108.57 (91.22 - 125.92)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	681.57 (638.96 - 724.18)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	0.00 (0.00 - 0.00)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	41.00 (30.92 - 51.08)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	6.82 (2.59 - 11.05)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			

All cause			
Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	779.87 (737.43 - 822.31)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	931.62 (859.43 - 1003.80)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	662.31 (611.23 - 713.39)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	12238.10 (12080.08 - 12396.13)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	11200.33 (10988.63 - 11412.03)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	13321.51 (13087.08 - 13555.93)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	283.38 (256.67 - 310.10)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	970.45 (921.11 - 1019.80)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	44.15 (32.87 - 55.43)

Wakefield: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wakefield**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	1199.41 (1064.27 - 1334.54)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	361.03 (286.57 - 435.48)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	601.71 (505.71 - 697.71)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	645.83 (546.40 - 745.27)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	300.44 (269.59 - 331.30)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	924.17 (870.52 - 977.83)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	3831.34 (3730.77 - 3931.92)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	272.02 (241.51 - 302.54)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	1062.50 (1001.58 - 1123.43)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	2128.82 (2043.97 - 2213.67)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	5273.00 (5144.99 - 5401.00)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	517.70 (472.88 - 562.52)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	12.60 (5.91 - 19.30)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	54.99 (43.97 - 66.00)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	1,457
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	7.3% (6-8.7%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	15.6% (13.8-17.5%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	13.8% (12-15.6%)
Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	4.12 (0.83 - 7.41)

Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	320,847	5,313
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wakefield**
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	111
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	20.9 (17-24.7)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	18
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	16.2 (9.4-23.1)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	17
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	94.4 (83.9-105)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	160.46 (110.77 - 210.14)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	76.22 (41.96 - 110.47)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	36.10 (12.52 - 59.69)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	285.00 (257.14 - 312.86)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	15.66 (9.66 - 21.67)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	0.00 (0.00 - 0.00)
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	104.30 (64.23 - 144.37)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	NA
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	13.11 (7.33 - 18.90)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	0.67 (0.00 - 1.97)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	30061.78 (29804.41 - 30319.14)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	1062.50 (1001.58 - 1123.43)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	2128.82 (2043.97 - 2213.67)

Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	5273.00 (5144.99 - 5401.00)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	517.70 (472.88 - 562.52)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	306.04 (273.60 - 338.49)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	1320.10 (1253.28 - 1386.91)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wakefield**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	78.06 (60.28 - 95.84)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	144.36 (100.73 - 187.99)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	93.81 (69.03 - 118.60)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	468.36 (424.90 - 511.83)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	41.14 (28.23 - 54.05)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	353.38 (315.61 - 391.16)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	368.15 (329.60 - 406.70)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	512.07 (475.37 - 548.78)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	390.36 (358.45 - 422.27)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	161.45 (141.37 - 181.53)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	158.71 (130.65 - 186.77)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	44.97 (29.98 - 59.96)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	17.32 (8.22 - 26.42)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	45.34 (34.51 - 56.17)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	47.39 (36.29 - 58.49)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	14.51 (8.38 - 20.65)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	64.86 (51.96 - 77.75)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	56.83 (44.70 - 68.96)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	46.96 (36.13 - 57.79)
Prostate cancer (invasive) - men only			

Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	149.62 (119.63 - 179.60)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	52.99 (35.69 - 70.29)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	13.30 (4.01 - 22.59)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	92.36 (75.80 - 108.93)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	1645.23 (1581.72 - 1708.74)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	12.65 (7.15 - 18.15)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wakefield**
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	26.39 (18.01 - 34.76)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	3838.14 (3748.62 - 3927.67)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	5.75 (2.14 - 9.36)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	1315.57 (1259.61 - 1371.52)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	194.63 (173.80 - 215.45)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	219.99 (196.48 - 243.50)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	31.22 (22.90 - 39.54)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	279.43 (251.38 - 307.48)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	32.80 (23.92 - 41.67)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	93.03 (75.80 - 110.26)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	731.50 (684.65 - 778.36)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	0.00 (0.00 - 0.00)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	23.94 (16.62 - 31.26)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	7.17 (3.25 - 11.08)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			
All cause			
Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	684.09 (644.57 - 723.62)

Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	849.60 (779.43 - 919.77)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	574.73 (527.91 - 621.55)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	11725.62 (11558.13 - 11893.11)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	10895.40 (10669.46 - 11121.33)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	12694.78 (12448.34 - 12941.23)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	273.89 (245.43 - 302.35)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	847.37 (799.16 - 895.59)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	40.99 (29.61 - 52.38)

Wilmington: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wilmington**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	1227.71 (1083.23 - 1372.18)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	349.49 (272.07 - 426.92)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	640.74 (536.06 - 745.42)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	698.99 (589.68 - 808.29)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	226.06 (196.39 - 255.73)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	484.33 (441.13 - 527.52)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	3420.44 (3315.17 - 3525.72)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	292.77 (257.60 - 327.94)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	689.26 (635.73 - 742.79)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1478.60 (1402.02 - 1555.17)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	2766.33 (2663.29 - 2869.37)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	384.07 (341.97 - 426.18)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	10.57 (3.89 - 17.26)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	70.59 (55.35 - 85.83)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	1,161
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	8% (6.4-9.6%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	19% (16.8-21.3%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	16.6% (14.5-18.8%)
Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	6.03 (1.58 - 10.48)
Domestic Violence - Child Abuse			

2010 Population count for children (0-18 yrs)	1,408,050	320,847	5,948
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	143
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wilmington**
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	24 (20.1-27.9)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	45
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	31.5 (23.9-39.1)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	21
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	46.7 (32.1-61.2)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	143.38 (93.74 - 193.03)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	120.98 (75.37 - 166.58)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	67.21 (33.21 - 101.21)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	349.55 (314.90 - 384.21)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	20.75 (12.39 - 29.12)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	NA
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	31.36 (8.13 - 54.60)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	NA
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	21.04 (13.03 - 29.06)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	0.00 (0.00 - 0.00)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	21713.91 (21466.41 - 21961.40)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	689.26 (635.73 - 742.79)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1478.60 (1402.02 - 1555.17)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	2766.33 (2663.29 - 2869.37)

Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	384.07 (341.97 - 426.18)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	198.62 (170.51 - 226.72)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	619.08 (569.51 - 668.66)
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	92.45 (71.25 - 113.64)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wilmington**
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	158.82 (114.39 - 203.26)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	103.00 (76.27 - 129.72)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	410.31 (365.73 - 454.90)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	65.85 (47.96 - 83.75)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	412.85 (368.12 - 457.57)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	406.51 (362.13 - 450.89)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	588.14 (542.29 - 633.99)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	437.29 (399.02 - 475.55)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	189.52 (164.01 - 215.02)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	169.90 (136.61 - 203.19)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	46.17 (29.22 - 63.12)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	29.90 (16.27 - 43.53)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	43.40 (30.85 - 55.96)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	39.21 (27.65 - 50.77)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	12.04 (5.65 - 18.42)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	95.31 (76.57 - 114.05)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	64.78 (49.83 - 79.72)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	60.52 (46.08 - 74.96)
Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	167.85 (131.08 - 204.62)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	60.38 (40.31 - 80.45)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	30.47 (14.33 - 46.61)

Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	112.24 (92.44 - 132.04)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	1813.39 (1737.82 - 1888.96)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	13.36 (6.49 - 20.24)
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	47.72 (34.84 - 60.61)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	4017.14 (3913.32 - 4120.96)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	4.93 (0.99 - 8.87)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wilmington**
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	1448.85 (1381.05 - 1516.65)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	214.50 (187.90 - 241.11)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	229.15 (201.35 - 256.95)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	37.46 (26.22 - 48.71)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	324.81 (291.52 - 358.10)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	36.05 (24.91 - 47.19)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	106.09 (87.08 - 125.09)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	702.89 (652.98 - 752.79)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	0.00 (0.00 - 0.00)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	21.44 (13.02 - 29.86)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	6.67 (2.04 - 11.30)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			
All cause			
Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	754.54 (705.34 - 803.75)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	890.17 (805.61 - 974.73)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	646.21 (587.33 - 705.09)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	11415.54 (11237.80 - 11593.28)

Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	10793.11 (10556.61 - 11029.62)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	12198.90 (11937.12 - 12460.68)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	293.61 (260.56 - 326.67)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	886.45 (831.54 - 941.37)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	50.05 (36.18 - 63.91)

Winchester: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Winchester**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	285.46 (213.93 - 356.99)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	121.67 (74.93 - 168.41)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	93.59 (52.59 - 134.59)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	116.99 (71.16 - 162.83)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	158.34 (130.51 - 186.18)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	376.28 (335.55 - 417.00)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	2284.83 (2195.42 - 2374.23)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	142.93 (113.15 - 172.72)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	471.82 (417.30 - 526.33)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1249.91 (1166.64 - 1333.17)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	2266.69 (2157.00 - 2376.37)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	173.27 (136.52 - 210.03)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	6.02 (0.98 - 11.06)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	30.19 (21.46 - 38.93)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	1,032
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	6.1% (4.6-7.6%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	14.7% (12.6-16.9%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	12.5% (10.5-14.5%)

Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	1.94 (0.00 - 4.62)
Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	320,847	6,168
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Winchester**
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	66
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	10.7 (8.1-13.3)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	37
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	56.1 (44.1-68)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	27
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	73 (58.7-87.3)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	131.03 (82.53 - 179.53)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	28.08 (5.61 - 50.54)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	NA
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	252.89 (226.05 - 279.73)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	11.42 (6.99 - 15.84)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	NA
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	51.48 (21.06 - 81.89)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	NA
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	7.39 (3.07 - 11.71)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	0.00 (0.00 - 0.00)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	24167.65 (23886.11 - 24449.19)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	471.82 (417.30 - 526.33)

Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	1249.91 (1166.64 - 1333.17)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	2266.69 (2157.00 - 2376.37)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	173.27 (136.52 - 210.03)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	234.86 (201.19 - 268.53)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	510.79 (459.52 - 562.07)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Winchester**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	72.31 (53.21 - 91.41)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	138.51 (96.65 - 180.37)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	98.06 (70.04 - 126.09)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	356.29 (313.94 - 398.63)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	49.96 (34.08 - 65.84)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	385.21 (341.19 - 429.23)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	255.05 (219.21 - 290.90)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	479.20 (441.36 - 517.03)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	367.26 (334.34 - 400.19)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	133.57 (114.85 - 152.28)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	130.83 (103.60 - 158.07)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	49.40 (32.55 - 66.25)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	14.97 (6.34 - 23.60)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	34.75 (24.96 - 44.53)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	35.01 (25.10 - 44.93)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	11.56 (6.08 - 17.03)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	57.19 (44.47 - 69.91)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	45.88 (34.29 - 57.47)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	26.31 (17.91 - 34.71)

Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	156.36 (125.10 - 187.61)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	75.66 (54.34 - 96.97)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	21.16 (9.65 - 32.68)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	81.00 (61.10 - 100.91)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	1003.44 (948.70 - 1058.19)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	11.66 (6.21 - 17.11)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Winchester**
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	28.71 (18.74 - 38.69)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	2610.59 (2532.20 - 2688.98)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	1.68 (0.00 - 3.72)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	983.74 (932.22 - 1035.26)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	148.38 (130.57 - 166.19)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	165.57 (143.78 - 187.36)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	45.99 (36.24 - 55.74)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	183.67 (159.06 - 208.27)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	15.56 (9.32 - 21.80)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	86.07 (67.97 - 104.17)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	526.95 (481.87 - 572.04)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	0.86 (0.00 - 2.53)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	17.89 (11.99 - 23.80)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	5.84 (2.27 - 9.42)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			

All cause			
Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	464.69 (431.76 - 497.62)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	560.62 (502.06 - 619.19)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	410.19 (370.25 - 450.13)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	9153.71 (8981.77 - 9325.66)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	8039.34 (7825.28 - 8253.39)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	10228.02 (9967.16 - 10488.87)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	137.33 (115.55 - 159.11)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	722.24 (674.13 - 770.35)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	27.00 (16.95 - 37.06)

Woburn: Health Indicators

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Woburn**
Substance Abuse and Mental Health			
Admissions to DPH funded substance abuse programs			
Total admissions (per 100,000)	1590.82 (1581.34 - 1600.30)	1039.34 (1023.13 - 1055.56)	1078.23 (974.55 - 1181.91)
Admissions where alcohol was primary substance (per 100,000)	506.93 (501.55 - 512.31)	338.75 (329.46 - 348.04)	270.21 (218.10 - 322.33)
Admissions where there was injection of primary substance (per 100,000)	676.43 (670.22 - 682.64)	450.40 (439.70 - 461.11)	553.54 (479.06 - 628.03)
Percent of All Admissions that used a need within the past year	742.65 (736.14 - 749.15)	496.45 (485.21 - 507.69)	566.66 (491.31 - 642.02)
Hospitalizations (age-adjusted rates)			
Alcohol/substance-related hospitalizations (age-adjusted rate per 100,000)	337.58 (335.62 - 339.55)	254.79 (251.26 - 258.32)	334.12 (308.61 - 359.63)
Mental disorders - hospitalizations (age-adjusted rate per 100,000)	837.85 (834.74 - 840.95)	718.69 (712.70 - 724.68)	650.88 (614.85 - 686.91)
Mental disorders - all related hospitalizations (age-adjusted rate per 100,000)	3839.51 (3833.23 - 3845.78)	3266.33 (3254.18 - 3278.49)	3876.77 (3796.13 - 3957.41)
Opioid-related hospitalizations (age-adjusted per 100,000)	315.55 (313.63 - 317.48)	208.45 (205.23 - 211.67)	321.37 (296.05 - 346.69)
ED visits (age-adjusted rates)			
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	922.36 (878.62 - 966.11)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	2084.55 (2018.71 - 2150.39)
Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	3747.51 (3661.35 - 3833.67)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	331.91 (305.26 - 358.57)
Mortality (age-adjusted rates)			
Opioid-related Fatal Overdoses - Death Rate Per 100,000	9.40 (9.07 - 9.74)	7.20 (6.60 - 7.80)	11.88 (7.10 - 16.66)
Mental Disorders: All - Death Rate Per 100,000	48.53 (47.86 - 49.20)	47.93 (46.50 - 49.37)	39.09 (31.60 - 46.58)
Maternal and Child Health			
Total Births Residence (5 years aggregated, 2005-2009)	370,396	89,262	2,548
Percent low birthweight (<2500 grams)	7.7% (7.6-7.7%)	7.5% (7.3-7.7%)	7.9% (6.8-8.9%)
Percent of births born prematurely (<37 weeks)	15.7% (15.6-15.8%)	15.7% (15.5-16%)	16.8% (15.3-18.2%)
Percent of births with no/late prenatal care	19.5% (19.4-19.6%)	16.7% (16.4-16.9%)	19.7% (18.2-21.3%)

Infant mortality rate (per 1,000 live births)	4.54 (4.32 - 4.76)	3.67 (3.28 - 4.07)	4.71 (2.05 - 7.37)
Domestic Violence - Child Abuse			
2010 Population count for children (0-18 yrs)	1,408,050	320,847	7,692
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Woburn**
Undup. Counts of Children Reported Maltreated (Allegedly Abused/Neglected)	78,394	11,572	331
Rate of child reported maltreatment (per 1,000 children 0-18 years)	55.7 (55.3-56.1)	36.1 (35.4-36.7)	43 (38.5-47.6)
Undup. Counts of Children Who Were the Subject of Investig. of Maltreatment	30,179	3,780	92
Percent of reports that were investigated (unduplicated by child)	38.5 (38.2-38.8)	32.7 (31.8-33.5)	27.8 (23-32.6)
Undup. Counts of Children w/ Subst. Allegations of Maltreatment following Investig.	18,733	2,459	60
Percent of reports investigated that were substantiated (unduplicated by child)	62.1 (61.5-62.6)	65.1 (63.5-66.6)	65.2 (55.5-74.9)
Infectious Disease			
Chlamydia Incidence (crude rate per 100,000)	357.27 (352.74 - 361.81)	242.80 (234.93 - 250.67)	199.38 (154.60 - 244.16)
Hepatitis C incidence (crude rate per 100,000)	118.90 (116.29 - 121.51)	87.17 (82.45 - 91.88)	110.18 (76.88 - 143.49)
Lyme disease incidence (crude rate per 100,000)	61.96 (60.08 - 63.85)	48.71 (45.18 - 52.23)	20.99 (6.45 - 35.53)
Pneumonia/Influenza			
Hospitalizations - age adjusted rate	322.16 (320.29 - 324.04)	298.69 (294.86 - 302.52)	392.97 (366.51 - 419.43)
Deaths - age adjusted rate	16.94 (16.54 - 17.34)	14.81 (14.00 - 15.61)	20.25 (14.77 - 25.73)
HIV/AIDS			
HIV/AIDS incidence (crude rate per 100,000)	9.97 (9.21 - 10.74)	8.38 (6.92 - 9.85)	15.74 (3.15 - 28.33)
HIV/AIDS prevalence (crude rate per 100,000)	272.82 (268.83 - 276.80)	202.68 (195.49 - 209.87)	175.77 (133.72 - 217.82)
HIV/AIDS hospitalizations (primary dx; age-adjusted rate per 100,000)	12.43 (12.05 - 12.81)	6.74 (6.16 - 7.31)	10.67 (6.07 - 15.26)
HIV/AIDS related hospitalizations (primary or secondary dx; age-adjusted rate per 100,000)	42.76 (42.06 - 43.46)	26.59 (25.46 - 27.72)	30.17 (22.56 - 37.79)
HIV/AIDS deaths (crude rate per 100,000)	1.58 (1.45 - 1.72)	0.99 (0.77 - 1.21)	1.46 (0.00 - 3.12)
Emergency Department (ED) discharges			
All cause ED discharges (age-adjusted per 100,000)	36897.60 (36881.14 - 36914.07)	30334.37 (30301.39 - 30367.34)	33940.51 (33727.16 - 34153.87)
Alcohol/substance use related EDdischarges (age-adjusted per 100,000)	858.83 (855.69 - 861.97)	713.79 (707.83 - 719.75)	922.36 (878.62 - 966.11)
Mental health ED discharges (age-adjusted per 100,000)	2091.86 (2086.95 - 2096.78)	1722.92 (1713.61 - 1732.23)	2084.55 (2018.71 - 2150.39)

Mental health related ED discharges (age-adjusted per 100,000)	4990.42 (4983.00 - 4997.84)	4073.97 (4059.95 - 4087.99)	3747.51 (3661.35 - 3833.67)
Opioid-related ED discharges (age-adjusted)	259.63 (257.87 - 261.39)	226.62 (223.23 - 230.01)	331.91 (305.26 - 358.57)
Asthma ED discharges (age-adjusted)	573.49 (570.81 - 576.17)	375.94 (371.42 - 380.46)	410.38 (380.10 - 440.66)
Asthma -related ED discharges (age-adjusted)	1443.98 (1439.78 - 1448.18)	1199.58 (1191.62 - 1207.55)	1084.57 (1035.88 - 1133.25)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Woburn**
Preventable inpatient hospitalizations (conditions associated with AHRQ Prevention quality indicators (PQI)) (age-specific rates per 100,000)			
Asthma admissions in adults (age 20+ yrs)	138.81 (137.35 - 140.28)	94.76 (92.22 - 97.31)	169.43 (148.40 - 190.45)
Asthma admissions in less than 20 yrs	187.85 (184.87 - 190.83)	167.93 (161.96 - 173.89)	223.91 (178.45 - 269.36)
Asthma admissions in less than 40 yrs	127.69 (125.99 - 129.40)	100.32 (97.18 - 103.46)	155.21 (130.06 - 180.37)
Congestive heart failure admissions (age 20+ yrs)	427.79 (425.22 - 430.36)	395.01 (389.83 - 400.20)	508.28 (471.92 - 544.63)
Hypertension admissions (age 20+ years)	66.47 (65.46 - 67.49)	54.70 (52.77 - 56.64)	61.92 (49.20 - 74.64)
Bacterial pneumonia admissions (20+ years)	375.79 (373.38 - 378.20)	323.71 (319.02 - 328.40)	478.34 (443.06 - 513.61)
Chronic obstructive pulmonary disease (COPD) (age 20+ yrs)	461.21 (458.54 - 463.88)	340.43 (335.62 - 345.25)	629.39 (588.96 - 669.82)
Chronic Disease: Cancer (age-adjusted rates per 100,000)			
Cancer (all types) (Invasive)			
Incidence - age adjusted	508.70 (506.37 - 511.03)	509.51 (504.53 - 514.49)	561.87 (530.76 - 592.97)
Hospitalizations - age adjusted rate	371.30 (369.33 - 373.27)	379.36 (375.10 - 383.62)	450.98 (423.28 - 478.68)
Deaths - age adjusted rate	169.88 (168.56 - 171.20)	166.00 (163.20 - 168.81)	203.39 (185.32 - 221.47)
Breast cancer (invasive) - women only			
Incidence - age adjusted rate	134.80 (133.16 - 136.45)	143.35 (139.75 - 146.95)	146.58 (124.56 - 168.59)
Hospitalizations - age adjusted rate	39.08 (38.18 - 39.98)	38.23 (36.36 - 40.09)	37.41 (25.89 - 48.94)
Deaths - age adjusted rate	20.15 (19.53 - 20.76)	19.37 (18.09 - 20.65)	12.55 (6.56 - 18.55)
Colorectal cancer (invasive)			
Incidence - age adjusted	44.23 (43.54 - 44.91)	43.62 (42.16 - 45.08)	49.34 (40.18 - 58.50)
Hospitalizations - age adjusted rate	38.41 (37.77 - 39.04)	38.63 (37.27 - 39.99)	44.52 (36.02 - 53.02)
Deaths - age adjusted rate	14.34 (13.95 - 14.72)	13.94 (13.13 - 14.75)	22.81 (16.79 - 28.83)
Lung cancer (invasive)			
Incidence - age adjusted	70.35 (69.48 - 71.23)	67.54 (65.70 - 69.38)	88.61 (76.35 - 100.86)
Hospitalizations - age adjusted rate	47.86 (47.14 - 48.57)	48.62 (47.07 - 50.17)	64.48 (54.14 - 74.82)
Deaths - age adjusted rate	46.77 (46.07 - 47.48)	44.84 (43.37 - 46.32)	57.86 (48.16 - 67.56)

Prostate cancer (invasive) - men only			
Incidence - age adjusted rate	156.94 (155.00 - 158.88)	150.53 (146.43 - 154.62)	133.53 (110.67 - 156.40)
Hospitalizations - age adjusted rate	58.15 (57.04 - 59.25)	55.77 (53.41 - 58.13)	58.02 (43.28 - 72.76)
Deaths - age adjusted rate	20.57 (19.83 - 21.30)	20.70 (19.11 - 22.30)	30.86 (19.57 - 42.14)
Chronic Disease: Endocrine, Cardiovascular, Respiratory (age-adjusted rates per 100,000)			
Diabetes			
Diabetes hospitalizations - age adjusted rate	135.03 (133.81 - 136.26)	109.65 (107.33 - 111.98)	126.32 (111.33 - 141.30)
Diabetes-related hospitalizations - age adjusted rate	1845.55 (1841.26 - 1849.83)	1630.19 (1621.60 - 1638.78)	1924.08 (1869.61 - 1978.54)
Deaths - age adjusted rate	13.74 (13.36 - 14.11)	11.93 (11.17 - 12.68)	10.62 (6.44 - 14.81)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Woburn**
Hypertension			
Hypertension hospitalizations - age adjusted rate	45.49 (44.79 - 46.19)	38.44 (37.08 - 39.80)	41.79 (33.24 - 50.34)
Hypertension-related hospitalizations - age adjusted rate	4025.13 (4019.22 - 4031.03)	3732.24 (3720.16 - 3744.32)	4326.35 (4250.71 - 4401.99)
Deaths - age adjusted rate	5.51 (5.28 - 5.74)	4.66 (4.20 - 5.12)	5.37 (2.54 - 8.21)
Major cardiovascular disease (CVD)			
Hospitalizations - age adjusted rate	1343.98 (1340.35 - 1347.61)	1280.80 (1273.23 - 1288.36)	1491.94 (1444.29 - 1539.59)
Deaths - age adjusted rate	193.42 (192.06 - 194.78)	178.23 (175.43 - 181.04)	198.15 (180.99 - 215.32)
Cerebrovascular			
Hospitalizations - age adjusted rate	227.67 (226.13 - 229.20)	215.23 (212.04 - 218.42)	255.50 (235.24 - 275.75)
Deaths - age adjusted rate	30.74 (30.19 - 31.28)	28.81 (27.67 - 29.94)	38.52 (30.97 - 46.06)
Chronic lower respiratory diseases			
COPD hospitalizations - age adjusted rate	364.35 (362.34 - 366.36)	286.55 (282.76 - 290.35)	461.26 (432.61 - 489.92)
Deaths - age adjusted rate	32.83 (32.25 - 33.41)	29.41 (28.23 - 30.59)	36.04 (28.59 - 43.50)
Asthma			
Asthma hospitalizations - age adjusted rate	151.92 (150.56 - 153.27)	114.78 (112.30 - 117.26)	177.99 (158.82 - 197.17)
Asthma-related hospitalizations - age adjusted rate	899.18 (895.97 - 902.39)	698.62 (692.69 - 704.54)	835.11 (794.98 - 875.25)
Deaths - age adjusted rate	0.72 (0.63 - 0.80)	0.50 (0.34 - 0.65)	0.49 (0.00 - 1.44)
Alzheimers			
Deaths - age adjusted rate	20.64 (20.20 - 21.08)	19.38 (18.47 - 20.29)	16.77 (11.92 - 21.62)
Parkinson's			
Deaths - age adjusted rate	5.90 (5.65 - 6.14)	5.92 (5.40 - 6.45)	6.29 (3.19 - 9.38)
Other Hospitalizations and Mortality: All Cause and Injuries (age-adjusted rates per 100,000)			
All cause			

Deaths - age adjusted rate	671.77 (669.23 - 674.30)	632.26 (627.01 - 637.52)	717.33 (684.55 - 750.11)
Deaths - age adjusted rate for men	812.42 (808.04 - 816.81)	760.60 (751.48 - 769.73)	936.64 (877.52 - 995.75)
Deaths - age adjusted rate for women	568.14 (565.10 - 571.17)	539.55 (533.26 - 545.83)	576.63 (538.14 - 615.12)
Hospitalizations - age adjusted rate	11569.70 (11559.38 - 11580.03)	10949.24 (10928.27 - 10970.22)	12914.05 (12776.33 - 13051.76)
Hospitalizations - age adjusted rate for men	10889.24 (10875.03 - 10903.46)	10194.31 (10165.47 - 10223.16)	12206.86 (12021.01 - 12392.72)
Hospitalizations - age adjusted rate for women	12372.78 (12357.77 - 12387.78)	11851.61 (11820.99 - 11882.23)	13970.35 (13765.83 - 14174.86)
Premature mortality for <75 yr population (age adjusted)	275.94 (274.17 - 277.72)	245.85 (242.27 - 249.44)	302.29 (278.25 - 326.32)
Injuries/poisonings			
Hospitalizations - age adjusted rate	852.06 (849.04 - 855.08)	781.86 (775.78 - 787.94)	975.61 (934.41 - 1016.80)
Deaths - age adjusted rate	42.05 (41.37 - 42.74)	36.20 (34.88 - 37.52)	40.87 (32.02 - 49.72)

Indicators	Data sources and years
Substance abuse program admissions	2013 Massachusetts Bureau of Substance Abuse Services (BSAS) (Accessed through MassCHIP)
Hospitalizations	2008-2012 Massachusetts Hospital Inpatient Discharges (UHDDS) (Accessed through MassCHIP)
ED discharges	2008-2012 Massachusetts Hospital Emergency Visit Discharges (Accessed through MassCHIP)
Mortality	2008-2012 Massachusetts Vital Records Mortality (Accessed through MassCHIP)
Natality	2008-2012 Massachusetts Vital Records Natality (Accessed through MassCHIP)
Infant mortality	2008-2012 Massachusetts Vital Records Natality Infant Deaths(Accessed through MassCHIP)
Lyme disease and Hepatitis C incidence	2013 Massachusetts Communicable Disease Program Epidemiology Program(Accessed through MassCHIP)
Chlamydia incidence	2012 Massachusetts Communicable Disease Program Sexually Transmitted Disease Program(Accessed through MassCHIP)
HIV/AIDS incidence/prevalence	2011 Massachusetts Communicable Disease Program HIV/AIDS Program(Accessed through MassCHIP)
Cancer incidence	2007-2011 Massachusetts Cancer Registry(Accessed through MassCHIP)

Appendix B – American Community Survey Demographic and Socioeconomic Data

Arlington: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		Service Area
Indicators	**State**	**Middlesex County**	**Arlington**
Total Population (count)	6,605,058	1,522,533	43,308
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	20,998
Female	3,407,556	781,211	22,310
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	48.5% (47.4-49.6%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	51.5% (50.4-52.6%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	36,163
Non-Hispanic Black	413,926	66,499	688
Hispanic	655,863	104,081	1,428
Non-Hispanic Asian	365,973	147,125	3,839
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	0
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	114
Other race	159,267	41,857	1,076
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	83.5% (81.7-85.3%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	1.6% (0.9-2.3%)
Hispanic	9.9% (9.8-10%)	6.8%	3.3% (2.4-4.2%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	8.9% (7.7-10.1%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0% (0-0.1%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0.3% (0.1-0.5%)
Other race	2.4%	2.7%	2.5%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	16.8% (15.2-18.4%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	19.5% (17.3-21.7%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	14% (12.2-15.8%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	2.7% (2-3.4%)

Age			
Counts			
0-4 yrs	366,296	86,505	2,929
5-9 yrs	386,310	89,642	2,436
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		**Service Area**
Indicators	**State**	**Middlesex County**	**Arlington**
10-14 yrs	399,362	88,147	2,277
15-19 yrs	464,514	100,898	2,010
20-24 yrs	477,862	101,261	1,529
25-34 yrs	872,220	225,025	6,129
35-44 yrs	869,517	211,046	6,730
45-54 yrs	1,006,344	232,669	7,039
55-59 yrs	446,342	100,173	3,296
60-64 yrs	382,511	83,894	2,419
65+ yrs	933,780	203,273	6,514
Population 18 years and older	5,197,008	1,201,686	34,142
Population less than 18 years of age	1,408,050	320,847	9,166
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	6.8% (6-7.6%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	5.6% (4.8-6.4%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	5.3% (4.7-5.9%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	4.6% (3.9-5.3%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	3.5% (2.8-4.2%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	14.2% (13-15.4%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	15.5% (14.4-16.6%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	16.3% (15.1-17.5%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	7.6% (6.7-8.5%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	5.6% (4.9-6.3%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	15% (14.2-15.8%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	78.8% (77.8-79.8%)
Households	2,530,147	581,120	18,688
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	29.5% (27.7-31.3%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	3.7% (2.8-4.6%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	26.3% (24.9-27.7%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	95.7% (94.9-96.5%)
Income			

Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	1.2% (0.6-1.8%)
Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	3.9% (3.1-4.7%)
Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	3.5% (0-7.4%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	1.4% (0.6-2.2%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	7.8% (6.9-8.7%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	1.4% (1-1.8%)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		**Service Area**
Indicators	**State**	**Middlesex County**	**Arlington**
Housing			
Number of housing units	2,808,549	612,535	19,552
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	4.4% (3-5.8%)
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	61.6% (59.6-63.6%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$498700 ($485712-511688)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	25% (22.1-27.9%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	38.4% (36.4-40.4%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	30.9% (27-34.8%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		43,675
Violent crime counts			
Overall count	26,953		51
Murder/non-negligent manslaughter count	121		0
Forcible rape count	1,642		3
Robbery count	6,552		9
Aggravated assault count	18,638		39
Property crime counts			
Overall count	143,089		515
Burgulary count	34,540		100
Larceny-theft count	99,317		404
Motor vehicle theft count	9,232		11
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		116.8 (84.7-148.8)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		0 (0-0)
Forcible rape rate	24.7 (23.5-25.9)		6.9 (0-14.6)
Robbery rate	98.6 (96.2-101)		20.6 (7.1-34.1)

Aggravated assault rate	280.4 (276.4-284.5)		89.3 (61.3-117.3)
Property crime rates (per 100,000)			
Overall rate	2153 (2141.9-2164)		1179.2 (1077.9-1280.4)
Burgulary rate	519.7 (514.2-525.2)		229 (184.1-273.8)
Larceny-theft rate	1494.4 (1485.1-1503.6)		925 (835.2-1014.8)
Motor vehicle theft rate	138.9 (136.1-141.7)		25.2 (10.3-40.1)

Town of Bedford: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Bedford**
Total Population (count)	6,605,058	1,522,533	13,557
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	6,777
Female	3,407,556	781,211	6,780
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	50% (48.2-51.8%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	50% (48.2-51.8%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	10,988
Non-Hispanic Black	413,926	66,499	214
Hispanic	655,863	104,081	573
Non-Hispanic Asian	365,973	147,125	1,571
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	0
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	0
Other race	159,267	41,857	211
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	81.1% (77.7-84.5%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	1.6% (0.2-3%)
Hispanic	9.9% (9.8-10%)	6.8%	4.2% (1.8-6.6%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	11.6% (9.3-13.9%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0% (0-0.3%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0% (0-0.3%)
Other race	2.4%	2.7%	1.6%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	15.8% (13.1-18.5%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	19.9% (17.1-22.7%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	16% (12.8-19.2%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	1.6% (0.9-2.3%)
Age			
Counts			

0-4 yrs	366,296	86,505	746
5-9 yrs	386,310	89,642	832
10-14 yrs	399,362	88,147	1,179
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Bedford**
15-19 yrs	464,514	100,898	761
20-24 yrs	477,862	101,261	576
25-34 yrs	872,220	225,025	1,088
35-44 yrs	869,517	211,046	1,822
45-54 yrs	1,006,344	232,669	2,509
55-59 yrs	446,342	100,173	949
60-64 yrs	382,511	83,894	756
65+ yrs	933,780	203,273	2,339
Population 18 years and older	5,197,008	1,201,686	10,338
Population less than 18 years of age	1,408,050	320,847	3,219
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	5.5% (4.2-6.8%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	6.1% (4.7-7.5%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	8.7% (7-10.4%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	5.6% (4.2-7%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	4.2% (3.1-5.3%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	8% (6.1-9.9%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	13.4% (11.8-15%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	18.5% (16.3-20.7%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	7% (5.6-8.4%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	5.6% (4.2-7%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	17.3% (15.2-19.4%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	76.3% (74.6-78%)
Households	2,530,147	581,120	4,977
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	35.1% (31.8-38.4%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	3.3% (1.8-4.8%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	29.3% (26.1-32.5%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	97.4% (96-98.8%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	3.8% (1.5-6.1%)

Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	4.1% (2.2-6%)
Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	30.6% (3.8-57.4%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	3.9% (0.2-7.6%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	8.5% (6.7-10.3%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	1.3% (0.6-2%)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Bedford**
Housing			
Number of housing units	2,808,549	612,535	5,191
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	4.1% (1.4-6.8%)
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	72.6% (68.8-76.4%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$540400 ($514464-566336)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	25.9% (19.9-31.9%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	27.4% (23.6-31.2%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	38.4% (30-46.8%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		13,575
Violent crime counts			
Overall count	26,953		7
Murder/non-negligent manslaughter count	121		0
Forcible rape count	1,642		1
Robbery count	6,552		0
Aggravated assault count	18,638		6
Property crime counts			
Overall count	143,089		76
Burgulary count	34,540		19
Larceny-theft count	99,317		56
Motor vehicle theft count	9,232		1
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		51.6 (13.4-89.8)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		0 (0-0)
Forcible rape rate	24.7 (23.5-25.9)		7.4 (0-21.8)
Robbery rate	98.6 (96.2-101)		0 (0-0)

Aggravated assault rate	280.4 (276.4-284.5)		44.2 (8.8-79.6)
Property crime rates (per 100,000)			
Overall rate	2153 (2141.9-2164)		559.9 (434.3-685.4)
Burgulary rate	519.7 (514.2-525.2)		140 (77.1-202.9)
Larceny-theft rate	1494.4 (1485.1-1503.6)		412.5 (304.7-520.3)
Motor vehicle theft rate	138.9 (136.1-141.7)		7.4 (0-21.8)

Town of Billerica: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Billerica**
Total Population (count)	6,605,058	1,522,533	40,932
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	20,180
Female	3,407,556	781,211	20,752
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	49.3% (48.1-50.5%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	50.7% (49.5-51.9%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	36,442
Non-Hispanic Black	413,926	66,499	678
Hispanic	655,863	104,081	1,287
Non-Hispanic Asian	365,973	147,125	1,976
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	0
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	14
Other race	159,267	41,857	535
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	89% (87.7-90.3%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	1.7% (0.9-2.5%)
Hispanic	9.9% (9.8-10%)	6.8%	3.1% (2.3-3.9%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	4.8% (3.9-5.7%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0% (0-0.1%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0% (0-0.1%)
Other race	2.4%	2.7%	1.3%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	9.8% (8.6-11%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	13.6% (11.7-15.5%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	22.8% (20.7-24.9%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	5.9% (4.2-7.6%)
Age			
Counts			

0-4 yrs	366,296	86,505	2,390
5-9 yrs	386,310	89,642	2,535
10-14 yrs	399,362	88,147	2,804
15-19 yrs	464,514	100,898	2,441
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Billerica**
20-24 yrs	477,862	101,261	2,197
25-34 yrs	872,220	225,025	5,473
35-44 yrs	869,517	211,046	5,764
45-54 yrs	1,006,344	232,669	7,289
55-59 yrs	446,342	100,173	2,247
60-64 yrs	382,511	83,894	2,599
65+ yrs	933,780	203,273	5,193
Population 18 years and older	5,197,008	1,201,686	31,617
Population less than 18 years of age	1,408,050	320,847	9,315
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	5.8% (4.8-6.8%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	6.2% (5.4-7%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	6.9% (6.2-7.6%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	6% (5.2-6.8%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	5.4% (4.6-6.2%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	13.4% (12-14.8%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	14.1% (13-15.2%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	17.8% (16.7-18.9%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	5.5% (4.7-6.3%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	6.3% (5.6-7%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	12.7% (12-13.4%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	77.2% (76.1-78.3%)
Households	2,530,147	581,120	14,276
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	36.3% (34.1-38.5%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	4.5% (3.3-5.7%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	25.6% (24.3-26.9%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	92.8% (91.6-94%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	4.1% (2.8-5.4%)
Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	6.3% (4.4-8.2%)

Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	24.2% (12.4-36%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	11.6% (6.7-16.5%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	9.3% (8.3-10.3%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	2.8% (2.1-3.5%)
Housing			
Number of housing units	2,808,549	612,535	14,757
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Billerica**
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	3.3% (1.9-4.7%)
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	82.3% (80.2-84.4%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$337600 ($332729-342471)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	29% (25.5-32.5%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	17.7% (15.6-19.8%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	31.5% (22.5-40.5%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		41,016
Violent crime counts			
Overall count	26,953		56
Murder/non-negligent manslaughter count	121		1
Forcible rape count	1,642		10
Robbery count	6,552		7
Aggravated assault count	18,638		38
Property crime counts			
Overall count	143,089		468
Burgulary count	34,540		89
Larceny-theft count	99,317		356
Motor vehicle theft count	9,232		23
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		136.5 (100.8-172.3)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		2.4 (0-7.2)
Forcible rape rate	24.7 (23.5-25.9)		24.4 (9.3-39.5)
Robbery rate	98.6 (96.2-101)		17.1 (4.4-29.7)
Aggravated assault rate	280.4 (276.4-284.5)		92.6 (63.2-122.1)
Property crime rates (per 100,000)			

Overall rate	2153 (2141.9-2164)		1141 (1038.2-1243.8)
Burgulary rate	519.7 (514.2-525.2)		217 (172-262)
Larceny-theft rate	1494.4 (1485.1-1503.6)		868 (778.2-957.7)
Motor vehicle theft rate	138.9 (136.1-141.7)		56.1 (33.2-79)

Town of Burlington: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Burlington**
Total Population (count)	6,605,058	1,522,533	24,875
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	12,209
Female	3,407,556	781,211	12,666
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	49.1% (47.5-50.7%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	50.9% (49.3-52.5%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	19,452
Non-Hispanic Black	413,926	66,499	784
Hispanic	655,863	104,081	364
Non-Hispanic Asian	365,973	147,125	3,856
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	16
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	0
Other race	159,267	41,857	403
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	78.2% (75.5-80.9%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	3.2% (1.8-4.6%)
Hispanic	9.9% (9.8-10%)	6.8%	1.5% (0.5-2.5%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	15.5% (13.3-17.7%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0.1% (0-0.2%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0% (0-0.1%)
Other race	2.4%	2.7%	1.6%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	20% (17.6-22.4%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	22.3% (19.7-24.9%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	21.4% (18.9-23.9%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	2.5% (1.7-3.3%)
Age			
Counts			

0-4 yrs	366,296	86,505	1,124
5-9 yrs	386,310	89,642	1,433
10-14 yrs	399,362	88,147	1,580
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Burlington**
15-19 yrs	464,514	100,898	1,374
20-24 yrs	477,862	101,261	1,366
25-34 yrs	872,220	225,025	3,335
35-44 yrs	869,517	211,046	3,585
45-54 yrs	1,006,344	232,669	3,646
55-59 yrs	446,342	100,173	1,734
60-64 yrs	382,511	83,894	1,307
65+ yrs	933,780	203,273	4,391
Population 18 years and older	5,197,008	1,201,686	19,765
Population less than 18 years of age	1,408,050	320,847	5,110
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	4.5% (3.6-5.4%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	5.8% (4.9-6.7%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	6.4% (5.5-7.3%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	5.5% (4.5-6.5%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	5.5% (4.3-6.7%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	13.4% (11.6-15.2%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	14.4% (13.3-15.5%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	14.7% (13.2-16.2%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	7% (5.8-8.2%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	5.3% (4.1-6.5%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	17.7% (16.5-18.9%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	79.5% (78.2-80.8%)
Households	2,530,147	581,120	9,216
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	33.1% (30.2-36%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	3.1% (1.7-4.5%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	32.6% (30.5-34.7%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	93.2% (91.6-94.8%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	3.6% (2-5.2%)

Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	4.4% (2.9-5.9%)
Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	29.8% (14.8-44.8%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	4.1% (1.4-6.8%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	9.5% (8-11%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	4.3% (2.6-6%)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Burlington**
Housing			
Number of housing units	2,808,549	612,535	9,593
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	3.9% (2.3-5.5%)
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	69.3% (66.9-71.7%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$413000 ($403389-422611)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	23.3% (19-27.6%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	30.7% (28.3-33.1%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	33.4% (27.8-39%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		24,975
Violent crime counts			
Overall count	26,953		39
Murder/non-negligent manslaughter count	121		1
Forcible rape count	1,642		5
Robbery count	6,552		7
Aggravated assault count	18,638		26
Property crime counts			
Overall count	143,089		631
Burgulary count	34,540		58
Larceny-theft count	99,317		557
Motor vehicle theft count	9,232		16
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		156.2 (107.2-205.1)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		4 (0-11.9)
Forcible rape rate	24.7 (23.5-25.9)		20 (2.5-37.6)
Robbery rate	98.6 (96.2-101)		28 (7.3-48.8)

Aggravated assault rate	280.4 (276.4-284.5)		104.1 (64.1-144.1)
Property crime rates (per 100,000)			
Overall rate	2153 (2141.9-2164)		2526.5 (2331.9-2721.2)
Burgulary rate	519.7 (514.2-525.2)		232.2 (172.5-291.9)
Larceny-theft rate	1494.4 (1485.1-1503.6)		2230.2 (2047.1-2413.4)
Motor vehicle theft rate	138.9 (136.1-141.7)		64.1 (32.7-95.4)

Town of Haverhill: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Haverhill**
Total Population (count)	6,605,058	1,522,533	61,335
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	29,609
Female	3,407,556	781,211	31,726
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	48.3% (47.2-49.4%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	51.7% (50.6-52.8%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	47,474
Non-Hispanic Black	413,926	66,499	1,199
Hispanic	655,863	104,081	10,413
Non-Hispanic Asian	365,973	147,125	712
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	0
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	139
Other race	159,267	41,857	1,398
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	77.4% (75.5-79.3%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	2% (1.4-2.6%)
Hispanic	9.9% (9.8-10%)	6.8%	17% (15.3-18.7%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	1.2% (0.8-1.6%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0% (0-0.1%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0.2% (0-0.4%)
Other race	2.4%	2.7%	2.3%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	9.9% (8.7-11.1%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	20.9% (19.2-22.6%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	17.2% (15.6-18.8%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	2% (1.5-2.5%)
Age			
Counts			
0-4 yrs	366,296	86,505	4,478

5-9 yrs	386,310	89,642	3,894
10-14 yrs	399,362	88,147	3,552
15-19 yrs	464,514	100,898	3,676
20-24 yrs	477,862	101,261	3,531
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Haverhill**
25-34 yrs	872,220	225,025	8,962
35-44 yrs	869,517	211,046	8,410
45-54 yrs	1,006,344	232,669	9,672
55-59 yrs	446,342	100,173	3,889
60-64 yrs	382,511	83,894	3,811
65+ yrs	933,780	203,273	7,460
Population 18 years and older	5,197,008	1,201,686	47,184
Population less than 18 years of age	1,408,050	320,847	14,151
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	7.3% (6.6-8%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	6.3% (5.6-7%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	5.8% (5.1-6.5%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	6% (5.4-6.6%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	5.8% (5.2-6.4%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	14.6% (13.6-15.6%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	13.7% (12.8-14.6%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	15.8% (14.8-16.8%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	6.3% (5.7-6.9%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	6.2% (5.7-6.7%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	12.2% (11.5-12.9%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	76.9% (75.9-77.9%)
Households	2,530,147	581,120	23,716
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	33.1% (31.3-34.9%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	8.9% (7.8-10%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	22.8% (21.6-24%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	87.7% (86.7-88.7%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	9.4% (7.8-11%)
Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	11.9% (10.4-13.4%)

Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	30.7% (22.5-38.9%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	17.4% (13.4-21.4%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	13.5% (12.5-14.5%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	4.6% (3.8-5.4%)
Housing			
Number of housing units	2,808,549	612,535	25,508
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	7% (5.9-8.1%)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Haverhill**
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	61.9% (60.4-63.4%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$256600 ($251914-261286)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	29.8% (27.3-32.3%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	38.1% (36.6-39.6%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	43.1% (39.3-46.9%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		61,897
Violent crime counts			
Overall count	26,953		418
Murder/non-negligent manslaughter count	121		2
Forcible rape count	1,642		12
Robbery count	6,552		52
Aggravated assault count	18,638		352
Property crime counts			
Overall count	143,089		1439
Burgulary count	34,540		393
Larceny-theft count	99,317		920
Motor vehicle theft count	9,232		126
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		675.3 (610.8-739.8)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		3.2 (0-7.7)
Forcible rape rate	24.7 (23.5-25.9)		19.4 (8.4-30.4)
Robbery rate	98.6 (96.2-101)		84 (61.2-106.8)
Aggravated assault rate	280.4 (276.4-284.5)		568.7 (509.4-627.9)
Property crime rates (per 100,000)			

Overall rate	2153 (2141.9-2164)		2324.8 (2206.1-2443.5)
Burgulary rate	519.7 (514.2-525.2)		634.9 (572.4-697.5)
Larceny-theft rate	1494.4 (1485.1-1503.6)		1486.3 (1391-1581.7)
Motor vehicle theft rate	138.9 (136.1-141.7)		203.6 (168.1-239.1)

Lexington: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lexington**
Total Population (count)	6,605,058	1,522,533	31,886
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	15,430
Female	3,407,556	781,211	16,456
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	48.4% (47.2-49.6%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	51.6% (50.4-52.8%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	23,008
Non-Hispanic Black	413,926	66,499	323
Hispanic	655,863	104,081	688
Non-Hispanic Asian	365,973	147,125	6,846
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	0
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	31
Other race	159,267	41,857	990
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	72.2% (70-74.4%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	1% (0.5-1.5%)
Hispanic	9.9% (9.8-10%)	6.8%	2.2% (1.2-3.2%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	21.5% (19.7-23.3%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0% (0-0.1%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0.1% (0-0.2%)
Other race	2.4%	2.7%	3.1%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	23% (21.5-24.5%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	28.8% (26.6-31%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	12.6% (10.8-14.4%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	1.1% (0.5-1.7%)
Age			
Counts			
0-4 yrs	366,296	86,505	1,574

5-9 yrs	386,310	89,642	2,099
10-14 yrs	399,362	88,147	2,706
15-19 yrs	464,514	100,898	2,748
20-24 yrs	477,862	101,261	751
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lexington**
25-34 yrs	872,220	225,025	1,592
35-44 yrs	869,517	211,046	4,050
45-54 yrs	1,006,344	232,669	5,658
55-59 yrs	446,342	100,173	2,547
60-64 yrs	382,511	83,894	2,179
65+ yrs	933,780	203,273	5,982
Population 18 years and older	5,197,008	1,201,686	23,617
Population less than 18 years of age	1,408,050	320,847	8,269
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	4.9% (4.1-5.7%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	6.6% (5.9-7.3%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	8.5% (7.7-9.3%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	8.6% (7.7-9.5%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	2.4% (1.9-2.9%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	5% (4.1-5.9%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	12.7% (11.8-13.6%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	17.7% (16.6-18.8%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	8% (7-9%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	6.8% (6-7.6%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	18.8% (17.7-19.9%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	74.1% (73.2-75%)
Households	2,530,147	581,120	11,541
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	41.1% (39.3-42.9%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	5.2% (3.7-6.7%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	33.1% (31.3-34.9%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	97.3% (96.5-98.1%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	3% (1.8-4.2%)
Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	3.9% (2.8-5%)

Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	15.7% (4.5-26.9%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	2.4% (0.7-4.1%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	6.8% (6-7.6%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	1.3% (0.9-1.7%)
Housing			
Number of housing units	2,808,549	612,535	12,081
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	4.5% (3-6%)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lexington**
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	82.1% (80.3-83.9%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$704600 ($689686-719514)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	24.3% (21.1-27.5%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	17.9% (16.1-19.7%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	40.8% (32.9-48.7%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		32,000
Violent crime counts			
Overall count	26,953		13
Murder/non-negligent manslaughter count	121		0
Forcible rape count	1,642		0
Robbery count	6,552		0
Aggravated assault count	18,638		13
Property crime counts			
Overall count	143,089		226
Burgulary count	34,540		36
Larceny-theft count	99,317		190
Motor vehicle theft count	9,232		0
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		40.6 (18.5-62.7)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		0 (0-0)
Forcible rape rate	24.7 (23.5-25.9)		0 (0-0)
Robbery rate	98.6 (96.2-101)		0 (0-0)
Aggravated assault rate	280.4 (276.4-284.5)		40.6 (18.5-62.7)
Property crime rates (per 100,000)			

Overall rate	2153 (2141.9-2164)		706.3 (614.5-798)
Burgulary rate	519.7 (514.2-525.2)		112.5 (75.8-149.2)
Larceny-theft rate	1494.4 (1485.1-1503.6)		593.8 (509.6-677.9)
Motor vehicle theft rate	138.9 (136.1-141.7)		0 (0-0)

Lowell: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lowell**
Total Population (count)	6,605,058	1,522,533	107,466
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	52,434
Female	3,407,556	781,211	55,032
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	48.8% (48.1-49.5%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	51.2% (50.5-51.9%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	55,804
Non-Hispanic Black	413,926	66,499	6,995
Hispanic	655,863	104,081	18,925
Non-Hispanic Asian	365,973	147,125	21,206
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	100
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	160
Other race	159,267	41,857	4,276
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	51.9% (50.4-53.4%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	6.5% (5.6-7.4%)
Hispanic	9.9% (9.8-10%)	6.8%	17.6% (16.3-18.9%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	19.7% (18.5-20.9%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0.1% (0-0.2%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0.1% (0-0.2%)
Other race	2.4%	2.7%	4.0%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	24.8% (23.5-26.1%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	41.9% (40.2-43.6%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	7.3% (6.5-8.1%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	5.9% (5.2-6.6%)
Age			
Counts			

0-4 yrs	366,296	86,505	8,099
5-9 yrs	386,310	89,642	6,519
10-14 yrs	399,362	88,147	5,710
15-19 yrs	464,514	100,898	8,578
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lowell**
20-24 yrs	477,862	101,261	9,274
25-34 yrs	872,220	225,025	18,963
35-44 yrs	869,517	211,046	13,476
45-54 yrs	1,006,344	232,669	14,195
55-59 yrs	446,342	100,173	6,216
60-64 yrs	382,511	83,894	4,932
65+ yrs	933,780	203,273	11,504
Population 18 years and older	5,197,008	1,201,686	82,889
Population less than 18 years of age	1,408,050	320,847	24,577
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	7.5% (6.9-8.1%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	6.1% (5.6-6.6%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	5.3% (4.7-5.9%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	8% (7.3-8.7%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	8.6% (7.9-9.3%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	17.6% (16.6-18.6%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	12.5% (11.8-13.2%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	13.2% (12.4-14%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	5.8% (5.3-6.3%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	4.6% (4.1-5.1%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	10.7% (10.2-11.2%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	77.1% (76.1-78.1%)
Households	2,530,147	581,120	39,258
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	34.5% (32.9-36.1%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	11.8% (10.8-12.8%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	21.5% (20.6-22.4%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	78.8% (77.5-80.1%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	15.5% (13.6-17.4%)
Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	19% (17.2-20.8%)

Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	39.9% (34.8-45%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	27.5% (23.7-31.3%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	13.2% (12.4-14%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	6.8% (5.9-7.7%)
Housing			
Number of housing units	2,808,549	612,535	42,761
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Lowell**
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	8.2% (7.2-9.2%)
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	45.4% (43.9-46.9%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$228400 ($224348-232452)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	16.6% (13.4-19.8%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	54.6% (53.1-56.1%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	40.5% (38-43%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		108,539
Violent crime counts			
Overall count	26,953		585
Murder/non-negligent manslaughter count	121		0
Forcible rape count	1,642		37
Robbery count	6,552		174
Aggravated assault count	18,638		374
Property crime counts			
Overall count	143,089		3125
Burgulary count	34,540		849
Larceny-theft count	99,317		1981
Motor vehicle theft count	9,232		295
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		539 (495.4-582.5)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		0 (0-0)
Forcible rape rate	24.7 (23.5-25.9)		34.1 (23.1-45.1)
Robbery rate	98.6 (96.2-101)		160.3 (136.5-184.1)
Aggravated assault rate	280.4 (276.4-284.5)		344.6 (309.7-379.4)
Property crime rates (per 100,000)			

Overall rate	2153 (2141.9-2164)		2879.1 (2779.7-2978.6)
Burgulary rate	519.7 (514.2-525.2)		782.2 (729.8-834.6)
Larceny-theft rate	1494.4 (1485.1-1503.6)		1825.2 (1745.5-1904.8)
Motor vehicle theft rate	138.9 (136.1-141.7)		271.8 (240.8-302.8)

Peabody: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Essex County***	**Peabody**
Total Population (count)	6,605,058	750,808	51,522
Demographics			
Gender			
Counts			
Male	3,197,502	360,954	24,411
Female	3,407,556	389,854	27,111
Percentages			
Male	48.4% (48.3-48.5%)	48.1% (48-48.2%)	47.4% (46.4-48.4%)
Female	51.6% (51.5-51.7%)	51.9% (51.8-52%)	52.6% (51.6-53.6%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	565,188	44,550
Non-Hispanic Black	413,926	21,276	971
Hispanic	655,863	128,310	4,003
Non-Hispanic Asian	365,973	24,207	1,364
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	138	1
Non-Hispanic American Indian/Alaskan Native	7,934	646	0
Other race	159,267	11,043	633
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	75.3% (75.2-75.4%)	86.5% (84.5-88.5%)
Non-Hispanic Black	6.3% (6.2-6.4%)	2.8% (2.7-2.9%)	1.9% (1-2.8%)
Hispanic	9.9% (9.8-10%)	17.1%	7.8% (6.3-9.3%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	3.2% (3.1-3.3%)	2.6% (1.7-3.5%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0% (0-0.1%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0% (0-0.1%)
Other race	2.4%	1.5%	1.2%
Percent of the population foreign born	15% (14.9-15.1%)	14.9% (14.6-15.2%)	15% (13.4-16.6%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	24% (23.7-24.3%)	21% (19-23%)
Percent Italian ancestry	13.7% (13.6-13.8%)	17.2% (16.8-17.6%)	22% (20.1-23.9%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	2.5% (2.3-2.7%)	7.6% (6.4-8.8%)
Age			
Counts			

0-4 yrs	366,296	43,463	2,313
5-9 yrs	386,310	47,255	2,568
10-14 yrs	399,362	48,630	2,618
15-19 yrs	464,514	52,261	3,350
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Essex County***	**Peabody**
20-24 yrs	477,862	46,998	3,040
25-34 yrs	872,220	86,418	5,796
35-44 yrs	869,517	97,913	6,493
45-54 yrs	1,006,344	120,356	8,175
55-59 yrs	446,342	52,550	3,559
60-64 yrs	382,511	45,915	3,155
65+ yrs	933,780	109,049	10,455
Population 18 years and older	5,197,008	579,973	41,936
Population less than 18 years of age	1,408,050	170,835	9,586
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.8% (5.7-5.9%)	4.5% (3.8-5.2%)
5-9 yrs	5.8% (5.7-5.9%)	6.3% (6.2-6.4%)	5% (4.3-5.7%)
10-14 yrs	6% (5.9-6.1%)	6.5% (6.4-6.6%)	5.1% (4.4-5.8%)
15-19 yrs	7% (6.9-7.1%)	7% (6.9-7.1%)	6.5% (5.6-7.4%)
20-24 yrs	7.2% (7.1-7.3%)	6.3% (6.2-6.4%)	5.9% (5.1-6.7%)
25-34 yrs	13.2% (13.1-13.3%)	11.5% (11.4-11.6%)	11.2% (10.1-12.3%)
35-44 yrs	13.2% (13.1-13.3%)	13% (12.9-13.1%)	12.6% (11.8-13.4%)
45-54 yrs	15.2% (15.1-15.3%)	16% (15.9-16.1%)	15.9% (14.9-16.9%)
55-59 yrs	6.8% (6.7-6.9%)	7% (6.9-7.1%)	6.9% (6.1-7.7%)
60-64 yrs	5.8% (5.7-5.9%)	6.1% (6-6.2%)	6.1% (5.4-6.8%)
65+ yrs	14.1% (14-14.2%)	14.5% (14.4-14.6%)	20.3% (19.3-21.3%)
Population 18 years and older	78.7% (78.6-78.8%)	77.2%	81.4% (80.5-82.3%)
Households	2,530,147	286,008	21,305
Percent of households with children <18 years old	30.9% (30.7-31.1%)	33% (32.5-33.5%)	26.6% (24.7-28.5%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	7.7% (7.4-8%)	5.1% (4-6.2%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	27.2% (26.9-27.5%)	35.5% (33.9-37.1%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	89% (88.7-89.3%)	89.9% (88.8-91%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	8.5% (8.1-8.9%)	4.4% (3.1-5.7%)
Percent of persons living below poverty level	11.4% (11.2-11.6%)	11.2% (10.8-11.6%)	6.3% (5.1-7.5%)

Percent of single female households with children living below poverty level	34.9% (34-35.8%)	34.3% (32.3-36.3%)	18.2% (10.5-25.9%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	15.8% (15-16.6%)	5.8% (3.4-8.2%)
Percent living with disability	11.3% (11.2-11.4%)	11.5% (11.2-11.8%)	14.8% (13.6-16%)
Percent without health insurance	4% (3.9-4.1%)	4.3% (4.1-4.5%)	3.9% (2.9-4.9%)
Housing			
Number of housing units	2,808,549	306,605	22,070
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Essex County***	**Peabody**
Percent of housing units that are vacant	9.9% (9.7-10.1%)	6.7% (6.3-7.1%)	3.5% (2.3-4.7%)
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	63.4% (62.9-63.9%)	63.4% (61.6-65.2%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$349400 ($347441-351359)	$333100 ($326854-339346)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	30% (29.2-30.8%)	29.6% (26.3-32.9%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	36.6% (36.1-37.1%)	36.6% (34.8-38.4%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	42.4% (41.4-43.4%)	43.1% (39.1-47.1%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		52,113
Violent crime counts			
Overall count	26,953		121
Murder/non-negligent manslaughter count	121		0
Forcible rape count	1,642		11
Robbery count	6,552		12
Aggravated assault count	18,638		98
Property crime counts			
Overall count	143,089		1102
Burgulary count	34,540		155
Larceny-theft count	99,317		893
Motor vehicle theft count	9,232		54
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		232.2 (190.9-273.5)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		0 (0-0)
Forcible rape rate	24.7 (23.5-25.9)		21.1 (8.6-33.6)
Robbery rate	98.6 (96.2-101)		23 (10-36.1)
Aggravated assault rate	280.4 (276.4-284.5)		188.1 (150.9-225.3)
Property crime rates (per 100,000)			

Overall rate	2153 (2141.9-2164)		2114.6 (1991.1-2238.2)
Burgulary rate	519.7 (514.2-525.2)		297.4 (250.7-344.2)
Larceny-theft rate	1494.4 (1485.1-1503.6)		1713.6 (1602.2-1825)
Motor vehicle theft rate	138.9 (136.1-141.7)		103.6 (76-131.2)

Reading: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Reading**
Total Population (count)	6,605,058	1,522,533	24,957
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	11,995
Female	3,407,556	781,211	12,962
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	48.1% (46.5-49.7%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	51.9% (50.3-53.5%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	22,774
Non-Hispanic Black	413,926	66,499	246
Hispanic	655,863	104,081	688
Non-Hispanic Asian	365,973	147,125	1,029
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	0
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	0
Other race	159,267	41,857	220
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	91.3% (89.4-93.2%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	1% (0.2-1.8%)
Hispanic	9.9% (9.8-10%)	6.8%	2.8% (1.6-4%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	4.1% (2.9-5.3%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0% (0-0.1%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0% (0-0.1%)
Other race	2.4%	2.7%	0.9%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	7.5% (5.8-9.2%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	9.6% (7.9-11.3%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	23.5% (20.8-26.2%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	1.6% (0.9-2.3%)
Age			
Counts			

0-4 yrs	366,296	86,505	1,301
5-9 yrs	386,310	89,642	1,864
10-14 yrs	399,362	88,147	2,149
15-19 yrs	464,514	100,898	1,509
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Reading**
20-24 yrs	477,862	101,261	1,038
25-34 yrs	872,220	225,025	2,536
35-44 yrs	869,517	211,046	3,393
45-54 yrs	1,006,344	232,669	4,027
55-59 yrs	446,342	100,173	1,907
60-64 yrs	382,511	83,894	1,415
65+ yrs	933,780	203,273	3,818
Population 18 years and older	5,197,008	1,201,686	18,666
Population less than 18 years of age	1,408,050	320,847	6,291
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	5.2% (4.2-6.2%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	7.5% (6.4-8.6%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	8.6% (7.4-9.8%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	6% (5.1-6.9%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	4.2% (3.5-4.9%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	10.2% (8.7-11.7%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	13.6% (12.5-14.7%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	16.1% (14.7-17.5%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	7.6% (6.4-8.8%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	5.7% (4.8-6.6%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	15.3% (14.2-16.4%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	74.8% (73.5-76.1%)
Households	2,530,147	581,120	9,164
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	36.1% (33.4-38.8%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	2.8% (1.7-3.9%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	28.6% (26.7-30.5%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	97.7% (96.8-98.6%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	1.2% (0.3-2.1%)
Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	1.7% (0.8-2.6%)

Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	9.3% (0-23.5%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	0.8% (0-2.1%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	7.2% (6-8.4%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	1.4% (0.8-2%)
Housing			
Number of housing units	2,808,549	612,535	9,705
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Reading**
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	5.6% (3.7-7.5%)
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	81.1% (78.7-83.5%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$438100 ($428654-447546)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	24.8% (21.3-28.3%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	18.9% (16.5-21.3%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	28.1% (19-37.2%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		25,223
Violent crime counts			
Overall count	26,953		10
Murder/non-negligent manslaughter count	121		0
Forcible rape count	1,642		0
Robbery count	6,552		6
Aggravated assault count	18,638		4
Property crime counts			
Overall count	143,089		189
Burgulary count	34,540		44
Larceny-theft count	99,317		136
Motor vehicle theft count	9,232		9
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		39.6 (15.1-64.2)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		0 (0-0)
Forcible rape rate	24.7 (23.5-25.9)		0 (0-0)
Robbery rate	98.6 (96.2-101)		23.8 (4.8-42.8)
Aggravated assault rate	280.4 (276.4-284.5)		15.9 (0.3-31.4)
Property crime rates (per 100,000)			

Overall rate	2153 (2141.9-2164)		749.3 (642.9-855.7)
Burgulary rate	519.7 (514.2-525.2)		174.4 (122.9-225.9)
Larceny-theft rate	1494.4 (1485.1-1503.6)		539.2 (448.8-629.6)
Motor vehicle theft rate	138.9 (136.1-141.7)		35.7 (12.4-59)

Stoneham: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Stoneham**
Total Population (count)	6,605,058	1,522,533	21,498
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	10,226
Female	3,407,556	781,211	11,272
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	47.6% (45.9-49.3%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	52.4% (50.7-54.1%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	19,610
Non-Hispanic Black	413,926	66,499	181
Hispanic	655,863	104,081	677
Non-Hispanic Asian	365,973	147,125	671
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	0
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	34
Other race	159,267	41,857	325
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	91.2% (89.1-93.3%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	0.8% (0.2-1.4%)
Hispanic	9.9% (9.8-10%)	6.8%	3.1% (1.8-4.4%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	3.1% (1.8-4.4%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0% (0-0.2%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0.2% (0-0.4%)
Other race	2.4%	2.7%	1.5%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	9.7% (7.9-11.5%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	14.2% (11.5-16.9%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	34.1% (31-37.2%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	2.7% (1.6-3.8%)
Age			
Counts			

0-4 yrs	366,296	86,505	864
5-9 yrs	386,310	89,642	1,076
10-14 yrs	399,362	88,147	1,209
15-19 yrs	464,514	100,898	1,248
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Stoneham**
20-24 yrs	477,862	101,261	1,096
25-34 yrs	872,220	225,025	2,676
35-44 yrs	869,517	211,046	2,707
45-54 yrs	1,006,344	232,669	3,339
55-59 yrs	446,342	100,173	1,630
60-64 yrs	382,511	83,894	1,696
65+ yrs	933,780	203,273	3,957
Population 18 years and older	5,197,008	1,201,686	17,560
Population less than 18 years of age	1,408,050	320,847	3,938
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	4% (3.1-4.9%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	5% (3.7-6.3%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	5.6% (4.7-6.5%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	5.8% (4.7-6.9%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	5.1% (4.1-6.1%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	12.4% (10.6-14.2%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	12.6% (11.1-14.1%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	15.5% (13.8-17.2%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	7.6% (6.4-8.8%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	7.9% (6.7-9.1%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	18.4% (17.3-19.5%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	81.7% (80.4-83%)
Households	2,530,147	581,120	8,855
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	25.7% (23.5-27.9%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	3.7% (2.3-5.1%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	31.5% (29.5-33.5%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	93.5% (91.9-95.1%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	2.1% (0.7-3.5%)
Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	4.4% (2.9-5.9%)

Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	13.2% (1.4-25%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	3.9% (0.1-7.7%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	10.3% (8.9-11.7%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	2.6% (1.7-3.5%)
Housing			
Number of housing units	2,808,549	612,535	9,400
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Stoneham**
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	5.8% (3.8-7.8%)
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	69.2% (66.4-72%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$393800 ($381641-405959)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	27.1% (22.5-31.7%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	30.8% (28-33.6%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	43.3% (36.4-50.2%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		21,852
Violent crime counts			
Overall count	26,953		29
Murder/non-negligent manslaughter count	121		0
Forcible rape count	1,642		1
Robbery count	6,552		9
Aggravated assault count	18,638		19
Property crime counts			
Overall count	143,089		259
Burgulary count	34,540		111
Larceny-theft count	99,317		138
Motor vehicle theft count	9,232		10
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		132.7 (84.4-181)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		0 (0-0)
Forcible rape rate	24.7 (23.5-25.9)		4.6 (0-13.5)
Robbery rate	98.6 (96.2-101)		41.2 (14.3-68.1)
Aggravated assault rate	280.4 (276.4-284.5)		86.9 (47.9-126)
Property crime rates (per 100,000)			

Overall rate	2153 (2141.9-2164)		1185.2 (1041.8-1328.7)
Burgulary rate	519.7 (514.2-525.2)		508 (413.7-602.2)
Larceny-theft rate	1494.4 (1485.1-1503.6)		631.5 (526.5-736.6)
Motor vehicle theft rate	138.9 (136.1-141.7)		45.8 (17.4-74.1)

Tewksbury: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Tewksbury**
Total Population (count)	6,605,058	1,522,533	29,429
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	14,152
Female	3,407,556	781,211	15,277
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	48.1% (46.7-49.5%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	51.9% (50.5-53.3%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	26,976
Non-Hispanic Black	413,926	66,499	532
Hispanic	655,863	104,081	530
Non-Hispanic Asian	365,973	147,125	897
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	0
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	58
Other race	159,267	41,857	436
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	91.7% (89.8-93.6%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	1.8% (0.4-3.2%)
Hispanic	9.9% (9.8-10%)	6.8%	1.8% (1.2-2.4%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	3% (1.9-4.1%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0% (0-0.1%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0.2% (0-0.4%)
Other race	2.4%	2.7%	1.5%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	6.9% (5.5-8.3%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	9.1% (7.1-11.1%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	23.5% (21.3-25.7%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	6.4% (4.7-8.1%)
Age			
Counts			

0-4 yrs	366,296	86,505	1,502
5-9 yrs	386,310	89,642	1,710
10-14 yrs	399,362	88,147	1,820
15-19 yrs	464,514	100,898	1,835
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Tewksbury**
20-24 yrs	477,862	101,261	1,478
25-34 yrs	872,220	225,025	3,610
35-44 yrs	869,517	211,046	3,906
45-54 yrs	1,006,344	232,669	4,992
55-59 yrs	446,342	100,173	2,349
60-64 yrs	382,511	83,894	1,722
65+ yrs	933,780	203,273	4,505
Population 18 years and older	5,197,008	1,201,686	23,137
Population less than 18 years of age	1,408,050	320,847	6,292
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	5.1% (4.1-6.1%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	5.8% (4.6-7%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	6.2% (5.3-7.1%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	6.2% (5.1-7.3%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	5% (4.2-5.8%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	12.3% (10.7-13.9%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	13.3% (12-14.6%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	17% (15.5-18.5%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	8% (7-9%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	5.9% (5-6.8%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	15.3% (14.2-16.4%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	78.6% (77.6-79.6%)
Households	2,530,147	581,120	10,907
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	31.3% (29.3-33.3%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	2% (0.9-3.1%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	28.9% (26.9-30.9%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	94.7% (93.6-95.8%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	1.7% (0.8-2.6%)
Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	3.1% (2-4.2%)

Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	9.6% (0-19.5%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	2.2% (0.8-3.6%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	9.8% (8.1-11.5%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	2.5% (1.5-3.5%)
Housing			
Number of housing units	2,808,549	612,535	11,441
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Tewksbury**
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	4.7% (3.1-6.3%)
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	86.3% (84.3-88.3%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$329000 ($321620-336380)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	26.4% (23.1-29.7%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	13.7% (11.7-15.7%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	39.2% (30.9-47.5%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		29,518
Violent crime counts			
Overall count	26,953		98
Murder/non-negligent manslaughter count	121		0
Forcible rape count	1,642		15
Robbery count	6,552		9
Aggravated assault count	18,638		74
Property crime counts			
Overall count	143,089		615
Burgulary count	34,540		152
Larceny-theft count	99,317		428
Motor vehicle theft count	9,232		35
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		332 (266.4-397.6)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		0 (0-0)
Forcible rape rate	24.7 (23.5-25.9)		50.8 (25.1-76.5)
Robbery rate	98.6 (96.2-101)		30.5 (10.6-50.4)
Aggravated assault rate	280.4 (276.4-284.5)		250.7 (193.6-307.7)
Property crime rates (per 100,000)			

Overall rate	2153 (2141.9-2164)		2083.5 (1920.5-2246.4)
Burgulary rate	519.7 (514.2-525.2)		514.9 (433.3-596.6)
Larceny-theft rate	1494.4 (1485.1-1503.6)		1450 (1313.6-1586.3)
Motor vehicle theft rate	138.9 (136.1-141.7)		118.6 (79.3-157.8)

Wakefield: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wakefield**
Total Population (count)	6,605,058	1,522,533	25,400
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	12,469
Female	3,407,556	781,211	12,931
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	49.1% (47.3-50.9%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	50.9% (49.1-52.7%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	23,649
Non-Hispanic Black	413,926	66,499	110
Hispanic	655,863	104,081	450
Non-Hispanic Asian	365,973	147,125	1,006
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	0
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	0
Other race	159,267	41,857	185
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	93.1% (90.9-95.3%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	0.4% (0-0.8%)
Hispanic	9.9% (9.8-10%)	6.8%	1.8% (1-2.6%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	4% (1.9-6.1%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0% (0-0.1%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0% (0-0.1%)
Other race	2.4%	2.7%	0.7%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	7.1% (5.1-9.1%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	10.2% (7.4-13%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	29.7% (26.4-33%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	2.2% (1.4-3%)
Age			
Counts			

0-4 yrs	366,296	86,505	1,434
5-9 yrs	386,310	89,642	1,573
10-14 yrs	399,362	88,147	1,492
15-19 yrs	464,514	100,898	1,195
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wakefield**
20-24 yrs	477,862	101,261	1,419
25-34 yrs	872,220	225,025	3,225
35-44 yrs	869,517	211,046	3,548
45-54 yrs	1,006,344	232,669	3,966
55-59 yrs	446,342	100,173	2,428
60-64 yrs	382,511	83,894	1,475
65+ yrs	933,780	203,273	3,645
Population 18 years and older	5,197,008	1,201,686	20,087
Population less than 18 years of age	1,408,050	320,847	5,313
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	5.6% (4.7-6.5%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	6.2% (5-7.4%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	5.9% (5-6.8%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	4.7% (3.9-5.5%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	5.6% (4.5-6.7%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	12.7% (11-14.4%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	14% (12.8-15.2%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	15.6% (14.2-17%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	9.6% (8.3-10.9%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	5.8% (4.8-6.8%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	14.4% (13.3-15.5%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	79.1% (77.7-80.5%)
Households	2,530,147	581,120	9,921
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	29.6% (27.1-32.1%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	2.6% (1.6-3.6%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	25% (23.2-26.8%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	94.9% (93.7-96.1%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	2.4% (1.2-3.6%)
Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	4.1% (2.7-5.5%)

Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	7.6% (0-16.3%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	1.6% (0.2-3%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	8.7% (7.5-9.9%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	2.2% (1.5-2.9%)
Housing			
Number of housing units	2,808,549	612,535	10,521
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wakefield**
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	5.7% (3.8-7.6%)
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	74.6% (71.4-77.8%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$407800 ($397782-417818)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	27.3% (23.4-31.2%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	25.4% (22.2-28.6%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	27.6% (20.2-35%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		25,415
Violent crime counts			
Overall count	26,953		67
Murder/non-negligent manslaughter count	121		0
Forcible rape count	1,642		3
Robbery count	6,552		8
Aggravated assault count	18,638		56
Property crime counts			
Overall count	143,089		309
Burgulary count	34,540		70
Larceny-theft count	99,317		223
Motor vehicle theft count	9,232		16
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		263.6 (200.6-326.7)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		0 (0-0)
Forcible rape rate	24.7 (23.5-25.9)		11.8 (0-25.2)
Robbery rate	98.6 (96.2-101)		31.5 (9.7-53.3)
Aggravated assault rate	280.4 (276.4-284.5)		220.3 (162.7-278)
Property crime rates (per 100,000)			

Overall rate	2153 (2141.9-2164)		1215.8 (1081.1-1350.6)
Burgulary rate	519.7 (514.2-525.2)		275.4 (211-339.9)
Larceny-theft rate	1494.4 (1485.1-1503.6)		877.4 (762.8-992.1)
Motor vehicle theft rate	138.9 (136.1-141.7)		63 (32.1-93.8)

Wilmington: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wilmington**
Total Population (count)	6,605,058	1,522,533	22,656
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	11,153
Female	3,407,556	781,211	11,503
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	49.2% (47.7-50.7%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	50.8% (49.3-52.3%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	20,583
Non-Hispanic Black	413,926	66,499	236
Hispanic	655,863	104,081	361
Non-Hispanic Asian	365,973	147,125	974
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	0
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	0
Other race	159,267	41,857	502
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	90.9% (88.9-92.9%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	1% (0.2-1.8%)
Hispanic	9.9% (9.8-10%)	6.8%	1.6% (0.8-2.4%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	4.3% (2.7-5.9%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0% (0-0.2%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0% (0-0.2%)
Other race	2.4%	2.7%	2.2%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	7% (5.3-8.7%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	8.5% (6.7-10.3%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	26.9% (23.5-30.3%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	3.6% (2.5-4.7%)
Age			
Counts			

0-4 yrs	366,296	86,505	1,511
5-9 yrs	386,310	89,642	1,751
10-14 yrs	399,362	88,147	1,601
15-19 yrs	464,514	100,898	1,673
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wilmington**
20-24 yrs	477,862	101,261	945
25-34 yrs	872,220	225,025	2,027
35-44 yrs	869,517	211,046	3,194
45-54 yrs	1,006,344	232,669	4,219
55-59 yrs	446,342	100,173	1,449
60-64 yrs	382,511	83,894	1,282
65+ yrs	933,780	203,273	3,004
Population 18 years and older	5,197,008	1,201,686	16,708
Population less than 18 years of age	1,408,050	320,847	5,948
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	6.7% (5.5-7.9%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	7.7% (6.4-9%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	7.1% (6-8.2%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	7.4% (6.5-8.3%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	4.2% (3.4-5%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	8.9% (7.4-10.4%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	14.1% (12.8-15.4%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	18.6% (16.9-20.3%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	6.4% (5.2-7.6%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	5.7% (4.7-6.7%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	13.3% (12-14.6%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	73.7% (72.1-75.3%)
Households	2,530,147	581,120	7,400
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	42.2% (39.2-45.2%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	4.7% (3-6.4%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	26% (23.3-28.7%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	94.8% (93.6-96%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	1.8% (0.7-2.9%)
Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	2.4% (1.3-3.5%)

Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	19.2% (4.9-33.5%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	3% (0.8-5.2%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	8.8% (7.7-9.9%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	2.1% (1.3-2.9%)
Housing			
Number of housing units	2,808,549	612,535	7,598
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Wilmington**
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	2.6% (1.1-4.1%)
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	87.7% (85.1-90.3%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$375000 ($368493-381507)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	19.7% (16.2-23.2%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	12.3% (9.7-14.9%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	32.6% (21.5-43.7%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		22,758
Violent crime counts			
Overall count	26,953		28
Murder/non-negligent manslaughter count	121		0
Forcible rape count	1,642		2
Robbery count	6,552		3
Aggravated assault count	18,638		23
Property crime counts			
Overall count	143,089		275
Burgulary count	34,540		58
Larceny-theft count	99,317		213
Motor vehicle theft count	9,232		4
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		123 (77.5-168.6)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		0 (0-0)
Forcible rape rate	24.7 (23.5-25.9)		8.8 (0-21)
Robbery rate	98.6 (96.2-101)		13.2 (0-28.1)
Aggravated assault rate	280.4 (276.4-284.5)		101.1 (59.8-142.3)
Property crime rates (per 100,000)			

Overall rate	2153 (2141.9-2164)		1208.4 (1066.4-1350.3)
Burgulary rate	519.7 (514.2-525.2)		254.9 (189.3-320.4)
Larceny-theft rate	1494.4 (1485.1-1503.6)		935.9 (810.8-1061)
Motor vehicle theft rate	138.9 (136.1-141.7)		17.6 (0.4-34.8)

Winchester: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Winchester**
Total Population (count)	6,605,058	1,522,533	21,621
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	10,113
Female	3,407,556	781,211	11,508
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	46.8% (45.4-48.2%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	53.2% (51.8-54.6%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	18,038
Non-Hispanic Black	413,926	66,499	200
Hispanic	655,863	104,081	404
Non-Hispanic Asian	365,973	147,125	2,514
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	26
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	7
Other race	159,267	41,857	432
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	83.4% (81.1-85.7%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	0.9% (0.4-1.4%)
Hispanic	9.9% (9.8-10%)	6.8%	1.9% (1-2.8%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	11.6% (10.1-13.1%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0.1% (0-0.3%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0% (0-0.1%)
Other race	2.4%	2.7%	2.0%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	14.5% (12.9-16.1%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	18.7% (16.6-20.8%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	19.4% (16.9-21.9%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	0.8% (0.5-1.1%)
Age			
Counts			

0-4 yrs	366,296	86,505	1,383
5-9 yrs	386,310	89,642	1,977
10-14 yrs	399,362	88,147	2,011
15-19 yrs	464,514	100,898	1,141
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Winchester**
20-24 yrs	477,862	101,261	718
25-34 yrs	872,220	225,025	1,093
35-44 yrs	869,517	211,046	3,452
45-54 yrs	1,006,344	232,669	4,131
55-59 yrs	446,342	100,173	1,205
60-64 yrs	382,511	83,894	964
65+ yrs	933,780	203,273	3,546
Population 18 years and older	5,197,008	1,201,686	15,453
Population less than 18 years of age	1,408,050	320,847	6,168
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	6.4% (5.5-7.3%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	9.1% (8.2-10%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	9.3% (8.2-10.4%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	5.3% (4.6-6%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	3.3% (2.6-4%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	5.1% (4.1-6.1%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	16% (15-17%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	19.1% (17.8-20.4%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	5.6% (4.6-6.6%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	4.5% (3.7-5.3%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	16.4% (15.3-17.5%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	71.5% (70.4-72.6%)
Households	2,530,147	581,120	7,546
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	42.2% (40-44.4%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	2.5% (1.5-3.5%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	31.2% (29.2-33.2%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	97.1% (96.2-98%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	1.6% (0.5-2.7%)
Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	3.4% (1.8-5%)

Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	6.5% (0-16.2%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	4% (0.5-7.5%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	5.6% (4.8-6.4%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	0.9% (0.4-1.4%)
Housing			
Number of housing units	2,808,549	612,535	7,920
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Winchester**
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	4.7% (2.9-6.5%)
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	83.5% (81-86%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$676800 ($656331-697269)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	19.8% (16.5-23.1%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	16.5% (14-19%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	46.7% (38.8-54.6%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		21,786
Violent crime counts			
Overall count	26,953		12
Murder/non-negligent manslaughter count	121		0
Forcible rape count	1,642		1
Robbery count	6,552		3
Aggravated assault count	18,638		8
Property crime counts			
Overall count	143,089		202
Burgulary count	34,540		40
Larceny-theft count	99,317		154
Motor vehicle theft count	9,232		8
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		55.1 (23.9-86.2)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		0 (0-0)
Forcible rape rate	24.7 (23.5-25.9)		4.6 (0-13.6)
Robbery rate	98.6 (96.2-101)		13.8 (0-29.4)
Aggravated assault rate	280.4 (276.4-284.5)		36.7 (11.3-62.2)
Property crime rates (per 100,000)			

Overall rate	2153 (2141.9-2164)		927.2 (799.9-1054.5)
Burgulary rate	519.7 (514.2-525.2)		183.6 (126.8-240.5)
Larceny-theft rate	1494.4 (1485.1-1503.6)		706.9 (595.6-818.1)
Motor vehicle theft rate	138.9 (136.1-141.7)		36.7 (11.3-62.2)

Woburn: Demographics and Socioeconomics

	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Woburn**
Total Population (count)	6,605,058	1,522,533	38,528
Demographics			
Gender			
Counts			
Male	3,197,502	741,322	18,890
Female	3,407,556	781,211	19,638
Percentages			
Male	48.4% (48.3-48.5%)	48.7% (48.6-48.8%)	49% (47.8-50.2%)
Female	51.6% (51.5-51.7%)	51.3% (51.2-51.4%)	51% (49.8-52.2%)
Race/ethnicity			
Counts			
Non-Hispanic White	5,000,518	1,161,079	32,258
Non-Hispanic Black	413,926	66,499	1,560
Hispanic	655,863	104,081	1,666
Non-Hispanic Asian	365,973	147,125	2,342
Non-Hispanic Native Hawaiian/Pacific Islander	1,577	548	0
Non-Hispanic American Indian/Alaskan Native	7,934	1,344	9
Other race	159,267	41,857	693
Percentages			
Non-Hispanic White	75.7% (75.6-75.8%)	76.3% (76.2-76.4%)	83.7% (81.4-86%)
Non-Hispanic Black	6.3% (6.2-6.4%)	4.4% (4.3-4.5%)	4% (2.3-5.7%)
Hispanic	9.9% (9.8-10%)	6.8%	4.3% (2.8-5.8%)
Non-Hispanic Asian	5.5% (5.4-5.6%)	9.7% (9.6-9.8%)	6.1% (5.2-7%)
Non-Hispanic Native Hawaiian/Pacific Islander	0% (0-0.1%)	0% (0-0.1%)	0% (0-0.1%)
Non-Hispanic American Indian/Alaskan Native	0.1% (0-0.2%)	0.1% (0-0.2%)	0% (0-0.1%)
Other race	2.4%	2.7%	1.8%
Percent of the population foreign born	15% (14.9-15.1%)	19.3% (19-19.6%)	15.1% (13.1-17.1%)
Percent of 5+ yr olds that speak language other than English in the home	21.9% (21.8-22%)	25% (24.7-25.3%)	19.6% (16.9-22.3%)
Percent Italian ancestry	13.7% (13.6-13.8%)	15.6% (15.3-15.9%)	23% (21.1-24.9%)
Percent Portuguese ancestry	4.7% (4.6-4.8%)	3.2% (3.1-3.3%)	3.5% (2.4-4.6%)
Age			
Counts			
0-4 yrs	366,296	86,505	2,302

5-9 yrs	386,310	89,642	1,857
10-14 yrs	399,362	88,147	1,998
15-19 yrs	464,514	100,898	2,161
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Woburn**
Total Population (count)	6,605,058	1,522,533	38,528
20-24 yrs	477,862	101,261	1,827
25-34 yrs	872,220	225,025	6,488
35-44 yrs	869,517	211,046	5,229
45-54 yrs	1,006,344	232,669	5,975
55-59 yrs	446,342	100,173	2,700
60-64 yrs	382,511	83,894	2,223
65+ yrs	933,780	203,273	5,768
Population 18 years and older	5,197,008	1,201,686	30,836
Population less than 18 years of age	1,408,050	320,847	7,692
Percentages			
0-4 yrs	5.5% (5.4-5.6%)	5.7% (5.6-5.8%)	6% (5.2-6.8%)
5-9 yrs	5.8% (5.7-5.9%)	5.9% (5.8-6%)	4.8% (4-5.6%)
10-14 yrs	6% (5.9-6.1%)	5.8% (5.7-5.9%)	5.2% (4.5-5.9%)
15-19 yrs	7% (6.9-7.1%)	6.6% (6.5-6.7%)	5.6% (4.8-6.4%)
20-24 yrs	7.2% (7.1-7.3%)	6.7% (6.6-6.8%)	4.7% (4.1-5.3%)
25-34 yrs	13.2% (13.1-13.3%)	14.8% (14.7-14.9%)	16.8% (15.3-18.3%)
35-44 yrs	13.2% (13.1-13.3%)	13.9% (13.8-14%)	13.6% (12.5-14.7%)
45-54 yrs	15.2% (15.1-15.3%)	15.3% (15.2-15.4%)	15.5% (14.3-16.7%)
55-59 yrs	6.8% (6.7-6.9%)	6.6% (6.5-6.7%)	7% (6.2-7.8%)
60-64 yrs	5.8% (5.7-5.9%)	5.5% (5.4-5.6%)	5.8% (4.9-6.7%)
65+ yrs	14.1% (14-14.2%)	13.4% (13.3-13.5%)	15% (14.1-15.9%)
Population 18 years and older	78.7% (78.6-78.8%)	78.9% (78.8-79%)	80% (78.9-81.1%)
Households	2,530,147	581,120	15,186
Percent of households with children <18 years old	30.9% (30.7-31.1%)	31.3% (31-31.6%)	30.6% (28.6-32.6%)
Percent single female householder with own children <18 present	6.9% (6.8-7%)	4.9% (4.7-5.1%)	6.2% (4.9-7.5%)
Percent of households with one or more people 65+ years old	26.3% (26.2-26.4%)	24.8% (24.6-25%)	27.8% (26.1-29.5%)
Percent with high school degree or more education	89.4% (89.3-89.5%)	92.1% (91.9-92.3%)	93.4% (92.2-94.6%)
Income			
Percent of families living below poverty level	8.1% (7.9-8.3%)	5.4% (5.1-5.7%)	4.7% (3.3-6.1%)
Percent of persons living below poverty level	11.4% (11.2-11.6%)	8.1% (7.8-8.4%)	6.2% (4.8-7.6%)

Percent of single female households with children living below poverty level	34.9% (34-35.8%)	26.8% (25.2-28.4%)	22.6% (13.6-31.6%)
Percent of children <18 yrs old living below poverty level	14.9% (14.6-15.2%)	9% (8.5-9.5%)	10.5% (6.9-14.1%)
Percent living with disability	11.3% (11.2-11.4%)	8.8% (8.7-8.9%)	11% (9.8-12.2%)
Percent without health insurance	4% (3.9-4.1%)	3.7% (3.5-3.9%)	3.8% (2.8-4.8%)
	Disparity from state	Disparity county	Disparity from cty & state
	Benchmarks		
Indicators	**State**	**Middlesex County**	**Woburn**
Total Population (count)	6,605,058	1,522,533	38,528
Housing			
Number of housing units	2,808,549	612,535	15,926
Percent of housing units that are vacant	9.9% (9.7-10.1%)	5.1% (4.9-5.3%)	4.6% (3.1-6.1%)
Percent of housing units that are owner occupied	62.7% (62.5-62.9%)	62.7% (62.3-63.1%)	60.4% (58.1-62.7%)
Median house value of owner-occupied units	$330100 ($329402-330798)	$398200 ($396603-399797)	$363100 ($358192-368008)
Among owner occup. units, monthly owner costs ≥35% of total income	28.3% (28-28.6%)	26.4% (25.8-27%)	27% (23.3-30.7%)
Percent of housing units that are renter occupied	37.3% (37.1-37.5%)	37.3% (36.9-37.7%)	39.6% (37.3-41.9%)
Among renter occupied units, rent 35% or more of total income	40.5% (40.1-40.9%)	36.5% (35.7-37.3%)	36.5% (31.5-41.5%)
Crime (per 100,000 population)			
Population count in 2012	6,646,144		38,863
Violent crime counts			
Overall count	26,953		96
Murder/non-negligent manslaughter count	121		0
Forcible rape count	1,642		4
Robbery count	6,552		19
Aggravated assault count	18,638		73
Property crime counts			
Overall count	143,089		668
Burgulary count	34,540		105
Larceny-theft count	99,317		544
Motor vehicle theft count	9,232		19
Violent crime rates (per 100,000)			
Overall rate	405.5 (400.7-410.4)		247 (197.7-296.4)
Murder/non-negligent manslaughter rate	1.8 (1.5-2.1)		0 (0-0)
Forcible rape rate	24.7 (23.5-25.9)		10.3 (0.2-20.4)
Robbery rate	98.6 (96.2-101)		48.9 (26.9-70.9)

Aggravated assault rate	280.4 (276.4-284.5)		187.8 (144.8-230.9)
Property crime rates (per 100,000)			
Overall rate	2153 (2141.9-2164)		1718.9 (1589.6-1848.1)
Burgulary rate	519.7 (514.2-525.2)		270.2 (218.6-321.8)
Larceny-theft rate	1494.4 (1485.1-1503.6)		1399.8 (1283-1516.6)
Motor vehicle theft rate	138.9 (136.1-141.7)		48.9 (26.9-70.9)

Sources:

Indicators	Data sources and years
Demographics, Socioeconomics, Housing	2009-2013 American Community Survey (ACS) 5-Year Estimates (www.factfinder.census.gov

Appendix C – LHMC Community Health Survey Data

Table 1: Number of respondents and response rates by town. Also, reporting average age, gender, and household income based on *weighted* data.

Demographics	Age – 18 -44	Age – 45 – 64	Age – 65+	Total LHMC Service Area Sample	Lahey System-wide Survey Sample	Lahey System-wide Low-income Sample	State Level Benchmark[1]
Number of respondents to survey	188	280	262	730	1137	186	N/A
Average age	N/A	N/A	N/A	47.80	48.53	49.49	39.2
% female	45.76%	48.92%	54.62%	51.3%	51.48%	58.31%	51.6%
Household income							
% <$50,000	31.77%	24.16%	50.85%	32.13%	29.94%	93.05%	38.6%
% $50,000-124,999	34.44%	38.75%	38.56%	36.76%	38.67%	6.94%	38.7%
% $125,000 or more	33.79%	37.09%	10.59%	31.11%	31.36%		22.7%

Table 2: Demographics of the LHMC community health survey sample compared to data for MA and Essex County. Reporting *weighted* survey data.

Demographics	Age – 18 -44	Age – 45 – 64	Age – 65+	Total LHMC Service Area Sample	Lahey System-wide Survey Sample	Lahey System-wide Low-income Sample	State Level Benchmark
Minority (non-White race and/or Hispanic ethnicity) (A5)	20.20%	7.62%	5.87%	12.81%	10.09%	20.09%	24.3%
Non English Speaking (A7)	19.25%	12.62%	2.87%	13.59%	11.73%	21.46%	21.9%
Married (A8)	48.79%	60.02%	43.26%	52.18%	54.13%	35.66%	49.4%
Less than high school/GED education (A9)	1.26%	2.00%	9.28%	2.96%	3.10%	9.09%	10.6%
Households with children <18 (A11)	42.99%	31.68%	.71%	30.94%	29.80%	34.15%	30.9%
Among non-retirees… Unemployed (A10)	7.17%	5.26%	1.37%	5.44%	4.37%	8.62%	6.2%

[1] A gray box indicates that state data is missing.

Table 3: Health care access and utilization of primary care, dental care, prescription drugs, specialty care, and hospital: LHMC community health sample compared for State and National rates. Reporting *weighted* survey data.

Area	Description	Age – 18 -44	Age – 45 – 64	Age – 65+	Total LHMC Service Area Sample	Lahey System-wide Survey Sample	Lahey System-wide Low-income Sample	State Level Benchmark
General Access	Received all needed health services in past 12 mos. (B18)	85.59%	84.96%	92.81%	86.68%	86.04%	90.11%	
	Didn't receive all needed services	0%	2.36%	0.66%	.98%	.96%	2.23%	
	Did not need care	14.41%	12.68%	6.53%	12.33%	13.01%	7.66%	
	Regular PCP or personal doctor	89.35%	95.90%	96.34%	93.01%	94.21%	92.80%	87.7%
	Routine check-up in the past 12 months – Adults (B10)	61.33%	76.07%	94.15%	72.90%	73.72%	65.74%	77.7%
	Adults 18-64 currently insured (B3)	96.94%	97.65%	99.85%	97.26%	98.02%	91.97%	96.0%
	Any time in the past 12 months that respondent did not have any health insurance (B1)	9.61%	8.18%	2.36%	8.97%	7.94%	30.24%	
Dental Care	Dental insurance (B22)	79.20%	77.11%	28.41%	69.08%	70.87%	49.35%	
	Dental care in last 12 mos. (B23)	69.36%	75.81%	59.44%	69.87%	70.20%	44.03%	74.7%
Prescriptions	Prescription coverage (B5)	92.44%	98.86%	91.16%	94.67%	94.63%	88.93%	
	Couldn't get prescription in past 12 mos. because of cost (B21)	9.01%	8.57%	4.53%	7.98%	7.99%	23.28%	
Specialty Care	Special care utilization in the past 12 mos. (B13)	58.39%	55.52%	79.24%	61.34%	60.60%	65.15%	
Hospital Care	Overnight hospital stay in the past 12 mos. (B15)	10.56%	11.30%	17.56%	12.23%	11.82%	14.89%	
	ER Utilization in the past 12 mos. (B12)	23.20%	18.74%	25.37%	21.74%	21.19%	29.12%	

Table 4: Preventive care: LHMC community health survey sample compared to state and national rates.
Reporting *weighted* survey data.

Preventive Care	Age – 18 -44	Age – 45 – 64	Age – 65+	Total LHMC Service Area Sample	Lahey System-wide Survey Sample	Lahey System-wide Low-income Sample	State Level Benchmark
Among women ≥40 years… Ever had mammogram (D29)	87.43%	95.61%	99.71%	95.48%	96.07%	91.97%	
If yes, Among women ≥40 years… Mammogram in past 2 years (D30)	82.82%	85.53%	83.49%	84.62%	86.31%	82.09%	84.6%
Among men ≥40 years… Ever had PSA (D34)	0.00%	42.05%	75.06%	53.86%	56.15%	48.83%	
Among men ≥40 years… PSA in past 2 years (D35)	0.00%	73.11%	85.91%	78.74%	78.15%	70.55%	60.0%
Among men and women ≥50 years… Ever had sigmoidoscopy/ colonoscopy (D27)	8.13%	63.86%	89.30%	82.15%	82.92%	71.01%	61.4%
Among women ≥18 years… Ever had Pap test (D32)	89.94%	95.96%	94.23%	92.81%	94.03%	85.95%	
Among women ≥18 years… Pap in past 3 years (D33)	83.24%	84.53%	54.51%	79.54%	81.47%	61.94%	77.6%

Table 5: Chronic Disease: LHMC community health sample compared for State and National rates.
Reporting *weighted* survey data.

Chronic Disease	Age – 18 -44	Age – 45 – 64	Age – 65+	Total Service Area Sample	Lahey System-wide Survey Sample	Lahey System-wide Low-income Sample	State Level Benchmark
Ever told had diabetes – adult (D1)	0.21%	8.03%	23.31%	7.57%	7.52%	12.10%	8.5%
Ever told asthma – adult (D8)	17.03%	12.49%	10.59%	14.03%	15.23%	12.86%	16.8%
Among those with asthma… ER in past 12 months for asthma (D10)	11.16%	0.00%	8.10%	7.76%	6.69%	18.91%	
Ever told had hypertension (D11)	8.27%	26.63%	61.01%	24.75%	25.02%	32.08%	29.4%
Among those with hypertension… Taking Rx for Hypertension (D12)	29.04%	90.15%	97.12%	83.69%	84.08%	89.94%	75.8%
Ever had cholesterol checked (D13)	40.46%	68.01%	82.42%	58.69%	61.01%	45.84%	86.1%
Among those with cholesterol ever checked… Ever told had High Cholesterol (D14)	19.06%	37.05%	52.65%	33.28%	32.99%	35.74%	36.5%
Among those with cholesterol ever checked and ever told high… Taking Rx to lower cholesterol (D15)	4.56%	66.88%	98.75%	59.92%	58.56%	59.35%	
Ever told had cancer (D23)	3.43%	13.35%	27.51%	11.63%	12.88%	17.06%	11.1%
Ever told had angina or coronary heart disease (D18)	0.00%	2.89%	14.22%	3.57%	3.67%	4.17%	4.7%

Table 6: Health behavior data: LHMC community health sample compared for State and National rates.
Reporting *weighted* survey data.

Behavior	Description	Age – 18 -44	Age – 45 – 64	Age – 65+	Total Service Area Sample	Lahey System-wide Survey Sample	Lahey System-wide Low-income Sample	State Level Benchmark
Weight	% Overweight (BMI) (C1/C2)	28.11%	39.98%	44.60%	35.03%	36.77%	38.40%	34.4%
	% Obese (BMI) (C1/C2)	18.24%	32.78%	28.92%	25.73%	25.52%	33.28%	23.6%
	Overweight or Obese (C1/C2)	46.34%	71.76%	73.52%	60.76%	62.29%	71.68%	58.0%
	Participated in any physical activities or exercises, other than regular job, in past month (C3)	29.09%	37.71%	58.52%	37.48%	38.81%	52.14%	80.2%
Nutrition	5 or more fruits and vegetables per day (excluding fruit juices) (C4)	70.94%	53.66%	52.38%	60.82%	60.15%	57.21%	19.0%
Tobacco	Former smoker (C10)	15.97%	26.07%	47.77%	25.44%	26.90%	26.99%	27.2%
	Never smoker (C9)	70.91%	62.29%	41.48%	62.52%	61.29%	48.27%	56.2%
	Current Smoker (C10)	9.98%	10.27%	8.66%	9.76%	9.86%	22.32%	16.6%
	Among current smokers… Consider quitting smoking in next 6 mos.(C12)	85.20%	51.18%	39.37%	65.07%	71.13%	75.27%	
Alcohol	Excessive drinker (C17 – C20)	27.62%	27.44%	13.17%	24.75%	27.86%	17.65%	
	Heavy drinker (C17-20)	9.21%	12.47%	7.31%	9.99%	10.99%	6.17%	7.5%
	Binge drinker (C16)	26.71%	24.32%	11.63%	22.89%	25.55%	15.75%	19.4%
Drugs	Marijuana in past 12 mos.(C20)	13.66%	6.97%	1.11%	8.81%	9.20%	12.83%	17.4%
	Cocaine in past 12 mos. (C21)	1.58%	0.00%	0.49%	.78%	.57%	0.34%	2.5%
	Heroin in past 12 mos. (C22)	0.00%	0.24%	0.00%	.089%	.071%	0.40%	
	Legal drugs used on own in past 12 mos. (C24)	4.88%	7.74%	8.58%	6.74%	7.73%	8.29%	
Injury Prevention	Drove within 2 hours of drinking or using illegal drugs in past month (C25)	25.32%	27.64%	15.47%	24.20%	24.99%	8.27%	
	In car with driver DUI (C26)	22.21%	20.09%	12.74%	19.52%	21.04%	6.04%	
	Adult seat belt use – always (C27)	90.55%	79.23%	80.62%	84.56%	85.07%	71.59%	80.9%

Table 7: Self-reported health status (physical and mental): LHMC community health sample compared for State and National rates. Reporting *weighted* survey data.

General Health Status	Age – 18 -44	Age – 45 – 64	Age – 65+	Total Service Area Sample	Lahey System-wide Survey Sample	Lahey System-wide Low-income Sample	State Level Benchmark
% reporting fair/poor health (E1)	7.31%	7.59%	10.68%	8.24%	8.32%	17.25%	13.8%
% people with ≥ 15 days in poor physical health (E4)	2.79%	7.49%	7.90%	5.40%	5.68%	11.10%	9.7%
% people with ≥ 15 days in poor mental health (E5)	4.88%	8.11%	4.34%	5.94%	6.30%	9.94%	11.2%
% people with ≥ 15 days sad or blue (E6)	2.49%	7.64%	6.14%	5.03%	5.43%	12.57%	
% people with ≥ 15 days tense or anxious (E7)	10.68%	12.16%	8.15%	10.73%	10.57%	15.80%	
% people with ≥ 15 days felt healthy/full of energy (E9)	59.85%	59.87%	61.27%	60.23%	61.45%	50.37%	
% limited in any way in any activities by physical, mental or emotional problems (E2)	7.98%	19.55%	27.04%	15.85%	17.33%	25.83%	

Table 8: Behaviors and Risks: LHMC community health sample compared for State and National rates. Reporting *weighted* survey data.

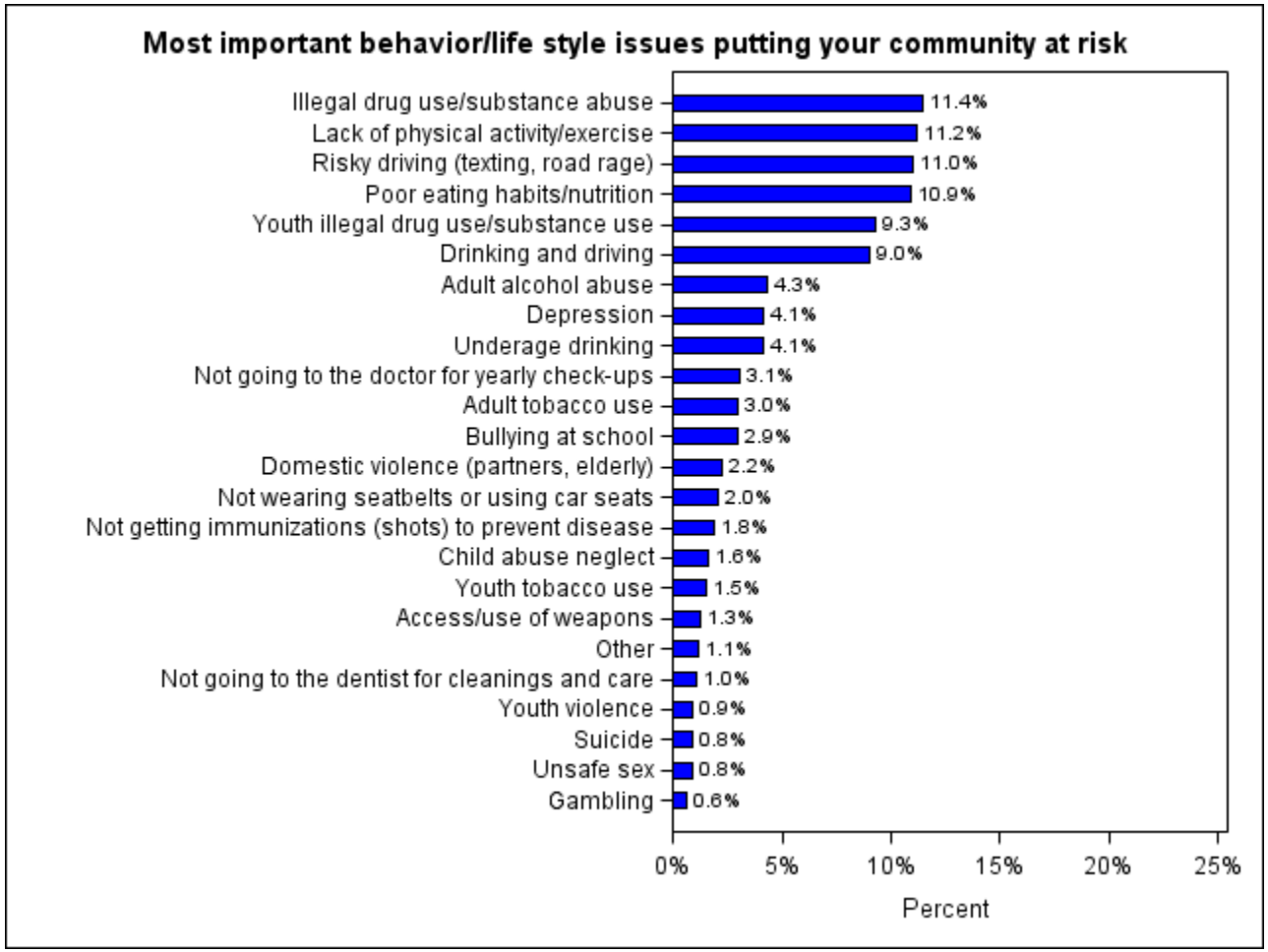


Table 9: Health Conditions: LHMC community health sample compared for State and National rates. Reporting *weighted* survey data.

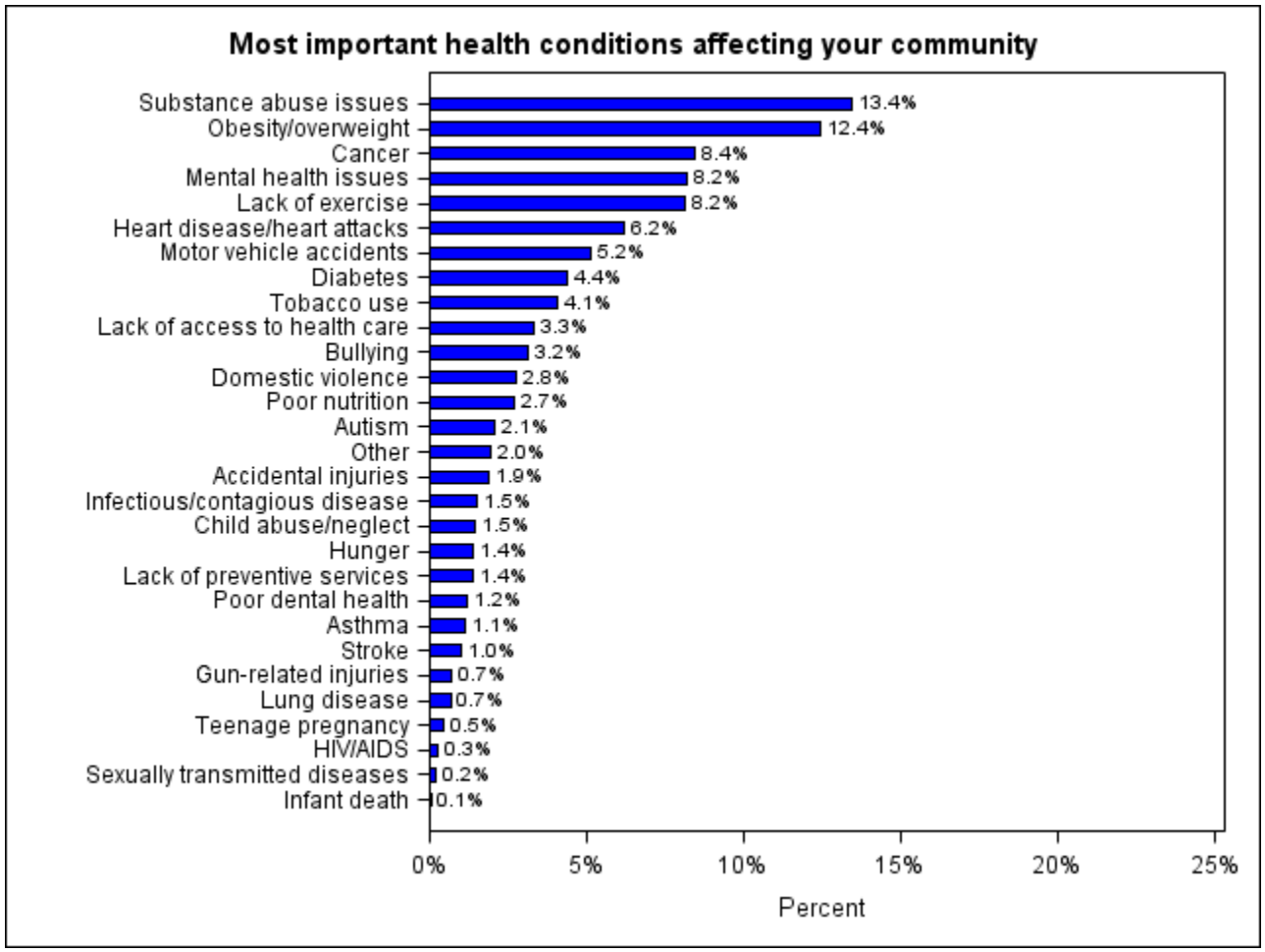
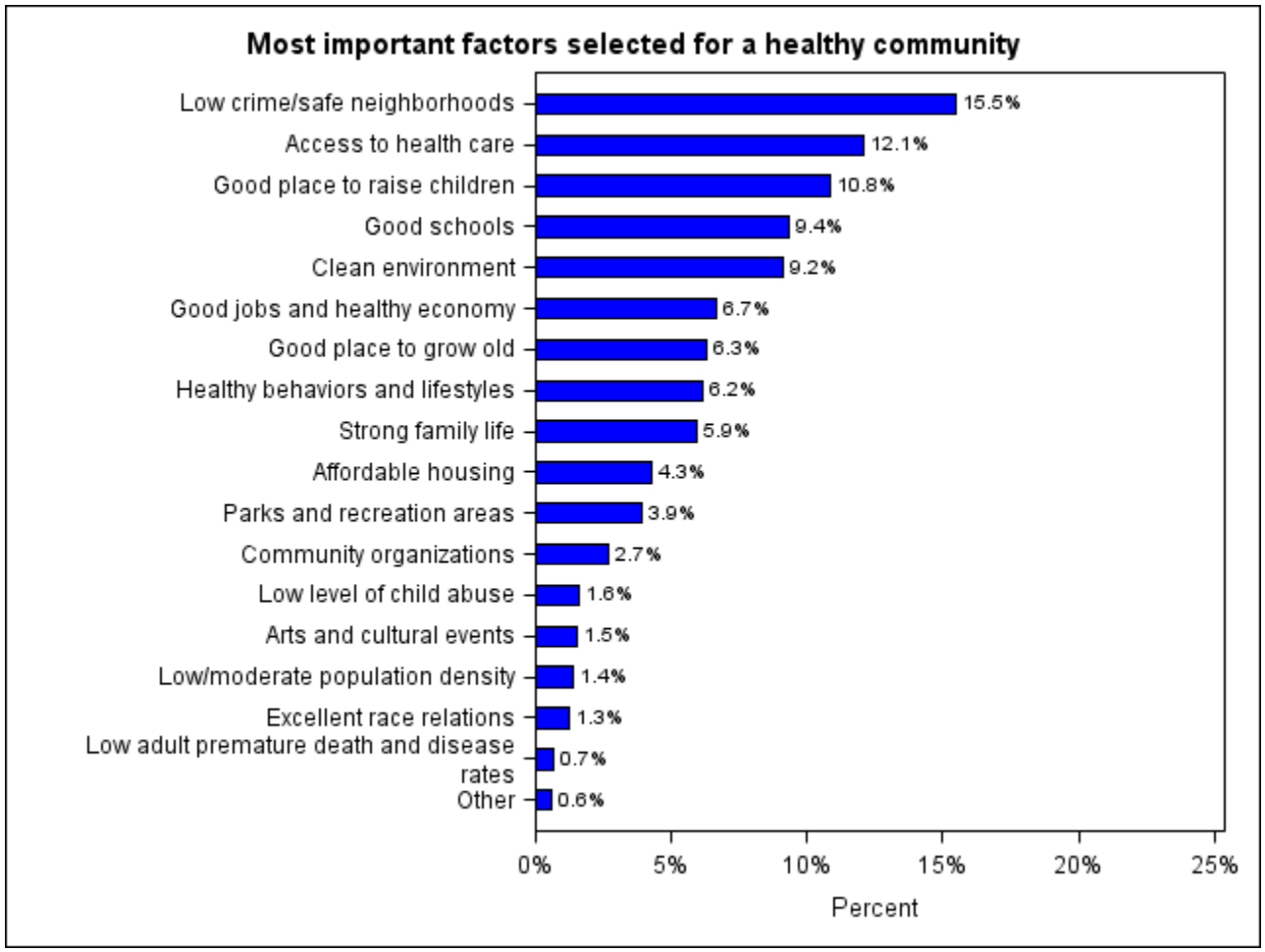


Table 10: Health Community Factors: LHMC community health sample compared for State and National rates. Reporting *weighted* survey data.



Appendix D – Key Informant Interview Guide

Lahey Health
Community Benefit Needs Assessment
EXTERNAL INTEVIEW GUIDE
2015 CHNA

Interview Questions

- **What do you see as the top health and social service issues /concerns impacting the health of residents in the area? (How much do the area's health care needs vary geographically? What segments of the population have the most significant needs or are most at-risk?)**

- **Are there significant health care service gaps in responding to these priority issue(s)? If so, what are they?**

- **How could/should Lahey target its resources to meet the needs of the community? What role would you like to see Lahey take in the community?**

- **What other community organizations should Lahey work with to address this issue(s)?** (i.e. schools, community centers, health care providers, public agencies, etc.)

In response to priority needs/issues:

- **Are there specific programs/services at Lahey that standout as working well to address the needs of the community? If so, please specify.**

- **Are there programs/services provided by other organizations that standout as working well to address the needs of the community? If so, please specify.**

- **What are your perceptions of Lahey? What impact do they have on the community?**

- **Do you have any suggestions as to others we can talk with in the community that could help us to better understand these issues?**

Appendix E – Key Informant Interview Summary

Needs/Issues:

- **Youth**
  - Mental health, suicide, stress
  - Substance abuse could not be higher priority:
    - A lot of "good kids" who get hooked after a sports injury or something. Young addicts often become lifelong addicts.
  - Alcohol access/binge drinking in high school students
  - Access to oxycontin in the home
  - East of access to drugs/alcohol among youth in more affluent towns (Winchester, Bedford)
  - Teen pregnancy and sexual health a concern. Could use more safety net coordination on this topic with Lahey

- **Adults**
  - Stress, anxiety
  - Alcohol abuse
- **Seniors/Elderly:**
  - Depression, isolation, management of home, financial affairs, hoarding, transportation is an issue to get to/from medical appointments, helping seniors age in their home, medication management, affordable housing, falls prevention
  - Support for seniors who have family members with substance abuse issues; seniors are apprehensive about asking for help as there is a sense of shame/stigma attached to the subject
  - Elder abuse prevention
  - Grandparents raising kids seem to be on rise. Has implications for elder health

- **Mental Health/Substance Abuse (across all ages):**
  - Veterans of all wars
  - Blue collar, young males
  - Opiates and Heroin use on the rise.
  - Longer-term substance abuse treatments less available. Not sure what to do after short-term/2-3 day treatments
- **Obesity/poor nutrition/inactivity which impacts chronic disease :**

- Access to fresh, locally grown produce
- Education on diet/exercise and chronic disease prevention
- Lack of physical exercise can be a major issue within low-income population
- Access to fresh, affordable foods can be a quiet issue. Food assistance still necessary even in suburban communities.

- **Oral Health**

Gaps/Barriers:

- Provider capacity
  - In particular mental health and substance abuse providers
  - need more depression/alcohol use screenings in primary care, detox programs, rehab beds, substance abuse outpatient and support services once out of rehab, needle/unused medication kiosks.
  - Geriatricians who are specifically trained to provide care to elderly
- Transportation, no public transportation in many of the towns.

Suggested Initiatives:

- Sharing of local needs assessment data back to communities from which feedback was solicited. Need for local town data on health outcomes**.**
- Forum on mental health/substance abuse to start/normalize conversations about this issue. (This is a hidden issue for a town like Winchester.) Can Lahey share about programs and services that are available?
- Lahey could sponsor drug drop-off boxes or drug take-back days.
- More MH/SA prevention and education programs, integrating screening/treatment into primary care.
- More educational/prevention programs (across content)
- Provide more programs in community settings.
- More care managers in PCP offices
- Whole Person Health
  - Expand exercise classes/balance classes that offer.
  - Provide nutrition education at farmer's markets
- Engagement of seniors
  - Gardening (Partnership with CoA's to build community gardens in senior centers/residences)

- Youth engagement
    - Employment and training for youth
- System changes in shifting how good health is rewarded (opportunities with current payment reform)
- More home visit programs
- Involvement with emergency preparedness activities.
- More pediatric/adolescent services
- Would like it if Lahey could fund a Public Health Regional Coordinator – either provide an FTE or salary for a public health coordinator/educator, that would represent 6-8 towns. One person who can coordinate shared services/trainings, drafting town policies across all towns.
- Communication from hospitals to communities and town officials could be stronger. Keeping folks informed vital to spread information on services and initiatives. Could be stronger
- More beds for people to get clean from drugs
- Sponsorship of food drives
- ER Diversion program to refer safety net patients to community based resources and FQHCs. Could treat mental health and higher risk patients in primary care/preventative settings. NSCH would take on more of these patients.
- More access to Lahey EHRs for community nonprofits would be helpful for coordination.

External Community Interviews

Name	Title	Organization
Richard Berube	Public Health Director	Billerica Board of Health
Susan Carp	Executive Director of the Arlington Council on Aging	Arlington Council on Aging
Ted Bettencourt	Mayor of Peabody	City of Peabody
James Harrison	Executive Director	The Food Project
Joan Butler	Executive Director	Minuteman Senior Services
Bruce MacDonald	Chief Executive Officer	Metro North YMCA
Heidi Porter	Public Health Director	Bedford Board of Health
Susan Lumenello	Public Health Director	Town of Burlington
Sharon Cameron	Public Health Director	City of Peabody
Christine Bongiorno	Arlington Public Health Director	Arlington Department of Health
Ruth Clay	Wakefield Public Health Director	Wakefield Health Department
John Curran	Town Manager, Billerica	Town of Billerica
Cathleen O'Dea	Assistant Town Manager, Billerica	Town of Billerica
Mike Higgins	Substance Abuse Coordinator	Town of Billerica

Internal LHMC Interviews

Name	Role
Richard Nesto, MD	Chief Medical Officer, Lahey Health
Kevin Norton	CEO - Lahey Health Behavioral Services
Mike Jellinek, MD	CEO, Lahey Health Community Network
Pauline Pike	Senior. Vice President Business Development
Denis Gallagher	COO, Primary Care
Mary Anna Sullivan, MD	CMO Lahey Health Behavioral Services
Jennifer Gizmunt	COO, Lahey Health Senior Care
Lisa Neveling	VP of Strategy and Planning, Lahey Health
Kathy Sheehan	Director of Ambulatory & Transitional Case Management
Dr. Gregory Bazylewicz, MD	Chief Population Health Officer
Dr. Wayne Saltsman, MD	Chief, Geriatrics and Transitional Care
Deb Costello	Executive Director, Lahey Health at Home
David Longworth, MD	Chief Medical Officer- Community Physician Network and Chair- Division of Primary Care
Joanne Conroy, MD	Chief Executive Officer, LHMC
David Martin, MD	Division Chair of Medicine, LHMC

Appendix F – Community and Provider Forum Summaries

Burlington Community Input Forum
January 19, 2016
Burlington Senior Center, Burlington, MA

Major Issues of concern:

- Board of Health – hear about Cancer hotspots here and there. Lahey has been helpful with needle disposal, and town health fairs.
    - Could be some more supplemental help with youth and adolescent health. Major gaps in Burlington with youth health, primarily around behavioral health. 17 year-olds in gap between pediatric and adult health.
    - Domestic violence is a serious issue in the community. Some form of mental health or support group, awareness. Would be a great to partner with Lahey.
    - Elder abuse is pervasive issue. Counts as domestic violence.
    - Minuteman "de-clutterers" and "Buried in Treasure" are hoarding programs.
- Lahey's role as a convener is huge. Lahey's Domestic Violence Task Force as a great example.
- Diagnosis of Alzheimer's is a major issue.
- Cancer diagnosis has exploded.
- Walkable streets and parks are needed
- Heroin and Opioids having impact on elders. Epidemic-afflicted leading to more elder abuse.

Barriers

- Not enough services around home visits and home health.
- Access to care is a major barrier. Those not on Medicaid, but those who can't afford services (particularly behavioral health). Cuts to mental health services.
- Opioid preventative services gaps. Mental health driver.

Program Suggestions

- Water aerobics class through Lahey has gotten great reviews.
- Resource guides from Lahey CB and Minuteman Senior Services very helpful. Online resources should be more available or linked. Awareness programs.
- Education around social media use and depression connection. Targeted towards youth and stress. Stress management for adolescents.
- Boys and Girls Clubs and YMCAs are great resources for youth and families.

Peabody Community Input Forum
January 26th, 2016
Peabody City Hall, Peabody, MA

Major Issues of concern:

- Mental health issues serious,
- Alcohol and marijuana use are still pervasive issues in Peabody that don't receive the same amount of coverage as the opioid crisis.
- Within first few months of school health center being open, behavioral health counselor had maxed out her caseload. Having on-site access to mental health services is huge for kids in area.
- Child BMI rates still higher than state average
- All of the high cancer rates usually had smoking or occupational hazard roots.
- Healthy Peabody putting together model of care for substance abuse home visits for
- Confidentiality restraints on ED providers have been difficult for referring substance users to public safety. Some state-run databases have been set up, but some functionality issues.
- Revere has been doing outreach with fire departments and substance users. Peabody will be looking at those models.
- Placing substance users in inpatient beds can be very difficult. Just aren't adequate beds for substance users.
- 18 -25 year olds are in a serious gap. Very difficult age to access.
- Caregiver support is difficult. Many caregivers often resistant to seeking help.
- Cultural barriers also exist. Had outreach to Brazilian population, where women expressed interest in reproductive health but didn't feel comfortable asking these questions in front of men of their lives.
- Gaps for older adults who don't yet qualify for elder services, ages 45-60 without resources.
- Hoarding is not an issue with large numbers but cases that arise are serious.

24928

Lahey Health
Community Health Needs Assessment

Sponsored by Lahey Hospital & Medical Center,
Beverly Hospital, Addison Gilbert Hospital and Winchester Hospital

Members of Lahey Health

NOTE: It is important that this survey be filled out by the adult (18 years or older) in the household whose birthday is coming up next.

(This is important so we can accurately represent all ages of people in your community)

Si le gustaría recibir esta encuesta en español, por favor llame gratis al 1-855-355-5986 JSI y deje su nombre, dirección, ciudad y código postal y se la enviraremos.

If you need additional assistance in completing this survey please call Luke Galford at JSI: 617-482-9485.

May 2015

JSI

24928

Lahey Health Community Health Needs Assessment Survey

INSTRUCTIONS AND INFORMATION FOR COMPLETING THE SURVEY
PLEASE READ CAREFULLY

Thank you for your willingness to complete this important survey. This survey is part of the Lahey Health Community Health Needs Assessment. Your responses to this survey will help to identify primary health concerns and explore ways that health and social service agencies, and the community at-large can work together to meet the needs of and to improve the health and well-being of the residents.

Your responses are completely confidential and your participation is voluntary. Information will never be presented in a way that could identify individual respondents. Questionnaires will be destroyed after the results have been compiled.

- If there is any question that you would prefer not to answer, you can skip over it. However, your response to each question is important to the project.

- **The adult (18 years or older) in the household whose birthday is coming up next should complete this survey.** This will help us to ensure that we obtain a representative sample of adults living in your area. As the adult whose birthday is coming up next, answer questions with respect to yourself, such as your age and your sex.

- If you need assistance filling out the survey due to poor eye sight or difficulty reading, then please ask another person in your household to help you read the survey and respond to each question. However, make sure that you are still answering questions specific to yourself (the adult in the household with the next upcoming birthday).

incorrect marks	correct mark	**Fill in circles darkly and completely.**

Section A: Sociodemographics

First we would like to find out some things about your background so that we can compare needs for people like yourself to other groups in the community.

A1. What is your age? ☐☐ years

A2. What is your gender?

○ Male ○ Female ○ Transgender

A3. Do you consider yourself to be:

○ Heterosexual/straight ○ Bisexual
○ Gay/Lesbian ○ Unsure
○ Choose not to answer

A4. Are you Hispanic or Latino?

○ Yes ○ No

A5. Which one or more of the following would you say is your race? Mark all that apply.

○ White
○ Black or African American
○ Asian
○ Native Hawaiian or Other Pacific Islander
○ American Indian or Alaska Native
○ Other _____

A6. How long have you lived in the town where you live now?

○ Less than 6 months
○ 6 months to 1 year
○ Greater than1 year to 5 years
○ Greater than 5 years to 10 years
○ More than 10 years

A7. What language(s) do you speak at home? Mark all that apply.

○ English
○ Haitian Creole
○ Portuguese
○ Spanish
○ Italian
○ Other_____

A8. What is your current marital status?

○ Married
○ Divorced/Separated
○ Widowed
○ Never married
○ A member of an unmarried couple living in the same household

A9. What is the highest grade or year of school that you have completed?

○ Never attended school or only attended kindergarten
○ Grades 1 through 8 (elementary)
○ Grades 9 through 11 (some high school)
○ Grade 12 or GED (high school graduate)
○ College 1 year to 3 years (some college, Associate's degree, or technical)
○ College 4 years (Bachelor's degree)
○ Masters degree or beyond

A10. Check the <u>one</u> answer that best describes your current employment status.

○ Employed for wages
○ Self-employed
○ Out of work for <u>more</u> than 1 year
○ Out of work for <u>less</u> than 1 year
○ A homemaker
○ A student
○ Retired
○ Unable to work

24928

Section A: Sociodemographics

A11. How many children (younger than 18 years of age) live in your household?

☐☐ number of children

A12. How many members of your household, including yourself, are 18 years or older?

☐☐ number of individuals

A13. Please estimate your total annual household income (before taxes) including all sources and types of income (i.e., wages, public assistance, child support, interest income, social security, stocks, rental income, trust funds) earned by all individuals in your household.

- ○ $0 - $14,999
- ○ $15,000 - $24,999
- ○ $25,000 - $34,999
- ○ $35,000 - $49,999
- ○ $50,000 - $74,999
- ○ $75,000 - $124,999
- ○ $125,000 - $249,999
- ○ $250,000 - $349,999
- ○ $350,000 or more

Section B: Access to Medical Care

B1. During the past 12 months, was there any time that you did not have any health insurance/coverage?

○ Yes ○ No **(If 'No' go to Question B3)**

B2. If you have not had insurance at any time in the past 12 months, what are the reasons why? Mark all that apply.

- ○ My employer does not offer it
- ○ I am self-employed
- ○ I am currently (or was) unemployed
- ○ I can't afford insurance
- ○ I am healthy and don't think I need it
- ○ Other _____

B3. Do you currently have health insurance/coverage?

○ Yes ○ No **(If 'No' go to Question B6 on pg. 4)**

B4. What kind of health insurance do you currently have? Mark all that apply.

- ○ Employer Sponsored/Commercial Insurance (e.g., Tufts, Blue Cross Blue Shield)
- ○ Medicare
- ○ Medicaid or other public insurance
- ○ Veteran's Affairs, Military Health, TRICARE or CHAMPUS
- ○ None of the above

B5. With your current health insurance plan, do you have prescription drug coverage, which covers a share of the cost of prescription drugs?

○ Yes ○ No

Section B: Access to Medical Care

Primary care physicians (also known as family practice or internal medicine doctors) are usually the doctors people go to first if they have health care needs or problems. They manage care for their patients, including referrals to specialist physicians.

B6. Do you have at least one person you think of as your personal doctor or primary care provider?

○ Yes ○ No **(If 'No' go to Question B8)**

B7. If yes, what type of primary care provider do you usually see?

- ○ Family/General Practice/Internal Medicine Physician
- ○ OB/GYN Physician
- ○ Nurse Practitioner/Physician's Assistant
- ○ Other _____

B8. Do you have one place (clinic, hospital, physician practice) that you usually go to for primary care?

○ Yes ○ No **(If 'No' go to Question B10)**

B9. If yes, where do you usually go for primary care services?

- ○ Physician's office
- ○ Hospital based practice/clinic in the community
- ○ Emergency Room
- ○ Urgent Care/Immediate Care Center
- ○ Other (please specify: _____)

B10. About how long has it been since you last visited a primary care provider for a routine check-up?

- ○ Less than 12 months ago
- ○ 1 year but less than 2 years ago
- ○ 2 years but less than 5 years ago
- ○ 5 or more years ago
- ○ Never

B12. In the last 12 months, how many times did you go to an emergency room to receive medical care?

○ None ○ 1-2 ○ 3-4 ○ 5 or more

Specialty care physicians are trained in identifying and treating diseases and conditions of particular parts of the body (e.g., a cardiologist treats conditions related to the heart; a dermatologist treats conditions and diseases of the skin). Most times you need a referral from your primary care doctor if you want to see a specialist for a particular problem.

B13. Did you need services from a specialty care physician in the past 12 months?

- ○ Yes
- ○ No **(go to Question B15 on pg.5)**

B14. What kind of specialty care did you receive in the past 12 months? Mark all that apply.

- ○ Cardiology (heart)
- ○ Dermatology (skin)
- ○ Endocrinology (hormonal system, diabetes, metabolic disorders)
- ○ GI (digestive system, stomach, colon)
- ○ General Surgery
- ○ Neurology (nervous system, brain disorders, stroke)
- ○ OB/GYN (female reproductive system, maternity care)
- ○ Oncology (cancer care)
- ○ Orthopedics (bones and muscles)
- ○ Pain Management
- ○ Pulmonology (lungs)
- ○ Rheumatology (arthritis, joints)
- ○ Urology (urinary system, prostate)
- ○ Other, (please specify: _____)

Section B: Access to Medical Care

B15. Did you stay in a hospital overnight for care or observation in the past 12 months?

○ Yes ○ No

B16. Did you receive all of the health services you needed in the past year, including primary care, specialty care, etc.?

○ No ○ Yes ○ Didn't need care/ no health problems

(If 'Yes' or 'Didn't need care' go to Question B18)

B17. What was the reason(s) you did not get care that you needed? Mark all that apply.

○ Cost of visits, co-payments, deductibles
○ Did not have health insurance
○ Did not have a provider
○ Couldn't find a provider willing to serve me
○ Do not feel comfortable with or trust my provider
○ Did not have transportation/could not get to the provider
○ Wait time for an appointment too long
○ Afraid of getting bad news
○ Other reasons, please specify:

_____

B18. Was there a time during the past 12 months when you needed to see a doctor but could not because of cost?

○ Yes ○ No

B19. How many, if any, different prescription medications are you currently taking?

☐☐ prescription medications

B20. How many, if any, different <u>non-prescription</u> medications are you currently taking that are <u>doctor-recommended</u>, like aspirin?

☐☐ non-prescription drugs that are <u>doctor-recommended</u>

B21. Was there a time during the past 12 months when you needed to fill a drug prescription or to buy a doctor-recommended non-prescription drug, but could not because of cost?

○ Yes ○ No

B22. Do you currently have dental insurance/coverage?

○ Yes ○ No

B23. How long has it been since you last visited a dentist or dental clinic for any reason?

○ Less than 12 months ago **(go to Question C1 on pg. 6)**
○ 1 year but less than 2 years ago
○ 2 years but less than 5 years ago
○ 5 or more years ago
○ Never

B24. What was the reason(s) you did not visit the dentist in the past year? Mark all that apply.

○ Cost of visits, co-payments, deductibles
○ Did not have dental insurance
○ Did not have a dentist or dental provider
○ Could not find a dentist or dental provider willing to serve me
○ Do not feel comfortable with or trust my dentist or dental provider
○ Did not have transportation/could not get to the dentist
○ Wait time for an appointment too long
○ Afraid of getting bad news
○ No reason to go/no oral health problems
○ Other reasons, please specify:

_____

C1. How tall are you?

☐ **feet** ☐☐ **inches**

C2. How much do you weigh?

☐☐☐ **pounds**

C3. During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, biking, yoga, golf, gardening, or walking for exercise?

- ○ Yes
- ○ No

Now think about all the foods you ate or drank during the past 30 days, including meals and snacks.

C4. During the past 30 days, not counting juice, how many times per day, on average, did you eat fruit? Include fresh, frozen, or canned fruit

- ○ 0 times per day
- ○ 1 time per day
- ○ 2 times per day
- ○ 3 times per day
- ○ 4 times per day
- ○ 5 or more times per day

C5. During the past 30 days, how many times per day, on average, did you eat cooked or canned beans, such as refried, baked, black, garbanzo beans, beans in soup, soybeans, edamame, tofu or lentils? Do NOT include long green beans

- ○ 0 times per day
- ○ 1 time per day
- ○ 2 times per day
- ○ 3 times per day
- ○ 4 times per day
- ○ 5 or more times per day

C6. During the past 30 days, how many times per day, on average, did you eat dark green vegetables for example broccoli or dark leafy greens including romaine, chard, collard greens or spinach?

- ○ 0 times per day
- ○ 1 time per day
- ○ 2 times per day
- ○ 3 times per day
- ○ 4 times per day
- ○ 5 or more times per day

C7. During the past 30 days, how many times per day, on average, did you eat orange-colored vegetables such as sweet potatoes, pumpkin, winter squash, or carrots?

- ○ 0 times per day
- ○ 1 time per day
- ○ 2 times per day
- ○ 3 times per day
- ○ 4 times per day
- ○ 5 or more times per day

C8. Not including what you reported above, during the past 30 days, how many times per day, on average, did you eat OTHER vegetables? Examples of other vegetables include tomatoes, tomato juice or V-8 juice, corn, eggplant, peas, lettuce, cabbage, and white potatoes that are not fried such as baked or mashed potatoes.

- ○ 0 times per day
- ○ 1 time per day
- ○ 2 times per day
- ○ 3 times per day
- ○ 4 times per day
- ○ 5 or more times per day

Section C: Health Behaviors/Lifestyle

The next questions are about lifestyle behaviors, such as smoking, drinking alcoholic beverages, and use of illegal substances/drugs. We want to again reassure you that your answers to these questions will be kept completely confidential.

C9. Have you smoked at least 100 cigarettes, or 5 packs, in your entire life?

○ Yes ○ No **(If 'No' go to Question C14)**

C10. Do you currently smoke cigarettes every day, some days or not at all?

○ Every day
○ Some days
○ Not at all **(go to Question C14)**

C11. During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?

○ Yes ○ No

C12. Are you considering quitting smoking within the next 6 months?

○ Yes
○ No **(If 'No' go to Question C14)**

C13. Are you seriously planning to quit smoking within the next 30 days?

○ Yes ○ No

C14. In the past 12 months, have you used any of the following? Mark all that apply

○ Chewing tobacco, snuff, or Snus
○ E-cigarettes or vapor cigarettes
○ Cigars or pipes

C15. During the past 30 days, have you had at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor? One drink is equivalent to a 12 ounce beer, a 5 ounce glass of wine, or a drink with one shot of liquor.

○ Yes ○ No **(If 'No' go to Question C20 on pg. 8)**

C16. During the past 30 days, how many days did you have at least one drink of any alcoholic beverage?

☐☐ **Days in the past 30 days**

C17. On the days when you drank alcohol, during the past 30 days, about how many drinks did you drink on average?

☐☐ **Number of drinks**

C18. Considering all types of alcoholic beverages, how many times during the past 30 days did you have 5 or more drinks (if you are a man) or 4 or more drinks (if you are a woman) on any one occasion?

☐☐ **Number of times in the past 30 days**

C19. During the past 30 days, what is the largest number of drinks you had on any occasion?

☐☐ **Number of drinks**

C20. In the past 12 months, have you used marijuana?

○ Yes ○ No

C21. In the past 12 months, have you used cocaine or crack?

○ Yes ○ No

C22. In the past 12 months, have you used heroin?

○ Yes ○ No

C23. In the past 12 months, have you used any other illegal drugs or substances?

○ Yes, please specify: _____

○ No

C24. In the past year, have you used any of the below medicines or drugs on your own? "On your own" means either without a doctor's prescription, in larger amounts than prescribed, or for a longer period than prescribed. Mark all that apply.

○ Sedatives (e.g., sleeping pills, barbiturates, Seconal, Quaalude)

○ Tranquilizers or anti-anxiety drugs (e.g., Valium, Librium, muscle relaxants, Xanac)

○ Painkillers (e.g., Codeine, Darvon, Percocet, Dilaudid, Demerol, Morphine, Vicodin, Oxycontin)

○ Stimulants (e.g., Preludin, Benzadrine, Methadrine, uppers, speed, amphetamines, Ritalin)

○ Other _____

○ I haven't used any of the above drugs in the past year on my own

C25. In the past month, have you driven a car within two hours after drinking any alcoholic beverages or using any illegal drugs (e.g., marijuana, cocaine, heroin)?

○ Yes ○ No

C26. In the past month, have you been in the car with a driver who drank any alcoholic beverages or used any illegal drugs (e.g., marijuana, cocaine, heroin) within the previous two hours?

○ Yes ○ No

C27. How often do you use seat belts when you drive or ride in a car?

○ Always
○ Nearly always
○ Sometimes
○ Seldom
○ Never

C28. During the past 12 months, have you gambled (bet) for money or valuables?

○ Yes ○ No **(If 'No' go to Question C32 on pg.9)**

C29. During the past 12 months, have you become restless irritable or anxious when trying to stop/cut down on gambling?

○ Yes ○ No

C30. During the past 12 months, have you tried to keep your family or friends from knowing how much you gambled?

○ Yes ○ No

C31. During the past 12 months did you have such financial trouble as a result of your gambling that you had to get help with living expenses from family, friends or welfare?

○ Yes ○ No

Section C: Health Behaviors/Lifestyle

The next questions are about firearms. We are asking these in a health survey because of our interest in firearm-related injuries. Please include weapons such as pistols, shotguns, and rifles; but not BB guns, starter pistols or guns that cannot fire. Include those kept in a garage, outdoor storage area or motor vehicle.

C32. Are there any firearms kept in or around your home (see definition above)? Mark all that apply.

- ○ No **(If 'No' go to Question D1)**
- ○ Yes, one or more pistols
- ○ Yes, one or more rifles
- ○ Yes, one or more shotguns

C33. Are any of these firearms usually unlocked? By unlocked, we mean you do not need a key or combination to get the gun or to fire it. We don't count a safety as a lock. Mark all that apply.

- ○ Yes, pistol(s) are usually unlocked
- ○ Yes, rifle(s) are usually unlocked
- ○ Yes, shotgun(s) are usually unlocked
- ○ No, all firearms are usually locked

C34. Are any of these firearms kept loaded? Mark all that apply.

- ○ Yes, pistol(s) are kept loaded
- ○ Yes, rifle(s) are kept loaded
- ○ Yes, shotgun(s) are kept loaded
- ○ No, no firearms are kept loaded

Section D: Chronic Disease and Prevention

This next section asks about several medical conditions you might have.

D1. Have you ever been told by a doctor, nurse or other health professional that you have diabetes (high blood sugar)?

- ○ Yes **(go to Question D2)**
- ○ Yes, but only during pregnancy **(go to Question D8 on pg. 10)**
- ○ Told borderline diabetes or pre-diabetes **(go to Question D8 on pg. 10)**
- ○ No **(go to Question D8 on pg. 10)**

D2. Are you now taking insulin?

○ Yes ○ No

D3. Are you now taking diabetes pills?

○ Yes ○ No

D4. In the past 30 days, how often did you check your blood level for glucose or sugar? Include times when checked by a family member or friend, but do not include times when checked by a health professional.

☐☐☐ **Times in the past 30 days**

D5. About how many times in the past 12 months have you seen a doctor, nurse, or other health professional for your diabetes?

☐☐ **Number of times**

D6. A test for "A1C" measures the average level of blood sugar over the past three months. About how many times in the past 12 months has a doctor, nurse, or other health professional checked you for hemoglobin A1C?

☐☐ **Number of times**

○ Never heard of hemoglobin A1C test

D7. When was the last time you had an eye exam in which your pupils were dilated? This would have made you temporarily sensitive to bright light.

○ Less than 1 month ago

○ 1 month but less than 1 year ago

○ 1 year but less than 2 years ago

○ 2 or more years ago

○ Never had an eye exam in which my pupils were dilated

D8. Have you ever been told by a doctor, nurse or other health professional that you have <u>asthma</u>?

○ Yes ○ No **(If 'No' go to Question D11)**

D9. During the past 3 months, have you used prescription inhalers (<u>not</u> including over-the-counter inhalers like Primatene Mist)?

○ Yes ○ No

D10. During the past 12 months, have you had to visit an emergency room or urgent care center / immediate medical care center because of asthma?

○ Yes ○ No

D11. Have you ever been told by a doctor, nurse or other health professional that you have <u>hypertension or high blood pressure</u>?

○ Yes **(go to Question D12)**

○ Yes, but only during pregnancy **(go to Question D13)**

○ Told borderline high or pre-hypertensive **(go to Question D13)**

○ No **(go to Question D13)**

D12. Are you currently taking medicine for your high blood pressure or hypertension?

○ Yes ○ No

D13. Blood cholesterol is a fatty substance found in the blood. About how long has it been since you last had your blood cholesterol checked?

○ Less than 12 months ago

○ 1 year but less than 2 years ago

○ 2 years but less than 5 years ago

○ 5 or more years ago

○ Never **(go to Question D16 on pg. 11)**

D14. Have you ever been told by a doctor, nurse or other health professional that you have <u>high blood cholesterol</u>?

○ Yes ○ No **(If 'No' go to Question D16 on pg. 11)**

D15. Are you currently taking medicine to lower your cholesterol, like Lipitor™, Zocor ™, Pravachol™, or Simvastatin™?

○ Yes ○ No

D16. Have you ever been told by a doctor, nurse or other health professional that you had a heart attack, also called a myocardial infarction?

○ Yes ○ No **(If 'No' go to Question D18)**

D17. Were you prescribed a beta-blocker, such as Atenolol or Metoprolol, after you were treated for your heart attack?

○ Yes ○ No

D18. Have you ever been told by a doctor, nurse or other health professional that you have angina or coronary heart disease?

○ Yes ○ No

D19. Have you ever been told by a doctor, nurse or other health professional that you had a stroke?

○ Yes ○ No

D20. A flu shot is an influenza vaccine injected into the arm. During the past 12 months, have you had a flu shot?

○ Yes ○ No

D21. A pneumonia shot or pneumococcal vaccine is usually given only once or twice in a person's lifetime and is different from the flu shot. Have you ever had a pneumonia shot?

○ Yes ○ No ○ Not sure

D22. Have you ever recieved the shingles vaccine (also called 'zoster vaccine')?

○ Yes ○ No ○ Not sure

D23. Have you ever been told by a doctor, nurse or other health professional that you had cancer?

○ Yes ○ No **(If 'No' go to Question D25 on pg. 12)**

D24. What type of cancer(s) were you diagnosed as having? Mark all that apply.

○ Lung
○ Colorectal
○ Prostate
○ Breast
○ Cervical, ovarian, or uterine
○ Pancreatic
○ Stomach or esophageal
○ Liver/bile duct
○ Urinary/bladder/kidney
○ Non-Hodgkin lymphoma
○ Leukemia
○ Thyroid
○ Oral cavity/pharynx
○ Skin (melanoma)
○ Other, please specify:

_____

Section D: Chronic Disease and Prevention

The next few questions are about cancer screening. Cancer screening tests help detect cancer at an early stage when it is still treatable and can help you live longer. Some tests everybody can get (like blood stool tests, sigmoidoscopy and colonoscopy for colorectal cancer), some tests are specific to men (like PSA and DRE tests for prostate cancer) and some tests are specific to women (like mammography for breast cancer and Pap tests for cervical cancer). Please make sure to answer the questions below that are appropriate for you based on your gender.

D25. A blood stool test is a test for colorectal cancer that may use a special kit at home to determine whether the stool contains blood. Have you ever had this test using a home kit?

○ Yes ○ No **(If 'No' go to Question D27)**

D26. How long has it been since your last blood stool test using a home kit?

○ Less than 12 months ago
○ 1 year but less than 2 years ago
○ 2 years but less than 3 years ago
○ 3 years but less than 5 years ago
○ 5 or more years ago

D27. Sigmoidoscopy and colonoscopy are exams performed by a doctor or health care professional in which a tube is inserted in the rectum to view the colon for signs of colorectal cancer or other health problems. Have you ever had either of these exams?

○ Yes ○ No **(If 'No' and you are a woman go to Question D29 on pg. 13; if you are a man go to Question D34 on pg. 13)**

D28. How long has it been since you had your last sigmoidoscopy or colonoscopy?

○ Less than 12 months ago
○ 1 year but less than 2 years ago
○ 2 years but less than 5 years ago
○ 5 years but less than 10 years ago
○ 10 or more years ago

The next few questions are specific to <u>women</u>. If you are a man, please go to Question D34.

D29. A mammogram is a type of x-ray that is taken of each breast to look for breast cancer. Have you ever had a mammogram?

○ Yes ○ No **(If 'No' go to Question D31)**

D30. How long has it been since you had your last mammogram?

○ Less than 12 months ago

○ 1 year but less than 2 years ago

○ 2 years but less than 3 years ago

○ 3 years but less than 5 years ago

○ 5 or more years ago

D31. Have you had a hysterectomy?

○ Yes **(If 'Yes' go to Question E1 on pg. 14)**

○ No

D32. A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?

○ Yes ○ No **(If 'No' go to Question E1 on pg. 14)**

D33. How long has it been since you had your last Pap test?

○ Less than 12 months ago

○ 1 year but less than 2 years ago

○ 2 years but less than 3 years ago

○ 3 years but less than 5 years ago

○ 5 or more years ago

The next few questions are specific to <u>men</u>. If you are a woman, please go to E1 on pg. 14.

D34. A Prostate-Specific Antigen test, also called a PSA test, is a blood test used to check men for prostate cancer. Have you ever had a PSA test?

○ Yes ○ No ○ Not sure

(If 'No' or 'Not sure' go to Question D36)

D35. How long has it been since you had your last PSA test?

○ Less than 12 months ago

○ 1 year but less than 2 years ago

○ 2 years but less than 3 years ago

○ 3 years but less than 5 years ago

○ 5 or more years ago

D36. A digital rectal exam (DRE) is an exam in which a doctor, nurse, or other health professional places a gloved finger into the rectum to feel the size, shape and hardness of the prostate gland. Have you ever had a digital rectal exam?

○ Yes ○ No **(If 'No' go to Question E1 on pg. 14)**

D37. How long has it been since you had your last digital rectal exam?

○ Less than 12 months ago

○ 1 year but less than 2 years ago

○ 2 years but less than 3 years ago

○ 3 years but less than 5 years ago

○ 5 or more years ago

Section E: Self-Reported Health Status

E1. Would you say in general your health is:

- ○ Excellent
- ○ Very Good
- ○ Good
- ○ Fair
- ○ Poor

E2. Are you limited in any way for any activities because of physical, mental, or emotional problems?

○ Yes ○ No

E3. Do you now have any health problems that require you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone? Include occasional use or use in certain circumstances.

○ Yes ○ No

E4. Thinking about your physical health, which includes physical illness or injury, for how many days during the past 30 days was your physical health <u>not good</u>?

☐☐ **days**

E5. Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health <u>not good</u>?

☐☐ **days**

E6. During the past 30 days, for about how many days have you felt sad, blue, or depressed?

☐☐ **days**

E7. During the past 30 days, for about how many days have you felt worried, tense, or anxious?

☐☐ **days**

E8. During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?

☐☐ **days**

E9. During the past 30 days, for about how many days have you felt very healthy and full of energy?

☐☐ **days**

E10. Has a doctor or other healthcare provider ever told you that you had an anxiety disorder (including acute stress disorder, anxiety, generalized anxiety disorder, obsessive-compulsive disorder, panic disorder, phobia, posttraumatic stress disorder, or social anxiety disorder)?

○ Yes ○ No

E11. Has a doctor or other healthcare provider ever told you that you have a depressive disorder (including depression, major depression, dysthymia, or minor depression)?

○ Yes ○ No

Section F: Special Subpopulations - Disabilities/Care Giving

These next questions are about disabling conditions that you or members of your household may have been diagnosed with.

F1. Has a member of your household been told by a doctor or other health care professional that he/she has Alzheimer's disease?

○ Yes ○ No

F2. Has a member of your household been told by a doctor or other health care professional that he/she has another form of cognitive impairment, such as dementia?

○ Yes ○ No

F3. Has a member of your household been told by a doctor or other health care professional that he/she has Parkinson's Disease?

○ Yes ○ No

F4. If there is a member of your household with Alzheimer's, dementia, or Parkinson's disease, are they getting all of the help that they need?

○ Yes, they are getting all of the help they need

○ No, they are not getting all of the help they need

○ There is no one in my household diagnosed with Alzheimer's, dementia, or Parkinson's Disease

These next questions are about care giving assistance you provide to a friend or family member.

F5. A caregiver is someone who provides regular care or assistance to a friend or family member who has a health problem, long-term illness, or disability. During the past month, did you provide any such care or assistance to a friend or family member?

○ Yes ○ No **(If 'No' go to Question G1 on pg. 16)**

F6. As a care giver, do you feel as if you are receiving all of the necessary support so that you can take care of your own emotional and physical health?

○ Yes ○ No

Section G: Other Health Issues

G1. A fall is when a person unintentionally comes to rest on the ground or another lower level. In the past 3 months, how many times have you fallen?

☐☐ Times **(If '0' times go to Question G3)**

↓

G2. How many of these falls caused injury? By an injury, we mean the fall caused you to limit regular activities for at least a day or to go see a doctor.

☐☐ Falls causing injury

G3. A 'Health Care Proxy' is a legal document that appoints a family member, friend, etc. to make health care decisions for you in the event that you are not able to make such decisions. Do you have a health care proxy?

○ Yes ○ No **(If 'No' go to Question G5)**

↓

G4. If yes, have you had a discussion with your health care proxy about your wishes regarding end of life care should you become incapable of communicating?

○ Yes ○ No

G5. How often do you get the social and emotional support you need?

○ Always
○ Usually
○ Sometimes
○ Rarely
○ Never

G6. Do you regularly participate in activities (at least 3 times per week) that allow you to socialize?

○ Yes ○ No **(If 'No' go to Question H1 on pg. 17)**

↓

G7. If yes, what types of activities do you participate in? Mark all that apply.

○ Meet people at a community center, church/mosque/synagogue, coffee shop or restaurant
○ Participate in volunteer activities
○ Meet people at my work or job location
○ Meet with people at my home or someone else's home
○ Other, please specify:

_____

Section H: Perceived Community Health Needs

H1. In the following list, mark what you think are the three (3) most important factors to a healthy community.

- ○ Good place to raise children
- ○ Good place to grow old
- ○ Low crime/safe neighborhoods
- ○ Low level of child abuse
- ○ Good schools
- ○ Access to health care (family doctor emergency and/or speciality services)
- ○ Parks and recreation areas
- ○ Clean environment (air, drinking water)
- ○ Affordable housing
- ○ Arts and cultural events
- ○ Excellent race relations
- ○ Good jobs and healthy economy
- ○ Strong family life
- ○ Healthy behaviors and lifestyles
- ○ Low adult premature death and disease rates
- ○ Low/moderate population density
- ○ Community organizations (social groups, church groups, volunteer groups)
- ○ Other (please specify): _____

H2. In the following list, mark what you think are the three (3) most significant health conditions/concerns affecting your community.

- ○ Accidental injuries (drowning, choking, home or work-related accidents)
- ○ Asthma
- ○ Autism
- ○ Cancer. What type(s)? _____
- ○ Child abuse/neglect
- ○ Diabetes
- ○ Domestic violence
- ○ Hunger
- ○ Gun-related injuries
- ○ Heart disease/heart attacks
- ○ HIV/AIDS
- ○ Infant death
- ○ Infectious/contagious disease (TB, pneumonia, flu, etc.)
- ○ Lack of access to health care (no insurance, no transportation, cost, not available, etc.)
- ○ Lack of exercise
- ○ Lack of preventive services (cancer screening, vaccines, immunizations, physicals, etc.)
- ○ Lung disease (emphysema, COPD, etc.)
- ○ Mental health issues (depression, schizophrenia, suicide, anxiety/stress)
- ○ Motor vehicle accidents
- ○ Obesity/overweight
- ○ Poor dental health
- ○ Poor nutrition
- ○ Sexually transmitted diseases (STDs, such as Herpes, Gonorrhea, Chlamydia, etc.)
- ○ Stroke
- ○ Substance abuse issues (alcohol or illicit drug use)
- ○ Teenage pregnancy
- ○ Tobacco use
- ○ Bullying
- ○ Other (please specify): _____

H3. In the following list, mark what you think are the three (3) behaviors/lifestyle issues below that you believe are putting your community's health at risk.

- ○ Lack of physical activity/exercise
- ○ Poor eating habits/nutrition
- ○ Adult tobacco use
- ○ Drinking and driving
- ○ Not wearing seatbelts or using car seats
- ○ Gambling
- ○ Adult alcohol abuse
- ○ Illegal drug use/substance abuse
- ○ Depression
- ○ Suicide
- ○ Not getting immunizations ("shots") to prevent disease
- ○ Unsafe sex
- ○ Risky driving (texting, road rage)
- ○ Domestic violence (partners, elderly)
- ○ Child abuse/neglect
- ○ Youth violence
- ○ Underage drinking
- ○ Youth tobacco use
- ○ Bullying in schools
- ○ Access/use of weapons
- ○ Youth illegal drug use/substance abuse
- ○ Not going to the dentist for cleanings and care
- ○ Not going to the doctor for yearly check-ups
- ○ Other (please specify):

_____

Thank you for your time and for the effort you have taken to provide us with this information. We want to assure you that your responses are completely confidential and the information from this survey will never be presented in a way that could identify individual respondents.

If you have any questions about this project, please feel free to contact Luke Galford at JSI: 617-482-9485.

Please return this survey in the enclosed postage paid envelope or mail to:

John Snow, Inc.
ATTN - Lahey CHNA
44 Farnsworth Street
Boston, MA 02210

THANK YOU!

Appendix H – Lahey Health Community Health Survey Methods

General Goals

The general goals were to gather health status and health needs indicators from a representative sample of residents in three service areas encompassing the Lahey System. The service areas were North Shore, Lahey and Winchester.

Sampling

The goal was to gather approximately the same number of surveys in each of the three service areas. What made sample selection complicated was that some of the communities were in more than one service area. Sample sizes for each town in a service area were based on the proportion that town's population made up of the total service area. The target service area sample size was 900 with the expectation that a 50% response rate would provide at least 450 residents for each sampling area. JSI selected 900 addresses randomly across the service area with each town in the service area represented proportionally to its population size.

For the towns that overlapped multiple service areas, it was true that for that particular town it made up a different proportion of households in the two service areas. JSI picked the sample size for that town that was the larger of the two different proportions. In this way, the service areas wound up having unequal sample sizes for the initial mailings (North Shore = 900; Winchester = 900; and Lahey = 1600). The total unduplicated sample size was 2,984 households. When the analyses were done for each service area, weighting was used to restore an dual area eligible town to its proper proportion of that particular service area (see weighting discussion below) as well as in the total Lahey System area.

In addition to the proportional sampling of each service area, JSI also drew an oversample of low income areas. JSI targeted an additional 600 households which were selected from Census block groups that had over 25% of the households with income less than 200% of the poverty level. Of course not all households that responded from those oversampled areas were low income households. In the analyses in which results for "low income" were presented, JSI combined respondents either from the main sample or the oversample whose reported family income was less than 200% of the poverty line.

Survey Methods

In order to maximize response rates from the selected samples, JSI used procedures which incorporated reminders as well as incentives. The first mailing was a "pre-notification" letter, which alerted the household to their selection to be in the sample and told them to be on the "look-out" for the survey mailing in a few weeks "because there was something of value inside that we knew they would like". The initial survey mailing included a respondent letter which explained

the purposes of the survey and procedures for protecting respondent confidentiality; a survey; a postage-paid business reply envelope; and a $5 cash incentive. Two weeks later a reminder letter was sent to any household which had not yet returned a survey. Two weeks after that (four weeks after the initial survey was sent) another reminder was sent but in this reminder a replacement copy of the survey was included. Two weeks after that (six weeks after the initial survey was sent) a third reminder letter was sent. Since response rates were lagging behind desired levels, a fourth reminder postcard was sent out.

Response Rate Table for three areas, low income oversample, and Total Unduplicated Sample

region	sample	rts	refused	completed	response_rate
North_Shore	**900**	**25**	**19**	348	39.8%
Winchester	**900**	**15**	**13**	376	42.5%
Lahey	**1608**	**29**	**27**	651	41.2%
Low_Income Area	**600**	**20**	**9**	187	32.2%
Total Unduplicated Sample	**2984**	**71**	**48**	1138	39.1%

Data Capture

Survey answers were scanned using Teleform software. This software alerts the human operator if any marks are ambiguous (too light or multiple answers when only one is desired). The human operator then made a final decision on how the answer to that question should be represented in the data.

Weighting for Analysis

Several criteria were used to weight the data from town residents in each of the three service areas. The first criteria that was applied was to ensure that each town was weighted to the proper proportion that town was of the total Census household counts for that service area. Then this group of households was weighted to represent exactly the proportion of gender and age distributions within the service area. After these steps were completed each service area had its own weight which ensured that each town within the service area was represented in the proper proportion of the service area household counts and that the sample matched Census data for age and gender distributions. For any town that was in multiple service areas, they actually had two

weights; one for its proportion of one service area and another for its proportion of the second service area.

An overall Lahey Health System weight was created for analyses that would combine the three service areas together. This weight adjusted the contributions of each area to its proper proportion of the total area. Towns that were represented in two service areas were re-weighted to their proper proportion in the total Lahey Health System.