# COMMUNITY HEALTH NEEDS ASSESSMENT

Beth Israel Lahey Health

Beth Israel Deaconess Hospital

*Needham*


2019

# Executive Summary

## Background, Purpose, and Approach

Beth Israel Deaconess Hospital-Needham (BID–Needham) is a 58-bed acute care community hospital in Needham, Massachusetts that has been nationally recognized for quality and safety. BID–Needham's mission is to provide, safe, high-quality community- based healthcare and access to tertiary care in close collaboration with Beth Israel Deaconess Medical Center, regardless of the patient's ability to pay, race, color, ethnicity, religion, gender, gender identity, sexual orientation, national origin, ancestry, age, genetics, or disability. BID–Needham is committed to its mission by providing the highest quality care focused on patient safety, and has been fulfilling this vision for more than 100 years. The entire BID–Needham team, including employees, physicians, volunteers and students, are committed to exceeding the expectations of their patients and their families, the community and each other. In 2019, as part of a merger of two health systems in the greater Boston region, BID–Needham became part of Beth Israel Lahey Health (BILH) - a system of academic medical centers, teaching hospitals, community hospitals, and specialty hospitals that employ more than 4,000 physicians and 35,000 staff members combined.

In addition to its commitment to clinical excellence, BID–Needham is committed to being an active partner and collaborator with the communities it serves. This Community Health Needs Assessment (CHNA) and the associated Implementation Strategy (IS) were completed in close collaboration with BID–Needham's Community Benefits staff, the Hospital's leadership, and the community at-large. All together, the assessment involved hundreds of people from across the service area, including health and social service providers, community advocates, Commonwealth and local public officials, faith leaders, and community residents. The process that was applied to conduct the CHNA and develop the IS exemplifies the spirit of collaboration and community engagement that is such a vital part of BID–Needham's mission.

This community health needs assessment report is an integral part of BID–Needham's population health and community engagement efforts. It supplies vital information that is applied to make sure that the services and programs that BID–Needham provides are appropriately focused, delivered in ways that are responsive to those in its service area, and address unmet community needs. This assessment and the associated prioritization and planning processes also provide a critical opportunity for BID–Needham to engage the community and to strengthen the community partnerships that are essential to BID–Needham's success now and in the future. Finally, this report allows BID–Needham to meet its Commonwealth and Federal Community Benefits requirements per the Massachusetts Attorney General's Office and the Federal Internal Revenue Service (IRS) as part of the Affordable Care Act.

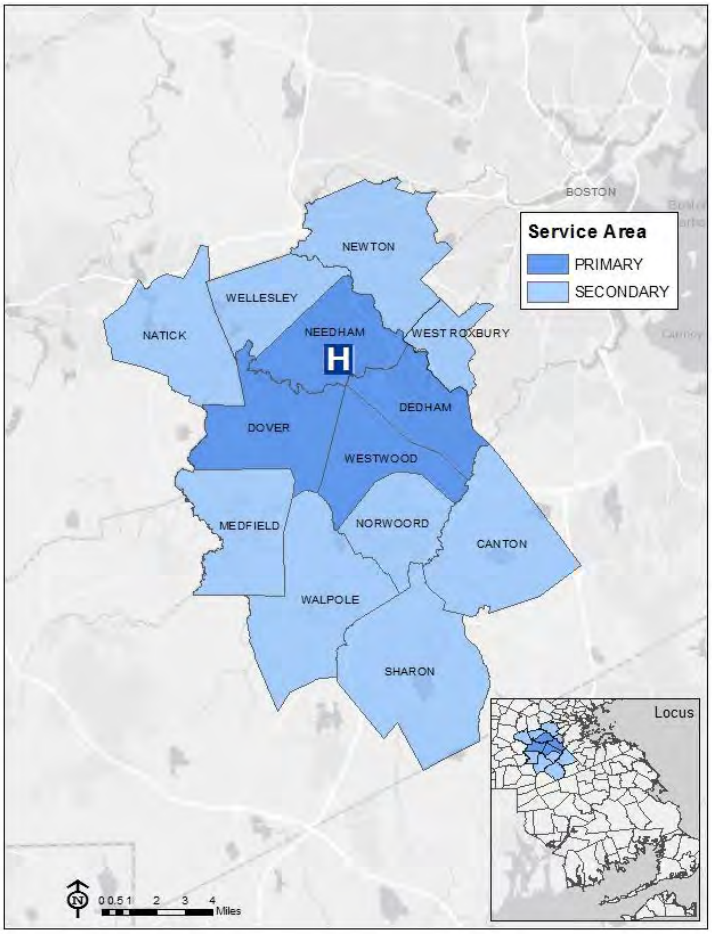
## Community Benefits Service Area & Community Benefits Priorities

BID–Needham's primary Community Benefits Service Area (CBSA) includes the towns of Dedham, Dover, Needham, and Westwood. Its secondary service area includes Newton, Wellesley, Natick, Medfield, Walpole, Norwood, Sharon, Canton, and West Roxbury (Boston). BID–Needham defines its CBSA as the

towns that make up its primary service area. This assessment focused on identifying the leading community health needs and priority populations within the Hospital's CBSA.

BID–Needham's community benefits activities support all of the people who live in its CBSA, across all geographic, demographic, and socio-economic segments. However, in recognition of the considerable health disparities that exist in some segments of the population in the CBSA, BID–Needham focuses the bulk of its community benefits resources on improving the health status of low income, underserved, vulnerable populations living in the more underserved communities of its CBSA. By prioritizing these population segments, BID – Needham is able to maximize the impact of its community benefits resources. BID–Needham currently supports and collaborates on many educational, outreach, screening, care management, care coordination, and other community-strengthening initiatives aimed at improving community health for those who live in its CBSA. In the course of these efforts, BID–Needham collaborates with many of the area's leading healthcare, public health, and social service organizations.

BID–Needham Community Benefits Service Area




## Approach and Methods

The assessment began with the creation of a Steering Committee comprised of representatives from BID–Needham, Beth Israel Deaconess Medical Center (BIDMC) in Boston, and the other BID affiliate hospitals (BID–Milton and BID–Plymouth). These organizations worked together to ensure that a collaborative, transparent, and robust process was applied across the BID hospital system. In October 2018, the Steering Committee hired John Snow, Inc. (JSI), a public health research and consulting firm based in Boston, to support their efforts and to work with them to complete the CHNA and IS. Next, BID–Needham formed a Community Benefits Advisory Committee (CBAC), made up of hospital staff, local service providers, and key community stakeholders. This group met three times over the course of the assessment; they provided input on the assessment approach, vetted preliminary findings, and helped to prioritize the community health issues and the priority populations. The Hospital also formed a Community Benefits Leadership Team (CBLT) made up of key hospital leadership and representatives from the Board of Directors. The Steering Committee, the CBAC, and the CBLT reviewed this CHNA report and the subsequent Implementation Strategy before it was submitted to the Board of Directors for approval.

Substantial efforts were taken to ensure that the assessment activities implemented included efforts to engage community residents, local public health officials, and other community stakeholders. The assessment was completed in three phases. Below is a summary of the activities that were associated with each Phase of the assessment and planning process. A detailed description of BID–Needham's approach to community engagement is included in Appendix A.

**Phase One** involved preliminary assessment and engagement activities, including:

- Collection and analysis of quantitative data to characterize community characteristics and disease burden
- Key informant interviews with hospital leadership, local service providers, and community stakeholders
- An evaluation of BID–Needham's current portfolio of Community Benefits activities

**Phase Two** involved targeted engagement activities, including:

- Focus groups with hospital leadership, clinical providers, community stakeholders and residents
- A community meeting with residents, service providers, public health officials, and other community stakeholders from the CBSA
- Dissemination and analysis of a Community Health Survey to capture residents' perceptions of barriers to good health, leading health issues, vulnerable populations, accessibility of health services, and opportunities for the hospital to improve the services they offer to the community

**Phase III** involved a series of strategic planning and reporting activities, including:

- Meetings with the CBAC and BID–Needham's Community Benefits Leadership Team (including members of the Board of Directors) to present CHNA findings, prioritize community health issues, identify vulnerable populations, and discuss potential responses
- Creation of a Resource Inventory to catalogue local organizations, service providers, and community assets that have the potential to address identified needs
- Literature review of evidence-based strategies to respond to identified health priorities
- Development of final a Community Health Needs Assessment report and Implementation Strategy

## Key Health-Related Findings

The following are brief summaries of some of the assessment's key findings. A full review of the quantitative and qualitative information that was collected for this assessment and that led the CBAC and the CBLT to identify the issues that were prioritized by the assessment, is included in the full body of the report below.

- **Social Determinants of Health Continue to Have a Substantial Impact on Many Segments of the Population.** One of the dominant themes from the assessment's findings was the impact that the underlying social determinants of health are having on those living in the CBSA. The segments of the population most challenged by these issues are older adults, low income individuals/families, racial/ethnic minorities, non-English speakers, and those with disabilities or with chronic / complex

conditions. More specifically, these segments struggle with financial insecurity, safe/affordable housing, transportation, access to healthy/affordable food, lack of social support, social isolation, and language access /cultural humility. These issues impact many people's and families' ability to access or pay for the services, housing, food, or other essential items they need and/or to live a happy, fulfilling, productive life.

- **The Burden of Substance Use and Mental Health Issues.** Mental health and substance use issues continue to be one of the region's most prevalent and challenging issues and are having a profound impact on individuals, families, and communities throughout the CBSA. These issues are also a major burden on the health and social service system. Health and social service providers, public health agencies, first-responders, and community-based organizations are confronted on a daily basis with people struggling with acute or chronic conditions and struggle to provide or link them to the care they need. With respect to mental health issues, depression/anxiety, stress, social isolation, and the impacts of trauma are the leading issues. With respect to substance use, the opioid crisis continues to have a tremendous impact on the region, along with alcohol use, marijuana use, and vaping in youth. The fact that physical, mental health, and substance use issues are so intertwined compounds the impact of these issues. Of particular concern are the increasing rates of opioid use and the impacts of trauma.

- **Limited Access to Behavioral Health (mental health and substance use) Services.** Despite the prevalence of mental health and substance use issues and the impact that these issues are having on individuals, families, and communities, the behavioral health service system in the region is extremely limited. There are major shortages of specialized providers - such as psychiatrists, therapists, addiction specialists, and case managers - who are capable of providing the full breadth of preventive, screening, assessment, treatment, and recovery support services that the community needs. This is particularly true for those who have limited English skills or different cultural perspectives that require specialized care, such as immigrants, racial/ethnic minorities, and LGBTQ individuals. Uninsured individuals, those covered by Medicaid, and those in low to moderate income brackets also struggle to access or pay for the services they need or to find providers who are able to take their coverage or insurance.

- **High Rates of Chronic and Acute Physical Health Conditions.** Another major finding from the assessment is the high rates of chronic and complex conditions that exist for many of the leading physical health conditions (e.g., heart disease, hypertension, cancer, and asthma) in the CBSA. Overall, the rates of illness and death are not statistically higher than the rates for the Commonwealth, however, it is important to note that these chronic physical health conditions are still the leading causes of death and must be addressed to improve the region's health status.

- **High Rates of the Leading Health Risk Factors (e.g., Lack of Nutritional Food and Physical Activity, Alcohol/Illicit Drug Use, and Tobacco Use).** Based on information gathered from focus groups, interviews, community meetings, the community health survey, and quantitative sources, the assessment found that there were substantial concerns related to the leading health risk factors, such as healthy eating, physical activity, obesity, tobacco use/vaping, alcohol use, and stress. Many

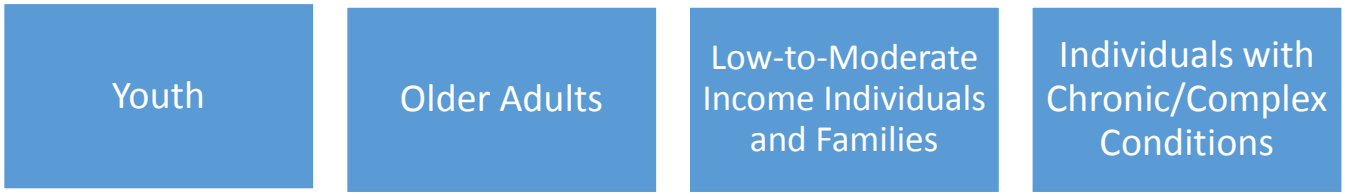
of those who were involved in the assessment believed that there was a need for more health education and a greater emphasis on health promotion and prevention.

- **Challenges Navigating the System and Coordinating Needed Services.** Another major theme from the interviews, focus groups, and community meetings conducted for the assessment was the challenges that many people in the CBSA face navigating the health and social service system. There was a general sense that there was a broad range of health and social services available in the region but that many did not know where to go for services or struggled to access the services even when they knew where to go. Once again, the population segment who struggle most to navigate the system are older adults, low income individuals/families, racial/ethnic minorities, non-English speakers, and those with disabilities or chronic/complex conditions. Many people said that there was a need for a resource inventory that would help residents access services, along with counselors or case managers who could further assist people to obtain and access the services they needed.

## Priority Populations

BID–Needham is committed to improving the health status and well-being of all residents living throughout its service area. Certainly all geographic, demographic, and socioeconomic segments of the population face challenges of some kind that can hinder their ability to access care or maintain good health. With this in mind, BID–Needham's IS includes activities that will support residents throughout its service area, across all segments of the population. However, based on the assessment's quantitative and qualitative findings, there was broad agreement that BID–Needham's IS should prioritize certain demographic and socio-economic segments of the population that have complex needs or face especially significant barriers to care, service gaps, or adverse social determinants of health that put them at greater risk. The assessment identified 1) Youth, 2) Older adults, 3) Low to moderate income individuals and families, and 4) Individuals with chronic and complex conditions as priority populations to be included in the IS.

**BID–Needham Priority Populations 2020-2022**



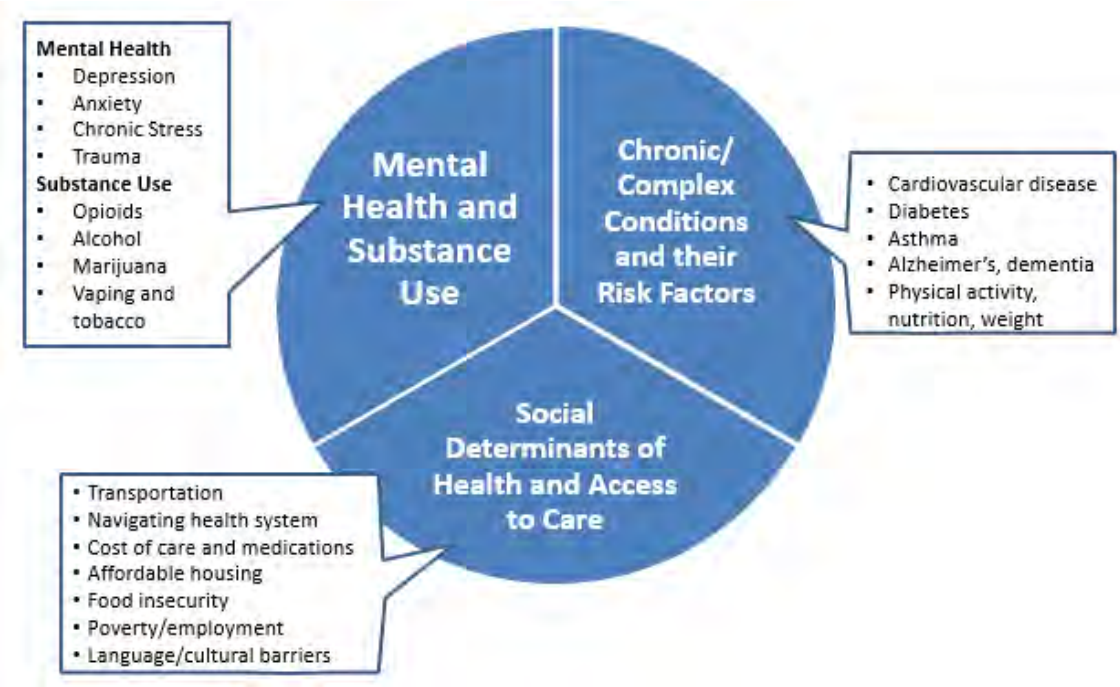

## Community Health Priorities

BID–Needham's CHNA was conducted as a population-based assessment. The goal was to engage the community and compile quantitative and qualitative information to identify the leading health-related issues affecting individuals in the CBSA, including social determinants of health, service gaps, and barriers to care. The priorities that have been identified have been framed broadly to ensure that the full breadth of unmet needs and community health issues are recognized. These priorities were identified through an integrated and thorough review of all of the quantitative and qualitative

information captured for the assessment. The priorities have been identified to maximize impact, reduce disparities, and promote collaboration and cross-sector partnership.

During the later stages of the CHNA process, significant efforts were made to vet the priority issues with leadership and the community-at large, through meetings with the CBAC, the CBLT, and a public forum. BID–Needham is confident that these priorities reflect the sentiments of those who were involved in the assessment and community engagement processes. Based on the findings from the breadth of BID–Needham's CHNA activities, the CBAC and the CBLT voted to prioritize 1) Mental health and substance use, 2) Chronic / complex conditions, and their risk factors, and 3) Social determinants of health.

### BID–Needham CHNA Priority Areas 2020-2022




The community health priorities that have been prioritized by the CHNA in the figure above are described in detail in the body of this report, along with a listing of the goals related to these priority areas that BID–Needham's Community Benefits staff, the CBAC, and CBLT believe will drive achievement. The objectives and strategic initiatives, by priority area, that will be part of BID–Needham's IS are included in BID–Needham's Summary Implementation Strategy, included in Appendix D.

**Community Health Needs not Prioritized by BID–Needham's CBAC**

It is important to note that there are community health needs that were identified by BID–Needham's assessment that, due to the limited burden that these issues present and/or the feasibility of having an impact in the short- or long-term on these issues, were not prioritized for investment. Namely, affordable housing was identified as a community need but these issues were deemed by the CBAC and the CBLT to be outside of BID–Needham's primary sphere of influence and have opted to allow others in its CBSA and the Commonwealth to focus on these issues. This is not to say that BID–Needham will not

support efforts in these areas. BID–Needham remains open and willing to work with hospitals across Beth Israel Lahey Health's network and other public and private partners to address these issues, particularly as part of a broad, strong collaborative.

## Summary Implementation Strategy

The following outlines BID–Needham's goals for addressing the priority populations and community health priorities identified above.

| **Priority Area 1: Mental Health and Substance Use** |
|---|
| **Goal 1: Educate About and Reduce Stigma Associated with Mental Health and Substance Use**<br>**Goal 2: Enhance Access to Mental Health and Substance use Screening, Assessment, and Treatment Services**<br>**Goal 3: Decrease the number of prescription drugs and other harmful drugs from the community** |
| **Priority Area 2: Chronic/Complex Conditions and their Risk Factors** |
| **Goal 1: Enhance Access to Health Education, Screening, Referral, and Chronic Disease Management Services in Clinical and Non-Clinical Settings**<br>**Goal 2: Reduce the Prevalence of Tobacco Use** |
| Priority Area 3: Social Determinants of Health and Access to Care |
| **Goal 1: Enhance Access to Care and Reduce the Impact of Social Determinants**<br>**Goal 2: Reduce Elder Falls and Promote Aging in Place** |

# Acknowledgements

This report is the culmination of nearly a year of work, involving hundreds of community residents, service providers, community advocates, Commonwealth and local public officials, and staff throughout Beth Israel Deaconess Hospital–Needham (BID–Needham) and many of its community partners. While it was not possible for the assessment to involve all residents and community stakeholders, there were substantial efforts made to ensure that all segments of the community had the opportunity to participate. BID–Needham's Community Benefits staff, the Community Benefits Advisory Committee (CBAC), and the BID–Needham Community Benefits Leadership Team (CBLT) would like to extend its sincere appreciation to everyone who invested their time, effort, and expertise to ensure the development of BID–Needham's Community Health Needs Assessment (CHNA) and its associated Community Health Implementation Strategy (IS).

This assessment was overseen by a Steering Committee, comprised of Community Benefits staff at BID–Needham, Beth Israel Deaconess Medical Center, and other BID-affiliate hospitals, as well as the CBAC, and the CBLT. The CBAC was newly established by BID–Needham in October 2019 to guide and oversee all of BID–Needham's Community Benefits efforts moving forward, with respect to the Hospital's periodic community health assessment, ongoing program implementation activities, and its monitoring, evaluation, and performance improvement efforts. The CBAC is comprised of Community Benefits staff, local social service providers, community health advocates, and other community leaders. BID–Needham would like to extend special thanks to the CBAC membership for their commitment to the Hospital, the community, and to a comprehensive assessment and planning process.

The Community Benefits Leadership Team (CBLT) was also newly established in October 2019 to ensure that BID–Needham's leadership was fully apprised of the Hospital's community benefits activities and was given the opportunity to provide their feedback regarding all aspects of the Hospital's program. BID–Needham's CBLT is comprised of Community Benefits Department staff, selected senior administrators and clinicians at the Hospital, and representatives from the Board of Trustees. The Steering Committee, CBAC, and CBLT met periodically to inform the approach, oversee progress, and provide critical feedback on preliminary and final results. BID–Needham would like to thank all individuals that served, and will continue to serve, on these vital committees.

BID–Needham was supported in this work by John Snow, Inc. (JSI), a public health consulting and research organization dedicated to improving the health of individuals and communities in the United States and around the world. BID–Needham appreciates the contributions that JSI has made in collecting and analyzing data, engaging the community, and conducting research throughout CHNA and IS development process. Finally, BID–Needham would like to express immense gratitude to community residents who contributed to this process. Since the beginning of the assessment in September of 2018, hundreds of individuals shared their needs, experiences, and expertise via interviews, focus groups, surveys, and community listening sessions and these proved to be tremendous contributions towards the creation of the CHNA and IS.

**Beth Israel Deaconess Hospitals Community Benefits Steering Committee 2019**

Andrea Holleran, Vice President of Strategic Planning and External Affairs, BID–Plymouth
Nancy Kasen, Community Benefits Director, Community Care Alliance Director
Alyssa Kence, Community Benefits Director, BID–Needham
Laureane Marquez, Senior Associate, Public Relations
Kelly McCarthy, Program Manager, Beth Israel Deaconess Medical Center
Robert McCrystal, Director of Communications, BID–Milton
Deborah Schopperle, Manager, Marketing and Communications, BID–Plymouth
Ryan Stanton, Marketing and Communications Representative, BID–Plymouth

**Beth Israel Deaconess Hospital–Needham Community Benefits Advisory Committee 2019**

Devra Bailin, Director, Needham Economic Development
Sarah Cleveland Baroud, Clinical Coordinator, Westwood Youth & Family Services
Carol Burak, Trustee, Dedham Food Pantry
Janet Claypoole, Director, Dover Council on Aging
Sue Crosley, Executive Director, Family Promise MetroWest
Lina Arena DeRosa, Director, Westwood COA
Lise Elcock, Membership Director, Newton Needham Regional Chamber
Jeanne Goldberg, Regional Practice Director, Beth Israel Deaconess Healthcare
Alyssa Kence, Community Benefits Director, BID–Needham
Valerie Lin, Board Member, Dover Parks & Recreation
Tim McDonald, Director, Needham Public Health Division
Leslie Medalie, Board of Trustees, BID–Needham
Marsha Medalie, COO, Riverside
Sheila Pransky, Director, Dedham Council on Aging
Diane Barry Preston, Board Member, Livable Dedham & Dedham Council on Aging
Sandy Robinson, Director, Needham Community Council
Susan Shaver, Director, Needham Community Farm
Hien Tran, Director, Needham Housing Authority

**Beth Israel Deaconess Hospital - Needham Community Benefits Senior Leadership Team 2019**

Amy Andre, Supervisor, Cardiology, BID–Needham
Janet Barrett, BID–Needham Board of Advisors
Virginia Carnahan, BID–Needham Board of Trustees and BILH Community Benefits Board
Helen Chan, Finance, BID–Needham
Ming Cheung, Director, Nutrition, BID–Needham
Kathy Davidson, Chief Nursing Officer, BID–Needham
John Fogarty, President, BID–Needham
Joe Giovangelo, Director, Pharmacy, BID–Needham
Bill Jackson, Director, Respiratory, BID–Needham
Alyssa Kence, Community Benefits Director, BID–Needham
Amy Krushell, Nurse Educator & Falls Committee Chair, BID–Needham
Anna Marinilli, Practice Manager, Cancer Center, Beth Israel Deaconess Cancer Center at Needham
Greg McSweeney, M.D., Chief Medical Officer, BID–Needham
Leslie Medalie, BID–Needham Board of Trustees
Elaine Rousseau, Director, Case Management, BID–Needham
Sam Sherman, Chief of External Relations, BID–Needham
Rebecca Stone, M.D., Otolaryngology, BID–Needham
Leanne Wood, Emergency Services, BID–Needham
Meghan York, M.D., Cardiology & Board of Advisors, BID–Needham

# Acronyms

| | |
|---|---|
| **ACA** | Affordable Care Act |
| **BID–Needham** | Beth Israel Deaconess Hospital–Needham |
| **CBAC** | Community Benefits Advisory Committee |
| **CBSA** | Community Benefits Service Area |
| **CBLT** | Community Benefits Leadership Team |
| **CHIA** | Center for Health Information and Analysis |
| **CHNA** | Community Health Needs Assessment |
| **HMOs** | Health Maintenance Organizations |
| **IS** | Implementation Strategy |
| **JSI** | John Snow, Inc. |
| **LEP** | Limited English Proficiency |
| **MassCHIP** | Massachusetts Community Health Information Profile |
| **MDPH** | Massachusetts Department of Public Health |
| **MHPC** | Massachusetts Health Policy Commission |
| **MWAHS** | MetroWest Adolescent Health Survey |
| **PHIT** | Population Health Information Tool |

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# Introduction and Purpose

## Introduction

Beth Israel Deaconess Hospital-Needham (BID–Needham) is a 58-bed acute care community hospital in Needham, Massachusetts that has been nationally recognized for quality and safety. BID–Needham's mission is to provide, safe, high-quality community- based healthcare and access to tertiary care in close collaboration with Beth Israel Deaconess Medical Center, regardless of the patient's ability to pay, race, color, ethnicity, religion, gender, gender identity, sexual orientation, national origin, ancestry, age, genetics, or disability. BID–Needham is committed to its mission by providing the highest quality care focused on patient safety, and has been fulfilling this vision for more than 100 years. The entire BID–Needham team, including employees, physicians, volunteers and students, are committed to exceeding the expectations of their patients and their families, the community and each other. In 2019, as part of a merger of two health systems in the greater Boston region, BID–Needham became part of Beth Israel Lahey Health (BILH) - a system of academic medical centers, teaching hospitals, community hospitals, and specialty hospitals that employ more than 4,000 physicians and 35,000 staff members combined.

In addition to its commitment to clinical excellence, BID–Needham is committed to being an active partner and collaborator with the communities it serves. This Community Health Needs Assessment (CHNA) and the associated Implementation Strategy (IS) were completed in close collaboration with BID–Needham's staff, more than one hundred health and social service partners, and the community at-large. The assessment efforts that took place over the past year engaged hundreds of community residents, as well as a wide range of other community stakeholders, including service providers, community advocates, Commonwealth and local public officials, faith leaders, and representatives from community-based organizations. The process that was applied to conduct the CHNA and develop the IS exemplifies the spirit of collaboration and community engagement that is such a vital part of BID–Needham's mission.

## Purpose

This community health needs assessment report is an integral part of BID–Needham's population health and community engagement efforts. It supplies vital information that is applied to make sure that the services and programs that BID–Needham provides are appropriately focused, delivered in ways that are responsive to those in its service area, and address unmet community needs. This assessment and the associated prioritization and strategic planning processes also provide a critical opportunity for BID–Needham to engage the community and to strengthen the community partnerships that are essential to BID–Needham's success now and in the future. Finally, this report allows BID–Needham to meet its Commonwealth and Federal Community Benefits requirements per the Massachusetts Attorney General's Office and the Federal Internal Revenue Service (IRS) as part of the Affordable Care Act. The primary goals for the CHNA and this report are to:

- Assess community health need, defined broadly to include health status, social determinants, environmental factors, and service system strengths and weaknesses;
- Engage the community, including local health departments, service providers across sectors and community residents, as well as BID–Needham leadership and staff; and
- Identify the leading health issues and the population segments most at-risk based on a review of the quantitative and qualitative information gathered by the assessment

This CHNA is also a vital source of information and guidance to:

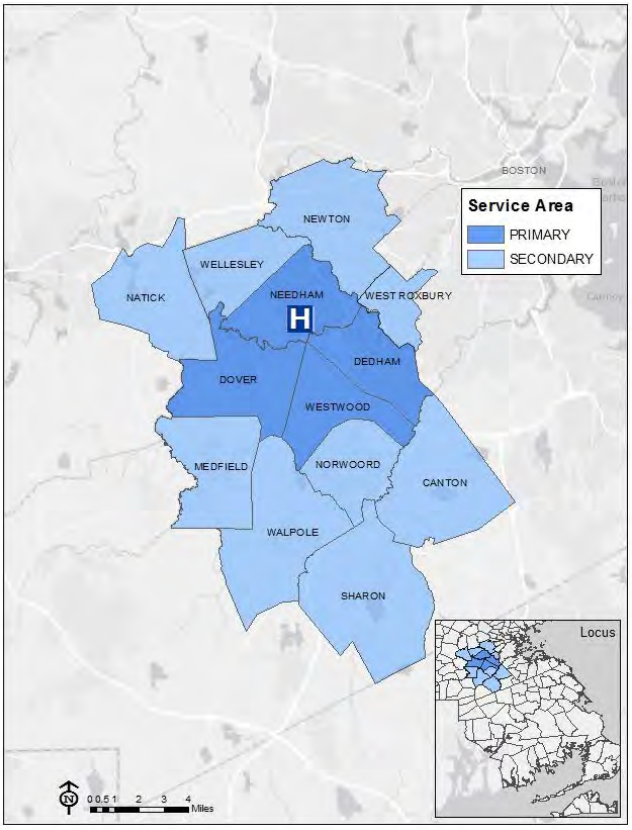
- Clarify issues related to community characteristics, barriers to care, existing service gaps, unmet community need and other health-related factors;
- Prioritize and promote community health investment;
- Inform and guide a comprehensive, collaborative community health improvement planning process; and
- Facilitate discussion within and across and sectors regarding community need, community health improvement, and health equity.

## Community Benefits Service Area & Community Benefits Priorities

BID–Needham's primary Community Benefits Service Area (CBSA) includes Dedham, Dover, Needham, and Westwood. Its secondary service area includes Newton, Wellesley, Natick, Medfield, Walpole, Norwood, Sharon, Canton, and West Roxbury (Boston) (Figure 1). This assessment focused on identifying the leading community health needs and priority populations within the Hospital's primary service area, which is how the Hospital defines its CBSA.

BID–Needham's community benefits activities support all of the people who live in its CBSA, across all geographic, demographic, and socio-economic segments. However, in recognition of the considerable health disparities that exist in some segments of the CBSA, BID–Needham focuses the bulk of its community benefits resources on improving the health status of low income and underserved populations living in the more underserved communities of its CBSA. By prioritizing these population segments, BID–

**Figure 1: BID–Needham Community Benefits Service Area**



Needham is able to maximize the impact of its community benefits resources. BID–Needham currently supports and collaborates on many educational, outreach, and community-strengthening initiatives aimed at reaching those who live in its CBSA. In the course of these efforts, BID–Needham collaborates with many of the area's leading healthcare, public health, and social service organizations.

# Approach and Methods

## Approach

The assessment began with the creation of a Steering Committee comprised of representatives from BID–Needham, Beth Israel Deaconess Medical Center (BIDMC) in Boston, and the other BID affiliate hospitals (BID–Milton and BID–Plymouth), who worked together to ensure a collaborative, transparent, and robust process, across the BID hospital system. In October 2018, the Steering Committee hired John Snow, Inc. (JSI), a public health research and consulting firm based in Boston, to support their efforts and to work with them to complete the CHNA and IS. This Steering Committee provided vital oversight of the CHNA approach and methods. This Committee met monthly, in-person and via conference call, to review project activities, vet preliminary findings, address challenges, and to ensure alignment in the CHNA approach and methods across the BID Hospital system.

BID–Needham formed a Community Benefits Advisory Committee (CBAC), made up of hospital staff, local service providers, and key community stakeholders. This group met three times over the course of the assessment; they provided input on the assessment approach, vetted preliminary findings, and helped to prioritize community health issues and priority populations. The hospital also formed a Community Benefits Leadership Team (CBLT) made up of key Hospital administrative and clinical staff and members from the Board of Trustees. The Steering Committee, the CBAC, and the CBLT reviewed this CHNA report and the subsequent IS before it was submitted to the Board of Trustees for approval.

Community engagement is integral to BID–Needham's mission towards providing exceptional, personalized care with dignity, compassion, and respect. Substantial efforts were taken to ensure that the assessment activities implemented included efforts to engage community residents, local public health officials, and other community stakeholders. These engagement efforts spanned all phases of the assessment from assessment planning, to data collection and assessment, to prioritization and planning, to reporting. These engagement efforts will continue during the ongoing monitoring and evaluation activities. BID–Needham recognizes the importance of collaborating with residents, advocates, service providers, Commonwealth and local public officials, representatives from community-based organizations, and other stakeholders when conducting assessment and planning projects of this kind.

The assessment was completed in three phases. Below is a summary of the activities that were associated with each Phase of the assessment and planning process. A detailed description of BID–Needham's approach to community engagement is included in Appendix A.

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- A community meeting with residents, service providers, public health officials, and other community stakeholders from the CBSA
- Dissemination and analysis of a Community Health Survey to capture residents' perceptions of barriers to good health, leading health issues, vulnerable populations, accessibility of health services, and opportunities for the hospital to improve the services they offer to the community

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- Meetings with the CBAC and CBLT (including members of the Board of Trustees) to present CHNA findings, prioritize community health issues, identify vulnerable populations, and discuss potential responses
- Creation of a Resource Inventory to catalogue local organizations, service providers, and community assets that have the potential to address identified needs
- Literature review of evidence-based strategies to respond to identified health priorities
- Development of final a Community Health Needs Assessment report and Implementation Strategy

# Methods

## Quantitative Data Collection and Analysis

Quantitative data from a broad range of sources was collected and analyzed to characterize communities in BID–Needham's CBSA, measure health status, and inform a comprehensive understanding of the health-related issues. Sources included:

- U.S. Census Bureau, American Community Survey 5-Year Estimates (2013-2017)
- Massachusetts Department of Elementary and Secondary Education: School and District Profiles (2017, and 2018-2019)
- FBI Uniform Crime Reports (2017)
- Massachusetts Department of Public Health, Registry of Vital Records and Statistics (2015)
- Massachusetts Department of Public Health, Bureau of Substance Abuse Services (2017)
- Massachusetts Department of Public Health, Annual Reports on Births (2016)
- Massachusetts Bureau of Infectious Disease and Laboratory Sciences (2017)
- Massachusetts Center for Health Information Analysis (CHIA) Hospital Profiles (FY 2013-2017)
- Massachusetts Healthy Aging Collaborative, Community Profiles (2018)

To augment the quantitative data that was compiled from MDPH, JSI worked with the Massachusetts Health Data Consortium (MHDC) and the Massachusetts Center for Health Information and Analysis (CHIA) to obtain 2017 inpatient hospital discharge data for all of the municipalities in BID–Needham's service area. CHIA aggregates detailed hospital inpatient data from all hospitals in Massachusetts and makes it available to hospitals and other researchers to understand morbidity, mortality, and health services utilization trends. These data are made available on an annual basis and allow for both hospital specific analyses based on where the patient was hospitalized as well as patient origin analyses based on the patient's address of residents. Related to the CHNA activities, these data were used to identify the leading causes of illness for adults (18+) by municipality based on a review of selected diagnostic categories.

Whenever possible, confidence intervals were analyzed to test for statistically significant differences between municipal and Commonwealth data points. A comprehensive Data Book is included in Appendix B. In this Data Book, data points are color-coded to visualize which municipal-level data points were significantly higher or lower compared to the Commonwealth overall. Data from the Massachusetts Department of Elementary and Secondary Education, the Bureau of Substance Abuse Services, the Annual Report on Births, and the Bureau of Infectious Disease and Laboratory Sciences did not include confidence intervals and could not be tested for statistical significance.

### Quantitative Data Limitations

Relative to most states, Massachusetts does an exemplary job at making comprehensive data available at the Commonwealth, county, and municipal levels through various reports and mechanisms provided by the Massachusetts Department of Public Health (MDPH). Historically, these data have been made available through the Massachusetts Community Health Information Profile (MassCHIP) data system, an automated and interactive resource provided by MDPH; MassCHIP is no longer updated. To replace this system, MDPH is creating the Population Health Information Tool (PHIT), which will include municipal level data stratified by demographic and socioeconomic variables (e.g. gender, age, race/ethnicity, poverty level). At the time this report was produced, community profiles were not available via the PHIT. The most significant limitation this caused was the availability of timely data related to morbidity, mortality, and service utilization. The data sets used in this report are the most up-to-date provided by MDPH. This data was still valuable and allowed for identification of health needs relative to the Commonwealth and specific communities, however, these data sets may not reflect recent trends in health statistics.

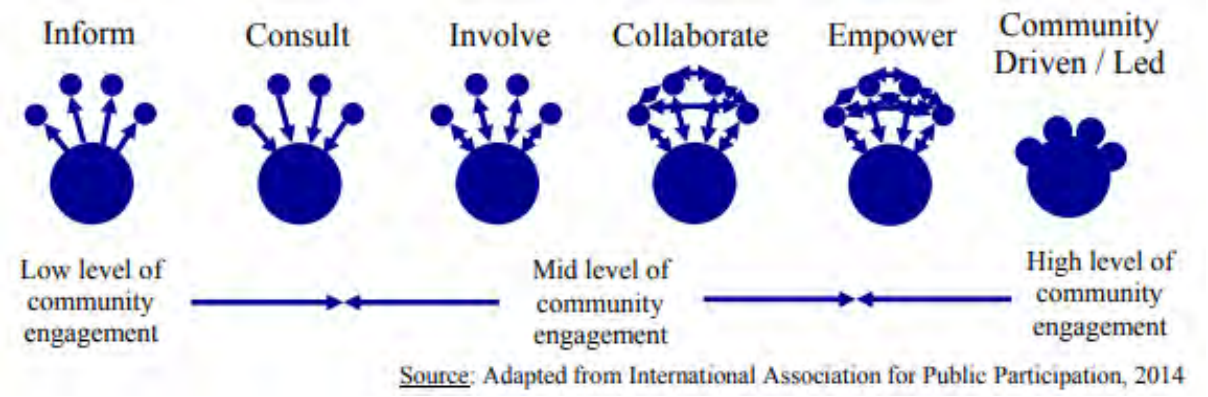
Additionally, quantitative data was not stratified by age, race/ethnicity, income, or other characteristics, which limited the ability to identify health disparities in an objective way. Qualitative activities allowed for exploration of these issues, but the lack of objective quantitative data constrained this effort.

## Qualitative Data Collection and Analysis

BID–Needham recognizes that authentic community engagement is critical to assessing community need, identifying health priorities and priority populations, and crafting a robust Implementation Strategy. BID–Needham was committed to engaging the community throughout this process.

In collaboration with its assessment and community engagement partners, BID–Needham applied MDPH's Community Engagement Standards for Community Health Planning as a guide.[1] As a result, BID–Needham employed a variety of strategies to ensure that community members were informed, consulted, involved, and empowered throughout the assessment process.

**Figure 1: Community Engagement Continuum**




**Informed:** BID–Needham informed the community of assessment activities (e.g. key informant interviews, Community Health Survey, focus groups) and provided summary quantitative and qualitative data findings in a public meeting.

**Consulted:** BID–Needham consulted the community by posting its current CHNA for public comment, holding focus groups with service providers, hospital leadership, community stakeholders, and community residents; completing key informant interviews; organizing a community meeting with residents, service providers, public health officials, and other community stakeholders from the CBSA; and disseminating a Community Health Survey.

**Involved:** BID–Needham formed advisory bodies, including the CBAC and CBLT, to provide input and feedback on the assessment approach and to vet preliminary findings. These bodies included hospital leadership, clinical staff, representatives from community organizations, social service providers, community advocates, and community residents.

**Collaborated:** The CBAC, which included many community residents and service providers, collaborated with one another and with staff and leadership at BID–Needham to prioritize health needs and vulnerable populations. This advisory body was also consulted in the drafting of the Implementation Strategy. BID–Needham's Community Benefits staff also worked with staff at the Needham Public

[1] https://www.mass.gov/files/documents/2017/01/vr/guidelines-community-engagement.pdf

Health Department to share information from their respective needs assessment efforts, the Hospital's CHNA activities and the Health Department's needs assessment activities relative to their efforts to become an accredited health department.

Below are descriptions of the approach to community engagement activities. Associated tools, lists of participants, and other materials are included in the Detailed Community Engagement Summary in Appendix A.

Key Informant Interviews (14 completed) – JSI conducted key informant interviews with community stakeholders. Interviewees included representatives from public health departments, legislators, clinical providers, elder service providers, behavioral health providers, and first responders. Key informant interviews were done to confirm and refine findings from secondary data, to provide community context, and to clarify needs and priorities of the community. JSI worked with BID–Needham to identify a representative group of interviewees. Interviews were 30-60 minutes long and were conducted by-phone using a structured interview guide created by JSI. Detailed notes were taken for each interview. For a list of interviewees and interview dates, the interview guide, and a summary of findings, please see Appendix A: Detailed Community Engagement Approach.

Focus Groups (4 completed) – JSI facilitated focus groups with the Needham Operations/Executive Leadership Team, made of up hospital leadership and clinical providers, and older adult residents at the Needham Senior Center. The Needham Health Department, working in collaboration with BID–Needham, facilitated focus groups with the Interfaith Clergy Association and the Youth Resource Network (two organizations that work directly with underserved populations in the CBSA), as well as providers who serve older adults. BID–Needham worked with the Needham Health Department to ensure that questions for the needs assessment were incorporated into their focus group guide. Notes were shared between the two organizations to inform each other's processes.

Focus groups allowed for the collection of information to augment findings from secondary data and key informant interviews, and exploration of strategic and programmatic options to address identified health issues, service gaps, and/or barriers to care. Participants were recruited by BID–Needham, the Needham Public Health Division, and representatives from host organizations. Focus groups were approximately 60 minutes and were conducted in-person using structured interview guides. Notes were taken at each session. Appendix A includes session dates and a focus group guide.

Community Meeting (1) – JSI presented at a Community Meeting at the YMCA in Needham. This event was co-sponsored by the Needham Public Health Division. JSI presented a summary of key quantitative and qualitative data findings from the CHNA and solicited feedback and input from community members. Notes were taken by the Needham Public Health Division and shared with JSI.

The community meeting allowed for the capture of information directly from community residents, representatives from local community organizations, and local service providers. Participants were asked to share their reactions to the data presented, their thoughts on community health needs and priorities, barriers to care, and vulnerable populations. BID–Needham and the Needham Public Health Division determined that the YMCA was an appropriate host, a neutral space, a trusted community

organization, and had ample public parking. Translation services and transportation to the event were available upon request. Appendix A includes a discussion guide.

### Community Health Survey (410 responses)

– The Community Health Survey allowed JSI to capture information directly from community residents. Respondents were asked for their opinion on leading social determinants of health, clinical health issues, vulnerable populations, access to care, and opportunities for the hospital to improve community health programming. JSI worked with BID–Needham and the Steering Committee to develop this survey. Surveys were available online, through the SurveyMonkey platform, in English. Hard copies of the survey were made available in English, Chinese, Spanish, and Russian. BID–Needham worked with local community organizations, businesses, and stakeholders to distribute the survey to community residents, including those who are typically hard-to-reach (e.g. older adults, non-English speakers). Findings from online and hard copy surveys were integrated for a full analysis. Appendix A contains a copy of the Community Health Survey and a list of survey distribution channels.

## Community Benefits Evaluation

JSI reviewed the Fiscal Year 2017 Community Benefits Report to the Attorney General (AG Report) submitted by BID–Needham to help the hospital evaluate and plan for future Community Benefits activities. Activities reported in the AG Report, defined as "actions undertaken in accordance to the community benefits which contributed to achieving the strategic objective of supporting community health", were abstracted from this report and individually scored by an evaluator at JSI. An activity was scored if it:

- Occurred at least once during FY 2017
- Was defined as a media, event/program, or a policy, systems, or environmental change
- Targeted the hospital's community benefits service areas

An activity was not scored if it was in the planning phase. JSI determined the intensity of each activity by coding three specific attributes, according to methodology reported in previous research:

- Behavioral intention: providing information; enhancing skills, services, or support; modifying access, barriers, and opportunities; modifying policies and broader conditions
- Duration: one-time, occurring more than once, or ongoing
- Reach: proportion-high, medium, low of the total priority population involved in or touched through the activity

Two evaluation team members rated each activity attribute on a scale of 0.1 (minimum) to 1 (maximum) and calculated a single intensity score using the protocol outlined in Table 1. A second trained evaluation team member coded a randomly selected number of activities to ensure inter-rater reliability. Two factors were considered in scoring both the duration and reach. A score of 0.1 – 0.5 was given dependent upon how many times and/or how long the activity was implemented during FY2017. If the duration or reach was unclear, the evaluators scored the attribute the lowest possible score (0.1). The formula used to calculate an intensity score for each activity was:

∑ behavioral value + duration value + reach value.

Scores could range from 0.3 (lowest intensity and least likely to impact long-term outcomes) to 3.0 (highest intensity and most likely to impact long-term outcomes). A total composite score for all activities was then summed across all activities. A full summary of findings can be found in Appendix E.

**Table 1: Community Benefits Evaluation Scoring Protocol**

| Dimension | Rubric for Scoring Intensity (0=low;1=high) |
|---|---|
| **Behavioral Intervention Strategy** | **High (1.0):** Modifying policies, systems and access<br>**Med (0.55):** Enhancing services and support<br>**Low (0.1):** Providing information; enhancing skills |
| **Duration (Yearly)** | **High (0.5):** Ongoing, throughout the year<br>**Med (0.275):** More than once per year<br>**Low (0.1):** One time event |
| **Duration (Sustainability)** | **High (0.5):** Ongoing, institutional practice<br>**Med (0.275):** Ongoing, demonstrated commitment (e.g., partnership, MOU, multi-organizational involvement)<br>**Low (0.1):** Would end without community-benefits dollars |
| **Reach (Community)** | **High (0.5):** >20% or more of the total population*<br>**Med (0.275):** 5-20% of the population<br>**Low (0.1):** 0-<5% of the population |
| **Reach (Priority Population)** | **High (0.5):** >20% or more of the total priority population^<br>**Med (0.275):** 5-20% of the population<br>**Low (0.1):** 0-<5% of the population |

*total population was based on the number of people living in the hospital's primary service area or the community within which the activity was implemented
^priority populations were based on the strategy's targeted population and may have been a calculation based on the prevalence of a condition across the U.S. or Massachusetts

## Resource Inventory

Federal and Commonwealth requirements indicate that a Resource Inventory should be created to inform the extent to which there are gaps in health-related services. To meet this obligation, JSI compiled a list of resources across the broad continuum of services, including clinical health care services, community health and social services, and public health resources. This was done primarily by compiling information from existing resource inventories and partner lists from BID–Needham. Information was also compiled from membership lists of the existing community health coalitions and from CHNA interviews and focus groups. JSI reviewed the hospital's prior annual report of community benefits activities to the Massachusetts Attorney General, which included a listing of partners, as well as publicly available lists of local resources. The goal of this process was to identify key partners who may or may not be already partnering with the hospital. The resource inventory can be found in Appendix C.

## Prioritization and Reporting

At the end of Phase II, JSI held a prioritization meeting with the CBAC. During this meeting, JSI presented quantitative and qualitative data findings, including key themes from key informant interviews, focus groups, community meeting, and the Community Health Survey. After the presentation of key findings,

the CBAC broke into small groups to discuss findings and were asked to prioritize, within their small groups:

- Leading barriers to care (i.e. social determinants of health and issues related to access to care)
- Leading clinical health issues
- Vulnerable populations

JSI aggregated priorities chosen within small groups and presented full lists to the entire group. CBAC members were then asked to choose their top three priorities within each category. Final prioritization results from the CBAC meeting are included in Table 2.

**Table 2: BID–Needham CBAC Prioritization Results**

| Leading Barriers to Good Health | Leading Health Issues | Target Populations |
|---|---|---|
| High cost of health care (21%) | Mental health (27%) | Older adults (30%) |
| Transportation (20%) | Physical activity, nutrition, and weight (22%) | Youth and adolescents (24%) |
| Lack of providers (e.g. behavioral health, primary care) (17%) | Older adult health/Healthy aging (19%) | Low income (24%) |
| Stigma stops people from seeking certain services (14%) | Substance use (19%) | LGBTQ (14%) |

JSI then presented full assessment results, including key findings from quantitative and qualitative data analysis, and results of the CBAC prioritization meeting, to the CBLT. Using the fully integrated analysis and prioritization from the CBAC, JSI drafted a set of priority and sub-priorities presented these to the CBLT for review and approval. Using the priority areas and populations as a guide, JSI worked with BID–Needham, the CBAC, and the CBLT to draft and finalize an Implementation Strategy.

Finally, JSI worked with BID–Needham in drafting and finalizing the CHNA report and IS. These documents were presented to the Board of Trustees, the authorized body of the Hospital, for approval on September 5, 2019. At this meeting, the Board of Trustees formally approved this community health needs assessment report and the associated IS. BID–Needham will be responsible for reporting on, and if necessary, updating and resubmitting their IS to the Massachusetts Attorney General's Office on an annual basis until the next assessment cycle in 2022.

As required by Federal and Commonwealth guidelines, this CHNA will be posted on BID–Needham's website and is available in hardcopy by request. Community members and service providers were encouraged to share their thoughts, concerns, or questions throughout the CHNA process; they are encouraged to continue to share their thoughts and ideas moving forward.

There was no written feedback on BID–Needham's previous CHNA or IS since its posting in 2016. There was also no feedback on the Massachusetts Attorney General's website, which publishes the Hospital's community benefits reports and provides an opportunity for public comment. Any feedback received will be taken into account when updates and changes are made to the IS or to inform future CHNA processes.

# **Key Findings:** Demographics

To understand community needs and health status for BID–Needham's service area, we begin with a description of the population's geographic and demographic characteristics, as well as the underlying social, economic and environmental factors that affect health status and equity. This information is critical to recognizing inequities, identifying target populations and health related disparities, and targeting strategic responses.

The CHNA captured a range of quantitative and qualitative data related to age, race/ethnicity, income and poverty, employment, education, and other determinants of health. The following is a summary of key findings related to community characteristics and the social, economic and environmental determinants of health for BID–Needham's CBSA. Conclusions were drawn from quantitative data and qualitative information collected through interviews, focus groups, and the Community Health Survey. Summary data is included below; more expansive data tables are included in the BID–Needham Data Book (Appendix B).

## Age

Age is a fundamental factor to consider when assessing individual and community health status. Older individuals typically have more physical and mental health vulnerabilities and are more likely to rely on immediate community resources for support compared to young people.

- All communities in BID–Needham's CBSA had a significantly high median age compared to the Commonwealth overall.
- The percentage of the population over 65 is significantly higher than the Commonwealth in all communities, as is the percentage of the population under 18, with the exception of Dedham.

**Table 3: Age Distribution**

| | Massachusetts | Dedham | Dover | Needham | Westwood |
|---|---|---|---|---|---|
| Median age (years) | **39** | 43.3 | 44.7 | 43.6 | 45 |
| Age under 18 (%) | **20.4** | 19.3 | 27.6 | 26.9 | 26.8 |
| Age over 65 (%) | **15.5** | 19.8 | 16.1 | 18.2 | 19.3 |

*Source:* US Census Bureau, American Community Survey, 2013-2017

Shading represents statistical significance compared to the Commonwealth. Figures highlighted in orange are statistically higher compared to the Commonwealth overall, while figures highlighted in blue are significantly lower.

## Race, Ethnicity, and Foreign-Born

An extensive body of research illustrates the health disparities and differences in health care access and utilization that exist for racial/ethnic minorities and foreign-born populations. According to the CDC, non-Hispanic Blacks have higher rates of premature death, infant mortality and preventable hospitalization than non-Hispanic Whites.[2] Hispanic/Latinos have the highest uninsured rates of any

[2] Centers for Disease Control and Prevention, "CDC Health Disparities and Inequalities Report (CHDIR)," Centers for Disease Control and Prevention Web Site, https://www.cdc.gov/minorityhealth/chdireport.html, September 10, 2015

racial or ethnic group in the United States.[3] Asians are at a higher risk for developing diabetes than those of European ancestry, despite a lower average BMI.[4] These disparities show the disproportionate and often avoidable inequities that exist within communities and reinforce the importance of understanding the demographic makeup of a community to identify populations more likely to experience adverse health outcomes. Residents of the service area were predominantly white and born in the United States (4), though there were racial/ethnic minorities and foreign-born populations in all communities.

- The percentage of residents that identified as Asian was significantly high in Dover (8.0) and Needham (8.2) compared to the Commonwealth overall (6.3).

**Table 4: Race/Ethnicity and Foreign Born**

| | Massachusetts | Dedham | Dover | Needham | Westwood |
|---|---|---|---|---|---|
| **White alone (%)** | **78.9** | 84 | 87.2 | 86.6 | 89.5 |
| **Black or African American alone (%)** | **7.4** | 8.6 | 3.0 | 2.1 | 0.3 |
| **Asian alone (%)** | **6.3** | 2.6 | 8 | 8.2 | 7.6 |
| **Hispanic or Latino of Any Race (%)** | **11.2** | 8.3 | 4.7 | 2.7 | 1.9 |
| **Foreign Born (%)** | **16.2** | 14.7 | 15.3 | 14 | 12.8 |

*Source:* US Census Bureau, American Community Survey, 2013-2017

Shading represents statistical significance compared to the Commonwealth. Figures highlighted in orange are statistically higher compared to the Commonwealth overall, while figures highlighted in blue are significantly lower.

## Language

Language barriers pose significant challenges to providing effective and high-quality community services and health care. While many larger health care institutions, including BID–Needham, have medical interpreter services available at their facilities, research has found that the health care providers' cultural competency is key to reducing racial and ethnic health disparities. While most residents of BID–Needham's CBSA speak English, there are residents who speak languages other than English in all communities. Some focus group and key informant interviewees identified language and cultural issues as barriers to accessing health care services that meet their needs, especially for Asian residents who speak Chinese and have limited English proficiency.

The percentage of residents who spoke Asian and Pacific Islander languages was significantly high in Westwood (6.0) compared to the Commonwealth (4.2).

[3] US Department of Health and Human Services: Office of Minority Health. Hispanic/Latino profile. https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=3&lvlid=64

[4] https://asiandiabetesprevention.org/what-is-diabetes/why-are-asians-higher-risk Why are Asians at a Higher Risk?

# **Key Findings:** Social Determinants of Health

The social determinants of health (SDOH) are the conditions in which people live, work, learn and play.[5] These conditions influence and define quality of life for many segments of the population in the CHNA service area.

It is important to note that there is limited data to characterize the social determinants of health at the community level. To augment the lack of quantitative data, key informant interviews, focus groups, a community meeting, and a Community Health Survey were conducted specifically to solicit feedback on SDOH and barriers to care, among other issues. A dominant theme from these qualitative data collection activities was the tremendous impact that the underlying social determinants, particularly housing, transportation, and income/employment have on residents in the service area.

## Socioeconomic Characteristics

Socioeconomic status (SES), as measured by income, employment status, occupation, education and the extent to which one lives in areas of economic disadvantage, is closely linked to morbidity, mortality and overall well-being. Lower than average life expectancy is highly correlated with low income status.[6]

### Education

Higher education is associated with improved health outcomes and social development at the individual and community levels.[7] Compared to individuals with more education, people with less education are more likely to experience health issues, such as obesity, substance use and injury.[8] The health benefits of higher education typically include better access to resources, safer and more stable housing and better engagement with providers. Proximate factors associated with low education that affect health outcomes include the inability to navigate the health care system, educational disparities in personal health behaviors and exposure to chronic stress.[9] It is important to note that, while education affects health, poor health status may also be a barrier to education.

- The percentage of residents with a high school degree or higher, and the percentage of the population with a Bachelor's degree or higher, was significantly high in all communities in BID–Needham's service area compared to the Commonwealth overall (Table 5).

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[5] Centers for Disease Control and Prevention, "Social Determinants of Health: Know What Affects Health," Centers for Disease Control and Prevention Web Site, https://www.cdc.gov/socialdeterminants/, January 29, 2018.
[6] Raj Chetty, Michael Stepner, Sarah Abraham, Shelby Lin, Benjamin Scuderi, Nicholas Turner, Augustin Bergeron, and David Cutler, "The Associaton Between Income and Life Expectancy in the United States, 2001-2014," *Journal of the American Medical Association* 315, no. 16 (April 26, 2016): 1750-1766.
[7] Emily B. Zimmerman, Steven H. Woolf, and Amber Haley, "Population Health: Behavioral and Social Science Insights – Understanding the Relationship Between Education and Health," Agency for Healthcare Research and Quality Web Site, https://www.ahrq.gov/professionals/education/curriculum-tools/ population-health/ zimmerman.html, September 2015
[8] Centers for Disease Control and Prevention, "Adolescent and School Health: Health Disparities," Centers for Disease Control and Prevention Web Site, https://www.cdc.gov/healthyyouth/disparities/index.htm, August 17, 2018
[9] Zimmerman, *Population Health*

**Table 5: Educational Attainment**

| | Massachusetts | Dedham | Dover | Needham | Westwood |
|---|---|---|---|---|---|
| **High school degree or higher (%)** | **90.3** | 93.6 | 98.3 | 97.7 | 97.5 |
| **Bachelor's degree or higher (%)** | **42.1** | 48.9 | 82.7 | 74.6 | 70.4 |

*Source:* US Census Bureau, American Community Survey, 2013-2017
Shading represents statistical significance compared to the Commonwealth. Figures highlighted in orange are statistically higher compared to the Commonwealth overall, while figures highlighted in blue are significantly lower.

The Massachusetts Department of Elementary and Secondary Education provides data on public school enrollment, attendance, retention and student characteristics (Table 6). In all communities in BID–Needham's CBSA, the dropout rate, percentage of English language learners, and percentage of economically disadvantaged students were lower than the Commonwealth overall. The percentage of students with disabilities was higher than the Commonwealth in Dedham.

**Table 6: School Enrollment, by District**

| | Massachusetts | Dedham | Dover | Needham | Westwood |
|---|---|---|---|---|---|
| **Dropout rate(%), 2017** | **4.9** | 2.5 | 0 | 0.2 | 0.4 |
| **English language learners (%), 2018-19** | **10.5** | 7.3 | 3.2 | 2.9 | 0.9 |
| **Students with Disabilities(%), 2018-19** | **18.1** | 23.2 | 13.1 | 17.2 | 16.9 |
| **Economically disadvantaged(%), 2018-19** | **31.2** | 23 | 2 | 9.1 | 4.8 |

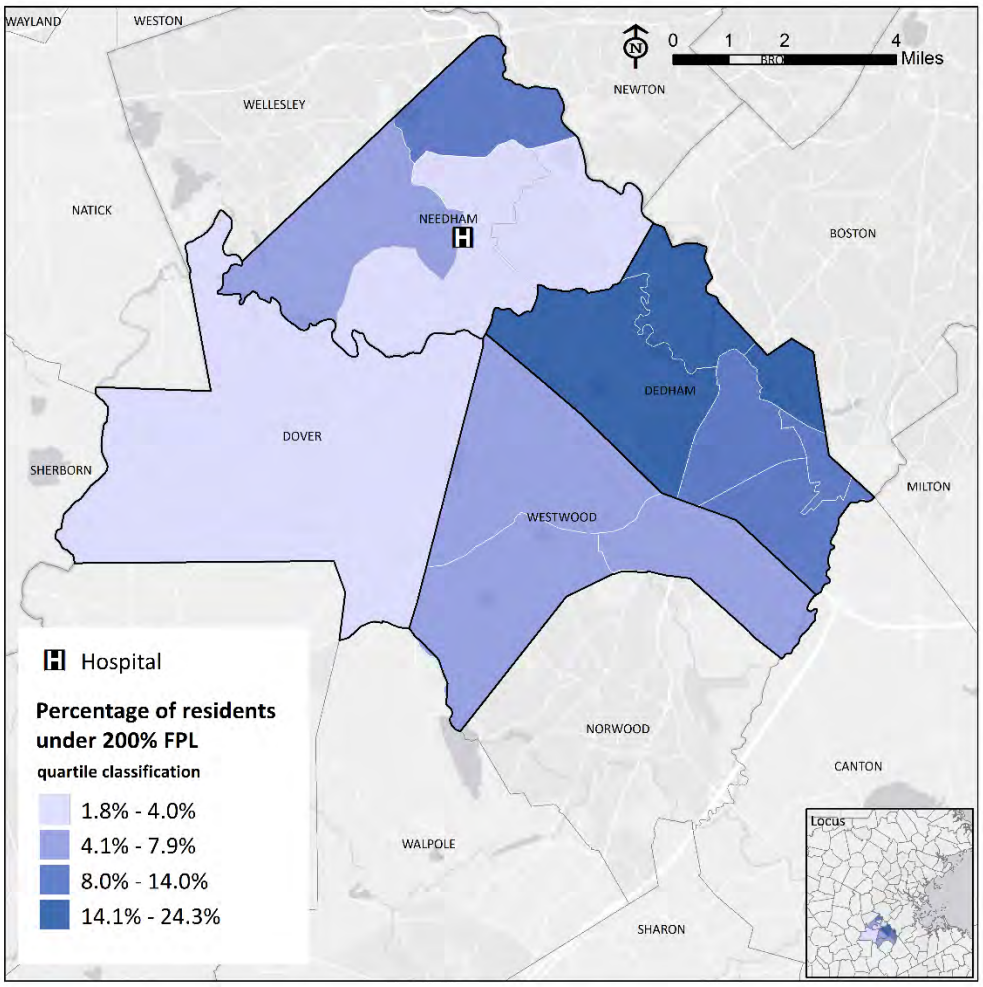
*Source:* Massachusetts Department of Elementary and Secondary Education School and District Profiles

## Employment, Income, and Poverty

Lack of gainful and reliable employment is linked to several barriers to care, including lack of health insurance, inability to pay for health care services and copays, and inability to pay for transportation to enable individuals to receive services. In key informant interviews and focus groups, participants stressed that while unemployment may be low across the service area, many live on fixed incomes or are "underemployed." Certain populations struggle to find and retain employment for a variety of reasons—ranging from mental and physical health issues, to lack of childcare, to transportation issues and other factors.

Like education, income impacts all aspects of an individual's life, including the ability to secure housing, needed goods (e.g. food, clothing), and services (e.g. transportation, healthcare, childcare). It may also affects one's ability to maintain good health. While many of the municipalities in BID–Needham's CBSA had median household incomes that were significantly higher than the Commonwealth overall, key informant interviewees and focus group participants reported that there were pockets of poverty throughout the service area, even in towns that were considered to be affluent.

**Figure 2: Percent of Population Under 200% Federal Poverty Level**




## Housing

Lack of affordable housing and poor housing conditions contributes to a wide range of health issues, including respiratory diseases, lead poisoning, infectious disease and poor mental health.[10] At the extreme are those without housing, including those who are homeless or living in unstable or transient housing situations. They are more likely to delay medical care and have mortality rates four times higher than those who have secure housing.[11]

According to a 2013 study of America's 25 largest cities, lack of affordable housing was the leading cause of homelessness. Adults who are homeless or living in unstable situations are more likely to experience mental health issues, substance use, intimate partner violence and trauma; children in similar situations have difficulty in school and are more likely to exhibit antisocial behavior.[12] Many key informants and

[10] James Krieger and Donna L. Higgins, "Housing and Health: Time Again for Public Health Action," *American Journal of Public Health* 92, no. 5 (2002): 758-768.
[11] Thomas Kottke, Andriana Abariotes, and Joel B. Spoonheim, "Access to Affordable Housing Promotes Health and Well-Being and Reduces Hospital Visits," *The Permanente Journal* 22, (2018): 17-079.
[12] Kottke, *Access to Affordable*

focus group/forum participants expressed concern over the limited options for affordable housing throughout the service area. This was particularly an issue for older adults, who often bear the burden of household costs (e.g. taxes, maintenance, adaptabilities) while living on fixed incomes. Lack of access to affordable assisted living facilities and transitional housing was also identified as an issue. Finally, some key informants and focus group participants felt as though public housing in options were in need of renovation.

- The percentage of owner occupied housing units was significantly high in all communities compared to the Commonwealth overall. The percentage of residents whose monthly owner costs exceed 30% of total household income was similar to the Commonwealth overall (31.5) in Dover (34.0), Needham (27.8), and Westwood (29.7), and was significantly lower in Dedham (27.)
- The percentage of rent occupied housing units was significantly low in all communities compared to the Commonwealth overall. The percentage of residents whose monthly rent exceeds 30% of total household income was similar to the Commonwealth in all communities.

**Table 7: Housing**

| | Massachusetts | Dedham | Dover | Needham | Westwood |
|---|---|---|---|---|---|
| **Vacant housing units (%)** | **9.7** | 3.7 | 4.8 | 2.8 | 6.1 |
| **Owner-occupied (%)** | **62.4** | 69.1 | 95.7 | 82.6 | 86.1 |
| **Monthly owner costs exceed 30% of household income (%)** | **31.5** | 27.0 | 34.0 | 27.8 | 29.7 |
| **Renter-occupied (%)** | **37.6** | 30.9 | 4.3 | 17.4 | 13.9 |
| **Gross rent exceeds 30% of household income (%)** | **50.1** | 56.2 | 53.8 | 49.2 | 46.4 |

*Source:* US Census Bureau, American Community Survey, 2013-2017
Shading represents statistical significance compared to the Commonwealth. Figures highlighted in orange are statistically higher compared to the Commonwealth overall, while figures highlighted in blue are significantly lower.

## Transportation

Lack of transportation has a significant impact on access to health care services and is a determinant of whether an individual or family has the ability to access the basic resources that allow them to live productive and fulfilling lives. Access to affordable and reliable transportation widens opportunity and is essential to addressing poverty and unemployment; it allows access to work, school, healthy foods, recreational facilities and a myriad of other community resources.

There is very limited quantitative data to characterize issues related to transportation. Interviewees, focus group participants, and survey respondents felt that transportation was a critical barrier to health and access to care, especially for those who lived outside of Needham, and for older adults without access to a personal vehicle. BID–Needham's CBAC identified transportation as the second leading barrier to good health.

- The mean commute time to work was significantly high in Dover (34.8 minutes) and Westwood (34.0) minutes compared to the Commonwealth overall (29.3).
- The percentage of residents who work outside of their county of residence was significantly high in all communities compared to the Commonwealth overall.

**Table 8: Transportation**

| | Massachusetts | Dedham | Dover | Needham | Westwood |
|---|---|---|---|---|---|
| **Takes car, truck, van (alone) to work (%)** | **70.7** | 70.9 | 70.5 | 71.4 | 67.6 |
| **Mean commute time (minutes) to work** | **29.3** | 30.5 | 34.8 | 30.4 | 34.0 |
| **Worked outside county of residence (%)** | **30.8** | 51.4 | 50.0 | 55.5 | 52.1 |

*Source:* US Census Bureau, American Community Survey, 2013-2017
Shading represents statistical significance compared to the Commonwealth. Figures highlighted in orange are statistically higher compared to the Commonwealth overall, while figures highlighted in blue are significantly lower.

## Food Access

Issues related to food insecurity, food scarcity and hunger were discussed as risk factors to poor physical and mental health for both children and adults. There is an overwhelming body of evidence to show that many families, particularly low income families of color, struggle to access food that is affordable, high-quality and healthy. While it is important to have grocery stores placed throughout a community to promote access, research shows that there are a number of factors that influence healthy eating, including quality and price of fruits and vegetables, marketing of unhealthy food and cultural appropriateness of food offerings.[13] Food pantries are often used as long-term strategies to supplement monthly shortfalls in food. Pantries and community meal programs have evolved from providing temporary or emergency food assistance to providing ongoing support for individuals, families, seniors living on fixed income, people with disabilities and adults working multiple low-wage jobs to make ends meet. Key informant interviewees and focus group participants mentioned local efforts to combat food insecurity and provide education on healthy choices, and felt there was a strong network of organizations working in this realm. Key informants also identified that there were no grocery stores or pharmacies in Dover.

- The percentage of residents who had received food stamp/SNAP benefits in the past 12 months was significantly low in all communities compared to the Commonwealth overall.

## Crime/Violence

Crime and violence are public health issues that influence health status on many levels, from death and injury, to emotional trauma, anxiety, isolation and absence of community cohesion. Across the service area, violent and property crime rates were similar or lower compared to the Commonwealth (Table 9).

[13] The Food Trust, "Access to Healthy Food and Why It Matters: A Review of the Research," http://thefoodtrust.org/uploads/media_items/executive-summary-access-to-healthy-food-and-why-it-matters.original.pdf

**Table 9: Crime Rates, 2017**

| | Massachusetts | Dedham | Dover | Needham | Westwood |
|---|---|---|---|---|---|
| **Violent crime rate (per 100,000)** | **353** | 39 | 17 | 29 | 116 |
| **Murder/non-negligent manslaughter** | **3** | 0 | 0 | 3 | 0 |
| **Forcible rape** | **30** | 8 | 0 | 6 | 37 |
| **Robbery** | **70** | 24 | 0 | 0 | 6 |
| **Aggravated assault** | **250** | 8 | 17 | 19 | 73 |
| **Property crime rate (per 100,000)** | **1,398** | 1684 | 297 | 625 | 1009 |
| **Burglary** | **247** | 59 | 17 | 19 | 61 |
| **Larceny-theft** | **1,041** | 1566 | 248 | 602 | 936 |
| **Motor vehicle theft** | **110** | 59 | 33 | 3 | 12 |
| **Arson** | **6** | 0 | 0 | 3 | 0 |

*Source:* FBI Uniform Crime Statistics, 2017

## Built Environment

The built environment—buildings, streets, parks, open spaces and other forms of physical infrastructure—have major influences on physical activity and lifestyle. Creating safe outdoor spaces for people to exercise, relax, and commute is an important component in establishing healthy lifestyle habits that protect against poor health outcomes. While concerns related to the built environment were not key themes of this assessment, these issues can work to either prevent or contribute to disease and disability in the community. There are a number of valuable community resources in the service area, including playgrounds, parks, athletic fields, walking trails, bike paths, dog parks, waterways, and recreational centers.

# **Key Findings:** Behavioral Risk Factors and Health Status

At the core of the CHNA process is understanding access-to-care issues, leading causes of morbidity and mortality, and the extent to which populations and communities participate in certain risky behaviors. This information is critical to assessing health status, clarifying health-related disparities and identifying health priorities. This assessment captures a wide range of quantitative data from federal and municipal data sources. Qualitative information gathered from key informant interviews, focus groups, and the community health survey informed this section of the report by providing perspective on the confounding and contributing factors of illness, health priorities, barriers to care, service gaps and possible strategic responses to the issues identified. This data augmented the quantitative data and allowed for the identification of vulnerable population cohorts.

## Health Insurance and Access to Care

Whether an individual has health insurance—and the extent to which it helps to pay for needed acute services and access to a full continuum of high-quality, timely and accessible preventive and disease management or follow-up services—has been shown to be critical to overall health and well-being.[14] Access to a usual source of primary care is particularly important, since it greatly affects the individual's ability to receive regular preventive, routine and urgent care and to manage chronic diseases.

While Massachusetts has one of the highest health insurance coverage rates in the U.S., there are still pockets of individuals without coverage, including young people, immigrants and refugees, and those who are unemployed. Many key informants and focus group/forum participants identified issues around navigating the health system, including health insurance, as a critical issue. This was especially an issue for older adults attempting to navigate Medicaid eligibility, costs, and coverage; low-to-moderate income populations—those who do not meet eligibility requirements for public insurance and/or public assistance programs and struggle to afford the rising costs of health care premiums; and non-English speakers who may face language and cultural barriers. BID–Needham's CBAC identified the high cost of healthcare as the leading barrier to good health for residents of the service area.

**Table 10: Health Insurance Coverage**

| | Massachusetts | Dedham | Dover | Needham | Westwood |
|---|---|---|---|---|---|
| **Uninsured (%)** | **3.0** | 2.3 | 1.4 | 1.4 | 0.9 |
| **Public health insurance (%)** | **35.5** | 32.5 | 23.2 | 22.7 | 23.7 |
| **Private health insurance (%)** | **74.2** | 81.7 | 90.8 | 94.0 | 90.3 |

*Source:* US Census Bureau, American Community Survey, 2013-2017

Shading represents statistical significance compared to the Commonwealth. Figures highlighted in orange are statistically higher compared to the Commonwealth overall, while figures highlighted in blue are significantly lower.

[14] National Center for Health Statistics, "Health Insurance and Access to Care." February 2017. Retrieved from https://www.cdc.gov/nchs/data/factsheets/factsheet_hiac.pdf

## Physical Activity, Nutrition, and Weight

Lack of physical fitness and poor nutrition are among the leading risk factors associated with obesity and chronic health issues. Adequate nutrition helps prevent disease and is essential for the healthy growth and development of children and adolescents, while 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. Over the past two decades, obesity rates in the United States have doubled for adults and tripled for children. Overall, these trends have spanned all segments of the population, regardless of age, sex, race, ethnicity, education, income or geographic region.

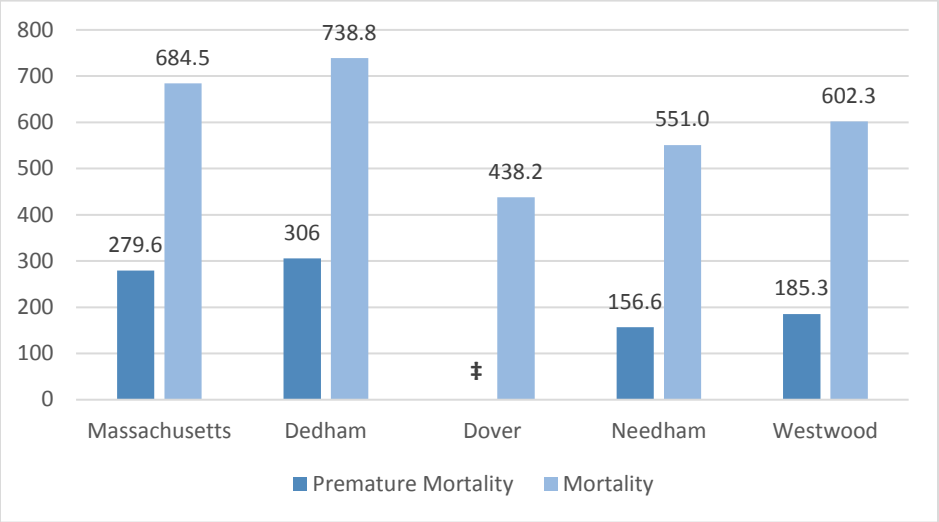
Data on the percentage of the population who are obese or overweight is available through the Behavioral Risk Factor Surveillance Survey, but is not available at the municipal level. However, lack of physical activity, poor nutrition, and obesity were identified as key risk factors for chronic and complex conditions by key informant interviewees and focus group/community forum participants. Physical inactivity and sedentary lifestyle was identified as the second leading barrier to good health amongst those who took the Community Health Survey.

## All-Cause Mortality and Premature Mortality

The all-cause and premature mortality rates do not indicate that all residents of a municipality have equal or similar access to care simply based on proximity to services. For example, not all residents in Needham have better access to health services, and therefore lower rates, than those in other municipalities, simply because they live closer to the hospital.

- All-cause mortality rates were lower in Dover (438.2), Needham (551.0), and Westwood (602.3) compared to the Commonwealth overall (684.5); significantly lower in Dover and Needham.
- Premature mortality rates were significantly low in Needham (156.6) and Westwood (185.3) compared to the Commonwealth overall (279.6). The premature mortality rate in Dover was suppressed due to small numbers.

**Figure 3: All-Cause and Premature Mortality Rates (age-adjusted rates per 100,000)**




*Source*: MDPH Registry of Vital Records and Statistics, 2015

## Chronic and Complex Conditions

Chronic conditions such as heart disease, cancer, stroke, Alzheimer's disease, and diabetes are the leading causes of death and disability in the United States, and are the leading drivers of the nation's $3.3 trillion annual healthcare costs.[15] Over half of American adults have at least one chronic condition, while 40% have two or more.[16] Perhaps most significantly, chronic diseases are largely preventable despite their high prevalence and dramatic impact on individuals and society. This underscores the need to focus on health risk factors, primary care engagement and evidence-based chronic disease management. There was broad, if not universal, acknowledgement and awareness of these pervasive health issues among interviewees and forum participants.

Key informants, focus group/forum participants, and members of the CBAC were also concerned about the lack of specialty care providers in the service area. The CBAC identified lack of providers- particularly behavioral health and primary care providers – as the third leading barrier to good health for residents of the CBSA. Access to specialty care plays a role in the prevention, treatment, and management of many chronic and complex conditions.

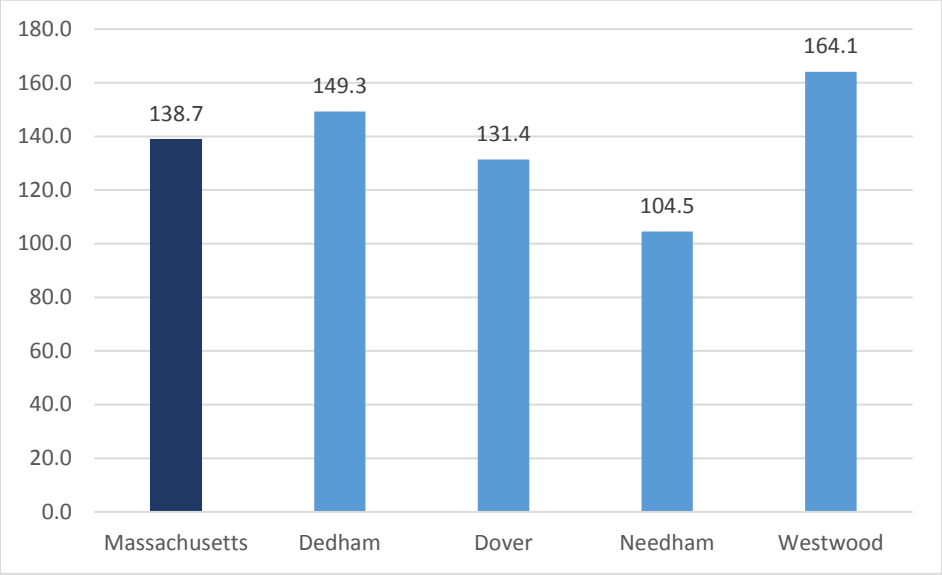
### Cardiovascular and Cerebrovascular Diseases

Cardiovascular and cerebrovascular diseases, such as heart disease and stroke, are affected by a number of health and behavioral risk factors, including obesity and physical inactivity, tobacco use, and alcohol use. Hypertension, or high blood pressure, increases the risk of more serious health issues including heart failure, stroke and other forms of major cardiovascular disease. Racial disparities in heart disease and hypertension are well-documented; black/African Americans are two to three times as likely as whites to die of preventable heart disease and stroke.[17] The age of onset for stroke is earlier for African Americans and Hispanic/Latinos compared to non-Hispanic whites.[18]

Though the heart disease mortality rate was higher than the Commonwealth (138.7) in Dedham (149.3) and Westwood (164.1), neither rates were significant (Figure 5).

[15] Centers for Disease Control and Prevention, "Chronic Diseases in America," US Census Bureau, 2013-2017 ACS 5-Year Estimates, last updated April 15, 2019.
[16] CDC, *Chronic Diseases in America*
[17] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5638710/
[18] https://www.stroke.org/understand-stroke/impact-of-stroke/minorities-and-stroke/

**Figure 5: Heart Disease Mortality (age-adjusted rates per 100,000)**




*Source*: MDPH Registry of Vital Records and Statistics, 2015

## Diabetes

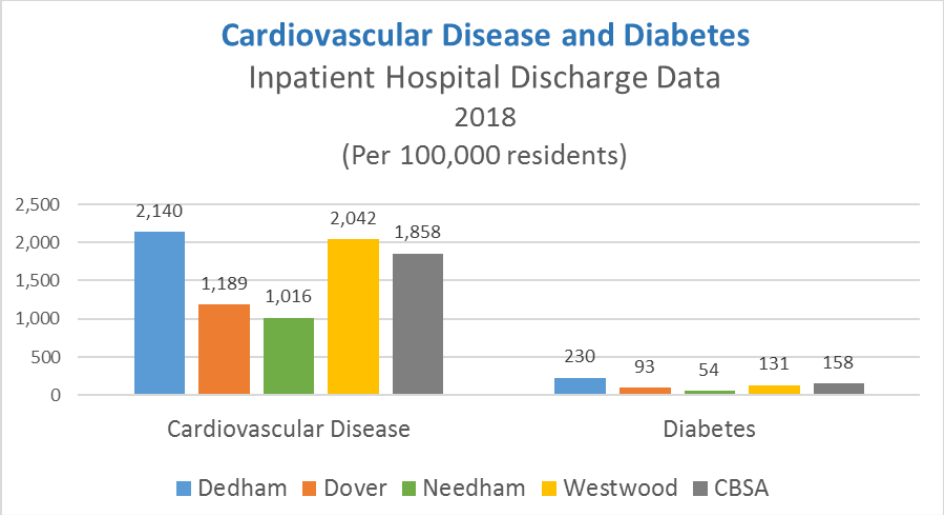
Over the course of a lifetime, approximately 40% of adults in the U.S. are expected to develop type 2 diabetes.[19] Several factors increase the risk of developing type 2 diabetes, including being overweight, physical inactivity, age, and family history. Having diabetes increases the risk of cardiovascular comorbidities (e.g. hypertension, atherosclerosis), may limit ability to engage in physical activity, and may have negative impacts on metabolism.[20] Key informants and focus group participants identified diabetes as a health issue in the service area, especially for those who are unable to manage the condition or who struggle with other chronic health issues.

Relative to the CBSA average, Dedham has the highest rate of hospital inpatient discharge per 100,000 adults for cardiovascular disease, and Westwood's rate is a close second. With respect to diabetes, Dedham's and Westwood's rates are also the highest in the service area but in this case Dedham's rate of hospital inpatient discharge is nearly twice as high as Westwood's rate, the next highest municipality. Needham has the lowest rates of discharge for both cardiovascular disease and diabetes compared to the towns in BID–Needham's CBSA.

[19] [38] Centers for Disease Control and Prevention, "Hispanic Health: Prevention Type 2 Diabetes," Centers for Disease Control and Prevention Web Site, https://www.cdc.gov/features/hispanichealth/index.html, September 18, 2017

[20] http://outpatient.aace.com/type-2-diabetes/management-of-common-comorbidities-of-diabetes

**Figure 6: Cardiovascular Disease and Diabetes, Inpatient Hospital Discharge Rates (Crude rates per 100,000 Adult residents – 18+)**



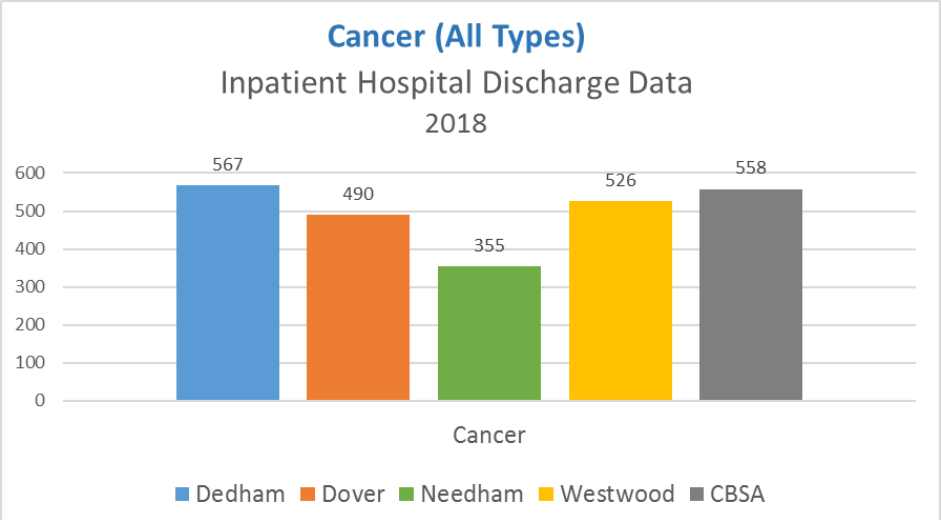

*Source*: Massachusetts Center for Health Information and Analysis, Case Mix Data. Hospital Inpatient Discharge Data. 2017

## Cancer

The most common risk factors are well known: age, family history of cancer, alcohol and tobacco use, diet, exposure to cancer causing substances, chronic inflammation, and hormones. Chronic and complex conditions, including cancer, and their risk factors were prioritized by key informants and focus group/forum participants.

With respect to cancer (all types), once again Dedham and Westwood have the highest rates of hospital inpatient discharge (nearly identical rates), and Needham's rate is the lowest. Needham's rate is two-thirds of the service area average.

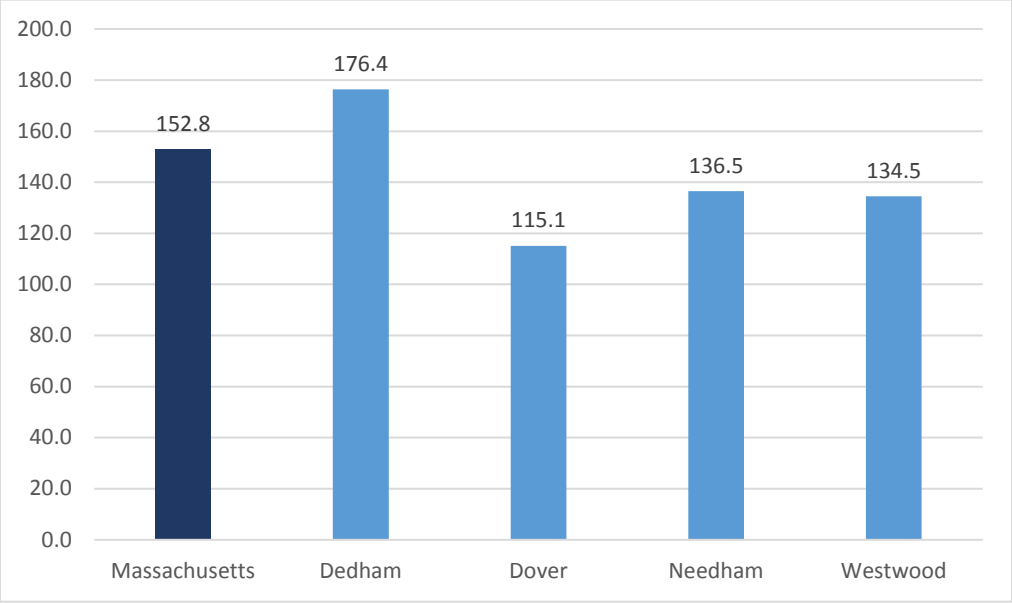
**Figure 7: Cancer (All Types) Inpatient Hospital Discharge Rates (Crude rates per 100,000 Adult residents – 18+)**




*Source*: Massachusetts Center for Health Information and Analysis, Case Mix Data. Hospital Inpatient Discharge Data. 2017

The all-cause cancer mortality rate was higher than the Commonwealth (152.8) in Dedham (176.4) though not significantly higher. Rates were lower in Dover (115.1), Needham (136.5), and Westwood (134.5) compared to the Commonwealth, though not significantly lower.

**Figure 8: All-cause mortality rate (age-adjusted rates per 100,000)**




*Source*: MDPH Registry of Vital Records and Statistics, 2015

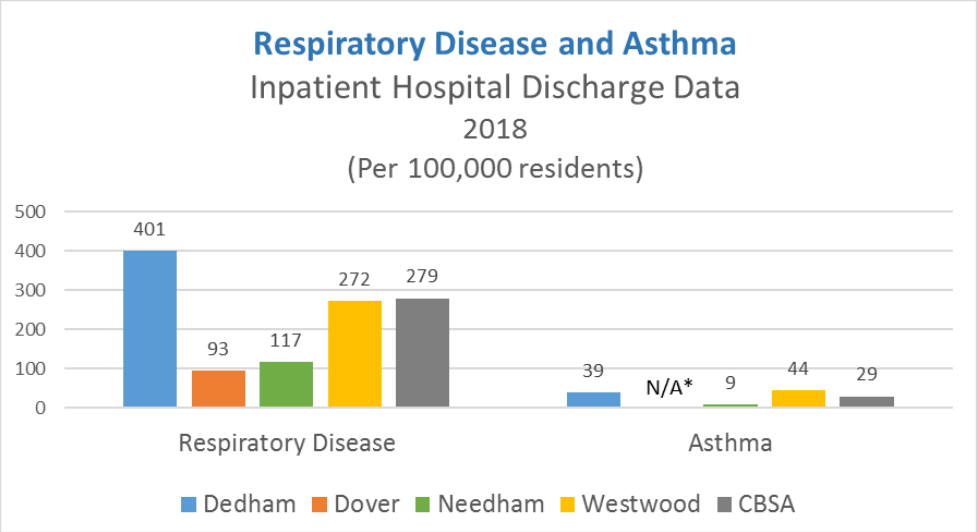
## Respiratory Diseases

Respiratory diseases such as asthma and chronic obstructive pulmonary disorder (COPD) are exacerbated by behavioral, environmental and location-based risk factors, including smoking, diet and nutrition, substandard housing and environmental exposures (e.g., air pollution, secondhand smoke). They are the third leading cause of death in the United States. In many scenarios, quality of life for those with respiratory diseases can improve with proper care and management.[21]

With respect to chronic lower respiratory disease (CLRD) and asthma, once again, Dedham and Westwood have the highest rates of hospital inpatient discharge per 100,000 residents. With respect to CLRD, Dedham's rate is 50% higher than Westwood's rate, which is the second highest, and four times higher than Dover's rate, which is the lowest in BID–Needham's CBSA.

[21] Office of Disease Prevention and Health Promotion, "Respiratory Diseases," Retrieved from https://www.healthypeople.gov/2020/topics-objectives/topic/respiratory-diseases

**Figure 9: Respiratory Disease and Asthma, Inpatient Hospital Discharge Rates (Crude rates per 100,000 Adult residents – 18+)**



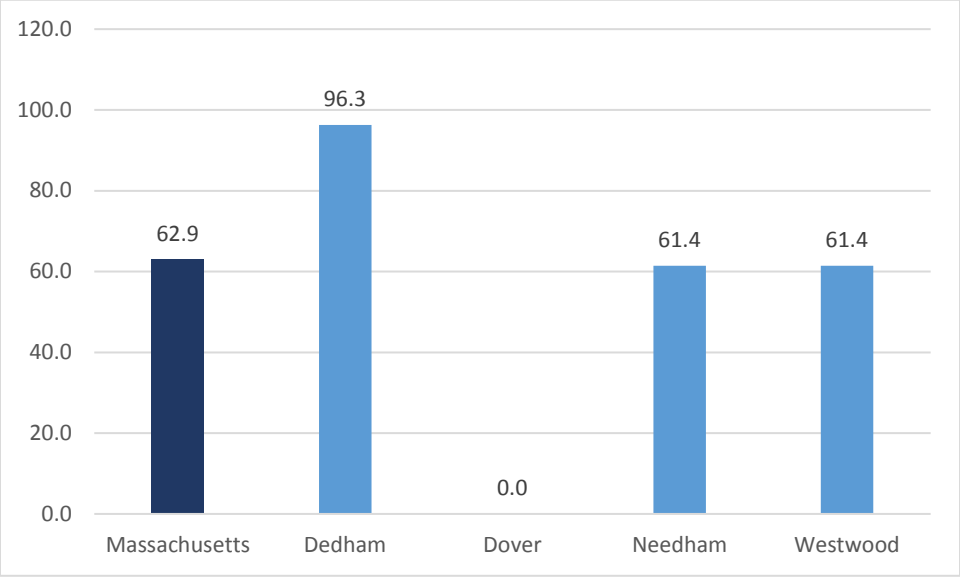

*Source*: Massachusetts Center for Health Information and Analysis, Case Mix Data. Hospital Inpatient Discharge Data. 2017

## Mental Health

Mental health—including depression, anxiety, stress, serious mental illness and other conditions—was overwhelmingly identified as one of the leading health issue for residents of BID–Needham's service area. Individuals from across the health service spectrum discussed the burden of mental health issues for all segment of the population, specifically the prevalence of mild to moderate depression and anxiety. Key informants and focus group participants also identified issues of chronic stress and anxiety amongst youth, theorizing that the impact of social media, interpersonal relationships, and the pressure to succeed in school and activities were the main contributors to this issue.

- The mental disorder mortality rate was significantly high in Dedham (96.3) compared to the Commonwealth overall (62.9) (Figure 11). The rate was significantly lower than the Commonwealth in Dover (0). Note that this data set is limited to only one year of data and that these rates are not a true reflection of the burden of mental health issues in the CBSA; while mental health disorders underlie many other medical conditions, including substance misuse, they are often not the primary cause of death.

**Figure 11: Mental Health Disorder Mortality (age-adjusted rates per 100,000)**




*Source*: MDPH Registry of Vital Records and Statistics, 2015

The MetroWest Adolescent Health Survey (MWAHS) is a regional initiative of the MetroWest Health Foundation. The survey intends to monitor trends, identify emergent adolescent health issues, and to mobilize and empower schools and communities to make data-informed decisions. The survey is administered on a biannual basis to 25 public school districts, including Dedham, Dover-Sherborn, and Needham.

**Table 11: MetroWest Adolescent Health Survey Data**

| % of High School students who: | Massachusetts | Dedham | Dover-Sherborn | Needham |
|---|---|---|---|---|
| **Experienced depressive symptoms in last 12 months** | 30 | 22 | 14.3 | 14 |
| **Reported life was very stressful in past 30 days** | N/A | 34 | 33.5 | 38 |
| **Seriously considered suicide in last 12 months** | 18 | 16 | 10.6 | 10 |
| **Were often or very often stressed about:** | | | | |
| **School issues** | N/A | 65 | 71 | 69 |
| **Social issues** | N/A | 31 | N/A | 32 |
| **Family issues** | N/A | 30 | N/A | 22 |
| **Safety issues** | N/A | 6 | N/A | 4 |
| **Appearance issues** | N/A | 30 | N/A | 28 |
| **Physical/emotional health** | N/A | 27 | N/A | 25 |

Source: MetroWest Adolescent Health Survey, 2016

Key informants and focus group participants were also concerned about social isolation and depression amongst older adults, especially frail elders living alone or who did not have a regular caregiver. According to community profiles put together by the Massachusetts Healthy Aging Collaborative:

- The percentage of older adults with depression in Dedham (34.8) was significantly higher than the Commonwealth overall (31.5). The percentages in Dover (20.2) and Needham (29.5) were significantly lower.
- The percentage of older adults with anxiety disorders in Dover (15.5) and Needham (22.7) were significantly lower than the Commonwealth overall (25.4).

**Table 12: Mental health of older adults**

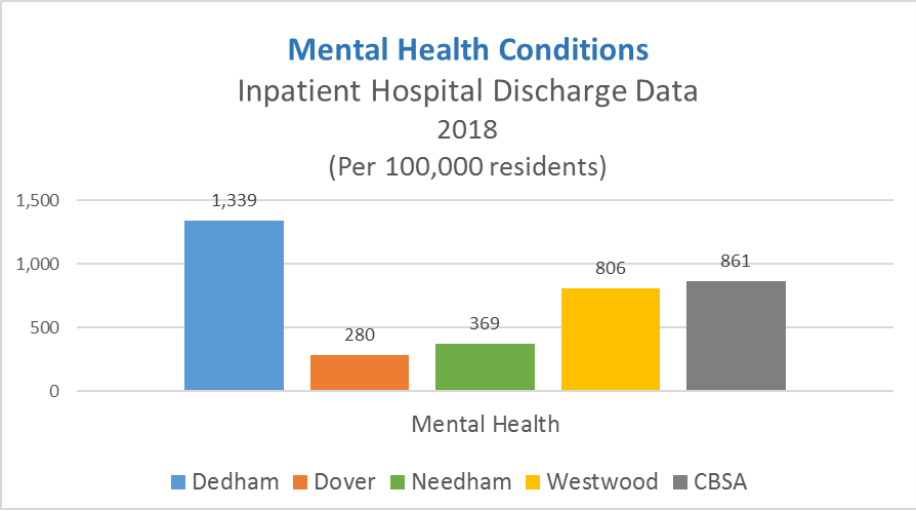
| | Massachusetts | Dedham | Dover | Needham | Westwood |
|---|---|---|---|---|---|
| **% 65+ with depression** | **31.5** | 34.8 | 20.2 | 29.5 | 31.7 |
| **% 65+ with anxiety disorders** | **25.4** | 26.9 | 15.5 | 22.7 | 24.9 |

*Source:* Massachusetts Healthy Aging Collaborative, Massachusetts Healthy Aging Community Profiles, 2018

Beyond the concern around specific conditions and vulnerable segments of the population, key informants and focus group/forum participants were concerned about barriers to mental health care, including stigma, lack of services across the spectrum (inpatient, outpatient, and specialty providers), and lack of support services (counselors, licensed social workers). Inpatient mental health services and outpatient mental health services were the #1 and #2 most difficult services to access among those who took the Community Health Survey.

Based on a review of hospital inpatient discharge rates per 100,000 adults (18+) for the leading mental health diagnoses by the municipalities in BID–Needham's CBSA, Dedham, once again, has a substantially higher rate of discharge than the other towns in the service area. Dover's rate is the lowest rate, followed by Needham. Dover's rate is one-third the CBSA average.

**Figure 12: Mental Health Conditions, Inpatient Hospital Discharge Rates (Crude rates per 100,000 Adult residents – 18+)**




*Source*: Massachusetts Center for Health Information and Analysis, Case Mix Data. Hospital Inpatient Discharge Data. 2017

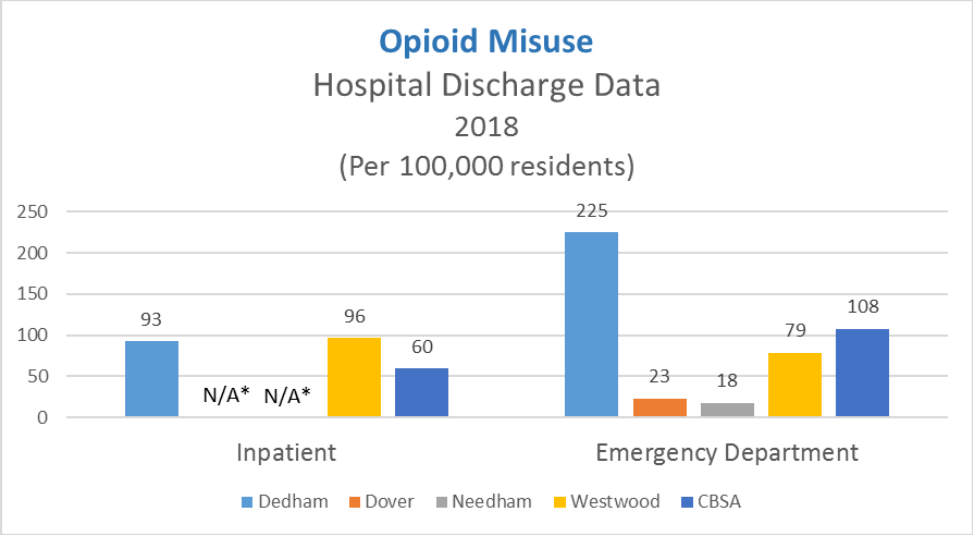
## Substance Use

Along with mental health, substance use was named as a leading health issue among key informants and focus group/forum/survey participants. Behavioral health providers reported that individuals continue to struggle to access care services, including rehabilitation and detox, outpatient treatment and medication-assisted treatment. As with mental health services, there are a number of community partners working to fill service gaps and address the needs of both individuals and the at-large community, although some individuals may face delays or barriers to care due to limited providers and specialists, limited treatment beds and social determinants that impede access (e.g., insurance coverage, transportation, employment, health literacy).

Key informants and focus group participants were concerned about the opioid epidemic and the effects it has not only on those struggling with addiction, but on families, communities, and society.

Based on a review of hospital inpatient and emergency department discharge rates per 100,000 adults (18+) for opioid misuse, Dedham's and Westwood's rates are the highest and drive up the service area average. Dover's and Needham's rates are only a fraction of Dedham's and Westwood's and in the case of inpatient discharge have been suppressed due to the small number. Dedham's rate is particularly high in the case of emergency department inpatient discharge, with its rate being ten times higher than the rate for the lowest town in the service area.

**Figure 13: Opioid Misuse, Inpatient Hospital Discharge Rates (Crude rates per 100,000 Adult residents – 18+)**




*Source*: Massachusetts Center for Health Information and Analysis, Case Mix Data. Hospital Inpatient Discharge Data. 2017

* Dover's and Needham's rates are not available because they have been suppressed due to the low number of discharges.

Several participants offered that while alcohol misuse is not as "acute" an issue as opioids, it is more prevalent and is a major contributor to rates of chronic disease (e.g. cancer, liver disease, cardiovascular disease). Among those from the service area treated in facilities licensed by the Massachusetts Bureau of Substance Abuse Services (BSAS), alcohol was the primary substance of use in Dover, Needham, and Westwood (Table 13).

**Table 13: Substance Use**

| | Massachusetts | Dedham | Dover | Needham | Westwood |
|---|---|---|---|---|---|
| **Opioid death count (by city/town of residence), 2017** | 8,188 | 25 | 1 | 3 | 8 |
| **Opioid death count (by city/town of occurrence), 2017** | 8,349 | 10 | 0 | 4 | 8 |
| **BSAS admissions (#), 2017** | 80,896 | 234 | 0-100 | 0-100 | 0-100 |
| **Primary substance of use (%)** | Heroin (53.1) | Heroin (54.5) | Alcohol (80.0) | Alcohol (50.8) | Alcohol (45.0) |

*Source*: Massachusetts Department of Public Health, Bureau of Substance Abuse Services, Utilization and Program Data, 2017

Vaping, or e-cigarette use, was a primary concern for youth. Key informants referred to e-cigarette use as an epidemic and were concerned not only with education and prevention efforts, but treating those who had developed nicotine addictions. Changing community norms around marijuana, especially in light of legalizing in Massachusetts, was also a concern amongst key informants and focus group participants, especially for young people.

The MWAHS monitors trends around substance use. According to 2016 survey results, the percentage of high school students in Dedham, Dover-Sherborn, and Needham public school districts who had ever used cigarettes, alcohol, marijuana, and e-cigarettes was lower than the Commonwealth overall (Table 14). The percentage of students who report currently using e-cigarettes was also lower than the Commonwealth across all three districts.

**Table 14 Substance Use Amongst High School Students**

| % of High School students who: | Massachusetts | Dedham | Dover-Sherborn | Needham |
|---|---|---|---|---|
| **Ever used cigarettes** | 28 | 17 | 12 | 13 |
| **Ever used alcohol** | 61 | 54 | 58 | 49 |
| **Ever used marijuana** | 41 | 32 | 29 | 24 |
| **Ever used prescription drugs without a doctor's prescription** | N/A | 6 | 7 | 5 |
| **Ever used e-cigarette** | 45 | 31 | 29 | 26 |
| **Currently use e-cigarette** | 24 | 11 | 14 | 16 |

Source: MetroWest Adolescent Health Survey, 2016

## Infectious Disease

Though great strides have been made to control the spread of infectious diseases in the U.S., they remain a major cause of illness, disability and even death. STIs, diseases transmitted through drug use, vector-borne illnesses, tuberculosis, pneumonia and influenza are among the infectious diseases that have the greatest impact on modern American populations. Though not named as a major health concern by interviewees or participants of forums and focus groups, disease burden is tracked to

prevent outbreaks and identify patterns in morbidity and mortality. Young children, older adults, individuals with compromised immune systems, injection drug users and those having unprotected sex are most at risk for contracting infectious diseases.

**Table 15: Infectious Disease**

| | Massachusetts | Dedham | Dover | Needham | Westwood |
|---|---|---|---|---|---|
| **Chlamydia cases (lab confirmed), 2017** | **29203** | 70 | 7 | 47 | 24 |
| **Gonorrhea cases (lab confirmed), 2017** | **7307** | 18 | 0 | 6 | <5 |
| **Syphilis cases (probable and confirmed), 2017** | **1091** | 8 | 0 | <5 | <5 |
| **Hepatitis A cases (confirmed), 2017** | **53** | 0 | 0 | 0 | 0 |
| **Chronic Hepatitis B (confirmed and probable), 2017** | **2023** | 6 | 0 | <5 | <5 |
| **Hepatitis C cases (confirmed and probable), 2017** | **7765** | 42 | <5 | 11 | 5 |
| **Pneumonia/influenza mortality (age-adjusted per 100,000)*** | **17.1** | 18.7 | 0 | 11 | 20.2 |

*Source:* MDPH Bureau of Infectious Disease and Laboratory Services, 2017 || *MDPH Registry of Vital Records and Statistics, 2015

# Community Health Priorities and Priority Population Segments

Between October 2018 and April 2019, BID–Needham conducted a comprehensive CHNA that included an extensive review of quantitative data and qualitative information gathered through interviews, focus groups, a community meeting, and a Community Health Survey. A resource inventory was also completed to identify existing health-related assets and service gaps. A detailed review of the CHNA approach, data collection methods, and key findings are included in the body and Appendices of this report.

Once BID–Needham's CHNA activities were completed, BID–Needham's Community Benefits staff convened the BID–Needham CBAC and CBLT and conducted a series of strategic planning meetings. These meetings allowed Hospital staff and a representative group of external community health stakeholders to review the quantitative and qualitative findings from the CHNA, prioritize the leading community health issues, identify segments of the population most at-risk, review existing community benefits programming, and begin to develop BID–Needham's 2020–2022 Implementation Strategy (IS). After these strategic planning meetings, BID–Needham's Community Benefits staff continued to work with the CBAC, CBLT, and other community partners to develop draft and final versions of BID–Needham's IS.

A Summary Implementation Strategy, with goals, priority populations, objectives, and strategies may be found in Appendix D.

## Core IS Planning Principles and State Priorities

In developing the IS, care was taken to ensure that BID–Needham's community health priorities were aligned with the Commonwealth of Massachusetts priorities set by the MDPH and the MA AGO (Table 16). Care was also taken to ensure that the IS was aligned with broader principals drawn from the Commonwealth's Community Benefit Guidelines and the literature on how to best promote community health improvement and prevention efforts.

**Table 16: Massachusetts Community Health Priorities**

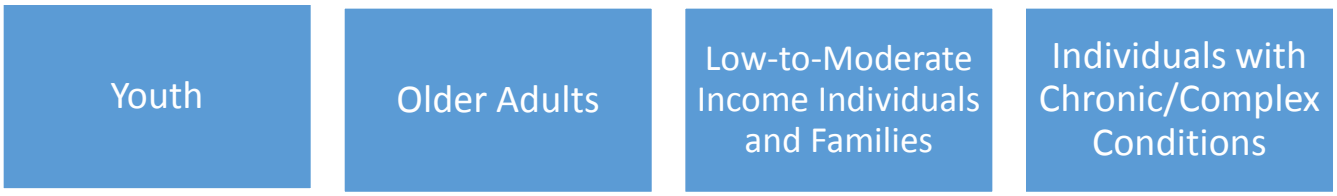
| *Community Benefit Priorities* | *Determination of Need Priorities* |
|---|---|
| • Housing stability and homelessness<br>• Mental illness and mental health<br>• Substance Use Disorders<br>• Chronic disease, with a focus on cancer, heart disease, and diabetes | • Built environments<br>• Social environments<br>• Housing<br>• Violence<br>• Education<br>• Employment |

## Priority Populations

BID–Needham is committed to improving the health status and well-being of all residents living throughout its service area. Certainly all geographic, demographic, and socioeconomic segments of the

population face challenges of some kind that can hinder their ability to access care or maintain good health. Regardless of age, race/ethnicity, income, family history, or other characteristics, everyone is impacted in some way by health-related risks. With this in mind, BID–Needham's IS includes activities that will support residents throughout its service area, across all segments of the population. However, based on the assessment's quantitative and qualitative findings, there was broad agreement that BID–Needham's IS should prioritize certain demographic and socio-economic segments of the population that have complex needs or face especially significant barriers to care, service gaps, or adverse social determinants of health that put them at greater risk. The assessment identified 1) Youth, 2) Older adults, 3) Low to moderate income individuals and families, and 4) Individuals with chronic and complex conditions as priority populations to be included in the IS.

**Figure 14: BID–Needham Priority Populations 2020-2022**




## Youth

Youth and adolescents were identified as among the most vulnerable and at-risk populations in the region. Participants' reasons for believing this group should be prioritized varied, but centered on the impacts of mental health and substance use. Adolescence is a critical transitional period that includes biological and developmental milestones that are important to establishing long-term identity and independence, but can lead to conflict, isolation and tension between adolescents and parents or caregivers. During this time, young people may struggle to access health education and information, social services, or may be seen by providers that misunderstand the needs of those in this age group. Although adolescents are generally healthy, they do struggle with health and social issues, such as obesity (e.g., poor nutrition and lack of physical activity), mental health (e.g., depression, anxiety, stress), substance use (e.g., cigarettes/vaping, marijuana, alcohol, opiates), sexually transmitted infections, and injuries due to accidents.

## Older Adults

The challenges faced by older adults came up in nearly every interview and focus group. Chronic disease, social isolation/lack of family support, living on fixed incomes, affordable housing, and transportation were identified as significant issues. In the U.S. and the Commonwealth, older adults are among the fastest growing age groups. The first "baby boomers" (adults born between 1946 and 1964) turned 65 in 2011. Over the next 20 years, these baby boomers will gradually enter the older adult cohort.

Chronic/complex conditions are the leading cause of death among older adults, and older adults are more likely to develop chronic illnesses such as hypertension, diabetes, COPD, congestive heart failure, depression, anxiety, Alzheimer's disease, Parkinson's disease and dementia than younger adult cohorts. By 2030, the CDC and the Healthy People 2020 Initiative estimate that 37 million people nationwide,

60% of the older adult population ages 65 and over, will need to manage more than one chronic medical condition. Significant proportions of this group experience hospitalizations, are admitted to nursing homes, and receive home health services and other social supports in home and community settings. Addressing these concerns demands a service system that is robust, diverse, and responsive.

### Low-to-Moderate Income Individuals and Families

Key informants, focus group participants, and hospital leadership discussed the challenges that individuals and families face when they are forced to decide between housing, food, heat, health care services, childcare, transportation or other essentials. These choices often lead to missed care or delays in care, either due to the direct costs of care (co-pays and deductibles) or the indirect costs of transportation, childcare, or missed wages. There was near consensus that lack of affordable housing was a leading issue in the region. Participants also spoke of the intense challenges that many moderate income individuals and families face due to the high cost of living, combined with the fact that most of those in the middle-income group are not eligible for public programs like Medicaid, food stamps, Healthy Start, and other subsidized services.

### Individuals with Chronic and Complex Conditions

Though substance use and mental health were the focus for many key informants, providers, and residents, one cannot ignore that heart disease, stroke and cancer are the leading causes of death in the nation and the Commonwealth. Along with other conditions, including asthma and diabetes, these conditions are considered to be chronic and complex and can strike early in one's life, possibly ending in premature death. It is also important to note that the risk and protective factors for many chronic/complex conditions are the same, including tobacco use, lack of physical activity, poor nutrition, obesity, and alcohol use. Individuals with chronic/complex conditions often face significant barriers to care (e.g., transportation, lack of health literacy, fragmented care). These issues are exacerbated for older adults and those that are disabled. Many key informants cited a need for care management, navigation, and care coordination for these populations. Several residents also suggested needs for caregiver support and resource programs.

## Community Health Priority Areas

BID–Needham's CHNA was conducted as a population-based assessment. The goal was to engage the community and compile quantitative and qualitative information to identify the leading health-related issues affecting individuals in the CBSA, including social determinants of health, service gaps, and barriers to care. The priorities that have been identified have been framed broadly to ensure that the full breadth of unmet needs and community health issues are recognized. These priorities were identified through an integrated and thorough review of all of the quantitative and qualitative information captured for the assessment. The priorities have been identified to maximize impact, reduce disparities, and promote collaboration and cross-sector partnership.

During the later stages of the CHNA process, significant efforts were made to vet the priority issues with leadership and the community-at large, through meetings with the CBAC, the CBLT, and a community meeting. BID–Needham is confident that these priorities reflect the sentiments of those who were involved in the assessment and community engagement processes. Based on the findings from the

breadth of BID–Needham's CHNA activities, the CBAC and the CBLT voted to prioritize 1) Mental health and substance use, 2) Chronic / complex conditions, and their risk factors, and 3) Social determinants of health and access to care.

**Figure 15: BID–Needham CHNA Priority Areas 2020-2022**


The community health priorities that have been prioritized by the CHNA in Figure 15 above are described in detail in the next section of this report, along with a listing of the goals related to these priority areas that BID–Needham's Community Benefits staff, the CBAC, and CBLT believe will drive achievement. The objectives and strategic initiatives, by priority area, that will be part of BID–Needham's Implementation Strategy are included in BID–Needham's Summary Implementation Strategy, included in Appendix D.

**Community Health Needs not Prioritized by BID–Needham's CBAC**

It is important to note that there are community health needs that were identified by BID–Needham's assessment that, due to the limited burden that these issues present and/or the feasibility of having an impact in the short- or long-term on these issues, were not prioritized for investment. Namely, housing was identified as a community need but these issues were deemed by the CBAC and the CBLT to be outside of BID–Needham's primary sphere of influence and have opted to allow others in its CBSA and the Commonwealth to focus on these issues. This is not to say that BID–Needham will not support efforts in these areas or other areas that are not prioritized. BID–Needham remains open and willing to work with hospitals across Beth Israel Lahey Health's network and other public and private partners to address these issues, particularly as part of a broad, strong collaborative.

# BID–Needham Implementation Strategy & Community Benefits Resources

BID–Needham's current 2017-2019 Implementation Strategy was developed in 2016 and addresses all of the priority areas identified by this CHNA. Certainly, this CHNA has provided new guidance and invaluable insight on the characteristics of the population, social determinants of health, barriers to care, and leading health issues that has informed and allowed BID–Needham to update its current IS.

Included below, organized by priority area, are the core elements of BID–Needham's 2020 – 2022 Implementation Strategy. The content of the strategy is designed to address the underlying social determinants of health, barriers to care, and promote health equity. The content is also designed to address the leading community health priorities, including activities geared to health education and wellness (primary prevention), identification, screening, and referral (secondary prevention), and disease management and treatment (tertiary prevention) (e.g. access to care, self-management support, harm reduction, treatment of acute illness, and recovery).

Below is a brief discussion of the resources that BID–Needham will invest to address the priorities identified by the CBAC and CBLT. Following the discussion of resources are summaries of each of the selected priority areas and a listing of the goals that have been established for each priority area.

**Community Benefit Resources**

In fiscal year 2018, BID–Needham contributed $540,833 in direct, in-kind and grant funding to support community initiatives operated by BID–Needham and its partners to improve the health of some of the CBSA's most underserved, vulnerable communities. Additionally, BID–Needham has leveraged $6,000 in grant and other funds to address health disparities and health inequities, and provided more than $690,000 in charity care to low income individuals who were unable to pay for care and services at BID–Needham.

This year, BID–Needham will commit a comparable amount if not more through uncompensated, "charity" care, direct, community health program investments, and in-kind resources of staff time and materials. BID–Needham will also generate leveraged funds through grants from public and private sources on behalf of its own programs or services as well as on behalf of its community partners.

BID–Needham and its leadership is committed to Community Benefits budget planning which ensures the funds and resources available to carry out its community benefits mission and to implement activities to address the needs identified by this CHNA. Recognizing that community benefits planning is ongoing and will change with continued community input, BID–Needham's IS will evolve. Circumstances may change with new opportunities, requests from the community, community and public health emergencies, and other issues may arise, which may require a change in the IS or the strategies documented within it. The CBAC, the CBLT, and BID–Needham's Board of Trustees are committed to assessing information and updating the plan as needed.

Following are brief descriptions of each priority area, along with the goals that were established by BID–Needham to respond to the CHNA findings and the planning process. Please refer to the Summary

Implementation Strategy in Appendix D for more details.

## PRIORITY AREA 1: MENTAL HEALTH AND SUBSTANCE USE

As it is throughout the Commonwealth and the nation, the burden of mental and substance use on individuals, families, communities and service providers in BID–Needham's service area is overwhelming. Nearly every key informant interview, focus group and community meeting included discussions on these topics. From a review of the quantitative and qualitative information, depression, anxiety/stress, social isolation, opioids, alcohol, and e-cigarette/vaping were the leading issues in this domain.

Despite increased community awareness and sensitivity about the underlying issues and origins of mental health and substance use issues, there is still a great deal of stigma related to these conditions. There is a general lack of appreciation for the fact that these issues are often rooted in genetics, physiology and environment, rather than an inherent, controllable character flaw. There is, however, a deep appreciation and a growing understanding for the role that trauma plays for many of those with mental and/or substance use issues, with many people using illicit or controlled substances to self-medicate and cope with loss, stress, abuse, pain, and other unresolved traumatic events.

The following goals were established by BID–Needham to respond to the CHNA and the strategic planning process. Please refer to the summary IS for more details (Appendix D).

| Priority Area 1: Mental Health and Substance Use |
| --- |
| **Goal 1: Educate About and Reduce Stigma Associated with Mental Health and Substance Use Issues** |
| **Goal 2: Enhance Access to Mental Health and Substance use Screening, Assessment, and Treatment Services** |
| **Goal 3: Decrease the number of prescription drugs and other harmful drugs from the community** |

## PRIORITY AREA 2: CHRONIC/COMPLEX CONDITIONS AND THEIR RISK FACTORS

While mental health and substance use were perceived to be the leading issues in BID–Needham's service area, one cannot lose sight of the fact that heart disease, stroke and cancer are the leading causes of death in the nation and the Commonwealth. Roughly, 6 in 10 deaths may be attributed to these three conditions combined. If you include respiratory disease (e.g., asthma, COPD) and diabetes, which are in the top 10 leading causes across all geographies, then one can account for the vast majority of causes of death. All of these conditions are typically considered to be chronic and complex and can often strike early in one's life, quite often ending in premature death. Within this priority area, according to those who participated in interviews, focus groups, the community meeting, and the Community Health Survey, cardiovascular disease, cancer, diabetes, and Alzheimer's disease and other dementias were thought to be of the highest priority. It is also important to note that the risk factors for nearly all chronic/complex conditions are much the same, including lack of physical activity, poor nutrition, obesity, tobacco use, and alcohol use.

The following goals were established by BID–Needham to respond to the CHNA and the strategic planning process. Please refer to the summary IS for more details (Appendix D).

| Priority Area 2: Chronic/Complex Conditions and their Risk Factors |
| --- |
| **Goal 1: Enhance Access to Health Education, Screening, Referral, and Chronic Disease Management Services in Clinical and Non-Clinical Settings** |
| **Goal 2: Reduce the Prevalence of Tobacco Use** |

## PRIORITY AREA 3: SOCIAL DETERMINANTS OF HEALTH AND ACCESS TO CARE

A dominant theme from the assessment was the tremendous impact that underlying social determinants of health, particularly access to affordable housing, transportation, poverty/employment, and food insecurity have on the entire population. The social determinants of health are often the drivers or underlying factors that create or exacerbate mental health issues, substance misuse, and chronic/complex conditions. These social determinants of health, particular poverty, underlie the access to care issues that were prioritized in the assessment: navigating the health system (including health insurance), chronic disease management, and access to culturally and linguistically competent care.

The following goals were established by BID–Needham to respond to the CHNA and the strategic planning process. Please refer to the summary IS for more details (Appendix D).

| Priority Area 3: Social Determinants of Health and Access to Care |
| --- |
| **Goal 1: Enhance Access to Care and Reduce the Impact of Social Determinants** |
| **Goal 2: Reduce Elder Falls and Promote Aging in Place** |

# Appendices

## Appendix A: Detailed Community Engagement Summary

## Appendix B: Data Book

## Appendix C: Resource Inventory

## Appendix D: Implementation Strategy

## Appendix E: Community Benefits Evaluation

# Appendix A: Detailed Community Engagement Summary

## KEY INFORMANT INTERVIEWS

| Name | Title/Affiliation | Sector(s) Represented/Population Served |
|---|---|---|
| Representative Denise Garlick | State Representative, 13th Norfolk District | Political leaders |
| Timothy Muir McDonald | Director, Needham Department of Public Health | Public Health/Municipal leadership |
| Jessica Tracy | Public Health Nurse, Dedham Department of Public Health | Public Health/Municipal leadership |
| Linda Shea | Director, Westwood Department of Public Health | Public Health/Municipal leadership |
| Carol Read | Director, Regional Substance Abuse Prevention Coalition | Community coalition; Substance use |
| Dr. David Buckle | Medical Director, Affiliated Physician Group | Clinical care |
| Marsha Medalie | Vice President and Chief Operating Officer, Riverside Community Care | Behavioral health |
| Latanya Steele | Director, Needham Council on Aging | Older adult health/healthy aging |
| Janet Claypoole | Director, Dover Council on Aging | Older adult health/healthy aging |
| Sheila Pransky | Director, Dedham Council on Aging | Older adult health/healthy aging |
| Lina Arena DeRosa | Director, Westwood Council on Aging | Older adult health/healthy aging |
| Sandra Robinson | Executive Director, Needham Community Council | Social services |
| Dennis Catalado | President, Cataldo Ambulance | First responders/EMS |
| Barbara Waterhouse | Founder/Executive Director, Circle of Hope | Social services; Housing |

### *Key Informant Interview Guide*

**Introduction:** As you may know, the Hospital is conducting a Community Health Needs Assessment (CHNA) to better understand the health needs of those living in its service area. This assessment, and a subsequent Implementation Strategy, is required of all non-profit hospitals to meet state Attorney General and Federal IRS requirements. The Implementation Strategy will outline how the hospital will work to address health needs and factors leading to poor health, as well as ways in which it will build on the community's strengths. It is therefore extremely important that the Hospital hear from a broad range of people living, working, and learning in the community. JSI has been contracted by the Hospital to conduct the assessment, which will include interviews, a Community Health Survey, and focus groups. This interview is part of the data collection and should take between 30-60 minutes. To ensure our data reflect your community or the community you serve, it is important that you speak openly and honestly. We'll be taking notes during the conversation, but will not link your name or personal information to your quotes without your permission. Do you have any questions before I get started?

- Question 1: Could you tell me more about yourself? How long have you worked at [name of organization]? Are you also a resident of a community within the service area? *Probe for information on programs/services offered through their organization, populations they work with, etc.*
- Question 2: The assessment is looking at health defined broadly – beyond clinical health issues, we're also looking at the root causes most commonly associated with ill-health (e.g. housing, transportation, employment/workforce, etc.) What do you see as the major contributors to poor health for those in the service area? *Try to identify top 2-3*

- Question 3: What clinical health issues (e.g. substance use, mental health, cancer, overweight/obesity, etc.) do you think are having the biggest impact on those in the service area? *Try to identify top 2-3*
- Question 4: What segments of the population have the most significant health needs or are most vulnerable? (e.g. young children, low-income, non-English speakers, older adults, etc.) *Do you see this changing in the future? Improving? Getting worse?*
- Question 5: How effectively do you think [Hospital] is currently meeting the needs of the community? Are there specific programs offered by [Hospital] that stand out to you as working well to address the needs of the community?
- Question 6: Where do you see opportunities for [Hospital] to implement programs/services to address community health needs?
- Question 7: Are there programs or services offered by other community organizations that you think are working well to address the needs of the community? *Mention that we will be compiling a list of community organizations/resources for the Resource Inventory*
- Question 8: As we explained at the beginning of this interview, we will be making an effort to gather input from community residents as part of this assessment. Can you recommend any strategies to engage hard-to-reach populations? *Any coalitions or advocacy groups that work with hard-to-reach populations? Any existing meeting groups you think it would be appropriate to reach out to?*
- Question 9: Finally, we are working to gather quantitative data to characterize health status – this includes demographic and socioeconomic data, and disease-specific incidence, hospitalization, emergency department, and mortality data wherever it is available. Do you know of, or use, any local data sources (e.g. reports, other needs assessments, etc.)?

## FOCUS GROUPS

| Name of group | Population/Sector Represented | Date | Location | Number of attendees (approx.) |
|---|---|---|---|---|
| Needham Operations Team | BID-Needham's Operations Team is comprised of senior clinical and administrative leadership at the hospital. BID facilitated a focus group with this group at the beginning of the assessment process to review the purpose, approach and methods; discuss leading health issues and vulnerable populations; and strategic initiatives for BID-Needham. | December 3, 2018 | Beth Israel Deaconess-Needham | 15 |
| Interfaith Clergy Association | This focus group was facilitated by the Needham Public Health Department, using a focus group that included questions from BID-Needham's focus group guide, and questions from the Needham Public Health Department. A representative from BID-Needham's Community Benefits staff attended to co-facilitate and take notes. Participants included representatives from faith-based communities in Needham. | December 11, 2018 | Christ Church, Needham | 12 |
| Youth Resource Network | The Youth Resource Network is comprised of representatives from numerous organizations that serve youth and families in Needham, including schools, behavioral health providers, youth and family services, law enforcement, and community coalitions. This session was facilitated by the Needham Department of Public Health. A representative from BID-Needham's Community Benefits staff attended to co-facilitate and take notes. | February 6, 2019 | Needham Town Hall | 11 |
| Aging population (residents) | JSI facilitated a focus group with older adults at the Needham Senior Center. Residents were engaged to share their thoughts on leading health issues for older adults, barriers to care (e.g. housing, transportation, cost of care), and the availability of health-related services in their community. A representative from the Needham Department of Public Health took notes for this session. | March 8, 2019 | Needham Senior Center | 15 |
| Aging population (service providers) | The Needham Department of Public Health facilitated a focus group with representatives from organizations that serve older adults. Participants were | March 8, 2019 | Needham Senior Center | 12 |

| | | | | |
|---|---|---|---|---|
| | asked to share their thoughts on leading social determinants, clinical health issues, and vulnerable population segments within the older adult cohort. Participants were also asked to share thoughts on opportunities for the hospital and Town of Needham. | | | |

### *Focus Group Guide*

**Introduction & Purpose of Focus Group:** Beth Israel Deaconess Hospital–Needham is conducting a Community Health Needs Assessment (CHNA) to better understand the health needs of those living in its service area. This assessment, and a subsequent Implementation Strategy (IS) is required of all non-profit hospitals to meet state Attorney General and Federal IRS requirements.

The IS will outline how the hospital will work to address health needs and factors leading to poor health, as well as ways in which it will build on the community's strengths. It is therefore extremely important that the Hospital hear from a broad range of people living, working, and learning in the community. To ensure our data reflect your community or the community you serve, it is important that you speak openly and honestly. We'll be taking notes during the conversation, but will not link your name or personal information to your quotes without your permission.

- Question 1: The assessment is looking at health defined broadly – beyond clinical health issues, we're also looking at the root causes of ill-health (e.g. housing, transportation, employment/workforce, poverty), also called the "social determinants of health." What social determinants do people struggle with the most in your community? *Try to identify top 2-3*
- Question 2: What clinical health issues (e.g. substance use, mental health, cancer, overweight/obesity) are having the biggest impact on those in your community? *Try to identify top 2-3*
- Question 3: What segments of the population have the most significant health needs or are most vulnerable for poor health? (e.g. young children, low-income, non-English speakers, older adults, racial/ethnic minorities) *Do you see this changing in the future? Improving? Getting worse?*
- Question 4: How effectively do you think the Hospital is currently meeting the needs of your community?
- Question 5: Where do you see opportunities for the Hospital to implement programs/services to address community health needs?
- Question 6: Are there programs or services offered by other community organizations that you think are working well to address the needs of the community?
- Question 7: We will be making an effort to gather input from community residents as part of this assessment. Can you recommend any strategies to engage hard-to-reach populations?

## COMMUNITY MEETING

| Name of group | Population/Sector Represented | Date | Location | Number of attendees (approx.) |
|---|---|---|---|---|
| Community Meeting | Community residents | March 27, 2019 | Charles River YMCA (Needham) | 27 |

JSI facilitated a community forum with residents of BID-Needham's service area at the Charles River YMCA. This location as chosen as it represented a safe, neutral, and accessible location for community residents to share their thoughts. The forum was advertised via the following distribution channels:

- Local papers in Needham, Dedham, Dover, and Westwood
- Online through the BID-Needham social media channels
- Online through the Needham Department of Public Health
- Postings at local housing authorities, food pantries, and community/social service organizations (translated into Russian and Chinese)

JSI facilitated this session by presenting a high-level overview of quantitative data findings from the BID-Needham Community Health Needs Assessment. Translation/interpretation in Russian and Chinese were offered but were not needed. Transportation to/from the Needham Housing Authority to the session was offered, as was free childcare. A question and answer session was then facilitated.

### *Community Meeting Discussion Topics*

- What are the leading social determinants of health (e.g. transportation, housing, food insecurity, poverty/employment) that people struggle with in your community?
- What are the leading clinical health issues that people struggle with in your community? (e.g. mental health, substance use, chronic/complex conditions)
- What populations are particularly vulnerable or at-risk for poor health?
- Where are there opportunities for BID-Needham to improve community health?
- What services/programs provided by the Town of Needham are working well, and where are there opportunities to improve?

## COMMUNITY HEALTH SURVEY

***Distribution channels:***

### *Community Health Survey Questions*

Beth Israel Deaconess Hospital Needham is conducting a Community Health Needs Assessment to better understand the most pressing health-related issues for residents in the communities they serve. It is important that the hospital gathers input from people living, working, and learning in the community. The information gathered will help the hospital to improve its services.

Please take about 10 minutes to complete this survey. Your responses will be anonymous.

This survey has been shared widely. **Please complete this survey only once**.

Please email Madison MacLean (madison_maclean@jsi.com) with questions.

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**Question 1: Do you live, work, and/or learn in Dedham, Dover, Needham, or Westwood?**

__ YES, I live, work, and/or learn in DEDHAM __ YES, I live, work, and/or learn in DOVER

__ YES, I live, work, and/or learn in NEEDHAM __ YES, I live, work, and/or learn in WESTWOOD

__ NO, I do not live, work, and/or learn in any of those towns.

**Question 2: What is your age?**

__ Under 18 __ 18 to 24 __ 23 to 34 __ 35 to 44

__ 45 to 54 __ 55 to 64 __ 65 to 74 __ 75 or older

**Question 3: Are you Hispanic, Latino/a, or of Spanish origin?** __Yes __No

**Question 4: What race best describes you? Select all that apply.**

__ White __ Black or African American __ Asian

__ Native Hawaiian or Pacific Islander __ American Indian or Alaska Native __ Other

***Please answer Questions 5-7 with your community and/or the population(s) you serve in mind.***

**Question 5A: Choose the top three (3) challenges that prevent people in your community from achieving and maintaining good health. Rank your top three (3) answers, with 1 being the greatest challenge.**

__ Lack of affordable/safe housing

__ Lack of access to transportation

__ Long commute to and from work or school

__ Crime or violence

__ Limited or no education

__ Lack of social support / social isolation

__ Physical inactivity or sedentary lifestyles

__ No or limited health insurance

__ High cost of health care

__ Food insecurity / unable to acquire healthy foods

__ Co-payments for medication

__ Social attitudes (e.g. discrimination, racism, distrust of providers)

__ Socioeconomic conditions (e.g. poverty, low wages, limited job opportunities)

__ Lack of health care providers that meet cultural, language, and/or social needs of patients

__ Limited access to health care (lack of providers or availability of appointments)

__ Inability to walk/ride a bike due to bad road conditions and/or no sidewalks

**Question 5B:** Are there other things that prevent people in your community from achieving and maintain good health? Please specify.

**Question 6A: Choose the three (3) health conditions that have the greatest impact on your community. Rank your top three answers, with 1 being the condition that has the most impact.**

__ Cancer

__ Cardiovascular conditions (e.g. hypertension/high blood pressure, heart disease, stroke)

__ Respiratory diseases (e.g. asthma, chronic obstructive pulmonary disease [COPD], emphysema)

__ Mental health (e.g. depression, anxiety, stress, trauma)

__ Substance use (e.g. alcohol, opioids, tobacco, e-cigarettes/vaping, marijuana)

__ Physical inactivity, nutrition, and/or obesity

__ Infectious disease (e.g. influenza, HIV/AIDS, sexually transmitted infections, hepatitis C)

__ Maternal and child health issues (e.g. prenatal care, teen pregnancy, infant mortality)

__ Diabetes

__ Oral health

__ Neurological disorders (e.g. Alzheimer's, Parkinson's, dementia)

__ Mobility impairments (e.g. falls, arthritis, fibromyalgia)

**Question 6B: Are there other health conditions that impact your community? Please specify.**

**Question 7A: Choose the top three (3) populations that you think have the most significant health-related needs. Rank your top three (3), with 1 being the group with the most significant needs.**

__ Young children (0-5 years of age) __ School age children (6-11 years of age)

__ Adolescents (12-17 years of age) __ Young Adults (18-24 years of age)

__ Older Adults (older than 65 years of age) __ Immigrants/Refugees

__ Racial/Ethnic Minorities __ Non-English Speakers

__ Homeless/Unstably housed __ Low-income populations

__ Those with disabilities (physical, cognitive, development, emotional)

__ Lesbian, Gay, Bisexual, Transgender, Queer/Questioning (LGBTQ)

**Question 7B:** Are there other populations that have significant health-related needs?

**Question 8: Which (if any) programs or services offered by Beth Israel Deaconess Needham have you attended? Check all that apply.**

__ Diabetes Fair __ Cancer screenings

__ Cholesterol/blood pressure screenings __ Community education lectures

__ CPR courses __ Support groups

**Question 9: Which (if any) of these programs do you think works well to address the needs of your community? Check all that apply.**

__ Diabetes Fair __ Cancer screenings

__ Cholesterol/blood pressure screenings __ Community education lectures

__ CPR courses __ Support groups

__ None

**Question 10: Which health services in your community are hard to access? Check all that apply.**

__ Primary care (e.g. family, general practice, internal medicine physicians)

__ Emergency care

__ Urgent care (e.g. immediate care centers, Minute Clinics)

__ Oral health care (e.g. dentists, oral surgeons)

__ Specialty care (e.g. cardiology, dermatology, oncology, endocrinology)

__ OB/GYN (e.g. female reproductive system, maternity care)

__ Pharmacies

__ Inpatient or residential drug and alcohol treatment (e.g. rehabilitation and detoxification)

__ Outpatient drug and alcohol treatment (e.g. medication-assisted treatment, outpatient clinics)

__ Inpatient mental health treatment (e.g. residential treatment, psychiatric hospitals, hospital inpatient units)

__ Outpatient mental health treatment (e.g. community mental health centers, mental health counseling)

__ Long term care (e.g. assisted living, skilled nursing facilities/nursing homes, convalescent homes)

**Question 11: Are there other health services in your community that are hard to access? Please specify.**

**Question 12: What programs or services should Beth Israel Deaconess Hospital–Needham offer or support to improve community health? Please specify.**

**Question 13: How did you hear about this survey?**

__ Beth Israel Deaconess Needham

__ Community Health Network Area 18 (CHNA 18)

__ Council on Aging or Senior Center

__Housing Authority

__Newspaper

__Other (Please specify):

**Question 14: Please provide any additional thoughts on how Beth Israel Deaconess Hospital–Needham could improve health in your community.**

**Thank you for your input. Please contact Madison MacLean (Madison_Maclean@jsi.com) with questions.**

# Appendix B: Beth Israel Deaconess Hospital–Needham Data Book

**Key**

Statistically higher than statewide rate

Statistically lower than statewide rate

| | | Primary Service Area | | | | |
|---|---|---|---|---|---|---|
| | **MA** | **Dedham** | **Dover** | **Needham** | **Westwood** | *Source* |
| **Demographics** | | | | | | |
| Population | 6,789,319 | 25377 | 5922 | 30429 | 15597 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Median age (years) | 39.4 | 43.3 | 44.7 | 43.6 | 45 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Age under 18 (%) | 20.4 | 19.3 | 27.6 | 26.9 | 26.8 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Age over 65 (%) | 15.5 | 19.8 | 16.1 | 18.2 | 19.3 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Race / Ethnicity / Culture | | | | | | |
| White alone (%) | 78.9 | 84 | 87.2 | 86.6 | 89.5 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Black or African American alone (%) | 7.4 | 8.6 | 3 | 2.1 | 0.3 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Asian alone (%) | 6.3 | 2.6 | 8 | 8.2 | 7.6 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Native Hawaiian and Other Pacific Islander (%) | 0 | 0 | 0 | 0 | 0 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| American Indian and Alaska Native (%) | 0.2 | 0.2 | 0 | 0 | 0 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Some Other Race (%) | 4.1 | 2.4 | 0 | 0.5 | 1.1 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Two or More Races (%) | 3.1 | 2.2 | 1.7 | 2.7 | 1.6 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Hispanic or Latino of Any Race (%) | 11.2 | 8.3 | 4.7 | 2.7 | 1.9 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Foreign Born (%) | 16.2 | 14.7 | 15.3 | 14 | 12.8 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Language Spoken at Home by Population 5 Years and Older | | | | | | |
| Language other than English | 23.1 | 18.6 | 17.3 | 16.6 | 16.5 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| speak English less than "very well" (%) | 9.1 | 5.5 | 3.0 | 4.4 | 4.3 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Speak Spanish at home (%) | 8.8 | 6.7 | 4.3 | 1.8 | 1.6 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| speak English less than "very well" (%) | 3.6 | 2.3 | 1.2 | 0.3 | 0.2 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Other Indo-European languages (%) | 8.8 | 8.1 | 8.8 | 8.6 | 7.4 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| speak English less than "very well" (%) | 3.1 | 2.0 | 0.2 | 2.1 | 1.5 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Asian and Pacific Islander Languages (%) | 4.2 | 2.1 | 4.1 | 4.1 | 6.0 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| speak English less than "very well" (%) | 2.0 | 0.4 | 1.6 | 1.5 | 2.2 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Household | | | | | | |
| Total households | 2,585,715.0 | 9,872.0 | 2,011.0 | 10,652.0 | 5,521.0 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Family households (families) (%) | 63.7 | 62.7 | 87.3 | 77.3 | 76.6 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| In married couple family (%) | 47.2 | 49.8 | 78.6 | 68.2 | 67.9 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Average family size | 3.1 | 3.2 | 3.2 | 3.2 | 3.3 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Income/Poverty | | | | | | |
| Unemployment Rate among Civilian Labor Force (%) | 6.0 | 5.0 | 2.8 | 4.3 | 3.9 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Median household income (dollars) | 74,167 | 89,514 | 204,018 | 141,690 | 145,799 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Below federal poverty line - all residents (%) | 11.1 | 5.0 | 0.8 | 3.0 | 1.9 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Below federal poverty line - families (%) | 7.8 | 2.2 | - | 2.5 | 1.4 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Below federal poverty line - under 18 years (%) | 14.6 | 4.7 | - | 1.2 | 2.4 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Below federal poverty line - age 65+ (%) | 9.0 | 5.3 | - | 6.8 | 2.1 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Below federal poverty line - female head of household, no husband present (%) | 24.4 | 9.8 | - | 13.1 | 5.8 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Below 200% of poverty level | 23.7 | 14.6 | 1.8 | 5.8 | 5.3 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Below 300% of poverty level | 36.4 | 25.5 | 5.5 | 11.1 | 11.1 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |

| | | Primary Service Area | | | | |
|---|---|---|---|---|---|---|
| | MA | Dedham | Dover | Needham | Westwood | *Source* |
| **Demographics** | | | | | | |
| Below 400% of poverty level | 48.6 | 37.0 | 13.7 | 17.0 | 20.4 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| With cash public assistance income (%) | 2.8 | 1.3 | 0.6 | 1.0 | 1.1 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| With Food Stamp/SNAP benefits in the past 12 months (%) | 12.3 | 6.4 | - | 2.8 | 1.3 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Health Insurance | | | | | | |
| Without insurance (%) | 3.0 | 2.3 | 1.4 | 1.4 | 0.9 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| With public insurance (%) | 35.5 | 32.5 | 21.2 | 22.7 | 23.7 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| With private insurance (%) | 74.2 | 81.7 | 90.8 | 90.0 | 90.3 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Transportation | | | | | | |
| Takes car, truck, van (alone) to work (%) | 70.7 | 70.9 | 70.5 | 71.4 | 67.6 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Takes car, truck, van (carpool) to work (%) | 7.5 | 8.2 | 6.1 | 6.0 | 4.8 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Takes public transportation (excluding cab) to work (%) | 10.2 | 10.8 | 8.4 | 10.6 | 17.2 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Mean commute time (minutes) | 29.3 | 30.5 | 34.8 | 30.4 | 34.0 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Worked outside county of residence (%) | 30.8 | 51.4 | 50.0 | 55.5 | 52.1 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Housing | | | | | | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Vacant housing units (%) | 9.7 | 3.7 | 4.8 | 2.8 | 6.1 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Owner-occupied (%) | 62.4 | 69.1 | 95.7 | 82.6 | 86.1 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Avg household size of owner occupied | 2.7 | 2.7 | 2.9 | 3.0 | 3.0 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Monthly owner costs exceed 30% of household income (%) | 31.5 | 27.0 | 34.0 | 27.8 | 29.7 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Renter-occupied (%) | 37.6 | 30.9 | 4.3 | 17.4 | 13.9 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Avg household size of renter occupied | 2.3 | 2.0 | 3.1 | 1.7 | 1.5 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Gross rent exceeds 30% of household income (%) | 50.1 | 56.2 | 53.8 | 49.2 | 46.4 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Educational Attainment (Population 25 Years and Older) | | | | | | |
| High school degree or higher (%) | 90.3 | 93.6 | 98.3 | 97.7 | 97.5 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Bachelor's degree or higher (%) | 42.1 | 48.9 | 82.7 | 74.6 | 70.4 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| School Enrollment | | | | | | |
| Graduation rate(%), 2017 | 88.3 | 92.9 | 98.8 | 97.6 | 96.1 | Massachusetts Department of Elementary and Secondary Education School and District Profiles |
| Drop out rate(%), 2017 | 4.9 | 2.5 | 0 | 0.2 | 0.4 | Massachusetts Department of Elementary and Secondary Education School and District Profiles |
| First language not English, 2018-19 | 21.9 | 14.9 | 5.8 | 9.6 | 5.2 | Massachusetts Department of Elementary and Secondary Education School and District Profiles |
| English language learners(%), 2018-19 | 10.5 | 7.3 | 3.2 | 2.9 | 0.9 | Massachusetts Department of Elementary and Secondary Education School and District Profiles |
| Students with Disabilities(%), 2018-19 | 18.1 | 23.2 | 13.1 | 17.2 | 16.9 | Massachusetts Department of Elementary and Secondary Education School and District Profiles |
| High Needs, 2018-19 | 47.6 | 42.4 | 19.7 | 24.2 | 22.4 | Massachusetts Department of Elementary and Secondary Education School and District Profiles |
| Economically disadvantaged(%), 2018-19 | 31.2 | 23 | 2 | 9.1 | 4.8 | Massachusetts Department of Elementary and Secondary Education School and District Profiles |
| Total Expenditures per Pupil, 2017 | $15,911.38 | $19,638.73 | $23,288.60 | $17,306.62 | $17,594.98 | Massachusetts Department of Elementary and Secondary Education School and District Profiles |
| Crime | | | | | | |
| Violent crime counts | 23,393 | 10.00 | 1 | 9 | 19 | FBI Uniform Crime Reports 2017 |
| Murder/non-negligent manslaughter | 171 | 0 | 0 | 1 | 0 | FBI Uniform Crime Reports 2017 |
| Forcible rape | 2,012 | 2 | 0 | 2 | 6 | FBI Uniform Crime Reports 2017 |
| Robbery | 4,643 | 6 | 0 | 0 | 1 | FBI Uniform Crime Reports 2017 |
| Aggravated assault | 16,567 | 2 | 1 | 6 | 12 | FBI Uniform Crime Reports 2017 |
| Property crime counts | 92,614 | 427 | 18 | 194 | 165 | FBI Uniform Crime Reports 2017 |

| | | Primary Service Area | | | | |
|---|---|---|---|---|---|---|
| | MA | Dedham | Dover | Needham | Westwood | *Source* |
| **Demographics** | | | | | | |
| Burglary | 16,371 | 15 | 1 | 6 | 10 | FBI Uniform Crime Reports 2017 |
| Larceny-theft | 68,955 | 397 | 15 | 187 | 153 | FBI Uniform Crime Reports 2017 |
| Motor vehicle theft | 7,288 | 15 | 2 | 1 | 2 | FBI Uniform Crime Reports 2017 |
| Arson | 373 | 0 | 0 | 1 | 0 | FBI Uniform Crime Reports 2017 |
| Violent crime rate (per 100,000) | 353 | 39 | 17 | 29 | 116 | FBI Uniform Crime Reports 2017 |
| Murder/non-negligent manslaughter | 3 | 0 | 0 | 3 | 0 | FBI Uniform Crime Reports 2017 |
| Forcible rape | 30 | 8 | 0 | 6 | 37 | FBI Uniform Crime Reports 2017 |
| Robbery | 70 | 24 | 0 | 0 | 6 | FBI Uniform Crime Reports 2017 |
| Aggravated assault | 250 | 8 | 17 | 19 | 73 | FBI Uniform Crime Reports 2017 |
| Property crime rate (per 100,000) | 1,398 | 1684 | 297 | 625 | 1009 | FBI Uniform Crime Reports 2017 |
| Burglary | 247 | 59 | 17 | 19 | 61 | FBI Uniform Crime Reports 2017 |
| Larceny-theft | 1,041 | 1566 | 248 | 602 | 936 | FBI Uniform Crime Reports 2017 |
| Motor vehicle theft | 110 | 59 | 33 | 3 | 12 | FBI Uniform Crime Reports 2017 |
| Arson | 6 | 0 | 0 | 3 | 0 | FBI Uniform Crime Reports 2017 |

**MOE = Margin of Error**

**TABLE C16001:** LANGUAGE SPOKEN AT HOME BY ABILITY TO SPEAK ENGLISH FOR THE POPULATION 5 YEARS AND OLDER, 2013-2017 AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES

| | DEDHAM | | | DOVER | | | NEEDHAM | | | WESTWOOD | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Estimate | MOE (+/-) | % of Total Pop 5+ | Estimate | MOE (+/-) | % of Total Pop 5+ | Estimate | MOE (+/-) | % of Total Pop 5+ | Estimate | MOE (+/-) | % of Total Pop 5+ |
| Population 5 years and over | 23,737 | 244 | | 5,663 | 101 | | 28,680 | 250 | | 14,964 | 143 | |
| Speak only English at home | 19,332 | 632 | 81.44 | 4,685 | 284 | 82.73 | 23,905 | 595 | 83.35 | 12,502 | 398 | 83.55 |
| **SPANISH or SPANISH CREOLE** | 1602 | 425 | 6.75 | 241 | 121 | 4.26 | 516 | 211 | 1.80 | 232 | 161 | 1.55 |
| Speak English less than "very well" | 556 | 252 | 2.34 | 67 | 57 | 1.18 | 84 | 69 | 0.29 | 25 | 32 | 0.17 |
| **FRENCH (Incl. Haitian, Cajun)** | 381 | 152 | 1.61 | 70 | 61 | 1.24 | 163 | 115 | 0.57 | 89 | 61 | 0.59 |
| Speak English less than "very well" | 135 | 93 | 0.57 | 7 | 11 | 0.12 | 42 | 62 | 0.15 | 10 | 16 | 0.07 |
| **GERMAN or WEST GERMANIC** | 94 | 58 | 0.40 | 89 | 85 | 1.57 | 100 | 68 | 0.35 | 76 | 52 | 0.51 |
| Speak English less than "very well" | 8 | 13 | 0.03 | 0 | 17 | 0.00 | 48 | 50 | 0.17 | 0 | 19 | 0.00 |
| **RUSSIAN, POLISH, OTHER SLAVIC LANGUAGES** | 282 | 137 | 1.19 | 89 | 74 | 1.57 | 952 | 337 | 3.32 | 207 | 127 | 1.38 |
| Speak English less than "very well" | 77 | 53 | 0.32 | 0 | 17 | 0.00 | 323 | 137 | 1.13 | 9 | 15 | 0.06 |
| **OTHER INDO-EUROPEAN LANGUAGES** | 1173 | 336 | 4.94 | 250 | 109 | 4.41 | 1245 | 413 | 4.34 | 734 | 239 | 4.91 |
| Speak English less than "very well" | 247 | 93 | 1.04 | 7 | 13 | 0.12 | 176 | 136 | 0.61 | 210 | 100 | 1.40 |
| **KOREAN** | 0 | 23 | 0.00 | 56 | 69 | 0.99 | 69 | 71 | 0.24 | 60 | 49 | 0.40 |
| Speak English less than "very well" | 0 | 23 | 0.00 | 30 | 45 | 0.53 | 10 | 16 | 0.03 | 36 | 30 | 0.24 |
| **CHINESE (Incl. Mandarin, Cantonese)** | 121 | 93 | 0.51 | 140 | 134 | 2.47 | 932 | 280 | 3.25 | 620 | 290 | 4.14 |
| Speak English less than "very well" | 41 | 62 | 0.17 | 46 | 54 | 0.81 | 380 | 180 | 1.32 | 234 | 145 | 1.56 |
| **VIETNAMESE** | 21 | 25 | 0.09 | 0 | 17 | 0.00 | 92 | 119 | 0.32 | 0 | 19 | 0.00 |
| Speak English less than "very well" | 0 | 23 | 0.00 | 0 | 17 | 0.00 | 50 | 75 | 0.17 | 0 | 19 | 0.00 |
| **TAGALOG (Incl. Filipino)** | 40 | 36 | 0.17 | 0 | 17 | 0.00 | 27 | 36 | 0.09 | 40 | 37 | 0.27 |
| Speak English less than "very well" | 0 | 23 | 0.00 | 0 | 17 | 0.00 | 1 | 2 | 0.00 | 0 | 19 | 0.00 |
| **OTHER ASIAN LANGUAGES** | 310 | 194 | 1.31 | 36 | 43 | 0.64 | 69 | 67 | 0.24 | 185 | 182 | 1.24 |
| Speak English less than "very well" | 62 | 49 | 0.26 | 13 | 20 | 0.23 | 1 | 3 | 0.00 | 55 | 70 | 0.37 |
| **ARABIC** | 319 | 229 | 1.34 | 0 | 17 | 0.00 | 193 | 222 | 0.67 | 218 | 164 | 1.46 |
| Speak English less than "very well" | 169 | 148 | 0.71 | 0 | 17 | 0.00 | 16 | 25 | 0.06 | 70 | 62 | 0.47 |
| **OTHER AND UNSPECIFIED LANGUAGES** | 62 | 49 | 0.26 | 7 | 11 | 0.12 | 417 | 225 | 1.45 | 1 | 2 | 0.01 |
| Speak English less than "very well" | 6 | 9 | 0.03 | 0 | 17 | 0.00 | 143 | 111 | 0.50 | 1 | 2 | 0.01 |

**MAH SERVICE AREA:** TOP 5
ANCESTRIES BY TOWN

*All data from US Census Bureau American Community Survey, 2013-2017 5-Year Estimates; B04006: People Reporting Ancestry*

| DEDHAM | Estimate | MOE | % |
|---|---|---|---|
| **Total Pop** | 25,377 | 30 | |
| Irish | 7,827 | 625 | 30.84 |
| Italian | 3,077 | 392 | 12.13 |
| English | 2,291 | 393 | 9.03 |
| German | 1,528 | 385 | 6.02 |
| Polish | 969 | 210 | 3.82 |

| DOVER | Estimate | MOE | % |
|---|---|---|---|
| **Total Pop** | 5,922 | 20 | |
| Irish | 1,233 | 269 | 20.82 |
| English | 812 | 165 | 13.71 |
| German | 778 | 230 | 13.14 |
| Italian | 544 | 182 | 9.19 |
| Russian | 305 | 171 | 5.15 |

| NEEDHAM | Estimate | MOE | % |
|---|---|---|---|
| **Total Pop** | 30,429 | 37 | |
| Irish | 6,799 | 835 | 22.34 |
| Italian | 3,372 | 521 | 11.08 |
| English | 3,145 | 448 | 10.34 |
| German | 2,574 | 438 | 8.46 |
| Russian | 2,434 | 459 | 8.00 |

| WESTWOOD | Estimate | MOE | % |
|---|---|---|---|
| **Total Pop** | 15,597 | 34 | |
| Irish | 4,938 | 541 | 31.66 |
| Italian | 2,430 | 422 | 15.58 |
| English | 1,695 | 358 | 10.87 |
| German | 1,034 | 276 | 6.63 |
| American | 732 | 246 | 4.69 |

| MASSACHUSETTS | Estimate | MOE | % |
|---|---|---|---|
| **Total Pop** | 6,789,319 | | |
| Irish | 1,403,567 | 11,116 | 20.67 |
| Italian | 871,822 | 8,323 | 12.84 |
| English | 647,855 | 6,278 | 9.54 |
| French (except Basque) | 437,190 | 5,490 | 6.44 |
| German | 400,519 | 4,838 | 5.90 |

**Key**

Statistically higher than statewide rate

Statistically lower than statewide rate

| | | Primary Service Area | | | | |
|---|---|---|---|---|---|---|
| | *MA* | *Dedham* | *Dover* | *Needham* | *Westwood* | Source |
| **Demographics** | | | | | | |
| All cause | | | | | | |
| Deaths, 2015 | 684.5 | 738.8 | 438.2 | 551 | 602.3 | MDPH Registry of Vital Records and Statistics |
| Premature mortality for <75 yr population, 2015 | 279.6 | 306 | --1 | 156.6 | 185.3 | MDPH Registry of Vital Records and Statistics |
| Injuries and Poisonings | | | | | | |
| Deaths, 2015 | 58.0 | 57.3 | --1 | 21.7 | --1 | MDPH Registry of Vital Records and Statistics |
| Motor Vehicle Related | | | | | | |
| Deaths, 2015 | 5.4 | --1 | 0 | 0 | 0 | MDPH Registry of Vital Records and Statistics |
| Assault | | | | | | |
| Deaths, 2015 | 2.0 | 0 | 0 | 0 | 0 | MDPH Registry of Vital Records and Statistics |
| **Behavioral Health** | | | | | | |
| Admissions to BSAS Contracted/Licensed Programs FY17 | | | | | | |
| **Number of people served** | 81,006 | 235 | 0-100 | 0-100 | 0-100 | MA Bureau of Substance Abuse Services (BSAS) |
| **Number of admissions** | 109,001 | 250 | 0-100 | 0-100 | 0-100 | MA Bureau of Substance Abuse Services (BSAS) |
| % Male | 67.8 | 79.2 | 80 | 63.3 | 54.8 | MA Bureau of Substance Abuse Services (BSAS) |
| % Black of African American | 7.3 | 5.2 | 0 | 0 | 0 | MA Bureau of Substance Abuse Services (BSAS) |
| % Multi-Racial | 6.3 | 7.7 | 0 | * | 14.5 | MA Bureau of Substance Abuse Services (BSAS) |
| % Other | 9.4 | 3.2 | 0 | * | * | MA Bureau of Substance Abuse Services (BSAS) |
| % White | 77.1 | 83.9 | 100 | 93.2 | 83.9 | MA Bureau of Substance Abuse Services (BSAS) |
| % Hispanic | 14.0 | 4 | 0 | * | * | MA Bureau of Substance Abuse Services (BSAS) |
| % No Education/Less Than High School Education | 25.5 | 20.5 | * | * | 20 | MA Bureau of Substance Abuse Services (BSAS) |
| % College Degree or Higher | 7.4 | 7.7 | 70 | 22.8 | 18.2 | MA Bureau of Substance Abuse Services (BSAS) |
| % Less Than 18 | 1.3 | 0 | * | * | * | MA Bureau of Substance Abuse Services (BSAS) |
| % 18 to 25 | 14.7 | 20.4 | * | 35 | 11.3 | MA Bureau of Substance Abuse Services (BSAS) |
| % 26 to 30 | 21.7 | 26 | 0 | 26.7 | 43.5 | MA Bureau of Substance Abuse Services (BSAS) |
| % 31 to 40 | 30.9 | 28 | * | 11.7 | * | MA Bureau of Substance Abuse Services (BSAS) |
| % 41 to 50 | 17.6 | 12.8 | * | * | * | MA Bureau of Substance Abuse Services (BSAS) |
| % 51 and older | 13.9 | 12.8 | * | 18.3 | 21 | MA Bureau of Substance Abuse Services (BSAS) |
| % Employed at Enrollment | 44.9 | 49.6 | 100 | 60.5 | 62.5 | MA Bureau of Substance Abuse Services (BSAS) |
| % Homeless at Enrollment | 30.1 | 27.2 | 0 | | 18.9 | MA Bureau of Substance Abuse Services (BSAS) |
| % At Risk of Homelessness | 38.1 | 38.1 | 0 | | 15 | MA Bureau of Substance Abuse Services (BSAS) |
| % Past Year Needle Use | 47.6 | 47.7 | * | 27.1 | 36.7 | MA Bureau of Substance Abuse Services (BSAS) |
| % Prior Mental Health Treatment | 46.2 | 42.6 | * | 39 | 51.7 | MA Bureau of Substance Abuse Services (BSAS) |
| **Primary Substance of Use 2017** | | | | | | |

| | | Primary Service Area | | | | |
|---|---|---|---|---|---|---|
| | *MA* | *Dedham* | *Dover* | *Needham* | *Westwood* | Source |
| **Demographics** | | | | | | |
| Total Admissions | 98,948 | 235 | 0-100 | 0-100 | 0-100 | MA Bureau of Substance Abuse Services (BSAS) |
| % Alcohol | 32.8 | 31.9 | 80 | 50.8 | 45 | MA Bureau of Substance Abuse Services (BSAS) |
| % Crack/Cocaine | 4.1 | 3 | * | * | * | MA Bureau of Substance Abuse Services (BSAS) |
| % Heroin | 52.8 | 54.9 | * | 30.5 | 43.3 | MA Bureau of Substance Abuse Services (BSAS) |
| % Marijuana | 3.4 | 2.6 | * | * | * | MA Bureau of Substance Abuse Services (BSAS) |
| % Other | 0.3 | * | * | * | * | MA Bureau of Substance Abuse Services (BSAS) |
| % Other Opioids | 4.6 | 5.5 | * | * | * | MA Bureau of Substance Abuse Services (BSAS) |
| % Other sedatives/hypnotics | 1.5 | * | * | * | * | MA Bureau of Substance Abuse Services (BSAS) |
| % Other stimulants | 0.5 | * | * | * | * | MA Bureau of Substance Abuse Services (BSAS) |
| Mental Disorders (age adjusted per 100,000) | | | | | | |
| Deaths, 2015 | 62.9 | 96.3 | 0 | 61.4 | 61.4 | MDPH Registry of Vital Records and Statistics |
| Suicide Deaths, 2015 | 9.0 | --1 | --1 | --1 | --1 | MDPH Registry of Vital Records and Statistics |
| Opioids (age adjusted per 100,000) | | | | | | |
| Fatal Overdoses, 2015 | 24.6 | --1 | 0 | --1 | --1 | MDPH Registry of Vital Records and Statistics |
| Opioid-related overdose death count by city/town of residence for the decedent, 201 | 9,114 | 27 | 1 | 5 | 8 | MDPH Registry of Vital Records and Statistics |
| Opioid-related overdose death count by city/town of death occurence, 2014-2018 | 9,443 | 14 | 0 | 4 | 3 | MDPH Registry of Vital Records and Statistics |
| **Chronic Disease (age-adjusted rates per 100,000)** | | | | | | |
| Diabetes | | | | | | |
| Deaths, 2015 | 16.8 | 27.8 | 0 | --1 | 0 | MDPH Registry of Vital Records and Statistics |
| Hypertension | | | | | | |
| Deaths, 2015 | 6.9 | --1 | 0 | --1 | --1 | MDPH Registry of Vital Records and Statistics |
| Major cardiovascular disease | | | | | | |
| Deaths, 2015 | 180.8 | 182.5 | 131.4 | 136.4 | 209.1 | MDPH Registry of Vital Records and Statistics |
| Heart Disease | | | | | | |
| Deaths, 2015 | 138.7 | 149.3 | 131.4 | 104.5 | 164.1 | MDPH Registry of Vital Records and Statistics |
| Coronary Heart Disease | | | | | | |
| Deaths, 2015 | 82.3 | 99 | --1 | 65.1 | 108.4 | MDPH Registry of Vital Records and Statistics |
| Cerebrovascular | | | | | | |
| Deaths, 2015 | 28.4 | 25.6 | 0 | 22.9 | 30.4 | MDPH Registry of Vital Records and Statistics |
| Chronic lower respiratory diseases | | | | | | |
| Deaths, 2015 | 33.0 | 20.1 | 0 | 18.1 | 27.8 | MDPH Registry of Vital Records and Statistics |
| Asthma | | | | | | |
| Deaths, 2015 | 1.0 | 0 | 0 | --1 | --1 | MDPH Registry of Vital Records and Statistics |
| Chronic Liver Disease | | | | | | |
| Deaths, 2015 | 8.1 | --1 | 0 | --1 | --1 | MDPH Registry of Vital Records and Statistics |
| **Cancer (age-adjusted rates per 100,000)** | | | | | | |

| | | Primary Service Area | | | | |
|---|---|---|---|---|---|---|
| | *MA* | *Dedham* | *Dover* | *Needham* | *Westwood* | Source |
| **Demographics** | | | | | | |
| All-cause | | | | | | |
| Deaths, 2015 | 152.8 | 176.4 | 115.1 | 136.5 | 134.5 | MDPH Registry of Vital Records and Statistics |
| Breast (invasive, female) | | | | | | |
| Deaths, 2015 | 9.8 | --1 | 0 | 13.6 | 0 | MDPH Registry of Vital Records and Statistics |
| Colorectal | | | | | | |
| Deaths, 2015 | 12 | --1 | 0 | --1 | 0 | MDPH Registry of Vital Records and Statistics |
| Lung | | | | | | |
| Deaths, 2015 | 39 | 46 | --1 | 37.3 | 37 | MDPH Registry of Vital Records and Statistics |
| Prostate | | | | | | |
| Deaths, 2015 | 7 | --1 | --1 | 28.4 | --1 | MDPH Registry of Vital Records and Statistics |
| **Maternal and Child Health** | | | | | | |
| Infant Mortality, 2015 (rate per 1,000) | 4.3 | --1 | 0.0 | 0 | 0.0 | MDPH Registry of Vital Records and Statistics |
| **Infectious Disease** | | | | | | |
| Chlamydia cases (lab confirmed), 2017 | 29203 | 70 | 7 | 47 | 24 | MDPH Bureau of Infectious Disease and Laboratory Services |
| Gonorrhea cases (lab confirmed), 2017 | 7307 | 18 | 0 | 6 | <5 | MDPH Bureau of Infectious Disease and Laboratory Services |
| Syphillis cases (probable and confirmed), 2017 | 1091 | 8 | 0 | <5 | <5 | MDPH Bureau of Infectious Disease and Laboratory Services |
| Hepatitis A cases (confirmed), 2017 | 53 | 0 | 0 | 0 | 0 | MDPH Bureau of Infectious Disease and Laboratory Services |
| Chronic Hepatitis B (confirmed and probable), 2017 | 2023 | 6 | 0 | <5 | <5 | MDPH Bureau of Infectious Disease and Laboratory Services |
| Hepatitis C cases (confirmed and probable), 2017 | 7765 | 42 | <5 | 11 | 5 | MDPH Bureau of Infectious Disease and Laboratory Services |
| Pneumonia/Influenza | | | | | | |
| Confirmed Influenza cases, 2017 | 24278 | 93 | 15 | 95 | 35 | MDPH Bureau of Infectious Disease and Laboratory Services |
| Deaths, 2015 | 17.1 | 18.7 | 0 | 11 | 20.2 | MDPH Registry of Vital Records and Statistics |
| HIV/AIDS (age-adjusted rate per 100,000) | | | | | | |
| Incidence, 2017 | 1870 | <5 | 0 | 0 | <5 | MDPH Bureau of Infectious Disease and Laboratory Services |
| Deaths, 2015 | 1.1 | 0 | 0 | 0 | 0 | MDPH Registry of Vital Records and Statistics |
| Infectious and Parasitic Disease (age-adjusted rate per 100,000) | | | | | | |
| Deaths, 2015 | 18.9 | 14.2 | --1 | --1 | --1 | MDPH Registry of Vital Records and Statistics |
| **Older Adult Health (age-adjusted rate per 100,000)** | | | | | | |
| Alzheimers deaths | 20.2 | 21.5 | --1 | 24.6 | --1 | MDPH Registry of Vital Records and Statistics |
| Parkinson's deaths | 7.7 | 13.4 | 0 | --1 | --1 | MDPH Registry of Vital Records and Statistics |

**Key**

Statistically higher than statewide rate

Statistically lower than statewide rate

**Source:** Massachusetts Vital Statistics, 2015

| | | | | Primary Service Area | | | |
|---|---|---|---|---|---|---|---|
| | *MA* | *Norfolk County* | *Middlesex County* | *Dedham* | *Dover* | *Needham* | *Westwood* |
| **Cancer Mortality (Age-adjusted per 100,000), 2015** | | | | | | | |
| All Types (invasive) | 152.8 | 145.1 | 140.8 | 176.4 | 115.1 | 136.5 | 134.5 |
| Bladder | 4.7 | 4.0 | 4.0 | --1 | --1 | --1 | --1 |
| Bone | 0.3 | --1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Brain/Central Nervous System | 4.7 | 4.7 | 4.2 | --1 | 0.0 | --1 | 0.0 |
| Breast (female) | 9.8 | 16.6 | 16.2 | --1 | 0.0 | 13.6 | 0.0 |
| Cervical | 0.6 | 1.3 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Colorectal | 12 | 12.6 | 11.8 | --1 | 0.0 | --1 | 0.0 |
| Esophageal | 4.9 | 4.1 | 4.3 | --1 | 0.0 | --1 | --1 |
| Kaposi's Sarcoma | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Kidney | 3.5 | 3.1 | 4.1 | 0.0 | 0.0 | --1 | --1 |
| Larynx | 0.8 | 0.8 | 0.6 | 0.0 | 0.0 | --1 | 0.0 |
| Leukemia | 5.7 | 4.8 | 5.9 | 13.9 | 0.0 | --1 | --1 |
| Liver | 6 | 5.5 | 6.0 | --1 | 0.0 | --1 | 0.0 |
| Lung | 39 | 39.2 | 35.2 | 46.0 | --1 | 37.3 | 37.0 |
| Lymphoma (Hodgkin) | 0.2 | --1 | --1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lymphoma (Non-Hodgkin) | 5.2 | 5.0 | 4.9 | --1 | --1 | --1 | --1 |
| Melanoma of Skin | 2.3 | 2.0 | 1.9 | --1 | 0.0 | 0.0 | 0.0 |
| Multiple Myeloma | 3.1 | 3.4 | 3.1 | 0.0 | 0.0 | --1 | --1 |
| Oral Cavity | 2.4 | 1.3 | 3.2 | --1 | 0.0 | 0.0 | 0.0 |
| Ovary | 3.9 | 6.5 | 6.6 | --1 | 0.0 | --1 | --1 |
| Pancreatic | 11.3 | 10.4 | 10.6 | 28.7 | 0.0 | --1 | 0.0 |
| Prostate | 7 | 17.7 | 14.8 | --1 | --1 | 28.4 | --1 |
| Soft Tissue | 1.5 | 1.1 | 1.7 | 0.0 | 0.0 | --1 | --1 |
| Stomach | 3.2 | 3.0 | 3.5 | 0.0 | 0.0 | --1 | 0.0 |
| Testis | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Thyroid | 0.5 | --1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Uterine | 2.7 | 4.7 | 3.9 | --1 | 0.0 | --1 | --1 |

## Massachusetts Healthy Aging Community Profile

Key

Statistically higher than statewide rate

Statistically lower than statewide rate

| | | | | Primary Service Area | | | | |
|---|---|---|---|---|---|---|---|---|
| | MA | Norfolk County | Middlesex County | Dedham | Dover | Needham | Westwood | Source |
| **POPULATION CHARACTERISTICS** | | | | | | | | |
| Total population 65 years or older | 1049751 | 110873 | 228153 | 5014 | 952 | 5543 | 3016 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Population 65 years or older (% of total population) | 15.5 | 16.0 | 14.4 | 19.8 | 16.1 | 18.2 | 19.3 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Population 65-74 years (% of total population) | 8.7 | 8.6 | 8.0 | 8.2 | 9.7 | 9.4 | 7.7 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Population 75-84 years (% of total population) | 4.5 | 4.8 | 4.3 | 7.6 | 4.9 | 5.2 | 7.3 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| Population 85 years or older (% of total population) | 2.3 | 2.5 | 2.1 | 4.0 | 1.5 | 3.6 | 4.3 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| % of 65+ population living alone | 29.9 | 28.8 | 28.5 | 32.2 | 14.0 | 29.0 | 30.0 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| % of only English speakers 65 years or older | 17.7 | 18.0 | 16.7 | 22.7 | 17.7 | 20.2 | 19.9 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| % Language other than English over 65 years or older | 11.9 | 12.8 | 11.1 | 14.1 | 12.5 | 14.8 | 21.7 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| % of Spanish at home speakers 65 years or older | 7.0 | 6.8 | 6.5 | 11.4 | 4.6 | 3.9 | 15.9 | US Census Bureau, 2013-2017 ACS 5-Year Estimates |
| **WELLNESS & PREVENTION** | | | | | | | | |
| % 60+ injured in a fall within last 12 months | 10.6 | | | 9.8 | 8.8 | 9.1 | 8.8 | 2018 Massachusetts Healthy Aging Community Profile |
| % 65+ had hip fracture | 3.7 | | | 4.7 | 3.4 | 4.6 | 4.2 | 2018 Massachusetts Healthy Aging Community Profile |
| %60+ with self-reported fair or poor health status | 18.0 | | | 18.2 | 16.5 | 9.9 | 16.5 | 2018 Massachusetts Healthy Aging Community Profile |
| % 60+ with physical exam/check-up in past year | 89.3 | | | 91.5 | 91.3 | 88 | 91.3 | 2018 Massachusetts Healthy Aging Community Profile |
| **BEHAVIORAL HEALTH** | | | | | | | | |
| % 60+ with 15+ days poor mental health last month | 7.0 | | | 7.1 | 4.7 | 5.8 | 4.7 | 2018 Massachusetts Healthy Aging Community Profile |
| % 65+ with depression | 31.5 | | | 34.8 | 20.2 | 29.5 | 31.7 | 2018 Massachusetts Healthy Aging Community Profile |
| % 65+ with anxiety disorders | 25.4 | | | 26.9 | 15.5 | 22.7 | 24.9 | 2018 Massachusetts Healthy Aging Community Profile |
| % 65+ with substance use disorders (drug use +/or alcohol abuse) | 6.6 | | | 6.7 | 5 | 4.7 | 6.1 | 2018 Massachusetts Healthy Aging Community Profile |
| **CHRONIC DISEASE** | | | | | | | | |
| % 65+ with Alzheimer's disease or related dementias | 13.6 | | | 18 | 8.8 | 15.1 | 16.2 | 2018 Massachusetts Healthy Aging Community Profile |
| **LIVING WITH DISABILITY** | | | | | | | | |
| % 65+ with clinical diagnosis of deafness or hearing impairment | 16.1 | | | 19.8 | 19.3 | 24 | 22.7 | 2018 Massachusetts Healthy Aging Community Profile |
| % 65+ with clinical diagnosis of blindness or visual impairment | 1.5 | | | 1.8 | 1.1 | 1.4 | 1.2 | 2018 Massachusetts Healthy Aging Community Profile |
| % 65+ with clinical diagnosis of mobility impairments | 3.9 | | | 4.7 | 3.7 | 3.3 | 3.6 | 2018 Massachusetts Healthy Aging Community Profile |
| **ACCESS TO CARE** | | | | | | | | |
| % Medicare managed care enrollees | 23.1 | | | 21.2 | 15.2 | 17.3 | 18.3 | 2018 Massachusetts Healthy Aging Community Profile |
| % dually eligible for Medicare and Medicaid | 16.7 | | | 11.8 | 2.1 | 7.1 | 7 | 2018 Massachusetts Healthy Aging Community Profile |
| % 60+ with a regular doctor | 96.4 | | | 97.9 | 98.4 | 98 | 98.4 | 2018 Massachusetts Healthy Aging Community Profile |
| % 60+ who did not see doctor when needed due to cost | 4.1 | | | 2.8 | 1.8 | 1.4 | 1.8 | 2018 Massachusetts Healthy Aging Community Profile |
| # of nursing homes within 5 miles | 399 | | | 12 | 5 | 12 | 8 | 2018 Massachusetts Healthy Aging Community Profile |
| # of home health agencies | 299 | | | 47 | 14 | 34 | 25 | 2018 Massachusetts Healthy Aging Community Profile |
| # of adult day health centers | 131 | | | 0 | 0 | 1 | 1 | 2018 Massachusetts Healthy Aging Community Profile |
| **COMMUNITY VARIABLES & CIVIC ENGAGEMENT** | | | | | | | | |
| % of grandparents raising grandchildren | 0.8 | | | 0.4 | 0 | 0.6 | 0.3 | 2018 Massachusetts Healthy Aging Community Profile |
| # of assisted living sites | 238 | | | 3 | 0 | 3 | 2 | 2018 Massachusetts Healthy Aging Community Profile |
| Total of all crashes involving adult age 60+/town | 132351 | | | 693 | 113 | 642 | 638 | 2018 Massachusetts Healthy Aging Community Profile |
| # of medical transportation services for older people | 268 | | | 22 | 11 | 17 | 17 | 2018 Massachusetts Healthy Aging Community Profile |
| # of nonmedical transportation services for older people | 252 | | | 58 | 31 | 45 | 45 | 2018 Massachusetts Healthy Aging Community Profile |

**Notes:**

**1. Demographics:** Each American Community Survey (ACS) estimate is accompanied by the upper and lower bounds of the 90 percent confidence interval. A 90 percent confidence interval can be interpreted roughly as providing 90 percent certainty that the true number falls between the upper and lower bounds.

**2. Clinical indicators:** All data provided by MassCHIP are estimates associated with some margin of error. Percentages are accompanied by 95% confidence intervals, meaning the true value of the measure falls within the range 95% of the time. The difference between two groups is statistically significant if the 95% confidence intervals surrounding these two estimates do not overlap

For CHIA data, confidence intervals for year over year reflect change within geography rather than difference from statewide benchmark

# Appendix C: Resource Inventory

| MULTI-SECTOR COLLABORATIVES AND COMMUNITY HEALTH PARTNERSHIPS | |
|---|---|
| **ORGANIZATION** | **CITY** |
| Substance Prevention Alliance of Needham | Needham |
| Needham Coalition for Suicide Prevention | Needham |
| Needham Youth Coalition | Needham |
| CHNA 18 | |
| Green Needham Collaborative | Needham |
| Needham Human Rights Committee | Needham |
| Needham Area Immigration Justice Task Force | |
| **LOCAL PUBLIC DEPARTMENTS** | |
| **ORGANIZATION** | **CITY** |
| Local Health Departments and Boards of Health | |
| Local Fire Departments | |
| Local Police Departments | |
| Local School Departments | |
| **BUSINESS AND COMMUNITY DEVELOPMENT** | |
| **ORGANIZATION** | **CITY** |
| Local Chambers of Commerce | |
| **ADULT EDUCATION** | |
| **ORGANIZATION** | **CITY** |
| Needham Community Education | Needham |
| Bay State Learning Center | Dedham |
| Dover Community Education | Dover |
| **YOUTH AND FAMILY SERVICES** | |
| **Organizations** | **City** |
| Riverside Early Intervention | |
| Needham Early Childhood Council | Needham |
| Baby Basics, Inc. | Needham |
| Needham Youth Services | Needham |
| Parent Talk, Inc. | Needham |
| **FOOD SECURITY AND HEALTHY EATING** | |
| **Organizations** | **City** |
| Needham Community Council | Needham |
| Dedham Food Pantry | Dedhm |
| St. Dunstan's Episcopal Church | Dover |
| Westwood Food Pantry | Westwood |
| Needham Traveling Meals Program | Needham |

| FOOD SECURITY AND HEALTHY EATING (Continued) | |
|---|---|
| **Organizations** | **City** |
| Needham Community Farm | Needham |
| Needham Garden Club | Needham |
| **HOUSING** | |
| **Organizations** | **City** |
| Needham Housing Authority | Needham |
| Dedham Housing Authority | Dedham |
| Westwood Housing Authority | Westwood |
| **DOMESTIC VIOLENCE SERVICES** | |
| **Organizations** | **City** |
| Domestic Violence Action Committee | Needham |
| **MULTI SERVICE AGENCIES** | |
| **Organizations** | **City** |
| Needham Community Council | Needham |
| Westwood Community Chest | Westwood |
| **DISABILITY SERVICES** | |
| **Organizations** | **City** |
| Autism Support Services at TILL | Dedham |
| Needham Commission on Disabilities | Needham |
| **SERVICES FOR OLDER ADULTS** | |
| **Organizations** | **City** |
| Otrada | Needham Heights |
| Julia Ruth House | Westwood |
| The Center at the Heights | Needham |
| Retired Mens Club of Needham | Needham |
| **FAITH-BASED ORGANIZATIONS** | |
| **Organizations** | **City** |
| My Brother's Keeper | |
| Needham Clergy Asociation | Needham |

| HEALTH CARE SERVICES | | |
|---|---|---|
| **Organizations** | **City** | **Service type** |
| Interface Community Resources & Referral | Needham | Behavioral Health |
| BID Needham | Needham | Inpatient and Emergency Services |
| VNA Care Network | | Hospice and Palliative Care |
| Boston Foundation for Sight | Needham | Specialty Care |
| **RECREATION AND COMMUNITY CENTERS** | | |
| **Organizations** | **City** | |
| Community Center of Needham | Needham | |
| Friends of the Needham Rail Trail Greenway | Needham | |
| YMCA of Greater Boston, Charles River Branch | Needham | |

# Appendix D: Summary Implementation Strategy

# Beth Israel Deaconess–Needham
# Implementation Strategy
# 2020 - 2022

Between October 2018 and April 2019, Beth Israel Deaconess Hospital–Needham (BID–Needham) conducted a comprehensive Community Health Needs Assessment (CHNA) that included an extensive review of existing quantitative data as well as the collection of qualitative information through interviews, focus groups and community meetings. A resource inventory was also completed to identify existing health-related assets and service gaps. During this process, the Hospital made substantial efforts to engage administrative and clinical staff at the Hospital (including senior leadership) and community health stakeholders throughout the Hospital's community benefits service area. A detailed review of the CHNA approach, data collection methods, and community engagement activities are included in Appendix A of BID–Needham's 2019 CHNA Report.

Once BID–Needham's CHNA activities were completed, the Hospital's Community Benefits (CB) staff convened the BID–Needham Community Benefits Advisory Committee (CBAC) and the Hospital's Community Benefits Leadership Team (CBLT) and conducted a series of strategic planning meetings. These meetings allowed Hospital staff and a representative group of external community health stakeholders to review the quantitative and qualitative findings from the CHNA, prioritize the leading community health issues, identify segments of the population most at-risk (Priority Populations), review existing community benefits programming, and begin to develop the Hospital's 2020 – 2022 Implementation Strategy (IS). After these strategic planning meetings, the Hospital's CB Staff continued to work with the CBAC, CBLT, and other community partners to develop draft and final versions of BID–Needham's 2020-2022 Implementation Strategy. Below is a summary of BID–Needham's IS.

## CORE IMPLEMENTATION STRATEGY PRINCIPLES AND STATE PRIORITIES

In developing the IS, care was taken to ensure that BID–Needham's community health priorities were aligned with the Commonwealth of Massachusetts priorities set by the Commonwealth's Department of Public Health (MDPH). The table below outlines the four Community Benefit focus issues identified by MDPH and the Executive Office of Health and Human Services. In addition to the four focus issues, MDPH identified six health priorities to guide investments funded through the Determination of Need Process. The Massachusetts Attorney General's Office encourages hospitals to consider these priorities in the Community Benefits planning process.

Also included below is a brief discussion of a series of guiding principles that informed the Hospital's IS development process.

## State Community Health Priorities

| Community Benefits Priorities | Determination of Need Priority Areas |
|---|---|
| Chronic disease with a Focus on Cancer, Heart Disease, and Diabetes | Built Environment |
| Housing Stability/Homelessness | Social Environment |
| Mental Illness and Mental Health | Housing |
| Substance Use Disorders | Violence |
| | Education |
| | Employment |

The following are a range of programmatic ideas and principles that are critical to community health improvement and have been applied in the development of the IS provided below.

- **Social Determinants of Health:** With respect to community health improvement, especially for low income and disadvantaged populations, there is growing appreciation for the importance of addressing the underlying social determinants of health, "the conditions in which people are born, grow, live, work and age that may limit access, lead to poor health outcomes, and are at the heart of health inequities between and within communities."[1] The leading social determinants of health include issues of poverty, housing, food access, violence, racism/bigotry, and transportation. It is important that hospital implementation strategies include collaborative, cross-sector initiatives that address these issues.
- **Health Education and Prevention:** Primary prevention aims to prevent disease or injury before it ever occurs by reducing risks, preventing exposures to hazards, or altering unhealthy behaviors that can lead to disease or injury. Secondary and tertiary prevention aims to reduce the

[1] O. Solar and A. Irwin, World Health Organization, "A Conceptual Framework for Action on the Social Determinants of Health," Social Determinants of Health Discussion Paper 2 (Policy and Practice), 2010, available at http://www.who.int/social_ determinants/corner/SDHDP2.pdf.

impact of chronic disease or health conditions through early detection as well as behavior change and chronic disease management geared to helping people to manage health conditions, lessen a condition's impact, or slow its progress. Targeted efforts across the continuum to raise awareness about a particular condition, educate people about risk factors and protective factors, change unhealthy behaviors, and manage illness are critical to improving health status.

- **Screening and Referral:** Early identification of those with chronic and complex conditions, followed by efforts to ensure that those in need of education, further assessment, counseling, and treatment, are critical to preventing illness before it takes hold or managing illness so as to lessen or slow its impacts. A critical component of screening and referral efforts is taking steps to ensure that people are fully engaged in treatment, including linkages to a primary care provider.

- **Chronic Disease Management:** Learning how to manage an illness or condition, change unhealthy behaviors, and make informed decisions about your health can help you live a healthier life. Evidence-based chronic disease management or self-management education (SME) programs, implemented in community-based setting by clinical and non-clinical organizations, can help people to learn skills to manage their health conditions, improve eating and sleeping habits, reduce stress, maintain a healthy lifestyle.

- **Care Coordination and Service Integration:** Efforts to coordinate care and integrate services across the health care continuum are critical to community health improvement. These efforts involve bringing together providers and information systems to coordinate health services, patient needs, and information to help better achieve the goals of treatment and care.

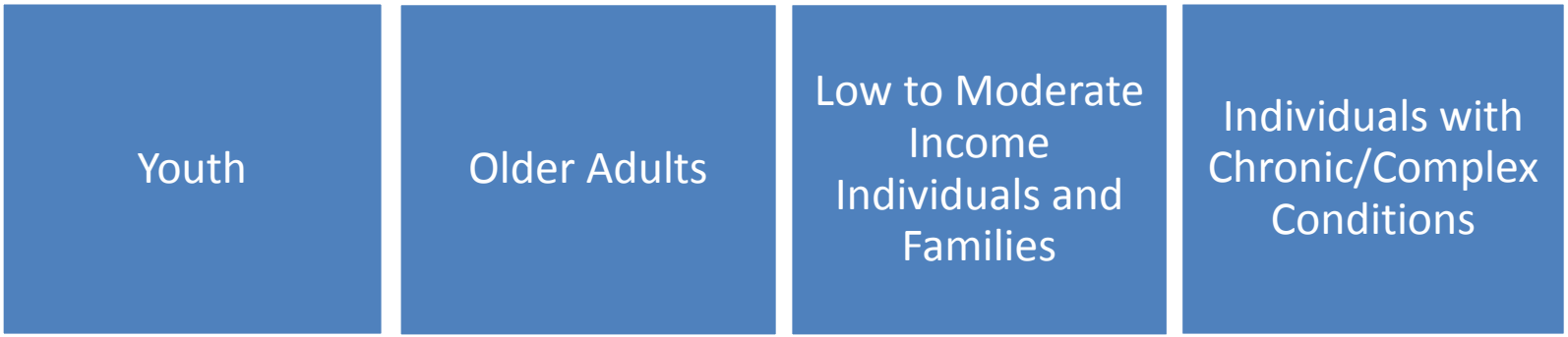
- **Patient Navigation and Access to Health Insurance:** One of the most significant challenges that people face in caring for themselves or their families across all communities is finding the services they need and navigating the health care system. Having health insurance that can help people to pay for needed services is a critical first step. The availability of insurance enrollment support, patient navigation, and resource inventories are important aspects of community health improvement.

- **Cross-sector Collaboration and Partnership:** When it comes to complex social challenges, such as community health improvement, there is a clear consensus that success will only be achieved through collective action, partnership and collaboration across organizations and health-related sectors. No one organization or even type of organization can have a sustained impact on these types of issues on their own. Hospital implementation strategies need to be collaborative and include partnerships with service providers across multiple sectors (e.g., health, public health, education, public safety, and community health).

## COMMUNITY HEALTH PRIORITY POPULATIONS AND NEEDS

BID–Needham is committed to improving the health status and well-being of all residents living throughout its service area. All geographic, demographic, and socioeconomic segments of the population face challenges of some kind that can hinder their ability to access care or maintain good health. Regardless of age, race/ethnicity, income, family history, or other characteristics, everyone is impacted in some way by health-related risks. With this in mind, BID–Needham's IS includes activities that will support residents throughout its service area, across all segments of the population.

However, based on the assessment's quantitative and qualitative findings there was broad agreement that BID–Needham's IS should prioritize certain demographic and socio-economic segments of the population that have complex needs or face especially significant barriers to care, service gaps, or adverse social determinants of health that put them at greater risk. More specifically, the assessment identified low to moderate income populations (including those who are uninsured or underinsured), individuals with chronic and/or complex conditions, older adults, and youth as priority populations that deserve special attention.




BID–Needham's CHNA approach and process provided many opportunities to vet the quantitative and qualitative data compiled during the assessment. Based on this process, the Hospital's Community Benefits staff, along with the CBAC, CBLT, and other stakeholders identified three community health priority areas, which together embody the leading health issues facing residents living in BID–Needham's Community Benefit Service Area. These three strategic domains are: 1) Mental Health and Substance Use, 2) Chronic/Complex Conditions and Their Risk Factors, and 3) Social Determinants of Health and Access to Care.


**Community Health Needs not Prioritized by BID–Needham's CBAC**

It is important to note that there are community health needs that were identified by BID–Needham's assessment that, due to the limited burden that these issues present and/or the feasibility of having an impact in the short- or long-term on these issues, were not prioritized for investment. Namely, Housing and education were identified as community needs, but these issues were deemed by the CBAC and the CBLT to be outside of BID–Needham's primary sphere of influence and have opted to allow others in its CBSA and the Commonwealth to focus on these issues. This is not to say that BID–Needham will not support efforts in these areas. BID–Needham remains open and willing to work with hospitals across Beth Israel Lahey Health's network and other public and private partners to address these issues, particularly as part of a broad, strong collaborative.

The following is BID–Needham's Implementation Strategy and provides details on BID–Needham's goals, priority populations, objectives, strategic activities, and measures of performance by priority area. Also included, is a listing of the state priorities that align with the activities included in the IS as well as a listing of the core partners that BID–Needham has been and will continue to work with to implement these activities. With respect to the core community partners listed, this is certainly not a complete list but rather many of its core partners. BID–Needham collaborates and partners with dozens of public and private service providers, community-based organizations, and advocacy organizations spanning all sectors and CBSA communities. BID–Needham is extremely appreciative of the efforts of all of its partners and looks forward to continuing and furthering its community partnerships, as it implements its community benefits and CHI activities in the years to come.

# I. Community Health Priorities

## Priority Area 1: Mental Health and Substance Use

**Brief Description:** As it is throughout the Commonwealth and the nation, the burden of mental and substance use on individuals, families, communities and service providers in BID–Needham's service area is overwhelming. Nearly every key informant interview, focus group and community meeting included discussions on these topics. From a review of the quantitative and qualitative information, depression, anxiety/stress, social isolation, opioids, alcohol, and e-cigarette/vaping were the leading issues in this domain. Despite increased community awareness and sensitivity about the underlying issues and origins of mental health and substance use issues, there is still a great deal of stigma related to these conditions. There is a general lack of appreciation for the fact that these issues are often rooted in genetics, physiology and environment, rather than an inherent, controllable character flaw. There is, however, a deep appreciation and a growing understanding for the role that trauma plays for many of those with mental and/or substance use issues, with many people using illicit or controlled substances to self-medicate and cope with loss, stress, abuse, pain, and other unresolved traumatic events.

**Resources / Financial Investment:** BID–Needham will commit direct, community health program investments, and in-kind resources of staff time and materials. BID–Needham will also generate leveraged funds through grants from public and private sources on behalf of its own programs or services as well as on behalf of its community partners.

| Goal | Priority Populations | Programmatic Objectives | Community Activities / Strategies |
|---|---|---|---|
| **Educate about and reduce stigma associated with mental health** | • Youth<br>• Older Adults<br>• Low to Moderate | • Increase community education and awareness of substance use/misuse and healthy mental, emotional, and social health | • Support **Mental Health First Aid** trainings in targeted community-based settings to raise awareness, reduce stigma, and educate residents and service providers about mental health and substance use |

| Goal | Priority Populations | Programmatic Objectives | Community Activities / Strategies |
|---|---|---|---|
| **and substance use Issues** | Income Populations<br>• Individuals with Chronic/ Complex Conditions | • Reduce the stigma associated with mental illness/ mental health and substance use/misuse, and addiction | • Provide **Community Health Mini Grants** to local departments of Health or other community-based partners to support evidence-based programs that promote mental health and substance use education and prevention<br>• Support **Mental Health and Substance Use Support Groups** for those with or in recovery from mental health or substance use and their family/friends/caregivers to raise awareness, reduce stigma, educate, and promote coping/recovery<br>• Support **Community-based Health Education Events** and programming with community partners to raise awareness, and educate on risk/protective factors, and services available in the community.<br>• Support **Substance Use Prevention Programming** and curriculum in local schools. |
| **Enhance access to mental health and substance use screening, assessment, and treatment services** | • Youth<br>• Older Adults<br>• Low to Moderate Income Populations<br>• Individuals with Chronic/ Complex Conditions | • Promote cross-sector partnership, collaboration, and information sharing across the broad health system to address access to mental health and substance use services<br>• Increase access to clinical and non-clinical support services for those with mental health and substance use issues, with an emphasis on priority populations<br>• Increase access to peer support for those with mental health and substance use and their family, friends, and caregivers<br>• Reduce inappropriate use of ED and other acute care services<br>• Increase access to screening, education, referral, and patient engagement services for those identified with or at-risk of mental health and substance use issues in clinical and non-clinical | • **Participate in local and regional coalitions and task forces** to promote collaboration, share knowledge, and coordinate community health improvement activities<br>• **Provide health insurance enrollment counseling/assistance and patient navigation support services** to uninsured or underinsured residents and patients with mental health and substance use issues<br>• Support the **Interface Mental Health Hotline,** which provides education and referral services for those seeking mental health counseling services<br>• Look into developing **integrated behavioral health services (mental health and substance use) in Primary Care and other specialty care settings** (Impact Model) for those with or at-risk of mental health issues, including screening, assessment, and treatment<br>• Explore **partnerships with elder service providers** that reach out to and serve isolated older adults not currently engaged in Council on Aging activities<br>• Explore partnerships with Local Health Departments, substance use providers, and BID–Needham departments to implement **Peer Recovery Coach Programs** geared to linking those with substance use/misuse issues to peer recovery coaches who provide recovery, case management, and navigation support<br>• Research implementation of a **BID–Needham Bridge Program** for those suffering from substance use disorder that screens, identifies, assesses, initiates treatment, and links participants to long-term SUD services in the community<br>• Support the **Community Crisis Intervention Team (CCIT)**, a partnership between hospital emergency departments, public safety officials, and behavioral health providers geared to reaching out to, referring, and engaging substance users/misusers in treatment |

| Goal | Priority Populations | Programmatic Objectives | Community Activities / Strategies |
|---|---|---|---|
| | | settings, with an emphasis on priority populations<br>• Increase access to insurance, patient navigation support, and other enabling/ supportive services for those with mental health and substance use issues, with an emphasis on priority populations<br>• Increase access to peer recovery coaches for those with substance use/misuse issues<br>• Reduce elder health isolation and depression<br>• Increase the number of practice settings with integrated behavioral health and primary care/specialty care services<br>• Increase primary care and specialty care follow-up after discharge from hospital settings | • Explore partnerships with community-based organizations that provide **social engagement activities for those who are isolated** or struggling with mental health issues |
| **Decrease the number of prescription drugs and other harmful drugs from the community** | • Youth<br>• Older Adults<br>• Low to Moderate Income Populations<br>• Individuals with Chronic/ Complex Conditions | • Decrease the availability of unused prescription drugs<br>• Increase the # of opportunities that residents of the service area can give back unused prescriptions | • Support **"Drug Take Back Days"** with Commonwealth and local law enforcement and other community-based partners<br>• Maintain **Prescription Drug Disposal Kiosk** in the lobby of the hospital to provide a safe place for the community to dispose of unwanted/ unneeded drugs<br>• Continue BID–Needham Opioid Taskforce to decrease use of and prescribing of opioids in the hospital, and to educate patients on opioid use and alternatives for pain management. |

### Priority Area 2: Chronic and Complex Conditions and their Risk Factors

**Brief Description:** While mental health and substance use were perceived to be the leading issues in BID–Needham's service area, one cannot lose sight of the fact that heart disease, stroke and cancer are the leading causes of death in the nation and the Commonwealth. Roughly, 6 in 10 deaths may be attributed to these three conditions combined. If you include respiratory disease (e.g., asthma, COPD) and diabetes, which are in the top 10 leading causes across all geographies, then one can account for the vast majority of causes of death. All of these conditions are typically considered to be chronic and complex and can often strike early in one's life, quite often ending in premature death. Within this priority area, according to those who participated in interviews, focus groups, the community meeting, and the Community Health Survey, cardiovascular disease, cancer, diabetes, and Alzheimer's disease and other dementias were thought to be of the highest priority. It is also important to note that the risk factors for nearly all chronic/complex conditions are much the same, including lack of physical activity, poor nutrition, obesity, tobacco use, and alcohol use.

**Resources / Financial Investment:** BID–Needham will commit direct, community health program investments, and in-kind resources of staff time and materials. BID–Needham will also generate leveraged funds through grants from public and private sources on behalf of its own programs or services as well as on behalf of its community partners.

| Goal | Priority Populations | Programmatic Objectives | Community Activities / Strategies |
|---|---|---|---|
| **Enhance access to health education, screening, referral, and chronic disease management services in clinical and non-clinical settings** | • Youth<br>• Older Adults<br>• Low to Moderate Income Populations<br>• Individuals with Chronic/ Complex Conditions | • Increase the number of people who are educated about chronic disease risk factors and protective behaviors<br>• Increase the number of adults who are engaged in evidence-based screening, counseling, self-management support, chronic disease management, referral services, and/or specialty care services<br>• Increase the number of people with chronic/complex conditions whose conditions are under control | • **Participate in coalitions and task forces** to promote collaboration, share knowledge, and coordinate community health improvement activities<br>• Partner with community groups to offer **wellness, fitness education and other events** as part of comprehensive chronic disease management for underserved community members, and other priority population segments<br>• Provide **First Aid, CPR and Stroke Management Trainings** to residents, service providers, and first responders as part of comprehensive chronic disease prevention and management efforts<br>• Provide evidence-based **health education on risk/protective factors, and self-management support programs** through partnerships with community-based organizations<br>• Support **screening, education, and referral programs** in clinical and non-clinical settings<br>• Promote enhanced **care transitions, care coordination and follow-up care programs** targeting those with chronic/complex conditions after discharge from the Hospital |

| Goal | Priority Populations | Programmatic Objectives | Community Activities / Strategies |
|---|---|---|---|
| | | | • Provide **Community Health Mini Grants** to community partners to support evidence-based programs that promote health education, screening, referral, and chronic disease management for priority populations |
| **Reduce the prevalence of tobacco use** | • Youth<br>• Older Adults<br>• Low to Moderate Income Populations<br>• Individuals with Chronic/ Complex Conditions | • Increase the number of people who quit smoking cigarettes, vaping, or using e-cigarettes<br>• Increase access to tobacco, vaping/e-cigarette cessation programs | • Support ***Smoking Cessation Programs*** geared to reducing tobacco, vaping and e-cigarette use<br>• Provide community education on the risks of vaping and tobacco use |

## Priority Area 3: Social Determinants of Health and Access to Care

**Brief Description:** A dominant theme from the assessment was the tremendous impact that underlying social determinants of health, particularly access to affordable housing, transportation, poverty/employment, and food insecurity have on the entire population. The social determinants of health are often the drivers or underlying factors that create or exacerbate mental health issues, substance misuse, and chronic/complex conditions. These social determinants of health, particular poverty, underlie the access to care issues that were prioritized in the assessment: navigating the health system (including health insurance), chronic disease management, and access to culturally and linguistically competent care.

**Resources / Financial Investment:** BID–Needham will commit direct, community health program investments, and in-kind resources of staff time and materials. BID–Needham will also generate leveraged funds through grants from public and private sources on behalf of its own programs or services as well as on behalf of its community partners.

| Goal | Priority Populations | Programmatic Objectives | Community Activities / Strategies |
|---|---|---|---|
| **Enhance access to care and reduce the** | • Youth<br>• Older Adults | • Increase partnerships and collaboration with social service | • **Participate in regional and local task forces and coalitions** to promote collaboration, share knowledge, and coordinate community health improvement activities |

| Goal | Priority Populations | Programmatic Objectives | Community Activities / Strategies |
|---|---|---|---|
| **impact of social determinants** | • Low to Moderate Income Populations<br>• Individuals with Chronic/ Complex Conditions s | and other community-based organizations<br>• Increase educational opportunities related to the importance and impact of social determinants<br>• Decrease the number of people who struggle with financial insecurity<br>• Increase access to low cost healthy foods with an emphasis on priority population segments<br>• Increase access to affordable, safe transportation options with an emphasis on priority population segments<br>• Increase training and employment opportunities for low to moderate income residents with an emphasis on priority population segments<br>• Increase the number of people assisted with insurance and other public program enrollment, and patient navigation<br>• Increase access to social experiences for those who are isolated and lack family/caregiver and other social supports | • Provide **Community Health Mini Grants** to community partners to support evidence-based programs that address social determinants and access to care<br>• Support farmers markets and other food access initiatives that provide fresh, locally-grown produce to low to moderate income, underserved populations<br>• Support local food access organizations and **Initiatives** to provide nutrition education and food access to low and moderate income populations living in public housing, school-based after-school programs, Councils on Aging, and other community venues<br>• Support **wellness and nutrition education events** in partnership with community partners<br>• Provide **enrollment counseling/ assistance and patient navigation support services** to uninsured or underinsured residents to enhance access to care<br>• Provide **linguistically and culturally appropriate health education and care management support**<br>• Explore **transportation access partnerships** with regional transportation providers and other community partners to enhance access to affordable, safe, accessible transportation options<br>• Organize and support **workforce mentorship and training programs** to enhance job training, skills development, and career advancement |
| **Reduce Elder Falls and Promote Aging in Place** | • Older Adults | • Reduce fear of falling<br>• Reduce Falls<br>• Increase activity levels | • Support **Safety at Home Program** for older adults to promote aging in place and reduce falls<br>• Support the **Fall Prevention Committee** to reduce Falls<br>• Organize **Matter of Balance workshops** for priority populations |

| Goal | Priority Populations | Programmatic Objectives | Community Activities / Strategies |
|---|---|---|---|
| | | • Reduce preventable Emergency Department and inpatient visits<br>• Increase the number of older adults living independently in their homes | • Support other elder service programming to encourage aging in place<br>• Continue 5-year commitment to address **healthy aging**, with Needham Public Health and Needham Council on Aging |

# Appendix E: Summary Community Benefits Evaluation

## Evaluation Summary

Multi-component initiatives (MCIs) such as those implemented and supported by Beth Israel Deaconess Hospital – Needham's Community Benefits Program (Needham CBP) are comprehensive in nature and show promise of being effective, equitable, and sustainable.[1-8,9] Yet, the varying timelines, priorities, implementing departments and organizations, targeted populations, and available resources make evaluations challenging. Further complicating the assessment of an MCI is that population-level health behaviors and outcomes take time to achieve. While it may be hard to detect the impact of MCIs on the desired long-term outcomes, it is important to assess whether the initiative has the attributes known to support and sustain population health in due time.

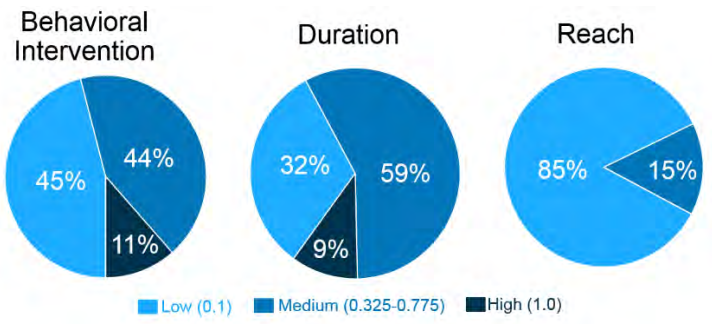
John Snow Inc. (JSI) employed an evidence-informed approach to evaluate the Needham CBP. Systematically, JSI scored three attributes found to be predictors of population health—the behavioral intervention, duration, and reach for each activity summarized in the *Fiscal Year 2017 Community Benefits Report to the Attorney General (AG Report)*. Intention is important because evidence suggests that when an activity improves access, reduces barriers, or changes broader conditions, there is a greater likelihood that individual behavior change will be sustainable (compared to simply enhancing their knowledge or skills).[10-12] Reach and duration are significant because research has found that when more people are exposed to a strategy, and for longer periods of time, there is a greater likelihood that the strategy will support the desired behaviors and outcomes.[10-12]

JSI abstracted and scored all activities defined as an action undertaken in accordance to the community benefits, and reported in the AG Report. An evaluation team member rated each activity attribute as low (0.1), medium (0.55), or high (1.0), and calculated an intensity score (∑ behavioral value + duration value + reach value). Scores could range from 0.3 (lowest intensity and least likely to impact long-term outcomes) to 3.0 (highest intensity and most likely to impact long-term outcomes). All activity scores where then summed to create a total composite score.

### Findings

Among Needham's activities (n=87), 44% had a medium intention score, 59% were scored medium in duration, and 15% had a medium reach score (Figure 1).

**Figure 1.** Activity Intensity Scores by Attribute



There were four priority areas within which these 87 activities were implemented: 1) Health Risk Factors; 2) Physical Health and Chronic Disease Management and Prevention; 3) Behavioral Health; and 4) Healthy Aging. The highest number of activities were implemented to address the "Health Risk Factors" priority area and the lowest number were targeting "Behavioral Health" (34 and 15, respectively) (Table 1).

**Table 1.** Summary of Activities by Priority Area

| Goal/Priority Area | Number of Activities | Average Score | Total Score |
|---|---|---|---|
| Health Risk Factors | 34 | 0.90 | 30.45 |
| Physical Health and Chronic Disease Management and Prevention | 18 | 1.01 | 18.23 |
| Behavioral Health | 15 | 0.84 | 12.6 |
| Healthy Aging | 20 | 0.90 | 17.93 |

The composite intensity score of the 87 activities was 79.2; the lowest possible score for all activities was a 26.1 (if all activities scored a 0.3) and the highest possible intensity score was a 261 (if all activities scored a 3.0). Each individual activity score ranged from 0.3 to 2.33; with a 0.91 average intensity score (Figure 2). About one-third (33%) of the activities had a medium score (1.2 – 2.1) and 66% had a low score (0.3 – 1.1) (Figure 3).

**Figure 2.** Individual Activity Intensity Score


**Figure 3.** Percentage of Activities with a Low, Medium, High Intensity Score

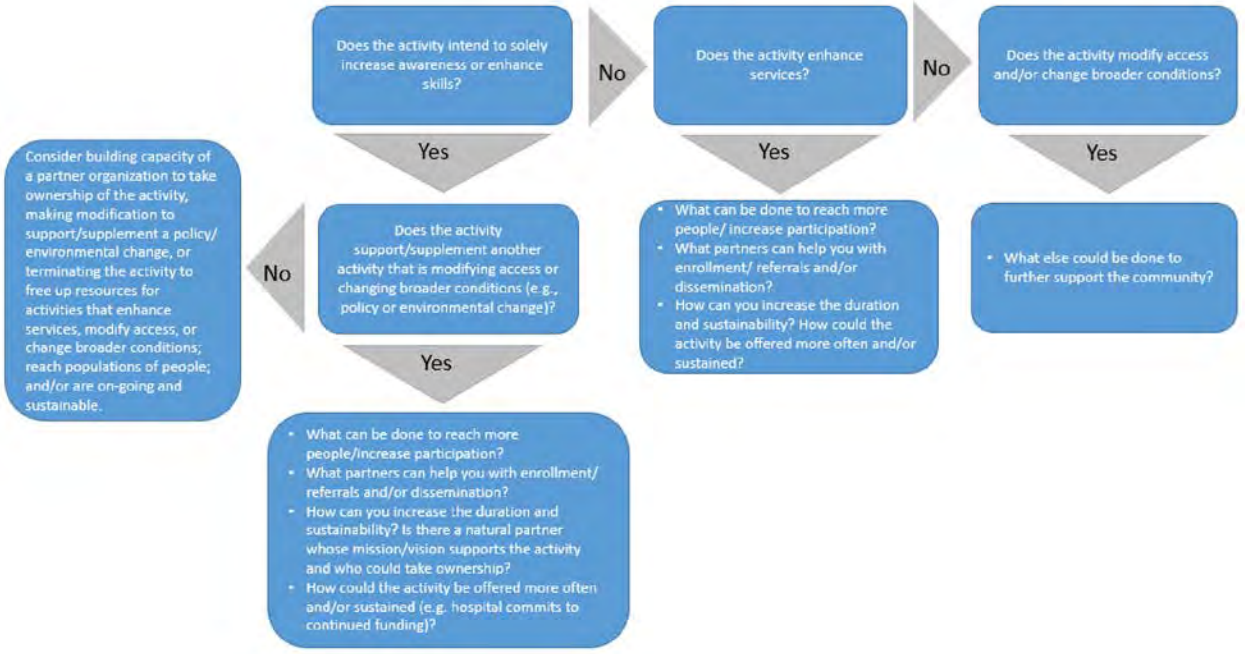

## Recommendations

Per the requirements of the AG, Beth Israel Deaconess Hospital – Needham contracted with JSI to evaluate the FY17 CBP. The purpose of the evaluation was to understand the likely impact of each of the reported activities on long-term behaviors and outcomes related to the four priority areas, and to identify opportunities to ensure the CBP supports population health most effectively. Using intention, reach, and duration to score the various activities provides a systematic way of assessing the dynamic and evolving activities implemented as part of the Needham CBP. It also provides a platform for documenting progress toward the long-term goal of improved health, and differentiating between activities that may have more or less influence on long-term outcomes.

Intensity scores should inform how resources are used most effectively in the future, provide direction for strengthening efforts individually or collectively, and serve as a baseline for measuring change overtime. Activities that were implemented at a lower intensity included the various grants that were awarded to community organizations. To increase the intensity of CBP dollars, and to ensure activities result in improved population health behaviors and outcomes, future efforts should be made to ensure all grantees provide detailed information on the purpose, duration, and reach of grant funding. In the extent

possible, activities should also prioritize the enhancement of services, modification of access, and/or change broader conditions that support the health and well-being of the community-at-large. Other lower-intensity activities included a number of one-time events. These activities received lower scores because they: 1) intended to increase awareness and/or educate/enhance the knowledge or skills of individuals, 2) were offered once or a few times (versus ongoing); and 3) reached a small percentage of the population. In general, it is recommended that each priority have multiple activities that work simultaneously to increase awareness and improve skills; enhance services; modify access; and change broader conditions for populations of people. CBP staff and partners should use Figure 4 to assess each activities' contribution to the overall priority area and for modifications to be made to increase the intensity within which all activities are implemented.

**Figure 4.** Flow chart for increasing the intensity of the community benefits program

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