

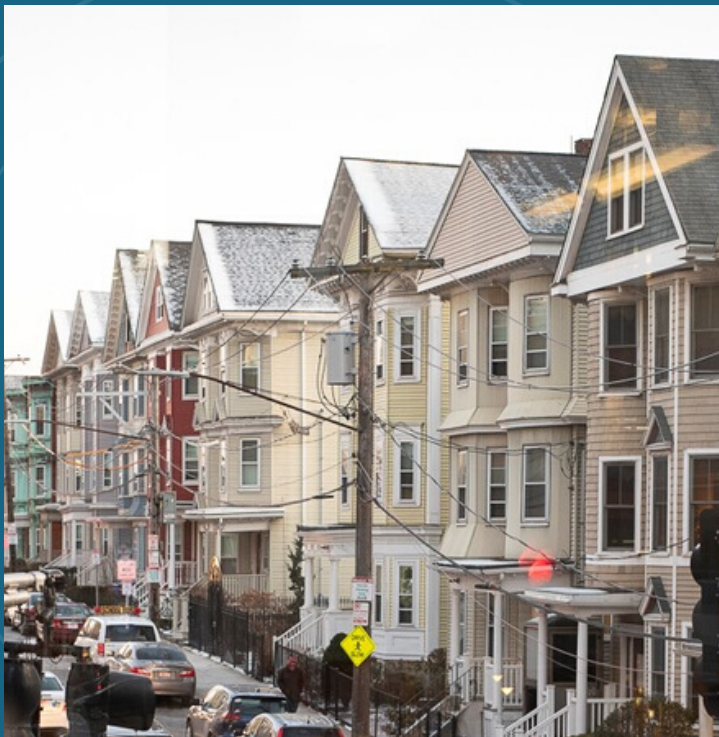
2019

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BRIGHAM AND WOMEN'S HOSPITAL  
CENTER FOR COMMUNITY HEALTH AND HEALTH EQUITY

# Community Health Assets and Needs Assessment and Implementation Plan



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All are welcome to use our findings to inform future practice and create healthier, equitable communities. We request that you please use the following citation: Brigham and Women's Hospital, Center for Community Health and Health Equity (2019). *Community Health Assets and Needs Assessment and Implementation Plan*. Boston, MA.

## EXECUTIVE SUMMARY

### **Commitment to Health Equity and Community Health**

Brigham and Women's Hospital (BWH) has a long-standing commitment to promoting health equity and improving health outcomes for patients, families, employees, and community members. For more than thirty years, BWH has been partnering with community health centers, schools, community-based organizations, businesses, and government agencies to understand and address the social factors impacting the health and well-being of community members. Through program delivery, research and community investments, BWH works at the community, family, and individual levels to maximize the conditions for increasing health equity. BWH approaches its health equity work with a racial equity lens that recognizes structural racism as a root cause of many health inequities. This understanding shapes how BWH thinks about, pursues, and designs initiatives.

### **Community Health Needs Assessment and Implementation Plan (CHNA-CHIP)**

The Patient Protection and Affordable Care Act (ACA) requires non-profit hospitals to conduct a community health needs assessment (CHNA) every three years and to develop and implement strategies for addressing the needs identified through a community health implementation plan (CHIP). The CHNA is also a key source document for additional planning and engagement processes. The 2019 BWH report uses a strengths-based approach, focusing on the importance of recognizing assets as well as needs. As such, this BWH report is titled a "Community Health Assets and Needs Assessment." However, for the purposes of clarity we will use "CHNA" to reference the assessment throughout the report since "CHNA" is standard nomenclature.

BWH's priority communities include Dorchester, Jamaica Plain, Mattapan, Mission Hill, and Roxbury. These neighborhoods are the focus of the CHNA-CHIP due to their proximity to the hospital, as well as the disproportionate burden of poverty, housing instability, and other social determinants of health in these communities compared to Boston overall. BWH operates licensed sites in Chestnut Hill, Foxborough, and West Bridgewater, and IRS guidelines indicate that these neighborhoods are included in the assessment. While all municipalities, including these three, face health challenges, the data indicate that the challenges faced by the priority neighborhoods in Boston are greater and thus, they are the primary focus of this report.

For the 2019 CHNA-CHIP, BWH participated in the Boston CHNA-CHIP Collaborative (the Collaborative), a joint initiative bringing multiple stakeholders together to assess the top priority community health issues in Boston and identify opportunities for shared implementation. Participants include Conference of Boston Teaching Hospital (CoBTH) members, community health centers, the Boston Public Health Commission, community organizations, and community members. The Collaborative conducted 45 interviews with Boston organizations and community leaders, facilitated 13 focus groups with a diversity of community members, implemented a community survey (2,404 respondents), and reviewed secondary data. To complement these data, BWH facilitated 10 key informant interviews, led five discussion groups, co-hosted one community meeting with area hospitals, and reviewed hospital specific patient data and other secondary sources. This extensive data collection provided rich information for the assessment.

### **This Report**

The 2019 BWH CHNA focuses on the many existing strengths and assets within the BWH priority neighborhoods, as well as health needs and opportunities. Through the CHNA process, five key priorities emerged: housing, behavioral health, financial security and mobility, access to services, and violence and trauma. These priority areas are discussed in detail in the sections to follow.

## BACKGROUND

### ABOUT BRIGHAM AND WOMEN'S HOSPITAL

Established in 1832, BWH is a not-for-profit academic medical center located in Boston, Massachusetts. A national leader in patient care, research, innovation, education and community health, BWH is a teaching affiliate of Harvard Medical School with specialty care in cancer, heart disease, orthopedic conditions and women's health. Along with its modern inpatient facilities, BWH offers extensive outpatient services and clinics, neighborhood primary care through two licensed community health centers and primary care sites, and state-of-the art diagnostic and treatment technologies and research laboratories. U.S. News and World Report consistently ranks BWH a top hospital and among the best in numerous specialty areas.

### BWH'S COMMITMENT AND APPROACH TO COMMUNITY HEALTH

BWH understands that where people are born, grow, live, work, and age is critical to their health. While genes and lifestyle behaviors are undoubtedly important, health is most profoundly influenced by more upstream factors such as racism and other forms of discrimination, attainment of quality education, financial stability, employment status, housing stability and conditions, community safety, and access to resources. These social determinants of health (SDoH) determine the context in which people live, which in turn impact their health and the health of their communities.

BWH has a long-standing commitment to promoting health equity and strengthening health outcomes for patients, families, employees, and community members. As part of that commitment, the Center for Community Health and Health Equity (CCHHE) was established in 1991 to develop, implement, manage, and evaluate initiatives that minimize health inequities and improve the well-being of those living in its priority neighborhoods of Dorchester, Jamaica Plain, Mattapan, Mission Hill, and Roxbury. CCHHE, along with BWH's two licensed community health centers, Southern Jamaica Plain Health Center and Brookside Community Health Center, and our BWH clinical colleagues work with community-based organizations, local schools, residents, hospital departments, businesses, and government agencies to break through structural barriers to health so often encountered by individuals and families in these communities. CCHHE focus areas include eliminating inequities in infant mortality and cancer care; supporting young parents; promoting youth development and employment through education and career opportunities; and curbing and responding to community, domestic, and interpersonal violence.

Key outcomes in FY19 included:

- The Passageway domestic violence program provided 1,087 counseling sessions and contacts to or on behalf of 837 patients, employees, or community members experiencing domestic violence.
- The Violence Recovery Program team members attended 212 different meetings and events to raise awareness and work collaboratively on issues of violence exposure.
- One hundred percent of alumni of the Student Success Jobs Program entered college after SSJP or have graduated college, and 63% of those students majored in a health or science field. Sixty percent reported that they were first in their family to enroll in college.
- Over 500 young people received educational support and mentoring from nearly 300 Brigham and Women's employees.
- Baby Café™, a Stronger Generations program that started in FY17, provided free, community-based breastfeeding support through trained lactation professionals to 88 women in two Baby Café™ sites: Southern Jamaica Plain Health Center and Brookside Health Center.

- More than 480 women received pregnancy and parenting services from health center-based case managers through the Stronger Generations Case Management Program.
- Our two BWH licensed community health centers in Jamaica Plain (Brookside Community Health Center and Southern Jamaica Plain Health Center) served over 21,000 patients with about 82,700 visits.
- Ten BWH Health Equity grantee organizations served nearly 2,000 Boston-area resident providing services aimed at improving psychological wellness, expanding economic opportunities and addressing racial equity.

CCHHE approaches its work through a racial equity lens, meaning that its recognition of racism as a root cause of many health inequities shapes how the Center thinks about, pursues, and designs initiatives. Racism, a system of advantage based on race, both intersects and compounds the negative impacts of social and economic challenges faced by community members. While people often think of the interpersonal displays of racism, a powerful impact of racism is experienced through its manifestations in societal systems and institutions. As the Boston Public Health Commission (BPHC) explained in its 2012-2013 *Health of Boston* report,

“At the structural level, racial inequality is perpetuated through a system of allocating social privilege using public policies and institutional practices. At the institutional level, unfair organizational policies and practices affect access to goods, services, and opportunities, including healthcare. At the interpersonal level, prejudice, discrimination, and unconscious bias affect the way people of all races perceive and interact with each other, intentionally and unintentionally. Internalized racism manifests as internalized oppression for people of color and can cause stress, depression, and feelings of inadequacy. White people internalize beliefs of superiority, which affects the way they perceive and interact with each other and with people of color.”<sup>i</sup>

Over time, racism results in inequitable health outcomes and access to opportunities that promote health and wellness for some groups, but not others. The legacy of redlining in the housing market is an example of a policy that contributes to racial inequities today. Specifically, as BPHC explains in its *Health of Boston 2016-2017* report:

“Redlining denied Black Americans the opportunity to sell or purchase property through racially restricted covenants that ultimately even reduced the market value of the property that they did own. The low market values, in turn, caused the economic worth of their communities to decline sharply. Home ownership tends to be the most important form of wealth accumulation, especially for low-income individuals. For this reason, property devaluation due to institutional racism created a barrier to the accumulation of wealth for people of color. The barrier to accumulating and passing on wealth to their children meant that these racist policies affected the socioeconomic status of multiple generations of Black Americans.”<sup>ii</sup>

Recognizing the history and consequences of racist structural and institutional policies and practices, such as redlining, and taking steps toward dismantling the resulting inequities is critical for those seeking to promote health equity. This understanding informs and shapes BWH’s approach to the CHNA and the opportunities for implementing impactful change.



## COMMUNITY HEALTH NEEDS ASSESSMENT

A CHNA identifies community health assets, needs, and opportunities to improve community health.

The goals of BWH CHNA are to:

- Systematically identify the health-related needs, strengths, and resources of a community to inform future planning,
- Understand the current health status of BWH priority neighborhoods overall and its sub-populations within their social context, and
- Meet regulatory requirements.

The ACA requires non-profit hospitals to conduct a CHNA every three years and to develop and implement strategies for addressing the needs identified through a CHIP. The BWH CHNA is also a key source document for other regulatory and planning processes.

The BWH CHNA defines health in the broadest sense and recognizes that factors at multiple levels impact a community's health. Considerable focus, however, was given to SDoH because of their significant influence on the current and future health of communities.

## METHODOLOGY

### DATA COLLECTION METHODS

The Boston CHNA-CHIP Collaborative

BWH participated in the Collaborative, a collaboration formed in 2018 to undertake the first large-scale collaborative citywide CHNA-CHIP. The Collaborative hired Health Resources in Action (HRiA), a non-profit public health organization, as a consultant partner to provide strategic guidance and facilitation of the process, collect and analyze data, and prepare the report. The Collaborative aimed to engage agencies, organizations, and residents in Boston through its various committees and groups. For more detail, see Appendix A.

### Secondary Data Collection

Secondary data from a variety of sources were analyzed during this process, including, but not limited to, the Boston Behavioral Risk Factor Surveillance System (BBRFSS), Youth Risk Behavior Survey (YRBS), U.S. Census American Community Survey (ACS), vital records, and the Acute Hospital Case Mix Database from the Center for Health Information and Analysis.

### Primary Data Collection

Primary data were collected through a community survey, focus groups, and key informant interviews.

#### Boston CHNA Survey

The Survey was developed and administered in February-March 2019, having been pilot-tested and guided by existing validated questions. It was administered online and via hard copy in seven languages. Outreach was conducted by over 35 organizations via social media, institutional e-newsletters, e-mails to large networks, waiting rooms, 13 Boston Public Library neighborhood branches, community events, and large apartment buildings. Additionally, Healthy Community Champions (an initiative of grassroots ambassadors) conducted targeted survey administration in specific neighborhoods. 2,404 Boston residents responded to the Survey, out of which 535 self-identified from Dorchester (22%), 203 from Jamaica Plain (8%), 102 from Mattapan (4%), 18 from Mission Hill (1%), and 185 from Roxbury (8%).



### Focus Groups

Focus groups were 90-minute semi-structured conversations with approximately 8-12 participants per group. Fifteen community and social service organizations located throughout Boston assisted with recruiting participants and/or hosting focus groups. Thirteen focus groups were conducted with the following populations:

1. Female low-wage workers (e.g. housekeepers, child care workers, hotel service workers, etc.)
2. Male low-wage workers (e.g. janitorial staff, construction, etc.)
3. Seniors (ages 65+) with complex, challenging issues (e.g. homebound, medical complications)
4. Residents who are housing insecure (no permanent address or close to eviction)
5. Latino residents in East Boston (in Spanish)
6. LGBTQ youth and young adults at risk of being homeless
7. Immigrant parents of school age children (5-18 years)
8. Survivors of violence; mothers who have been impacted by violence
9. Parents who live in public housing in Dorchester
10. Chinese residents living in Chinatown (in Chinese)
11. Haitian residents living in Mattapan (in Haitian Creole)
12. Residents in active substance use recovery
13. Additional focus group with notes provided: Chinatown residents

A total of 104 community residents participated in focus groups, representing 13 neighborhoods across the city. Nearly half of focus group participants identified as Black or African American (45%), a third of participants identified as Hispanic or Latino (34%), and 10% identified as White. Most participants identified as female (57%), 36% identified as male, and 7% identified as transgender or genderqueer.

### Key Informant Interviews

Forty-five key informant interviews were completed, six of which were additional interviews submitted by work group volunteers. Interviews were 45-60 minute semi-structured discussions that engaged institutional, organizational, community leaders, and front-line staff across the following sectors: public health, health care, housing and homelessness, transportation, community development, faith, education, public safety, environmental justice, government, workforce development, social services, food insecurity, and business organizational staff that work with specific populations such as youth, seniors, disabled, LGBTQ, and immigrants.

### **The Collaborative Report**

Much of the data cited in this assessment is from the Boston CHNA-CHIP Collaborative: 2019 Community Health Needs Assessment, which synthesized the data from the many sources detailed above. The report includes extensive data for Boston and its many neighborhoods. All data presented in this report, unless otherwise cited, are from the Collaborative report.

### BWH Data Collection

To complement the Collaborative data and processes, BWH engaged in additional primary and secondary data collection to illuminate the strengths, needs, and priorities specific to BWH and its priority neighborhoods, and to engage and draw on the expertise of internal and community stakeholders. Throughout this report, “priority neighborhoods” or “priority communities” reference Dorchester, Jamaica Plain, Mattapan, Mission Hill, and Roxbury.

### Primary Data Collection

Primary data were collected through 10 internal key informant interviews with BWH leaders and five discussion groups with community stakeholders. Interviewees and discussion group attendees were selected based on their strategic areas of expertise and their connections to BWH priority communities. For a list of key informants, see Appendix B; for a list of the stakeholders gathered for the discussion groups, see Appendix B. Interviewees and discussion group attendees were asked about the pressing health concerns facing BWH priority neighborhoods, existing resources and supports, opportunities for collective action, as well as other topics. The key informant interview question guide can be found in Appendix C. Each of the discussion group guides were unique as they were developed and tailored for each of the five stakeholder groups. Note takers were present at all the interviews and discussion groups, and a thematic analysis was conducted.

Of the discussion groups noted above, the meeting in Mission Hill involved collaboration with four other area hospitals, who shared in planning and recruiting for and facilitation of the meeting. Approximately 50 individuals participated in the meeting, which took place at Tobin Community Center. Interpretation was available in Spanish and Mandarin. For more information, see Appendix D.

### Secondary Data Collection

In addition to the quantitative data collected and analyzed by the Collaborative, BWH reviewed and incorporated additional secondary data sources to inform this assessment. BWH-specific data on clinical, emergency department, and interpretive services utilization were obtained and analyzed. Key research and policy reports that investigate the health, social, and economic status of Boston communities were also reviewed. A list of the BWH primary data sources informing this assessment, beyond the Collaborative, can be found in Table 1. For a list of secondary data sources used by the Collaborative, please see Appendix E.

**Table 1. Summary of BWH Data Collection Sources (Beyond Collaborative Data Collection)**

Data Type	Primary Data Sources
<b>Quantitative Data</b>	BWH Utilization Data (obtained from EPSi [an internal Partners HealthCare service utilization and billing database])
	BWH Emergency Department Data (obtained from Partners HealthCare, Massachusetts Data Warehouse Database)
	BWH Interpreter Services Data (obtained from BWH Interpreter Services)
<b>Qualitative Data</b>	Interviews with 10 BWH stakeholders
	Focus groups with community members and health providers working with community members, including: <ul style="list-style-type: none"><li>• Mission Hill Community Residents</li><li>• BWH Community Health Workers and Resource Specialists</li><li>• Emergency Department Providers</li><li>• SSJP Participants</li><li>• Southern Jamaica Plain Health Center Advisory Committee Members</li></ul>

## LIMITATIONS AND CONSIDERATIONS

### Secondary Data

Each secondary data source has its own set of limitations due to variations in data collection, definition of measures, definition of neighborhoods, sample size, and timing. For example, different data sources use varying ways to measure similar variables (e.g., different questions to identify race/ethnicity; different boundaries for neighborhoods) and there may be a significant lag from the time of data collection to data availability. Some data are not available by specific population groups or at a more granular geographic level due to small sub-sample sizes. In some cases, data from multiple years may have been aggregated to allow for data estimates at a more granular level or for specific groups. Finally, while data are examined by certain categories of race and ethnicity (e.g., White, Black, Latino, Asian), it is not possible for many of these data sources to examine sub-population groups within these categories (e.g., Chinese descent, Vietnamese descent).

### Collaborative Survey Data

While strong efforts were made to conduct outreach across the City and within neighborhoods and population groups who experience an inequitable health burden, the Boston CHNA Survey used a convenience sample. A convenience sample limits data quality in a number of ways. First, there is the potential selection bias in who participated or was asked to participate in the survey, resulting in a sample that may not be representative of all Boston or neighborhood residents. As a result, citywide and neighborhood-level findings cannot necessarily be generalized to the larger population. Second, some sub-group analyses consist of very small sub-sample sizes (e.g., Haitian Creole speakers, non-binary and transgender individuals, etc.). Given the lack of other sources of data for these populations, the sub-group analyses are presented in the report for population groups. However, it is important to note that given the small sub-sample sizes and convenience sampling methodology, results should be interpreted with caution.

### Collaborative Focus Groups and Key Informant Interview Data

The number and diversity of the focus groups and interviews necessitated the use of multiple moderators and interviewers, particularly for non-English language groups. Thus, there is likely variation in how interview and focus group protocols were interpreted and implemented. Focus groups also ranged in size and varied in group dynamics. Moreover, while focus groups and interviews provide valuable insights and important in-depth context, due to their small sample size and non-random sampling methods, results are not generalizable.

## GEOGRAPHIC LEVEL REPORTING

The ability to report findings for the BWH priority neighborhoods varies throughout this report based on the data source. Data from the Collaborative report is not available for Mission Hill as a separate and distinct community. Rather, Mission Hill data are included with Roxbury data, based on the use of ZIP code tabulation areas for data analysis, unless otherwise noted. Specifically, all data pulled from the Boston Planning and Development Agency (BPDA) reports highlight Mission Hill neighborhood data. In addition, due to the relatively large geographic area and population of Dorchester, some data for this community is separated into two groups defined by ZIP code: Dorchester (02121, 02125) and Dorchester (02122, 02124). When data are presented for Dorchester without a ZIP code distinction, it means that results pertain to all of Dorchester as a single community.

## FINDINGS

### COMMUNITY DEMOGRAPHICS

The demographics of a community are important to understanding local health outcomes. While age, gender, race and ethnicity, and language are important factors that can impact an individual's health, the distribution of these characteristics in a neighborhood, the social and economic opportunities available (or not readily available), and structural barriers present are key to understanding the health of and health inequities in a community. The section below provides an overview of the population of Boston and of BWH priority neighborhoods of Dorchester, Jamaica Plain, Mattapan, Mission Hill, and Roxbury.

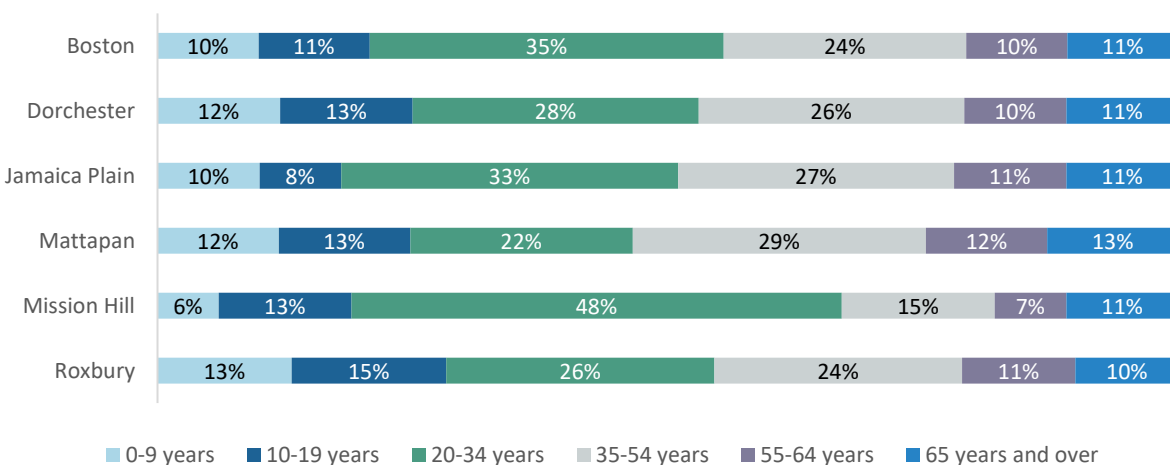
#### Population

According to 5-year estimates from the ACS, the population of Boston is 669,158 (2013-2017), representing an 8% increase in population from 2012. BWH priority neighborhoods experienced a similar growth rate to the city overall with the exception of Roxbury; the neighborhood's population grew 17% during this time.

#### Age Distribution

As depicted in Figure 1, the age distribution of BWH priority neighborhoods is similar to that of Boston overall, with a few exceptions. The percentage of adults 20-34 years old in Mission Hill (48%) is 13% higher than that of Boston overall (35%), while the percentage of adults 20-34 years old is 13% lower in Mattapan (22%).

Figure 1. Age Distribution by City and Priority Neighborhood, 2013-2017



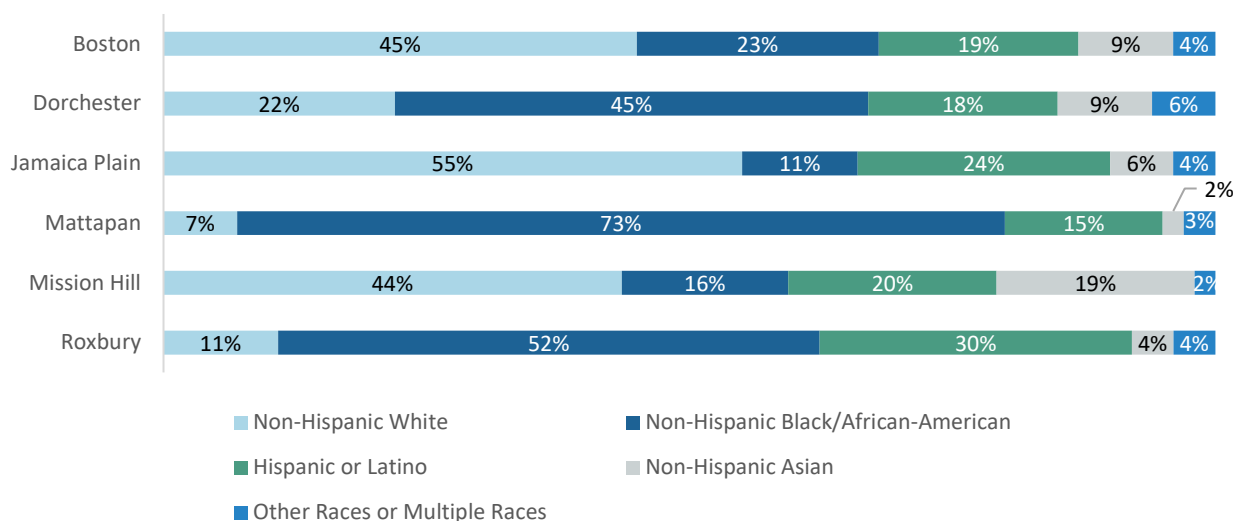
Source: Boston Planning & Development Agency Boston in Context: Neighborhoods Report

Data: U.S. Census Bureau, 2013-2017 American Community Survey, BPDA Research Division Analysis

#### Race and Ethnicity

BWH priority neighborhoods are more racial and ethnically diverse than the city overall. Mattapan, Roxbury, and Dorchester have large Black populations (73%, 52%, 45%, respectively), and approximately one-quarter of the populations of Roxbury and Jamaica Plain are Hispanic/Latino (30%, 24%, respectively). For comparison, Boston's Black population comprises 23% of the city and 19% is Hispanic/Latino. See Figure 2 for more details.

Figure 2. Race and Ethnicity by City and Priority Neighborhood, 2013-2017



Source: Boston Planning & Development Agency Boston in Context: Neighborhoods Report  
 Data: U.S. Census Bureau, 2013-2017 American Community Survey, BPDA Research Division Analysis

### Gender

In Boston, 52% of the population is female and 48% is male. Across BWH priority neighborhoods, the percentages are similar to Boston’s although not identical. Specifically, the percentages of males in BWH priority neighborhoods range from 45% (in both Dorchester (02121) and Jamaica Plain) to 51% (in Dorchester (02125)) and for females, from 49% (in Dorchester (02125)) to 55% (in both Dorchester (02121) and Jamaica Plain).<sup>iii</sup> To note, the information presented above is limited by the data’s categorization that suggests gender is binary (i.e. male or female).

### Language

Boston is a city of many languages. Thirty-eight percent of the city’s population five years of age and older speak a language other than English at home, and this percentage is significantly higher in Dorchester (02121, 02125) (47%) and Roxbury (46%). Other than English, Spanish and French/Haitian Creole/Cajun are the most commonly spoken languages in BWH priority communities. Language diversity was considered a major strength of Boston, according to Collaborative focus group participants, especially those who were non-English speakers. Several participants discussed belonging to “tight-knit” cultural groups where residents could speak freely in their native language. Non-English-speaking focus group participants reported that for the most part, they were able to access some community resources in their native language. However, they also reported having much longer wait times for these services.

### Foreign-Born

Collaborative key informant interviewees and focus group participants described a robust immigrant community in Boston. Thirty-six percent of residents of Dorchester (02121, 02125), 34% of Mattapan, and 32% of Dorchester (02122, 02124) were born outside the United States, which is higher than Boston

overall (28%). Citywide, those born outside the United States were most likely to come from the Caribbean (29%) and Asia (26%).

Interviewees noted that foreign-born residents face substantial access challenges in the U.S. due to systems that do not sufficiently accommodate language and cultural diversity. Health care and social service providers shared that the diversity of immigrant and refugee groups in the community creates challenges for service providers to reach everyone effectively. Several focus group participants also noted that the city is home to a number of undocumented residents. These residents were described as facing substantial barriers to accessing health and other services and are particularly vulnerable in the current political climate.

#### BWH Specific Data on Priority Communities

##### Geography

In FY2018, BWH served 265,901 patients, approximately 22% of whom were residents of the City of Boston (n=58,929). Of BWH’s patients who resided in Boston, 49% (n=29,102) were residents of one of BWH priority neighborhoods (Table 2).

**Table 2: BWH Patient Population by City and Priority Neighborhood, FY2018**

Geography	Percentage of BWH Patients from Specified Geographies (Out of Total Patient Population, N=265,901)
City of Boston	22% (n=58,929)
BWH Priority Neighborhoods	49% (n=29,102)
Dorchester (02121, 02125)	10% (n=6,101)
Dorchester (02122, 02124)	10%(n=5,999)
Jamaica Plain	14% (n=8,261)
Mattapan	4% (n=2,308)
Roxbury (including Mission Hill)	11% (n=6,433)

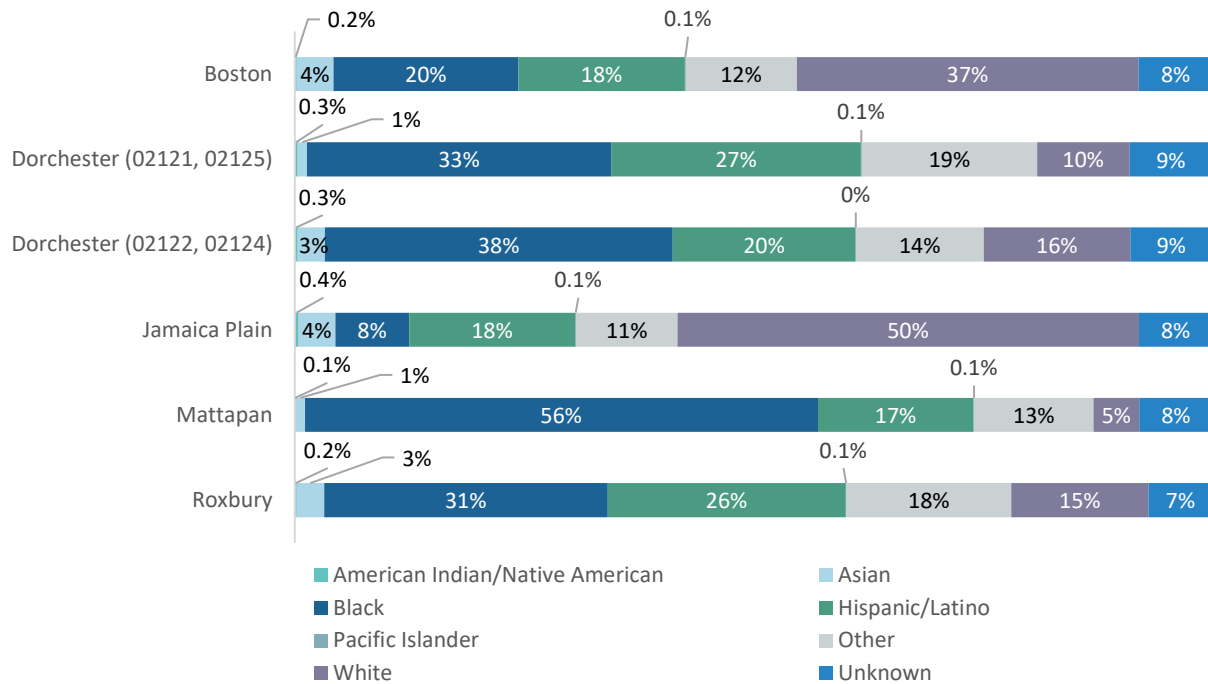
Source: EPSi (an internal Partners HealthCare service utilization and billing database)

Note: These data do not include patients served by Brigham and Women’s Physicians Organization

##### Race/Ethnicity

Among BWH patients, there is substantial variation in the race/ethnicity across priority neighborhoods. For instance, in fiscal year 2018, over one-half of Mattapan patients were Black/African American (56%), and just over one-fourth of Dorchester (02121, 02125) and Roxbury patients were Hispanic/Latino (27% and 26%, respectively) (Figure 3). It is interesting to note that the racial and ethnic backgrounds of BWH patients does not always reflect the diversity of patients’ home communities. Specifically, the neighborhoods of Mattapan, Dorchester (02121 and 02125), Roxbury, and Dorchester (02122, 02124) have higher percentages of Black/African-American residents (77%, 45%, 41%, and 49% respectively) than the BWH patient pools from those same communities (56%, 33%, 31%, and 38% respectively). Additionally, 8% of Roxbury residents are Asian, but just 3% of BWH patients from Roxbury are Asian.

Figure 3: Race/Ethnicity of BWH Patient Population by City and Priority Neighborhood, FY2018



Source: EPSi (an internal Partners HealthCare service utilization and billing database)

Note: These data do not include patients served by the Brigham and Women’s Physicians Organization

### Payor Information

With the exception of Jamaica Plain, the majority of the patient population from BWH priority neighborhoods was covered by public health insurance (from 60% to 67%). The percentage of patients insured by public payors increased from FY2015 to FY2018 across all BWH priority neighborhoods, with the largest increase in Mattapan (from 43% to 63%).<sup>iv</sup>

### Interpreter Services

BWH provides face-to-face interpreter services for 30 different languages, including American Sign Language (ASL). Interpreter services are supplemented through video (35 languages) and phone (240 languages). The hospital also provides portable devices (TTY machines and amplified headsets) for those who are hearing impaired.

In FY2018, a total of 91,329 interpreter requests were made and completed. Sixty percent of requests were delivered through telephonic interpretation, 39% through Non-ASL Face-to-Face interpretation, 1% through video remote interpretation, and 1% through ASL Face-to-Face interpretation. In the Emergency Department, a total of 12,365 interpreter requests were made and completed (2% of total ED visits).

### COMMUNITY ASSETS

Understanding the distribution and availability of resources and services in a community helps to highlight the assets that can be drawn upon to address community health needs as well as any potential gaps. Inherently linked with community assets is civic engagement, which describes involvement in



informal or formal social organizations and community-based activities. Notably, findings related to community assets and civic engagement presented here touch on some of the many strengths and resources in Boston’s communities, but it is not exhaustive and does not capture the full breadth and depth of the assets in Boston’s neighborhoods.

Across many data sources, numerous community assets emerged including, but not limited to, cultural diversity, proximity to healthcare services and other institutions, collaborative social service organizations, engaged community residents, and a strong faith-based community. Boston CHNA Survey respondents were asked to identify strengths of their community or neighborhoods from a list of eleven possible assets, and the most frequently identified strength by respondents from Dorchester, Jamaica Plain, Mattapan, and Roxbury was “My community has people of many races and cultures” (Table 3). Collaborative focus group participants and interviewees described Boston as an engaged city, one that is willing to help those who are struggling. One key informant shared, *“Regardless of the changing face of the community, there is still a real sense of community here. People looking out for each other...and the amount of services and variety of services is just incredible. We hope to keep that richness within the community.”* Foreign-born community members were described as having strong work ethics and *“will to survive”*.

**Table 3. Most Frequently Identified Community/Neighborhood Strengths by Boston CHNA Survey Respondents, by Priority Neighborhood, 2019**

	Dorchester (N=293)	Jamaica Plain (N=109)	Mattapan (N=53)	Roxbury (N=106)
1	My community has people of many races and cultures	My community has people of many races and cultures	My community has people of many races and cultures	My community has people of many races and cultures
2	My community is close to medical services	People accept others who are different than themselves	My community is close to medical services	My community is close to medical services
3	People speak my language	People care about improving their community	People care about improving their community	People speak my language
4	My community has good access to resources	My community is close to medical services	People speak my language	People accept others who are different than themselves
5	People accept others who are different than themselves	People are proud of their community	People can deal with challenges in this community	My community has good access to resources

Source: Collaborative Report, 2019

Community members and Collaborative interview participants all noted proximity and abundance to health care services and a strong network of connected social services as major strengths of their community. One Collaborative focus group participant in Mattapan noted, *“There’s so much that the city of Boston has to offer; it has some of the best colleges and universities, best teaching hospitals...”* One Collaborative key informant described, *“Generally Boston is deeply collaborative; even though there isn’t a plan, there is a willingness and appetite to collaborate and pull together in ways that affect the common good.”* Despite the abundance of services and willingness to collaborate, community members and interviewees noted that there is a need to reduce duplicative social services and strengthen collaborations.

Key informants, focus group participants, and other internal and community stakeholders specifically mentioned a wide variety of community assets beyond health care and social services. These included community centers, libraries, venues offering or promoting access to healthy food options, social justice organizations, grass roots advocacy groups and organizations, and community gardens. In addition, one Southern Jamaica Plain Health Center Advisory Committee member noted that Jamaica Plain has a wealth of community-based expertise among community leaders, advocates, and organizations that should be utilized to support new initiatives.

Furthermore, community cohesion refers to community dynamics, such as a shared sense of membership, influence, social integration, and connections among residents. In community meetings held by the Collaborative, residents raised strengths they perceived based on connections within their community. Participants who belonged to similar affinity groups expressed a strong sense of cohesion among their communities, particularly those with similar racial, cultural, linguistic, and religious backgrounds. For example, Haitian residents in Mattapan indicated supporting small businesses run by other Haitian immigrants. Approximately 75% of residents in BWH priority neighborhoods strongly agree or agree with the statement, “My neighbors and I want the same thing for our neighborhood.” At the same time, more than 55% of residents in each of these neighborhoods strongly disagree or disagree that they “...have a lot of influence over what [their] neighborhood is like.”

When looking at civic engagement, 46% of Boston CHNA Survey respondents, many of whom were recruited to complete the Survey through community organizations, reported involvement in organizations such as neighborhood associations, labor unions, immigration and civil rights groups, religious groups, community organizations, or other organizations. Additionally, nine in ten respondents indicated that it was important to be involved in government decision-making (90%). Nearly eight in ten respondents knew who their elected representatives were (78%). Approximately seven in ten respondents knew how to contact an elected representative (71%) or felt that they could influence decisions made at city, state, and federal levels (65%). Among Boston CHNA Survey respondents who are eligible to vote, nearly half (47%) reported voting in every election.

## SOCIAL DETERMINANTS OF HEALTH

Having a healthy population is about more than delivering quality health care to residents. Where a person lives, learns, works, and plays all have an enormous impact on health. Health is not only affected by people’s genes and lifestyle behaviors, but by factors such as employment status, quality of housing stock, and economic policies. These factors are referred to as “social determinants of health (SDoH)”.

The Health Equity Research and Intervention team at BWH’s CCHHE collaborated with Brookside and Southern Jamaica Plain Community Health Centers to pilot a system for screening for social needs and guiding referrals to help patients access social services. This SDoH screening is now implemented at 130 primary care practices across the Partners HealthCare system, including several locations at BWH. Partners HealthCare has also incorporated tracking of SDoH in electronic health records and through ICD 10 codes. This increased emphasis on social determinants in patient care has elevated the visibility of SDoH in the health care field.<sup>v</sup>

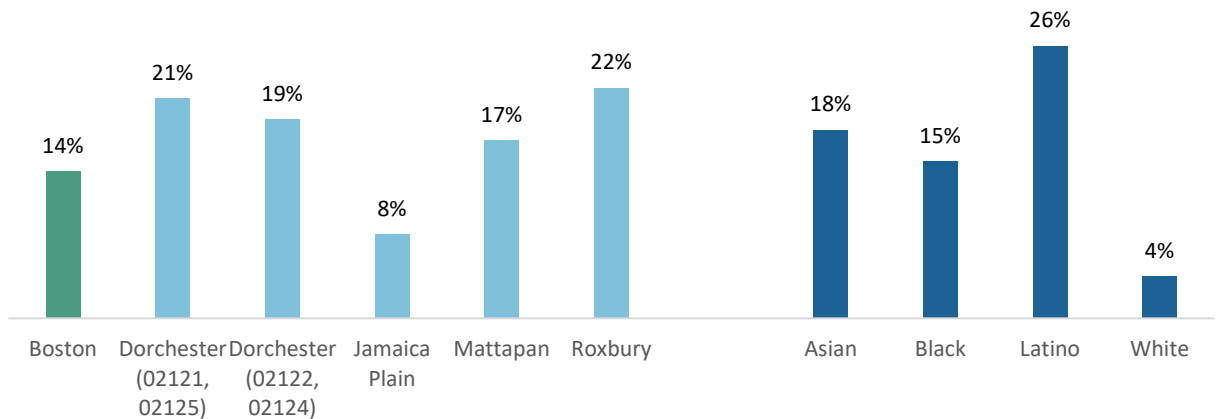
### Education

Educational attainment is a prominent predictor of health outcomes; however, the role of education in health outcomes is multifaceted. Educational attainment may increase access to economic and social resources such as quality stable housing, healthcare, and social support systems.<sup>vi</sup>

Boston is a highly educated city. Nearly half of adults (48%) aged 25 years or older hold a bachelor’s degree or higher. However, there are stark differences by race/ethnicity and by neighborhood. Nearly 70% of White residents hold a college degree compared to 20% of Black residents and 21% of Hispanic/Latino residents. At the same time, Black and Latino residents are more likely to lack a high school diploma than White residents (15% and 26%, respectively, compared to 4%). In addition, there are also differences by neighborhood. Residents of Roxbury, Dorchester (02121, 02125), and Dorchester (02122, 02124) have a greater proportion of residents without a high school diploma (22%, 21%, 19%, respectively) than the city of Boston (14%) (Figure 4).

Echoing comments shared in focus groups and interviews from the Collaborative, data from Boston Public Schools show that over three-quarters of students are deemed high needs (76%), defined as either being low income, economically disadvantaged, being a current or former English Language Learner, or having a disability. Furthermore, graduation rates vary by race for Boston Public Schools students. The 2018 graduation rate for White students was 81% compared to 78% for Black students and 69% for Latino students. Parents in a Dorchester focus group raised concerns about the lack of equitable investment in Boston Public Schools across neighborhoods.

Figure 4. Percent Population 25 Years and Older with Less than a High School Diploma, by City, Priority Neighborhood, and Race/Ethnicity, 2013-2017



Source: Collaborative Report, 2019

Data: U.S. Census, American Community Survey 5-Year Estimates, 2013-2017

Note: Race/ethnicity data presented for Boston overall

### Employment

The most recent available data (June 2019) indicate the unemployment rate for Boston is 3%.<sup>vii</sup> According to the ACS, nearly one-third of Boston residents 16 years or older are employed in education, health care, or social assistance industries. However, when examining ACS unemployment data over the past several years (2013-2017), which can be analyzed by neighborhood and other subgroups, data show that unemployment rates have been significantly higher in Dorchester (02121, 02125) (11%), Dorchester (02122, 02124) (10%), Mattapan (10%), and Roxbury (13%), and significantly lower in Jamaica Plain (5%) compared to Boston overall (7%). Furthermore, the unemployment rate for Black Boston residents was higher (9%) compared to White Boston residents (5%).

Numerous Boston CHNA Survey respondents reported feeling underemployed, lacking livable wages, or desiring more job satisfaction. Collaborative focus groups and interviewees noted that those with lower education or fewer skills (especially in technology), immigrants, and those with a criminal record experience employment challenges. This is consistent with findings from an October 2018 report commissioned by The Boston Foundation showing that wage stagnation and increases in the cost of living are impacting low- and middle-income workers.<sup>viii</sup>

Collaborative focus group members and interviewees saw a need for more trade schools and job centers, and more and improved opportunities for young people to access employment opportunities. Many focus group participants discussed the challenges for workers with less formal education. One Collaborative interviewee shared, *“We have become the two cities of Boston. The extreme and stark difference is right in your face; where you have urban affluence right up against urban poverty... the Ritz condo development right next to St. Francis House...”* Several focus group participants from Dorchester and Mattapan described working multiple low-wage jobs and the stress from a lack of job security. One Dorchester resident shared, *“I have three jobs and still make less than \$45,000 a year, barely getting by.”*

Concurrently, employers have found it increasingly difficult to fill positions. Workforce development experts have highlighted the need for efforts to recruit and offer further training to employees who may not hold all the required credentials, but are hardworking, skilled, and eager for an opportunity to receive further on the job training.<sup>ix</sup>

### Financial Security and Mobility

Income is a significant social determinant of health. At an individual level, income influences where people live, their ability to access higher education and skills training, and their access to resources. Low-income individuals have limited access to healthy foods, opportunities for physical activity, and healthy environments, and have higher rates of physical limitations, chronic disease and more limited access to health care.<sup>x</sup> At a community level, low community wealth often correlates with more limited educational and job opportunities, greater community violence, environmental pollution, and disinvestment in essential infrastructure and resources.<sup>xi</sup>

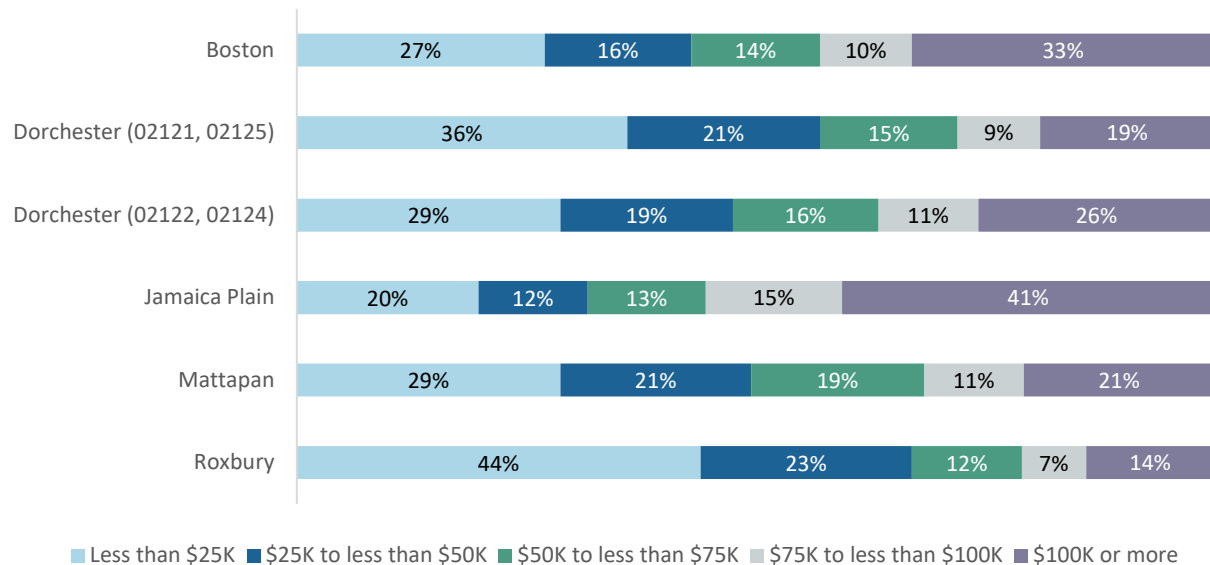
### Poverty

In Boston, one-fifth of the population lives in poverty, according to ACS data, and 50% of those impoverished live in the BWH priority neighborhoods.<sup>xii</sup> Moreover, within these neighborhoods, 16% (Jamaica Plain) to 40% (Mission Hill) live in poverty.<sup>xiii</sup> Mission Hill is home to many college students and while those residing in congregate student housing are not surveyed, college students living in private housing are part of the ACS sample. While students may live on low incomes, their future income earning potential through education is greater. In addition to the inequitable distribution of poverty across Boston neighborhoods, poverty rates differ by household types as well. Nearly 50% of families with children in Boston are led by a female head of household, and the poverty rate among this population is 48%.<sup>xiv</sup>

Boston’s median household income is \$62,021. However, median income ranges from \$27,721 (Roxbury) to \$84,446 (Jamaica Plain) across the priority neighborhoods.<sup>xv</sup> (See Figure 5 for household income distribution by city and priority neighborhood.) Communities of color bear the greatest burden of poverty—within the city, household income for white residents is roughly two times as high as that for non-white groups.<sup>xvi</sup> Specifically, the median household income for Latinos in Boston in 2017 was \$36,998, for Blacks it was \$39,344, and for Asians it was \$47,048 as compared to \$98,317 for Whites.

Moreover, in *The Color of Wealth in Boston*, authors note that “Racial differences in asset ownership, particularly homeownership, contribute to vast racial disparities in net worth.”<sup>xvii</sup> These vast disparities have their origins in systemic racism and a series of historic and contemporary policies and practices that prevented people of color from purchasing land and property, accessing housing loans, and developing assets.<sup>xviii</sup>

Figure 5. Household Income Distribution, by City and Priority Neighborhood, 2013-2017



Source: Collaborative Report, 2019

Data: U.S. Census, American Community Survey 5-Year Estimates, 2013-2017

Among Boston neighborhoods, credit scores and debt collection rates vary. About half of consumers in Roxbury (51%) and Mattapan (48%) have subprime credit scores and approximately one-third (35%) have debt collections on their credit reports.<sup>xix</sup> These figures are greater than higher-income neighborhoods, such as Beacon Hill, where 8% have subprime credit scores and 5% have debt collections on their credit reports.<sup>xx</sup>

Financial insecurity was reported as a concern in most Collaborative focus groups and interviews, with participants indicating that it was one of the root causes of stress in their lives and noting challenges meeting basic needs such as food, shelter, and medical care. Focus group participants often attributed these financial stressors to stagnant salaries, high costs of living, and difficulty balancing multiple low-wage jobs. One Collaborative interviewee summarized, “*Real wages have been going down for low income people [for decades]. This is at the heart of all of it: people have no time because they are working 4 jobs to get the same salary they used to get from one [job]. If you can’t rest, how can you be healthy? The sleep and the downtime are fundamental, and people have less of it. Some people have to work 70 hours to make ends meet.*”

### Housing

Housing emerged as a paramount health issue across Boston, including in the BWH five priority neighborhoods. Housing is deeply connected to health and wellbeing. Among children, housing

instability is associated with a greater likelihood of experiencing poor health, asthma, lower than healthy weight, a higher risk for developmental delays and an increased lifetime risk of depression. Among adults, housing instability is associated with reduced access to care, delaying needed health care and medications, a higher likelihood to report mental distress and difficulty sleeping, and a greater incidence of depression.<sup>xxi</sup> In addition to impacting access to health care, high housing costs can preclude individuals from paying for food, clothing, transportation, and other fundamental costs of living, which are key aspects to living a healthy life.<sup>xxii</sup>

Five internal BWH key informants identified housing as a public health concern noting issues such as lack of stable and affordable housing, gentrification and displacement, homelessness, housing conditions, and overcrowding. One BWH interviewee discussed how community violence, housing insecurity, and substance use are often intertwined. BWH focus groups with Mission Hill community members, SSJP students, Southern Jamaica Plain Health Center Advisory Committee members, and BWH community health workers and resource specialists also underscored housing as a key health concern, touching upon specific issues such as lack of affordability, gentrification and displacement, senior isolation as neighbors are priced out, aging population as children and families are priced out, and the need for housing assistance for immigrants. Thirty-nine percent (Mattapan) to 70% (Jamaica Plain) of Boston CHNA Survey respondents from BWH priority neighborhoods reported housing quality or affordability as the top most important community health concern and 24% (Mattapan) to 34% (Roxbury) reported homelessness as the most important concern.

From 2013 to 2017 in BWH priority neighborhoods, most housing tenure was renter-occupied. The percentage of renter-occupied housing ranged from 54% (Jamaica Plain) to 82% (Roxbury). Among renters, between 36% (Dorchester (02122, 02124)) and 58% (Jamaica Plain) were cost-burdened, meaning renters spent more than 30% of their income on housing. Owners with mortgages in these neighborhoods were also financially constrained by housing costs between 2013 and 2017 with 27% (Dorchester (02122, 02124)) to 40% (Mattapan) being cost-burdened. Moreover, except for certain areas of Jamaica Plain, if residents in BWH priority neighborhoods earn the median income or lower, they cannot afford the local median rent.<sup>xxiii</sup> From 2013 to 2017 across BWH priority neighborhoods, median monthly housing costs for owners with mortgages ranged from \$1,700 (Roxbury (02120)) to \$2,300 (Jamaica Plain) and for renters from \$800 (Dorchester (02121)) to \$1,500 (Jamaica Plain). Housing costs have been rising in Boston, yet many have not experienced simultaneous wage growth.<sup>xxiv</sup> For example, between 2015 and 2018, the median condo sale price across BWH priority communities rose between 17% and 65% in areas of Roxbury and Mission Hill.<sup>xxv</sup>

Rising housing costs in historically low-income communities are associated with gentrification (the process of affluent outsiders moving into less affluent neighborhoods) and result in displacement of local residents who are predominately individuals of color and immigrants in BWH priority neighborhoods. As a Collaborative key informant summarized, *“White community members are flocking to Dorchester and Roxbury when it’s historically consisted of low-income communities of color.”* Another Collaborative key informant explained, *“There’s been a dramatic increase in housing costs in the last several years. You’re seeing more [immigrant] families unable to meet the pressure and are being pushed out to places like Quincy and Randolph because they cannot afford Dorchester...making it harder to access socialization for seniors, healthcare, linguistic resources.”* Some Collaborative key informants and focus group participants with long-standing roots in historically working-class communities of color described changes in the character and culture of their neighborhoods in recent years. Specifically, it was noted that younger professionals were changing the “feel” of these areas. For example, one Roxbury resident shared, *“I grew up here and it’s changed so much; I hardly know anyone in the*

*neighborhood anymore.*” Focus group participants attributed this lack of community linkages to gentrification and displacement. One key informant shared, *“If you’ve been working with people for decades to clean up their neighborhoods who now cannot afford to live in Boston, that affects all of our work. You have people who for years have worked to get the community safer and cleaner and are now getting priced out...pushed away.”* Similar sentiments were expressed in the meeting held in Mission Hill, wherein residents voiced concerns that much of the neighborhood housing stock was purchased by investors and converted into expensive transient housing for local college students. In 2018, the 02120 ZIP code of Mission Hill was the second most common neighborhood for off-campus living for undergraduate and graduate students in the city of Boston.<sup>xxvi</sup>

In addition to housing issues associated with rising costs, residents also face housing discrimination. As part of the Collaborative’s focus groups, Roxbury and Dorchester residents reported being unable to get housing because landlords did not accept Section 8 vouchers. A Dorchester public housing resident underscored the burden faced by the elderly and disabled, explaining, *“We have elderly folks who are being displaced because [public] housing units aren’t accessible [for the disabled] and there are no call buttons in case they need help.”* In addition, in Boston, Black (13%) and Latino (13%) residents are over two and a half times more likely to be denied a non-Federal Housing Administration loan than White residents (5%) and this inequity persists even when controlling for income.<sup>xxvii</sup>

In terms of housing quality, Collaborative focus group residents from Dorchester reported that housing stock is in disrepair, overcrowded, and lacking investment. Mattapan and Dorchester focus group participants perceived that landlords often *“do what they want,”* including developing additional units within their buildings without notifying residents. One Mattapan resident shared, *“My landlord is making the basement into a 3-bedroom apartment, but they didn’t even let us know.”*

## Transportation

In the Boston region, 37% of jobs are within half of mile of a rapid transit or commuter rail station.<sup>xxviii</sup> Collaborative focus group participants from Jamaica Plain expressed satisfaction with transportation in their neighborhood and those in Mattapan highlighted improvements to key Mattapan bus routes in recent years. Nonetheless, transportation is still an issue in Boston, including BWH priority neighborhoods. As the Boston Foundation summarized in its October 2018 report, Boston’s *“...aging transit system requires regular maintenance and upgrades, and in recent years, reliability has declined dramatically.... This deterioration coincides with rising housing costs in the center of the city.”*<sup>xxix</sup> Poor public transportation is a critical public health issue since it can lead to the increased use of automobiles and a more sedentary lifestyle, missed health care appointments, and increased stress and worse mental health outcomes among other issues.<sup>xxx</sup> Moreover, when public transportation is used, it positively affects health outcomes by lowering air pollution from vehicular emissions and the number of vehicle crashes.<sup>xxxi</sup> Finally, ACS 2013-2017 estimates suggest that between 32% (Mattapan) and 43% (Jamaica Plain) of individuals 16 years and older living in BWH priority neighborhoods rely on public transportation to get to work, underscoring the critical importance of public transportation to economic opportunity.

The need for greater transportation access came up in BWH key informant interviews and BWH focus groups with respondents highlighting rising costs, the failings of current assistance programs, and the importance of transportation for older residents amongst other issues. The impact of gentrification on transportation was also raised during a BWH focus group and by a BWH key informant with the key informant explaining that as people are being pushed out of their homes, their commutes become even more challenging. In the Boston CHNA Survey about transportation barriers in daily life, “limited street



parking, traffic-related noise, or traffic” was chosen by a fifth to a quarter of respondents from Dorchester (25%), Jamaica Plain (23%), and Roxbury (20%). A fifth of respondents from Mattapan (20%) selected “cost of transportation” as a barrier and a fifth of respondents from Dorchester (20%) and Roxbury (21%) chose “availability of public transportation.”

Finally, while many residents in the BWH priority neighborhoods take public transportation to work, between 38% (Roxbury) and 63% (Mattapan) of residents 16 years and over commuted to work in a car, truck, or van from 2013 to 2017. The average annual premium car insurance rates in BWH priority neighborhoods are among the highest in the city. For example, the average annual rate in Dorchester (02101) and Roxbury (02119, 02120) is over \$700 more than the lowest neighborhood rate of \$1,316 (Fenway).

### Environmental Health

According to the World Health Organization, “Environmental health addresses all the physical, chemical, and biological factors external to a person, and all the related factors impacting behaviours.”<sup>xxxii</sup> Boston CHNA Survey data indicate the top environmental health concerns at home for respondents from BWH priority neighborhoods include:

- Outdoor air pollution from vehicles (Dorchester, Jamaica Plain, Mattapan, Roxbury)
- Outdoor noise pollution from vehicles (Dorchester, Jamaica Plain, Mattapan, Roxbury)
- Extreme outdoor heat or cold (Dorchester, Jamaica Plain, Mattapan, Roxbury)
- Dangerous traffic (Dorchester, Jamaica Plain, Roxbury)
- Bug and/or rodent infestation (Dorchester, Mattapan, Roxbury)
- Mold/mildew or water leaks (Jamaica Plain, Mattapan)
- More severe storms (Jamaica Plain)
- Poor indoor air quality (Mattapan)

The focus on traffic as an environmental health issue was underscored during BWH’s community meeting with Mission Hill residents. Community members cited their concern that the increased noise and pollution from vehicles cutting through the neighborhood to access other neighborhoods including Longwood Medical Area.

Boston CHNA Survey respondents from BWH priority communities also reported on their top five environmental health concerns at work and school. Many of the topics were similar to the “at home” issues raised, but additional issues appeared such as inadequate heating and/or cooling and tobacco smoke.

### Built Environment

Environmental health also includes the health impacts from the built environment. The built environment, or the physical make up in which where people live and work,<sup>xxxiii</sup> shapes an individual’s ability to access resources they need to live healthy lives. Through focus groups and interviews conducted by the Collaborative and BWH, the following issues emerged regarding the built environments of BWH priority neighborhoods: 1) green space, 2) access to healthy foods, 3) walkability and pedestrian safety, 4) access to health care, and 5) public safety.

### Green Space

The BWH priority communities differ with regard to green space accessibility. The Collaborative interviewees and focus group participants described excellent access to green space in Jamaica Plain and

noted the Arboretum in Jamaica Plain and Franklin Park in Dorchester as community strengths. The Collaborative's focus group members from Dorchester, however, felt there is insufficient green space in their neighborhood, relating it to new housing development. SSJP focus group participants also highlighted the need for more green space as a key health issue.

### **Access to Healthy Foods**

The Collaborative's focus group and interview participants expressed concern about limited healthy food options in lower income neighborhoods across Boston, especially in Dorchester, Mattapan, and Roxbury. One resident of Dorchester participating in a Collaborative focus group shared, *"The problem is that you can't get quality food unless you leave your community"* and another Dorchester resident said, *"Buying cheap food is not good for your kids but I can't afford Whole Foods."* Some Boston residents in Collaborative focus groups described a prevalence of convenience stores and fast food restaurants in low-income communities, which many linked to the rise of obesity and diabetes. As one Dorchester parent explained, *"In our neighborhood we have a lot of corner stores full of a bunch of junk foods. If you go to fruit and veggie area in corner stores...those fruits have often been sitting there a long time and have fruit flies."* Two BWH key informants and Southern Jamaica Plain Health Center Advisory Committee focus group participants also highlighted that access to healthy foods is a key health issue in BWH priority neighborhoods. Jamaica Plain, and parts of Roxbury, Mattapan, and Dorchester have substantial geographic areas with limited access to grocery stores.

### **Pedestrian Safety, Walkability, and Biking**

Pedestrian safety in heavily trafficked neighborhoods emerged as an issue among SSJP focus group participants and Mission Hill community meeting members. Furthermore, the ability to walk in a community can be important for physical activity and safety. A walk score indicates pedestrian-friendliness, with scores closer to 100 indicating greater walkability and those closer to 0 indicating less walkability. In 2017, BWH priority neighborhoods matched or exceeded Boston's walk score, with the exception of Mattapan, which scored lower. To note, despite Dorchester (02122) ranking higher than Boston in terms of walkability score, according to 2014 data, Dorchester is one of the neighborhoods that has a larger concentration of poor condition sidewalks than other city neighborhoods.

Biking is a challenge in some of the BWH priority neighborhoods. For example, there is less than one mile of bicycle trails in Mattapan versus approximately six miles in both East Boston and Hyde Park. In addition, Bluebike stations, the city's rental bicycle system, are not as readily accessible across BWH priority neighborhoods compared to Back Bay, Downtown Crossing, and the South End.<sup>xxxiv</sup> In May 2019, the Mayor's office announced more bike stations to be created in Dorchester.<sup>xxxv</sup>

### **Public Safety**

Community public safety issues take many forms. Collaborative interviewees and focus group participants from Dorchester and Mattapan expressed concern about safety in their community open spaces, as well as challenges with rodents, snow removal, and lack of public restrooms. In addition, Collaborative focus group participants in Dorchester, Mattapan, and Roxbury expressed concerns about individual safety in their community open spaces, citing an increase in used needles on sidewalks, playgrounds, and in parks. To combat these issues, one BWH key informant suggested the need to work with city officials on city planning that would help prevent violence, such as location of police stations and streetlights. SSJP focus group participants suggested the need to increase the security of public areas in BWH priority communities. Furthermore, SSJP focus group participants did note that libraries are a community asset as a place for young people to gather and feel safe.

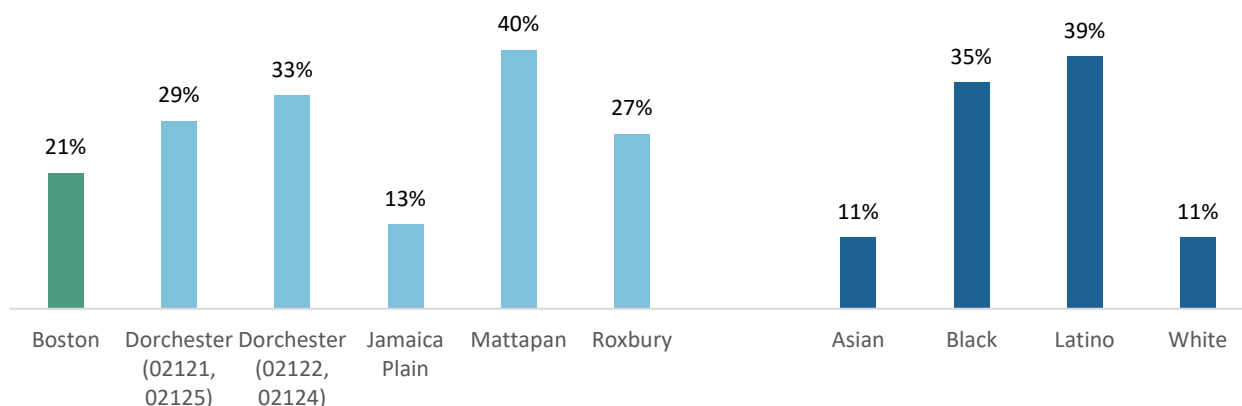
## Food Insecurity

Many Americans do not meet nutritional guidelines outlined by the U.S. Department of Health and Human Services and the U.S. Department of Agriculture. Inadequate financial resources and limited access to healthy, affordable food contribute to these patterns. Food insecurity has substantial negative effects on health; research has shown that people experiencing food insecurity have lower nutritional intakes, increased rates of mental health problems and depression, higher rates of diabetes and hypertension, and worse oral health. To mitigate limited financial resources, food insecure individuals often must choose between food and engaging in healthcare, taking medications as prescribed, and covering costs of other basic needs.<sup>xxxvi</sup>

The proportion of Boston adults experiencing food insecurity has declined from 2010 to 2017; however, nearly one in five residents still experience food insecurity. Latino (39%) and Black (35%) residents were significantly more likely than White residents (11%) to report being food insecure as were foreign-born residents compared to U.S. born residents. By neighborhood, Mattapan, Roxbury, and Dorchester had a significantly higher percentage of residents than Boston overall who reported being food insecure (Figure 6).

Food assistance programs were described by Collaborative focus group participants and interviewees as filling a critical gap for those facing difficulty accessing food. In fact, nearly 20% of Boston residents receive benefits from the Supplemental Nutrition Assistance Program (SNAP).

Figure 6. Percent of Adults Reporting Food Purchased Did Not Last and Did Not Have Money to Get More, by City, Priority Neighborhood, and Race/Ethnicity, 2013, 2015, and 2017 Combined



Source: Collaborative Report, 2019

Data: Boston Public Health Commission, BBRFSS, 2013, 2015, and 2017 combined

Notes: Data show percentage of adults reporting it was sometimes or often true that the food didn't last and they did not have money to get more; race/ethnicity data presented for Boston overall

## VIOLENCE AND TRAUMA

Violence and trauma are important public health issues affecting all aspects of an individual's health. Individuals and communities are exposed to and experience violence and trauma in different ways. Although violence is often thought of as interpersonal, it can also be systemic and structural. As Karandinos and Bourgois (2019) explain, structural violence "...results from durable systemic inequality

produced by large-scale forces, including racism, gender inequality, poverty, and harmful public policies rather than from isolated individual actions or serendipity.”<sup>xxxvii</sup> These different types of violence are interconnected as systemic and structural violence creating conditions in communities that can lead to interpersonal violence.

The presence and impact of violence and trauma surfaced as a reoccurring theme and area of concern. This is particularly true for BWH priority communities of Dorchester, Roxbury, and Mattapan. The data informing this assessment clearly indicate that violence and trauma disproportionately impact communities of color as well as other marginalized groups.

### **Systemic and Institutional Racism**

Systemic and institutional racism—and the direct connection to violence and trauma—were described as a priority by several Collaborative key informants and focus group participants as well as by BWH interviewees. As one Collaborative interviewee summarized, “*We see things in communities of color like over policing, greater system involvement, more suspensions, the school to prison pipeline...racism shows up in all of these insidious ways.*” There was an expressed need to better understand how systemic issues such as racism and other forms of oppression impact trauma in communities of color.

### **Community Violence**

Community violence emerged as one of the strongest themes across data sources. Findings indicate that inequities exist in exposure to violence at the community level. Boston CHNA Survey data indicate that 25% of all Boston respondents consider their neighborhood unsafe or extremely unsafe with Roxbury (50%), Mattapan (49%), and Dorchester (45%) having nearly double the rate. Similar breakdowns by race/ethnicity were evident in the 2015 Boston BRFSS with Black (70%) and Latino (69%) adults being more likely to report feeling only somewhat safe or not safe in comparison to White adults (51%) and Boston overall (56%).<sup>xxxviii</sup> Boston CHNA Survey respondents from Mattapan (43%) and Dorchester (36%) were more likely to cite gunshots in their neighborhood over the past year as a serious problem compared to respondents from other Boston neighborhoods. Additionally, in 2018, Roxbury, Dorchester, and Mattapan had among the highest number of violent crimes reported by the Boston Police Department. The homicide rates and homicide by firearm rates from 2011 to 2016 were higher among Black and Latino residents compared to White residents in Boston. In addition, of Boston neighborhoods, the homicide by firearm rate per 100,000 residents from 2011 to 2016 was highest in Dorchester (02121, 02125), Dorchester (02122, 02124) Mattapan, and Roxbury (13.7, 10.6, 9.4, 7.3, respectively).

Community violence was raised as an area of significant concern in the focus groups and interviews conducted by the Collaborative. Community violence-based trauma was mentioned as affecting many population groups, but with an emphasis on communities of color, young children, LGBTQ youth, seniors, and immigrants. In addition, Collaborative focus group participants and interviewees from Dorchester most frequently cited concerns about increasing gun violence in their communities. Collaborative focus group and interview participants also brought up the impact of “overpolicing” on communities of color. Collaborative community residents and interviewees alike stressed that community violence needs to be addressed with an understanding of collective trauma<sup>1, xxxix</sup>

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<sup>1</sup> According to the National Resource Center on Domestic Violence (2016), collective trauma refers to trauma that happens to large groups of people (e.g., colonialism, slavery, poverty) and can be transmitted across generations.

Concerns about community violence and trauma were echoed by two BWH key informants as well as by focus group participants of SSJP. One key informant noted that living in a neighborhood with a burden of violence can lead to negative and lasting health effects, including chronic stress and cardiac problems.

### **Interpersonal and Domestic Violence**

Interpersonal and domestic violence is an additional area of concern. In 2018, Roxbury (386) and Mattapan (368) had among the highest numbers of restraining orders served by the Boston Police Department (compared to a citywide average of 160). In 2014-2015, the assault-related injury emergency department visits were higher for Black and Latino residents compared to White residents, and higher for the neighborhoods of Dorchester, Mattapan, and Roxbury.<sup>xi</sup> A few Collaborative key informants and focus group participants in Mattapan noted the prevalence of interpersonal violence, underscoring that women of color and non-English speaking immigrants are especially vulnerable to interpersonal and domestic violence. They stressed the need for more bilingual service providers.

### **Adverse Childhood Experiences (ACEs)**

ACEs, a term the Centers for Disease Control and Prevention defines as “all types of abuse, neglect, and other potentially traumatic experiences that occur to people under the age of 18,”<sup>xii</sup> emerged as an important theme through Collaborative focus groups. In 2017, 19% of Boston adults reported experiencing one ACE over their lifetime and nearly 16% reported more than one ACE. BRFSS data indicate that adults who identified as Black, Latino, and LGBTQ were more likely than their counterparts to report having lived with a caregiver with mental illness as a child, having lived with a caregiver with substance misuse as a child, and having lived with adults who physically abused each other as a child (2013-2017). Adults in Dorchester (02122, 02124) were more likely to report having lived with adults who physically abused each other (26%) and having lived with someone who had been in prison during childhood (19%) than the average across Boston (17% and 8%, respectively) (2013-2017). There was a perception among parents who were Collaborative key informants and focus group participants that there is a lack of resources for children who have experienced traumatic events. This was especially prominent in Dorchester where residents cited inequitable social emotional supports in schools with a greater percentage of low-income students of color.

### **Bullying**

Bullying among youth in Boston has declined over the past few years. According to the most recent data available (2013-2017), 12% of Boston high school students reported that they have been bullied on school property over the past year and 9% reported they have been bullied electronically in the past year. Female and LGBTQ students are disproportionately affected by bullying.

### **Trauma**

Other facets of trauma were discussed in Collaborative focus groups and key informant interviews, including the trauma of poverty that results in chronic stress and post-traumatic stress disorder and intergenerational trauma. One interviewee with experience in early childhood education shared, “*trauma is generational; parents and their parents before them are living in unstable housing, are being evicted...*” Collaborative key informants who worked with children described an “*incredible resilience*” among children who have experienced trauma. Collaborative interview and focus group participants mentioned a growing fear of deportation and family separation. Moreover, Collaborative focus group participants who identified as survivors of violence expressed the need for more accessible and trauma-informed services.

## BEHAVIORAL HEALTH

Behavioral health, including mental health and substance use, remains a primary concern for BWH priority communities.

### Mental Health

Mental health issues were described as a priority concern across almost all of the discussion groups and interviews conducted by the Collaborative and BWH. Stress, anxiety, and depression were identified as top mental health issues, especially for those who identify as LGBTQ, low-income residents, seniors, children, immigrants, and communities of color. Mental health was also often discussed in connection with trauma and substance use, and social determinants like multigenerational poverty, employment, and safety. Additionally, discrimination has been shown to negatively impact mental health.<sup>xlii</sup>

Among Boston CHNA Survey respondents who experienced discrimination a few times a year or more, respondents of color were more likely to report discrimination based on race than White respondents. Specifically, 78% of Black respondents, 73% of Asian respondents, 67% of respondents of two or more races/ethnicities or respondents of other races/ethnicities, and 53% of Latino respondents reported discrimination based on race compared to 13% of White respondents.

BRFSS data indicate that 12% of Boston adults reported persistent sadness<sup>2</sup> with Black and Latino residents, females, non-home owners, those with less than some college education, those making less than \$50,000 a year, LGBTQ residents, and those not employed being populations more affected (2013-2017). Moreover, 21% of Boston adults reported feeling persistent anxiety<sup>3</sup> with females, non-homeowners, LGBTQ residents, those making less than \$25,000 a year, and those not employed being disproportionately affected. The age-adjusted suicide rate for Boston overall (2012-2016) is 6.7 deaths per 100,000 residents and Dorchester (02122, 02124) is the only neighborhood across Boston with a higher suicide rate than Boston overall (8.9 deaths per 100,000 residents).

Concern for mental health issues among children and youth was also a prominent theme in Collaborative focus groups and interviews and these concerns are corroborated in the quantitative data. Collaborative key informants spoke of how social and economic stressors exacerbate mental health issues for children. YRBS data indicate 30% of Boston public high school students reported feeling persistent sadness,<sup>4</sup> with female students and students who identify as LGBTQ being demographic groups more affected (2013-2017). Also, according to the YRBS, 12% of Boston public high school students reported seriously considering suicide, with 26% of LGBTQ students indicating that they seriously considered suicide and 18% of LGBTQ high school students and 9% of Latino high school students reporting attempting a suicide in the past year. Moreover, Asian (59%), Black (68%), and Latino (65%) high school students were less likely to report that they have at least one trusted adult at school compared to White (76%) students between 2015-2017.

While the proportion of people receiving treatment for depression has grown, significant barriers constrain access for many. Among those who reported receiving treatment for depression, rates were lower among Asian (9%) and Black residents (15%) compared to White residents (20%) and foreign-born residents (9% for those living 10 years or less in U.S. and 14% for those living more than 10 years in U.S.) compared to those who were born in the U.S. (21%) (2013-2017). Jamaica Plain (23%) and Roxbury

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<sup>2</sup> Persistent sadness is defined as feel sad, blue, or depressed for more than 15 days within the past 30 days.

<sup>3</sup> Persistent anxiety is defined as feeling worried, tense, or anxious for more than 15 days within the past 30 days.

<sup>4</sup> Persistent sadness among Boston public high school students is measured by feeling sad or hopeless every day for 2 weeks or more in the past 12 months.

(24%) residents reported higher rates for receiving treatment for depression compared to Boston overall (18%) (2013-2017). Specific barriers mentioned in Collaborative focus groups related to mental health services include stigma, cultural and language differences, cost of services, and lack of sufficient providers (both in terms of numbers and access to those that understand different cultures, language, and lived experiences); this was particularly true in BWH priority neighborhood of Dorchester. For example, mothers who had experienced violence in Dorchester explained being offered mental health services from clinicians who they identified as inexperienced and lacking racial awareness.

In addition to an insufficient number of providers, other Collaborative key informant participants pointed to systemic challenges to addressing community mental health issues, including long wait lists, limited resources for non-English speakers, the need for more full-time emotional supports in the school system, and the struggle to attract and retain a diverse workforce. BWH discussion group participants also voiced concerns related to stigma as well as limited access and availability of services. Four of BWH's key informant interviewees drew attention to mental health issues, including the prevalence of trauma, depression and anxiety among patients from BWH priority neighborhoods, and the need to prioritize and expand mental health care at BWH.

### Substance Use

Substance use is considered a priority health issue in many group discussions and interviews conducted by the Collaborative and BWH. As highlighted above, the interrelationship between trauma, mental health, and substance use was frequently raised by key informants. One BWH interviewee specifically noted the strong connection between substance use, community violence, and housing instability.

In the Collaborative interviews and groups discussions, marijuana, prescription drug use, and opioids were mentioned as being among the most troubling. There was particular concern regarding the impact of substance use on young people, including among focus group participants in Dorchester. Substance use was named as a concern in the discussions with BWH Emergency Department staff, SSJP participants, and BWH's key informant interviewees.

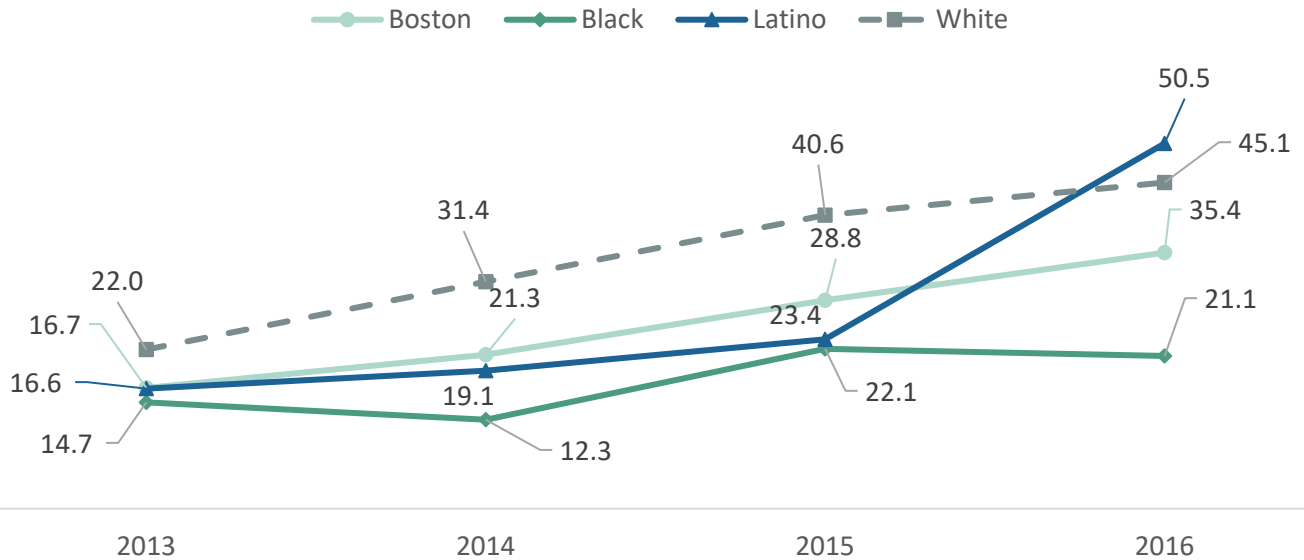
### Opioid Use

Opioid use arose as a persistent issue across Boston. While some Collaborative key informants noted that headway has been made to address the opioid epidemic in recent years, more is needed to address its severity. In many instances, opioid addiction starts with dependence of taking prescription pain medication. While fewer than 10% of Boston high school students reported to have ever taken prescription pain medication without a doctor's prescription or differently than how a doctor told them, LGBTQ students (19%) were more likely to report this behavior compared to heterosexual/non-transgender students (7%) (2017).

Heroin and fentanyl were named as specific substances of concern, and ones that are cheap and easily available. Some interviewees perceived that opioid use was on the rise in communities of color and cautioned the perception that it is a "*White problem.*" From 2016 to 2017, there were 25.0 hospital patient encounters across Boston hospitals related to opioid overdoses per 10,000 residents. Opioid overdose hospital encounter rates were higher for White residents than for Asian, Black, and Latino residents. Between 2013 and 2016, there was an increase in unintentional opioid overdose deaths in Boston overall, with 16.7 deaths per 100,000 residents in 2013 to 35.4 deaths per 100,000 residents in 2016 (Figure 7). For Latino residents, the mortality rate for unintentional opioid overdoses increased over 200%, from 16.7 deaths per 100,000 residents in 2013 to 50.5 deaths per 100,000 residents in 2016--the highest rate of all groups.



Figure 7. Unintentional Opioid Overdose Mortality Rate, by Boston and Race/Ethnicity, Age-Adjusted Rate per 100,000 Residents 12 Years and Over, 2013-2016



Source: Collaborative Report, 2019

Data: Massachusetts Department of Public Health, Boston resident deaths, 2013-2016

Notes: Sample size for Black and Latino for 2013 and 2014 are  $\leq 20$  and rates should be interpreted with caution; data not shown for Asian due to insufficient sample size

According to the Massachusetts Registry of Vital Records and Statistics, Boston saw some improvement in the reduction of confirmed opioid-related overdose deaths for *all intents* (unintentional/undetermined and suicide) in 2018 (181 deaths), which is down from 198 deaths in 2017 and 194 deaths in 2016.<sup>xliii</sup>

### Tobacco Use

While Boston has seen a decrease in smoking since 2010, nearly one in six adults (15%) reported being a current smoker in 2017. Some neighborhoods have higher rates of smoking than Boston overall, including Dorchester (02122, 02124); 2013-2017 estimates suggest that 22% are current smokers. High school students' cigarette smoking rates in Boston have also declined from 10% in 2011 to 3% in 2017. While Collaborative focus groups and interview participants shared concern regarding e-cigarette use/vaping among young people, YRBS data indicate that use of e-cigarettes<sup>5</sup> among Boston high school students has decreased (from 15% in 2015 to 6% in 2017). It is critical to note that e-cigarette use among youth varies by different demographic groups. LGBTQ Boston public high school students (18%) are more likely to report e-cigarette use than their heterosexual or non-transgender counterparts (9%) (2015-2017).

<sup>5</sup> This includes any e-cigarette use in the past 30 days.

## **Marijuana Use**

Concerns related to marijuana were raised in multiple Collaborative focus groups, particularly as they related to young people and given the recent legalization of the substance in Massachusetts. YRBS data indicate that marijuana use has remained steady since 2011, with 24% of Boston high school students reporting current marijuana use (2013-2017). LGBTQ youth (39%) were more likely than heterosexual/non-transgender youth (22%) to be current marijuana users (2013-2017). For Boston adults, 19% reported using marijuana in the past 30 days (2017). Male (23%) and LGBTQ (34%) adults were more likely to report current marijuana use than their counterparts.

## **Alcohol Consumption & Binge Drinking**

Alcohol use was not identified as frequently as other substances in the qualitative data. However, the alcohol mortality rate for Boston overall has increased over time from 19.2 in 2013 to 25.5 deaths per 100,000 residents in 2016.

## **Substance Use Mortality**

From 2013-2016, there was an increase in Boston, and specifically among the city's Latino residents, in the mortality rate of all substance use deaths combined, including alcohol, other drug mortality, and unintentional and intentional overdose or poisoning. When excluding deaths attributed to fentanyl, the overall substance misuse mortality rate for Boston decreased over time.

## **Treatment Service Utilization and Barriers**

Of the 100 people (4%) completing the Boston CHNA Survey who indicated that they needed substance use treatment or services at some point, 22% reported that they could not access the substance use services they needed. Collaborative focus group participants in recovery and a few interviewees discussed the need for more affordable inpatient and outpatient treatment options, especially for non-English speakers. Long-term support services, such as sober houses, were identified as limited and expensive. There was a perception that insurance companies only covered certain substances. Further, the need for culturally-competent treatment options was also discussed as a challenge by Collaborative key informants. One interviewee noted, *"There is far too little access to treatment programs, and those that do exist are not linguistically and culturally competent."* One BWH key informant mentioned the importance of a harm-reduction approach and substance use-related care that is flexible, compassionate, and makes a patient *"feel like a human being."*

In 2017, there were 129 unique substance misuse treatment admissions per 10,000 Boston residents 12 years of age or older. These rates vary by specific substance as well as by race/ethnicity. Of note, Black residents had a higher treatment admission rate for alcohol and marijuana compared to White residents. For treatment admissions for heroin, however, Asian, Black, and Latino residents were less likely to be admitted for treatment than White residents. Similarly, Asian, Black, and Latino residents had lower treatment admission rates for prescription drug abuse than their White counterparts. According to data from the Boston Public Health Commission (BPHC), from 2011 to 2015, there are pronounced differences in the percent of hospital patient encounters for opioid-related overdose resulting in substance misuse treatment in 30 days among Boston residents by race/ethnicity.<sup>xiv</sup> During this time, hospital patient encounters involving White residents were more likely to result in accessing substance misuse treatment within 30 days (26%) compared to those involving Black residents (10%) and Latino residents (20%).<sup>xiv</sup>

Examining emergency department (ED) data specific to BWH, 5% of all ED visits had a primary diagnosis related to mental health or substance use among individuals with a Boston ZIP code in FY2018

(N=1,315).<sup>xlvi</sup> Of this 5%, 2% of ED visits had a primary diagnosis related to substance use. In April 2018, BWH opened a bridge clinic (located close to the BWH ED), a rapid, low-barrier substance use disorder clinic with the goal of providing initial treatment and transition support to longitudinal care. From April 2018 to March 2019, 325 patients were referred to the clinic and 242 patients (75%) had at least one visit. Two-thirds (66%) of patients had opioid use disorder, 30% had alcohol use disorder, and 31% had polysubstance use. Of the 242 patients with at least one visit, more than half (54%) remain active in the clinic. Of note, for 98 patients that have data six months prior and six months post clinic referrals, ED visits at BWH decreased by 45% and hospital admissions decreased by 37%.<sup>xlvii</sup>

## HEALTH CARE ACCESS AND UTILIZATION

Boston is a city with many health care resources, and 87% of respondents to the Boston CHNA Survey reported that they could access health care services easily. One indicator of access is having a primary care doctor or health care provider. According to BBRFSS, approximately 80% of Boston residents report having a primary care doctor or health care provider, which is associated with fewer emergency room visits and hospitalizations. This figure is consistent across BWH priority neighborhoods. However, there are differences by race; Asian and Latino residents are less likely than White residents to indicate having one person as a personal doctor or healthcare provider.

While Collaborative focus group and interview participants and Boston CHNA Survey respondents were positive about the quality and proximity of health care in their community, they cited several concerns around access to care. The most significant barriers to health care access discussed in the focus groups were being under-insured; language and immigration status; navigation and care coordination challenges; transportation; and lack of culturally-sensitive approaches to care. Cost was not identified as a major barrier to care for most participants. However, Black and Hispanic/Latino residents were more likely to report that they could not afford to see a doctor in the past year. For Boston CHNA Survey respondents, long wait times for appointments and lack of evening or weekend services were the top two factors that made it difficult for them to access health care.

In addition to the barriers noted above, lack of insurance persists as a challenge in BWH priority neighborhoods. In 2017, less than 3% of Massachusetts residents were uninsured, however, the rate of uninsurance was higher in all BWH priority neighborhoods, except for Jamaica Plain and one part of Mission Hill.<sup>xlviii</sup> The highest rate of uninsurance among BWH priority neighborhoods was in the 02125 ZIP code of Dorchester (6%).<sup>xlix</sup>

Despite the physical presence of hospitals, Mission Hill community meeting participants mentioned the need for increased access to community health resources in their neighborhood. Key informants also underscored the need to improve local residents' access to care in their communities, suggesting BWH 1) needs to make residents feel welcome and that they can easily access the hospital, 2) primary care needs to expand in and outside the hospital, 3) needs to invest in and build stronger relationships with local communities, and 4) should work to embed health services in its priority neighborhoods (e.g. telehealth, programs in community churches, etc.).

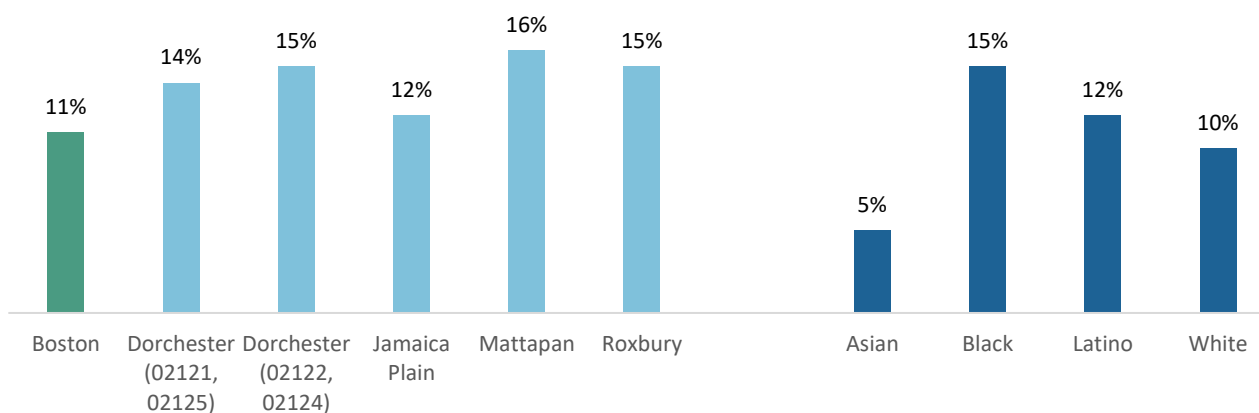
## HEALTH CONDITIONS

The following section provides an overview of several health conditions, including asthma, cancer, diabetes, heart disease and stroke, and obesity. The data presented indicate that communities of color are inequitably impacted by both acute and chronic health conditions.

## Asthma

While rates of adult asthma in Boston are relatively low (11%), there are differences across the population. More adult residents of Dorchester (02122, 02124), Roxbury, and Dorchester (02121, 02125) (15%, 15% and 14%, respectively) have asthma than the overall city population. Black adults were more likely to report having asthma (15%) compared to White adults (10%) (Figure 8). For Boston Public High School youth, 29% of Latino students, 28% of Asian students, 25% of Black students, and 19% of White students have asthma. Additionally, Latino residents were most likely to identify asthma as the top concern that affects community health (22%). Participants in the Mission Hill community meeting highlighted asthma as a prominent health concern in their neighborhood.

Figure 8. Percent of Adults Reporting Having Asthma, by City, Priority Neighborhood, and Race/Ethnicity, 2013, 2015, 2017, Combined



Source: Collaborative Report, 2019

Data: Boston Public Health Commission, BBRFSS, 2013, 2015, and 2017 combined

Note: Race/ethnicity data presented for Boston overall

## Cancer

While cancer ranked as the most common cause of death in Boston, it was not frequently mentioned as a pressing concern among Collaborative focus group and interview participants. In terms of cancer mortality, rates were not higher for any BWH priority neighborhoods compared to the city overall. For female breast cancer mortality, the mortality rate is higher for black women (26%) than white women (21%).

In terms of cancer prevention, some Collaborative key informants perceived that men may often feel emotionally uncomfortable talking about health issues like prostate cancer, making them more likely to avoid routine checkups or cancer screenings. One Collaborative key informant with expertise in cancer indicated that more is needed to encourage residents of color to participate in clinical trials to reduce cancer disparities among non-White residents. The interviewee shared that historical wrong doings have made men of color averse to clinical trials in some instances, sharing, “*We have the Tuskegee disaster where Black men were used as guinea pigs to get information that was helping other populations; the patient base is not trustful of clinical trials.*” Suggestions were made to increase community outreach efforts—particularly in the Black community—to increase public knowledge about cancer prevention.

## Diabetes

Data from the BRFSS show diabetes disproportionately affecting residents in certain neighborhoods. The percentage of Mattapan residents surveyed reporting that they have diabetes (18%) is double that of the Boston average (9%). Black and Hispanic/Latino residents were more likely to report having diabetes (15% and 12% respectively) compared to White residents (5%). Black residents were most likely to identify diabetes as the top concern that affects community health, according to the Boston CHNA Survey (35%). The link between diet and diabetes was highlighted in two BWH key informant interviews.

## Heart Disease and Stroke

Heart disease was the second leading cause of death in Boston across the years 2011-2016 across all races. Eighteen percent of respondents to the Boston CHNA Survey, across all Boston neighborhoods, identified heart disease and stroke as the top health concern in their community. Residents of Roxbury (144 per 10,000), Dorchester (02122, 02124) (117 per 10,000), Dorchester (02121, 02125) (114 per 10,000), and Mattapan (108 per 10,000) experienced higher hospitalizations rates for heart disease when compared to Boston overall (98 per 10,000). Roxbury residents also experienced a higher heart disease mortality rate (159 per 100,000), compared to the Boston rate (131 per 100,000). One BWH key informant identified preventing heart disease as a priority, noting that most cases are preventable and can be attributed to risk factors such as high blood pressure, high LDL cholesterol, smoking, and poor nutrition.

The stroke hospitalization rate was higher in Dorchester (27 per 100,000) and Roxbury (31 per 100,000) than the Boston average (22 per 100,000); the stroke mortality rate was also higher in Dorchester (02121, 02125) (36 per 100,000) and Dorchester (02122, 02124) (42 per 100,000) than the Boston average (29 per 100,000). Additionally, the stroke mortality rate was higher for Black residents (41 per 100,000) than for the city overall (29 per 100,000).

## Obesity

Across the U.S., obesity is the second leading cause of preventable death. Currently, about 40% of American adults and 19% of American youth are considered obese. Factors leading to obesity are numerous and often preventable by, for example, eating healthy food and engaging in physical activity. Community environments can shape access to affordable, healthy food, and affordable, safe opportunities for fitness.

According to BBRFSS, 57% of Boston adults are overweight or obese. Obesity/overweight rates are higher in Mattapan, Roxbury, and Dorchester than the city overall. Black and Hispanic/Latino adults are more likely to be obese compared to White adults. Among public high school students in Boston, 23% are overweight or obese, with the highest obesity rates among Hispanic/Latino high school students. One BWH key informant highlighted the issue of obesity for the immigrant and refugee community.

The Centers for Disease Control (CDC) recommends 150 minutes of aerobic physical activity a week. Only 30% of Boston high school students met the guideline. Asian students (22%) were the least likely to have met this guideline when compared to all other groups. One BWH key informant emphasized the importance of physical activity for heart health but pointed out that while we encourage patients to exercise, we do not provide the funding needed to implement interventions. A resident from Dorchester echoed this concern in a Collaborative focus group, highlighting the lack of affordable resources to engage in exercise. Additionally, perceptions of community safety impact exercise rates.<sup>1</sup>

## MATERNAL AND CHILD HEALTH

The health and well-being of mothers, infants, and children are important indicators of community health. Their well-being determines the health of the next generation and can help predict future public health challenges for families, communities, and the health care system. Understanding disparities within infant mortality rates, low birthweight and preterm births, and access to prenatal care, is an important predictor of infant survival, child development, and well-being as well as potential health care resources needed and costs of care.

The overall birth rate in Boston has declined for women 15 to 44 years old since 2011 to 42 births per 1,000 female residents in 2017. However, some BWH priority communities have higher birth rates than the city average. Specifically, Dorchester (02121, 02125) has a birth rate of 58 per 1,000, Dorchester (02122, 02124) has a birth rate of 63 per 1,000, Jamaica Plain has a birth rate of 60 per 1,000, and Mattapan has a birth rate of 68 per 1,000.

In addition to these neighborhood-level differences in birth rate, there are also differences in infant mortality rates, low birthweight and preterm births, and access to prenatal care among different racial and ethnic groups in the city. Rates of infants with low birthweight (9%) and preterm births (10%)—both important risk factors for infants—have generally remained steady from 2011-2017. However, rates for both are higher for Black mothers, with 13% of births with low birthweight and 12% of births preterm. In addition to these differences in outcomes, there are differences by race and ethnicity for access to prenatal care. Access to prenatal care for women in Boston has improved over time, and currently more than 80% of mothers Boston receive adequate or adequate plus prenatal care.<sup>6</sup> However, Asian (84%), Black (76%), and Latino (79%) mothers are less likely than White (89%) mothers to receive adequate prenatal care.

**Table 4. Maternal and Child Health Indicators by City and Priority Neighborhood**

	Boston	Dorchester (02121, 02125)	Dorchester (02122, 02124)	Jamaica Plain	Mattapan	Roxbury
<b>Pre-Term Births (before 37 weeks gestation)*</b>	10%	8%	11%	10%	11%	10%
<b>Low Birth Weight Births (less than 2,500 grams)**</b>	9%	9%	12%	8%	11%	8%
<b>Infant Mortality Rate (per 1,000 live births)***</b>	5	6	9	NA	8	4

Source: Health of Boston, 2016-2017

Data: \* Massachusetts Department of Public Health, Boston Resident Live Births, 2017

\*\* Massachusetts Department of Public Health, Boston Resident Live Births, 2017

\*\*\* Massachusetts Department of Public Health, Boston Resident Live Births, 2015-2017 Combined

<sup>6</sup> According to the Kotelchuck Index for Prenatal Care, adequate prenatal care is defined as having 80-109.9% of expected visits for prenatal care and adequate plus prenatal care is defined as having 110% or more of expected visits.

## SEXUAL HEALTH

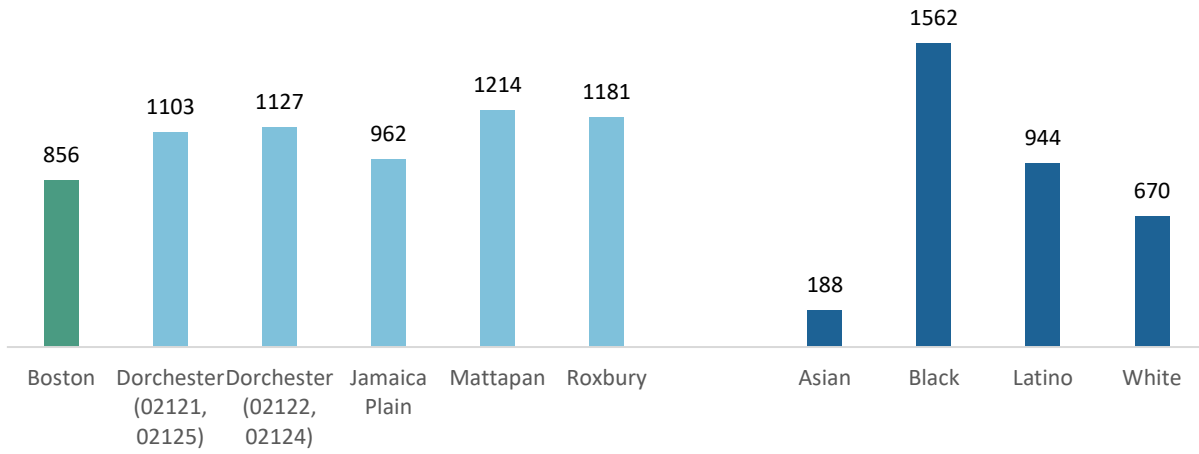
While sexual health was not a prominent theme discussed across focus groups or interviews; the Youth Risk Behavioral Survey provides helpful insights into sexual behaviors among youth, such as condom use, to inform STI prevention strategies. According to 2013-2017 Youth Risk Behavioral Survey results, 44% of Boston public high school students reported ever having sex and 62% of sexually active Boston public high school students used a condom during the last time they had sex. Understanding adolescent sexual activity and sexual health is particularly important given that residents age 15-24 experienced the highest rates of chlamydia and gonorrhea. Boston has experienced an increase in cases of chlamydia and gonorrhea over time with disparities by neighborhood, age, and sex. While the incidence of HIV among Boston residents has decreased over time, disparities persist by neighborhood, race/ethnicity, age, and sex.

Inequities persist in sexual health, with communities of color disproportionately burdened by sexually transmitted infections (STIs). According to the Division of STD Prevention of the Massachusetts Department of Public Health, the rate of chlamydia in the city of Boston increased 21% between 2015 and 2017. Chlamydia rates were 1,310 cases per 100,000 residents in Dorchester (02121, 02125), 1,071 per 100,000 in Roxbury, 1,028 per 100,000 in Mattapan, and 1,069 in Dorchester (02122, 02124), all higher than the Boston average (773 per 100,000). Additionally, incidence of gonorrhea in Boston increased by 54% from 2015 to 2017. Dorchester (02121, 02125) had an incidence rate of 400 cases per 100,000 residents, and Dorchester (02122, 02124) had an incidence rate of 354 cases per 100,000, both higher than the Boston average of 247 per 100,000.

Incidence of HIV among Boston residents has decreased over time, dropping from 29 new diagnoses per 100,000 residents in 2014 to 22 new diagnoses per 100,000 residents in 2017. However, disparities exist by neighborhood, race/ethnicity, age, and sex. In 2017, Mattapan and Roxbury residents experienced the highest HIV incidence rates (45 and 40 new HIV diagnoses per 100,000 residents, respectively) across all neighborhoods in Boston. Latino and Black residents also experienced rates of new HIV diagnosis (44 and 36 per 100,000 residents, respectively) at more than three times the rate of White residents (11 per 100,000 residents). In terms of HIV prevalence (both new and existing cases), rates are highest among Black residents (1,562 cases per 100,000) and lowest among Asian residents (188 per 100,000). Prevalence is higher in all BWH priority neighborhoods than Boston overall (Figure 9).



Figure 9. HIV Prevalence by City, Priority Neighborhood, and Race/Ethnicity (Age-Specific Rate per 100,000 Residents), 2016



Data: Collaborative Report, 2019

Source: Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences, HIV/AIDS Surveillance Program, 2016

Notes: Data as of 1/1/2019 and are subject to change; data do not include incarcerated individuals; race/ethnicity data presented for Boston overall

## BWH LICENSED SITES LOCATIONS

In addition to focusing on its five priority neighborhoods located in Boston, BWH also serves members of additional communities where the hospital operates licensed sites, including in Foxborough, Chestnut Hill, and West Bridgewater. While all municipalities, including these three, face health challenges, the data indicate that the concerns faced by BWH priority neighborhoods in Boston are greater and thus, they are the primary focus of this report. The following subsections present a brief snapshot of the areas based on available data.

### FOXBOROUGH

Brigham and Women's/Mass General Health Care Center in Foxborough provides primary care and specialty services, including cardiology, dermatology, general and gastrointestinal surgery, orthopedic surgery, pain management, plastic surgery, rehabilitation, sports medicine, diagnostic radiology, and lab services.

#### Demographic Data

Foxborough (02035) is a town located in Norfolk County, Massachusetts and is situated approximately 22 miles southwest of Boston and 18 miles northeast of Providence, Rhode Island. Demographic data from the Census Bureau's 2017 American Community Survey 5-Year Estimates provide that nearly 17,500 residents live in Foxborough. Table 5 below provides population statistics for this community.

**Table 5: Population Statistics for Foxborough**

Data Indicator	Indicator Variable	Foxborough	Massachusetts
<b>Total Population</b>	Total Population	17,448	6,789,319
	Total Land Area (Square Miles)	20	7,801
	Population Density (Per Square Mile)	879	870
<b>Change in Total Population</b>	Total Population, 2000 Census	16,246	6,349,179
	Total Population, 2010 Census	16,865	6,547,629
	Total Population Change, 2000-2010	619	198,450
	Percent Population Change, 2000-2010	4%	3%
<b>Population Under Age 18</b>	Total Population	17,448	6,789,319
	Population Age 0-17	3,732	1,383,532
	Percent Population Age 0-17	21%	20%
<b>Population Age 18-64</b>	Total Population	17,448	6,789,319
	Population Age 18-64	10,753	4,356,036
	Percent Population Age 18-64	62%	64%
<b>Population Age 65+</b>	Total Population	17,448	6,789,319
	Population Age 65+	2,963	1,049,751
	Percent Population Age 65+	17%	15%
<b>Population with Any Disability</b>	Total Population (For Whom Disability Status is Determined)	17,413	6,713,702
	Total Population with a Disability	1,958	781,740
	Percent Population with a Disability	11%	12%

<b>Population in Limited English Households</b>	Total Population Age 5+	16,295	6,426,464
	Linguistically Isolated Population	138	327,565
	Percent Linguistically Isolated Population	1%	5%

Source: University of Missouri. (2019). CARES Engagement Network.

### Age

Foxborough’s overall population is similar to the statewide average, with 21% of residents in the 0-17 age cohort (versus 20% for the state); 62% in the 18-64 age cohort (versus 64% for the state); and 17% in the 65+ age cohort (versus 15% for the state).<sup>ii</sup>

### Race

Foxborough exhibits less racial diversity than the state average, with 90% of residents identifying as White; 6% of residents identifying as Black or African American; 2% of residents identifying as Asian; and 2% of residents identifying as two or more races.<sup>iii</sup>

### Foreign-Born Residents and Language Barriers

Foxborough’s population of foreign-born individuals is approximately 8%, with the majority of this population from Europe or Latin America.<sup>iii</sup> Consequently, Foxborough has a very limited number of residents who identified as Limited English proficiency.<sup>iv</sup> Less than 1% of residents of Foxborough are considered linguistically isolated.<sup>iv</sup>

## Social Determinants of Health Indicators

### Education

Nearly all of Foxborough’s residents have graduated from high school with 95% of residents attaining at least a high school diploma or higher.<sup>vi</sup> Other data on educational attainment in the Foxborough area may be found in Table 6.

**Table 6: Educational Attainment for Foxborough Residents**

Data Indicator	Indicator Variable	Foxborough	Massachusetts
<b>Education- Bachelor’s Degree or Higher</b>	Total Population Age 25+	12,442	4,706,536
	Population Age 25+ with Bachelor’s Degree or Higher	6,070	1,980,861
	Percent Population Age 25+ with Bachelor’s Degree or Higher	49%	42%
<b>Education- High School Graduation Rate</b>	Total Student Cohort	188	58,549
	Estimated Number of Diplomas Issued	175	51,104
	Cohort Graduation Rate	93%	87%
<b>Education- No High School Diploma</b>	Total Population Age 25+	12,442	4,706,536
	Population Age 25+ with No High School Diploma	670	458,080
	Percent Population Age 25+ with No High School Diploma	5%	10%

Source: US Census Bureau: American FactFinder. 2013-2017 American Community Survey 5-Year Estimates.

### Employment and Economic Indicators

The current unemployment rate for Foxborough is approximately 3%. In addition, 3% of residents in Foxborough do not have a car, the average household income is slightly below \$120,000, and the town’s uninsured rate is 2%, slightly lower than the state’s overall rate of 3%.<sup>lvii</sup>

### Health Indicators

#### Substance Use

Like so many other states, Massachusetts faces challenges around substance use disorders (SUDs), with 10% of the population 13-years-old and older have a SUD.<sup>lviii</sup> Furthermore, 4% of the state’s residents 13+ have both a SUD and a mental health condition.<sup>lix</sup> In particular, Massachusetts continues to face a growing epidemic of opioid addiction and overdose deaths. In March 2014, a Public Health Emergency was declared in the Commonwealth, triggering the formation of a Task Force which brought together multiple stakeholders. The Task Force released a report discussing a comprehensive strategy to address the crisis. Some of the recommendations include, but are not limited to, the expansion of treatment beds and integrated services and the formation of a centralized navigation system for patients, families, and first responders. Since the Task Force issued its recommendations, the Massachusetts Department of Public Health has instituted initiatives to combat overdose deaths, including training first responders and families on the administration of naloxone, opening drop-in centers, instituting various interventions to prevent and address substance use disorders and providing funding to acute treatment service and clinical stabilization service programs. Data from the Massachusetts Department of Public Health provide that 15 known opioid deaths occurred in Foxborough over the last five years.<sup>lx</sup> However, this number may be higher.

#### Cancer and Heart Disease

Table 7 outlines the incidence of cancer and heart disease within Foxborough.

**Table 7: Health Indicators – Cancer and Heart Health**

Data Indicator	Indicator Variable	Foxborough	Massachusetts
	Cancer Incidence Rate (Per 100,000 Pop.)	476	459
<b>Cancer Incidence-Breast</b>	Estimated Total Population (Female)	11,208	417,659
	New Cases (Annual Average)	17	5,747
	Cancer Incidence Rate (Per 100,000 Pop.)	152	138
<b>Cancer Incidence-Colon and Rectum</b>	Estimated Total Population	21,266	787,837
	New Cases (Annual Average)	8	2,915
	Cancer Incidence Rate (Per 100,000 Pop.)	38	37
<b>Cancer Incidence-Lung</b>	Estimated Total Population	21,268	791,065
	New Cases (Annual Average)	13	5,047
	Cancer Incidence Rate (Per 100,000 Pop.)	61	64
<b>Cancer Incidence-Prostate</b>	Estimated Total Population (Male)	10,212	383,270
	New Cases (Annual Average)	11	4,078
	Cancer Incidence Rate (Per 100,000 Pop.)	108	106

<b>Heart Disease (Medicare Population)</b>	Total Medicare Fee-For-Service Beneficiaries	2,044	861,255
	Beneficiaries with Heart Disease	501	203,807
	Percent with Heart Disease	25%	24%

Source: US Census Bureau: American FactFinder. 2013-2017 American Community Survey 5-Year Estimates.

#### Other Health Conditions

Table 8 outlines the incidence of depression and diabetes within Foxborough.

**Table 8: Health Indicators – Depression and Diabetes**

Data Indicator	Indicator Variable	Foxborough	Massachusetts
<b>Depression (Medicare Population)</b>	Total Medicare Fee-for-Service Beneficiaries	2,044	861,255
	Beneficiaries with Depression	428	195,083
	Percent with Depression	21%	23%
<b>Diabetes (Adult)</b>	Total Population Age 20+	530,406	5,195,292
	Population with Diagnosed Diabetes	45,615	484,019
	Population with Diagnosed Diabetes, Age-Adjusted Rate	7%	8%

Source: US Census Bureau: American FactFinder. 2013-2017 American Community Survey 5-Year Estimates.

#### Leading Needs for Foxborough

Issues of concern for Foxborough include extended commutes to work (more than 60 minutes) (17% compared to the state average of 12%) and low food access (58% of residents versus the state average of 28%).<sup>lxii</sup> Low food access means that at least 33% of residents live more than 0.5 mile from a supermarket in an urban environment or over 10 miles from a supermarket in a rural one.<sup>lxiii</sup>

An interview with the Health Director of Foxborough Board of Health and the Foxborough Deputy Chief of Emergency Medical Services (EMS)/Public Health Nurse identified that they are seeing considerable need from senior citizens that do not meet the criteria for social and support services to facilitate independent living, but may be facing significant challenges in activities of daily living. Another issue that was noted were recent issues of housing and financial instability for those with behavioral health challenges. The Town of Foxborough is preparing an application to expand their capacity to respond to community health needs through the Mobile Integrated Health Care (MIH) and Community EMS programs. The importance of health screening and well-being checks for residents, particularly senior citizens were noted. It was also mentioned that Foxborough is the home of Gillette Stadium, and with the influx of visitors to the area, there is an increased incidence of issues requiring an emergency health response when events are scheduled.

## CHESTNUT HILL

BWH operates Brigham and Women's Health Care Center, Chestnut Hill, located at 850 Boylston Street in Chestnut Hill, Massachusetts. Brigham and Women's Health Care Center is home of the Gretchen S. & Edward A. Fish Center for Women's Health, which aims to "...provide high quality, integrated clinical services and education based on leading-edge research on women's health and gender-specific care. The practice supports particular areas of health where the risk and prevalence of disease in women is of particular importance, and those areas in which women have been traditionally under-diagnosed, under-treated, or underserved."<sup>lxiii</sup> The Fish Center for Women's Health provides primary care services as well as ten other specialties. In addition to the Fish Center for Women's Health, several other programs and services are available at Brigham and Women's Health Care Center, Chestnut Hill, including laboratory and radiology services, and allergy and clinical immunology.<sup>lxiv</sup>

In addition to BWH's presence in Chestnut Hill, Newton-Wellesley Hospital (part of the Partners HealthCare network) also serves the Chestnut Hill community. For a thorough look at the health needs and assets of the Newton community, which includes Chestnut Hill, please see Newton-Wellesley Hospital's 2018 Community Health Needs Assessment, [linked here](#).

Chestnut Hill is a village of 22,105 residents spread across three municipalities: Boston, Brookline, and Newton. Chestnut Hill is only approximately five miles long but has a higher population density (4,537 residents) than the state average (870 residents) per square mile. In terms of social and economic factors, Chestnut Hill fares better than the state average across a host of indicators. Seventy-nine percent of Chestnut Hill residents have a bachelor's degree or higher, compared to the state average of 42%. Additionally, the cohort graduation rate for Chestnut Hill is 91%, compared to the state average of 87%. Lastly, the average household income for Chestnut Hill is \$184,485, exceeding the state average of \$101,858.<sup>lxv</sup>

In terms of housing, Chestnut Hill also fares better than the state overall. Thirty-two percent of Chestnut Hill residents are housing cost burdened (meaning that their housing costs exceed 30% of income), compared to the state average of 35%. Furthermore, 30% of occupied housing units in Chestnut Hill have one or more substandard conditions, compared to the state average of 35%.<sup>lxvi</sup>

Lastly, Chestnut Hill's strengths include having more primary care physicians (161 per 100,000) than the state average (124 per 100,000) and more dentists (124 per 100,000) than the state average (96 per 100,000). Moreover, Chestnut Hill generally outperforms the state average on most health indicators. For example, 22% of adults in Chestnut Hill are considered obese, compared to the state average of 24%.<sup>lxvii</sup>

## WEST BRIDGEWATER

West Bridgewater is a town of 7,117 residents located in Plymouth County. West Bridgewater has many assets that support and promote health and wellness, and the town matches or exceeds the state average across a host of indicators. For example, West Bridgewater has lower breast cancer incidence than the state average (129 per 100,000 compared to 138 per 100,000), and is on par with the state for colon and rectum cancer incidence (35 per 100,000 in West Bridgewater compared to 37 per 100,000 across Massachusetts), percent of Medicare beneficiaries with depression (22% in West Bridgewater compared to 23% across Massachusetts), and percent of Medicare beneficiaries with heart disease (24% in both West Bridgewater and across Massachusetts).

West Bridgewater fares better than the state in terms of the percentage of fourth-grade students reading at a proficient or better level (62% compared to 55%) and the percentage of the population with a high school diploma (94% compared to 90%). Additionally, 4% of West Bridgewater's population lives below 100% of the Federal Poverty Level compared to 11% of the state population.<sup>lxviii</sup>

In terms of housing, 29% of the West Bridgewater population is housing cost burdened, compared to the state average of 35%. The quality of housing in West Bridgewater is also better than the state average, with 28% of housing units in West Bridgewater with one or more substandard conditions, compared to the state average of 35%.<sup>lxix</sup>

## KEY PRIORITIES

Across BWH priority neighborhoods, there are innumerable strengths. Community members highlighted racial and cultural diversity, acceptance of differences, and access to medical and other resources as some of their neighborhoods' many assets. At the same time, these neighborhoods face structural inequities and societal challenges that negatively impact health outcomes. Given the history and consequences of racist structural and institutional policies and practices, communities of color in Boston, and BWH priority neighborhoods in particular, experience inequities around issues such as housing, financial security and mobility, and violence and trauma. As such, taking steps toward dismantling these inequities is a critical for those seeking to promote health equity. Specifically, poor health outcomes associated with housing, behavioral health, financial security and mobility, access to services, and violence and trauma were identified as the top health issues across these communities.

## CRITERIA FOR PRIORITIZATION

To identify these priority areas, criteria were selected to assess the magnitude of community issues and their impact on the most disadvantaged population groups. The five priority areas selected were based on the following prioritization criteria: 1) burden 2) equity 3) impact 4) feasibility and 5) collaboration.

## PRIORITY AREAS

### **Financial Security and Mobility**

Residents of BWH's priority neighborhoods face barriers to financial security and mobility. For example., the poverty rates in Mission Hill, Roxbury, and Dorchester exceed the rate for Boston, and the unemployment rate is higher in Mattapan, Roxbury, and Dorchester than Boston.<sup>lxx</sup> Additionally, Roxbury, Dorchester, Mattapan, and Mission Hill have a higher percentage of residents with less than a high school diploma than the rest of Boston.<sup>lxxi</sup>

### **Housing**

Primary housing issues included lack of stable and affordable housing, rising costs, gentrification and displacement, homelessness, overcrowding, and inadequate housing conditions. Across BWH priority communities, renters and owners with mortgages are cost-burdened because median monthly housing costs exceed median household incomes.

### **Violence and Trauma**

Community violence emerged as an important theme with many respondents from Dorchester, Mattapan and Roxbury reporting safety concerns in their neighborhoods. Concerns related to violence and trauma were reiterated by internal data sources, including high school students participating in SSJP and key informants working in the fields of psychiatry and addiction. Data indicate that violence and trauma disproportionately impact communities of color as well as other marginalized groups, including young children, LGBTQ individuals, women, and immigrants.

### **Behavioral Health**

Mental health, substance use, and trauma emerged as deeply connected issues. For mental health, stress, anxiety, and depression arose as prominent themes, specifically among youth and marginalized demographic groups. Stigma and access to mental health care continue to be challenges. Substance use remains a top concern and opioid use (especially heroin and fentanyl) continues to be a persistent issue. Across the behavioral health spectrum, the lack of culturally-competent treatment was a critical service gap.



**Access to Services**

Despite high rates of insurance coverage, Boston community residents reported challenges in accessing consistent, high-quality health care. Barriers to care reported include the high cost of care, appointment wait time, a lack of evening or weekend services, a lack of transportation, offices not accepting new patients, and a lack of care that adequately meets the diverse needs of community members. Moreover, BWH key informant interviewees stressed the importance of a patient-centered care approach that responds to the unique and individual needs of patients.

## APPENDICES

### APPENDIX A: COLLABORATIVE COMMITTEES, WORKING GROUPS, AND MEMBERSHIP

- The *Steering Committee*, comprised of 19 members, provided strategic direction and oversight of the process. Members represented COBTH hospitals, health centers, community development corporations, community representatives, the Boston Public Health Commission, and a public health organization focused on community.
- The *Operations Committee*, comprised of Steering Committee co-chairs and the Collaborative's Coordinator, resolved operational issues requiring immediate actions.
- The *Secondary Data Work Group* provided guidance on the approach to secondary data and fostered connections with key networks and groups to provide relevant data. It included 32 members representing a range of organizations, including hospitals, health centers, local public health, and community-based organizations.
- The *Community Engagement Work Group* provided guidance on the approach to community engagement, input on primary data collections methods, and support with logistics for primary data collection. It included 54 members representing a range of organizations, including hospitals, health centers, local public health, education, community development, social services, and community-based organizations.
- *General membership* attended events, shared information, and participated in work groups.

APPENDIX B: LIST OF BWH INTERNAL KEY STAKEHOLDERS INTERVIEWED & DISCUSSION GROUPS

**Internal Stakeholders**

<b>Name</b>	<b>Title</b>
<i>Sunny Eappen, MD, MBA</i>	<i>Senior Vice President, Medical Affairs and Chief Medical Officer</i>
<i>H. Tim Ewing, PhD</i>	<i>Vice President of Employee Diversity, Inclusion &amp; Experience</i>
<i>Gail Levine, MD</i>	<i>Instructor, Harvard Medical School; Brigham and Women's Primary Care at Massachusetts Mental Health Center</i>
<i>Eldrin Lewis, MD, MPH</i>	<i>Associate Physician; Associate Professor of Medicine, Harvard Medical School; Director of Cardiovascular Clerkship Program, Cardiovascular Medicine</i>
<i>Nawal Nour, MD, MPH</i>	<i>Chief Diversity &amp; Inclusion Officer, Center for Diversity &amp; Inclusion; Founding Director, African Women's Health Center; Division Director, Ambulatory Obstetrics and Gynecology; Director, Global Obstetrics and Gynecology Health</i>
<i>Abigail Ortiz, MSW, MPH</i>	<i>Director of Community Health Programs, Southern Jamaica Plain Health Center</i>
<i>Maddy Pearson, DNP, RN, NEA-BC</i>	<i>Chief Nursing Officer and Senior Vice President, Clinical Services</i>
<i>Christin Price, MD</i>	<i>Associate Director, Brigham and Women's Physicians Organization; Program Administrative Director, Brigham Health Bridge Clinic</i>
<i>Paul Ridker, MD, MPH</i>	<i>Director of the Center for Cardiovascular Disease Prevention, Eugene Braunwald Professor of Medicine</i>
<i>Gwill York, MBA</i>	<i>Brigham Health Board Trustee</i>

**Discussion Groups**

BWH Community Health Workers
BWH Emergency Department Providers
SSJP Participants
Southern Jamaica Plain Health Center Advisory Committee Members
Mission Hill Community Members

## APPENDIX C: INTERNAL KEY INFORMANT INTERVIEW GUIDE

### Brigham and Women's Hospital Community Health Assessment 2019 One-on-One Guide for INTERNAL Key Informant Interviews

#### Introduction

- Introduce interviewer and notetaker
- Thank you for taking the time to talk with us today and contributing to our community health assessment.
- We undertake a CHNA every 3 years (*our last one was completed in 2016*). In this cycle, we are part of a City-wide collaborative that includes the CoBTH hospitals, community organizations, health centers, and the Boston Public Health Commission who are undertaking the process together. Data is being derived from numerous secondary data sources as well as 45 community interviews and 12 focus groups and community survey for this collaborative effort.
- We are doing additional data collection for the BWH CHNA CHIP and will also be providing a BWH report to hospital Trustees in early summer.
- In our discussion, I will be asking about the current needs of BWH's priority neighborhoods, which are **Dorchester, Jamaica Plain, Mattapan, Mission Hill, and Roxbury**. We understand your knowledge of these specific neighborhoods may vary, and that is fine. (*We have also been advised that our needs assessment this year should include data in a few additional BWH locations where we have a hospital license and Partners Community Health will be assisting with that*).
- In addition to interviews with BWH staff, we are analyzing community level health data and conducting interviews with internal stakeholders.
- We are also interested in hearing your perspective on opportunities for the hospital to work in partnership with the community to address these community needs.

#### Background

1. I'd like to start by asking you to provide a brief overview of your primary role(s) and responsibilities at BWH.
2. What do you see as the current and emerging public health concerns in these communities, as well as the factors impacting overall health and well-being?

##### Probes:

- Who is most impacted by these concerns? Any specific populations?
- What might be needed to respond to these emerging public health concerns?
- What do you think are the areas we should prioritize?

#### Brigham and Women's Hospital Role

3. What role do you see Brigham and Women's Hospital playing in efforts to improve the health and well-being of individuals who live in our priority neighborhoods?
  - a. What is your perception of the community-based outreach and programming currently offered?  
Probe: What are these impressions based on?
  - b. Are there BWH departments or staff that you believe should be specifically involved in future efforts?

4. What programs or partnerships do you think would help us better meet the needs of residents of our priority neighborhoods?

##### Probe:

- What partnerships could be forged?
5. We are always interested in learning from the experience of others and are eager to build upon the strengths of our communities.
    - a. Are there any highly impactful community health approaches and resources that you would like us to be aware of (could be either happening at BWH or elsewhere)?
    - b. As an organization, how do you think we could more systemically build upon the strengths and assets in these communities?
  6. We know from public health data there are significant health inequities in our priority neighborhoods. What is your vision of what BWH, as a health care organization, can do collaboratively to make the greatest impact on addressing health inequities so all in our community can reach their health potential?
  7. Do you have any additional thoughts you would like to convey to inform the community health needs assessment process?

**Closing:** Thank you very much for your time. If you (or you colleagues) are interested in being involved in the next phases of the CHNA-CHIP process, please let me know and we will add you to the distribution list for updates and notification of a meeting this Spring of an internal working group as well as updates on the city-wide Collaborative process.

## APPENDIX D: COMMUNITY MEETING INFORMATION & KEY QUESTIONS

BWH held a community meeting with Mission Hill residents on March 6, 2019 from 6-7:30PM at the Tobin Community Center. Approximately 50 residents attended the meeting. Interpretation was available in Spanish and Mandarin. The following background information and questions guided the meeting.

### **Background (*Presented by facilitators to attendees*)**

This discussion group is part of an effort by a new Collaborative of community organizations, health centers, hospitals, and the Boston Public Health Commission. The Collaborative is completing a joint city-wide Community Health Needs Assessment (CHNA) to gain a greater understanding of the health issues of Boston residents, how those needs are being addressed, and whether there might be opportunities to address these issues more effectively. This information will inform a Community Health Improvement Plan (CHIP) for the City of Boston, to identify areas for future programs and services and coordination of resources across partners. As part of this process, we are having discussions like these with a wide variety of groups across the city. We are interested in hearing people's feedback on the strengths and needs of the community and suggestions for the future.

### **Questions**

- How would you describe your community? What are some of the biggest concerns in your community? How have you seen your community change over the last several years?
- What are you most proud of in your community? What makes it unique?
- Given what has been said, what are some possible solutions to address these problems?
- Can you tell us about the challenges in terms of what kinds of jobs people can access and have a living wage?
- What are the most pressing physical and emotional health issues?
- What resources help people stay healthy? What resources do not work to stay healthy?
- Where do people go if there is an issue that needs to be addressed? What happens to patients? How do you support them to find them what they need?

### **Closing (*Presented by facilitators to attendees*)**

Facilitators will provide the opportunity for any outstanding feedback in addition to explaining next steps in the CHNA process. Facilitators will thank attendees for their participation.

## APPENDIX E: COLLABORATIVE MATERIALS

All Collaborative materials can be found by accessing the website of the Boston CHNA-CHIP Collaborative, located at <http://bostonchna.org/index.html>.

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2019



BRIGHAM AND WOMEN'S HOSPITAL  
CENTER FOR COMMUNITY HEALTH AND HEALTH EQUITY

# Community Health Implementation Plan

## **BRIGHAM AND WOMEN'S HOSPITAL COMMUNITY HEALTH IMPLEMENTATION PLAN (CHIP)**

In 2019, Brigham and Women's Hospital conducted a Community Health Assets and Needs Assessment and implementation planning process (CHNA-CHIP) to inform community-based efforts as well as to adhere to requirements set by the Patient Protection and Affordable Care Act. For its 2019 CHNA, the Brigham participated in the Boston CHNA-CHIP Collaborative (BCCC), a joint initiative to bring multiple stakeholders together to assess the top priority community health issues in Boston and identify opportunities for shared investment. Participants included members of the Conference of Boston Teaching Hospital (CoBTH), community health centers, the Boston Public Health Commission, community organizations, and community members. In addition to the BCCC's extensive primary and secondary data collection and analysis, the Brigham collected additional data for our priority neighborhoods of Dorchester, Jamaica Plain, Mattapan, Mission Hill, and Roxbury.

At the conclusion of this comprehensive assessment, the following were identified as top community health priorities in the hospital's priority neighborhoods:

1. Financial Security and Mobility
2. Housing
3. Violence and Trauma
4. Behavioral Health (including mental health and substance use)
5. Access to Services

For each of these priorities, our primary focus is to implement strategies that will achieve racial and ethnic health equity.

# FINANCIAL SECURITY AND MOBILITY

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## OBJECTIVE

Support interventions and partnerships that reduce financial instability and increase economic mobility for low-income residents in our priority communities

## STRATEGIES

- 01** Provide economic mobility and workforce development coaching to pregnant and parenting women through the Family Partnership Program, as well as group-based skill development and information sharing via our Community Calendar
- 02** Partner with community-based organizations in our priority neighborhoods to support financial literacy and workforce development for young parents
- 03** Provide a continuum of education, career exposure, and employment programming for young people in partnership with Boston Public Schools and the Boston Private Industry Council
- 04** Support Jamaica Plain Neighborhood Development Corporation to lead a youth employment program focused on out of school youth
- 05** Increase awareness and promotion of local businesses among the BWH community to support economic vitality in our local neighborhoods
- 06** Provide residents from Mission Hill and other local neighborhoods with employment and career counseling, skills development training and referrals, and facilitate job interviews of qualified community residents
- 07** Partner with locally based organizations and institutions to create career training programs and pathways at Brigham Health for adults who have experienced significant barriers to employment



# HOUSING

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## OBJECTIVE

Support efforts to increase housing stability in our priority neighborhoods

## STRATEGIES

- 01** Provide support to community-based organizations engaging in housing stabilization efforts in our priority communities through the Housing Stabilization Support Initiative and the Flex Fund of the Innovative Stable Housing Initiative
- 02** Provide housing advocacy and support at our licensed community health centers and selected clinics
- 03** Explore strategies to further support housing stability and affordability in our priority neighborhoods
- 04** Contribute to a local homelessness organization to establish a large-scale permanent supportive housing site
- 05** Partner to provide legal services to address housing issues for those who have experienced domestic violence



# VIOLENCE AND TRAUMA

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## OBJECTIVE

Provide an integrated and effective response to those experiencing violence and trauma and build system capacity to provide trauma-informed care in our communities



## STRATEGIES

- 01** Provide advocacy, safety planning, and supportive counseling for community members who experience domestic violence and for patients who experience human trafficking and/or domestic, sexual, and/or community violence
- 02** Collaborate with key community partners to offer supportive violence prevention education to young people in high risk environments
- 03** Provide health care leadership for the Jamaica Plain Neighborhood Trauma Team, responding to community needs when violence occurs
- 04** Participate in community events to support neighborhood cohesion
- 05** Develop and implement effective hospital-wide policy and procedures to care for patients who have experienced violence and trauma
- 06** Provide trauma-informed services to patients through the hospital's C.A.R.E. clinic to improve health outcomes for survivors of individual, interpersonal, and collective trauma
- 07** In collaboration with the Partners Trauma Informed Care network, continue to provide learning opportunities for staff to develop awareness, skills, and confidence in providing trauma-informed care
- 08** In partnership with survivor-led community programs, advance our trauma-informed human trafficking rapid response in the hospital, health centers, and other community access points through a continuum of direct services



# BEHAVIORAL HEALTH

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## OBJECTIVE

Strengthen our prevention and response to mental health and substance use conditions in our community and support innovative, effective models of care for our priority neighborhoods



## STRATEGIES

- 01** Provide opioid intervention and response, including through the Bridge Clinic (a rapid-access, low barrier clinic for patients with substance use disorders), a “MedSafe” drop-off location, and by dispensing nasal Narcan to patients who request it at the pharmacy and to high-risk patients in the ED and Bridge Clinic
- 02** As part of the Boston Cambridge Hospital Consortium on Opioids, train a range of health care providers on addiction, opioid use disorder, and related stigma and pursue three initiatives to support hospital employees and their families facing substance use challenges
- 03** Provide mental health support to young people participating in CCHHE youth programs
- 04** Identify opportunities for mental health clinicians to engage with community members to inform the Brigham community mental health response
- 05** Support community-based organizations to deliver and implement innovative models that strengthen the conditions of community psychological wellness through the Health Equity Grants
- 06** Offer no-cost behavioral health counseling for community members and patients who have experienced domestic violence
- 07** Provide clinical supervision to social work staff and students in partnering community organizations to increase social and emotional support for program participants
- 08** Provide no-cost mental health services for people experiencing and/or witnessing community violence and trauma

# ACCESS TO SERVICES

## OBJECTIVE

Address barriers that hinder access to care for community members

## STRATEGIES



- 01 Support community health workers, community resources specialists, and patient navigators by providing opportunities for them to share needs and best practices widely
- 02 Expand local community representation on BWH Patient Advisory Councils
- 03 Provide transportation assistance to low income patients through the Perinatal Transportation Assistance Program as well as patients in recovery
- 04 Provide a wide variety of health equity programs through the Health Promotion Center at Southern Jamaica Plain Health Center designed from a racial justice lens
- 05 Provide community members with access to weekly free breastfeeding support from bilingual/bicultural certified lactation consultants
- 06 Conduct an annual flu clinic for senior residents in Mission Hill in partnership with a non-profit housing and human service organization
- 07 Provide health education and support programs for community members with specific health and social needs at Brookside Community Health Center
- 08 Provide “Home Hospital” care to acutely ill adults in their homes
- 09 Provide resources to low income patients with breast cancer who do not have adequate income or insurance to pay for necessary services related to breast cancer diagnosis
- 10 Provide free skin cancer screenings at various community locations and events
- 11 Provide racial justice and health equity training programs for the public and a racial reconciliation and healing project for local young people
- 12 Develop additional programming at the Center for Community Wellness at Sportsmen’s Tennis & Enrichment Center that responds to the needs of local residents
- 13 Increase access to healthy foods by collecting food daily for donation, providing free monthly meals for community members, supporting healthy cooking series for the public and patients and supporting food pantry programs

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