

Brookline Older Adult Community Health Needs Assessment



2022

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EXECUTIVE SUMMARY

Introduction

This report serves to identify the needs and resources of the older adult community in the town of Brookline, MA. Through systematic data collection we have highlighted areas that our data collection supports as being areas of particular need for the community.

Key Findings

Transportation & Built Environment

Access to safe, reliable, and accessible transportation varies between North and South Brookline. Although the town's physical infrastructure is well-maintained and provides access to green spaces, it lacks in areas of safety and accessibility for the older adult population.

Healthcare Access

Limitations in medical transportation services, both in quantity and in usability of services, prohibit many older adults from reaching healthcare appointments. A lack of providers specializing in older adult needs, particularly in mental and behavioral health, further restricts access to care. High costs associated with home health care impact many older adults' ability to age in place.

Housing

There is an inadequate supply of affordable, subsidized housing options and widespread concern over rising rent prices in Brookline. For homeowners, property taxes, utilities and home maintenance costs, and lack of financial support for aging in place are burdensome. For individuals who need in-home care, affordable support is difficult to find.

Personal & Legal Rights

Scammers, mainly online, pose a threat to older adults in Brookline. Conservatorship issues and maintaining personal and legal rights are of particular concern to older adults.

INTRODUCTION

Purpose of this Project

The Brookline Older Adult Community Health Needs Assessment is an initiative conducted by Boston University School of Public Health (BUSPH) students taking section C1 of SB820: Assessment and Planning for Health Promotion in Spring 2022. This was conducted in collaboration with the Brookline Council on Aging, the Brookline Senior Center, and Professor Harold Cox. We worked under the supervision of Dr. Jonathan Jay, an assistant professor of Community Health Sciences at BUSPH, and teaching assistants Walae Hayek and Chioma Mbonu. This project was born out of a reported need for more information on possible gaps in the social services available to older adults in Brookline.

Community Health Needs Assessment

A community health needs assessment (CHNA) seeks to identify the needs and current resources of a community through systematic data collection and analysis. The results are shared with stakeholders and typically accompany a set of health priorities to be addressed. It is imperative that a CHNA includes a variety of opportunities for community members to provide their input. CHNAs may include a range of data collection methods, including focus groups, surveys, individual interviews, environmental analysis, and analysis of secondary health data.

The goals of the Brookline Older Adult CHNA are to:

- Understand the social service-related needs of the Brookline older adult community and the resources afforded to them
- Evaluate features of the community environment that support or diminish Brookline older adult health
- Identify community-related concerns, priorities, values, aspirations, and visions of Brookline older adults
- Outline priority areas of action to improve the health of the Brookline older adult community, particularly involving social services delivery

Community Background

Located in Norfolk County, Massachusetts, and bordering the Boston metropolitan area, the town of Brookline is home to approximately 60,000 residents. Notable centers of commercial activity include

Brookline Village and Coolidge Corner, where many local businesses and independent stores are located. Along with the neighboring cities of Newton and Brighton, the town is a major cultural hub for the Jewish community and also has a large Irish American presence. Brookline operates an assortment of community resources for residents; this includes

The Public Library of Brookline which offers a variety of events and activities for all ages, especially children and older adult populations.

Overall, the town of Brookline is strongly liberal. 87.6% of residents voted Democrat in the 2020 presidential election, compared to 11.2% who voted Republican.¹ Over the past few years, Brookline has adopted a number of forward-looking public health initiatives. As a result of the COVID-19 pandemic, two notable coalitions were established: Building a Better Brookline, which advocates for housing affordability, racial equity, climate, transit, and economic development; and Brookline for Everyone, which focuses on issues of housing affordability, racial inclusion, and sustainability. Environmental and health issues are an important part of the town's political agenda. In 2021, Brookline became the first town in America to ban the sale of all tobacco products to all individuals born after January 1, 2000. Additionally, the town declared in early 2022 that it had partnered with Amp Energy to invest in renewable energy and ultimately reduce carbon dioxide emissions by 2,000 metric tons per year. Brookline recently announced the appointment of Sigalle Reiss as the town's new Director of Public Health and Human Services. Reiss has previously expressed her belief in data-driven approaches and use of community coalitions for the improvement of public health programs.²

Brookline residents include many highly-paid professionals, particularly those in the fields of medicine and education. This may be due to the town's close proximity to the Longwood Medical Area, which includes hospitals and research institutions such as Beth Israel Deaconess Medical Center, the Dana-Farber Cancer Institute, and Harvard Medical School. Residents are predominantly White and highly educated, with growing populations of racial/ethnic minority groups and older adults aged 60 years or older. Compared to the national median household income of \$67,521 in 2020, Brookline reported a significantly higher average household income of \$113,642. These demographics may be explained in part by historical segregation; akin to several other Boston suburbs, redlining and discriminatory housing practices dating back to the 1930s prevented low-income people of color from living or owning property in Brookline.³ While the town is one of the most affluent communities in the state, concern remains over how best to identify and serve Brookline households living at or below the federal poverty level. There has been a call among residents for more affordable housing options for young and older adults and low- to middle-income households. In 2021, Brookline passed The Colonel Floyd Home Rule Petition, H.4083,

granting the Brookline Housing Authority the opportunity to sustainably redevelop the Colonel Floyd Apartments, which currently serve as senior public housing, into almost twice the number of affording housing units.

Brookline is known for its quality urban landscape and high walkability, with easy access to public transportation, including the MBTA Green Line and multiple bus routes, most concentrated in North Brookline. In comparison, South Brookline is a largely residential area that is most accessible by car. South Brookline has fewer public transit options and is less walkable than denser areas of North Brookline. The town also operates transportation services for elderly residents, including Elderbus and the Brookline Elder Taxi System (BETS). Brookline was given a vehicle as part of a larger grant awarded to various Councils on Aging and other municipalities in order to improve transit. Brookline is also recognized as an Age-Friendly and Dementia-Friendly Community.

There are a variety of social services that tailor to specific needs of older adults in Brookline, specifically through the Council on Aging and Brookline Senior Center. Founded in 2001, the Council on Aging is a municipal department of the town of Brookline housed in the Brookline Senior Center and located near Coolidge Corner. In tandem, the Council on Aging and the Brookline Senior Center provide many services and resources to older adults in the area. These include volunteer opportunities, peer support groups, art workshops, movie nights, and a daily free lunch. The Brookline Senior Center also acts as a liaison to connect older adults with information and resources throughout Brookline and the greater Boston area to help them age safely and autonomously. Older adults can also access resources through the Brookline Center for Community Mental Health, which connects individuals with affordable individual/group counseling, emergency funds for basic needs, and case management services. The town has additionally implemented an all-volunteer led Community Aging Network to provide resources and advocacy to support aging in place for older residents.

Older Adult Health Needs

As the senior population of Brookline continues to grow, it is critical that older adults in the town are able to identify and utilize resources that support their physical and emotional well-being. According to the Council on Aging's 2018 Strategic Planning Memo, the number of adults aged 60 years or older in the town is projected to increase by almost 40% between 2010 and 2025. In order to most effectively serve the growing number of older adults in Brookline, we must understand the unique needs of this population.

Older adults face complex challenges as they age in a society that is not adequately prepared to meet their needs. Life expectancy in the United States has increased steadily over time, from an average of 73.7 years in 1980 to an average of 77 years in 2020. As the Council on Aging’s Strategic Planning Memo points out, much of the US’s social, economic, and physical infrastructure has yet to catch up to meet the demands of a population that is living longer and requires additional, specialized healthcare and social services. As individuals continue to grow older, they experience life changes that impact their physical and mental health. Older adults often grapple with the loss of friends, family, and their personal autonomy. Those who wish to “age in place” in their homes face the responsibility of managing the upkeep of their households; alternatively, older adults who opt to transition into public housing may encounter challenges with the accessibility, availability, and affordability of housing options.

Improving mental health among older adults is a particularly high priority. In a 2008 report on mental health and aging released by the Centers for Disease Control and Prevention (CDC), an estimated 20% of people aged 55 years or older experience some type of mental health concern, with depression being the most prevalent condition.⁴ The COVID-19 pandemic has additionally exacerbated existing issues surrounding social isolation among older adults, limiting opportunities for social and civic engagement and increasing the rates of physical isolation due to stay-at-home or shelter-in-place mandates. The increased use of technology for accessing healthcare, both before and during the pandemic, also poses a challenge for older adults. Notably, transportation remains a key area of concern among older adults in Brookline. The town’s Council on Aging has additionally identified affordable housing, healthcare access, social isolation, advocacy, and home care as priority target issues.

In reflecting upon how we can devise strategies to address key issues among older adults in Brookline, it is also necessary that we **acknowledge individual differences in lived experience**. Within the older adult population, there is a broad range of socioeconomic levels, cultural backgrounds, and personal interests. While some older adults may be able to retire comfortably and have free time to volunteer and engage with their community, other individuals may need to continue working to maintain a steady source of income or serve as caregivers for other family members. Additionally, physical ability varies widely among older adults, impacting mobility, level of physical activity, and acceptable modes of transportation. Keeping these differences in mind will be crucial as we survey the landscape of existing resources and address gaps in services in the town of Brookline.

Approach

Prior to beginning our research, we identified six focus areas to frame our investigation. These focus areas were first chosen based on the initial tenets designated by the Brookline Council on Aging. To fill in the gaps, we had an in-class discussion and a group brainstorming session to ensure that all topics of importance were covered. The focus areas are as follows: (1) Housing Costs, Food Security, and Financial Stability; (2) Marginalization, Vulnerability, and Resilience; (3) Transportation and Built Environment; (4) Access to Healthcare Services; (5) Personal and Legal Rights, and Safety; and (6) Social and Civic Engagement and Employment. The team was then divided into groups of four to five students for each topic of focus. Each of these working groups (WG) developed one section of this final report.



Figure 1. The Social-Ecological Model from Agency for Healthcare Research and Quality.

The **Social-Ecological Model**, a well established theory in the field of public health, was used to guide our analysis (*Figure 1*). The Social-Ecological Model posits that health related outcomes are not caused solely by individual behaviors, but by a complex interplay of individual, interpersonal, community, institutional, and societal level factors and the intersections between them. We used this framework to shift the majority of the burden of responsibility from an individual’s behavior and genetics to higher-level factors that may create a health promoting or detracting environment. Built into this theory is the understanding that changes implemented at higher levels, such as the community or societal level, can potentially have a greater impact and reach in society. This includes changes in the physical, social, or political environment. Public health focuses on these levels, as more people can be reached by making these large-scale changes.

At the base of our CHNA is the recognition that one's health is affected by structural limitations, social barriers, and physical barriers to health, as well as by individual actions. On an even broader scale, we acknowledge the influence of race, age, income, and geography as contributing factors to an individual's overall health. Thus, we collected data spanning the entirety of the Social-Ecological Model, from individual to structural data. This recognition gave meaning to our environmental assessments, older adult service provider interviews, and broad health data (described below) as being direct contributors to the health of the population of interest.

At the center of a CHNA is the community in which the assessment is focused. To ensure that we properly engaged with our community, we allowed for our research questions to be guided by their concerns and opinions. These considerations applied not only to method planning and our interactions with the community, but also our conversations within the classroom. For example, if the team had identified an issue as a priority, but it was not mentioned in any of the key informant interviews, we would omit this issue from our final analysis.

We want to acknowledge that this assessment was completed by individuals not directly a part of the community in focus. All of the needs, feelings, and perceptions from our assessment were gathered through primary and secondary research, as described in the upcoming "*Methodologies*" section. We acknowledge that our team is not affected by ageism in the way that those who this assessment is centered around are. We made a conscious effort throughout the assessment to remove personal biases from any data collection or reporting. We also focus on a *spectrum* of "healthy" and "successful" aging. We intentionally try to move away from a rigid definition of aging well as we understand that this process may look different for each individual. By focusing on a stringent definition of "aging well," we may unintentionally marginalize and separate those who don't identify with the mainstream definition. Overall, we think that it is important for the reader to understand the position of those who completed the assessment, relative to the community that the assessment is focused on.

We also place a special focus on language throughout our assessment. When dealing with sensitive topics such as mental health, person-first language is a priority. Using terms such as a "person with depression", rather than the inversion, allows for autonomy and acknowledgement of the individual before acknowledgment of a characteristic or diagnosis. Our focus on language also continues with being cognizant of potentially harmful or stigmatizing terms. Our report was mindful of using non-stigmatizing language when discussing mental health, physical health, age, and other sensitive topics. Therefore, readers will see "older adult" being used consistently throughout the report. We believe that there is no

clear age threshold when an adult faces the issues that we have found in our assessment. There are certain areas in the report in which 60+ or 65+ have been used, largely because available data use these age cutoffs. However, we have no reason to believe that our findings would differ substantially depending on which age threshold was used.

Interpreting this CHNA

When interpreting this CHNA, it is important to account for strengths and limitations of our assessment approach. Closely collaborating with Director Dobek and other Senior Center staff, and interviewing older adults who use the Center's services allowed us to obtain detailed information about the priorities of those involved in programming and advocacy for the older adult population of Brookline. Interactions with Director Dobek and interviews with service providers offered a clear picture of the current landscape of social services available to older adults. Conducting demographic research, environmental assessments, and a review of health data prior to these interviews allowed working groups to develop tailored interview questions designed to elicit interviewees' main concerns and priorities regarding older adult issues. Partnership with the Senior Center was a vital aspect of understanding older adult social services and gaining access to older adults and service providers.

Major limitations of our assessment are **a relatively small sample of interviewees compared to the total older adult population of Brookline and lack of input from individuals who are not involved with the Senior Center**, either as service providers or users. The sample of 10 provider interviewees and 13 resident interviewees may not have captured the perspectives, priorities, and unmet needs of all older adults living in Brookline. Residents who volunteered to be interviewed through the Senior Center could differ in important ways from other older adults, potentially in their levels of social and civic engagement, health status, socioeconomic status, and other variables. We did not conduct an in-depth demographic assessment of interviewees, so their characteristics cannot be compared to American Community Survey data to assess representativeness. Particularly important to account for is that residents who were interviewed already participated in Senior Center activities and services.

As part of further assessment, **perspectives of older adults who do not currently engage with the Senior Center will be necessary** to identify how services might be expanded or modified to better serve these individuals. Conducting key informant interviews with providers who are not affiliated with the Senior Center, such as physical and mental healthcare providers, local home health agencies, librarians, and other community and religious organization leaders can provide insight into older adult

populations who may not have been represented in our sample. Leveraging the Senior Center's existing partnership with organizations such as the Greater Boston Chinese Golden Age Center and Fenway Health in addition to creating new partnerships with relevant community organizations can assist in obtaining a more diverse group of perspectives. The concept of "centering at the margins," or prioritizing the voices of those most marginalized can be a helpful framework for moving forward in modifying older adult services in Brookline. When the needs of those who have historically been marginalized or least involved due to systems and structures that prioritize the majority are put at the center, all older adults will benefit. Because individual interviews are time and labor intensive, focus groups, surveys, or a combination of the two could be used in the future to gain deeper insight into older adults' needs. Distributing a survey or recruiting focus group members through cultural centers or other organizations and posting flyers at commonly frequented areas such as grocery stores, public transit stops, and libraries can also broaden future assessment results.

METHODS

Demographics

Demographics are an important form of secondary data. Having a strong understanding of *who* makes up the population of interest allows us to contextualize health needs and trends, and primary, qualitative data results. We may make more informed suggestions regarding the prioritization of health care needs when taking into account the multiple groups and subgroups that make up the Brookline community. Thus, an intersectional approach was taken with special attention to social and economic marginalization. It is important to properly ensure the most vulnerable populations are represented in our report and considered when suggesting health priorities.

To create the demographic tables included in the CHNA, the American Community Survey (ACS) of the U.S. Census was the primary data source consulted. Three broad themes are highlighted across our demographic tables: economic security, social identity, and population growth trends. Various community features were considered and researched to represent these themes. Frequencies were calculated by dividing each relevant Census or ACS by total population. Tables were created in Excel.

Environmental Assessments

Environmental audits were conducted to assess the built environment of Brookline. The built environment can impact the health of community members, especially older adults. Certain aspects of the built environment are of particular relevance to the health of older adults, including sidewalk conditions, benches, bus shelters, lighting, curb cut-outs, timed crosswalks, ramps, and other features for mobility aids. In order to conduct environmental audit assessments, the AARP Healthy Aging Network Environmental Audit Tool was used.⁵ Relevant geographic areas of Brookline, (areas surrounding the Senior Center or other community locations, such as libraries) were assessed by doing a ‘walking audit’ either virtually with Google Maps Street View or in person. The geographic areas immediately surrounding locations of interest were audited using the AARP tool and notable features were noted, along with corresponding screenshots or photographs. Street View was also helpful in assessing urban density, built infrastructure, and the Longwood Medical Area. Google Maps and city websites were used to assess transit lines and parking availability.

Health Data

Health data was obtained to inform the CHNA and suggestions for prioritization areas. Some examples of health data that are highlighted in this CHNA are wellness demographics, preventative care engagement, and health services utilization. The primary data source for the collection of health data was the 2018 Massachusetts Healthy Aging Community Profile. Additionally, the Massachusetts Immunization Information System (MIIS), City of Brookline website, Census quicksheets, and community-based organization websites were consulted. Before beginning the process of drafting an interview guide for key informants, the Brookline Council on Aging provided us with their executive summaries and notes from previous council meetings. These notes are confidential, but gave us insight into the perceptions of older adult community members, the political landscape of the community, and priorities of the council-members. These summaries and notes were reemphasized by Director Ruthann Dobek, LICSW, who spent an hour with our team to discuss the goals of her organization and where she saw gaps in services for Brookline older adults. The collection of other health data helped direct our focus in drafting interview guides for key informants, our major primary data sources.

Key Informant Interviews

Key informant interviews were the major source of *primary* data collected by our team. These interviews afford us a greater insight into the health needs of Brookline, the perception of its residents and service providers, lived experiences, priorities of older adults and also the opportunity to fill in gaps in the secondary data by providing the context of lived experiences to our research. A total of 23 key informant interviews were conducted by working group members. Of these 23, 10 were conducted with Brookline service providers and 13 were conducted with older adult residents of Brookline.

All working groups collectively drafted interview guides for both providers and residents. Provider interview questions explored the impact of COVID-19 on the interviewee's organization, their most popular or used services, their community partnerships, and their perceived needs of their clients. Resident interview questions varied more, with questions tailored to the earlier discussed focus areas, about personal safety, community engagement, financial and housing situation, healthcare access, and built environments. Both interview guides were designed to produce 45 minute semi-structured interviews. Key informants were recruited through the Brookline Senior Center, which connected our class with providers and residents.

Provider interviews were conducted on April 4, 2022 via Zoom in groups of 3-4 students. Resident interviews were conducted on April 11, 2022 in a hybrid format. Working groups interviewed residents

together, either in-person at the Brookline Senior Center or via Zoom or phone call. Interviews were not recorded but extensive notes were taken. After the interviews were completed, all groups submitted write-ups with major themes and takeaways that emerged from the interviews. Interview data was collated as a large group by presenting major themes from each interview group.

DEMOGRAPHICS

Introduction and Framing

The following section provides an overview of the older adult population of Brookline within the U.S. Census' definition of older adults, as aged sixty-five and over. Demographics are critical to understanding the health inequities and health of communities. Factors like race, ethnicity, age, and gender are key characteristics that shape individual health, but it is also important to acknowledge the structural factors, such as economic and social opportunities and geographic distribution of these characteristics, as well. Structural issues of importance are ageism, racism, lack of language diversity, wealth inequality, anti-LGBTQ+ sentiment, etc. These issues create substantial barriers to community health and engagement (e.g., inability to access resources and services, employment discrimination, social isolation, etc.) creating disparities in well-being, health outcomes, and quality of life.

Though the health of older adults may be shaped by age-related physical and cognitive changes, this impact differs greatly from how ageism shapes health. Discrimination and inadequate protection that directly result from ageism have severe effects on their overall health, quality of life, and wellbeing.⁷ While this section focuses on Brookline's older adult population, it is imperative to acknowledge that aging is not done in a vacuum. The very factors that impact community health also influence aging and may cause individuals to experience disadvantages that are not solely attributable to ageism.

This section's approach utilizes intersectional theory and a Marginalization, Vulnerability, and Resilience (MVR) framework to recognize the diversity of older adults in Brookline. The intersectional theory recognizes that social determinants of health are not experienced in isolation; lived conditions and health are shaped by an individual's unique, multidimensional identity and their position in social structures and categories. MVR's framework contextualizes how even *within* defined intersections there is individual heterogeneity and avoids intersectionality's tendency to view communities as monoliths. In addition, MVR recognizes the individual and their experiences by acknowledging differences in agency and resiliency in resisting sources of oppression and structural power(s).

Intersectional patterning alone can only predict how societal factors influence population-level health, making it unable to capture the richness of individual experience. While the MVR framework cannot be integrated into data collected via the U.S. Census, as it reflects population-level demographics, it

is important to interpret data *through* this frame. Specifically, when analyzing demographic Census data, one must remember the nuances of identity are not entirely captured and that individuals do not lead single-identity lives.

This section highlights three areas to explore: social identity, economic security including housing security, and COVID-based vulnerability. These areas are then used to frame population trends now and into the future. It is important to note that this section is non-exhaustive nor is it able to capture the full view of Brookline’s diversity; some information is missing and/or incomplete and as such requires estimates using national or state-level population data. Please note that the population data included in this section is informed by the 2020 American Community Survey data, the most recently available U.S. Census data.

Social Identity

Social identity is an “individual’s knowledge of belonging to certain social groups, together with some emotional and valuational significance of that group membership.”⁸ Some of these identities include race, ethnicity, sex, gender, marital status, citizenship status, and many more. The demographic tables presented compare the older adults’ make-up between 2015 and 2020. It is important to note that there are gaps when collecting demographic data in Brookline, MA. For instance, the American Community Survey (ACS) does not survey questions about sexual orientation, gender identity, language diversity, or cultural diversity, and specified the range of disabilities (e.g. if they are neurological, physical, intellectual, and more).

Population of Older Adults in Brookline		
	2015	2020
Total Population in Brookline	59,123	59,223
Total population of 65+ years	8,915 (15.1%)	9,486 (16%)
65- 69 years	3,015 (5.1%)	2,749 (4.6%)
70- 74 years	2,365 (4.0%)	2,548 (4.3%)
75- 79 years	1,360 (2.3%)	1,521 (2.6%)
80- 84 years	769 (1.3%)	1,497 (2.5%)
85+ years	1,419 (2.4%)	1,171 (2.0%)

Table 1. Population Distribution, 2015 and 2020

Brookline is an affluent town located to the west of Boston, Massachusetts. There is a growing population of older adults and with each year, the percentage increases. The older adult (65+) population makes up 16% (N= 9,486) from the total population of 59,223. Out of the 9,486 older adults, many older adults are between the ages of 65 to 69 (4.6%); meanwhile, the age group of 85+ only comprised 2.0%. When it comes to gender, most of Brookline’s older adult residents are female at 59.2% of the older adult population with their male counterparts making up 40.9% of the population. According to the ACS, marital status amongst older adults was the following: married (55.2%), with few respondents indicating that they were either separated (0.8%), divorced (14%), widowed (17%), or never married (13%).

Race & Ethnicity of Older Adults in Brookline		
	2015	2020
White (Non- Latinx)	7,569 (84.9%)	7,911 (83.4%)
White	7,845 (88.0%)	8,025 (84.6%)
Black or African American	187 (2.1%)	323 (3.4%)
American Indian & Alaska Native	0.0%	38 (0.4%)
Asian	820 (9.2%)	873 (9.2%)
Native Hawaiian & other Pacific Islander	0.0%	0.0%
Latinx	303 (3.4%)	247 (2.6%)

Table 2. Race & Ethnicity of 65+ Adults Distribution, 2015 and 2020

Citizenship Status of Older Adults in Brookline		
	2015	2020
Native	6,771 (75.9%)	6,488 (68.4%)
Immigrant	2,144 (24.1%)	2,998 (31.6%)
Naturalized U.S Citizen	1,897 (88.5%)	2,719 (90.7%)
Not a U.S. Citizen	247 (11.5%)	279 (9.3%)
Median Age of Naturalized U.S Citizen	54.1	54.7

Table 3. Age Citizenship Status of 65+ Adults, 2015 and 2020

Key Highlights:

- In 2020 there was a 6.0% increase in older adults in Brookline compared to 2015.
- In 2020, the Black or African American older adult population was 1.62 times greater than in 2015.
- In 2020, the Latinx older adult population was 1.24 times less than in 2015.
- The largest racial/ethnic makeup of older adults identifies as White (Non-Latinx) or White with approximately 85%.
- The second major racial/ethnic group in Brookline were Asians with a steady 9.2% in both 2015 and 2020
- Two thirds of older adults identified English as their primary language
- In 2020, the immigrant older adult population was 1.32 times greater than in 2015.
- In 2020, the native-born older adult population was 2.00 times less than in 2015.
- The older adult population had a median age of 72.5 and 73.9, for 2015 and 2020 respectively.

Another identity that is often associated with older adults is disability status, where one-third of the population identified that they had any disability. The tables provided are based on data collected from the ACS in both 2015 and 2020. There is still more work to be done when collecting data from older adults in Brookline that can guide and orient both Brookline's Senior Center and the Brookline Council on Aging about what services need to be improved or created so that members have their needs met, such as ethnic/racial clubs, events for single folks, and more.

Economic & Housing Security

Income is one of the strongest social determinants of health; it determines an individual's financial security, housing situation, nutrition, and transportation.⁹ One's income status is also determined by both their employment and location they reside in, which determines the opportunities they can access.

Previous and current employment status plays a large role in older adults' wellbeing. Employment provides opportunities for economic stability, social wellbeing, and a sense of purpose and belonging.¹⁰ As illustrated in **Table 4**, there has been minimal change in employment status within Brookline from 2015 - 2020. Brookline's older adult residents are represented in the labor force at a higher percentage, 34.9%, than those who reside in the state of MA employed at 22.7%, and those in the United States, employed at 18.4%. The higher rate of working older adults in Brookline may speak to several factors: Brookline having higher rates of white collar jobs allows for older adults to work longer. Another possibility is the lack of economic stability, social wellbeing, or sense of purpose not otherwise being fulfilled outside of the labor force.

Employment Status of Older Adults in Brookline		
Years	2015	2020
Total population 65 +	8,915	9,486
In labor force	34.4% (3,067)	34.9% (5,103)
Unemployed	.4% (36)	.5% (47)
Not in Labor Force	65.6% (5,848)	65.1% (6,175)

Table 4. Employment Status of Older Adults 65+ in Brookline, 2015 and 2020.

2015 - 2020 shows minimal change for earning and social security income. Supplemental Nutrition Assistance Program usage has seen an increase of roughly 3x the rate from 5.1% in 2015 to 14.5% in 2020, while Cash Public Assistance only saw a slight increase.¹¹ This is a significant increase compared to Massachusetts, whose Supplemental Nutrition Assistance Program usage was 11.6% consistently from 2015 - 2020. This could indicate that more older adults are facing food insecurity than in previous years potentially due to the economic uncertainty related to the COVID-19 pandemic. These statistics are supported by data from community organizations providing food assistance to older adults in Brookline. Springwell and Mutual Aid Brookline, both reported the largest growth in their service base was among older adults, especially at age-restricted housing facilities.¹² While it is possible that many of these older adults required this service due to medical vulnerability from COVID rather than food insecurity alone, even after high vaccination rates in Brookline among the older adult population, usage of these services by older adults has remained high, suggesting continuing food insecurity.

Household Income Status of Older Adults in Brookline		
Years	2015	2020
Total Population 65+	5,635	6,187
With Earning	48.4% (2,727)	49.6% (3,069)
With Social Security Income	79.6% (4,485)	76.9% (4,758)
With Supplemental Income	2.8% (158)	5.2% (321)
With Cash Public Assistance Income	1.3% (73)	2.5% (155)
With Retirement Income	40.2% (2,265)	41.7% (2,580)
With SNAP Benefits	5.1% (287)	14.5% (897)

Table 5. Household Income status of Older Adults 65+ in Brookline, MA

Housing plays a critical role in one’s physical safety and financial wellbeing. Often one’s housing is their largest expense; it can be an investment for some and a burden for others. For Brookline, there has been minimal shift in housing tenure status from 2015 - 2020; there are less homeowners and more renters, despite the increase in overall population.

Housing Tenure of Older Adults in Brookline		
Years	2015	2020
Total Population 65+	5635	6187
Owner Occupied Housing Unit	66.6% (3,753)	64.8% (4,003)
Renter Occupied Housing Unit	33.4% (1,882)	35.2% (2,178)

Table 6. Employment Status of Older Adults 65+ in Brookline, MA

In Brookline, there has been a rise of 3% from 2015 - 2020 among older adults below the federal poverty line (FPL). This rise in FPL was similarly mirrored in Massachusetts from 2015 - 2020, growing from 81 to 83%. This potentially could be a result of older adults falling below the poverty line, since there has also been a decrease in the “150% or above” FPL bracket. Massachusetts uses the subsidized FPL, established at 138% by the Affordable Care Act, which accounts for inflation and other factors the FPL has not accounted for since its inception in 1965. Considering Brookline’s high housing cost and the low FPL, our data is limited in demonstrating how many older adults 65+ are struggling with financial security.¹³ While income insecurity is difficult to quantify within census records, the presence of income insecurity and housing insecurity were also reflected in key informant and participant interviews.

Poverty Status of Older Adults in Brookline		
Years	2015	2020
Total Population 65+	8,611	9,207
Below 100% of Poverty Level	8% (689)	11.0% (1,013)
100% – 149% of Poverty Level	7.2% (620)	5.1% (470)
At or above 150% of Poverty Level	84.7% (7,293)	83.9% (7,724)

Table 7. Poverty Status of Older Adults 65+ in Brookline, MA

COVID-19 Based Vulnerabilities

Synthetic estimation indicates older Asian adults in Brookline died from COVID-19 at disproportionate rates compared to other racial groups. Research and interventions addressing the determinants underlying these high mortality rates are especially needed in the context of rising Anti-Asian discrimination and violence. Case and mortality rates during the COVID-19 pandemic have revealed race-based health inequities within Brookline's population, particularly among older adults as the demographic age group most vulnerable to severe illness or death due to COVID-19.¹⁴ These racial disparities in case and mortality rates are unfortunately a pattern experienced across the United States, despite stark differences in geographic, political, and social contexts.

However, what makes Brookline's experiences of racial disparities in COVID-19 mortality rates particularly important to examine in the context of a Community Health Needs Assessment is how the demographic makeup of these disparities has differed. Nationally, Black and (non-White) Latinx populations have had the highest rates of COVID-19 mortality even in contexts where these same racial and ethnic groups have not experienced the highest case rates.^{15,16} Brookline, in contrast, has seen its highest COVID-19 mortality rates among its Asian population.¹⁴ Examining mortality rates in comparison with racial and age demographic representation suggests older Asian adults in Brookline died at higher rates than other population groups, particularly (non-Latinx and Latinx) Whites. Asians represented 28% of Brookline's COVID-19 deaths between March 2020 and March 2021. On the surface, this number does not seem extremely disproportionate with 2020 ACS data estimating Brookline's Asian population at 22.3%.¹¹ However, Asians represent only 8.2% of the 65 and older population, the age range in which approximately 94% of Brookline's COVID-19 deaths occurred in this 1-year time period.^{11,14}

Given this context, the fact that Asian individuals constituted 28% of COVID-19 deaths in Brookline from March 2020 to March 2021 seems to indicate disproportionately higher risks of death from COVID-19 were present for Asian older adults. In contrast, White residents of Brookline in total accounted for 61% of the town's total COVID-19 death in the same period despite being 77.3% of the town's overall population and an even higher proportion of 83.4% of adults ages 65 and older, the social group considered most vulnerable to death from COVID-19.¹¹ However, it is also essential to note that neither the ACS nor Brookline Health Department's COVID-19 Report disaggregates or specifies Latinx as a racial category separate from White; in the context of COVID-19 case and mortality rates, this may be potentially problematic given the highly documented disparities in outcomes between non-White Latinx communities experiencing greater rates of illness and death than non-Latinx Whites.¹⁵

Brookline Health Department's COVID-19 report does not suggest possible underlying reasons for the disproportionately high mortality rate of older Asian adult residents, though our background research suggests several key interacting social factors may be at work. Fear resulting from experiences of xenophobia and racist pandemic-related rhetoric fueling the alarming rise in anti-Asian hate crimes may be particularly strong for older Asian adults, who have often found themselves targeted due to their perceived vulnerability.¹⁶ Other key intersecting social factors to consider may include language challenges in seeking care, the cost of care, challenges navigating health insurance, fear over seeking care with irregular immigration status, and a mistrust of health systems and professionals.^{16,17} Moving forward from the pandemic, it will be vital for Brookline's older adult social service providers ensure that they understand and can respond to the specific vulnerabilities and diverse experiences of the town's Asian older adults, particularly concerning health care access as well as social barriers, including stigma and discrimination.

Population Trends

North-South gaps in resources. The geographic distribution of older adults in Brookline is an important factor to consider when assessing needs of older adults throughout the town.¹⁸ While the Senior Center along with other older-adult specific resources are located in North Brookline, South Brookline has a very large population of older adults based on estimates from 2010 Census data and the American Community Survey. This was echoed by Brookline older adult residents who experience the resource gaps present in South Brookline, South Brookline, which falls below Boylston Street, has a population of more than 1,000 older adults.

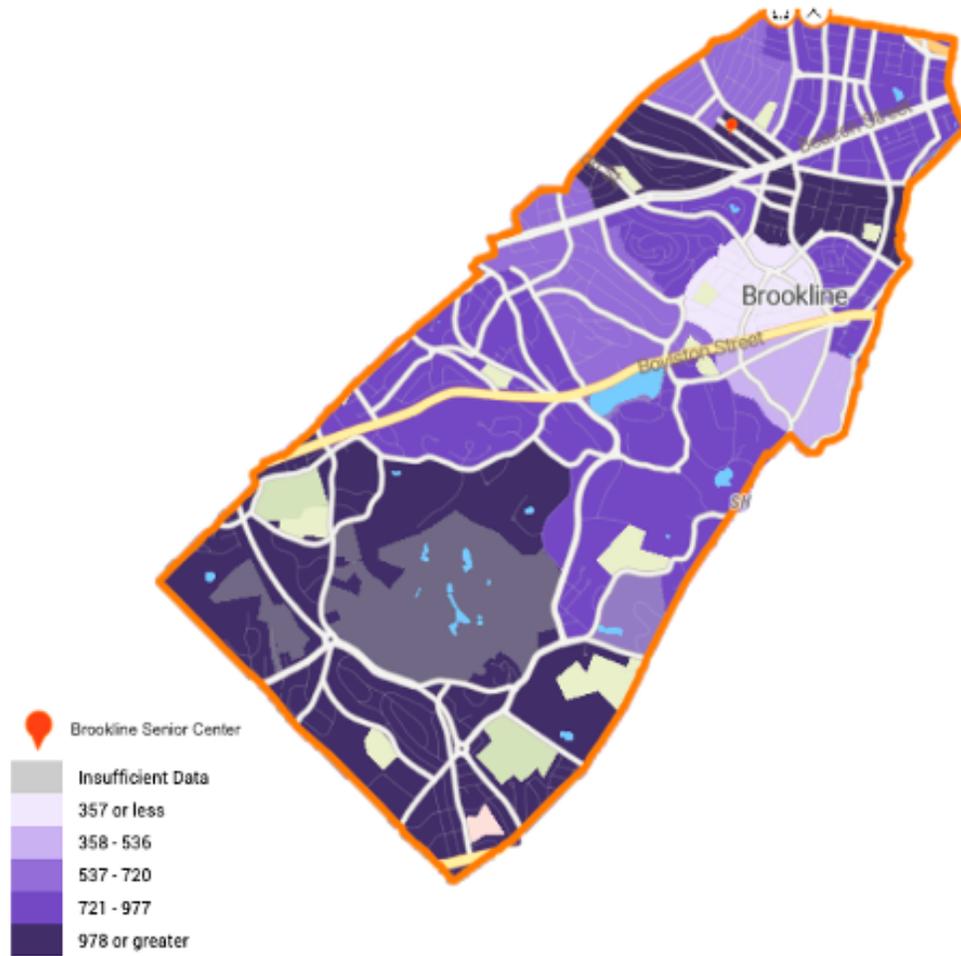


Figure 2. Map of Brookline shading depicting number of 65+ individuals living within a given census tract.¹⁸

Description: This image depicts a map of Brookline shaded dark purple where there is a high number of older adults and shaded increasingly lighter purple where there is a lower number of older adults. The map is more heavily shaded dark purple in South Brookline, indicating a high older adult population in South Brookline. The map shows varying shades of light purple in mid and North Brookline, with another dark purple area near the Brookline Senior Center.

This gap in resources is further highlighted when looking at the diversity of income within a given area. The Gini Index measures income inequality within a given area with 0 signifying total income equality and 1 indicating total inequality: the Gini Index of 0.51 in South Brookline indicates high diversity of income level in this area.^{18,19} Although South Brookline has a higher median household income than North Brookline, South Brookline displays unusually high income inequality. Broken down by census tract, most areas of South Brookline fall above the national and state averages of 0.42 and 0.47

respectively. Despite the high median household income in South Brookline, the income inequality points to a significant and potentially growing population of individuals who lack the financial resources of their neighbors. The minimal public transit and social services within the area can lead to potential isolation and gaps in support for this community. This was further reflected by community members in the interviews conducted.

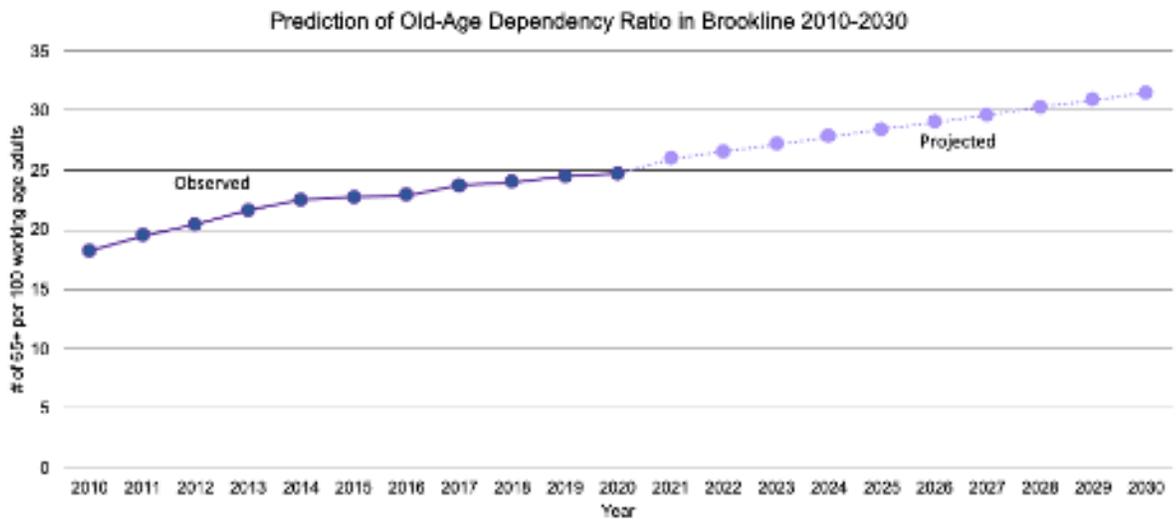


Figure 3. 2010-2020 ASC data of the Old-Age Dependency Ratio, with trend prediction from 2020-2030²⁰

Description: This figure shows a line graph of the old-age dependency ratio in Brookline trending upwards. The graph begins with approximately 18 older adults (65+) per every 100 working adults in 2010 and rises to nearly 25 in 2020, with a projected value of approximately 31 in 2030.

Increasing dependency of older adults. The number of older adults in Brookline is growing with a 6% increase from 2015 to 2020. Another way to measure the impact that a growing older population has on a community is through the old-age dependency ratio. This is a measure of the number of individuals aged 65 and over, for every 100 people of working age (ages 20 to 64).²⁰ Not only is the absolute number of older adults increasing, the old-age dependency ratio is also increasing. As shown in the graph above, the old-age dependency ratio between 2010 and 2020 increased by 26%. If the trends of the last decade hold true, the old age dependency ratio could increase to 31.5 by 2030. This means that for every 100 working age adults in Brookline there are approximately 30 residents over 65. This ratio is one indication of potential social services changes that Brookline will need to respond to. As this ratio increases, there will be added economic and social pressure on older-adult specific social supports, healthcare, and financial support.^{20,21,22} For Brookline to maintain the same level of support for older

adults a larger proportion of the town's budget will need to be allocated accordingly. This trend is important for many reasons, including how it will impact more vulnerable older adults specifically those who require more support from the social services. This trend will also impact those who are currently under-served within the social service makeup of Brookline.

Impacts on marginalized populations. Disparities in social service, health care access, and specific social service needs are felt differently across different axes of identities as well as within other marginalized communities. Marginalized communities already face specific structural, social, and discriminatory factors that contribute to health inequities and social service gaps. As the whole older adult population grows in Brookline, identifying the needs and priorities of marginalized older-adults will be increasingly important from both a social service standpoint and an inequity perspective.

Another key population of older adults in Brookline is the immigrant community. In 2020, 31.6% of older adults in Brookline identified as an immigrant and 29.5% of older adults were more comfortable speaking languages other than English.²⁰ The Brookline immigrant community in general has an older median age than the general population. This large section of the older Brookline population is growing consistently with the general trend. This population potentially faces barriers in accessing social services, community support, and health care resources. The concerns around barriers in access due to lack of language-specific resources was reflected further in the key informant interview.

Housing insecurity was identified as a major source of concern among older adult residents in Brookline in interviews, a concern that is reflected in the demographic data as well. With the already limited resources in Brookline of older adult-specific affordable housing, the potential impacts of a growing older adult population creates even more vulnerability.

Need for a More Comprehensive Assessment

As the older adult population grows identifying the needs and priorities of marginalized groups within the older adult population will be increasingly important from a social services standpoint. The specific concerns regarding older adults with marginalized identities were not necessarily reflected in our interviews with key informants and older adult community members. This discrepancy between our secondary data analysis and the key themes pulled from key themes from interviews points to the need for a further comprehensive needs assessment that seeks to engage specifically with marginalized individuals within the Brookline older adult community.

HEALTH DATA

Introduction

Understanding the health status of older adults in Brookline is an important component of understanding this community's needs. In this section we look at health data on wellness and preventative care, healthcare utilization, behavioral health, chronic disease, and disability. In doing so, we identify health conditions that either (a) impact a **large number** of older adults in Brookline or that (b) **have significant health implications** for those that are affected, even if impacting a smaller number. Additionally, we compare Brookline to the rest of Massachusetts. In seeing where Brookline is doing better and worse than the rest of the state, we can identify strengths of the community and areas where more could be done to support the healthcare needs and improve the health of older adults in Brookline.

Methods

The data in this section are primarily based on secondary data from the 2018 Massachusetts Healthy Aging Community Profile for Brookline.²³ The data drawn from the profile for this section of the Brookline Community Health Needs Assessment (CHNA) come primarily from the Center for Medicare and Medicaid Services (CMS) Master Beneficiary Summary File (MBSF) and the Massachusetts Behavioral Risk Factor Surveillance System (BRFSS).

MBSF claims data. MBSF is an annual data file constructed from the CMS Chronic Conditions Data Warehouse, which includes individual insurance claims for all persons eligible for Medicare for at least one month during the calendar year. The data used in the 2018 report are from the years 2014 and 2015. Because these data are derived from claims, they do not include data from managed care providers, like Medicare Advantage plans, which do not submit claims data to CMS, and may be missing information on chronic conditions from beneficiaries who go undiagnosed because they do not have access to a provider.

BRFSS survey data. The BRFSS is a state-based system of annual health surveys established by the Centers for Disease Control and Prevention and administered by the Massachusetts Department of Public Health to collect information on health risk behaviors, preventative health practices, and health care access. Because the BRFSS survey is designed to obtain state-level estimates, sample sizes are small for individual towns. In order to get an adequate sample size for Brookline, multiple years of survey data were

pooled together. The data included in this report is primarily from the 2013-2015 BRFSS surveys, though some indicators use data from as early as 2010.

Although these data are now several years old, they are included as the most comprehensive data available on the health status of older adults in Brookline. Other available health data sources do not include as wide a range of health indicators and many provide data only at the state- or county-level, as opposed to the town-level, or do not provide data specifically for the older adult population. More recent MBSF claims data and BRFSS survey data exist but were not accessible to these authors within the scope of this CHNA. Given this limitation, commentary is included in the following subsections describing how the statistics may differ today based on changes that have occurred in Brookline over the past seven years.

Data from the Brookline Community Survey that did not come from the MBSF or BRFSS include counts of service providers and self-reported disability rates. Data on the number of Medicare service providers (primary care providers, hospitals, home health agencies) come from the Medicare.gov website. Number of dentists per 100,000 persons (all ages) came from the Massachusetts Department of Public Health license verification website. These data are up to date as of 2018. Data on self-reported disability come from the 2012 – 2016 American Community Survey (ACS). Though more recent ACS data were available, in order to be able to maintain the comparison of self-reported disability data to clinically diagnosed disability data, which come from the MBSF, we report the older data here. More information on the exact methodologies used for data collection in the 2018 Massachusetts Healthy Aging Community Profile can be found in the technical documentation for that report.²⁴

The indications of “B” (better) and “W” (worse) in the tables below highlight differences between community and state estimates that were statistically significant at an alpha of 5%. “B” is used where a higher/lower value has positive implications for the health of older residents. “W” is used where a higher/lower score has negative implications for the health of older people. An asterisk (*) is used to indicate when the health implications of a statistically significant difference were unclear. A dash (-) is used when there is no statistical relationship between the two groups, meaning that the estimates are relatively equal.

Data used in this section that did not come from the 2018 Massachusetts Healthy Aging Community Profile include data on COVID-19 vaccination rates from the Massachusetts Immunization Information System (MIIS),²⁵ which are up to date as of April 2022, as well as data from qualitative

interviews with older adult Brookline residents and service providers, which are used to contextualize the quantitative data.

Wellness & Prevention

Key findings: Brookline performs better overall in wellness factors compared to the rest of the state and has above-average rates of flu and shingles vaccinations. However, rates of COVID-19 vaccination are lower.

Recommendations: Improve access to affordable gyms, education on nutrition, and other preventative care services.

Brookline fares better than Massachusetts on several important indicators related to overall wellness (**Table 8**). For example, older adults in Brookline self-reported fair or poor health status at about half the rate (9.9%) of older adults in Massachusetts (18.0%), which indicates that Brookline residents perceive their health more positively than other Massachusetts residents. In addition, Brookline performs better than Massachusetts on physical activity, clinically diagnosed obesity, and high cholesterol among older adults. One possible reason why Brookline performs better than the state in these areas is the availability of space for physical activity in both the Brookline Senior Center and outdoor environments. One resident mentioned that there are many parks and green spaces around Brookline, allowing older individuals to safely exercise and interact with the space around them. However, another resident said that the Brookline Senior Center's equipment is limited, and other gyms are costly, so there are still some barriers to address. In addition, a Brookline older adult resident stated that there is a great need for nutrition education for residents to understand the healthy options available around them, which may explain why only 27.2% of older adults in Brookline report having five or more servings of fruits or vegetables per day.

By contrast, Brookline performs worse than Massachusetts on older adults who have had a hip fracture. Although Brookline performed slightly, but not significantly, better on older adults who were injured in a fall within the last 12 months, this does not take into account the severity of falls. More severe falls may account for the higher percentage of hip fractures in Brookline older adult residents.

Wellness Measures of Older Adults in Brookline			
	Better / Worse State Rate	Brookline Estimate	State Estimate
% 60+ with self-reported fair or poor health status	B	9.9%	18.0%
% 60+ with any physical activity within last month	B	88.3%	73.3%
% 60+ getting recommended hours of sleep	–	64.1%	62.7%
% 60+ injured in a fall within last 12 months	–	9.1%	10.6%
% 65+ had hip fracture	W	4.3%	3.7%
% 60+ with 5 or more servings of fruit or vegetables per day	–	27.2%	21.5%
% 65+ clinically diagnosed obese	B	12.4%	19.0%
% 65+ with high cholesterol	B	68.1%	75.0%

Table 8. Wellness Indicators. “B”= Brookline performed significantly better than state. “W”= Brookline performed significantly worse than state. “-” = Brookline performed relatively equal to state. “*” = Health implications of statistical relationship is unclear.

With regards to preventative care, Brookline performs better than Massachusetts estimates in flu and shingles vaccines, with no significant difference in pneumonia vaccines, mammography, and colorectal cancer screening (**Table 9**). One possible reason why Brookline does better on some of these preventative care measures and has high rates of preventative care overall is the close proximity of many primary care providers and hospitals to the town of Brookline, as described in the next section.

Surprisingly, Brookline displays lower rates of COVID-19 vaccination among older adults compared to the rest of Massachusetts.²⁵ Low COVID-19 vaccination rates are often attributed to vaccine hesitancy, but Norfolk County, which includes Brookline, has very low rates of reported vaccine hesitancy (5%), lower than most other counties in the state.²⁶ While these hesitancy rates are not specific to older adults, it makes it less likely that vaccine hesitancy would explain the low rates of COVID-19 vaccination among older adults in Brookline compared to the rest of Massachusetts. Another possible explanation for lower vaccination rates is that older adults in Brookline may face barriers to accessing COVID-19 vaccines due to the barriers in accessing healthcare services during the COVID-19 pandemic, described further below. The specific issues of vaccine hesitancy and barriers to accessing the COVID-19 vaccine were not discussed in interviews. Lastly, the differential vaccination rates among older adults in Brookline compared to the rest of the state may be artificial, due to issues with how vaccination rates are reported

within the state’s vaccine reporting system (Ruthann Dobek, LICSW, personal communication, May 2022). Further investigation is needed to verify that older adult COVID-19 vaccination rates are lower in Brookline and if so, into what the reasons are.

Even though levels of preventative medical care are generally high, a Brookline provider highlighted the need for preventative care education at the Brookline Senior Center. In addition, a resident stated that it would be helpful if workshops on health and wellness, which existed before the COVID-19 pandemic, were reinstated in the Senior Center’s programming. Both the provider and resident expressed that interacting with healthcare professionals and healthcare-related education would better prepare older individuals for healthy living as they age.

Preventative Care Indicators in Older Adults in Brookline			
	Better / Worse State Rate	Brookline Estimate	State Estimate
% 60+ women with mammogram within last 2 years	–	82.6%	84.8%
% 60+ with colorectal cancer screening	–	67.5%	63.3%
% 60+ flu shot past year	B	71.1%	60.8%
% 65+ with pneumonia vaccine	–	78.6%	72.0%
% 60+ with shingles vaccine	B	55.7%	39.7%
% 65+ with COVID-19 vaccinations (full)	–	75.4%	88.3%
% 65+ with COVID-19 vaccinations (partial)	–	10.5%	11.2%

Table 9. Preventative Care Indicators. “B”= Brookline performed significantly better than state. “W”= Brookline performed significantly worse than state. “-” = Brookline performed relatively equal to state. “*” = Health implications of statistical relationship is unclear.

Access to Care & Service Utilization

Key findings: Brookline has many healthcare providers nearby and higher rates of health service utilization than the state. However older residents still struggle to get in contact with their doctor and travel to appointments due to transportation and technological barriers.

Recommendations: Improve accessibility of transportation to medical care services and availability of doctor’s appointments for older adults.

Brookline has a high concentration of healthcare services (**Table 10**). In the state of Massachusetts there are 66 hospitals, 14 (21.2%) of which are located within five miles of Brookline. In addition, out of the 10,333 primary care providers in the state, 482 (4.7%) are located within five miles of Brookline. There is also an unusually high density of dentists in the area, with 248 dentists per 100,000 persons (all ages) compared to the state average of 84. Brookline has a high number of home health agencies with 55 (18.4%) out of 299 in the state.

Access to Care Indicators in Brookline		
	Brookline	State
# Of primary care providers within 5 miles	482	10,333
# Of hospitals within 5 miles	14	66
# Of home health agencies	55	299
# Of dentists per 100,000 persons (all ages)	248	84

Table 10. Access to Care Indicators.

Brookline is doing better than the state of Massachusetts on several health service utilization indicators (**Table 11**). Older adults in Brookline are less likely to forgo seeing a doctor when needed due to cost and more likely to have an annual dental exam. Additionally, almost all older adults in Brookline have a regular doctor (98%). The lower rate of older adults who did not see a doctor due to cost could be explained by the high median income among residents. Meanwhile the percentage of older adults with an annual dental exam being higher than the state could be explained by the high proportion of dentists to residents as stated above. Healthcare utilization data were obtained before the onset of the COVID-19 pandemic. Due to COVID-19, service utilization is expected to have decreased as a result of increased reliance upon telehealth and a decrease in doctors’ appointments for routine screenings.²⁷

Despite the statistics showing Brookline doing well with regards to healthcare access and service utilization, the experiences shared in the interviews told a different story. For example, the percentage of older adults with a physical exam or check-up in the past year is on par with the state average, however one provider said that many older adults face challenges when calling to schedule a doctor’s appointment. Oftentimes residents will call a doctor’s office and have an automated voice answer that guides them through various prompts. The provider said that this can be really frustrating and difficult to navigate for older adults and so they often “give up.” Providers also reported that telehealth can be an issue as some older adults struggle to navigate technology and computer applications such as Zoom. In addition, the wait

to be seen by a doctor can be months. Another provider said that transportation is a major barrier to traveling to appointments for older adults. Steps up to get on the train and uneven sidewalks are examples of transportation barriers noted in interviews. Lastly, residents noted that dental care can be incredibly expensive and dental insurance is often lacking for older residents.

Service Utilization of Older Adults in Brookline			
	Better / Worse State Rate	Brookline Estimate	State Estimate
% 60+ with a regular doctor	–	98%	96.4%
% 60+ who did not see doctor when needed due to cost	B	1.4%	4.1%
% 60+ with physical exam/check-up in past year	–	88%	89.3%
% 60+ with annual dental exam	B	89.1%	77.5%
Emergency room visits/1000 persons 65+ per year	*	472	639
Inpatient hospital stays/1000 persons 65+ per year	*	229	294
# skilled nursing facility stays/1000 persons 65+ per year	*	84	106
Home health visits per year	–	4.1	4.0
% 65+ getting Medicaid long term services and supports	*	3.1%	4.9%

Table 11. Service Utilization Indicators. “B”= Brookline performed significantly better than state. “W”= Brookline performed significantly worse than state.”-” = Brookline performed relatively equal to state. “*” = Health implications of statistical relationship is unclear.

Behavioral Health

Key findings: Among older adults, depression and bipolar disorder are significantly more prevalent in Brookline than Massachusetts overall. There is a significantly lower prevalence of tobacco and substance use disorders among older adults in Brookline compared to the statewide prevalence.

Recommendations: Increase the number of mental health care providers and improve accessibility to mental health services.

Brookline displays higher rates of depression and bipolar disorder among older adults than the rest of the state (**Table 12**). Both depression and bipolar disorder (as well as anxiety) are classified as mood disorders by the DSM-V. These data were collected prior to the COVID-19 pandemic. Social isolation has been associated with increases in negative outcomes such as anxiety and depression, therefore, we expect

that the prevalence of mood disorders has likely increased during the pandemic.²⁸ At the same time, people with psychiatric disorders have increased susceptibility to the SARS-CoV-2 virus and are at higher risk for severe disease, so social isolation can be important for protection from infection.²⁸ Among nearly 3,000 patients at six Eastern Massachusetts hospitals, it was found that hospitalized individuals with a previous mood disorder diagnosis were associated with elevated risk for morbidity and mortality from COVID-19, as well as being more likely to need post-hospitalization acute care.²⁹ This leads to a cycle where social isolation worsens mental health, increasing risk for COVID-19, which enhances the need for social isolation. With worsening mental health in a population comes the increased need for mental healthcare. However, in both provider and resident interviews, a problem that repeatedly arose was access to these services. Providers and residents had concerns about both the low number of mental health facilities for older adults and the wait times for appointments at facilities that currently exist. For example, the Brookline Center for Community Mental Health currently has a year-long wait list.

While Brookline does not perform as well as the rest of the state on mood disorders, the prevalence of substance use disorders among older adults in Brookline is only about two-thirds of the state prevalence. In addition, the prevalence of excessive drinking among older adults in Brookline is not significantly different from Massachusetts. Smoking and tobacco use is also a very strong behavioral health measure for older adults in Brookline. The percentage of older adults who smoke in the entire state of Massachusetts is over five times the percentage of older adults who smoke in Brookline. Beyond that, the prevalence rate of tobacco use disorder among older adults in Brookline is one-half of what it is statewide. The greater Brookline community clearly sees tobacco use as an important public health issue, as they recently became the first town in the country to ban cigarette and vape product sales based on birth date, as opposed to age. The law states that nobody born after January 1, 2000 can buy cigarettes or vaping products, regardless of their age.³⁰ While it is going to take many years to see the effects of this law on the health of older adults, there is an expectation that prevalence of smoking and tobacco use disorder will become even lower over time.

Behavioral Health Indicators of Older Adults in Brookline			
	Better / Worse State Rate	Brookline Estimate	State Estimate
% 65+ with depression	W	35.2%	31.5%
% 65+ with bipolar disorders	W	5.3%	4.5%
% 65+ with anxiety disorders	–	26.0%	25.4%
% 60+ excessive drinking	–	9.7%	9.3%
% 65+ with substance use disorders (drug use and/or alcohol abuse)	B	4.7%	6.6%
% 60+ current smokers	B	1.6%	8.5%
% 65+ with tobacco use disorders	B	5.0%	10.2%

Table 12. Behavioral Health Indicators. “B” = Brookline performed significantly better than state. “W” = Brookline performed significantly worse than state. “–” = Brookline performed relatively equal to state. “*” = Health implications of statistical relationship is unclear.

Chronic Disease

Key findings: While older adults in Brookline have fewer chronic conditions compared to Massachusetts, there is still a high burden of multiple chronic diseases among older adults in Brookline.

Recommendations: Ensure adequate management of chronic diseases for older adults by improving competent care from geriatric physicians.

Relative to the state of Massachusetts, older adults in Brookline have, overall, a lower prevalence of chronic conditions. Nevertheless, with a high proportion of multiple chronic illnesses experienced by older Brookline residents, there is still a general need for optimized healthcare access for all. There is a high burden of chronic disease as 55.2% of older adults in Brookline have at least four chronic conditions (**Table 13**). These numbers indicate a need for physicians who are trained in managing the complex health needs of older adults, but one provider noted that physicians specialized in geriatrics are lacking in Brookline.

Chronic Disease in Older Adults in Brookline			
	Better / Worse State Rate	Brookline Estimate	State Estimate
% 65+ with 4+ (out of 15) chronic conditions	B	55.2%	60.7%
% 65+ with 0 chronic conditions	B	9.6%	7.3%
% 65+ with Alzheimer's disease or related dementias	–	14.2%	13.6%
% 65+ with diabetes	B	25.1%	31.7%
% 65+ with stroke	B	10.0%	12.0%
% 65+ with chronic obstructive pulmonary disease	B	13.2%	21.5%
% 65+ with hypertension	B	67.6%	76.2%
% 65+ ever had a heart attack	B	3.0%	4.6%
% 65+ with ischemic heart disease	B	38.6%	40.2%
% 65+ with congestive heart failure	B	19.3%	22.4%
% 65+ with osteoarthritis/rheumatoid arthritis	–	53.4%	52.4%
% 65+ with osteoporosis	W	24.9%	20.7%
% 65+ with chronic kidney disease	B	22.6%	27.3%
% 65+ with liver diseases	B	7.2%	8.6%
% 65+ with fibromyalgia, chronic pain, and fatigue	–	19.6%	19.8%
% 65+ with traumatic brain injury	W	2.2%	1.5%
% 65+ with glaucoma	W	30.2%	25.7%
% 65+ with cataract	W	68.6%	65.4%
Cancer	Better/Worse State Rate	Brookline Estimate	State Estimate
% 65+ with leukemias and lymphomas	W	3.8%	2.3%
% 65+ with lung cancer	–	1.8%	2.1%
% 65+ with colon cancer	B	2.4%	2.9%
% 65+ women with breast cancer	W	13.4%	10.9%
% 65+ women with endometrial cancer	–	2.0%	1.9%
% 65+ men with prostate cancer	W	15.9%	13.8%

Table 13. Chronic Disease Indicators. “B”= Brookline performed significantly better than state. “W”= Brookline performed significantly worse than state.”-” = Brookline performed relatively equal to state. “*” = Health implications of statistical relationship is unclear.

Brookline has a lower prevalence of diseases related to smoking and alcohol use disorders, including chronic obstructive pulmonary disease (COPD), lung cancer, stroke, heart disease, hypertension, and liver disease, compared to the rest of the state. This is likely related to the lower prevalence of smoking and substance use disorders among older adults in Brookline, as reported in the previous section. Even with lower percentages of most chronic conditions in comparison to Massachusetts, the high prevalence of certain chronic conditions in Brookline are worth noting. For instance, over half of the older adult population in Brookline has osteoarthritis/rheumatoid arthritis (53.4%) and well over half have hypertension (67.6%). Breast cancer and prostate cancer prevalence also stand out relative to other cancers, with almost 15.9% of older adult males in Brookline having had prostate cancer and 13.4% of older adult females who have had breast cancer. Chronic conditions are largely informed by behavioral health patterns and access to quality, preventative care. Particular attention should be placed on addressing these conditions in healthcare settings, ultimately shaping health and quality of life for older adults in Brookline.

Living With Disability

Key findings: There is lower self-reported disability in Brookline compared to Massachusetts. There is also a disconnect between clinical and self-reported disability related to vision and hearing.

Recommendations: Improve access to competent healthcare services to ensure appropriate diagnosis and management of conditions for older adults in Brookline. Improve accessible infrastructure of services and events (e.g., captioning) for older adults with disabilities.

In comparison to state estimates, self-reported disability is lower among older adults in Brookline for all categories, which include difficulty with hearing, vision, independent living, cognition, self-care, and ambulatory difficulty (**Table 14**). However, there is still a notable percentage of older adults with self-reported independent living (12.5%) and self-care (6.6%) difficulty. This finding emphasizes a need for affordable home care health services for Brookline older adults, a need identified by multiple providers and residents.

In the case of clinical diagnoses, there are more clinical diagnoses of hearing and vision difficulties among older adults in Brookline when compared to Massachusetts. Referring back to **Table 13**, Brookline

also sees a higher percentage of older adults with glaucoma (30.2%) and cataracts (68.6%) in comparison to state estimates, which may explain the higher rates of vision difficulties. The Brookline Senior Center currently offers hearing aid services and an assistive technology program for people with low vision or blindness.³¹ However, one Brookline resident spoke to the need to take accessibility a step further by making public spaces and events more accessible for those with vision and hearing difficulties (e.g., open captioning in movie theaters).

Further, twice as many Brookline older adults have been diagnosed with deafness or hearing difficulties than those who self-report hearing difficulty. Inversely, approximately half as many older adults in Brookline have been diagnosed with blindness or vision difficulties than those who have self-reported vision difficulty. These findings reveal a disconnect between clinical diagnoses and self-reported disability, emphasizing a need for equitable access to healthcare for all older Brookline adults to ensure that their health needs are appropriately diagnosed and addressed.

Disability Indicators in Older Adults in Brookline			
	Better / Worse State Rate	Brookline Estimate	State Estimate
Self Reported Disability Indicators			
% 65+ with self-reported hearing difficulty	–	11.1%	14.2%
% 65+ with self-reported vision difficulty	–	3.5%	5.8%
% 65+ with self-reported ambulatory difficulty	–	14.7%	20.2%
% 65+ with self-reported cognition difficulty	–	6.3%	8.3%
% 65+ with self-reported independent living difficulty	–	12.5%	14.3%
% 65+ with self-reported self-care difficulty	–	6.6%	7.9%
Clinically Diagnosed Disability Indicators			
% 65+ with clinical diagnosis of deafness or hearing impairment	W	20.5%	16.1%
% 65+ with clinical diagnosis of blindness or visual impairment	W	1.8%	1.5%
% 65+ with clinical diagnosis of mobility impairments	B	3.3%	3.9%

Table 14. Living With Disability Indicators. “B”= Brookline performed significantly better than state. “W”= Brookline performed significantly worse than state.”-” = Brookline performed relatively equal to state. “*” = Health implications of statistical relationship is unclear.

ENVIRONMENTAL ASSESSMENT

Introduction

In the context of a community health needs assessment, the environment refers to the physical spaces in which we carry out our lives. This definition encompasses both public and private spaces, and ranges from public parks, streets and sidewalks, and transportation systems to building infrastructure and conditions. **The ways in which physical spaces are designed, maintained, and utilized affect community members' physical, mental, and social well-being.** A crucial cross-cutting aspect of all these physical spaces pertinent to this assessment is their accessibility, which can be particularly fraught for older adults. Therefore, accessibility will be discussed in all of the following subsections.

Methods

In February 2022, an environmental assessment was conducted by each student in the BUSPH SB820 class, totaling approximately 30 separate assessments throughout the Brookline community. Each assessment covered roughly 1-3 city blocks or an equivalent area, and focused on physical spaces in the town deemed relevant to this CHNA, including areas surrounding public transportation stops, healthcare facilities, municipal and community services (ie, police department, library, Brookline Senior Center), and parks. All assessments were conducted either in person or via Google Maps Street View. For each assessment area, students completed relevant parts of the AARP Walk Audit Toolkit Worksheets³², which are tools for systematically assessing built design features of sidewalks, streets, pedestrian crosswalks, and public transportation access points, with a focus on safety and accessibility. These worksheets also prompt users to quantitatively record which community members are utilizing a public space and how, in order to make inferences about the area's usefulness and functional accessibility. The assessments conducted throughout Brookline also involved capturing original photographs (or, in the case of Google Maps Street View, screenshots) of notable environmental features and compiling these visual findings on a map of each assessment area. The audit worksheet tool can be found in the appendix.

Community Assets

This environmental assessment begins with the elements of the community environment which key informants described as strengths and assets of the community. This is not to suggest that the following findings focus strictly on gaps and shortcomings, but rather, to begin by highlighting the deep well of resources the community will draw upon when considering improvements. Assets identified by key

informants and community members include Brookline’s green spaces, the MBTA Green Line and local bus lines, the well-marked crosswalks and crossing beacons, proximity to the Longwood Medical area, and the robust tax revenue generated by taxpayers.

I. Green Spaces

While it is small in land area and densely urban, Brookline is home to an abundance of parks and green spaces. They include, but are not limited to, Halls’ Pond Sanctuary at Amory Park, Brookline Reservoir Park, Griggs Park, Schick Park, St. Mark’s Park, Emerson Garden, and Linden Park. Hall’s Pond is, according to one key informant, one of the most highly used wildlife sanctuaries in Massachusetts. These spaces provide community members with the ability to have outdoor experiences, relax, and recreate. Each of these assets is located near main thoroughways where public transportation is accessible (*Figure 4.*).

II. The MBTA Green Line and Access to MBTA Bus Lines

One benefit of Brookline that is not also enjoyed by all neighboring towns and cities of Boston, is Brookline’s more complete inclusion in the MBTA T system (*Figure 5*). One key informant said, *“infrastructure is a strength of Brookline. Places are accessible via the Green Line, as long as people are able to get to and use the T.”* The MBTA Green Line’s C and D branches run east to west through the town of Brookline, and four bus lines run through the town, providing transport to points in Brookline, Boston, Cambridge, and Newton.

The Green Line C branch travels from Cleveland Circle in Brighton to Government Center in downtown Boston. Cleveland Circle hugs the northwestern border of Brookline. The C line is also commonly referred to as the Beacon St Line, as it runs nearly its entirety on Beacon St in Brookline. It has stops in Washington Square and Coolidge Corner, two major locations for shopping, restaurants, and services such as the Mass General Brigham Urgent Care center.

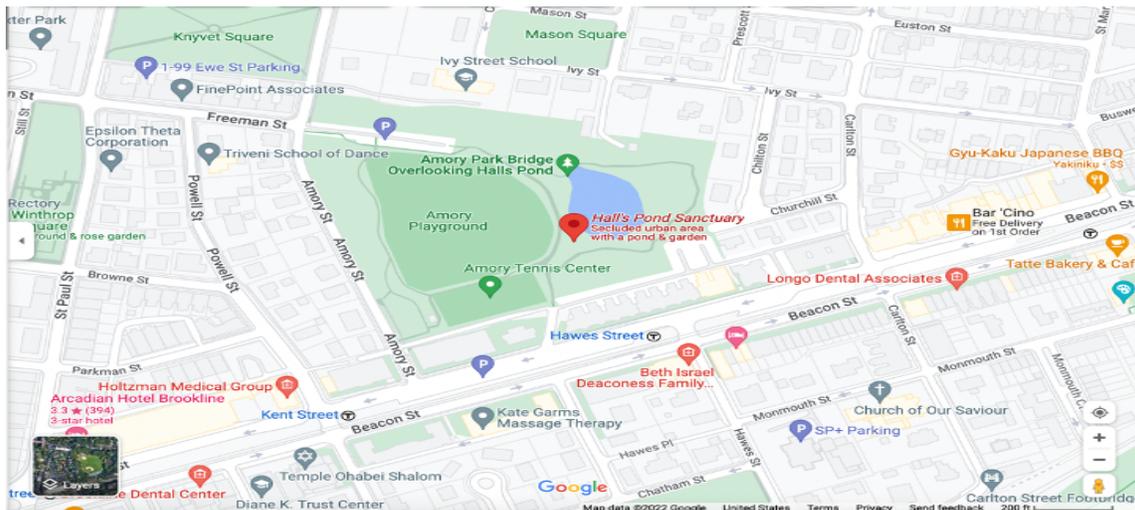
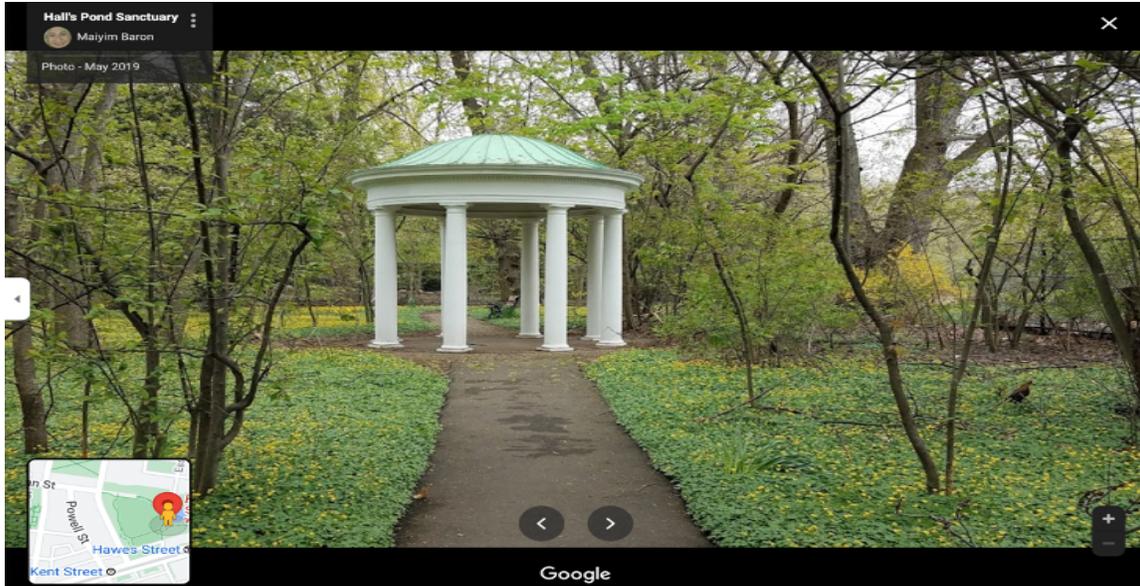


Figure 4. Map and image of Hall's Pond Sanctuary.

Description: This figure is comprised of two pictures. On top, there is an image of Hall's Pond Sanctuary taken on Google Maps Street View. Under this, is a map of Brookline with a red marker on the location of Hall's Pond Sanctuary, between Amory St and Beacon St.

The Green Line D branch also travels east to west in Brookline, slightly farther south than the C branch. It provides stops on the Brookline side of the Longwood medical area, Brookline Village, Brookline Hills, and the Beaconsfield area. These stops provide more rapid transport into downtown Boston, as well as access to smaller, but still important, commercial areas of Brookline for locals.

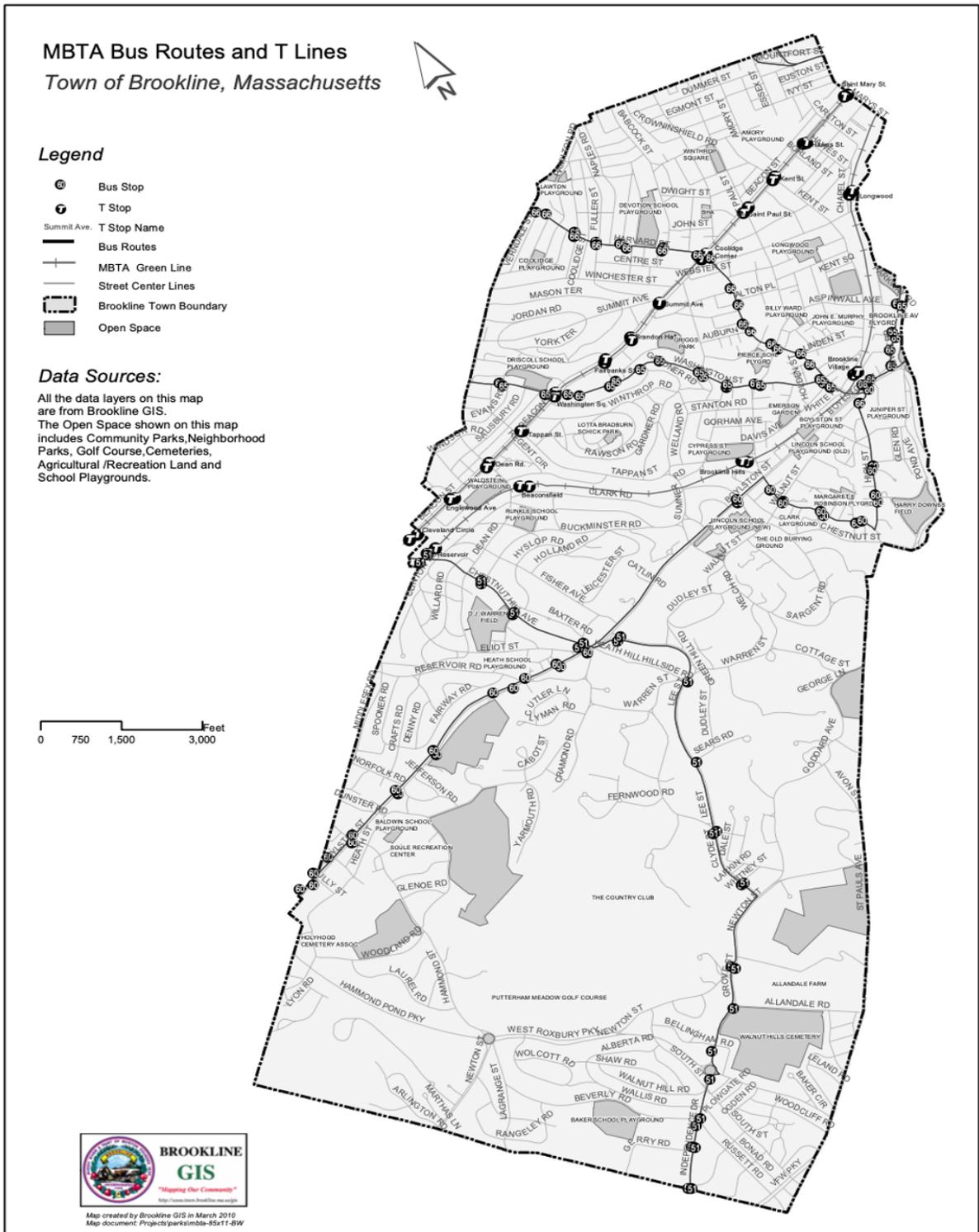


Figure 5. Map of MBTA Bus Routes and T Lines in Town of Brookline³³

Description: This figure depicts a map of Brookline and the MBTA T routes and stops within it. The stops and routes are concentrated in North Brookline, with only two routes reaching South Brookline.

III. Crosswalks and Beacons

Brookline has a walking score of 81, and by and large, crosswalks in major intersections are clearly marked with beacons for pedestrians.³⁴ Key informants interviewed said that, provided they are physically able, they use walking as a primary means of transport. This is a strength of the community, and as this report will discuss in more detail, there are still gaps and improvements that can be made to increase the walkability of the community, especially for those who are older. While the town's streets and sidewalks support an easy-to-walk environment, interviewees also let us know that they need constant maintenance and attention in order to remain safe.

Crossing beacons come in the form of signs, lights for pedestrians to activate while crossing, and traditional streetlight style beacons with "WALK" and "DON'T WALK" messages. While the traditional streetlight style beacons are commonly found in U.S. cities and towns, the signs with lights are less common, and actively help to create a more pedestrian friendly environment, where cars and their drivers are more conscious of pedestrians.

IV. Proximity to the Longwood Medical Area

Brookline borders the Longwood Medical area, a medical campus in Boston. The hospitals and institutions at Longwood include, but are not limited to, Beth Israel Deaconess Medical Center, Brigham and Women's Hospital, the Dana-Farber Cancer Institute, and the Massachusetts Mental Health Clinic.

V. Tax Revenue

Brookline has a deep well of financial resources with which to support its maintenance, growth, and development given their high tax revenue. Brookline's higher property values mean generous income from real estate taxes. This is a potent resource not all other towns and cities are endowed with. Brookline has an obligation to return these resources to residents in the form of social services for more vulnerable community members. As this needs assessment will reveal, key informants expressed a desire to see these great resources distributed more equitably, with an increased awareness and concern for older adults.

Community Needs

Having identified a number of assets in Brookline, the report will now address community needs. Through resident and provider interviews, an audit of the community, and an informal environmental

assessment, transportation and built environment were identified as the two overarching areas for community improvement.

I. Transportation

Transportation is essential to connecting people to the many healthcare facilities, services, and green spaces available to Brookline residents. According to one of our key informants who works as a transportation specialist for older adults in Brookline, 70% of the older adult population does not drive. Therefore, other means of transportation, including public transportation, are vital for this community. In our conversations with residents and service providers, transportation came up as a significant issue for older adults and a barrier to engage in the many services that are available to them.

“Transportation is *the biggest concrete example* of barriers to services [in Brookline].”

– Key Informant Interviewee

Geographical Gaps in Transportation Services

Availability and access to transportation services varies based on geographical location. As depicted in *Figure 5*, the Green Line and MBTA buses are a major asset in the town, particularly for residents living in North Brookline. However, there are residential areas in South Brookline that are far from T and bus stops. The majority of Brookline’s grocery stores are located in North Brookline, and residents in the southern part of the town have to rely on regular access to cars to go grocery shopping or to access other services that are in North Brookline. Not all older adults live in neighborhoods where they can easily access public transportation, so special attention needs to go to ensuring these individuals who are geographically isolated from T lines and bus routes can travel to medical appointments, grocery stores and other places.

Accessibility & Usability of Existing Transportation Services

The Senior CharlieCard is an important resource for older adults to ride the T at reduced fare prices, but there are difficulties accessing it. Several interviewees from the community mentioned that it is difficult to purchase this card and replace it if it's lost. There is limited availability to talk to someone on the phone or in person about CharlieCard issues, and older adult riders find it challenging to make the trip to Downtown Crossing to purchase or replace their senior pass.

Residents also highlighted that the T is inaccessible to residents who have challenges with mobility. One key informant noted that new Green Line trolley cars designed without stairs, in order to be more accessible, were introduced in recent years, but even with these trolleys, access to the train is still problematic for older adults. Since payment is made at the front of the vehicle, conductors often do not open the accessible back doors to let people on. The new cars with no stairs are few in number, and old trolleys with stairs still run frequently.

The Brookline Senior Center provides resources to help with transportation to medical appointments, including a local bus service for older residents, but key informants expressed a need for more resources and for the expansion of the bus route. Medical transportation is only offered during certain hours on weekdays and is limited to certain locations. One key informant mentioned that the Center's services previously included a bus route to medical areas, grocery stores and other convenient stops. Now, the bus only offers medical transportation and travels to and from the Senior Center. The need for wheelchair accessibility on the Senior Center buses was also highlighted in conversations with residents.

While medical transportation is vital for the older population, there is a need for more transportation to non-healthcare visits as well. Taxicab company services were also highlighted as a great resource for healthcare transportation among older adults. However, taxis are not wheelchair accessible and cab drivers often do not want the liability of escorting people in a wheelchair in and out of the car. Key informants also reported a sharp decrease in the ability of standard company cab services ever since the beginning of the COVID-19 pandemic. There is a need for medical escort staff to help people get in and out of cars, as well as vehicles that accommodate people with wheelchairs and oxygen tanks.

Lyft, Uber and GoGoGrandparent are rideshare apps that offer discounted rates for seniors, and the Senior Center offers assistance with arranging transportation through these apps. While these are valuable services, sometimes users are forgotten or miss their ride. As a result, they may miss their healthcare appointments. Additionally, the app-based transportation platforms are not easy for everyone to navigate, as not all older adults are accustomed to using technology. Some interviewees have also mentioned that they tend to cost more than traditional taxi company rides. Lastly, wheelchair users cannot use these resources since passenger cars are not set up to fit and accommodate wheelchairs.

“When schedulers and assistants schedule appointments for the older population, they don’t understand the challenges it takes to get to a healthcare facility.”

– Key Informant Interviewee

II. Built Infrastructure

The built infrastructure in Brookline represents the basic facilities—such as roads, sidewalks, communications, power supplies, and buildings—which enable the town to function. Key informant interviews with providers and residents highlighted a number of issues within the built environment that negatively impact daily life for older adult community members in Brookline.

Internet Access and Usability

Interviews with residents and providers found that there is nuance in issues surrounding internet access and technology literacy. The older adult population is not homogenous: some older adults are not technologically literate and are unable to access virtual services; other older adults are technologically adept but find that programs geared towards them, such as activities at the Brookline Senior Center, are outdated and not technologically accessible.

First, a lack of internet literacy can make some resources impossible to access. Many services in Brookline, including those related to transportation, utilities, and even town communications, require the use of an email address or access to the internet. For a number of older adults, this renders them inaccessible. The March 2022 Brookline Disparity Report also noted access to the internet as an area of priority for the community, reinforcing resident informant concerns.³⁵

“I can’t tell you the amount of people who are unable to do anything online because they don’t have any email address.”

– Key Informant Interviewee

Second, for older adults with internet literacy, residents noted that an inability to access the Senior Center through the internet was a barrier to program use and made it more difficult to engage in programming. Specifically, residents reported they were required to sign up for programs via a telephone call, making what could be a quick process more time-consuming.

Parking Availability

A second issue that was identified through interviews relates to the availability of parking in Brookline. While the majority of older adults in Brookline do not drive, a significant minority do. For this smaller population of older adult drivers, residents and providers reported that older adults consistently struggle to find safe and accessible parking in and around the services and businesses that they access. According to one provider, older adults are forced to make decisions on where to shop for groceries based on parking availability, rather than the price points or food selection. This may further exacerbate economic constraints that some older adults experience, and also limits people's freedoms and choices. Residents also mentioned a lack of parking outside of the Brookline Senior Center, a service hub for this population. As housing density increases and alternative modes of transportation are popularized, it is important to consider how parking availability may impact the needs of the older adult community and their ability to participate in community life.

Sidewalk Quality

Sidewalk quality is an area of particular concern for older adult populations.

According to the CDC, two out of five adults age 65 and older have a disability in the U.S., many of which are related to mobility.³⁶ As such, it is particularly imperative for this population that sidewalks are accessible (including curb cuts), free of uneven surfaces, and in overall good condition. Throughout interviews, older adults and providers reported concerns around the state of sidewalks in Brookline, with one resident suggesting that she knew of at least two falls that had been caused by disrepair on sidewalks. Interviewees suggested a perception that the town is unwilling to properly invest in the repairs needed to create safe and accessible sidewalks. One provider mentioned the town does collect constituent feedback related to sidewalk accessibility, however, access to the internet is required to participate in the program, which may prohibit some community members from voicing concerns.

The environmental audit of Brookline (described in the Environmental Audit Methods above) found multiple areas of sidewalk with uneven ground and blocked by obstacles. Additionally, some sidewalk passages appeared to be less than the ADA minimum of 3 feet wide. In winter months, the issues are compounded by snow that further decreases accessibility of the town's walkways. Property owners in Brookline are required to remove the snow in front of their buildings. As shown in **Figure 6**, the environmental audit found that some areas were not adequately cleared of snow, or were not cleared in a manner that promotes safety for pedestrians, especially those in wheelchairs.



2. Obstacles in sidewalk, incompletely shoveled, unmarked driveway

3. Sidewalk narrowed and raised due to tree; unevenness repaired with asphalt

Figure 6. Sidewalk assessment.

Description: This figure consists of two photographs. The image furthest to the left is of a sidewalk in Brookline that is covered in snow and opens to an unmarked driveway. The image furthest to the right depicts a sidewalk that is narrowed by a tree and raised in that same area.

Summary of Findings

This community health needs assessment addresses key components of the environment and physical spaces that are utilized each day by older adults living within the city of Brookline, Massachusetts in addition to the existing assets that Brookline has to offer.

Some of the existing community assets located within the city of Brookline include:

- The parks and green spaces
- Presence of the MBTA green line train and MBTA bus lines
- Clearly marked crosswalks and audible beacons
- Proximity to the Longwood Medical area
- Robust tax revenue

Our findings:

- There are key gaps in transportation services for older adults which restricts access to green spaces, healthcare facilities, services, and community-based resources.
- Existing transportation infrastructure can be laborious and troublesome to navigate due to disability status and limited access to transit stops.
- Difficulty accessing technology prevents some older adults in Brookline from readily accessing transportation services within the city.
- Street and sidewalk conditions are a considerable safety concern. These concerns are exacerbated in winter months when snow creates additional obstacles for residents.
- Many sidewalks do not have cut curbs making it difficult for community members with wheelchairs or walkers to easily access them.
- A lack of parking prohibits older adults' ability to access the resources and services they need.
- Limited access to internet services and internet literacy marginalizes certain members of the older adult population.

INTERVIEW RESULTS

Methods

Two rounds of semi-structured interviews were conducted. The first round consisted of interviews with ten providers who work with the Brookline Senior Center. Many of these providers are social workers who work specifically with the Brookline Council on Aging. Their job descriptions vary to encompass different needs of older adults in Brookline including, transportation coordinators, outreach to isolated adults, home care program coordinators, psychotherapy providers, and more. The second round consisted of interviews with thirteen older adults in Brookline. These older adult residents were all involved with programs at the Senior Center and volunteered to participate in the interviews.

The interviews consisted of semi-structured discussions which lasted between 30 and 60 minutes. The questions related to need categories including housing costs, food security & financial stability, marginalization, vulnerability & resilience, transportation & built environment, access to healthcare services, personal & legal rights; safety, and social & civic engagement; employment. Students worked collaboratively to generate an interview guide which addressed each of the major topics mentioned above. Students then piloted the interview guides and received feedback relating to the substance wording of the questions as well as the order of questions. This feedback was used to generate the final interview guides (Appendix Sample Interview Guide). With the revised interview guide 2-3 students interviewed each interviewee. The provider interviews took place on Zoom and the resident interviews took place at the Brookline Senior Center.

After the interviews, interviewers compiled notes relative to each interview. As a full group we discussed results through the lens of each need category to identify major themes. Next a group of students reviewed all interview notes through the lens of these major themes to pull out key areas of clarification and context. These findings were then summarized below.

Marginalization, Vulnerability & Resilience

Several providers and residents expressed a **need for culturally competent healthcare providers and social workers with inclusive language capacity**. This is especially true for **Russian and Asian communities** who are in need of services at the Senior Center. One provider interviewee shared an instance where a Russian-speaking individual came into the Senior Center for

assistance but staff were unable to understand his needs or offer services due to the language barrier. Since Brookline has a large population of Mandarin speaking older adults, the Senior Center partnered with the Chinese Golden Aging Center to host celebrations and holidays. Unfortunately, COVID-19 limited capacity for using resources like the Chinese Golden Aging Center and having bilingual social workers onsite. Prior to COVID-19, there was a Mandarin-speaking social worker onsite at the Senior Center.

Several resident interviews expressed how older adults of Brookline are in **need of more attention when it comes to social services and programs**. One resident interviewee said, “*seniors in Brookline make up a little more than 20% of the population of Brookline but get 2% of the budget, while schools get 60%.*” The **distribution of funds doesn’t always align with what is needed** when it comes to older adults. Brookline could improve their recognition of the older adult population by planning more inclusive recreational programs. There seems to be more of an emphasis on recreational programs tailored for younger families.

Due to COVID-19 there has been a significant decrease of resources for racial/ethnic minority groups at the Senior Center. The Brookline Senior Center was entirely shut down from March-June of 2020, and remained closed to the public through June of 2021. COVID-19 dramatically impacted the Senior Center services. One provider interviewee described it as being a “*nightmare.*” They continued to say, “*before COVID there were around 150 people coming in and out of the center every day for services or just to socialize.*” Prior to COVID, the Senior Center had a LGBTQ+ support group and had much more involvement with the Chinese Golden Aging Center.

After the Senior Center shut down completely, the Senior Center **struggled to create virtual programs** and lacked the infrastructure to accommodate this type of transition. Despite there being several negative outcomes from COVID-19, there were a few positive outcomes as well. There was an increased interest and desire to learn technology by older adults. COVID-19 encouraged (or forced) older adults to explore previous technology issues so they could remain in contact with family members over Zoom. Instead of technology being seen as intimidating, it was seen as a “*different way to accomplish things*” one interviewee noted.

There is a **large population of isolated older adult residents across Brookline** largely due to a **lack of specified outreach to racial/ethnic minority communities**. One provider interviewee thought that the Help Intake Demographic questions at the Senior Center could be more inclusive and open-ended to improve outreach. There has been an effort to let older adults know about programs offered

at the Senior Center via newsletters, fliers, and their website, but this doesn't always reach minority communities. Demographically, Brookline is a town that is predominantly white, but diversity still exists and services "*[should be] accessible for everyone regardless of background,*" one resident noted who has lived in Brookline his entire life and has witnessed an increase in diversity over time. He went on to comment about how he learns a lot from his neighbors who are different from him, "*it's a mixed community, and I like it.*" Several interviewees agreed that the Senior Center is a very welcoming space to older adults of all different backgrounds, however there is room for improvement when it comes to outreach. Considering our resident interviewees were only people who are engaged with the Brookline Senior Center, it's important to mention that opinions may be biased based on their experience. Given this limitation, we're likely **missing other narratives related to racial/ethnic minority community outreach.**

Access to Healthcare Services

Even though there are services that provide older adults with transportation, **there are several challenges in utilizing them to access health care services.** It seems the lack of coordination is limiting the actual benefit these services could provide. The Senior Center has a van that takes older adults to appointments but there are a limited number of drivers and availability. The Senior Center also assists with arranging taxi transportation, but taxis aren't as common as they used to be. The Senior Center also has a grant through **Lyft** and **Uber** to get people to their appointments. However, for those with walkers, wheelchairs, or oxygen tanks, **transportation services aren't designed to accommodate older adults with these types of equipment.** Not every older adult has access to a smartphone to utilize rideshare apps, or they don't possess the technological skills to utilize rideshare apps. Respondents indicated that it can be stressful and frustrating to get to an appointment on time, especially for older adults with limited mobility. The Senior Center does have resources to help with transportation to medical appointments, but more support is needed to fill these gaps.

Access to home healthcare is very limited. One provider interviewee expressed how home health care providers are needed and could help bridge the gap for older adults accessing health care services. Several older adults have the need and/or desire to "age in place," **but home care services are expensive.** There is a notable service gap for older adults who can still live safely independently but need a little extra support in some aspects of their lives. Not being able to maintain the upkeep of a home can add to the feelings of frustration, anxiety, or helplessness. The "Housing Costs, Food Security & Financial Stability" section will go into more detail on home services.

There are barriers to accessing mental health services, specifically **long waits to see mental health care providers**. Several provider interviewees agreed that there aren't enough mental health providers specializing in geriatrics and there's low availability overall for mental health services. Some wait times for an intake appointment can be up to six months or even a year. **Since COVID-19 began, there has been an overwhelming need to get mental health services**, like grief counseling. A provider interviewee stated *"Seniors were disproportionately impacted in terms of their mental health."*

COVID-19 has also **increased feelings of isolation among older adults**. A service provider interviewee said, *"We need to prioritize mental health, especially after COVID."* Both providers and residents expressed major concerns with older adults needing mental health care, but there was little to no discussion of how to get mental health care. When faced with barriers like long wait times and not enough mental health care providers, it can be discouraging for older adults to seek out mental health care.

Housing Costs, Food Security, & Financial Stability

Interviewers have found that there is a great need for subsidized housing but are not available. There is an **extremely long wait list**, especially for assisted living as many seniors would like to move to these residences to help with their daily tasks. Some residents have said that they have to wait for 4 years or more to get into an assisted living residence due to shortages in physical buildings so there is a limited amount of room available to those applying. A provider stated, **"the waitlist for affordable housing in Brookline is over 5 years with Brookline Housing Authority,"** and the **waitlist for section 8 Housing Choice Voucher Program is 1-3 years**. Resources from the Senior Center help but cannot fix the problem. A service provider stated that sometimes people are referred out of Brookline or to private organizations that may be able to help with subsidized housing. They stated that, **"We [the senior center] are willing to assist in filling out the application, but the hard part is telling them how long the waitlists are"**. Residents are very concerned about affordable housing and one states *"housing is being built but it's not affordable, so it doesn't help."*

"Just nuts" is how one service provider from Brookline Senior Center said when asked about rental costs of Brookline. Another service provider states that, **"Property taxes and lack of affordable housing** were huge issues that lead to the request of subsidized housing." Many older adults in Brookline are *"house rich, cash poor."* Many of the residents interviewed have been living in the same house for decades but are unable to refurbish or fix it due to rising costs. One resident rents out part of the house which provides them with an income. Unfortunately heat and water bills are getting higher. This past year

they spent \$21,000 on the house. Without the income from the rent (\$12,000), they would not be able to afford necessities and other items. Another resident's greatest concern for safety is that her house doesn't get taken away or become too expensive for them to afford. Due to property taxes going up the older adult population has less money due to their fixed income. 18.3% of older adults in Brookline have less than \$20,000/year. This is especially difficult for homeowners. The cost of living is high so if the costs get any higher they will be forced to leave the city. Rising rent prices and utility concerns were expressed by almost everyone interviewed for the needs assessment. As one resident put it, **“I don't know anyone over 75 who is not worried about their finances.”**

Older adults need more affordable options to be able to support them staying in their home and age in place. Things such as gas, food, cleaning services and other necessities that make it possible to stay at home. Many of the houses that older adults in Brookline live in are older and need repairs, but due to parts not being made anymore and costs going up, it is impossible to live comfortably. There are also other resources that cannot be reached due to costs such as a recreation center, dental care, health center and help to live alone. Unfortunately, older adults have a fixed income, so with prices increasing it has become increasingly difficult to afford items that have previously been easily paid for. A service provider spoke about this issue saying that **aging in place is a financial challenge for many older adults who require home care**. It can be difficult for people to afford home care, even a home health aid for just a few hours a day to cover some critical areas that they can't manage on their own. There are some quality services from Springwell, but sometimes the services granted are not sufficient.

There is a huge unmet need for home health services to keep people out of nursing homes and in their own homes. *“People want to stay in their own homes, that is the goal.”* There are some home care services which are a fill-in program at the Senior Center for people who don't qualify for income-based programs, but can't afford private care. Another service provider discussed a **service gap for seniors who can still live safely independently but need a little extra support** in some aspects of their lives (i.e., going to doctor's appointments or grocery shopping) stressing that these older adults do not need to go to nursing homes, but cannot afford the extra support they need. She discussed reminders of taking medication as being part of this gap. Assisted living costs anywhere from \$5,000 to \$7,000 so having the ability to afford to have someone help with daily tasks will save the older adults the stress of having to move.

Transportation & Built Environment

“70% of older adults in Brookline do not drive,” as one service provider at the Brookline Senior Center explains, “so transportation is very important”. Several residents have stated that it is difficult to call ride sharing apps due to the fact that they do not have cell phones. Not only does this make **healthcare difficult to access, but also grocery stores, and other general tasks.** Many of these transportation options do not arrive right in front of the place older adults want to go, so residents find it difficult to use the T. Other residents have mentioned that the Brookline Recreation Center and Senior Center had trips for 55+ residents to theaters and museums, boat trips to islands, to see lighthouses, or just downtown to get older adult residents outside their homes. Unfortunately it “*went by the wayside.*” There’s a program at Newton that does this, but it’s far away and older adults have difficulties getting there. The **Senior Center has senior vans, but needs more** and other residents stated that they need more van drivers as well. A service provider stated that the Senior Center got a grant in order to run these programs. Another servicer stated that prior to COVID-19, the Brookline Senior Center had a bus that would go on a fixed loop by grocery stores and medical areas, and another shuttle that would take folks directly to the Senior Center. Now, the bus solely offers medical transportation and transportation to and from the Senior Center. One interviewer concluded that, “**Improving transportation in Brookline could decrease older adults’ need to keep their cars, helping to keep people safe and able to age in place.**” Many of the residents stated that lack of access to healthcare is due to transportation and if improved, they will be able to make it to appointments and not have to use ride share apps.

There are many places in Brookline that do not have access to the T (such as South Brookline). One resident stated that they live in the most isolated part of Brookline where there’s only 1 bus an hour. Another said it’s “*not really possible for them to get to us [at COA].*” South Brookline has more affordable housing but T stops and other transportation services are far away. This is even more difficult in that some older adults have mobility issues and use wheelchairs or walkers. Seniors are eligible for a special pass for the MBTA, but to get one, or if you lose yours, you have to go to Downtown Crossing to replace it. There are also **issues with the MBTA's “The Ride” program.** Getting a reservation is a “*real pain.*” Sometimes people call cabs/rideshares instead because they cannot get a van reservation. **This brings out issues with accessibility both from mobility and also physical location.** Wheelchairs do not fit in Lyft's/Ubbers/Cabs or the senior vans. Sometimes rideshare transportation does not show up and is expensive. Some trains have staircase steps and others don’t, so getting on and off some trains is difficult for older adults.

Residents have mentioned during their interviews that crosswalks and sidewalks are in poor conditions due to various reasons such as snow, ice, rain or lack of maintenance. During the winter months, with ice on the sidewalks, it is especially difficult for residents and they cannot access necessities (especially when unshoveled). Some residents don't use sidewalks or crosswalks altogether due to how unsafe they are. Some parts of Brookline currently have construction going on and this has also made it difficult to walk on the sidewalk. **Several residents stated their impression is that even though the taxes are being raised, none of it goes to repairing the sidewalks.** One resident stated that the town doesn't spend enough on sidewalk/crosswalks and knows 2 other older folks that have fallen due to sidewalk disrepair. Another resident noted that **cyclists on sidewalks and inattentive college students were areas of concern for elder accessibility.** There are also gaps/concerns related to pedestrian crosswalks, lighting, and signaling. There are also difficult walking paths getting to the T stops and stations. A service provider stated that there also needs to be ways to identify trains for those who have sensory deficits, such as signs or announcements to make it easier for older adults to get around. Wider sidewalks and more places to sit are other structures that older adults would benefit from. Some residents need someone holding their arm because there are no curb cuts for some sidewalks, making it difficult to walk due to the conditions of the sidewalk. Walking is some older adults' main mode of transportation, so making the sidewalks safer, shoveling them when needed, and making appropriate repairs would make it easier for older adults to go from place to place safely.

Personal & Legal Rights; Safety

Providers discussed in their interviews that older adults are particularly vulnerable to scams and fraud. They expressed there is **need for education and further resources to protect elders against scams and fraud.** Providers stressed the large impact that fraud and scams can have on the older population. One resident mentioned that she got **nervous about her safety online because she doesn't understand it and in fears of scams.** One provider mentioned that one gentleman got caught in a gift card scam (losing \$10K) even though he was aware of different fraud scams. This highlights **how dangerous scams are and that they can take many different forms.** This highlights **a gap in services for resources in prevention against fraud, but also what avenues (i.e., legal services) there are to help address older adults, if they do get scammed.** Providers and residents expressed that resources exist, but there is a need for individuals and potentially a department to be set up to support elders navigating such issues. Pre-COVID, there was a program through the Brookline Legal Assistance Bureau involving a rotating **schedule of local attorneys** specializing in elder services (end of life, housing, etc.) that would come to visit the Senior Center. **The attorneys provided legal advice and more long-term legal services if needed, however, these**

services have been impacted by the COVID-19 pandemic. The **Massachusetts Bar does provide an elder law presentation,** but they seem to be lacking in legal services currently.

The reactions varied from residents in terms of personal freedom in terms of decision making. Some residents expressed “total freedom” when it came to making their decisions. Some residents described how they sometimes consulted family members regarding medical decisions. Lastly, some residents explained the **challenges of navigating systems (i.e. Medicaid) impacts decision making “particularly around medical needs.” Some felt restricted in their decisions using the examples of the limitations of health insurance.** Participants expressed frustration and felt they had **“no control” over big decisions, noting the difficulty when places don’t accept their insurance leading to health needs not being met.** Residents expressed that this raised their stress levels, made them feel misunderstood, and gave them a sense of lack of expression in regards to their decision making. A provider stressed “the system is not built to address older adults’ needs.”

While strong familial support can contribute to overall well being, familial dynamics can lead to stress and limit autonomy in decision making. **Poor family dynamics can influence decision making and might contribute to lack of autonomy (i.e. conservatorships and guardianships).** Making medical decisions can be challenging, and **without lack of support from their families, older adults may be subject to having their rights violated.** Providers mentioned **those with mental disabilities and those who were nonverbal (i.e. aphasia) were particularly vulnerable to having their rights violated.** An example from a provider in which a 95 year old woman with aphasia was placed in a locked nursing home against her will. This woman was living independently and managing her activities of daily living (ADL), but couldn’t communicate verbally when she came to urgent care for medical assistance. The facility couldn’t identify any family members, so the hospital put her under guardianship. In another similar example, another provider shared an adult who was **placed in a memory care facility by a hospital against her will without strong grounds to do so.** These examples highlight families as well as the medical system jumping to conclusions about one’s cognitive and physical abilities. A provider explained the **importance of listening to older adults’ health needs so they can maintain their autonomy and can choose the best options for care as they age.**

Social & Civic Engagement; Employment

Social and civic engagement can provide opportunities for older adults to be more involved in their community and to broaden their social networks. However, **limited access to transportation services and parking affects participation.** It was noted by providers and residents that such engagement depends on access to transportation as well as parking. Some areas in **South Brookline are not as close to bus stops or T stops** and can make it difficult to access services easily. One resident explained that she lives within a ten minute walk from the Senior Center so she can come participate in the activities, but noted that some other residents **had trouble accessing the Center because of a lack of parking.** One provider explained that the “lack of transportation is a big reason why we don’t see people as often as we would.” People may be less comfortable driving or have lost their license. Even if they live close by, they may not even be able to walk. **Difficulties with transportation make participating in social events a barrier for people, thus hindering attendance or their ability to engage in their communities.** Providers noted the current reliance on ride shares, such as Lyft and Uber, but greater expansion for transportation options to the center is needed. In addition, another provider explained the need for wheelchair-accessible buses at the Senior Center.

Volunteering and engaging, especially at the Senior Center, was identified as a key area of fulfillment in the lives of the residents we interviewed. However, COVID **dramatically impacted** the senior center services. Multiple providers described **a decrease in social engagement due to COVID-19.** One provider described it as being a “nightmare.” She said before COVID there were around 150 people coming in and out of the center every day for services or just to socialize. After they shut down completely, the provider noted that they **struggled to create virtual programs.** Another provider described when the center had to switch to telephone contact because of the pandemic, it was hard to keep in touch with clients, particularly those with hearing disabilities or poor telephone connections. Furthermore, residents expressed the impact of **COVID-19 contributing to loneliness and isolation.** One resident explained there may be a need for social services to **help older adults adjust to “post-pandemic” life,** which can include adjusting to more opportunities for social events online. The pandemic has had an impact on how we socialize and engage in our communities, so **collaborating with adults in how to approach the pandemic and navigating the “new normal” could address some issues related to loneliness and isolation.**

Many current recreation offerings from the town cater only to younger families but should be expanded to include older adults. However, some residents expressed interest in an **expansion of activities specific to physical activity and social engagement for adults.** Brookline needs to

recognize and acknowledge the older adult population in the planning of its recreational programs. One provider emphasized the desire to have **all Brookline departments recognize and acknowledge older adults in program planning**. They expressed that **intergenerational programming and activities** have the potential to be more inclusive and diverse for older adults. Some residents expressed their active lifestyles, and how exercise and physical movement play a role in their lives. One resident described how gyms are expensive and that the Senior Center has a limited amount of equipment. **Fitness programs were of particular interest to residents**, in their view of valuable programming that older adults wanted to participate in.

SAMPLE COMMUNITY HEALTH IMPROVEMENT PLAN

Introduction

A Community Health Improvement Plan (CHIP) is a detailed, evidence-based improvement plan that addresses the prioritized needs of the community.³⁷ Over the course of our work, we have conducted extensive research on the town of Brookline to help identify and assess the resources, strengths, and needs of older adults living in Brookline. After collecting this data, we created a sample CHIP to help improve the health and quality of life of older adults living in Brookline. The process by which this CHIP was developed was collaborative in nature as the concepts used to generate each priority area and the goals, objectives, and strategies following were brainstormed by the class and refined by the authors.

Why a Sample CHIP?

We created a *sample* CHIP, not a fully-fledged CHIP, due to key limitations presented by the nature of our assessment. Given our time constraints, we were not able to garner feedback from residents and providers regarding our CHIP, which would have helped further refine our goals and strategies. Moreover, the sample size of residents and providers who were recommended by the Brookline Council on Aging was limited. While providing rich context, the data we collected is not a complete representation of the population of older adults in Brookline; it is not generalizable. Therefore, a final CHIP needs to be informed by a more extensive process with additional time to gather input from experts. We suggest that this sample CHIP act as a blueprint which can inform future next steps.

Strategic Framework

Vision: A community-informed vision to improve the health of older adults in Brookline by implementing sustainable programs and advocating for equitable change.

Mission: To achieve and promote positive change in the health of older adults by identifying community-related concerns, priorities, values, and aspirations of Brookline older adults.

Selection of Priorities

This sample CHIP outlines four priority areas for expanding services to older adults in Brookline:

- Transportation,
- Affordable Housing,
- Mental Health and Social Isolation, and
- Safe and Accessible Technology

The main data sources used to develop the priority areas were the interviews done with healthcare providers and older adult residents in Brookline, along with supplemental background research on the town of Brookline itself. The selection process for these priority areas were heavily community-informed. While members of the community were not physically present while we prioritized topics, their words and ideas were present in the way we used interview data to inform our choices. We decided on these four priorities because they are a manageable and digestible quantity of areas that still allows us to analyze the specific needs within each topic. These areas also are broad enough that they subsume other topic areas that were mentioned as important but not prioritized. For example, aging in place was identified as a pertinent topic, but the final categories touch on numerous aspects of aging in place (e.g., transportation, affordable housing).

Prioritization Process

Our goal for this process was to be as hands-on and collaborative as possible. After collating the provider and resident interview data as a class, we used a group consensus and voting process to decide on the final priority areas. The first step was to divide into smaller groups in order to allow each person's voice to be heard more equitably. Within these groups, we took all the data summarized from interview results and research to develop approximately ten candidate priority areas. Still, within these groups, those ten priority areas were voted on using a tally system in which each group member was given three tallies to vote for the three priority areas that they felt most represented the needs of older adults in Brookline. The four priority areas with the top number of tallies were reported back to the class at large for a final vote. Some priorities among groups were very similar and therefore combined at this stage, leaving us with seven areas to vote upon anonymously as a class.

The seven topic areas included in the survey were: income insecurity, transportation, mental health/isolation, affordable housing/cost of living; safety and accessibility of technology; culturally

responsive programming/advocacy; and support for aging in place. Each student (n=26) received one vote and the topics with the most votes were selected as the four priority areas.

We achieved our goal of collaboration, as the prioritization process was proactive and interactive, engaging each student and democratically coming to a consensus. After voting, no one voiced disagreement with the topic areas.

Final Priorities and Central Focus

As mentioned previously, the final four priority areas and percentage of class agreement for each topic area are: Affordable Housing (92.3% agreement); Transportation (88.5% agreement); Mental Health & Social Isolation (84.6% agreement); Safe and Accessible Technology (42.3% agreement). The priority areas were expansive enough to encompass multiple topics brought out in resident and provider interviews, but also specific enough that the goals and objectives seem achievable. For example, while income insecurity is an issue that affects older adults, increasing the minimum wage in Brookline or social security pensions is outside of the scope of influence of our stakeholders. The categories are intentionally broad, the transportation category encompasses both means of transportation (e.g., access to safe transportation like bus, subway, car, etc.) and the walkability of Brookline streets. Some, like the safety and accessibility of technology category, are more specific and targeted. The way we have chosen to combine and split these categories seems to align with strategies used by the 2020 Boston CHIP.¹ The 2020 Boston CHIP was used as a reference point and guide for the formation of this sample CHIP.

Priority Area 1: Transportation

According to our interview results, transportation is a significant issue for older adults because it acts as a barrier to engaging in the many services that are available to them.

One provider identified transportation as:

"the biggest concrete example of barriers to services."

It is important to mention that the Brookline Senior Center has made and continues to make multiple efforts to offer resources to help with transportation to medical appointments and to the Senior Center, including a local bus service for older residents. However, there is a great need for more resources to be available for the older adults in Brookline, including the ability to safely travel across the town.

Major gaps in access to transportation exist between the South Brookline area and the North Brookline area, in favor of the North area. Since most of the Brookline services and resources available to older adults are located in the northern area, residents in the southern part of the town must rely on regular access to cars. However, the majority of residents in the interviews stated that they do not drive nor have access to a vehicle. One specific example of this is the lack of grocery stores located in the South Brookline area. Thus, other means of transportation, including public motor transportation and walkability are vital for this community. As was seen in our environmental audits, many sidewalks are in medium to bad condition. Inadequate sidewalk conditions make it difficult for older adults to walk safely, especially when mobility aids are needed.

Furthermore, residents have highlighted that the Massachusetts Bay Transportation Authority (MBTA) **is not adequately accessible to residents who have challenges with mobility.** Some of the cars and stations have stairs without any accessible options for wheelchair users or those with other walking disabilities. Finally, the taxicab services, used today by the Brookline Senior Center to assist older adults with transportation to medical appointments, are not wheelchair accessible. Cab drivers often do not want the liability of escorting people using a wheelchair in and out of the car. There is a need for medical escort staff to help people get in and out of cars, as well as vehicles that accommodate people with wheelchairs and oxygen tanks.

Priority Area 1: Transportation

Goal: To ensure all older adults have access to safe transportation in Brookline.

- Objective 1.1: By the end of 2024, increase access to motor transportation options for older adults above the current baseline.
 - Strategy 1.1.1: Advocate for public and private funding to significantly improve transportation services for older adults in Brookline.
 - Strategy 1.1.2: Create more MBTA routes to connect South and North Brookline.
 - Strategy 1.1.3: Create town shuttles for older adults to the Brookline Senior Center, special town events, grocery stores, museums, and surrounding medical centers.
 - Strategy 1.1.4: Reach out and establish new partnerships with bus and cab services that offer wheelchair accessibility to improve wheelchair accessibility on the Senior Center buses and cab services.

- Objective 1.2: By the end of 2024, improve Brookline’s street walkability. Have 80% of Brookline’s sidewalks in great condition.
 - Strategy 1.2.1: Conduct a walkability assessment of Brookline’s streets
 - Strategy 1.2.2: Advocate for the need to increase street walkability in Brookline.
 - Strategy 1.2.3: Develop a plan to increase walkability for older adults (e.g., install benches, shades and streetlights, snow removal, repairing sidewalks cracks, etc.) by mid-2023.
 - Strategy 1.2.3: Create and coordinate a social involvement volunteer program for high school and undergraduate students to shovel snow for seniors.

Priority Area 2: Affordable Housing

Lack of affordable housing is a dominant issue that arose in all Key Informant interviews. **Many participants emphasized that the rising cost of living in Brookline is a major concern.**

Older adult residents in Brookline experience escalating economic inequality on a daily basis since their income amount does not grow (fixed income), compared to the dramatic rise in living expenses, especially the increase in rent prices each year.

One resident shared that:

"100% of the people I've met at the Senior Center are constrained [financially]."

There is a huge gap between the small number of units that exist today that can serve as independent or assisted living units for older adults compared to the large number of older adults who need to use these kinds of units. **Currently, the waiting list is over four years.** Moreover, sometimes people are referred out of Brookline or to private organizations that may be able to help with subsidized housing.

Additionally, several interview participants noted that aging in place is a financial challenge for many older adults who require home care. It can be difficult for people to afford home care, even for just a few hours a day to cover some critical areas that they cannot manage on their own. Some qualify for services through Springwell, an agency that provides home care and other services for older adults, but sometimes the services granted are not sufficient. **There is a huge unmet need for home health and non-health services to keep people out of nursing homes and in their own homes.**

Priority Area 2: Affordable Housing

Goal: Ensure safe and affordable housing tailored to the unique needs of the older adults living in Brookline.

- Objective 2.1: By the end of 2025, create 150 available units for elder-specific affordable housing.
 - Strategy 2.1.1: Advocate for new building developments in Brookline to have 10% of units dedicated to older adult housing, with affordable prices.
 - Strategy 2.1.2: Advocate and raise state and national funds for affordable independent/assisted living.
 - Strategy 2.1.3: Build two new affordable apartment buildings for independent/assisted living subsidies by local and national funds.
- Objective 2.2: By the end of 2024, double the number of home-care support programs to allow older adults to “age in place.”
 - Strategy 2.2.1: Advocate for policy change to support home-care programs.
 - Strategy 2.2.2: Establish and coordinate two town-funded, full-time employees to provide non-health support (house maintenance) at home for older adults.
 - Strategy 2.2.3: Establish and coordinate town-funded, part-time employees to provide health support (e.g., social workers, nurses, physical therapists, and physicians) at home for older adults.

Priority Area 3: Mental Health & Social Isolation

Mental health and social isolation were described as a priority concern for providers and residents in all interviews. Older adult residents have expressed concern that residents who are experiencing a mental health crisis or diagnosed with a mental illness, are not getting their mental health needs met. Both residents and providers brought up the discrimination of mental health diagnoses and how that affects older adults wanting to receive assistance for their mental health. Interview groups were very concerned with how COVID-19 has affected older adults in terms of social isolation, depression, anxiety, loss of friends, and life changes. One interviewee expressed the importance of Brookline incorporating grief counseling for older adults to help the older community members experiencing the loss of loved ones.

The effects of social isolation were exacerbated by the COVID-19 pandemic. Many older adults received social interaction at Brookline Senior Center but because of COVID-19, those in-person social gatherings were discontinued. Participants have expressed that there has always been the need for better mental health resources before the COVID-19 pandemic, but now there is an even greater need in older adults because of the effects of social isolation.

One interviewee was concerned about older adults who are confined to their homes and are not able or willing to leave their homes. Another interviewee talked about the need to incorporate more social workers at the Brookline Senior Center.

The lack of mental health providers and mental health services in Brookline was always there but became evident during the COVID-19 pandemic. There are limited mental health services offered in Brookline. A key informant stated that:

“the lack of practitioners in clinics, that has been the biggest concern.”

A provider expressed significant concern over the low availability of mental health services and how that affects the mental health of older adults. Providers specifically stressed the importance of having mental health professionals who specialize in geriatrics. Most mental health providers work for the Brookline Mental Health Center but **the waiting list for those services is over one year long**, which is an additional barrier for the older adults of Brookline.

Priority Area 3: Mental Health & Social Isolation

Goal: To improve mental health and reduce social isolation among older adults in Brookline.

- Objective 3.1: By the end of 2023, any older adult who is seeking mental health care will be able to attend an appointment with a mental health practitioner within 6 months.
 - Strategy 3.1.1: Increase the number of mental health providers available in Brookline by 45%.
 - Strategy 3.1.2: Increase the funding of mental health services and resources in Brookline by 40% (i.e., in-person visits, phone calls, video meetings, and hybrid appointments) to increase the access to these services.

- Objective 3.2: By the end of 2023, determine the percentage of older adults experiencing social isolation.
 - Strategy 3.2.1: Conduct an assessment of the number of socially isolated adults and the reason for social isolation.
 - Strategy 3.2.2: Run monthly sessions for residents in Brookline to learn more about social isolation, social support, resiliency, etc.

Priority Area 4: Safe & Accessible Technology

The older adults in Brookline have expressed their lack of comfort in using technology such as smartphones (and the applications on the smartphones), computers, and tablets. There was a huge emphasis on not feeling comfortable navigating ride-sharing applications or Zoom because older adults do not understand how to use those programs. Other older adults have stated that they do not use technology often or have access to technology. This affects their access to healthcare services. The COVID-19 pandemic has shown that there needs to be technical support for the older adults of Brookline. A lot of the older adults' primary healthcare providers switched to virtual appointments and it caused a barrier to the older adults getting to their appointments.

The first major concern was lack of knowledge behind using technology such as smartphones, laptops, applications (e.g., Uber, Lyft, Zoom, etc.), and tablets. The older adults in the interview groups expressed their overall lack of comfort in using technology. There is also a growing concern among older adults that are not using technology regularly; using landlines instead of cellphones; not having access to WiFi; not having a computer or knowing how to use a computer, or using 3G cellular service instead of 4 or 5G cellular service.

There is also an issue of older adults not feeling safe getting into cars with strangers. This stems from their lack of understanding of how to navigate the driving applications, how to check that drivers are verified through the application, and tracking their location, which could make them feel safer using these driving applications. Another interviewee expressed the importance of teaching older adults how to use applications such as Uber and Lyft so they can feel comfortable and secure using those applications.

The second major concern was older adults' safety in digital spaces. Part of the education about technology would also need to include information on how to safely navigate the internet and avoid

things like scams and fraudulent activity directed at older adults. While being able to access technology is important, it is also critical that older adults learn how to securely browse the internet without compromising their identity, falling for financial scams, or being the victim of fraud.

Another issue that residents and providers brought up is the lack of availability of technical assistance for those who have disabilities such as vision and hearing impairments. This affects the ability of older adults with vision and hearing impairments to access healthcare, specifically telehealth care. Residents suggested that some form of training on how to safely use technology that is focused around assistive technology may be beneficial.

Priority Area 4: Safe & Accessible Technology

Goal: To ensure the protection of older adults in Brookline, recognizing they are often considered vulnerable and/or marginalized when using technology.

- Objective 4.1: By the end of 2023, increase the knowledge of technology safety for older adults by 60%.
 - Strategy 4.1.1: Provide technology safety education to 40% of the older adults who are part of the Senior Center.
 - Strategy 4.1.2: Hire at least five volunteers who will provide one-on-one technical support to older adults at the Senior Center.
- Objective 4.2: By the end of 2023, increase the number of older adults with visual and auditory impairments who have access to assistive technology by 40%.
 - Strategy 4.2.1: Provide screen readers and applications to increase usability of telehealth, and training to use this technology for older adults at key locations for older adults within Brookline.

CONCLUSIONS

This CHNA highlights the resource and service needs for older adults in Brookline. We used a combination of interviews, environmental assessments, and secondary data collection to make the assessments and suggestions outlined in this report. The older adult community faces a unique set of challenges and barriers to their health, with even greater challenges faced by some members due to the diversity within the community. We identified technology, mental health and social isolation, affordable housing, and transportation as areas of particular importance. This report can be used to guide further assessment as well as future policy and town planning.

The growing population of older adults in Brookline underscores the need for further assessments and planning in this community. This CHNA, though thorough, was not able to reach a diverse population of individuals to take part in our primary research. Without representing everyone in the community, we cannot conclude that our results represent the needs and priorities of everyone in the community. Thus, further assessment focusing on some of the weakness areas in this report could make for a more conclusive and holistic assessment of the needs of the community.

APPENDICES

Appendix A: Provider Interview Guide

We're so excited to be with you today! We are_____.

1. Thank you for joining us today. Could you begin by introducing yourself and telling us about your role in older adult services?

These interviews will cover topics including housing, transportation, safety, personal identity, social engagement, healthcare access, and other areas. The interview will last 30-60 minutes.

2. Thinking about community partnerships: Brookline Council on Aging partners with the Chinese Golden Aging Center, Fenway Health, and other LGBTQ focused organizations. Can you talk about how you and the Council on Aging reach out to elders that have been marginalized from social services in the past?
 - a. Follow-up probe: In terms of community partnerships, how do you coordinate shared responsibilities?
3. What impacts, both positive and negative, has the COVID-19 pandemic had on your services over the past two years?

Follow up probe: Do you expect any of these impacts to shape service delivery in the long term?
4. What resources and services exist regarding the built environment (including building conditions, public spaces, transportation system, roads) for older adults in Brookline? Where are there gaps in services?
5. What do you feel are the biggest obstacles within the built environment (including building conditions, public spaces, transportation system, roads) and transportation system for older adults in Brookline?
6. What issues do older adults in Brookline face in accessing healthcare?

7. What is your vision for how healthcare providers and institutions in Brookline could best serve older adults in Brookline?
8. Brookline recently began offering more volunteer and employment opportunities for the older population. Have you noticed a difference in how elders engaged in the community before offering these newer opportunities versus after?
Probe: From the current opportunities, what trends have you noticed in the type of opportunities that the older population chose?
9. What are some things (if any) you would change about the social engagement /opportunities that are offered in Brookline?
Probe: What do you feel is lacking and how would you like to see Brookline to address this issue?
10. What are the most commonly requested housing related services by older adults?
Optional probe: Does the demand surpass the service capacity?
11. What are some challenges you have faced in identifying and engaging with older adults who are in greatest need of services?
12. Without giving us any identifiable details, Can you describe a time when your organization ever dealt with an older adult in your community that has had their personal and legal rights violated?
 - a. Probe: How did this play out?
 - b. Probe: What was done to help this person, if anything?
 - c. If they are not comfortable answering: What are the trends that you have seen regarding older adults rights being violated?
13. What, if any, preventative programs / services exist to protect older adults from having their rights violated? If you could use any local/ regional resources to improve personal & legal rights; safety for older adults in your community what would you use?
14. Is there anything else we haven't discussed that you would like to share?

Appendix B: Resident Interview Guide

We're so excited to be with you today! We are _____.

1. Thank you for joining us today. Could you begin by introducing yourself?

This interview will cover topics including housing, transportation, safety, personal identity, social engagement, healthcare access, and other areas. The interview will last 30-60 minutes.

Are you ready to get started?

2. How long have you lived in Brookline?
3. What are your biggest concerns about getting around the town of Brookline, including buildings, public spaces, and transportation?
4. Are there some places, spaces, or types of transportation that you feel exclude some older adults because of how they are built or designed? Why or why not?
5. Do you feel that the social services you access are tailored to your needs or are they standard? (do they take into account your race/ ethnicity and sexual orientation?)
6. Where do you feel resources need to be invested to support you and the older adult community of Brookline in the future?
7. Do you or other older community members have issues with accessing health care and, if so, what are your/their biggest concerns?
8. What should be priority areas of action to improve access to healthcare for older adults in Brookline?
9. What does safety look like for you? And, What are your visions and aspirations for the community in regards to your personal & legal rights; safety?

10. How much freedom do you feel you have to make big decisions in your life? (for example, in regards to your finances or medical care)
11. What are some of the pros and cons about your current housing situation?
12. Do you feel that you're able to afford everything that you need to live comfortably?
13. What role does working/volunteering play in your life (social connection, income, civic duty, etc.)?
14. Do you participate in any of the Brookline Senior Center activities? If yes, what do you like the most? If not, why?
15. Is there anything else we haven't discussed that you would like to share?

Appendix C: AARP Street Auditing Tool



AARP Walk Audit Tool Kit Worksheet

Sidewalks, Streets and Crossings SINGLE-LOCATION AUDIT

Community Name: _____

Location/Street Name(s): _____

Audit date: _____ Start time: _____ AM | PM End time: _____ AM | PM

Posted speed limit(s): _____ Do the motorists appear to be obeying the speed limit(s)? _____

Total number of vehicle lanes: _____ The street is: one-way | two-way

If more than one lane: Does the roadway have a median and/or a pedestrian island?

The street has: no sidewalk no sidewalk but needs one no sidewalk but needs two
 partial sidewalks a sidewalk on one side of the street sidewalks on both sides of the street

YES | NO | OTHER Skip any statements that don't apply

THE SIDEWALK:

- 1. Is separated from the street by a barrier or buffer (a curb, grass, landscaping)
- 2. Is surfaced with a material that is smooth and consistent (e.g., or asphalt rather than bricks)
- 3. Is in good condition, without cracks or raised sections
- 4. Is free of obstacles (hydrants, utility poles, overgrown landscaping, trash receptacles)
- 5. Is free of interruptions from driveways (such as to/from homes, parking lots, etc.)
- 6. Is continuous (no segments are missing) and complete (it doesn't randomly end)
- 7. Is wide enough (at least 5 feet) for two people to walk side by side or pass one another
- 8. Has tactile ground surface indicators so pedestrians with vision impairment will know when the path is ending
- 9. Has a curb cut ramp (for use by wheelchairs, baby strollers, etc.) wherever it is interrupted by a street

THE STREET:

- 1. Has traffic lights and/or stop signs at intersections and crossings
- 2. The traffic lights and/or stop signs are clearly visible to drivers and pedestrians
- 3. Has crosswalks
- 4. The crosswalks are well marked and clearly visible to drivers and pedestrians
- 5. Has signage alerting drivers to the presence of pedestrians
- 6. Has a designated bicycle lane
- 7. Has a pedestrian crossing signal, also called a beacon (if yes, complete the next section)

THE PEDESTRIAN CROSSING SIGNALS:

- 1. Are working
- 2. Have a "push-to-walk" mechanism, meaning pedestrians can stop vehicle traffic
- 3. Have audible prompts for people with vision impairment
- 4. Are placed in appropriate locations (if not, make note of where more are needed)
- 5. Provide enough time to cross (indicate the amount of time: _____ minutes _____ seconds)
- 6. Provide suitable opportunities to cross (indicate the amount of time pedestrians must wait for a traffic light change in order to cross: _____ minutes _____ seconds)

Consider using the "Build a Better Block" worksheet as well.

Walkability of the area, based on the findings above: Great Acceptable Mixed Poor

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Sidewalks, Streets and Crossings WALKING AUDIT

Community Name: _____

Starting location: _____ Ending location: _____

Route: _____

Audit date: _____ Start time: _____ AM | PM End time: _____ AM | PM

Posted speed limit(s): _____ Do the motorists appear to be obeying the speed limit(s)? _____

Total number of vehicle lanes: _____ The street is: one-way | two-way

If more than one lane: Does the roadway have a median and/or a pedestrian island?

The street has: no sidewalk no sidewalk but needs one no sidewalk but needs two
 partial sidewalks a sidewalk on one side of the street sidewalks on both sides of the street

YES | NO | OTHER Skip any statements that don't apply

THE SIDEWALK:

- 1. Is separated from the street by a barrier or buffer (a curb, grass, landscaping)
- 2. Is surfaced with a material that is smooth and consistent (e.g., concrete or asphalt rather than bricks)
- 3. Is in good condition, without cracks or raised sections
- 4. Is free of obstacles (hydrants, utility poles, overgrown landscaping, trash receptacles)
- 5. Is free of interruptions from driveways (such as to/from homes, parking lots, etc.)
- 6. Is continuous (no segments are missing) and complete (it doesn't randomly end)
- 7. Is wide enough (at least 5 feet) for two people to walk side by side or pass one another
- 8. Has tactile ground surface indicators so pedestrians with vision impairment will know when the path is ending
- 9. Has a curb cut ramp (for use by wheelchairs, baby strollers, etc.) wherever it is interrupted by a street

THE STREET:

- 1. Has traffic lights and/or stop signs at intersections and crossings
- 2. The traffic lights and/or stop signs are clearly visible to drivers and pedestrians
- 3. Has crosswalks
- 4. The crosswalks are well marked and clearly visible to drivers and pedestrians
- 5. Has signage alerting drivers to the presence of pedestrians
- 6. Has a designated bicycle lane
- 7. Has a pedestrian crossing signal, also called a beacon (if yes, complete the next section)

THE PEDESTRIAN CROSSING SIGNALS:

- 1. Are working
- 2. Have a "push-to-walk" mechanism, meaning pedestrians can stop the vehicle traffic
- 3. Have audible prompts for people with vision impairment
- 4. Are placed in appropriate locations (if not, make note of where more are needed)
- 5. Provide enough time to cross (indicate the amount of time provided: _____ minutes _____ seconds)
- 6. Provide suitable opportunities to cross (indicate the amount of time pedestrians must wait for a traffic light change in order to cross: _____ minutes _____ seconds)

Consider using the "Build a Better Block" worksheet as well.

Walkability of the area, based on the findings above: Great Acceptable Mixed Poor

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Sidewalks

Community Name: _____

Location/Street Name(s): _____

Audit date: _____ Start time: _____ AM | PM End time: _____ AM | PM

If more than one lane: Does the roadway have a median and/or pedestrian island?

The street has: no sidewalk no sidewalk but needs one no sidewalk but needs two
 partial sidewalks a sidewalk on one side of the street sidewalks on both sides of the street

YES | NO | OTHER Skip any statements that don't apply

THE SIDEWALK:

- 1. Is separated from the street by a barrier or buffer (a curb, grass, landscaping)
- 2. Is surfaced with a material that is smooth and consistent (concrete or asphalt rather than bricks)
- 3. Is in good condition, without cracks or raised blocks
- 4. Is free of obstacles (hydrants, utility poles, overgrown landscaping, trash receptacles)
- 5. Is free of interruptions from driveways (such as to/from homes, parking lots, etc.)
- 6. Is continuous (no segments are missing) and complete (it doesn't randomly end)
- 7. Is wide enough (at least 5 feet) for two people to walk side by side or pass one another
- 8. Has tactile ground surface indicators so pedestrians with vision impairment will know when the path is ending
- 9. Has a curb cut ramp (for use by wheelchairs, baby strollers, etc.) wherever the sidewalk is interrupted by a street

NOTES OR OTHER OBSERVATIONS:

Walkability of the area, based on the findings above: Great Acceptable Mixed Poor

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Street Safety and Appeal

Community Name: _____

Location/Street Name(s): _____

Audit date: _____ Start time: _____ AM | PM End time: _____ AM | PM

YES | NO | OTHER Skip any statements that don't apply

THE LOCATION HAS:

- 1. Places to sit
- 2. Shade trees
- 3. Grass, flowers and landscaping (if yes, is the greenery well maintained? _____)
- 4. Awnings, outdoor umbrellas or other shelter from rain and other weather conditions
- 5. Drinking fountains (if yes, are they working and clean? _____)
- 6. Public restrooms (if yes, are they clean and safe? _____)
- 7. A transit or bus shelter (if yes, is there seating? _____)
- 8. Trash receptacles (if yes, so they appear to be regularly emptied?)
- 9. Buildings and/or homes that are well-maintained
- 10. Informative signage
- 11. Well-placed signage
- 12. Streetscape features (art, signage, etc.) that are representative of/suitable for the community
- 13. Pedestrian-scaled lighting
- 14. A posted speed limit that seems suitable (if yes, does it appear that drivers are obeying the limit? _____)

IMPRESSIONS:

- 1. The location/street is a safe and appealing destination
- 2. The location/street is a safe and appealing travel route
- 3. The location/street appears to be safe for users of all ages, abilities, races, income levels, etc.
- 4. The location/street appears to be safe for pedestrians during both the day and night
- 5. Pedestrians appear to be safe from moving vehicles
- 6. Pedestrians appear to be safe from crime, harassment or similar threats

For "No" or "Other" answers, use the space below or on the back of this worksheet to briefly explain the response.

NOTES OR OTHER OBSERVATIONS:

Walkability of the area, based on the findings above: Great Acceptable Mixed Poor



Public Transit Access

Community Name: _____

Location/Street Name(s): _____

Audit date: _____ Start time: _____ AM | PM End time: _____ AM | PM

YES | NO | OTHER Skip any statements that don't apply

IMPRESSIONS:

- 1. Pedestrians can safely access and depart from the transit stop or station
- 2. The transit stop or station is in a useful location
- 3. The transit stop or station protects waiting passengers from moving vehicles
- 4. The transit stop or station has suitable seating for waiting passengers
- 5. The transit stop or station features shelter from (check all that apply) rain sun heat cold wind
- 6. The transit stop or station is clean and well-maintained
- 7. The transit stop or station is well lighted
- 8. The transit stop or station has useful amenities (if yes, describe what they are)
- 9. The transit stop or station feels safe from crime
- 10. I would feel safe and comfortable waiting in this location

NOTES OR OTHER OBSERVATIONS:

Walkability of the area, based on the findings above: Great Acceptable Mixed Poor

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Build a Better Block

Would the safe walkability and appeal of the walk audit location or route be improved by any of the following features? Select those you think could help:

- 1. Sidewalks (because there aren't any at all)
- 2. Sidewalk repairs
- 3. Wider sidewalks
- 4. Safety barriers between the sidewalk and street (landscaping, low walls, fencing, etc.)
- 5. Decorative sidewalk features (hanging flower baskets, planters)
- 6. Crosswalks (because there aren't any at all)
- 7. Raised crosswalks
- 8. Artistic crosswalks
- 9. Pedestrian "bulb-outs" at intersections or crossings
- 10. Pedestrian island(s)
- 11. Pedestrian-friendly lighting
- 12. One-way rather than two-way traffic
- 13. Outdoor seating and furnishings for public use (benches, tables, parklets, etc.)
- 14. Decorative and/or directional (also called "wayfinding") signage
- 15. Public art (sculpture, wall murals, banners)
- 16. More street-level/street-facing shops and businesses
- 17. Shelter from the elements (awnings, outdoor umbrellas, etc.)
- 18. Green space (such as a small park or "pocket park")
- 19. Street trees and landscaping
- 20. Improved landscape maintenance
- 21. Drinking fountains
- 22. Public restrooms (or, if already present, better maintenance)
- 23. Litter removal
- 24. Graffiti removal
- 25. Trash receptacles
- 26. Security features (cameras, call-boxes, etc.)
- 27. Management of off-leash dogs
- 28. Repair or removal of vacant or rundown buildings
- 29. On-street parking
- 30. Parking garage or structure

OTHER FEATURES:



Summary

Record the score totals for each observation type

- Record the total number of yes responses for the category
- Record the total number of no responses for the category
- Record the one-word rating for the category

This information — as well as all notes, photographs, videos and observation discussions — will be helpful for writing a short report and/or preparing a PowerPoint presentation.

Community Name: _____

Street/Intersection Observed: _____ and _____

Audit Date: _____

WORKSHEET	YES RESPONSES	NO RESPONSES	RATING
			Great Acceptable Mixed Poor
Sidewalks, Streets and Crossings (Single-Location Audit)			
Sidewalks, Streets and Crossings (Walking Audit)			
Sidewalks			
Streets and Crossings			
Street Safety and Appeal			
Public Transit Access			

NOTES OR OTHER OBSERVATIONS:

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