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Cambridge Health Alliance
2022 Oral Health Assessment

Final Report

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Health Resources in Action
Advancing Public Health and Medical Research

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Executive Summary

Needs Assessments are a valuable instrument and means for individuals and groups to methodically learn from populations about their experiences, to identify needs, and develop solutions. Oral Health has been historically separated from United States healthcare financing, education, delivery, and research. This Oral Health Assessment is one institution's (Cambridge Health Alliance – CHA) experience in utilizing available resources from the state's Medicaid sponsored technical assistance marketplace (MassHealth Delivery System Reform Incentive Payment Program) to partner with a leading non-profit organization with significant experience in conducting needs assessments (Health Resources in Action – HRiA) to learn from local populations (Malden and Everett) at risk of oral health access barriers and investigate their likely needs.

This Oral Health Assessment was designed using available literature on community oral health needs assessments and associated oral health quality of life instruments implemented in the United States, United Kingdom, and elsewhere globally. Populations of interest were identified using recent utilization claims of non-traumatic dental conditions data from the locally serving hospital emergency department (CHA Everett Hospital). Relationships with CHA Needs Assessment workers, community-based organization, and subject matter experts were consulted with study team members to design and implement the following Oral Health Assessment:

- **Key Informant Interviews**
- **Focus Groups** (*Malden Senior Living Center, Everett Haitian Community Center, CHA Group Based Opioid Treatment, Malden parents of children*)
- **Online Oral Health Survey** (*266 Malden or Everett responses transcribed into English, Spanish, Portuguese-Brazilian, Haitian Creole, Mandarin*)
- **Expert Advisory Group** (*Eight Representatives affiliated with state government, non-profit, grant-awarding, oral health advocacy, healthcare, and academic organizations)*

Key findings from this report

- Pervasive disparities in access to oral health services by self-identifying people in the black, indigenous, and people of color communities of Malden and Everett.
- Barriers associated with accessing oral health services are strongly associated to financing, provider availability, and trust in the oral health system.
- Respondents report their oral health status affects their quality of life as it relates to their ability to function as well as their physical, psychological, and social wellbeing.

Opportunities for further work highlighted from this project

- The role that social support services, like community health workers or care coordination may have in enhancing access to oral health services.
- The role that education, communication, and access to preventive oral health services plays in empowering communities to support their oral health where they work, learn, and live.
- The value in integrating oral health and training allied health workers to address oral health needs in community with a culturally humble approach.
- The value in measuring oral health status in a community-focused approach compared with traditional healthcare system and provider centric methods.

This report may be used to help direct resources for oral health and community building in the communities of Malden and Everett. Healthcare agencies, healthcare payers, community assessment organizations and individuals interested in addressing oral health needs in their community may also use the process and findings from this report as they see fit.

To the communities of Everett and Malden, this project represents a hopeful beginning to fruitful collaborations aimed at empowering individuals and groups to reach healthy and meaningful lives.

-Alec S. Eidelman, DMD, MPH
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Acknowledgements

This report is aware that individuals and groups are entitled to their own identities and that the act of being characterized into distilled categories for the purposes of reports can be harmful and hurtful. Concerted efforts were made to bring this awareness to our project activities, our language, and the intent of this report. While conducting the actions of this project, we also recognize the impact the COVID-19 pandemic and community-based research plays in our communities and thank those that participated for their time, patience, and efforts to let their voice be heard.

A special note of gratitude to the following individuals and organizations who helped support the work of this project:

Cambridge Health Alliance:

- Population Health Management
- Department of Community Health, Health Improvement Team
- Department of Dental Medicine and Oral Health

The Expert Advisory Group

Health Resources in Action

Introduction

Cambridge Health Alliance (CHA) undertook an oral health-focused community health needs assessment (oral health assessment) process in the fall of 2021 focusing narrowly on the oral health of residents within its service area. Health Resources in Action (HRiA), a non-profit public health consultancy organization, was engaged to conduct the CHNA. This oral health assessment aims to better understand the oral health needs of community members in Malden and Everett. Measuring Oral Health perceptions and status at the population level in Massachusetts and elsewhere in the United States of America has been conducted in a variety of methods, this project's approach blends existing and novel assessment instruments to gather information.

Assessment Methods

The following section details how the data for the Cambridge Health Alliance (CHA) oral health assessment was compiled and analyzed. The identification of data sources and the development of primary data collection instruments were informed by a literature scan and the engagement of an Advisory Group comprised of experts in the fields of community health and/or oral health and healthcare policy. Prior to this project Emergency Department utilization data for non-traumatic dental conditions at the Cambridge Health Alliance Everett (Whidden) Hospital were analyzed to help identify populations at risk of having higher barriers to accessible routine preventative and basic oral health care. This information alongside existing quality of life instruments in oral health that were validated in multiple language and for related risk factors were used to help develop key informant and focus group guides, as well as online surveys. These oral health assessment instruments were developed in addition to survey and focus group access and perception items included in a regional wellbeing assessment distributed to the greater catchment areas and will be presented in subsequent publication of these efforts. Primary analysis of aggregated qualitative and quantitative results aimed to identify observational and descriptive statistics for oral health in the target communities.

Secondary Data Review

American Community Survey, U.S. Census

This oral health assessment incorporated data from the American Community Survey through U.S. Census to describe overall socio-demographic characteristics of residents of Everett and Malden – including age and racial/ethnic distribution, educational attainment, and income. These data are presented by Everett, Malden, and Massachusetts. For certain indicators, additional stratification by race/ethnicity are presented to show differences. Five-year estimates were used to provide a more stable sample size for local geographies.

Regional Wellbeing Assessment Community Survey, Cambridge Health Alliance (CHA)

Concurrent with this assessment, the Health Improvement Team at CHA led a regional wellbeing assessment, in collaboration with healthcare and community partners focused on Medford, Somerville, Everett, and Malden. The Regional Wellbeing Assessment involved data collection methods such as secondary data review, community focus group discussions, and a community survey. Select survey data gathered as part of CHA's Regional Wellbeing Assessment were included in this assessment to provide additional context around current perceptions of and experiences accessing healthcare and oral health access. The Wellbeing Assessment survey aimed to gather residents' perceptions about the community health strengths and challenges that matter most to people, and included questions asking about perceptions on community assets, natural and built environment, economic and educational environment, healthcare environment, and social and cultural environment. The survey was administered during Winter 2021-2022 and was available in English, Spanish, Haitian Creole, Portuguese, and Simplified Chinese. For this oral health assessment, preliminary Wellbeing Assessment survey data on perceptions of healthcare and oral health care access stratified by Everett and Malden, where possible, were included.

Oral Health Community Survey

To obtain a more comprehensive picture of residents' perceptions about oral health status, access to oral health services, and attitudes about oral health, HRiA, in collaboration with CHA, developed a community survey with input from advisory group members and guided by existing validated questions from the field or used in other studies. The survey was web-based and offered in English, Spanish, Portuguese, Haitian Creole, and Simplified Chinese. The survey was disseminated by CHA through social media and email (including CHA Twitter, City of Malden's Twitter, CHA Patient Newsletter, and CHA in Brief) and collected responses between March and April 2022. A total of 340 people completed the survey, and 266 responses were retained for analyses because respondents indicated that they worked, went to school, or received services in Malden or Everett. The majority of respondents completed the survey in English (86.5%, n=230), followed by 6.8% in Portuguese (n=18), 4.1% in Simplified Chinese (n=11), and 2.6% in Spanish (n=7). Data were analyzed using SAS 9.4. Respondent characteristics are summarized in **Table 1**.

Sub-group analyses were also explored; however, due to small sub-group sample sizes, the assessment findings focus on overall results. Where possible, notable differences observed by race/ethnicity and public insurance are described in the text. Chi-square and Fisher's Exact tests were conducted, where appropriate.

- For the race/ethnicity sub-group analysis, due to small sample sizes for individual races/ethnicities, respondents were categorized into two groups: BIPOC respondents (N=138), which includes any respondent identifying as at least one race other than White or any ethnicity other than European, compared to non-BIPOC respondents (N=125).
- For the public insurance sub-group analysis, respondents were categorized into two groups: respondents with dental insurance through Medicaid and/or Medicare (N=85), compared to respondents without dental insurance through Medicaid and/or Medicare (N=145).

Table 1. Community Survey Respondent Characteristics (N=266)

Characteristics	Count	Percent
Town Where Reside (N=266)		
Everett	117	44.0%
Malden	77	28.9%
Other	72	27.1%
Town Where Work, Go to School or Receive Services (N=259)†		
Everett	112	57.1%
Malden	148	43.2%
None	15	5.8%
Race (N=244)†		
Asian	26	10.7%
American Indian or Alaska Native	10	4.1%
Black or African American	28	11.5%
Native Hawaiian or Other Pacific Islander	3	1.2%
White	174	71.3%
Additional race category	10	4.1%
Ethnicity (N=251)†		
Asian	23	9.2%
Black or African American	32	12.8%
Brazilian or Portuguese	27	10.8%
European	132	52.6%
Hispanic, Latino, or Spanish	35	13.9%
Middle Eastern or North African	6	2.4%
Native Hawaiian or Other Pacific Islander, or American Indian/Alaskan Native	5	2.0%
Additional ethnicity category	6	2.4%

Characteristics	Count	Percent
Age (N=237)		
Under 18 years old	11	4.6%
18-24 years old	46	19.4%
25-34 years old	84	35.4%
35-44 years old	52	21.9%
45-54 years old	18	7.6%
55-64 years old	18	7.6%
65+ years	8	3.4%
Current Dental Insurance (N=230)†		
Employer-based insurance	74	32.2%
Private insurance (not employer-based)	63	27.4%
Medicaid or MassHealth	73	31.7%
Medicare and/or Medicare and supplement	14	6.1%
Other source	2	0.9%
None	29	12.6%
Primary Language Spoken at Home (N=237)†		
Arabic	4	1.7%
Cambodian/Khmer	1	0.4%
Cape Verdean Creole	4	1.7%
Chinese	6	2.5%
English	193	81.4%
French (including Cajun)	1	0.4%
Haitian Creole	6	2.5%
Korean	2	0.8%
Portuguese	20	8.4%
Spanish	17	7.2%
Vietnamese	2	0.8%
Other	5	2.1%
Educational Attainment (N=232)		
Less than high school or secondary school	4	1.7%
Some high school or secondary school	15	6.5%
High school or secondary school graduate or GED	47	20.3%
Some college or 2-year degree	56	24.1%
Certification program or trade school	21	9.1%
College graduate	56	24.1%
Some graduate school or a graduate degree	33	14.2%
Gender (N=235)		
Female	148	63.0%
Male	84	35.7%
Genderqueer or Nonbinary	3	1.3%
Sexual Orientation (N=219)		
Asexual	4	1.8%
Bisexual	12	5.5%

Characteristics	Count	Percent
Gay	5	2.3%
Lesbian	5	2.3%
Queer	2	0.9%
Pansexual	1	0.5%
Straight/heterosexual	181	82.7%
Not sure/Questioning	6	2.7%
Prefer to self-describe	3	1.4%
Parent/Caregiver to a Child Under the Age of 18 (N=245)		
Yes	87	35.5%
No	158	64.5%
Age of Children (N=84)		
Under 7 years	36	43.4%
7-12 years	32	38.6%
13-17 years	15	18.1%

DATA SOURCE: Cambridge Health Alliance Oral Health Community Survey, 2022
NOTE: Dagger (†) denotes where questions allowed for respondents to check all options that apply; therefore, totals may not add up to 100%; Denominators do not include respondents who did not answer the question or selected 'prefer not to answer'

Community and Stakeholder Discussions

Focus Groups

HRiA held four virtual focus groups with a total of 20 participants. Focus groups were designed to gather input from a variety of stakeholders and included those in recovery, parents with young children, Haitian-speaking community members, and seniors. Focus group population selection was informed by emergency department utilization data (i.e., for non-traumatic dental conditions) for the target population and current oral health trends. Focus groups were approximately 60 minutes and covered several topics including participants' perceptions of strengths of the community, top health concerns, oral health status and understanding of the connection of oral health to overall health/wellbeing, frequency of and reasons for dental visits, facilitators and barriers to accessing to oral health care, gaps in services, and recommendations for service improvement.

Key Stakeholder Interviews

HRiA interviewed five stakeholders who were selected for their perspectives on and relationships with Everett and Malden communities, as well as their expertise and knowledge on current oral health needs in the communities. Interviewees included a pediatric dentist, an emergency clinic dentist, a community engagement manager with Everett Public Schools, the chief of the Department of Dental Medicine and Oral Health at CHA, a leader of a non-profit organization working with the Haitian Community, and a dental student working at a free dental clinic. Interviews ranged in length from 30 to 60 minutes. Interviewees were asked to share their perspectives on similar issues asked about in focus groups: strengths of the community; health concerns; oral health status and understanding about oral health; facilitators and barriers to accessing oral health care; service gaps; and needed programs and services.

Limitations

As with all data collection efforts, there are several limitations related to the assessment's methods that should be acknowledged. Regarding secondary data, years of the most current data available may still be a few years behind (for instance, with the American Community Survey data – the estimates are from 2016-2020). Due to the lag in time, the data may not necessarily accurately reflect the current demographics of the communities, especially taking impacts of the COVID-19 pandemic into

consideration. Additionally, secondary data around health behaviors and outcomes were not available at the local level (Everett and Malden), which limit the context provided.

The community health survey fielded specifically for this assessment used a convenience sample for gathering information; while strong efforts were made to disseminate the survey to a broad cross-section of respondents from the region, results are not necessarily statistically representative of the larger population living in Everett and Malden due to non-random sampling techniques. Additionally, the current survey burden on community residents and lack of in-person outreach may have influenced who would be more likely to respond to the survey. It should also be noted that survey respondents did not always answer every question on the survey; therefore, percentages shown below reflect only those participants who answered each question.

Similarly, while the focus groups and interviews conducted for this assessment provide valuable insights, results are not statistically representative of a larger population due to non-random recruiting techniques and a small sample size. Recruitment for focus groups was conducted by CHA, working with community partners. Because of this, it is possible that the responses received only provide one perspective of the issues discussed. It is also important to note that data were collected at one point in time, so findings, while directional and descriptive, should not be interpreted as definitive.

Assessment Findings

Secondary Data Review Findings

The section below provides an overview of the population of Everett and Malden. Who lives in a community is greatly related to the rates of health outcomes and behaviors of that area.

Population Size

Everett and Malden are mid-sized Massachusetts cities, north of Boston.[1] According to the American Community Survey, Everett's population was estimated to be about 46,000 in 2016-2020; Malden's population is about 30% larger than Everett's, slightly above 60,500 in 2016-2020 (**Table 2**).

Table 2. Total Population, by Massachusetts and City/Town, 2016-2020

Geography	Count
Massachusetts	6,873,003
Everett	46,275
Malden	60,710

DATA SOURCE: U.S. Census Bureau, American Community Survey, 5-Year Estimates, 2016-2020

Age Distribution

Overall, both Everett and Malden had younger populations than the state as a whole: 64.6% of Everett's population and 62.6% of Malden's population were under the age of 45, compared to 56.5% for Massachusetts (

Table 3). Everett and Malden had a similar age profile, with some slight variation: Everett had a higher proportion of residents under 18, while Malden had a slightly higher proportion of residents 75 years of age or older.

[1] https://www.city-data.com/city/Massachusetts.html

Table 3. Age Distribution, by Massachusetts and City/Town, 2016-2020

Geography	Under 18 years	18-24 years	25-44 years	45-64 years	65-74 years	75+ years
Massachusetts	19.8%	10.1%	26.6%	26.9%	9.5%	7.0%
Everett	22.0%	7.6%	35.0%	24.1%	6.9%	4.4%
Malden	18.4%	9.4%	34.8%	24.3%	6.8%	6.3%

DATA SOURCE: U.S. Census Bureau, American Community Survey, 5-Year Estimates, 2016-*2020*

Racial/Ethnic Distribution

Both Malden and Everett were racially and ethnically diverse cities (**Table 4**). While across the state, about 70% of residents identified as White, less than half of residents in both Everett and Malden identified as White (41.3% and 45.9%, respectively). One quarter of Malden's residents identified as Asian (25.4%), compared to 8% in Everett, while nearly 30% of Everett's residents identified as Hispanic/Latino, compared to 10% in Malden.

Table 4. Racial and Ethnic Distribution, by Massachusetts and City/Town, 2016-2020

Geography	Asian	AIAN	Black	Hispanic/ Latino, any race	NHOPI	White	Other	Two or more races
Massachusetts	6.7%	0.1%	6.8%	12.0%	<0.1%	70.8%	0.8%	2.7%
Everett	7.8%	<0.1%	16.7%	29.2%	<0.1%	41.3%	1.8%	3.1%
Malden	25.4%	0.1%	15.7%	9.6%	0.0%	45.9%	1.0%	2.4%

DATA SOURCE: U.S. Census Bureau, American Community Survey, 5-Year Estimates, 2016-2020
NOTE: Racial categories include individuals identifying as the race and not Hispanic/Latino (i.e., Asian includes individuals identifying as Asian, non-Hispanic); AIAN stands for American Indian and Alaska Native; NHOPI stands for Native Hawaiian and Other Pacific Islander

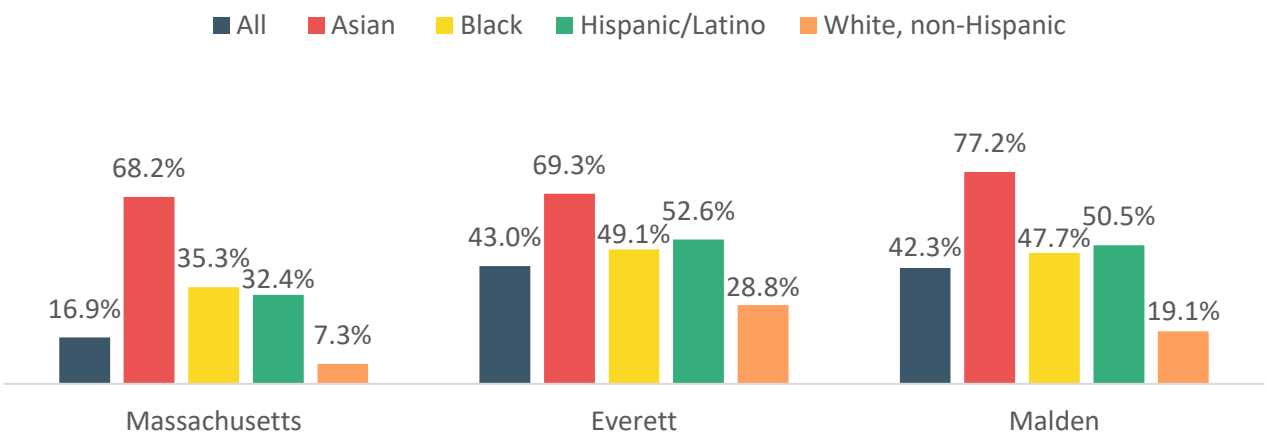
Foreign-Born Population

Four in ten residents of Everett and Malden were born outside of the U.S., compared to two in ten in the state overall (

Figure 1). Half of Hispanic/Latino residents and almost half of Black residents in the two cities were born in another country. As shown in

Table 5, residents born in Brazil make up almost a quarter of foreign-born residents in Everett (23.4%), followed by El Salvador (19.4%), and Haiti (15.2%). Over three-quarters of Asian residents in Malden were foreign-born (77.2%). For Malden, the largest proportions of foreign-born residents were born in China (28.7%), Brazil (11.5%), and Haiti (10.6%).

Figure 1. Percent Foreign-Born, by Race/Ethnicity, by Massachusetts and City/Town, 2016-2020



DATA SOURCE: U.S. Census Bureau, American Community Survey, 5-Year Estimates, 2016-2020
NOTE: Asian and Black categories include individuals identifying as the race categories alone (i.e., only identifying as one race), and may identify as Hispanic/Latino

Table 5. Top Countries of Origin, Percent Foreign-Born, by Massachusetts and City/Town, 2016-2020

	Massachusetts	Everett	Malden
1	**China** (10.0%)	**Brazil** (23.4%)	**China** (28.7%)
2	**Dominican Republic** (7.8%)	**El Salvador** (19.4%)	**Brazil** (11.5%)
3	**India** (6.8%)	**Haiti** (15.2%)	**Haiti** (10.6%)
4	**Brazil** (6.5%)	**Vietnam** (4.9%)	**India** (8.2%)
5	**Haiti** (5.1%)	**India** (4.4%)	**Vietnam** (6.0%)

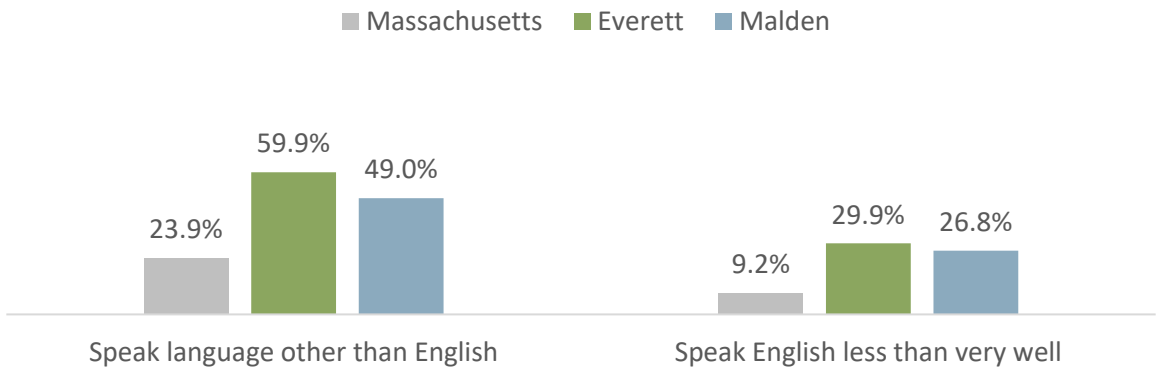
DATA SOURCE: U.S. Census Bureau, American Community Survey, 5-Year Estimates, 2016-2020

English Language Proficiency

Over half of residents over the age of 5 in Everett and nearly half in Malden reported to speak a language other than English at home (59.9% and 49.0%, respectively), a substantially higher proportion than the state (23.9%) (

Figure 2). Furthermore, nearly 30% of residents in both cities reported to speak English less than very well. As seen in **Table *6***, Spanish was the most commonly spoken language among those who speak a language other than English at home in Everett (22.4%), while Chinese was the most common language in Malden (14.6%). Many residents in the Everett and Malden also reported to speak French, Haitian, or Cajun.

Figure 2. Percent Population 5 Years and Over Who Speak a Language Other Than English at Home and Speak English Less Than Very Well, by Massachusetts and City/Town, 2016-2020



DATA SOURCE: U.S. Census Bureau, American Community Survey, 5-Year Estimates, 2016-2020

Table 6. Top Non-English Languages Spoken at Home, Percent Population 5 Years and Over, by Massachusetts and City/Town, 2016-2020

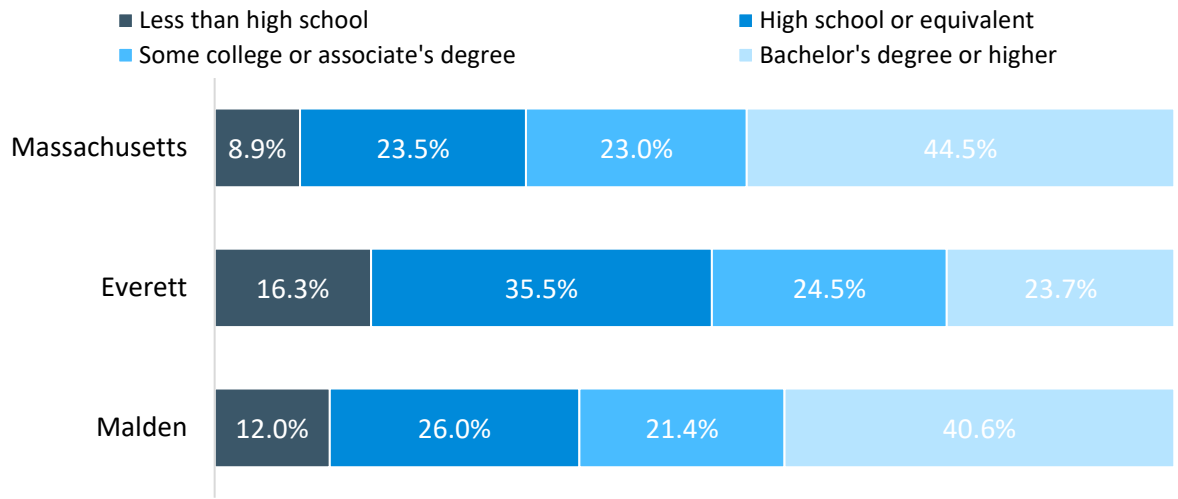
	Massachusetts	Everett	Malden
1	**Spanish** (9.1%)	**Spanish** (22.4%)	**Chinese** (14.6%)
2	**Other Indo-European languages** (5.5%)	**Other Indo-European languages** (19.5%)	**Other Indo-European languages** (11%)
3	**French, Haitian, or Cajun** (2.2%)	**French, Haitian, or Cajun** (10.6%)	**Spanish** (6.8%)
4	**Chinese** (2.1%)	**Vietnamese** (2.3%)	**French, Haitian, or Cajun** (6.1%)
5	**Other Asian and Pacific Island languages** (1.2%)	**Russian, Polish, or other Slavic languages** (1.4%)	**Other and unspecified languages** (2.8%)

DATA SOURCE: U.S. Census Bureau, American Community Survey, 5-Year Estimates, 2016-2020

Educational Attainment

Everett and Malden varied in their educational profile (
Figure 3). The educational attainment of Malden residents was similar to the state: four in ten residents over the age of 25 reported to have a bachelor's degree (40.6% and 44.5%, respectively). By contrast, less than a quarter of Everett residents over age 25 had a college degree (23.7%). About 16% of Everett residents over age 25 had not completed high school, a higher proportion than Malden (12%) and a proportion almost twice as high as the state (8.9%). Education rates also differed across racial and ethnic groups in the two cities, as they did in Massachusetts as a whole. Over 90% of White, non-Hispanic residents in the state and in each of the two cities had a high school diploma or higher. About 90% of Black residents in Malden and 86% of Black residents in both Everett and the state had a high school diploma or higher. Education rates were lower for Hispanic and Asian residents over 25: 71% of Asian residents and 72% of Hispanic residents in Everett had a high school diploma or higher; in Malden, 80% of Asian residents and 86% of Hispanic residents had a high school diploma or higher.

Figure 3. Educational Attainment, Percent Population 25 Years and Over, by Massachusetts and City/Town, 2016-2020

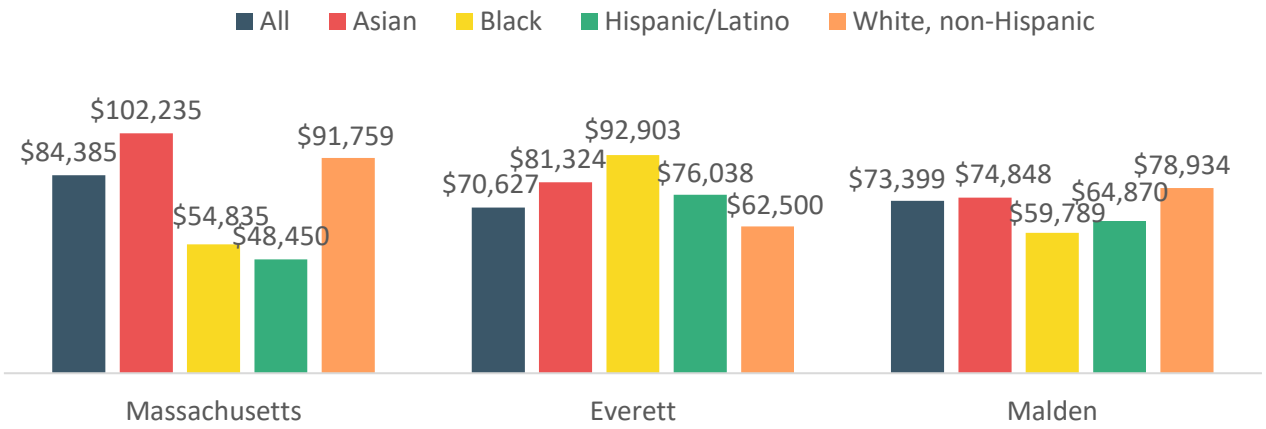


DATA SOURCE: U.S. Census Bureau, American Community Survey, 5-Year Estimates, 2016-2020

Income and Poverty

Median household incomes in Malden ($73,399) and Everett ($70,627) were lower than the state ($84,385), although there are differing patterns across racial and ethnic groups (**Figure 4**). In Everett, Black residents had the highest median household income across groups ($92,903), while White residents were seen to have the highest in Malden ($78, 934).

Figure 4. Median Household Income, by Race/Ethnicity, by Massachusetts and City/Town, 2016-2020

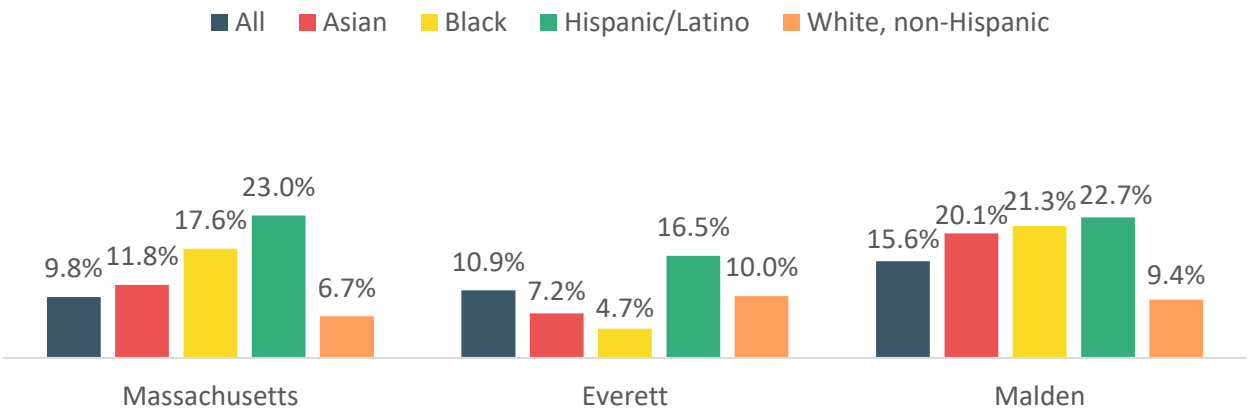


DATA SOURCE: U.S. Census Bureau, American Community Survey, 5-Year Estimates, 2016-2020
NOTE: Asian and Black categories include individuals identifying as the race categories alone (i.e., only identifying as one race), and may identify as Hispanic/Latino

While Massachusetts and Everett had similar rates of poverty (9.8% and 10.9%, respectively), a higher proportion of Malden residents (15.6%) lived below the poverty line (**Figure 5**). A smaller proportion of Everett residents across most racial and ethnic groups lived in poverty compared to Malden and the state. The proportion of Asian (20.1%) residents living in poverty in Malden was three times higher than in Everett (7.2%), and the proportion of Black residents living in poverty is over four times higher (21.3% and 4.7%, respectively). Malden has a higher rate of Hispanic residents living in poverty (22.7%) than Everett (16.5%), about the same rate as the state (23.0%).

Data about children in poverty revealed that Malden (17.3%) and Everett (15.0%) saw higher rates of families with children living in poverty than the state overall (10.3%). Mirroring overall poverty rates, a higher proportion of children from Asian, Black, and Hispanic families lived in poverty in Malden (8.1%, 15.4%, and 15.6%, respectively) than in Everett (2.4%, 2.5%, and 13.1%, respectively).

Figure 5. Percent Individuals Living Below Poverty Level, by Race/Ethnicity, by Massachusetts and City/Town, 2016-2020



DATA SOURCE: U.S. Census Bureau, American Community Survey, 5-Year Estimates, 2016-2020
NOTE: Asian and Black categories include individuals identifying as the race categories alone (i.e., only identifying as one race), and may identify as Hispanic/Latino

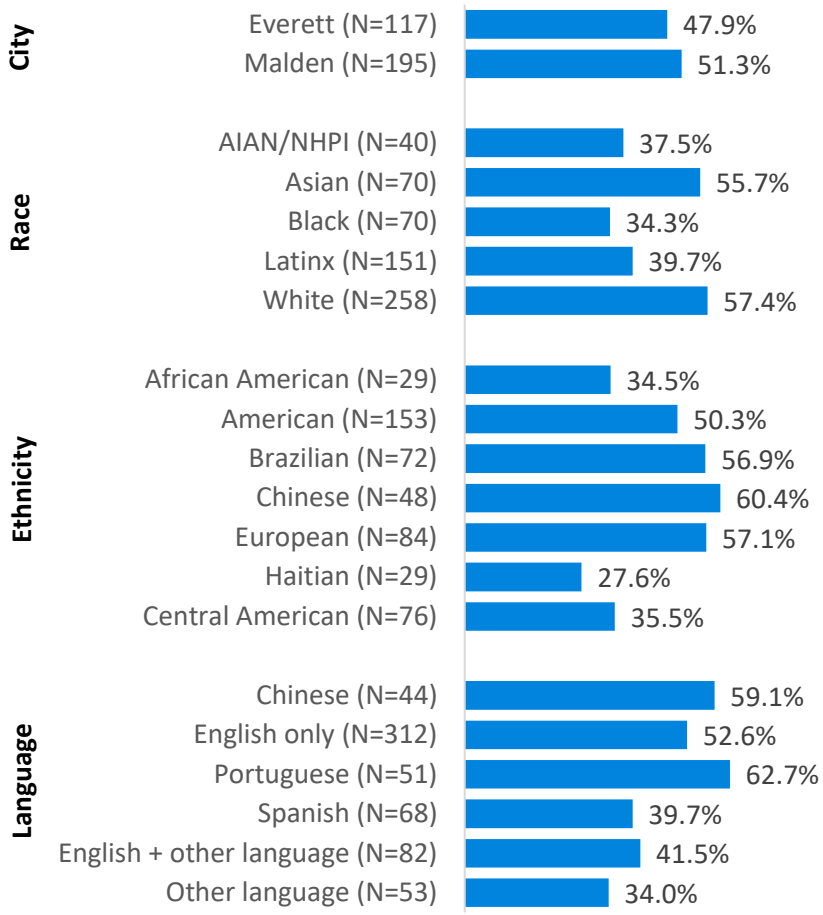
Access to Care

Based on the CHA Wellbeing Assessment community survey preliminary findings, survey respondents from Everett and Malden shared similar views on whether health care in the community meets their physical health needs, with about half of respondents saying that it is true that health care in the community meets their physical health needs (47.9% and 51.3%, respectively)

(

Figure 6). The figure also presents these data by sub-groups. There were some differences in responses across racial, ethnic, and language groups: for example, the lowest proportions of respondents feeling that health care in their community meets their physical health needs were seen among Haitian respondents (27.6%), Black respondents (34.3%), and African American respondents (34.5%).

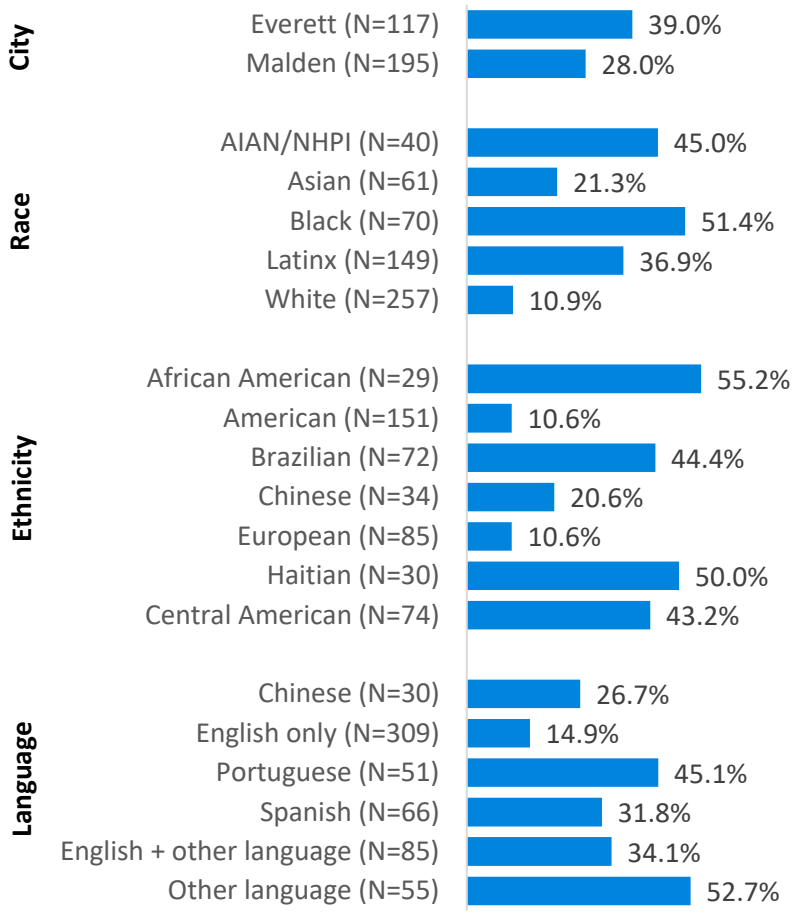
Figure 6. Percent Wellbeing Assessment Survey Respondents' Reporting It Is True That Health Care in Community Meets Physical Health Needs, by Select Sub-Groups, 2022



DATA SOURCE: CHA Wellbeing Assessment Community Survey, 2022
NOTES: AIAN/NHPI stands for American Indian or Alaska Native, or Native Hawaiian or Pacific Islander; race categories include respondents identifying as Latinx, with exception to White; Central American includes respondents identifying as Salvadoran, Guatemalan, or Honduran; sub-group analyses by race, ethnicity, and language include all survey respondents (not limited to those residing in Everett and Malden).

The Wellbeing Assessment community survey also asked about respondents' need to access different types of healthcare (e.g., dental (mouth) care).
Figure *7* presents these data by select sub-groups. Over one in three respondents living in Everett reported that they needed dental care but were not able to access it in the past year (39.0%), compared to just over one in four respondents living in Malden (28.0%). Similar trends were seen among African American respondents (55.2%), Black respondents (51.4%), and Haitian respondents (50.0%) – in that the largest proportions of respondents within these groups reported to have needed dental care but was not able to access it.

Figure 7. Percent Wellbeing Assessment Survey Respondents' Reporting They Needed Dental (Mouth) Care But Was Not Able to Access in Past Year, by Select Sub-Groups, 2022



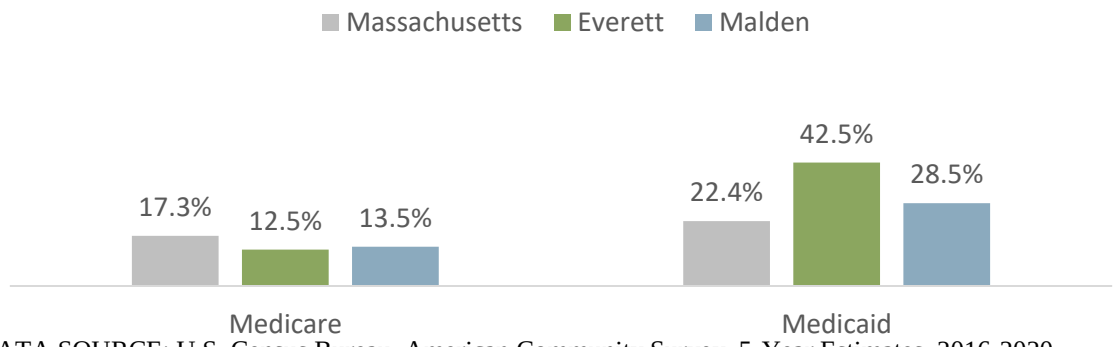
DATA SOURCE: CHA Wellbeing Assessment Community Survey, 2022
NOTES: AIAN/NHPI stands for American Indian or Alaska Native, or Native Hawaiian or Pacific Islander; race categories include respondents identifying as Latinx, with exception to White; Central American includes respondents identifying as Salvadoran, Guatemalan, or Honduran; sub-group analyses by race, ethnicity, and language include all survey respondents (not limited to those residing in Everett and Malden).

Health Insurance Coverage

Mirroring population patterns, both Everett (12.5%) and Malden (13.5%) had a lower proportion of residents covered by Medicare than the state (17.3%) (

Figure 8). Both cities had a higher proportion of residents covered through Medicaid than the state. Over 40% of Everett residents are covered by Medicaid, substantially higher than Malden (28.5%) and the state (22.4%).

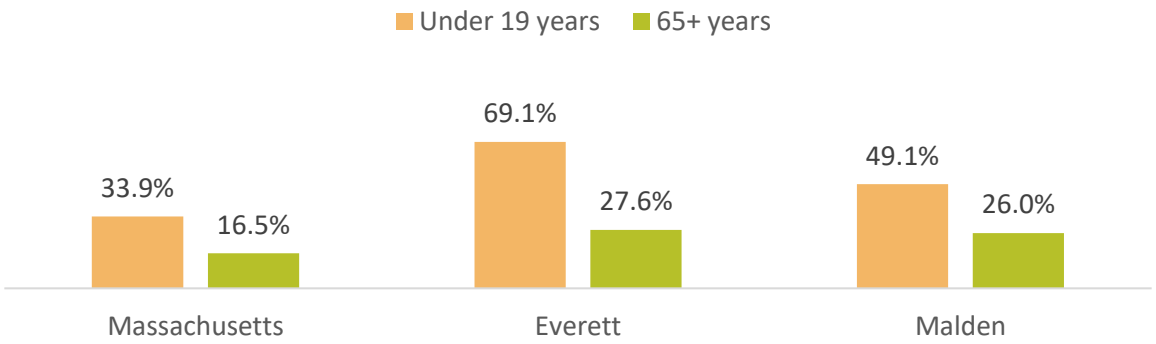
Figure 8. Percent Civilian Noninstitutionalized Population with Public Insurance Coverage, by Insurance Type, by Massachusetts and City/Town, 2016-2020



DATA SOURCE: U.S. Census Bureau, American Community Survey, 5-Year Estimates, 2016-2020
NOTE: Civilian noninstitutionalized population includes individuals not residing in institutions such as nursing homes, incarceration or correctional facilities, or mental hospitals; Medicare and Medicaid categories include individuals who only have the coverage or in combination

Almost 70% of children in Everett were covered through Medicaid, a higher proportion than in Malden (49.1%) and over twice as high as for the state (33.9%) (**Figure 9**). Both Everett and Malden had a higher proportion of senior residents (27.6% and 26.0%, respectively) covered by Medicaid compared to the state (16.5%).

Figure 9. Percent Civilian Noninstitutionalized Population with Medicaid, by Age, by Massachusetts and City/Town, 2016-2020



DATA SOURCE: U.S. Census Bureau, American Community Survey, 5-Year Estimates, 2016-2020
NOTE: Civilian noninstitutionalized population includes individuals not residing in institutions such as nursing homes, incarceration or correctional facilities, or mental hospitals; Medicaid includes individuals who only have Medicaid coverage or in combination with other types of coverage

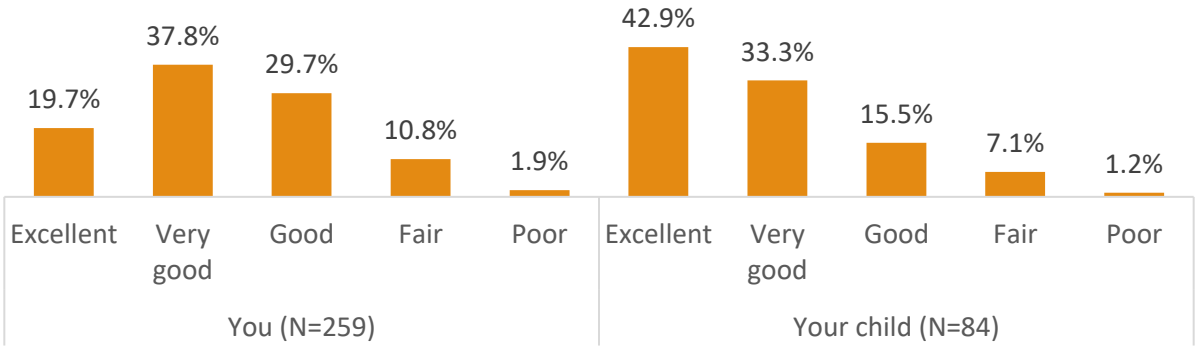
Oral Health Community Survey Findings

This section describes the results of the community survey fielded as part of this oral health assessment. The purpose of the survey was to better understand oral health status, attitudes and behaviors related to oral health care, and barriers to accessing dental care across a broad range of respondents who live, work, go to school, and/or use services in Everett or Malden. Overall survey results are presented below. Sub-group analyses where notable (and/or statistically significant) differences across sub-groups are described. It should be noted, however, that in some cases, the number of respondents in these groups is small and results should be interpreted with caution.

Health Status and Satisfaction with Oral Health

Survey respondents reported to be largely healthy, with over half reporting that their overall health was very good or excellent, while over 75% of survey respondents who were parents with children under the age of 18 described their children's health as very good or excellent (
Figure *10*). Furthermore, when looking within sub-groups, while not statistically significant, twice as many BIPOC survey respondents (16.8%, n=22) as non-BIPOC respondents (8.8%, n=11) described their overall health as fair or poor.

Figure 10. Survey Respondents' Reported Overall Health Status For Themselves and Their Children, 2022



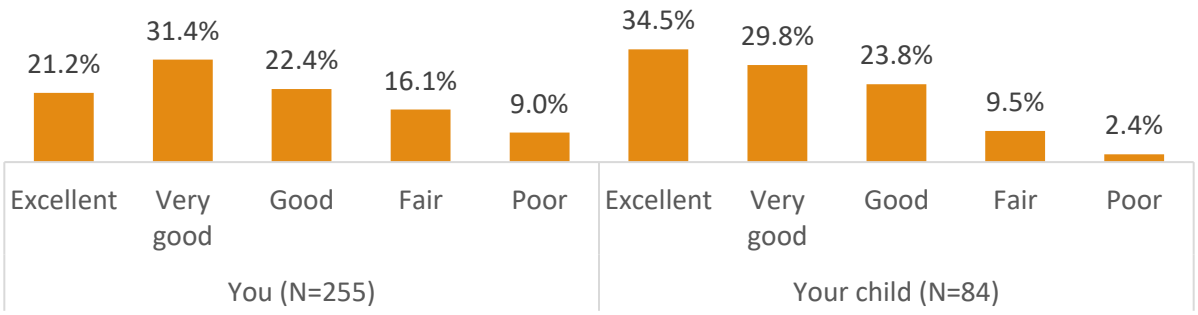
DATA SOURCE: Cambridge Health Alliance Oral Health Community Survey, 2022

Survey respondents' assessment of their oral health status mirrored their assessment of overall health status with over 50% reporting that their oral health status was very good or excellent (

Figure 11). Among BIPOC respondents, 32.6% (n=42) reported their oral health to be fair or poor, compared to 16.3% (n=20) of non-BIPOC respondents – which is a statistically significant difference (p=0.003, chi-square).

Similarly, according to survey respondents identifying as parents, a large percentage reported that their children had very good or excellent oral health (64.3%). No notable differences were seen among sub-groups.

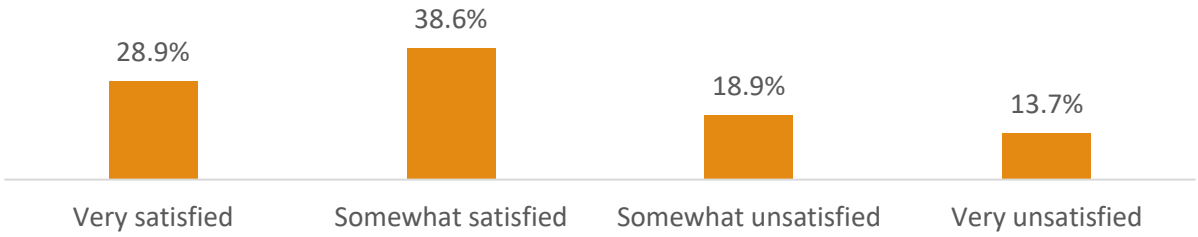
Figure 11. Survey Respondents' Reported Oral Health Status For Themselves and Their Children, 2022



DATA SOURCE: Cambridge Health Alliance Oral Health Community Survey, 2022

In terms of satisfaction with their teeth, over half of survey respondents reported that they were somewhat or very satisfied with the way their teeth looked (67.5%), with slightly over one quarter being very satisfied (28.9%) (**Figure 12**). Differences across sub-groups were observed around self-reported satisfaction with teeth. A larger proportion of BIPOC respondents reported to be somewhat or very unsatisfied with their teeth compared to non-BIPOC respondents (40.0% and 24.6%, respectively), which was a statistically significant difference (p=0.01, Fisher's Exact Test). Similarly, 40% of respondents who were covered by Medicaid and/or Medicare reported that they were somewhat or very unsatisfied with the way their teeth looked, compared to over a quarter of respondents not covered by Medicaid and/or Medicare – not a statistically significant difference (p=0.06, Fisher's Exact Test).

Figure 12. Survey Respondents' Reported Satisfaction with the Way Their Teeth Look, 2022 (N=249)



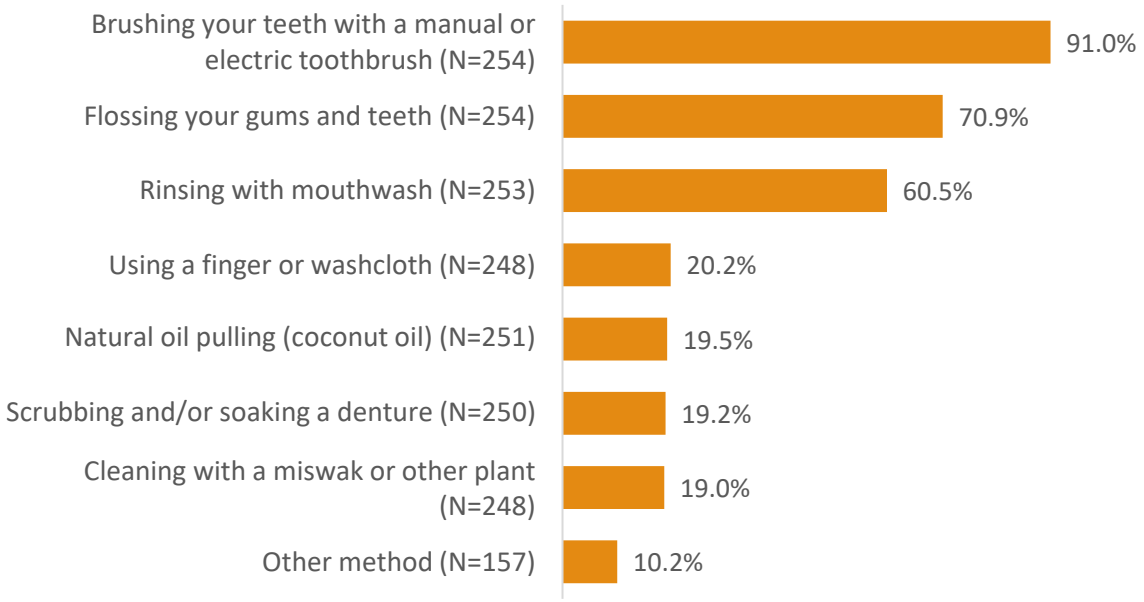
DATA SOURCE: Cambridge Health Alliance Oral Health Community Survey, 2022

Oral Health Behaviors and Practices

Survey respondents were also asked about how often they cleaned their teeth or mouth via a variety of methods (e.g., brushing teeth, flossing, etc.). Over 90% of survey respondents reported that they often or always brush their teeth with a manual or electric toothbrush, followed by 70.9% reported they often or always flossed their gums and teeth, and 60.5% rinsed with mouthwash (

Figure 13).

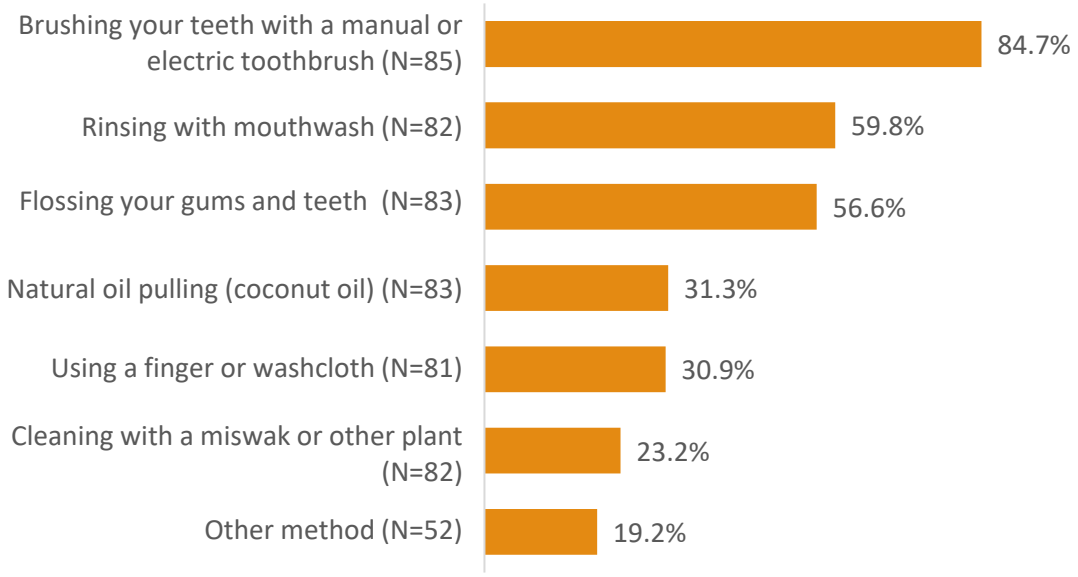
Figure 13. Survey Respondents' Methods for Cleaning Teeth and/or Mouth (Percent Reporting Often or Always), by Cleaning Methods, 2022



DATA SOURCE: Cambridge Health Alliance Oral Health Community Survey, 2022
NOTE: Data are arranged in descending order by percent often/always

Over 80% of survey respondents identifying as parents of at least one child under 18 reported that their children brush their teeth or have their teeth brushed often or always (**Figure 14**). As with adults, methods such as oil pulling, cleaning with a miswak or other plant, or using a finger or washcloth were less common.

Figure 14. Survey Respondents' Children's (Under 18 Years) Methods for Cleaning Teeth and/or Mouth in Typical Week (Percent Reporting Often or Always), by Cleaning Methods, 2022



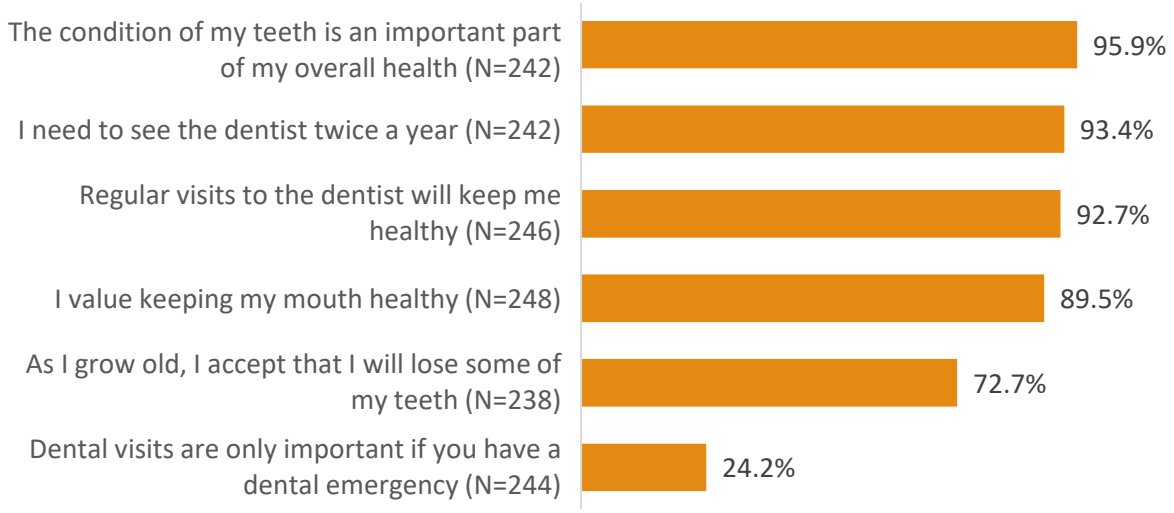
DATA SOURCE: Cambridge Health Alliance Oral Health Community Survey, 2022
NOTE: Data are arranged in descending order by percent often/always

Oral Health Perceptions

Additionally, survey respondents were also asked about their perceptions of or beliefs about oral health, as shown in **Figure 15**. Overall, survey respondents reported that they value good oral health and hygiene and appreciate the importance of oral health to overall health. Over 90% of respondents reported they agreed or strongly agreed ***the condition of their teeth is an important part of their overall health*** (95.9%), ***they need to see the dentist twice a year*** (93.4%), and ***regular visits to the dentist will keep them healthy*** (92.7%).

However, a majority of respondents (72.7%) agreed or strongly agreed that ***as they grow old, they accept that they will lose some of their teeth*** and nearly one quarter agreed or strongly agreed that ***dental visits are only important if they have a dental emergency*** (24.2%). When looking at sub-groups, almost one in three BIPOC respondents (31.7%) reported agreeing or strongly agreeing that ***dental visits are only important if they have a dental emergency***, compared to 16.0% of non-BIPOC respondents – a statistically significant difference (p=0.004, Fisher's Exact Test).

Figure 15. Percent Survey Respondents Agreed or Strongly Agreed with Oral Health Perceptions, 2022



DATA SOURCE: Cambridge Health Alliance Oral Health Community Survey, 2022
NOTE: Data are arranged in descending order by percent agree/strongly agree

Difficulties Due to Problems with Oral Health

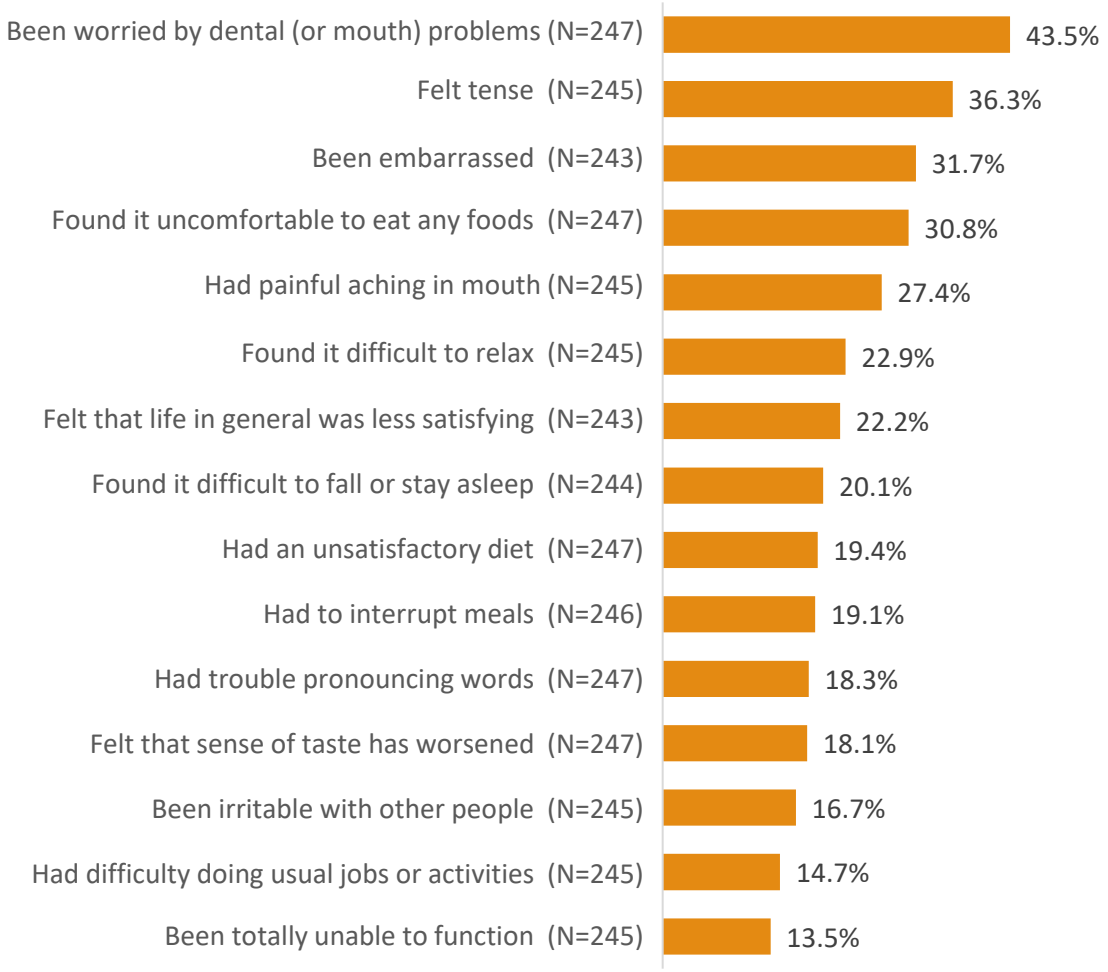
Many survey respondents indicated that they faced limitations or quality of life impacts attributed to their oral health, as shown in

Figure 16. Most often respondents reported emotional challenges connected to their oral health: almost half of survey respondents reported that they often or always ***worried about dental or mouth problems*** (43.5%) and one in three respondents reported that they often or always ***felt tense*** (36.3%) or ***have been embarrassed about their teeth, mouth, or dentures*** (31.7%). Survey respondents also reported experiencing physical discomfort: nearly one third of respondents reported that they often or always ***found it uncomfortable to eat any foods*** (30.8%) and over one in four ***had painful aching in their mouths*** (27.4%).

When examining results among BIPOC respondents compared to non-BIPOC respondents, there were some notable differences seen with regard to experiences of difficulties due to problems with teeth, mouth, or dentures. For example, over half of BIPOC respondents reported to have often or always ***been worried by dental or mouth problems*** (52.5%, n=63) compared to about one third of non-BIPOC respondents (34.5%, n=41) – a statistically significant difference (p=0.006, Fisher's Exact Test). Almost half of BIPOC respondents reported they often or always ***felt tense because of problems with their teeth or mouth*** (46.2%, n=54), compared to 28.6% (n=34) of non-BIPOC respondents, which is a statistically significant difference (p=0.007, Fisher's Exact Test). Additionally, a higher proportion of BIPOC respondents reported they often or always ***found it uncomfortable to eat any foods*** (41.7%, n=50) compared to non-BIPOC respondents (21.9%, n=26) – a statistically significant difference (p=0.001, Fisher's Exact Test).

When looking by public dental coverage, one third (33.3%) of respondents who were covered by Medicaid or Medicare for their dental insurance reported that they often or always ***felt life in general was less satisfying because of problems with teeth, mouth or dentures*** compared to 16.4% of those without public insurance (p=0.006, Fisher's Exact Test).

Figure 16. Survey Respondents' Reported Experiences of Difficulties Due to Problems with Teeth, Mouth, or Dentures in Past Six Months (Percent Reporting Often or Always), 2022



DATA SOURCE: Cambridge Health Alliance Oral Health Community Survey, 2022
NOTE: Data are arranged in descending order by percent often/always

Access to Oral Health Care

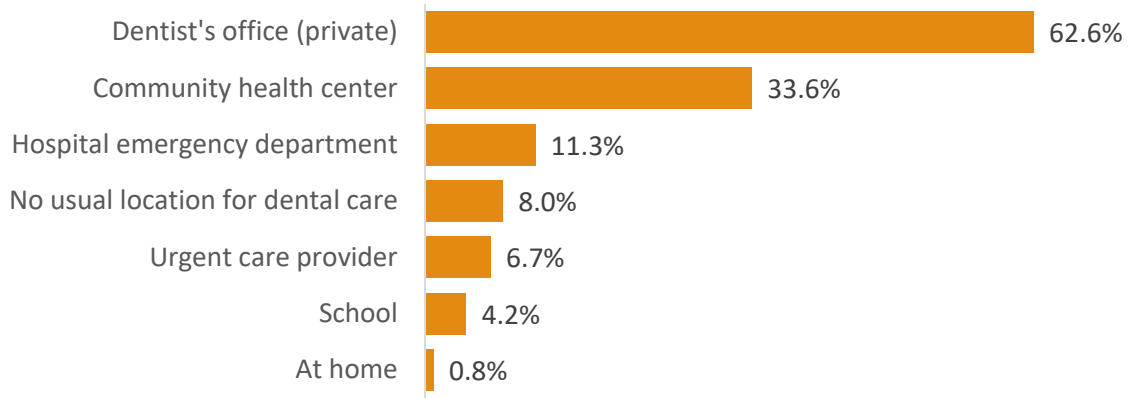
The majority of all survey respondents reported that they have a regular dentist (80.6%). Responses differed across different groups. When looking by race/ethnicity, about one quarter of BIPOC respondents reported that they do not have a regular dentist or hygienist (25.8%, n=31), compared to 12% (n=14) for non-BIPOC respondents – a statistically significant difference (p=0.008, Fisher's Exact Test).

As shown in **Table 1**, over 80% of all respondents reported to have at least one form of dental insurance – with nearly one third reporting having employer-based insurance (32.2%), followed by 31.7% reporting to have dental coverage through Medicaid (or MassHealth), and 27.4% reporting to have private insurance (not employer-based). When looking by race/ethnicity, 44.3% (n=50) of BIPOC respondents reported to have dental insurance through Medicaid or MassHealth compared to 20% (n=20) of non-BIPOC respondents – a statistically significant difference (p=0.0001, Fisher's Exact Test).

In terms of dental care sources, over 60% of survey respondents reported that they usually get their dental care from a private dentist (65.6%), while another 33.6% go to a community dental clinic (**Figure 17**).

Additionally, some notable differences were seen when looking at reported dental care sources by certain sub-groups. For example, one in eight BIPOC respondents reported to not have a location where they usually get dental care (12.5%, n=15) compared to 2.6% (n=3) of their non-BIPOC counterpart, which is a statistically significant difference (p=0.006, Fisher's Exact Test). Use of emergency rooms for dental care was higher among respondents with public dental insurance: 18.8% (n=16) of respondents with public health insurance (Medicaid and/or Medicare) reported that they get their dental care form an urgent care provider, compared to 7.6% (n=11) of respondents not covered by Medicaid and/or Medicare (p=0.02, Fisher's Exact Test).

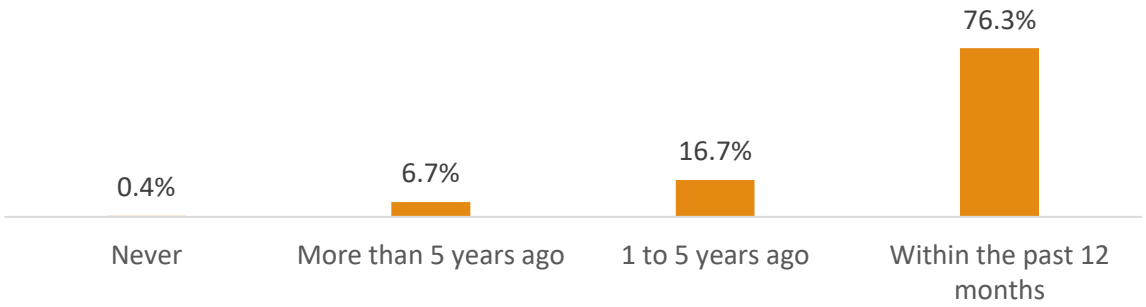
Figure 17. Survey Respondents' Reported Usual Source of Dental Care When Needed, 2022 (N=238)



DATA SOURCE: Cambridge Health Alliance Oral Health Community Survey, 2022
NOTE: Data are arranged in descending order

Nearly three-quarters of all survey respondents reported that they had seen a dentist within the last 12 months (
Figure 18). While there was variation between groups in stratified analyses, few rose to the level of statistical significance. One notable difference was seen in one specific sub-groups -- a smaller proportion of Brazilian or Portuguese respondents reported to have had a dental check-up within the past year (50.0%, n=11) compared to non-Brazilian or Portuguese respondents (79.4%, n=170) (p=0.001, Chi-square test). However, it is important to state that the sample size of this group is very small, and results should be interpreted with caution.

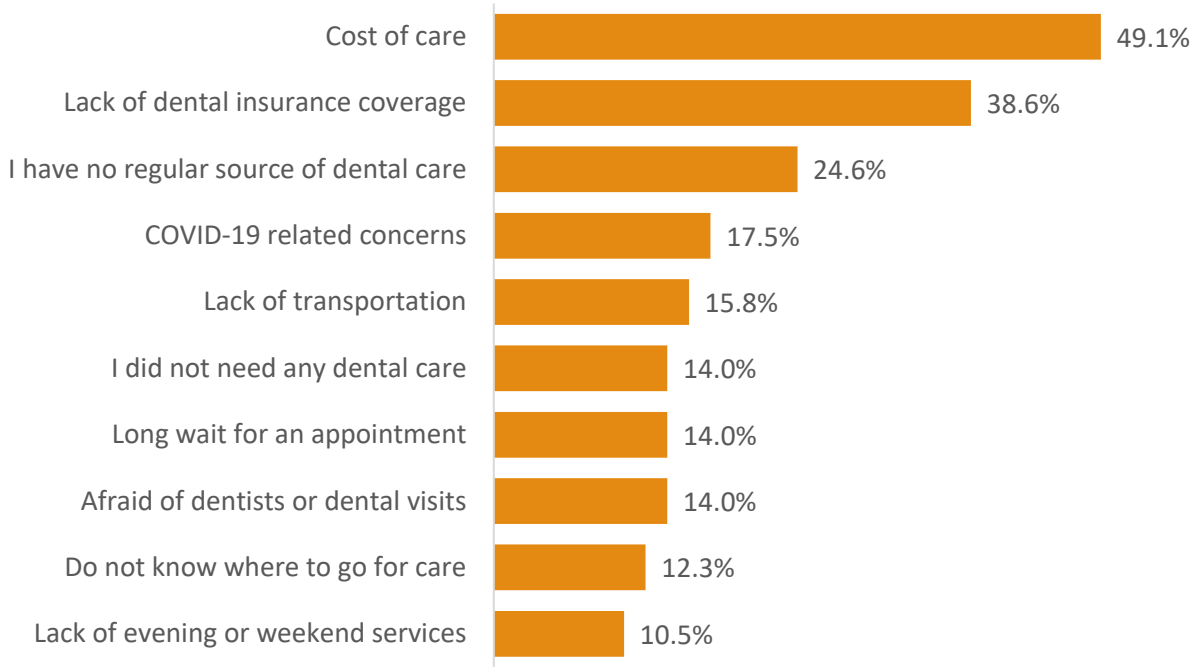
Figure 18. Survey Respondents' Reported Time Since Last Dental Check-Up, 2022 (N=240)



DATA SOURCE: Cambridge Health Alliance Oral Health Community Survey, 2022

Slightly less than one quarter of all survey respondents reported that they had not visited a dentist or hygienist in the past year. When asked about reasons for this, respondents most often cited the cost of care (49.1%), followed by lack of dental insurance coverage (38.6%), and not having a regular source of dental care (24.6%) (**Figure 19**).

Figure 19. Survey Respondents Reported Reasons for Not Visiting a Dentist or Hygienist in Past Year (Among Those Who Have Not Had a Dental Check-up in Past Year), 2022 (N=57)



DATA SOURCE: Cambridge Health Alliance Oral Health Community Survey, 2022
NOTES: Data are arranged in descending order; reasons with fewer than five responses (<10%) are not presented in figure; question was only asked to respondents who indicated they had not had a dental check-up within the past 12 months

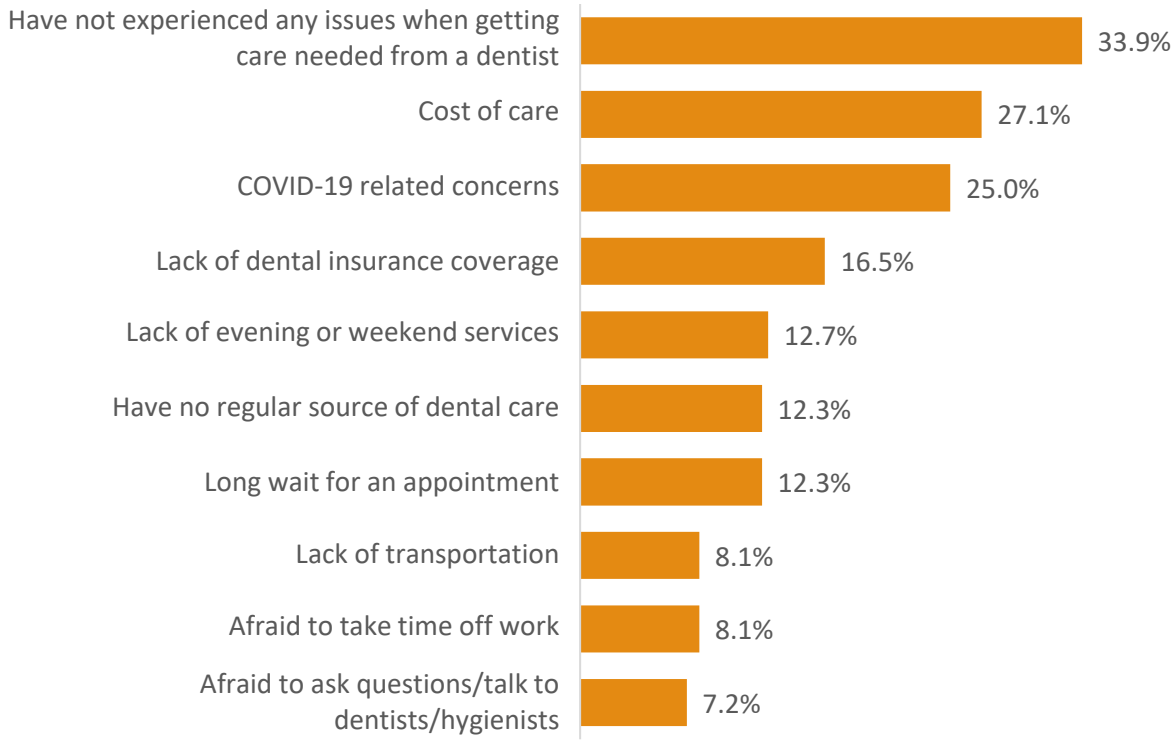
Furthermore, about 40% of survey respondents reported that there was a time in the past 12 months that they needed dental care but could not get it. Larger proportions of some sub-groups reported not getting dental care when they needed it: over half of BIPOC respondents (51.7%, n=60) vs. 30.6% (n=34) of non-BIPOC respondents (statistically significant, p=0.002, Fisher's Exact Test) and 45.0% (n=36) of respondents with dental coverage through Medicaid or MassHealth vs. 35.5% (n=49) of respondents without coverage through Medicaid (not statistically significant, p=0.195, Fisher's Exact Test).
When asked broadly about challenges that made it harder for them to get care they needed from a dentist or hygienist, about one third of all survey respondents reported to have not experienced any issues when getting dental care they needed. In terms of barriers, survey respondents most often cited cost of care (27.1%), COVID-19 concerns (25.0%), and lack of dental insurance coverage (16.5%) as making it harder for them to get dental care (
Figure 20).

Among BIPOC respondents, about 80% (n=97) reported to have experienced at least one of barrier making it harder for them to get dental care, compared to 50% (n=57) of non-BIPOC respondents – a statistically significant difference (p<0.0001, Fisher's Exact Test). Larger proportions of BIPOC respondents reported COVID-19 concerns and not having a regular source of dental care as barriers compared to non-BIPOC respondents (34.2%, n=41 vs. 14.9%, n=17 and 16.7%, n=20 vs. 7.0%, n=8,

respectively) – both of these being statistically significant differences (p=0.001 and p=0.03, Fisher's Exact Test, respectively).

Additionally, one in five respondents with dental coverage through Medicaid or MassHealth (19.1%, n=16) cited the lack of evening or weekend services as a barrier, compared to 9.2% (n=13) of respondents who do not have coverage through Medicaid – a statistically significant difference (p=0.04, Fisher's Exact Test).

Figure 20. Survey Respondents' Reported Barriers to Accessing Oral Health Care in the Past 12 Months, 2022 (N=236)



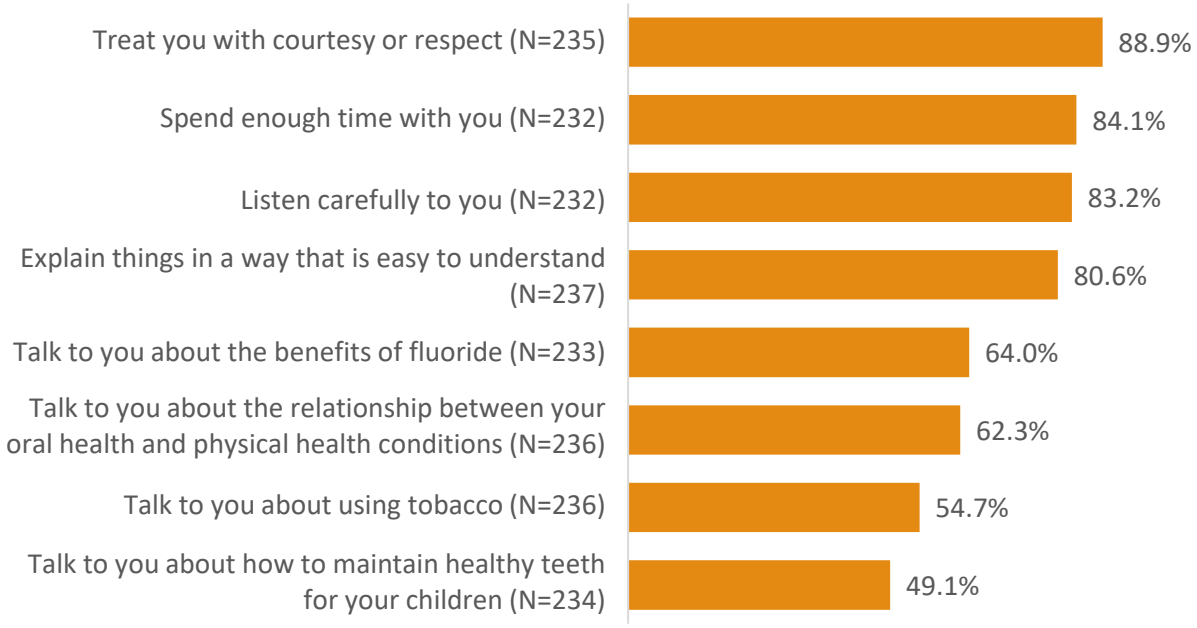
DATA SOURCE: Cambridge Health Alliance Oral Health Community Survey, 2022
NOTES: Data are arranged in descending order; reasons with fewer than ten responses (<5%) are not presented in figure

Experience with Providers

Lastly, the survey asked respondents about their experiences with dentists and hygienists. Overall, survey respondents reported positive interactions with their dental providers during visits, sharing that providers often or always ***treated them with courtesy or respect*** (88.9%), ***spent enough time with them*** (84.1%), ***listened carefully*** (83.2%), and ***explained things in a way that was easy to understand*** (80.6%) (**Figure 21**).

When looking by race/ethnicity, a number of notable differences were observed. A smaller proportion of BIPOC respondents reported their dentist often or always ***explained things in a way that was easy to understand*** compared to non-BIPOC respondents (79.7%, n=90 vs. 90.2%, n=101) – a statistically significant difference (p=0.04, Fisher's Exact Test). Furthermore, a smaller percentage of BIPOC respondents reported their dentist often or always ***spent enough time with them*** (83.3%, n=90) compared to 92.9% (n=104) of non-BIPOC respondents – also a statistically significant difference (p=0.04, Fisher's Exact Test).

Figure 21. Survey Respondents' Reported Experiences with Dentist or Hygienist During Visit (Percent Reporting Often or Always), by Situation, 2022



DATA SOURCE: Cambridge Health Alliance Oral Health Community Survey, 2022
NOTES: Data are arranged in descending order by percent often/always

Community and Stakeholder Discussions

Focus groups and interviews were conducted to understand existing assets, challenges, and gaps related to oral health from the perspectives of residents and oral health providers and community leaders who work in Everett and Malden. This section describes key themes that arose from these conversations.

Strengths and Assets of the Community

Across focus groups and interviews, diversity and social cohesion were identified as two of the most prominent strengths of the communities. Participants and interviewees pointed to large, hardworking immigrant groups in both communities, and in particular, a strong Brazilian culture in Malden. While racial and ethnic diversity were described most often by focus group participants and interviewees, one interviewee also noted that there is diversity in income and age within the two communities as well.

Everett and Malden were also described as communities with strong social cohesion. Residents pointed to close connections among neighbors and through community institutions, such as churches. Interviewees also shared that the communities have strong institutions, including schools and the CHA clinic.

> *"…neighbors have lived [here in Malden] since I was a child, people you catch up with when you see them outside, [bring] each other food in times of need."*
>
> - Focus Group Participant

Day-to-day Concerns for Community Residents

When discussing day-to-day concerns of residents, focus group participants and interviewees most often mentioned the social determinants of health, particularly for lower income residents and newer immigrants. Interviewees and focus group participants alike stated that housing is expensive, making it difficult for some residents to afford to stay in the area. Participants shared that homelessness has been growing in the communities. Participants also stated that the high cost of food and lack of access to healthy food in some areas of the cities has contributed to food insecurity, poor nutrition, and obesity among residents. Focus group participants cited the lack of well-paying jobs, inability to access transportation, and traffic and poor road maintenance as additional community concerns. It was also expressed that these community challenges have been exacerbated with the COVID-19 pandemic.

Concerns about the communities' youth were mentioned in a couple interviews and discussed in one focus group. Interviewees noted the negative impact the COVID-19 pandemic has had on young people's social and emotional health and the disruptions to academics. One focus group participant discussed the lack of community-based support services for youth.

Concerns related to accessing healthcare were also shared in interviews and during focus group discussions. The high cost of healthcare was a common theme. One focus group participant shared, "*[It's] not difficult to get care, but costs are high."* Other healthcare concerns mentioned included the lack of understanding of how health insurance works and lack of a prevention mindset that leads to delays when seeking healthcare. These factors, one interviewee noted, all contribute to poorer health outcomes for residents.

Perceptions of Oral Health

Across conversations, poor oral health status among residents of Malden and Everett was a theme. Several interviewees, all of whom work as dental or community services providers, mentioned a high rate of caries among children, as well as more serious issues such as broken teeth, premature loss of teeth, drifting dentition, and abscesses. One interviewee reported seeing more broken teeth and fractures than they have seen before, which they attributed to teeth grinding in response to the stress and emotional toll of the COVID-19 pandemic. Lack of preventative oral health care is a key factor leading to more serious oral health issues, according to interviewees.

Participants in focus groups echoed interviewees' perceptions, with many reporting that they were not satisfied with their own oral health. Some participants noted the serious negative effects of drug use on their teeth and gums, while other participants shared the challenges to oral health that come with aging. Some focus group members expressed dissatisfaction with their oral health, despite taking care of their teeth.

> *"My teeth aren't too great. I lose a tooth every once in a while. I know I need to improve them. I brush and use mouth wash, but they still aren't great."*
>
> - Focus Group Participant

Poor oral health among children was mentioned in several conversations. Focus group participants and interviewees shared that parents tend to be less concerned about their children's baby teeth so they often do not take steps to care for these teeth. Interviewees observed that some parents lack understanding about oral health, which leads to practices such as giving children candy and soda and giving babies juice in their bottles. Interviewees providing dental services to children have observed fillings and restorative work in children's teeth; one stated that they have had to extract children's permanent teeth because they were not restorable. Another interviewee stated that many children have had fillings and restorative work, which they believed demonstrated that children have access to treatment when needed, but that families lack knowledge about how to prevent caries.

Furthermore, focus group conversations revealed that participants' overall understanding of the connection between oral and physical health is mixed. Some reported that they understood how important good oral health is to their wellbeing yet also stated that their primary care providers do not talk about this, while other participants reported that they did not think about this connection. Interviewees also shared mixed perspectives. A couple of interviewees stated that they believed residents do understand and appreciate the oral-physical health relationship. One interviewee shared an example of having several patients tell them that they feel their oral health is affecting their diet and diabetes. However, some interviewees thought there is insufficient understanding of this vital connection.

> *"Generally, people probably understand that dental health is connected to systemic health, but actual knowledge of dental health care is inadequate."*
>
> *- Key Stakeholder Interviewee*

Both focus group participants and interviewees shared that healthcare providers spend limited, and often no time, discussing oral health with their patients. Many focus group participants stated that their primary care physicians have not brought up oral health care for either themselves or their children and it is patients who must do so. One focus group participant shared that they had to ask their doctor about fluoride for their child. Another focus group participant stated, *"The problem is that [with] the PCP, if you don't bring up oral health issues yourself, then they won't get addressed."* Focus group participants recalled that CHA had a Haitian doctor at one time who did ask about oral health, which they appreciated.

Frequency of Regular Dental Visits or Check-Ups

Many focus group participants shared that they see or try to see a dentist regularly; for some, this had been more inconsistent during the COVID-19 pandemic. Others, however, reported that they seek dental care only when there is a problem. Some interviewees noted this pattern as well: lower income residents and other vulnerable groups tend to take a more reactive approach to oral health care. Cost is the primary reason for delayed dental care according to focus group members. A focus group participant explained, "*[The] problem isn't that we don't want [dental] care, it's the money."* Several focus group participants shared that they have sought dental care for one reason and then been told by a provider that more work (and more expenses) was necessary and that this is a reason they do not go to the dentist.

> *"I only go to the dentist when I need something done like getting a tooth pulled. I know dentists do cleanings and stuff, but I haven't really gone for that."*
>
> - Focus Group Participant

Perceptions of Access and Barriers to Oral Health Care

Focus group participants and interviewees stated that accessing oral health services in Everett and Malden can be difficult. In general, participants and interviewees stated that it was easier to access dental care for children than for adults. An interviewee noted that the HeadStart program requires a dental exam as part of registration and also offers some oral health education as part of programming. Focus group participants who were parents of children shared that reminders sent for pediatric dental appointments are very helpful in keeping their children up-to-date with oral health care. Participants also stated that there is less access for those who are lower income and those without dental insurance. One interviewee noted that seniors in particular, are *"falling through the cracks"* because many are not covered by MassHealth yet no longer have dental insurance and face steep oral health costs. Focus group participants and interviewees identified several barriers that Everett and Malden residents face when trying to access dental care, as described below.

Cost of Care

As noted above, the high cost of dental care was mentioned as a challenge across all focus groups and interviews. A common theme in focus group discussions was additional cost beyond what insurance will cover. One focus group participant explained the challenge by saying, *"Insurance says they'll cover it, but then the dentist says you also need to pay x, y, z and then you end up paying the same amount the insurance was covering."* Finding lower cost dental providers is a constant struggle according to participants. Another focus group participant shared, *"Elderly people sometimes call the senior center [in Malden] to ask where to go. They desperately need care but can't afford it or don't know where to go."* A couple of focus group participants said that they choose to go to local dental schools for care because it is more affordable. Another pointed out that some residents go back to their home countries for dental care. As this participant stated, *"[some] prefer to get their dental treatments in Brazil…it's much cheaper."* Interviewees reported that some people choose to have teeth removed rather than replaced or restored as that is the most cost-effective option. Most often, participants stated, people forgo care, leading to more serious issues later on.

> *"[There are] plenty of private practices exist in Malden, but out of pocket expenses are too high for many Malden residents – [they must choose] between rent, groceries, oral health."*
>
> - Key Stakeholder Interviewee

Limitations of Insurance Coverage

Lack of comprehensive dental insurance coverage was another barrier identified in focus group discussions and interviews. Several participants specifically mentioned limitations on MassHealth dental coverage. One focus group participant explained, "*For me, MassHealth covers everything because I am pregnant, but [for my husband], it doesn't cover all and it's very expensive."* While MassHealth covers biannual cleanings, fillings, crowns, and root canals, the deeper cleaning needed to treat gum disease requires out-of-pocket costs. MassHealth does not cover orthodontic work, making it more difficult for lower income children to get braces. Medicare likewise has limitations on oral health services covered for seniors. An additional challenge seniors face, according to focus group participants, is understanding and navigating their dental insurance.

> *"[I] went to a dentist in Malden [who] took MassHealth….[they] did a deep cleaning and a regular cleaning. [I] didn't go back after because [I] couldn't afford it even with MassHealth."*
>
> - Focus Group Participant

Challenges with Getting Care from a Dental Provider or Getting a Dental Appointment

Focus group participants stated that it can be difficult to get oral health appointments. Finding a provider who accepts MassHealth is particularly challenging. As one focus group member stated, "*[I] have a hard time calling providers and asking if they take MassHealth*." Finding staff is a challenge facing all dental providers, according to one interviewee. One interviewee explained that low reimbursement for services by MassHealth can substantially constrain small private practices that want to continue to serve the underserved. As one interviewee explained, "*MassHealth pays providers as if providers are volunteers receiving a stipend."* As a consequence, an interviewee explained, fewer providers participate in MassHealth, some limit the number of MassHealth patients they take, and others raise fees for the uninsured and self-pay patients to make up for low reimbursement. For residents this can mean long wait times for appointments. As one focus group participant shared, "*I have a broken tooth…I have an appointment next week, but I called three weeks ago."*

> *"My mom tried to schedule an appointment in June, but they made one for July and then pushed it to September. After that, [they pushed it again] and [then] couldn't get an appointment at all."*
>
> - Focus Group Participant

Low Oral Health Literacy

Lack of understanding about how to care for teeth, the importance of prevention, and the oral-physical connection are all contributors to poor oral health according to interviewees. Several also noted that parents, particularly immigrant parents, do not understand the importance of caring for baby teeth and the connection between children's diets and their oral health. An interviewee observed that lack of understanding about the benefits of water fluoridation is also a challenge and that some parents distrust town water and see juice as a healthy alternative. Interviewees also pointed out that the lack of a prevention mindset is also a factor that negatively affects residents' oral health. Culture also plays a role, according to participants. Several participants explained that in many cultures, prevention is not emphasized, and people seek health and dental care only when they have a problem. In Haiti, one interviewee explained, dental care is seen as a luxury rather than a necessity, so many people will not pursue it if there are barriers.

Fear and Dental Anxiety

Fear is also a barrier to accessing oral health services according to interviewees and focus group participants. During the COVID-19 pandemic, people stayed away from healthcare and oral health offices out of fear of getting sick. As mentioned earlier, focus group participants also reported that some residents do not access oral health services because they fear learning that they need more extensive—and expensive—dental work. A member of the Haitian focus group explained,

> *"Older people may be missing teeth… [they are afraid of] going to the appointment and [having the dentist] find other issues."*
>
> - Focus Group Participant

Lack of Trust of/Good Experience with Providers

Lack of trust in providers is a factor that substantially affects healthcare access according to focus group participants and interviewees. Among immigrant groups, one interviewee noted, fear of engaging with any programs or healthcare services is a substantial barrier to obtaining timely health and oral health care. As described above, several focus group participants stated that their dental providers find new dental issues to addressed, at additional cost. This experience, participants shared, often dissuades them from seeking dental care or trusting dental providers. An interviewee working with community members agreed saying that residents tend to believe that *'If we go [to a dental provider], they will create a problem.'* Concerns about dentists' "bedside manner" arose in two focus groups. Some participants shared experiences with unprofessional and unfriendly interactions with their dentists. Other participants reported that their dentists did not explain in advance what they were doing; one participant said, "*I felt like they just used me as an experiment…they were not communicating what they're going to do."* Interviewees shared that time pressures during appointments often prevent providers from sitting down with patients and really talking to them.

> *"[I] went to the dentist to get teeth removed, but they seemed to add on more issues… [they] gave [me] a list of everything else that needed to be done. [It seemed like the] dentist just wanted to make more money."*
>
> - Focus Group Participant

Transportation

Although not a common theme in conversations, one interviewee shared that transportation, especially to lower-cost providers and dental clinics who can provide more specialized treatment, can be a barrier for some patients in Everett and Malden.

Gaps in Services and Community Suggestions for the Future

Below describes the gaps identified by focus group participants and interviewees in current oral health services and some suggestions for improvement they shared.

More Availability of Dental Providers

Focus group participants and interviewees saw a need for more dental providers, particularly those who accept MassHealth. Several participants suggested that more community-based dental providers were needed and recommended another federally qualified health center (FQHC) dental clinic in Malden, emergency dental services in Malden, expanded services at Sharewood, and creating a one-stop-shop that provides both health and dental care. One interviewee saw potential for increasing oral health services

access through schools by establishing on-site dental clinics for students, expanding sealant programs in schools, and engaging orthodontists to go into to the schools. Focus group participants suggested more up-to-date information about which providers accept public insurance. Several participants recommended that reimbursement rates should be increased to encourage more private dental providers to participate in MassHealth. Attention to individuals with special needs that are unable to be cared for by private dentists is a significant barrier for many families caring for those who may need additional support services in order to safely receive oral health care.

More Affordable Dental Care

The cost of dental care, as described above, is a substantial barrier to accessing care. Focus group participants and interviewees suggested that MassHealth and Medicare expand the services covered to reduce costs on residents. Some focus group members, in particular within the Haitian community, and a couple of interviewees also saw a need for financial assistance programs to help lower income residents pay for dental care and non-covered services.

Expanded Oral Health Literacy Programs

Numerous focus group participants saw a gap in oral health literacy programs and thought more of these types of programs and services should be available. Suggested topics included different types of toothbrushes, and which are best for whom, the benefits of water fluoridation, and the connection between oral and physical health. Focus group participants within the Haitian community and interviewees working with immigrant residents stressed the need to educate about prevention and the importance of seeking dental care when an issue first arises. Other focus group participants suggested conversations and education about oral health should also focus on helping people to feel more comfortable with going to the dentist and better equipped to talk about their teeth and mouth.

Focus group participants and interviewees identified a variety of venues through which to share oral health information including community events with dental providers at public parks, workshops for residents at community-based organizations, and through schools and school nurses. Focus group participants within the Haitian community also suggested educational events at churches and messaging through radio and television. Other focus group participants noted that social media outreach such as through Facebook could be effective; they also suggested that discussing oral health at Alcoholics Anonymous (AA) meetings and during recovery programs would reach those overcoming addiction. One participant recommended that dental clinics conduct outreach to people experiencing homelessness. Focus group members and interviewees stressed that multiple modes of information sharing are needed—written, verbal, visual—and that repeated messaging is important. Participants suggested more outreach to children about how to take care of their teeth, including young children, and described school principals and school nurses as vital partners. One participant suggested that oral health be integrated into school health and physical education curricula. Another recommended providing oral health "kits" to students in much the same way personal protective equipment (PPE) kits were distributed during the COVID-19 pandemic.

> *"The best way would be a combination of visual and verbal instructions. Creating pamphlets, going through with the parents, and describing potential complications of putting off dental health will all help the Malden community take their oral health more seriously on a daily basis."*
> - Focus Group Participant

Greater Engagement of Primary HealthCare Providers

Several participants saw a gap in engagement of health care providers, including primary care providers and pediatricians, in oral health care and believed that this should be addressed. As one interviewee

summed up, "*[We] need a broader, upstream view of oral health that is tied to other areas of health."* Various suggestions were provided by interviewees and participants. One interviewee recommended the 'Smiles for Life' program that is integrated into medical electronic health records (EHR) and prompts questions about dental care access and dental issues. This interviewee also noted pregnancy as a good time to talk to patients about oral health for themselves, partners, and children. Several participants noted the important role pediatricians play in supporting children's health and suggested that more should be done to encourage pediatricians to have conversations about oral health with their patients and families. An interviewee also suggested a more systemic approach by finding a way to bill for dental services through traditional health coverage; this, the interviewee stated, *"would help establish the importance of dental care for maintaining overall health."*

Participants provided several specific suggestions for better integration of oral health at CHA. A focus group participant suggested having care coordinators or general health providers at CHA discuss oral health with patients. Another focus group participant also suggested a more active role in oral health for healthcare providers saying that, "*If doctors are asking about our teeth, CHA doctors could arrange appointments for us with CHA dentists."*

> *"[My] daughter's father is homeless and has teeth missing but would have benefitted from dental care from the care coordinator [at CHA]. Only general health and medication were discussed."*
>
> - Focus Group Participant

Better Coordination Across Partners/New Partnerships

Interviewees pointed to the need for community-level approaches that connect dental care to other settings in order to take a more holistic approach to health and healthcare. As one interviewee noted, schools are seen as critical partners in reaching both students and their families and participants suggested that schools and school nurses play a more active role in supporting and messaging about oral health. Interviewees and focus group participants alike mentioned that trusted community institutions—including churches and other religious institutions, the Family Resource Center, and the Parent Information Center—can also share information about oral health and connect residents to needed services.

Enhance Cultural Competency

Several participants suggested that oral health providers could take steps to enhance cultural competency and, in some cases, overall interaction with patients. A couple of interviewees noted that need for expanded language capacity including more providers or interpreters for Portuguese and Spanish. A focus group participant within the Haitian community suggested that better understanding of the diets of different cultures could be helpful in oral health care. Other participants suggested that dental providers be more understanding of the experiences that patients have had and the barriers they face and how this affects their oral health. An interviewee noted that providers could also benefit from understanding the impact of trauma on patients' lives and their approaches to health and oral health care.

> "[The dental provider should] allow patients to take a breath, recollect, and give [them] options to make a decision rather than making them feel like they're being 'dumped on' because they can't afford something. [People have] anxiety surrounding not being able to afford services…fear that teeth will need to be removed."
>
> - Focus Group Participant

Conclusions

This oral health assessment brings together quantitative and qualitative data from a variety of sources to provide an overview of the current oral health status and perceptions of Everett and Malden residents, and explore community assets, as well as oral health resources and gaps. Overarching themes that emerge from this assessment include:

- **Malden and Everett are home to people from many different places**. Four in ten residents are foreign-born and roughly half speak a language other than English at home. Haitian, Brazilian, and Chinese residents comprise some of the largest population groups in the communities. Community survey results and discussions with focus group participants and interviewees suggest that BIPOC residents in Everett and Malden experience greater challenges to accessing oral health care than their non-BIPOC neighbors.

- **Malden and Everett saw lower median household incomes and higher poverty rates compared to the state.** When discussing day-to-day concerns of residents, focus group members and interviewees most often mentioned the social determinants of health, including expensive housing and growing homelessness, food insecurity, lack of well-paying jobs, and inability to access transportation.

- **Many Everett and Malden residents were covered through public health insurance.** Over 40% of Everett residents were covered by Medicaid, substantially higher than Malden (28.5%) and the state (22.4%). Almost 70% of children in Everett were covered through Medicaid, a higher proportion than in Malden (49.1%) and over twice as high as for the state (33.9%). Both Everett and Malden had a higher proportion of senior residents (27.6% and 26.0%, respectively) covered by Medicaid compared to the state (16.5%). Community survey results show that nearly one third (31.7%) of respondents had dental insurance through Medicaid. Challenges associated with accessing dental services for those covered by MassHealth was a frequent topic of conversation in focus groups and interviews.

- **While most respondents to the community survey and community focus group members described their overall oral health status as good, very good, or excellent, some reported being dissatisfied with the appearance of their teeth and worried or embarrassed about their teeth, mouth, or dentures.** Physical discomfort such as difficulty eating some foods and painful aching in their mouths were additional oral health challenges reported by survey respondents. Higher proportions of BIPOC respondents reported negative experiences due to problems with teeth or mouth than non-BIPOC respondents.

- **Poor oral health among children was mentioned as a concern in several conversations.** This was attributed to low parent concern about their children's baby teeth, and lack of understanding about oral health which leads to unhealthy practices. Overall, focus group members and interviewees suggested that more needs to be done to reach parents and children themselves with messaging about the importance of oral health and good oral hygiene practices.

- **Focus group participants and interviewees cited the lack of understanding about the importance of prevention, especially in some communities, as a substantial barrier to good oral health.** Survey results mirror this: nearly one quarter of survey respondents believed that dental visits are only important for a dental emergency. This perception was higher among BIPOC survey respondents. Many focus group participants shared that they see or try to see a

dentist regularly; others, however, reported that they seek dental care only when there is a problem. Interviewees who were dental providers noted this pattern as well: lower income residents and other vulnerable groups tend to take a more reactive approach to oral health care. Focus group participants and interviewees also saw potential for strengthening care coordination between primary care providers and dental providers, which may address this barrier to good oral health.

- **Over 80% of survey respondents reported that they have a regular dentist; over 60% of reported that they usually get their dental care from a private dentist, while another 34% go to a community dental clinic.** A larger proportion of BIPOC survey respondents reported to have a regular dentist than their counterparts. Focus group participants and interviewees stated that accessing oral health services, especially for adults, in Everett and Malden can be difficult. About 18% of survey respondents reported that they get their dental care from an emergency room or an urgent care clinic. Use of emergency rooms for dental care was higher among survey respondents with public health insurance (Medicaid or Medicare).

- **Among survey respondents, interviewees, and focus group participants, the cost of care was the most often-cited barrier to accessing oral health services.** A common theme in focus group discussions was the additional cost beyond what insurance will cover. Lack of comprehensive dental coverage was the second most common barrier according to survey respondents and a common barrier described by residents participating in focus groups. Limitations on MassHealth dental coverage was a substantial constraint to oral health access for those residents with public insurance. Slightly less than one quarter of survey respondents reported that they had not visited a dentist or hygienist in the past year.