2022 ORAL HEALTH NEEDS ASSESSMENT

PREPARED BY:

Community Health Administration

DC | HEALTH
GOVERNMENT OF THE DISTRICT OF COLUMBIA

WE ARE WASHINGTON DC
GOVERNMENT OF THE DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

Acknowledgments

DC | HEALTH
GOVERNMENT OF THE DISTRICT OF COLUMBIA

COMMUNITY HEALTH ADMINISTRATION

Thomas Farley, MD, MPH
Senior Deputy Director

Robin Diggs Perdue, MPH
Deputy Director of Strategy, Programs and Policy

Asad Bandealy, MD, MPH
Health Care Access Bureau, Bureau Chief

Khalil Hassam
DC Primary Care Office, Director

Urvi Patel, MHA
DC Oral Health Program, Manager

Ashley Vann, MPP
DC Primary Care Office, Public Health Analyst

Danyelle Gowie, MPH
DC Oral Health Program, Public Health Analyst

Frank Valliere, MA
DC Primary Care Office, Workforce Development Public Health Analyst

Table of Contents

List of Figures

List of Tables

Executive Summary

INTRODUCTION AND BACKGROUND

The 2022 Oral Health Needs Assessment (OHNA) serves as a comprehensive review of oral health in the District of Columbia developed by the DC Department of Health (DC Health). The first volume of this report describes characteristics of the District's diverse population, their relationship to oral health in the District, and the challenges to equitable access and distribution of oral health services. The report also examines the recent oral health landscape, providing a baseline insight into primary care and oral health integration, which can improve health outcomes of patients at co-located Federally Qualified Health Centers.

APPROACH

The Oral Health Needs Assessment will be presented in multiple volumes. In this first volume, DC Health sourced data from the Center for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS) and the DC Health Equity Report (DC HER) to understand the difference in utilization patterns across varied social and structural determinants of health. The 2017 Board of Dentistry (BOD) licensure survey and other data provided by the Health Regulation Licensing Administration (HRLA), in concert with data from Health Resources and Services Administration (HRSA), helped draw a picture of the current oral health landscape.

KEY FINDINGS

- Reported dental visits in the past year were lowest among adults in Wards 5, 7, and 8, indicating potential disparities in oral health care access.
- Of 268 District-wide preventive dental care access points identified in the 2017 Board of Dentistry Survey, only 39 percent were reported as accepting Medicaid and/or offering sliding fees for residents with low income.
- Education level, income, and unemployment affected reported dental visits: adults without a high school diploma, with earned income less than $15,000, and/or who were unable to work or unemployed for over a year were each less likely to have visited a dentist in the past year.
- There are 15 Federally Qualified Health Center sites that practice co-located dental and medical care. Of the 12 sites that responded to a survey, all 12 reported at least some element of integrated clinical practice.

Introduction

The 2022 Oral Health Needs Assessment (OHNA) is the first comprehensive review of oral health and oral health care in the District of Columbia (DC) published by the DC Department of Health (DC Health). As the first report of its kind published by DC Health, it serves as a baseline assessment of access, utilization, and primary care integration in the District. The OHNA will be published in multiple volumes over the coming months.

The first volume, presented here, provides

- background on the Primary Care Office's process for conducting the assessment (Chapter 1);
- an overview of DC community characteristics and the impact of social determinants on DC residents' oral health (Chapter 2); and
- an analysis of the District's oral health care landscape, including safety net infrastructure, workforce, and integration with primary care (Chapter 3).

Subsequent volume(s) will include analyses of dental coverage, oral health status, oral health risk behaviors, and utilization of oral health care services, dental homes, and emergency departments. In addition, recommendations will be provided for DC Health and other District oral health stakeholders on developing and sustaining an accessible, equitable oral health care system capable of providing high quality services in a cost-effective manner for those who live, work, and play in the District.

The OHNA is informed by the collection, compilation, and analysis of quantitative data related to oral health care utilization, need, demand, and supply in District, conducted by staff of the Health Care Access Bureau located within DC Health's Community Health Administration. The Health Care Access Bureau's mission is to improve access to and utilization of high quality, patient-centered health care, and is the organizational home of the Primary Care Office (PCO), which includes the Oral Health Program. The PCO is responsible for coordinating District activities and resources relating to primary care and oral health care services delivery and provider recruitment and retention. Key PCO activities include:

- conducting statewide analysis of unmet need, disparities, and health workforce issues;
- coordinating Health Professional Shortage Areas (HPSAs) and Medically Underserved Areas/Populations (MUA/Ps) designation process to ensure consistent accurate assessment of underservice, including data collection, verification, and analysis, as applicable;

- expanding primary care access through coordination of the District's Health Professional Loan Repayment Program (HPLRP), National Health Service Corps (NHSC), and Nurse Corps programs; planning and execution of other provider recruitment and retention activities; collaboration with health center planning and development; and collaboration with other governmental and non-governmental partners and organizations to support access to primary care services; and
- expanding oral health care access through coordination of the District's School-based Oral Health Program (SBOHP); planning and execution of workforce recruitment and retention activities; and collaboration with other governmental and non-governmental partners and organizations to support access to oral health care services.

The OHNA's findings are intended to guide oral health stakeholders and DC Health programs and policy, specifically in the areas of oral health care infrastructure, workforce, and service delivery models, and inform PCO oral health care workforce recruitment and retention activities.

1 | Background

The 2022 Oral Health Needs Assessment (OHNA) provides a baseline assessment of oral health status and oral health care access, coverage, utilization, and integration with primary care in the District of Columbia (DC). This chapter describes the Primary Care Office's (PCO) process for completing the first volume of the 2022 OHNA, including:

- the PCO's approach to compiling, reviewing, and analyzing data and other relevant information (section 1.1); and
- descriptions of key data sources used for the assessment (section 1.2).

Introductions to subsequent volumes will provide additional information on key data sources relied upon therein.

1.1 APPROACH

The DC Primary Care Office (PCO) compiled, reviewed, and analyzed a broad array of quantitative data, supplemented by reviews of relevant government and non-government reports and targeted reviews of the scientific literature.

To assess and describe demographic, socioeconomic, and geographic population characteristics and leading oral health-related risk factors, causes of morbidity/mortality, social and structural determinants of health, and at-risk populations in the District, the PCO relied primarily on quantitative data from the US Census Bureau's 2019 *American Community Survey (ACS),* the US Center for Disease Control and Prevention's *Behavioral Risk Factor Surveillance System (BRFSS),* as well as quantitative data compiled from a broad range of DC Government sources. Data reviews and analyses were supplemented by reviews of several recent DC government reports, including the 2018 *DC Health Equity Report (DC HER)*, the 2021 *COVID-19 Pandemic Health and Healthcare Recovery Report*, the 2017 *DC Health Systems Plan,* and the 2018 *State Medicaid Health IT Plan (SMHP)* and subsequent 2022 *SMHP Update,* as well as the DC Healthy Communities Collaborative's 2019 *District of Columbia Community Health Needs Assessment (CHNA).*

To assess the strength and capacity of DC's oral health care system, including infrastructure, workforce, service distribution, and integration of oral health and primary care, the DC PCO relied on the DC Board of Dentistry's (BOD) 2017 *Licensure and Survey Data* and the 2022 *Primary Care and Oral Health Integration Survey*, developed and administered by the PCO (see Appendix A).

1.2 DATA SOURCES

This section lists and provides a brief description of key data sources, including survey data years referenced in this assessment, as well as relevant DC government and non-government reports that were compiled, reviewed, and analyzed to inform volume one of the 2022 OHNA.

Survey Data

- **Behavioral Risk Factor Surveillance System (BRFSS; 2017, 2018).** National CDC survey that collects state-level data about residents regarding health-related risk behaviors, chronic health conditions, and preventive services use. National oral health data are collected biannually in even years, with states having the option to add state-specific questions each year. For this assessment, survey year 2018 is assessed along with state-added questions from survey year 2017. Data from 2018 are prioritized over 2020 data due to the impact of the COVID-19 pandemic on health care utilization.
- **DC Board of Dentistry (BOD) Licensure and Survey Data (2017).** The Health Regulation and Licensing Administration at DC Health is the home of the Board of Dentistry, which provided data files including licensure and survey response data on all dentists (Doctor of Medicine in Dentistry, or DMD, and Doctor of Dental Surgery, or DDS) licensed to practice in the District. Data from 2017 are prioritized over 2019 and 2021 data due to data completeness.
- **Primary Care and Oral Health Integration Survey (2022).** Adapted from the Virginia Department of Health Oral Health Integration Learning Collaborative Integration Assessment Tool, the survey was distributed by the PCO to Federally Qualified Health Centers with co-located medical and dental practices in the District, to collect site-level data on interprofessional competencies, health information exchange, patient resources, and overall perceived level of integration.
- **American Community Survey (ACS) 1-Year and 5-Year Estimates (2019).** The ACS is an ongoing nationwide survey conducted by the US Census Bureau that collects information on social, economic, and demographic characteristics. Datasets provide state-level information on an array of characteristics, including family composition, poverty, income, housing, and other data for DC residents, including by census tract and by ward.

DC Government Reports

- **DC Health Equity Report (2018).** The *Health Equity Report: District of Columbia 2018* (DC HER) is a comprehensive DC Health report focusing on social and structural determinants of health in the District. The report highlights nine key drivers of health outcomes, including both non-clinical (education, employment, income, housing, transportation, food environment, outdoor environment, and community safety) and clinical (medical care) drivers.

- **COVID-19 Pandemic Health and Healthcare Recovery Report (2021).** DC Health report addressing potential population health concerns resulting from the pandemic, including delayed preventative and chronic disease care; long-term effects of COVID-19 infection; economic impact and job loss; mental health stress, social isolation, trauma, and grief; and loss of academic, social, and emotional growth in children.
- **DC Health Systems Plan (HSP; 2017).** DC State Health Planning and Development Agency (SHPDA) report that provides a roadmap for the development of a comprehensive, accessible, equitable health care system capable of providing the highest quality services in a cost-effective manner to those who live and work in DC. The 2017 Health Systems Plan is informed by a comprehensive needs assessment that clarifies community need, barriers to care, unmet service need, provider capacity, and service gaps across all health service categories.
- **Other DC Government Sources.** Data was compiled from a broad range of DC Government sources, including DC Health, DC Office of Planning, DC Department of Housing and Community Development, DC Department of Health Care Finance, DC Department of Behavioral Health, and DC Department of Employment Services.

Federal Government Reports

- **Oral Health in America: Advances and Challenges (2021).** Report published by the National Institutes of Health (NIH) examining the status, opportunities, and challenges for oral health in the context of modern American society. As a follow up to the Surgeon General's Report on Oral Health in America, the report is a culmination of two years of research and writing by over 400 contributors.

Non-Governmental Reports

- **DC Community Health Needs Assessment (CHNA; 2019).** DC Healthy Communities Collaborative report providing a holistic view of drivers of community and population health in the District. The report analyzes key health, demographic, and socioeconomic data to better understand community health needs, challenges, and strengths, and identifies opportunities to better meet the District's and its residents' unique needs and challenges. The DC Healthy Communities Collaborative is a group of community health leaders and organizations formed in 2012 to assess and address community health needs in the DC area.

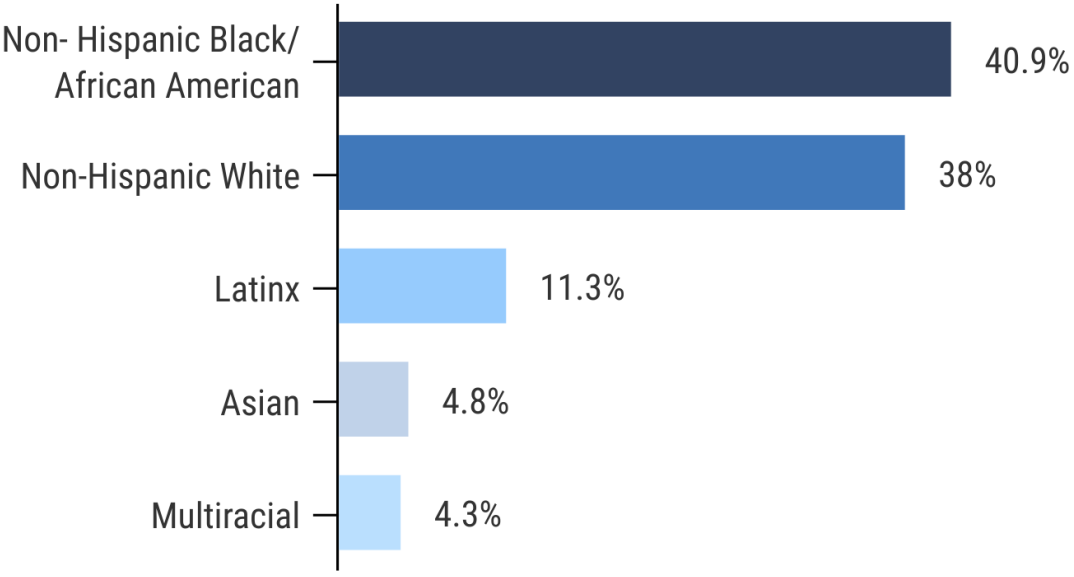
2 | Community Characteristics and Social Determinants of Health

The District of Columbia (DC) is a culturally, economically, and racially diverse global city that is home to nearly 700,000 residents; between 2010 and 2020, the District's population grew approximately 14.6 percent, representing the seventh highest growth rate in the nation. As the United States capital and seat of the federal government, DC is also largely a commuter city, with much of the city's workforce living in neighboring states, Maryland and Virginia. Despite being a federal district, DC still holds several state-level responsibilities. The District is organized into eight geopolitical wards for municipal purposes. This chapter presents a brief overview of DC demographic characteristics, particularly age, gender, and race, and their relationship to oral health outcomes (2.1) and social and structural drivers impacting DC residents' health (2.2).

2.1 DEMOGRAPHIC CHARACTERISTICS AND ORAL HEALTH

The District is one of the most diverse cities in the nation, comprising a plurality of non-white residents; Figure 2-1 provides a breakdown of DC residents by race and ethnicity.

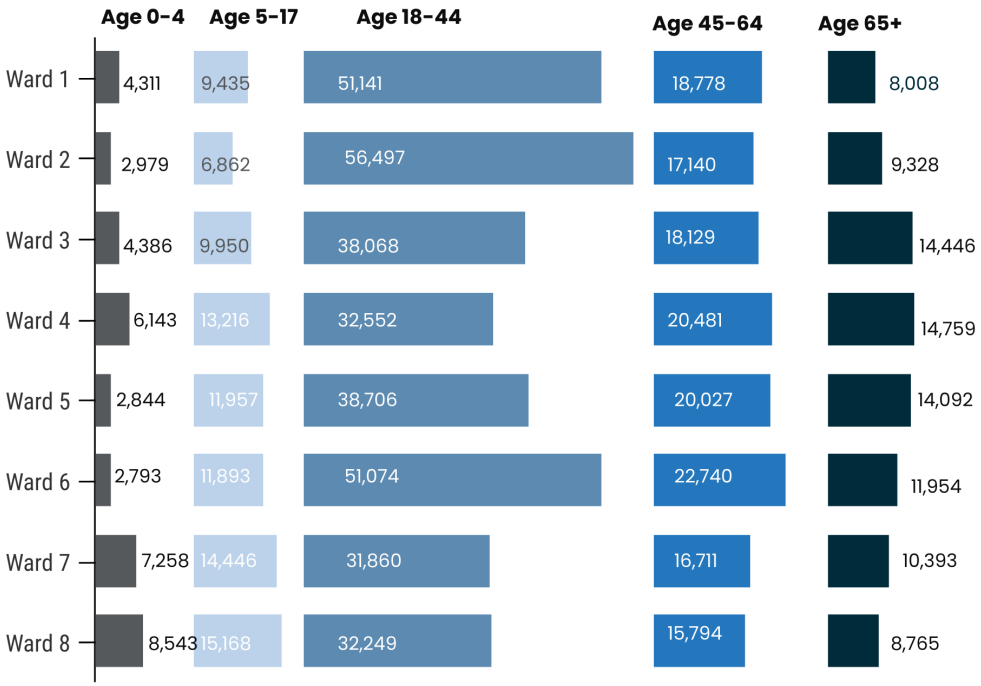
Figure 2-1: DC Population Characteristics — Race and Ethnicity



Source: U.S. Census Bureau, 2020 Census Redistricting Data (Public Law 94-171) Summary File

With a median age of 34 years, DC is also a relatively young city compared to the national median age of 38 years; Figure 2-2 provides a breakdown of age distribution by Ward.

Figure 2-2: DC Population Characteristics — Age Distribution by Ward



Source: U.S. Census Bureau, American Community Survey, 2019

Women represent approximately 52.6 percent of the District's population, a larger proportion than the 50.8 percent share of women in the US population as a whole.[1] Age, gender, and race are considered meaningful factors that impact oral health outcomes and health care access.

Age and Oral Health

Children and seniors represent particularly vulnerable age groups when it comes to oral health. Children under the age of six are at a special risk of developing early childhood caries, which can impact long-term oral health outcomes. In the District, there is a comprehensive public health insurance benefit covering children ages 0–20 years old and according to the National Survey for Children's Health 83.9 percent, of children ages 1–17 reported visiting a dentist in 2019–2020.

Seniors are at greater risk of developing age-related dental health conditions like dry mouth, root and coronal caries, and periodontitis,[2] and often experience greater difficulty accessing oral health resources, particularly when they retire and lose dental insurance benefits, as Medicare does not have a standard dental benefit.

Table 2-1: Visited a Dentist, Dental Hygienist, or Dental Clinic Within the Past Year, by Age

AGE	%	95% CONFIDENCE LIMITS	
1–5	65.7	53.7	75.9
6–11	91.8	79.0	97.1
12–17	92.3	81.9	96.9
18–24	77.7	71.5	83.9
25–34	75.0	70.8	79.2
35–44	75.7	71.5	79.9
45–54	74.7	71.1	78.3
55–64	68.8	65.0	72.6
65+	69.7	66.9	72.5

Source: National Survey of Children's Health, Health Resources and Services Administration, Maternal and Child Health Bureau, 2019; DC Behavioral Risk Factor Surveillance Survey, 2018

In 2018, reported dental care utilization was lowest among young children (ages 1–5) and older adults (ages 55+). For older adults, this is likely a reflection of coverage and access challenges, discussed in more detail in Section 2.2. For young children, this may reflect issues related to access, outreach, and family oral health literacy; the DC Health School-Based Oral Health Program is a stop-gap program intended to help alleviate such challenges, as discussed in more detail in Section 3.1.

Gender and Oral Health

During pregnancy, women are at greater risk of developing periodontitis and dental caries.[3] However, men generally experience higher rates of periodontal disease, oral cancer, and dental trauma resulting from a combination of biological, social, and gender-related factors, and are more likely to ignore their oral health and have poorer oral hygiene habits.[4]

Race and Oral Health

Oral health is not immune to the impact of structural racism and racial disparities in health outcomes. Compared to Non-Hispanic Whites, Black/African Americans with lower socioeconomic status suffer more from tooth loss, dental decay, dental pain, and chewing difficulties.[5] Moreover, African Americans report more financial difficulties and are less likely to seek dental care than their white counterparts.[6] Race and structural racism impact social and structural determinants of health, discussed in further detail in Section 2.2, below. Demographic factors are also likely to inform population-based differences

in forthcoming analyses of oral health care utilization, oral health status, and risk behaviors, which will be published in a subsequent volume of the 2022 OHNA.

2.1 Section Highlights:

- Non-Hispanic Black/African Americans, pregnant women, young children, and seniors are particularly vulnerable groups when it comes to oral health. Each group faces various challenges related to access, utilization, and oral health risk behaviors.
  - » Black/African Americans with lower socioeconomic status generally have poorer oral health status and are more likely to face financial challenges when accessing dental care.
  - » Pregnant women are at greater risk of developing cavities and gum disease.
  - » Young children risk developing cavities which can negatively impact oral health throughout their life.
  - » Seniors face greater dental accessibility challenges, related to retirement and loss of work-related dental benefits. Additionally, seniors had one of the lowest reported utilization rates for dental visits in 2018.

2.2 SOCIAL AND STRUCTURAL DETERMINANTS OF HEALTH

In 2018, DC Health published the inaugural *Health Equity Report: District of Columbia (DC HER),* providing "a baseline assessment of the social and structural determinants of health in the District," which revealed a stark contrast in the distribution of wealth, resources, and health outcomes across District wards and neighborhoods; for example, the report found a 21-year difference between the DC neighborhoods with the highest and lowest life expectancies. As highlighted in the DC HER, "evidence shows that overall, clinical care drives only 20 percent of population health outcomes, with the remaining 80 percent generated by non-clinical determinants."[7] The report identified nine key social and structural drivers impacting health, eight of which are non-clinical (see Box 2-1).

BOX 2-1: Key Social and Structural Drivers of Health

Education

Low educational attainment correlates with a risk for living in poverty as well as higher rates of fair or poor health, including higher prevalence of and poorer outcomes for a range of acute and chronic health conditions.

Employment

People who are employed have better health, and individuals and families supported by stable employment are better positioned to practice healthy behaviors consistently as well as utilize preventative medical services.

Income

Higher incomes and social status are linked with better health. Income inequality is linked with health disparities and poorer health outcomes. The greater the gap between the richest and poorest, the greater the difference in health outcomes.

Housing

Housing affordability relative to income is critical to determining how much households have left over to meet other basic needs. Households that are severely cost-burdened often endure financial strain and can end up making difficult tradeoffs between essentials such as food, utilities, and medical bills.

Food Environment

Food insecurity remains a major barrier to healthy eating. Food deserts and food swamps can compound negative health outcomes for entire communities. Improving ease of access to affordable and healthy food options is vital to reducing barriers.

Transportation

Poor access to public transportation is linked with decreased income and higher rates of unemployment, while decreased access to active transportation (e.g. walking and biking) is linked with decreased physical activity.

Outdoor Environment

Evidence suggests that proximity to green space provides a tangible health benefit, that this benefit is particularly apparent among low-income residents, and that it is more pronounced with closer proximity to that space.

Community Safety

Research shows that factors such as lack of jobs, racial and economic segregation, and concentrated poverty negatively impact neighborhood quality, community safety and quality of life. Cumulatively, these increase the likelihood of violence, compounding the effects of community and historical trauma.

Medical Care

Access to comprehensive, equitable health coverage that prioritizes health literacy and acknowledges the impact of implicit bias on care received can help to improve health outcomes for groups where these gaps still persist.

Source: *DC Department of Health (2018). Health Equity Report: District of Columbia 2018. https://app.box.com/s/yspij8v81cxqyebl7gj3uifjumb7ufsw*

The DC HER found significant differences in each of these drivers aligned with disparities in health outcomes across DC neighborhoods.[8] Most, if not all, of these factors are relevant to oral health; for example, the ability to access oral health care varies with age, education level, income, race, ethnicity, access to medical insurance, and geographic location. As shown in Table 2-2, in 2018, dental utilization was lowest in wards 5, 7, and 8;[9] wards 7 and 8 also happen to be predominantly Black/African American, and the primary location in the District where social and structural disparities aggregate.

Table 2-2: Adults Who Have Visited a Dentist, Dental Hygienist, or Dental Clinic Within the Past Year

LOCATION	%	95% CONFIDENCE LIMITS	
Ward 1	81.0	74.8	85.9
Ward 2	76.4	67.2	83.6
Ward 3	88.0	83.8	91.2
Ward 4	74.3	68.7	79.2
Ward 5	68.0	62.2	73.2
Ward 6	74.5	69.2	79.2
Ward 7	68.8	62.8	74.3
Ward 8	66.4	60.5	71.8

Source: DC Behavioral Risk Factor Surveillance Survey, 2018

Structural racism is a primary driver influencing the social and structural determinants of health and cannot be overlooked as a factor impacting oral health access, utilization, and outcomes. Table 2-3 shows dental utilization by race/ethnicity, highlighting particular disparities between non-Hispanic Black/African Americans and non-Hispanic White District residents.

Table 2-3: Race/Ethnicity — District Adults Who Have Visited a Dentist, Dental Hygienist, or Dental Clinic Within the Past Year

RACE/ETHNICITY	%	95% CONFIDENCE LIMITS	
White	83.2	80.6	85.5
Black/African American	65.2	62.4	68.0
Other	65.0	57.9	71.5
Hispanic/Latino	75.9	68.2	82.3

Source: DC Behavioral Risk Factor Surveillance Survey, 2018

Addressing the social and structural determinants is key to reducing health disparities and improving the oral health of all District residents; their relation to oral health and impacts on oral health utilization are explored here.

Education, Employment, Income

Overall, the District boasts one of the highest percentages of educational attainment in the nation, with 58 percent of DC residents age 25 years and older having earned a bachelor's degree or higher, compared to 32 percent nationwide.[10] However, some areas of the District, particularly Wards 7 and 8, also have high percentages of adults over 25 without a high school diploma who were also living in poverty.[11]

Table 2-4: Percent of DC Adults 25+ Without a High School Diploma

LOCATION	%
Ward 1	9.88
Ward 2	4.30
Ward 3	2.02
Ward 4	11.72
Ward 5	9.27
Ward 6	6.55
Ward 7	13.29
Ward 8	13.29

Source: US Census Bureau. Bachelor's Degree Attainment in the US 2005–2019

In 2018, District adults without a high school diploma were almost 25 percent less likely to have visited a dentist in the past year than those with a college diploma.

Table 2-5: Oral Health and Education Level — District Adults Who Have Visited a Dentist, Dental Hygienist, or Dental Clinic Within the Past Year by Education Level

EDUCATION	%	95% CONFIDENCE LIMITS	
Less than H.S.	55.6	47.4	63.7
H.S. or G.E.D.	68.1	64.0	72.3
Some post-H.S.	68.9	64.1	73.6
College graduate	81.0	79.0	83.0

Source: DC Behavioral Risk Factor Surveillance Survey, 2018

Education level not only impacts oral health care utilization, but also *oral health literacy*, defined as "the degree to which individuals have the capacity to obtain, process, and understand basic oral health information and services needed to make appropriate health decisions."[12] High oral health literacy often leads to better oral health habits and outcomes, whereas lower oral health literacy has been linked to poorer overall oral health status,[13] and increased risk of missed dental appointments[14] and not following preventive oral health care recommendations.[15]

Educational attainment also impacts employment status, job quality, earned income, and availability of employer-sponsored benefits (e.g. paid sick leave, health insurance), in turn impacting health care utilization and health outcomes.[16] By employment status, as highlighted in Table 2-6, oral health care utilization among District residents in 2018 was lowest among adults who were unable to work or unemployed.

Table 2-6: Oral Health and Employment Status — District Adults Aged 18-64 Who Have Visited a Dentist, Dental Hygienist, or Dental Clinic Within the Past Year

EMPLOYMENT STATUS	%	95% CONFIDENCE LIMITS	
Employed	77.3	75.0	79.5
Unemployed	65.5	57.4	72.8
Other	75.7	68.4	81.8
Retired	70.1	66.8	73.1
Unable to work	53.7	46.7	60.6

Source: DC Behavioral Risk Factor Surveillance Survey, 2018

The US Bureau of Labor Statistics (BLS) documented a close relationship between income and number of benefits, finding individuals with lower incomes often received fewer benefits and had lower rates of benefit utilization.[17] By income, District adults earning less than $50,000 annually were less likely to have utilized dental services in the past year than those earning $50,000 or more, as highlighted in Tables 2-7 and 2-8.

Table 2-7: Oral Health and Income — District Adults Aged 18-64 Who Have Visited a Dentist, Dental Hygienist, or Dental Clinic Within the Past Year

INCOME	%	95% CONFIDENCE LIMITS	
Less than $15,000	57.6	50.9	64.3
$15,000–$24,999	66.3	60.5	72.1
$25,000–$49,999	65.8	60.3	71.3
$50,000–$74,999	73.1	67.1	79.1
$75,000 and above	84.1	81.9	86.3

Source: DC Behavioral Risk Factor Surveillance Survey, 2018

Table 2-8: Oral Health and Income — District Adults Aged 65+ Who Have Visited a Dentist, Dental Hygienist, or Dental Clinic Within the Past Year

INCOME	%	95% CONFIDENCE LIMITS	
Less than $15,000	49.4	38.8	60.0
$15,000–$24,999	52.3	43.9	60.7
$25,000–$49,999	60.7	53.4	68.0
$50,000–$74,999	81.9	75.4	88.4
$75,000 and above	88.7	85.7	91.7

Source: DC Behavioral Risk Factor Surveillance Survey, 2018

Seniors making less than $50,000 per year visit the dentist 20–30 percent less than higher income seniors. Delivery of dental care services usually requires the ability to pay personally or through individual insurance, thereby directly limiting care to those with greater financial resources, particularly for adults. Low income seniors are further limited as Medicare does not have a built-in dental benefit and further limits Medicaid eligibility, as discussed in more detail with the next driver, medical care.

The ability to access dental insurance, which comes more readily with higher paying and more stable employment is, in turn, also linked to race.[18] Moreover, dental services may not be readily available in areas where many people of color live, because the structure of payment for services provides lower incentives for providers to locate in those areas.[19]

Medical Care

In the US, access to health care is largely dependent on health insurance coverage, and the District has prioritized ensuring coverage for all residents. In 2018, just 8.5 percent of District adults reported having no health insurance, compared to 12.2 percent nationally; in 2019, 98 percent of District

children were covered, compared to 94 percent nationally.[20] However, health insurance coverage does not guarantee access, particularly when it comes to dental care, which is often covered under a separate insurance plan for private insurance payors. Regular preventive dental care and earlier identification of problems, when they are easier to treat, are essential for good oral health; but many don not get the care they need. More people are unable to afford dental care more than other types of health care.[21]

In the District, approximately 1 in 2 residents are Medicaid beneficiaries, with all beneficiaries covered for standard preventive and restorative dental services. Table 2-9 provides a basic overview of dental services covered by age group.

Table 2-9: Medicare and Medicaid Dental Coverage

	CHILDREN/ ADOLESCENTS (0–21)	ADULTS (21–64)	PREGNANT WOMEN (15–44)	SENIORS (65+)
Dental exams, cleanings, and fluoride treatments (every six months); filings; crowns; gum and root canal treatment; x-rays; simple and complex surgical extractions (as needed)	Fully Covered	Fully Covered	Fully Covered	Covered with Medicare add-on
Dentures	N/A	Covered for complete and partial dentures	Covered for complete and partial dentures	Covered with Medicare add-on

Source: DC Department of Health Care Finance Fee Schedule, 2022

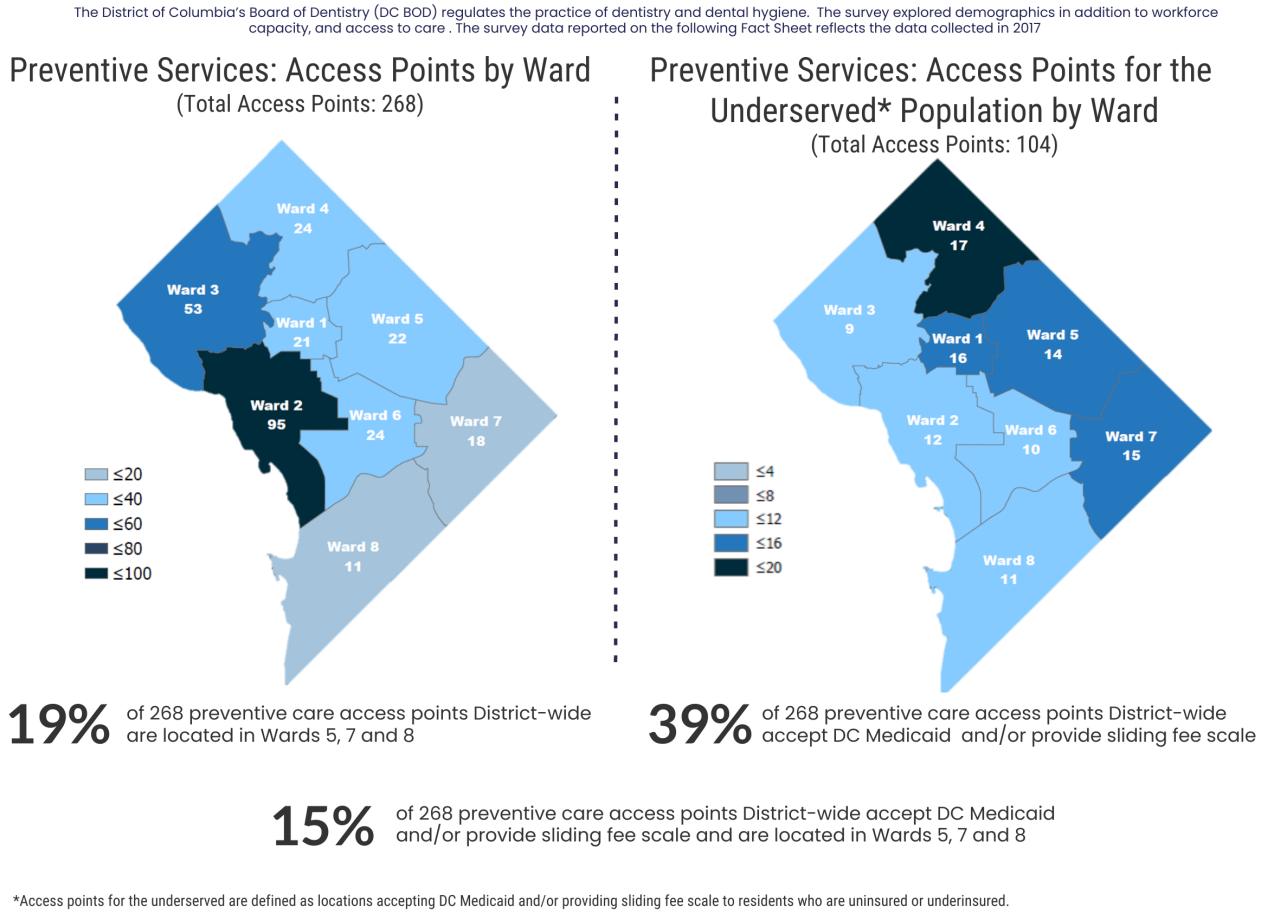
Medicaid dental benefits are even more comprehensive for District children aged 20 and younger, providing full coverage for preventive and restorative dental services as well as orthodontics, necessary oral surgery, and extractions. However, coverage gaps exist for seniors (65+) receiving public insurance benefits. Although US adults aged 21–64 with income levels up to 200 percent of the Federal Poverty Level (FPL) are Medicaid eligible, income limits for Medicaid eligibility decrease to 100 percent for seniors when Medicare eligibility begins at age 65. Medicare does not cover dental, except under approved Medicare add-on private health insurance plans (Part C) supplemented for those already enrolled in Original Medicare (Part A and B). These add-ons constitute an additional cost and therefore an additional barrier to use of dental services.[22]

Despite the expansive coverage, low-income District residents face barriers to accessing dental care. Based on responses to the 2017 Board of Dentistry Workforce Survey,* the DC PCO identified 268 total

* The 2017 Board of Dentistry Workforce survey was presented to District dentists at the time of licensure renewal and included questions on provider demographics, practice details, and patient services; the 2017 survey had an 80 percent response rate.

preventive dental care access points — defined as public facing dental sites/locations/clinics where at least one dentist offers four primarily preventive dental services: oral evaluation, cleaning, x-ray, and fluoride varnish—across the District. Of these, 39 percent (104) were reported to accept Medicaid and/or offer sliding fee scales for residents with low income. Wards 5, 7, and 8, where residents were less likely to have visited a dentist in the last year, included only 19 percent (51) of identified preventive dental care access points, further decreasing to 15 percent (40) when limiting to access points reported as accepting Medicaid and/or offering sliding fee scales.

Figure 2-3: Clinical Practicing Dentists — Preventive Care



Source: DC Health Oral Health Program, BOD 2017 Survey Instrument

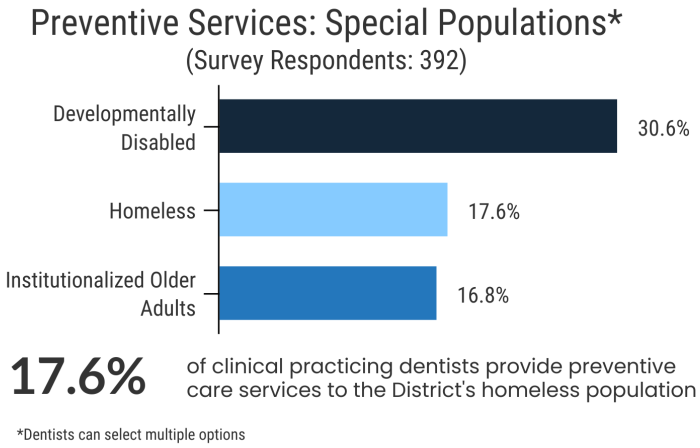
Housing and Food Environment

Housing also plays an important role in a person's overall health status, with homelessness closely connected to declines in physical and mental health. Persons experiencing homelessness tend to experience higher rates of health conditions such as HIV infection, alcohol and drug abuse, mental illness, tuberculosis, and other conditions.[23] In January 2020, the District had an estimated 6,380

residents experiencing homelessness on any given day, as reported by the Continuums of Care to the US Department of Housing and Urban Development (HUD). In the 2018–2019 school year, an estimated 6,858 DC public school students experienced homelessness over the course of the year, according to data from the US Department of Education. Of that total, 108 students were unsheltered, 1,427 were in shelters, 318 were in hotels/motels, and 4,746 were doubled up.[24] In 2021, the overall number of residents experiencing homelessness on any given day has since decreased by about 20 percent (5,111 residents).[25]

Individuals experiencing homelessness face an additional barrier to oral health: finding a dental provider that will provide care. In the 2017 Board of Dentistry survey, only about 17 percent of the District's clinical practicing dentists reported offering preventive dental services to persons experiencing homelessness.[26] Provision of preventive oral health care services to this and other "special populations" are highlighted in Figure 2-4.

Figure 2-4: Preventive Services — Special Populations



Source: DC Health Oral Health Program, BOD 2017 Survey Instrument

Interestingly, reports indicate the quality of housing and availability of social supports appears to ameliorate the effect of poverty.[27] Specifically, when low-income adults and children resided in better quality housing and had social supports, they were more likely to retain 20 or more teeth and have less tooth decay.[28] This suggests that, in addition to the importance of addressing poverty, improving the built and social environments can result in resilience as a response to the harmful health effects of poverty itself.

Food insecurity, defined as lack of consistent access to enough food for an active, healthy life,[29] also impacts opportunities for residents to prioritize healthy food choices. Healthy food options are vital for the maintenance of oral health, as free sugars are the essential dietary factor in the development of dental caries. Within the District, the mix of healthy options such as full-service grocery stores, supermarkets, farmers markets, and healthy corner stores varies at the neighborhood level. However, although most residents live within one mile of a grocery store given the small geographic size of DC, factors like income,

employment status, and education level impact an individual's ability to afford and access healthy food.[30]

Ultimately, the social and structural drivers discussed throughout this chapter should not be viewed as separate, but rather as interconnected parts impacting each other in various, nuanced ways. In subsequent volumes the oral health needs assessment will continue demonstrate the impact of these social and structural determinants on oral health. The overall driver of race and structural racism will also be addressed and demonstrated repeatedly. As each key driver is referenced in relation to oral health in the District, it is important to recognize how they overlap and interact, ultimately explaining why poor oral health outcomes may aggregate in a specific location or among a specific population.

2.2 Section Highlights:

- Of 268 District-wide preventive dental care access points identified in the 2017 Board of Dentistry Survey, only 39 percent were reported as accepting Medicaid and/or offering sliding fees for residents with low income.
- Dental visits among adults were lowest in Wards 5, 7, and 8 in 2018. Wards 7 and 8 have the highest proportion of Black/African-American residents, the highest percentage of lower income residents, and the highest percentage of adults over the age of 25 without a high school diploma.
- Adults without a high school diploma were around 25 percent less likely to visit a dentist in the past year than those with a college diploma.
- Those who are unemployed or unable to work and those earning less than $50,000 were less likely to visit the dentist in the past year than those who are employed and earning more than $50,000.
- In the District, approximately 1 in 2 residents are Medicaid beneficiaries and they are covered for standard preventive and restorative dental services.
- Coverage gaps exist for dental services, particularly for adults over the age of 64 as standard Medicare does not provide dental coverage.
- Access to preventive dental services is also limited; just 19 percent of all preventive care access points in the District were located in Wards 5, 7, and 8, where dental utilization was reported to be the lowest.
- For individuals experiencing homelessness, access to a dental provider is even more challenging with only 17.6 percent of preventive dentists providing care to this population.

1 DC Health Matters Collaborative. 2021. *Demographics Summary Data for City: District of Columbia.* https://www.dchealthmatters.org/demographicdata

2 American Dental Association (ADA). nd. *Aging and Dental Health.* https://www.ada.org/resources/research/science-and-research-institute/oral-health-topics/aging-and-dental-health

3 Azofeifa A., Yeung L.F., Alverson C.J., & Beltrán-Aguilar E. 2016. Dental caries and periodontal disease among U.S. pregnant women and nonpregnant women of reproductive age, National Health and Nutrition Examination Survey, 1999–2004. *Journal of Public Health Dentistry.* 76(4): 320-329. https://doi.org/10.1111/jphd.12159 .

4 Lipsky M.S., Su S., Crespo C.J., & Hung M. 2021. Men and Oral Health: A Review of Sex and Gender Differences. *American Journal of Men's Health*. 15(3). https://doi.org/10.1177/15579883211016361

5 Cohen L.A., Bonito A.J., Eicheldinger C., Manski R.J., Macek M.D., Edwards R.R. 2011. Behavioral and socioeconomic correlates of dental problem experience and patterns of health care-seeking. *The Journal of the American Dental Association.* 142(2):137–149. https://doi.org/10.14219/jada.archive.2011.0056

6 Gilbert G.H. 2005. Racial and socioeconomic disparities in health from population-based research to practice-based research: The example of oral health. *Journal of Dental Education.* 69(9):1003–1014.

7 DC Department of Health (2018). *Health Equity Report: District of Columbia 2018*. https://app.box.com/s/yspij8v81cxqyebl7gj3uifjumb7ufsw

8 DC Department of Health. 2018. *Health Equity Report: District of Columbia 2018*. https://app.box.com/s/yspij8v81cxqyebl7gj3uifjumb7ufsw

9 Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. 2018. BRFSS Prevalence and Trends Data [online]. https://www.cdc.gov/brfss/brfssprevalence/

10 McElrath, K., & Martin, M. 2021. Bachelor's Degree Attainment in the United States: 2005 to 2019. *U.S. Census Bureau American Community Survey Briefs.* https://www.census.gov/library/publications/2021/acs/acsbr-009.html

11 DC Department of Health (2018). *Health Equity Report: District of Columbia 2018*. https://app.box.com/s/yspij8v81cxqyebl7gj3uifjumb7ufsw

12 National Institutes of Health, National Institute of Dental and Craniofacial Research. 2005. The invisible barrier: literacy and its relationship with oral health. Journal of Public Health Dentistry. 65(3):174-182. https://doi.org/10.1111/j.1752-7325.2005.tb02808.x .

13 National Institutes of Health. 2021. *Oral Health in America: Advances and Challenges.* Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research. https://www.nidcr.nih.gov/sites/default/files/2021-12/Oral-Health-in-America-Advances-and-Challenges.pdf

14 Holtzman, J.S. 2013. The association between oral health literacy and failed appointments in adults attending a university-based general dental clinic. *Community Dentistry and Oral Epidemiology.* 42(3): 263-270. https://doi.org/10.1111/cdoe.12089

15 National Institutes of Health. 2021. *Oral Health in America: Advances and Challenges*. Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research. https://www.nidcr.nih.gov/sites/default/files/2021-12/Oral-Health-in-America-Advances-and-Challenges.pdf

16 O'Brien E. 2003. Employers' benefits from workers' health insurance. *The Milbank Quarterly.* 81(1):5-43. https://doi.org/10.1111/1468-0009.00037

17 U.S. Bureau of Labor Statistics. 2020. A profile of the working poor, 2018. *BLS Reports*. Report 1087. https://www.bls.gov/opub/reports/working-poor/2018/home.htm

18 National Institutes of Health. 2021. *Oral Health in America: Advances and Challenges*. Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research. https://www.nidcr.nih.gov/sites/default/files/2021-12/Oral-Health-in-America-Advances-and-Challenges.pdf

19 National Institutes of Health. 2021. *Oral Health in America: Advances and Challenges.* Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research. https://www.nidcr.nih.gov/sites/default/files/2021-12/Oral-Health-in-America-Advances-and-Challenges.pdf

20 DC Health Matters Collaborative. *Community Dashboard: All Data.* https://www.dchealthmatters.org/indicators/index/dashboard?alias=alldata

21 Vujicic M., Buchmueller T., Klein R. 2016. Dental care presents the highest level of financial barriers, compared to other types of health care services. *Health Affairs.* 35(12):2176–21. https://doi.org/10.1377/hlthaff.2016.0800

22 U.S. Department of Health and Human Services. 2021. *What is Medicare Part C?* https://www.hhs.gov/answers/medicare-and-medicaid/what-is-medicare-part-c/index.html

23 American Public Health Association. 2017. *Housing and Homelessness as a Public Health Issue*. https://apha.org/Policies-and-Advocacy/Public-Health-Policy-Statements/Policy-Database/2018/01/18/Housing-and-Homelessness-as-a-Public-Health-Issue

24 U.S. Interagency Council on Homelessness. *District of Columbia homelessness statistics.* https://dev2.usich.gov/homelessness-statistics/dc

25 The Community Partnership for the Prevention of Homelessness. 2021. Point-in-time count: District of Columbia continuum of care. https://community-partnership.org/wp-content/uploads/2021/06/2021-PIT-Count-Presentation.pdf

26 DC Department of Health, DC Oral Health Program. 2017. Board of Dentistry workforce survey: 2017 fact sheet. https://dchealth.dc.gov/sites/default/files/dc/sites/doh/page_content/attachments/BOD-2017-FactSheet.pdf

27 National Institutes of Health. 2021. *Oral Health in America: Advances and Challenges*. Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research. https://www.nidcr.nih.gov/sites/default/files/2021-12/Oral-Health-in-America-Advances-and-Challenges.pdf

28 National Institutes of Health. 2021. *Oral Health in America: Advances and Challenges*. Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research. https://www.nidcr.nih.gov/sites/default/files/2021-12/Oral-Health-in-America-Advances-and-Challenges.pdf

29 Coleman-Jensen, A., Rabbitt, M.P., Gregory, C.A., & Singh, A. 2019. *Household food security in the United States in 2018, ERR 270.* Washington, DC: U.S. Department of Agriculture, Economic Research Service. https://www.ers.usda.gov/webdocs/publications/94849/err-270.pdf

30 DC Office of Planning & DC Food Policy Council. 2020. *Food access & food security in the District of Columbia: Responding to the COVID-19 public health emergency.* https://dcfoodpolicycouncilorg.files.wordpress.com/2020/09/food-security-report-9-24-20.pdf

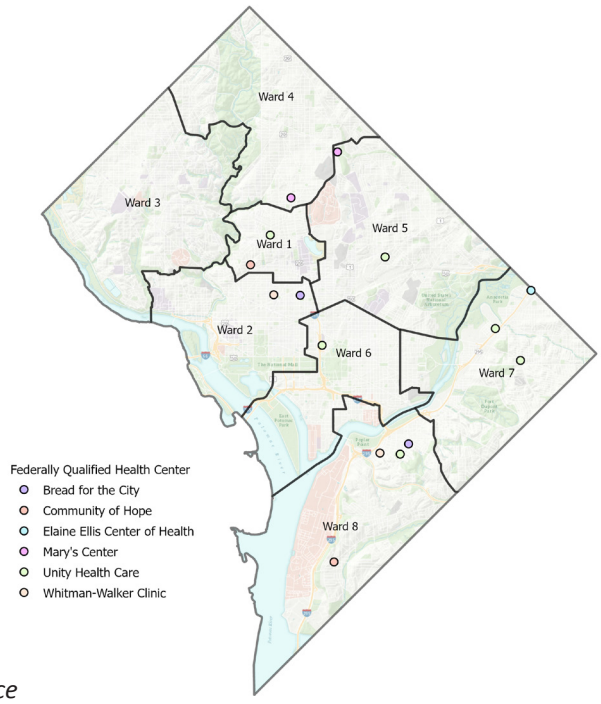
3 | The District's Oral Health Care Landscape

Access to health care is driven in large part by the availability of health care resources (i.e., service delivery sites, providers) in a community. This chapter presents a brief overview of the District's oral health care landscape, particularly the oral health care safety net infrastructure and service distribution (3.1), the oral health care workforce, including workforce training, recruitment, and retention programs (3.2), and the status of primary care and oral health care integration (3.3).

3.1 SAFETY NET INFRASTRUCTURE AND SERVICE DISTRIBUTION

The District has an extensive health care safety net infrastructure providing access to an array of oral health services — including diagnostic, preventive, and restorative services for the District's underserved areas and populations. Currently, there are eight Federally Qualified Health Center organizations* providing oral health services on-site alongside other health care services, Currently, there are eight Federally Qualified Health Center organizations providing oral health services on-site alongside other health care services, across fifteen primary and dental care integrated service delivery sites,[1] shown in Figure 3-1.

Figure 3-1: Map of Federally Qualified Health Center Sites with Primary and Dental Care



Prepared by: DC Primary Care Office

*Bread for the City, Community of Hope, Elaine Ellis, Family Medical Counseling Services, La Clinica del Pueblo, Mary's Center, Unity Health Care, and Whitman-Walker

In addition to Federally Qualified Health Centers, several community- and hospital-based clinics and health centers provide oral health services to at-risk, vulnerable, and underserved District populations. These include Children's National's hospital campus-based clinic, and the Children's Health Center site at THEARC, Catholic Charities' Spanish Catholic Center Volunteer Medical Clinic, the Howard University College of Dentistry Dental Clinic, and So Others Might Eat (SOME). Persons experiencing homelessness can access oral health care services at SOME and the Unity Health Care operated Community for Creative Non-Violence (CCNV) dental clinics. Saint Elizabeth's Hospital, the District's public psychiatric facility, also provides oral health services to ambulatory and hospitalized patients. Lastly, the Branch Health Clinic Washington Navy Yard serves the active-duty military.

DC Health also administers the School-Based Oral Health Program (SBOHP), launched in 2003, which provides school-based dental care services to DC children who may not otherwise access care and serves as a critical tool for compliance with DC Law 6-66, mandating all students entering DC schools to have a physical and oral health examination each school year. As a stop-gap program, the School-Based Oral Health Program

- increases access to both clinical (i.e., dental examinations, cleanings, fluoride varnish, dental sealants) and non-clinical (i.e., oral health education, referrals and linkages, care coordination) services;
- creates linkage to dental homes for children to access on-going care;
- reduces negative impact of poor oral health on student preparedness and readiness to learn; and
- reduces the number of District children with dental caries.

All DC children ages 1 to 19 are eligible to receive dental services through the program, however children in DC Public Schools, Public Charter Schools, and licensed child development centers, where compliance with DC Law 6-66 is low, are prioritized. On average the School-Based Oral Health Program serves about 2,400 District students per school year of the approximately 90,000 students in DC Public Schools and Public Charter Schools; Table 3-1 provides additional detail on the Program's reach since 2015.

Table 3-1: Students Served* by the School-Based Oral Health Program Since 2015

	SY 15–16	SY 16–17	SY 17–18	SY 18–19	SY 19–20**	SY 20–21**	SY 21–22**	SBOHP TOTAL
Licensed Child Development Centers	193	50	34	182	741		458	1658
Public Charter Schools	2980	1372	1656	1191	350		89	7638
DC Public Schools	1732	2397	1634	1014	1121			7898
SBOHP Total	4905	3819	3324	2387	2212		547	17194

*Students who have received any service from the Program
**Program suspended for all or part of the school year due to COVID-19

Source: DC Health Oral Health Program

Health Professional Shortage Areas and Medically Underserved Areas/Populations

The federal government designates Health Professional Shortage Areas and Medically Underserved Areas/Populations across the country; these are designations of a shortage of dental health, primary care, and/or mental health care providers, which can be geographic (covering the total population within an area) or population-based (covering a specific segment of an area's population, such as persons experiencing homelessness). Importantly, these designations are a necessary condition for health care sites' eligibility for an array of federal and District programs, including workforce recruitment and retention programs like National Health Service Corps (NHSC) and the District's Health Professional Loan Repayment Program (HPLRP), discussed in Section 3.2, below. If a health care site is not located within a designated area, or serving a designated population, the site cannot participate in common recruitment and retention programs.

Dental Health Professional Shortage Areas are scored on a scale of 0-26; higher scores correspond to increased needs of an area and/or population. As 100 percent of the District's water is fluoridated, the highest score possible is 25. See Figure 3-2 for the dental Health Professional Shortage Area scoring formulas.

Figure 3-2: Dental Health Professional Shortage Area Scoring Formula

Source: HRSA. 2022. Scoring Shortage Designations. https://bhw.hrsa.gov/workforce-shortage-areas/shortage-designation/scoring (accessed 09/01/2022).

The District currently has two population-based dental Health Professional Shortage Areas: *Homeless-Downtown D.C.* and *Low-income-Anacostia*, scored at 17 and 19, respectively; the population designation represents an underserved group residing within each Health Professional Shortage Area. The Anacostia Health Professional Shortage Area covers the District east of the river, which are large portions of Wards 7 and 8, where 53 percent of residents live at or below 200 percent of the federal poverty level; 95 percent of Wards 7 and 8's population are Black/African-American. The Downtown DC Health Professional Shortage Area, located in the center of DC within Ward 2, represents residents experiencing homelessness. As of 2021, the latest year for which data are available, the District had an estimated 5,111 residents experiencing homelessness.[2,3]

Federally Qualified Health Centers also receive an automatic facility Health Professional Shortage Area designation, enabling these grant-funded health centers to leverage federal programs and funding to enhance access for underserved populations. Public or non-profit private facilities can also receive an Other Facility Health Professional Shortage Area designation if they serve a population or geographic area with a provider shortage. Currently, Spanish Catholic Charities is the District's only non-profit facility with an Other Facility Health Professional Shortage Area designation for dental health. Most organizations have a high Health Professional Shortage Area score, which allows them to competitively recruit oral health care providers who are interested in incentive programs, like National Health Service Corps. Dental Health Professional Shortage Area scores for the District's Federally Qualified Health Centers and Other Facility are provided in Table 3-2.

Table 3-2: Federally Qualified Health Centers and Other Facilities With a Dental Health Professional Shortage Area Score

ORGANIZATION	DENTAL HEALTH PROFESSIONAL SHORTAGE AREA SCORE
Bread for the City	25
Community of Hope	25
Elaine Ellis Health Center	25
Family Medical Counseling Services	25
La Clinica Del Pueblo	19
Mary's Center	25
Spanish Catholic Charities	17
Unity Health Care, Inc.	25
Whitman-Walker Health	24

Between 2017 and 2019, the total number of dental patients served by the District's Federally Qualified Health Centers increased by nearly 25 percent. However, the COVID-19 pandemic resulted in an approximately 39 percent decrease in dental patients served in 2020 and 2021 compared to 2019.[4] Prior to the pandemic, dental patient visits accounted for approximately 20–23 percent of patient volume each year, reducing to approximately 15 percent of patient volume in 2020 and 2021. Data on dental patients served between 2017 and 2021 are provided in Table 3-3.

Table 3-3: Dental Patients Served by District Federally Qualified Health Centers and Look-Alike

	2017	2018	2019	2020	2021
Dental Patients Served	37,262	40,130	46,421	28,546	28,401
Percent of Overall Patients Seen at Federally Qualified Health Centers	19.95%	20.73%	23.33%	15.19%	14.87%

Source: HRSA. 2022. District of Columbia Health Center Program Uniform Data System (UDS) Data 2017–2021. https://data.hrsa.gov/tools/data-reporting/program-data/state/DC *(accessed 09/01/2022).*

3.1 Section Highlights:

- The District has an extensive oral health safety net infrastructure, with 8 Federally Qualified Health Centers providing comprehensive, integrated oral health care through 15 service delivery sites throughout the District along with other community- and hospital-based clinics providing oral health care to at risk and underserved populations.
- For District students the School-Based Oral Health Program serves as an additional stop gap program, providing preventive dental services and linking students back to their primary dental provider.
- There are 2 federally designated dental Health Professional Shortage Areas in the District: a low income dental shortage area located in Anacostia (Wards 7 and 8) and a second shortage area for persons experiencing homelessness, located in downtown DC.
- Federally Qualified Health Centers are automatically designated as Health Professional Shortage Areas. The federal designation allows for the organizations within shortage areas to access and participate in several federal and local programs with the aim of recruitment and retention of dental providers into the District workforce.
- Prior to the COVID-19 pandemic, approximately 20–23 percent of patients served in Federally Qualified Health Centers were receiving dental services at those sites.

3.2 WORKFORCE

The oral health care workforce comprises dentists and an array of allied professionals. As of 2021, there were 201,927 *dentists working in dentistry*[*] in the United States.[5] Approximately 78.9 percent are general dentists, while the remaining approximately 21 percent work in one of twelve specialties, including primarily orthodontics and dentofacial orthopedics (5.4%), pediatric dentistry (4.3%), and oral and maxillofacial surgery (3.7%), among others.[6] Allied dental health professionals include dental hygienists, dental assistants, dental therapists, dental laboratory technicians, and community dental health coordinators.

In the District, the DC Health Regulation and Licensing Administration (HRLA), through the DC Board of Dentistry (BOD), licenses dentists, dental hygienists, and dental assistants, conducting renewal cycles in odd-numbered years. As of 2021, there were 1,056 dentists, 421 dental hygienists, and 501 dental assistants with active licenses in the District. Table 3-4 provides data on licensed dentists, dental hygienists, and dental assistants, including the total number with active licenses and the number who reported a DC business address in their license applications or renewals since 2017.

Table 3-4: Licensed Dentists, Dental Hygienists, and Dental Assistants in DC

	2017		2019		2021	
	ACTIVE LICENSE	DC BUSINESS ADDRESS	ACTIVE LICENSE	DC BUSINESS ADDRESS	ACTIVE LICENSE	DC BUSINESS ADDRESS
Dentists	1286	787	1169	770	1,056	667
Dental Hygienists	508	280	481	291	421	191
Dental Assistants	664	533	639	540	501	322

Source: DC Health Regulation and Licensing Administration, 2017–2021

The number of licensed dental health professionals has trended downward in the past four years, with the most significant decrease occurring between 2019 and 2021. From 2019, the District saw a 13 percent decrease of licensed dentists and a 34 percent decrease of licensed hygienists with District business addresses. If this decline reflects an actual decrease in dentists and hygienists providing clinical care in the District, it would further exacerbate the challenges to access and utilization of dental care.

* The American Dental Association (ADA) defines *dentists working in dentistry* as "those whose primary occupation is one of the following: private practice (full- or part-time), dental school/faculty staff member, armed forces, other federal services (i.e., Veterans' Affairs, Public Health Service), state or local government employee, hospital staff dentist, graduate student/intern/resident, or other health/dental organization staff member."

It is also important to note that some dental professionals licensed to practice in DC may not necessarily provide services in DC — for comparison, the American Dental Association (ADA) reported 737 dentists actively working in the District in 2021.[7] As such, licensees reporting a business address in DC (included in Table 3-4, above) may be more reflective of the number actually providing services in DC. However, this number also provides an imperfect estimate, as oral health professionals, particularly dentists, may split time between multiple practice locations, within and outside the District. With workforce survey updates and improvements planned to be in effect for the 2023 Board of Dentistry licensure renewal cycle, the DC Primary Care Office (PCO) hopes to develop a more precise understanding of oral health care workforce numbers and capacity in the coming years.

Oral Health Workforce Education and Residency Programs

The Howard University College of Dentistry (HUCD) is the sole dental school in the District, training dentists and dental hygienists for community-oriented practice, particularly in underserved communities. As a teaching and patient care institution, HUCD also operates dental clinics, providing general dental treatment; specialized care in oral and maxillofacial surgery, pediatric dentistry, and orthodontics; and a dental home for District children and their families from across all demographic, social, and cultural backgrounds.[8] See Table 3-5 for an overview of HUCD's education programs.

Table 3-5: Howard University College of Dentistry Education Programs

	PROGRAMS	DURATION	CLASS SIZE
Undergraduate Programs	Certificate of Dental Hygiene	2 years	N/A
Predoctoral Programs	Doctor of Dental Surgery (DDS)	4 years	75–80
	BS/DDS Program	6 years	N/A
	International Dentist Program (for dentists who previously received dental degree outside of U.S.)	2 years	Up to 10

Source: Howard University College of Dentistry. Programs and Admissions. https://dentistry.howard.edu/education/programs-and-admissions

Beyond degree-granting programs, ten post-doctoral residency programs exist across five District institutions — Howard University College of Dentistry, the Washington VA Medical Center, Children's National Hospital, Saint Elizabeths Hospital, and Washington Hospital Center — as detailed in Table 3-6.

Table 3-6: Postdoctoral Dental Education Programs in DC

INSTITUTION	PROGRAMS	DURATION
Howard University[a]	General Dentistry	1 year
	Advanced Education in General Dentistry	1 year
	Postdoctoral Orthodontics	2 years
	Advanced Education in Pediatric Dentistry	2 years
	Oral and Maxillofacial Surgery	4 years
Washington VA Medical Center[b]	Dental General Practice	1 year
	Dental Prosthodontics	3 years
Children's National Hospital[c]	Pediatric Dentistry	2 years
Saint Elizabeths Hospital[d]	Advanced General Practice	1 year
Washington Hospital Center[e]	Oral and Maxillofacial Surgery	4 years

a. Howard University College of Dentistry (n.d.). Postdoctoral Programs. http://healthsciences.howard.edu/education/colleges/dentistry/programs/postdoctoral-programs

b. U.S. Department of Veterans Affairs (n.d.). Dental Residency programs. https://www.va.gov/washington-dc-health-care/work-with-us/internships-and-fellowships/dental-residency-programs

c. Children's National Hospital (n.d.). Pediatric Dentistry Residency. https://childrensnational.org/healthcare-providers/healthcare-education/residencies-and-fellowships/subspecialty-residency-programs/pediatric-dentistry-residency

d. Saint Elizabeths Hospital (n.d.). Psychiatry Training Programs. https://www.sehpsychiatry.org/

e. Washington Hospital Center (n.d.). Oral Maxillofacial Surgery Residency Program. https://www.medstarhealth.org/education/residency-programs/oral-and-maxillofacial-surgery

There are currently no accredited dental assistant programs in DC; however, there are two regional programs at Fortis College of Maryland and Northern Virginia Community College.

Workforce Recruitment, Retention, and Development Programs

To recruit and retain a culturally competent health care workforce that is equitable, well-distributed, and corresponds to the demands of the residents, the DC Primary Care Office (PCO) administers and supports a variety of local and federal workforce programs focused on recruitment and retention of health care providers to underserved areas.

Administered by the DC PCO and supported by both local and federal funds, the DC Health Professional Loan Repayment Program (HPLRP) provides loan repayment to eligible health care professionals practicing in the District's designated Health Professional Shortage Areas, including dentists and dental hygienists. The DC PCO also provides administrative and technical support for the National Health Service Corps (NHSC), a US Health Resources and Services Administration (HRSA) program that provides loan repayment and scholarships to eligible health care professionals, including dentists and dental hygienists, practicing at approved sites located in Health Professional Shortage Areas across the US.

Table 3-7: Health Professional Loan Repayment Program (HPLRP) New Contracts Over TIme, 2018–2022

	HPLRP FISCAL YEAR OF CONTRACT START DATE					
Participant Provider Type	2018	2019	2020	2021	2022	Total
Dentist (DDS or DMD)	3	1	1	-	4	9
Registered Dental Hygienist (RDH)	-	-	-	-	1	1

Source: DC Primary Care Office Database

Over the past five years, 10 dental professionals have been added to the Health Professional Loan Repayment Program; nine dentists and one dental hygienist. Thirty-four total dental professionals were enrolled in these local and federal loan repayment programs in 2022, in exchange for service in a Health Professional Shortage Area; Table 3-8 provides an overview of two dental loan repayment programs.

Table 3-8: Loan Repayment Programs Available to Oral Health Professionals in DC

PROGRAM	ADMINISTRATOR	MAXIMUM AWARD	ELIGIBLE DENTAL PROVIDERS	CONTRACT	PARTICIPANTS*
Health Professional Loan Repayment Program (HPLRP)	DC	$165,040 total over 4 years (full-time only)	Dentists Dental Hygienists	2-4 years	Dentists: 8 Dental Hygienists: 1
National Health Service Corps, Loan Repayment Program (NHSC LRP)	Federal	100% of loans $25,000/year ($12,500/year part-time)	Dentists Dental Hygienists	2 years 1-year renewals	Dentists: 16 Dental Hygienists: 9

**Participant totals reflect most recent data available for each program: HPLRP (within FY22); NHSC LRP (within FY21).*

Community Dental Health Coordinator Pilot

The community dental health coordinator model was established by the ADA in 2006 as one of several strategies to break down the barriers that prevent people from utilizing regular dental care and enjoying optimal oral health, particularly in urban and rural environments and among Native American populations.[9] In fiscal year 2018, DC Health was awarded funding and implemented a community dental health coordinator pilot.

DC Health granted funds to a Federally Qualified Health Center to develop the pilot. The subgrantee identified and trained three community dental health coordinators (two dental assistants and one dental hygienist) before implementing the pilot at three of its sites, two of which were co-located with dental and medical services. The pilot targeted pregnant women attending a check-up with their obstetrician and any accompanying children under the age of five. The community dental health coordinators integrated with the subgrantee's primary care team to connect patients to oral health services, including oral health instruction, a demonstration of oral hygiene technique, administration of fluoride varnish (dental hygienist only), and linking patients to the dentist.

The program deployed in early 2020 but was interrupted due to the COVID-19 pandemic. The program resumed virtually in June 2020. Based on successes found with pregnant women and their children, the target population was expanded to include diabetic and prediabetic seniors beginning October 2021. The pilot ended in September 2022.

DC Health and the grantee are evaluating successes and limitations of this model and how to scale successes of this model of care, to ensure more women, children, and other District residents receive high-quality and timely dental services. Overall, the program presents a promising model for linking patients to dental care and improving oral health literacy. However, for the model to be sustainable outside of the oral health workforce grant, community dental health coordinator services would ultimately need to be reimbursable or integrated into the District's health care finance system. Data from the pilot is presented in Table 3-9.

Table 3-9 Residents Served in the Community Dental Health Coordinator Pilot Program

	PREGNANT WOMEN	CHILDREN UNDER 5	SENIORS	TOTAL TOUCHES
FY 2020	19	72		91
FY 2021	248	562		1052*
FY 2022**	133	213	126	472

* FY21 total touches includes individuals who were not in the target population of pregnant women and children under 5.

** In FY2022 the CDHC target population expanded to cover diabetics and seniors as well as children aged 9 and under.

Source: DC Health Oral Health Program

3.2 Section Highlights

- There has been a downward trend in dental providers licensed to practice in the District between 2017 and 2021, with the greatest decrease occurring over the pandemic. In 2021, there were 667 licensed dentists (-13% from 2019), 191 licensed dental hygienists (-33%), and 322 licensed dental assistants (-39%) who reported a DC business address, which may be more reflective of the actual number providing services in DC. However, these numbers provide an imperfect estimate, as oral health professionals, particularly dentists, may split time between multiple practice locations, within and outside the District; planned updates and improvements to the 2023 Board of Dentistry Workforce survey seek to address this.
- The Health Professional Loan Repayment Program and the National Health Service Corps are two federally- and locally-funded programs that offer loan assistance and repayment in an effort to recruit and retain well qualified and culturally competent health care providers. In 2021, 34 dental professionals, including dentists and dental hygienists, were participating in these programs.
- The community dental health coordinator pilot introduced a promising new model of care to the District. The pilot showed encouraging results, with community dental health coordinators serving over 1,500 patients in the target population in spite of the challenges presented by the COVID-19 pandemic. The program also demonstrated effective integration of primary care and oral health. The next steps surround the sustainability and scalability of the model strategically throughout the District, which, if introduced, could potentially provide further opportunities to link underserved District residents to oral health care and expand the scope of District's dental workforce.

3.3 PRIMARY CARE – ORAL HEALTH INTEGRATION

The 2000 U.S. Surgeon General's report *Oral Health in America* "envisioned a national partnership to reduce disparities in access to and utilization of oral health care—one that would enable individuals, health professionals, and their communities to work together to bridge the long-standing gap between medical and dental care."[10] As a result, multiple models of integrated medical-dental care, in which providers deliver dental care as part of a health care system that includes primary medical care, specialty medical care, and related medical services, have been developed and implemented. Most often, these services are co-located in Federally Qualified Health Centers, Veterans Affairs (VA) clinics, and private Accountable Care Organizations (ACO), where dental and medical providers use a common electronic health record (EHR).[11]

The rationale behind the integration of primary and oral health care is informed by the common risk factor approach and the bidirectional relationship between oral health and other diseases. The *common risk factor* approach recognizes that because diet, hygiene, smoking, alcohol use, stress, and trauma impact both oral health and several other chronic diseases, adopting a collaborative approach is more rational than a disease-specific approach.[12,13] Additionally, a *bidirectional relationship* often exists between oral health and primary care related to specific diseases and conditions; for example, diabetes can impact susceptibility to periodontal disease and periodontal disease can impact susceptibility to diabetes through several biological pathways.[14,15,16] Most physicians and dentists are in nonintegrated practices; integration can begin using simple agreements regarding referral and acceptance of patients.[17]

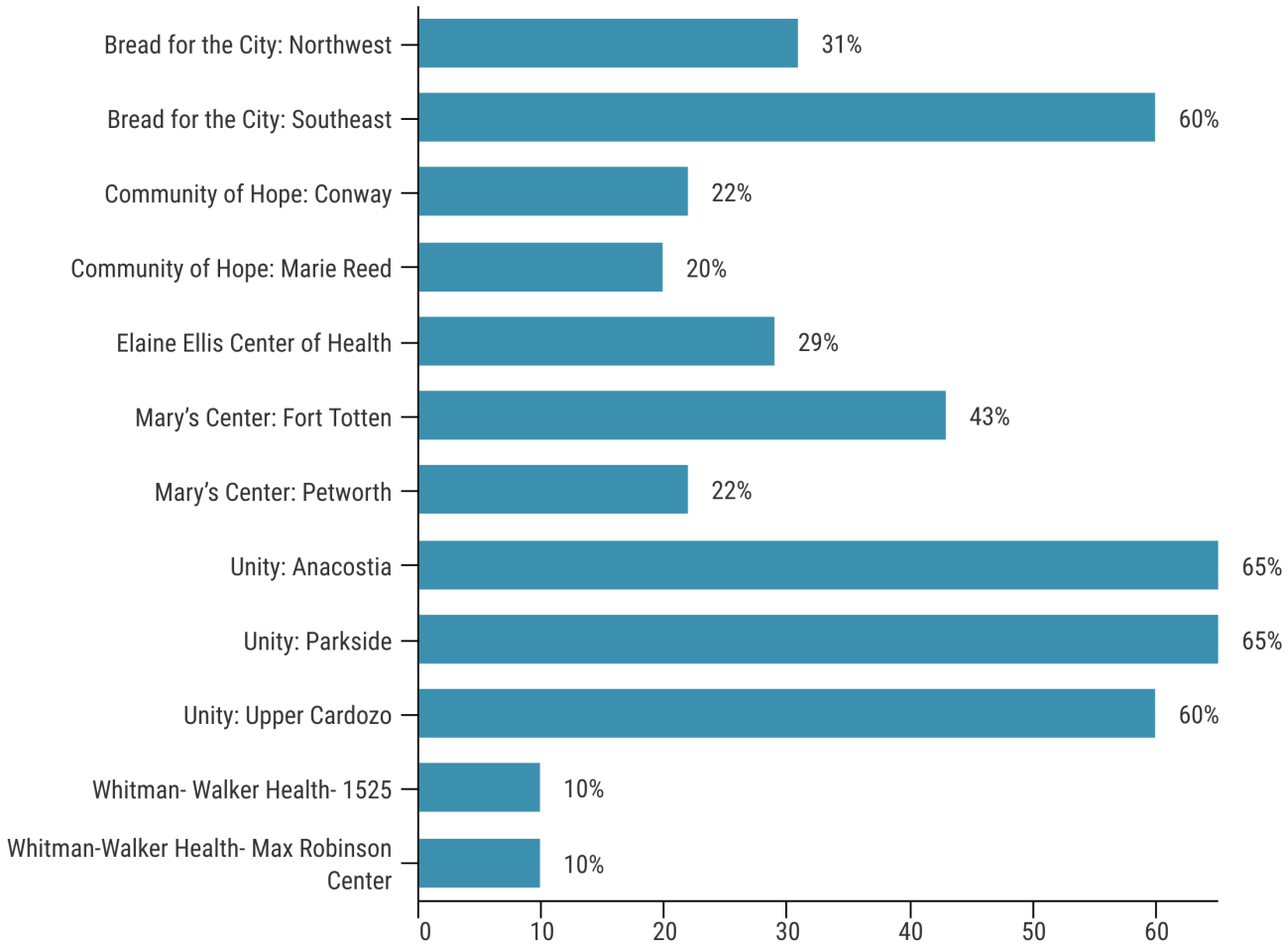
The 2018 DC Primary Care Needs Assessment (2018 PCNA) discussed the importance of team-based care delivery and oral health/primary care integration; however, a baseline for primary care and oral health integration had never been assessed within the District. For this assessment, the DC Primary Care Office (PCO) developed and administered a primary care and oral health integration survey to eight District Federally Qualified Health Centers with co-located medical and dental offices (15 sites) in July 2022; 12 of 15 sites responded to the survey. The survey assessed general information, interprofessional competencies, health information exchange, distribution of patient education resources/materials, and overall perceived assessment of integration level; results of the survey are discussed herein. Survey questions are available in Appendix A.

The Primary Care Office gratefully acknowledges the participation of Bread for the City, Community of Hope, Elaine Ellis, Mary's Center, Unity Health Care, and Whitman-Walker Health in this survey.

General Information

The survey assessed the percentage of patients with both a medical and dental home at the site. The percentage of patients receiving both dental and medical care at a co-located site ranged from 10 to 65 percent; at four sites, at least 60 percent of patients see their physician and dentist at the same location. The co-location and overlap of patients with medical and dental homes within the organization presents a strong opportunity for internal dental referrals and closing the loop on those referrals. Figure 3.3 shows the breakdown by site. For medical care-only patients of these co-located sites who have been otherwise disconnected from dental care, a greater emphasis on primary care and oral health integration can have the added benefit of linking them with regular dental care.

Figure 3-3: Percentage of Patients Who Receive Medical Services and Have a Dental Home in the Same Organization, by Co-located Site



Interprofessional Competencies

The survey assessed levels of interprofessional collaborative practice. Medical providers have numerous opportunities to see infants, toddlers, and preschoolers at frequent and regular intervals with well-child visits. The medical home model is being leveraged nationally to expand access to preventive oral health care services for children. Basic preventive oral care includes: 1) oral health risk assessment, 2) oral health anticipatory guidance, 3) fluoride varnish application, and 4) dental referrals.[18,19]

Following the 2018 PCNA recommendation to develop team-based care models, various grant programs, including Care Transformation (CaT) and State Oral Health Workforce (SOHW), targeted training in basic preventive oral health care for primary care providers. Table 3-10 shows co-located sites where medical providers offer basic preventive oral health care and the services they provide.

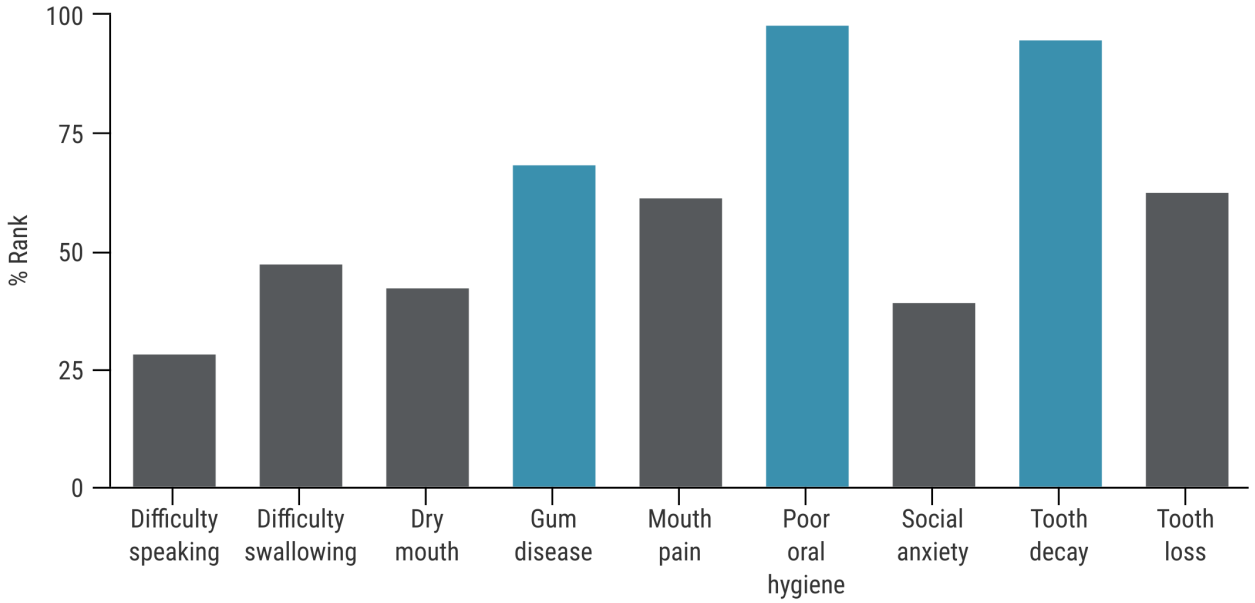
Table 3-10: Oral Health Services Provided by Medical Professionals* at Co-located Sites

	ORAL HEALTH ASSESSMENT	FLUORIDE VARNISH	ORAL HEALTH EDUCATION	INTERNAL REFERRALS TO DENTAL PROVIDERS	EXTERNAL REFERRALS TO DENTAL PROVIDERS OR SPECIALISTS
Bread for the City: Northwest	X			X	
Bread for the City: Southeast	X		X	X	X
Community of Hope: Conway	X	X	X	X	X
Community of Hope: Marie Reed	X	X	X	X	X
Elaine Ellis Center of Health	X		X	X	X
Mary's Center: Fort Totten	X	X	X	X	
Mary's Center: Petworth	X	X	X	X	
Unity: Anacostia			X	X	
Unity: Parkside	X		X	X	
Unity: Upper Cardozo	X		X	X	
Whitman-Walker Health — 1525	X		X	X	X
Whitman-Walker Health — Max Robinson Center	X		X	X	X

**Medical professionals include PCPs, NPs, PAs, and RNs.*

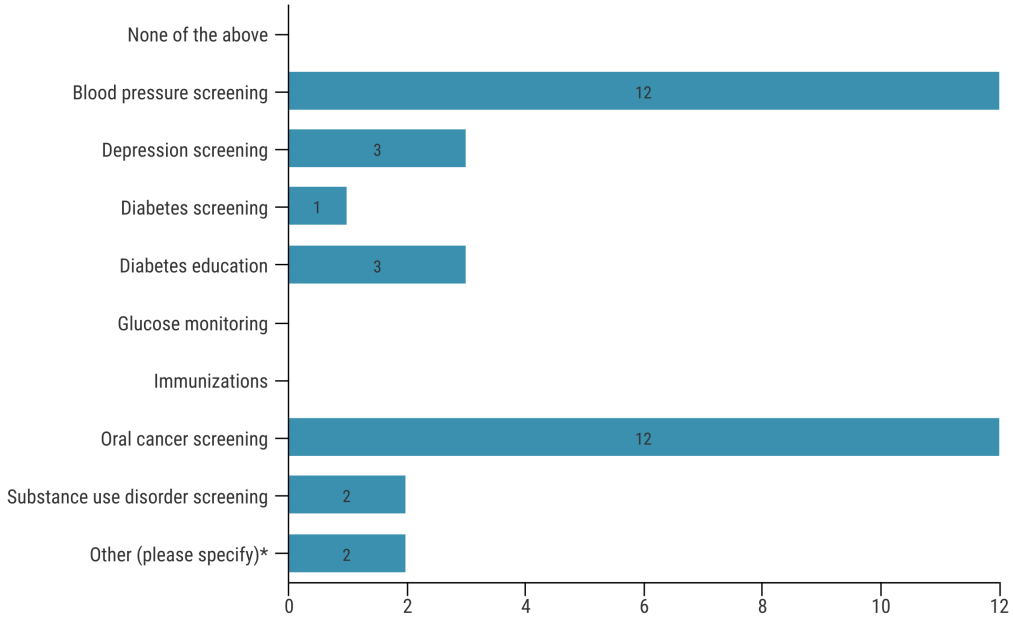
Respondents ranked most common oral health issues at each site on a scale of 1–9 with 1 being the most prevalent. The results were analyzed, weighted, and combined. Overall, the top ranked oral health issues cited were poor oral hygiene, tooth decay, and gum disease; Figure 3-4 provides additional detail on oral health issues cited by respondents. These can be positively impacted by the regular application of basic preventive oral health services.

Figure 3-4: Average Ranking of Oral Health Issues Among Co-located Sites



Dental professionals are providing limited medical services with blood pressure and oral cancer screening being the most common. The COVID-19 pandemic led to other states and jurisdictions using dentists to assist medical health care providers in vaccine administration; it may be valuable to expand the scope of DC dental providers to administer relevant vaccinations (i.e. HPV) or to provide emergency readiness vaccine training, in the event of future public health emergencies.

Figure 3-5: Medical Services Provided by Dental Professionals at Co-located Sites.



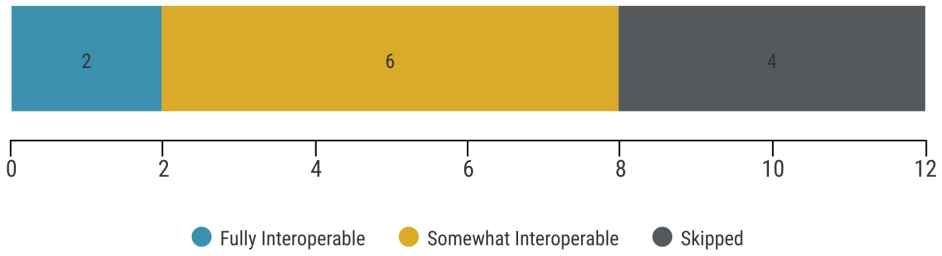
*For the 2 sites indicating other (please specify), screening provided was for COVID-19

Health Information Exchange

A shared medical record is vital to the infrastructure of primary care and oral health integration. Direct communication through EHR among dentists, hygienists, physicians, pharmacists, nurses, and other members of the care team enables quick and easy coordination of patient care in both medical and dental settings.[20] The primary care - oral health survey assessed each co-located site's EHR functionality and ability to access and coordinate both medical and dental communications.

Eight co-located sites reported having at least a somewhat interoperable EHR; see Figure 3-6.

Figure 3-6: Level of Interoperability of EHR at Co-located Sites



Among co-located sites, medical teams had more access to schedule dental appointments through the EHR than dental teams had access to schedule medical appointments, as shown in Figures 3-7 and 3-8.

Figure 3-7: Medical Team Ability to Schedule Dental Appointments through the EHR

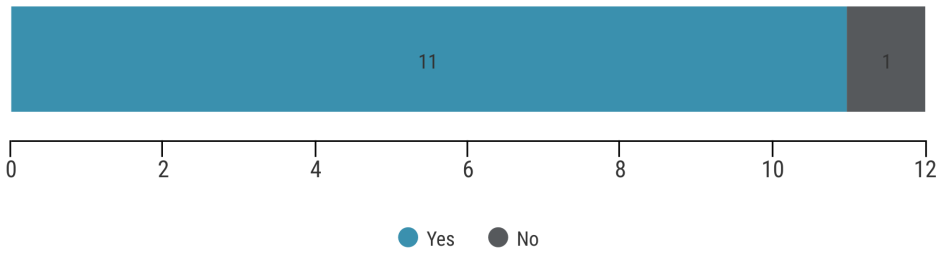
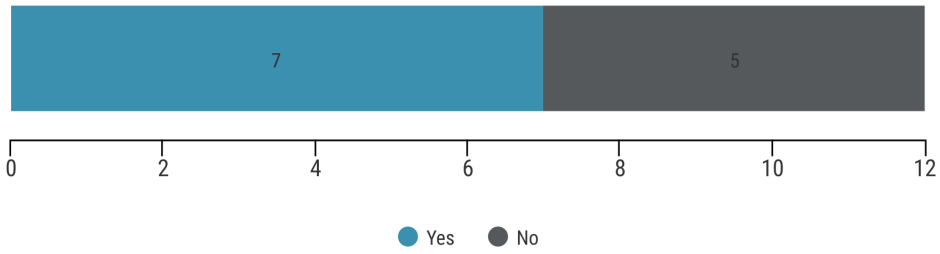


Figure 3-8: Dental Team Ability to Schedule Medical Appointments through the EHR



The ability for interprofessional referrals and the opportunity to subsequently close the loop on those referrals is a vital and beneficial part of primary care - oral health integration.

Patient Materials and Resources

Communication and patient education are other aspects of effective integration. The primary care - oral health survey assessed the integration of the office setting with co-located sites offering both general medical and dental brochures and patient education resources to the population. Of co-located sites that completed the survey, 10 indicated that patient resources were displayed and/or shared within both practice settings, as shown in Figures 3-9 and 3-10.

Figure 3-9: Co-located Sites Where Medical Department Displays/Provides Oral Health-Related Education Materials (e.g., importance of toothbrushing, flossing, fluoride)

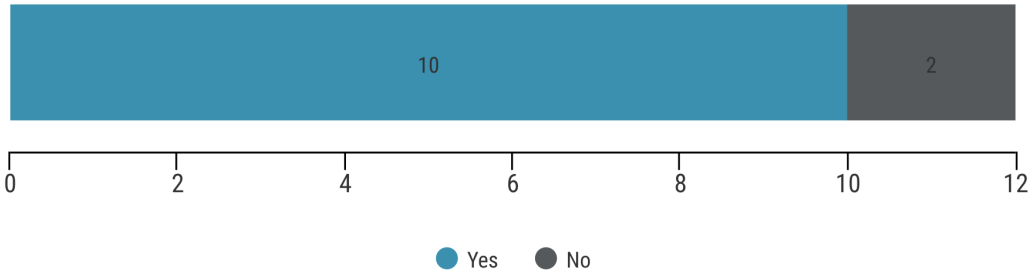
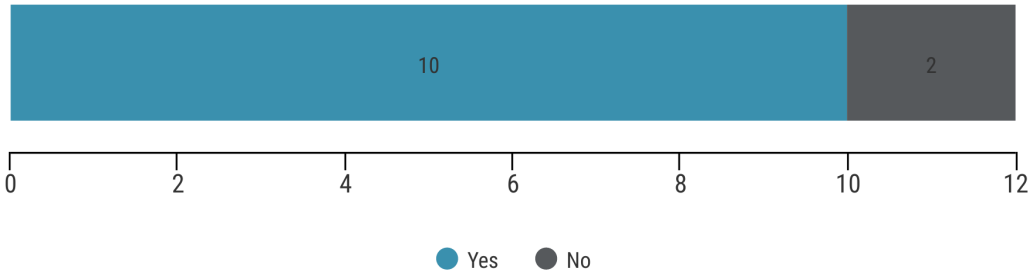


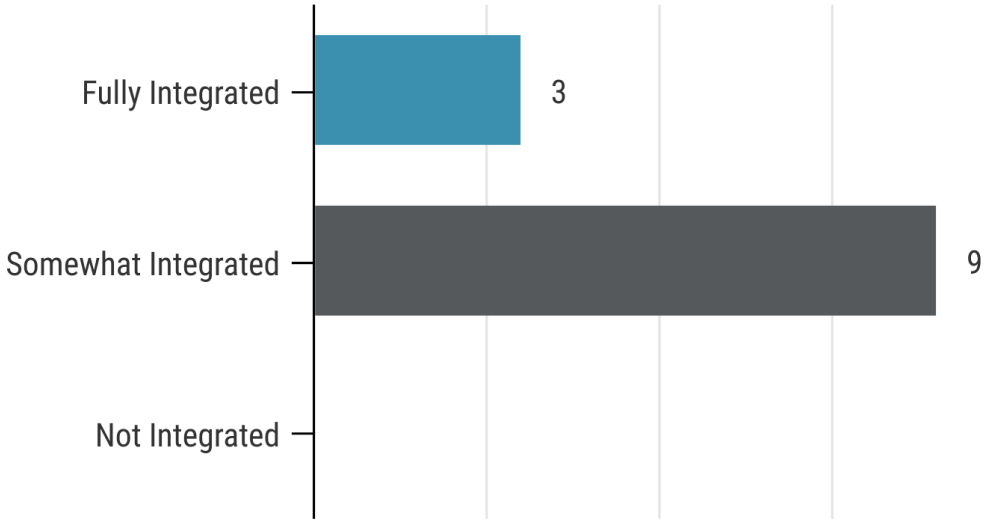
Figure 3-10: Co-located Sites Where Dental Department Displays/Provides Primary Care Related Education Materials (e.g., diabetes, HIV, smoking cessation, HPV Vaccination)



Overall Site Perceived Integration

Finally, the survey asked each site about the overall perception of integration status at the site. The responses, presented in Figure 3-11, were entirely subjective and not based on any objective criteria for level of integration nor a summation of the prior survey responses. Of the 12 sites that participated in the survey, all sites perceived their sites were at least somewhat integrated.

Figure 3-11: Perceived Assessment of the Level of Integration Between Medical and Dental Departments



As this is a baseline assessment, further exploration of the wider workforce and primary care - oral health integration status will be addressed in future iterations of the OHNA. Additionally, more in depth discussion on the challenges and success of primary care and oral health integration at these co-located Federally Qualified Health Centers will be explored in future OHNA stakeholder interviews.

3.3 Section Highlights

- Of the 15 Federally Qualified Health Center sites that practice co-located dental and medical care in DC, 12 responded to our survey; all 12 reported at least some level of integrated clinical practice.
- Medical professionals at each co-located site reported offering at least one or more oral health service, with oral health assessment and oral health education being the most common.
- Dental professionals at each co-located site reported offering limited medical services, most commonly blood pressure screening and oral cancer screening.
- Medical providers at all but one co-located site were capable of referring patients to a dental provider through a shared electronic health record. For dental providers interprofessional medical referrals were available at a little more than half of the surveyed co-located sites through the electronic health record.
- All but 2 co-located sites displayed both dental and medical educational materials/ resources in both dental and medical departments.
- Three sites perceived the location to be “fully integrated” while the other nine co-located sites reported a perception of being “somewhat integrated”.

1 U.S. Health Resources & Services Administration (HRSA). 2023. *FQHCs and LALs by state.* https://data.hrsa.gov/data/reports/datagrid?gridName=FQHCs

2 U.S. Department of Housing and Urban Development (HUD). 2022. *2007–2021 point-in-time estimates by state.* https://www.hudexchange.info/resource/3031/pit-and-hic-data-since-2007/

3 The Community Partnership for the Prevention of Homelessness. 2021. Point-in-time count: District of Columbia continuum of care. https://community-partnership.org/wp-content/uploads/2021/06/2021-PIT-Count-Presentation.pdf

4 U.S. Health Resources & Services Administration (HRSA). 2022. *District of Columbia Health Center Program Uniform Data System (UDS) data.* https://data.hrsa.gov/tools/data-reporting/program-data/state/DC.

5 American Dental Association (ADA). 2022. *Supply of Dentists in the U.S.: 2001–2021.* https://www.ada.org/resources/research/health-policy-institute/dentist-workforce.

6 National Institutes of Health. 2021. *Oral Health in America: Advances and Challenges*. Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research. https://www.nidcr.nih.gov/sites/default/files/2021-12/Oral-Health-in-America-Advances-and-Challenges.pdf

7 American Dental Association (ADA). 2022. *Supply of Dentists in the U.S.: 2001–2021.* https://www.ada.org/resources/research/health-policy-institute/dentist-workforce.

8 Howard University College of Dentistry. nd. *Predoctoral Programs.* http://healthsciences.howard.edu/education/colleges/dentistry/programs/predoctoral-programs

9 American Dental Association (ADA). nd. *Community dental health coordinator.* https://www.ada.org/resources/community-initiatives/action-for-dental-health/community-dental-health-coordinator

10 Institute of Medicine (IOM). 2011. Improving access to oral health care for vulnerable and underserved populations. Washington, DC: The National Academies Press. https://doi.org/10.17226/13116

11 National Institutes of Health. 2021. *Oral Health in America: Advances and Challenges*. Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research. https://www.nidcr.nih.gov/sites/default/files/2021-12/Oral-Health-in-America-Advances-and-Challenges.pdf

12 Sheiham A., & Watt R.G. 2000. The common risk-factor approach: A rational means of promoting oral health. *Community Dentistry and Oral Epidemiology.* 28(6):399–406. https://doi.org/10.1034/j.1600-0528.2000.028006399.x

13 Prasad M., Manjunath C., Murthy A.K., Sampath A., Jaiswal S., & Mohapatra A. 2019. Integration of oral health into primary health care: A systematic review. *Journal of family medicine and primary care*. 8(6):1838-1845. https://doi.org/10.4103/jfmpc.jfmpc_286_19

14 Grover H.S. & Luthra S. 2013. Molecular mechanisms involved in the bidirectional relationship between diabetes mellitus and periodontal disease. *Journal of Indian Society of Periodontology.* 17(3):292–301. https://doi.org/10.4103/0972-124X.115642

15 Atchison K.A. & Weintraub J.A.. Integrating oral health and primary care in the changing health care landscape. *North Carolina Medical Journal.* 78(6):406–409. https://doi.org/10.18043/ncm.78.6.406

16 Prasad M., Manjunath C., Murthy A.K., Sampath A., Jaiswal S., & Mohapatra A. 2019. Integration of oral health into primary health care: A systematic review. *Journal of Family Medicine and Primary Care*. 8(6):1838-1845. https://doi.org/10.4103/jfmpc.jfmpc_286_19

17 Prasad M., Manjunath C., Murthy A.K., Sampath A., Jaiswal S., & Mohapatra A. 2019. Integration of oral health into primary health care: A systematic review. *Journal of Family Medicine and Primary Care*. 8(6):1838-1845. https://doi.org/10.4103/jfmpc.jfmpc_286_19

18 Braun P.A., & Cusick A. Collaboration between medical providers and dental hygienists in pediatric health care. *Journal of Evidence-Based Dental Practice.* 16(Suppl):59–67. https://doi.org/10.1016/j.jebdp.2016.01.017

19 Prasad M., Manjunath C., Murthy A.K., Sampath A., Jaiswal S., & Mohapatra A. 2019. Integration of oral health into primary health care: A systematic review. *Journal of Family Medicine and Primary Care*. 8(6):1838-1845. https://doi.org/10.4103/jfmpc.jfmpc_286_19

20 National Institutes of Health. 2021. *Oral Health in America: Advances and Challenges*. Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research. https://www.nidcr.nih.gov/sites/default/files/2021-12/Oral-Health-in-America-Advances-and-Challenges.pdf

4 | Strategy

In response to the findings within this volume, there are a number of recommended approaches that stakeholders can take. These approaches are organized by group:

DC Health Will:

- Analyze existing data on accessibility and use of oral health care to determine if differences in care-seeking exist between race, ethnicity, gender, location, or other factors, expounding on the finding that utilization of dental services was the lowest by residents living in Wards 5, 7, and 8.
- Work with the Department of Health Care Finance and dental providers to update the 2017 finding that 39 percent of preventive dental care access points reported accepting Medicaid and explore reasons for the enrollment rate.
- Work with Department of Health Care Finance and dental health providers to co-design solutions that increase the number of dental providers credentialed with Medicaid.
- Conduct a qualitative assessment to understand why District residents may or may not utilize dental care.
- Update the Board of Dentistry survey to collect and then analyze data on workforce burnout and needs and develop strategies to reduce and prevent burnout and address workforce-identified needs.
- Conduct analyses of the dental workforce to diagnose root causes of the 26 percent decrease in District dental workforce between 2019 and 2021.
- Develop materials for health care providers to help improve integration between medical and oral health.
- Analyze utilization of dental care data sources to compare against surveys which found that 82 percent of children and 73.8 percent of adults accessed dental care in 2019 and 2018, respectively.

Health Care Providers and Health Systems Can:

- Reduce barriers to dental care by offering more same-day and acute care scheduling options, evening and weekend hours, and telehealth visits (as appropriate) within dental homes.

- Begin dental and medical integration using simple agreements regarding referral and acceptance of patients.
- Health care providers that have already begun dental and medical integration, such as 12 Federally Qualified Health center sites, can continue to maintain and enhance their integration.

Health Plans Can:

- Increase the number of dental providers and practices credentialed with Medicaid.
- Develop payment models that offer incentives for providers to improve integration of medical and dental care.
- Provide additional support, such as financial incentives or administrative assistance, to dental clinics establishing new sites in Wards 5, 7, and 8, where dental care access and utilization are lowest.

4.1 SUBSEQUENT VOLUMES

This volume of the OHNA provided an overview of the oral health workforce and landscape and introduced the social and structural factors that impact oral health outcomes and drive utilization. It also identified oral health challenges facing the District (impact of social and structural determinants on reported oral health utilization, impact of dental Health Professional Shortage Areas on already vulnerable populations, and a decline in the number of licensed dental providers) and highlighted opportunities (e.g. primary care - oral health Integration) and new and existing programs and strategies address these challenges (School-Based Oral Health Program, National Health Service Corps, and DC's Health Professional Loan Repayment Program).

Subsequent volume(s) of the OHNA will provide insight on how different priority populations engage in oral health care. For each group a brief on oral health status, risk behaviors, coverage, and utilization (public and private) will be produced. Each volume will draw and expand on information from volume one; together, the full report will provide a comprehensive baseline assessment of oral health in the District.

Appendix A: DC Health Primary Care-Oral Health Integration Survey

PRIMARY CARE AND ORAL HEALTH INTEGRATION

General Information

1. Health Center Site (Dropdown)

2. Indicate the type/s of medical, dental, behavioral, and additional health care services provided at this health center site. (Check all that apply).

   ☐ Primary Care Medical
   ☐ Preventive Dental Care
   ☐ Dental Care: Restorative
   ☐ Behavioral Health
   ☐ Pharmacy
   ☐ Vision
   ☐ Nutrition
   ☐ Social Services
   ☐ Other (please specify)_____

3. Workforce: Please indicate the number of each staff category below at this site.

   ☐ Primary Care Physicians:_____
   ☐ Advanced Practice Nurses:_____
   ☐ Physicians Assistants:_____
   ☐ Registered Nurse:_____
   ☐ Other Nursing Staff:_____
   ☐ General Dentists:_____
   ☐ Pediatric Dentists:_____
   ☐ Registered Dental Hygienists:_____

- ☐ Dental Assistants:_____
- ☐ Community Dental Health Workers:_____
- ☐ Social Workers:_____
- ☐ Other Behavioral Health Staff:_____
- ☐ Nutritionists:_____
- ☐ Community Health Workers:_____
- ☐ Case Managers/ Care Coordinators:_____
- ☐ Administrative/ Operational Staff:_____

4. Please indicate the average percentage of the patient population served at this health center site.
   - ☐ Children (0-9 years)____%
   - ☐ Adolescents (10-17)_____%
   - ☐ Pregnant women (15-44)____%
   - ☐ Adults (18-64)____%
   - ☐ Seniors (65+)____%
   - ☐ Persons experiencing homelessness___%
   - ☐ Persons with intellectual____%

5. What percentage of patients receiving medical services also have a dental home with the organization?_____

6. Please rank the following medical health issues based on prevalence at this health center, with 1 indicating highest prevalence.
   - ☐ Cancer
   - ☐ Diabetes
   - ☐ Heart disease /stroke
   - ☐ Hypertension
   - ☐ Opioid Use/Substance Abuse
   - ☐ Pre-term Birth
   - ☐ Other (please specify)_____

7. Please rank the following **oral health** issues based on prevalence at this health center, with 1 indicating highest prevalence.

   ☐ Difficulty speaking
   ☐ Difficulty swallowing
   ☐ Dry Mouth
   ☐ Gum Disease
   ☐ Mouth Pain
   ☐ Poor Oral Hygiene
   ☐ Social Anxiety
   ☐ Tooth Decay
   ☐ Tooth Loss

8. Is teledentistry offered at this health center?

   ☐ Yes
   ☐ No

Interprofessional Competencies

9. Indicate which oral health services are provided by the following categories of non-dental professionals.

	MEDICAL PROFESSIONALS (PCP, NPS, PAS, RNS)	**OTHER PROFESSIONALS** (NUTRITIONISTS, CARE COORDINATORS/ CASE MANAGERS, CHWS)	**BEHAVIORAL HEALTH PROFESSIONALS**	**ADMINISTRATIVE STAFF**
Oral Health Assessment				
Fluoride Varnish				
Oral Health Education				
Internal Referrals to Dental Providers				
External Referrals to Dental Providers or Specialist				

10. Have any on site non-dental professionals participated in oral health clinical content training?

- ☐ Yes
- ☐ No (skip to Q12)

11. Which non-dental professional type has participated in oral health clinical content training? (Check all that apply).

- ☐ Primary Care Physicians
- ☐ Advance Practice Nurse
- ☐ Physician Assistants
- ☐ Registered Nurses
- ☐ Behavioral Health Professionals
- ☐ Social Workers
- ☐ Care Coordinators/ Case Managers
- ☐ Administrative/Operational Staff
- ☐ Community Health Workers
- ☐ Nutritionists

12. Indicate which medical services are provided by your dental professionals, if applicable. (Check all that apply).

- ☐ Blood pressure screening
- ☐ Depression screening
- ☐ Diabetes screening
- ☐ Diabetes education
- ☐ Glucose monitoring
- ☐ Immunizations
- ☐ Oral Cancer Screening
- ☐ Substance use disorder screening
- ☐ Other (please specify)_____
- ☐ None of the above

13. What incentives, if any, are offered to providers to encourage practice integration? _____
_____

Health Information Technology

14. Please indicate if the health center site utilizes the following Electronic Health Record (EHR) systems. (Check all that apply).

    ☐ Electronic Medical Record (EMR)

    ☐ Electronic Dental Record (EDR)

    ☐ Electronic Mental Health Software

15. Please indicate which EHR vendor is used for the following. Please enter N/A, if not applicable.

    ☐ EMR: _____

    ☐ EDR:_____

    ☐ Electronic Mental Health Software:_____

16. Does the EHR system allow for access to both medical and dental records?

    ☐ Yes (go to #17)

    ☐ No (skip to 18)

17. Describe your electronic medical and dental record's interoperability. (Interoperability the ability of different IT systems to connect in a coordinated manner, within and across organizational boundaries to access, exchange, and cooperatively use data)

    ☐ Fully interoperable

    ☐ Somewhat interoperable

    ☐ Not interoperable

18. Does the medical team schedule dental appointments through the EHR?

    ☐ Yes

    ☐ No

19. Does the dental team schedule medical appointments through the EHR?

    ☐ Yes

    ☐ No

20. My health center currently shares dental records with the following organizations:

- ☐ Federal Government
- ☐ State Government
- ☐ CRISP
- ☐ Hospital Organization
- ☐ Other health centers
- ☐ Other (please specify)
- ☐ None of the above

Patient Materials/Resources

21. Does your medical department display/provide oral health related education materials? (i.e. importance of toothbrushing, flossing, fluoride)

- ☐ Yes
- ☐ No
- ☐ Other (please specify)_____

22. Does your dental department display/provide primary care related education materials? (i.e. diabetes, HIV, smoking cessation, HPV)

- ☐ Yes
- ☐ No
- ☐ Other (please specify)_____

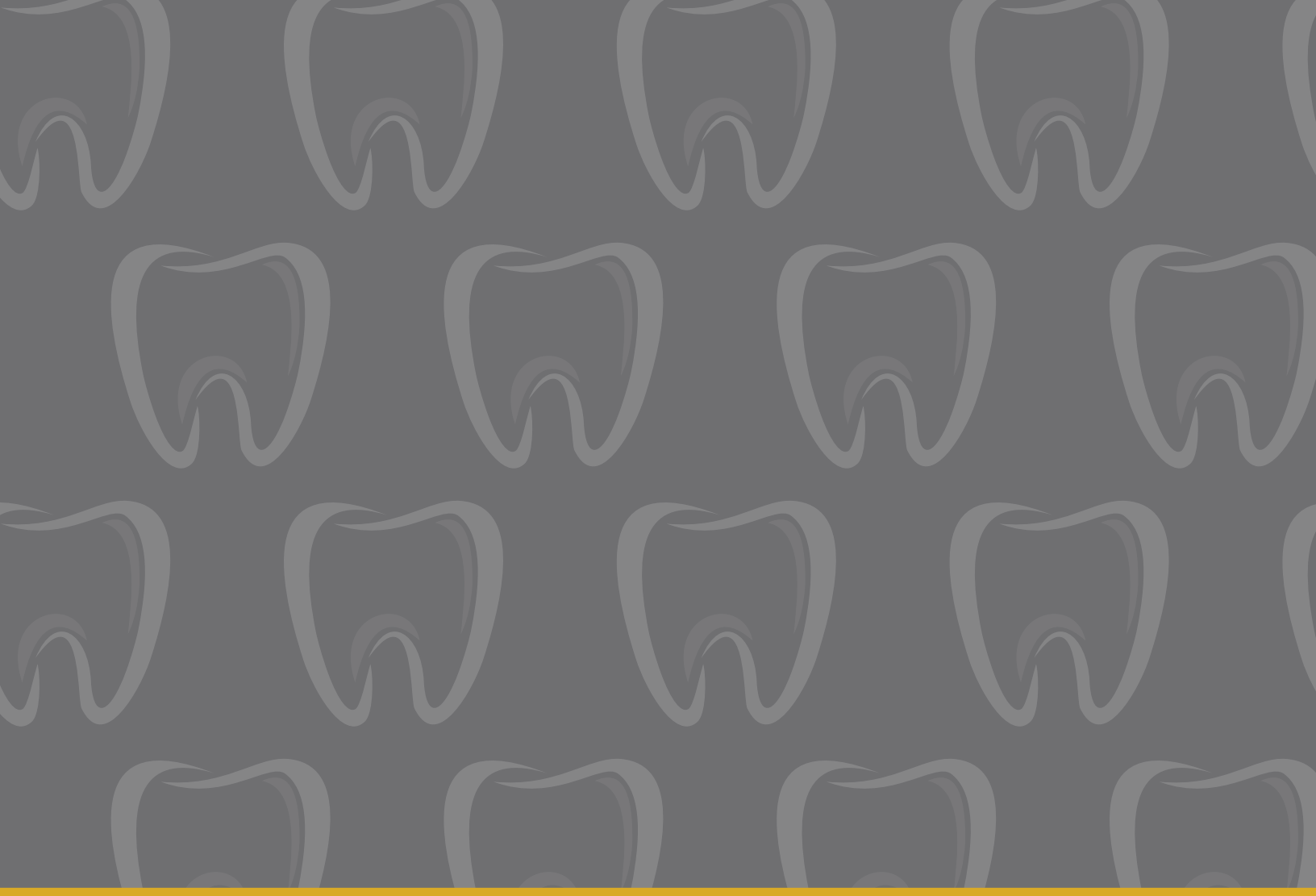
Overall Assessment

23. What is your overall assessment of the level of integration between the medical and dental departments at this health center?

- ☐ Not Integrated (go to #24)
- ☐ Somewhat integrated (go to #24)
- ☐ Fully integrated (end of survey)

24. Below are some common areas clinics need to integrate medical and dental care. Please rank these options from 1-5 with 1 being the biggest barrier for your clinic and 5 being the least.

- ☐ ___ Time/staff capacity to add integration activities
- ☐ ___ Integration training needs/deficits
- ☐ ___ Health information technology interconnectivity
- ☐ ___ Capacity of referral partners to see referred patients
- ☐ ___ Communication between medical and dental office



DC | HEALTH
GOVERNMENT OF THE DISTRICT OF COLUMBIA

GOVERNMENT OF THE
DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR