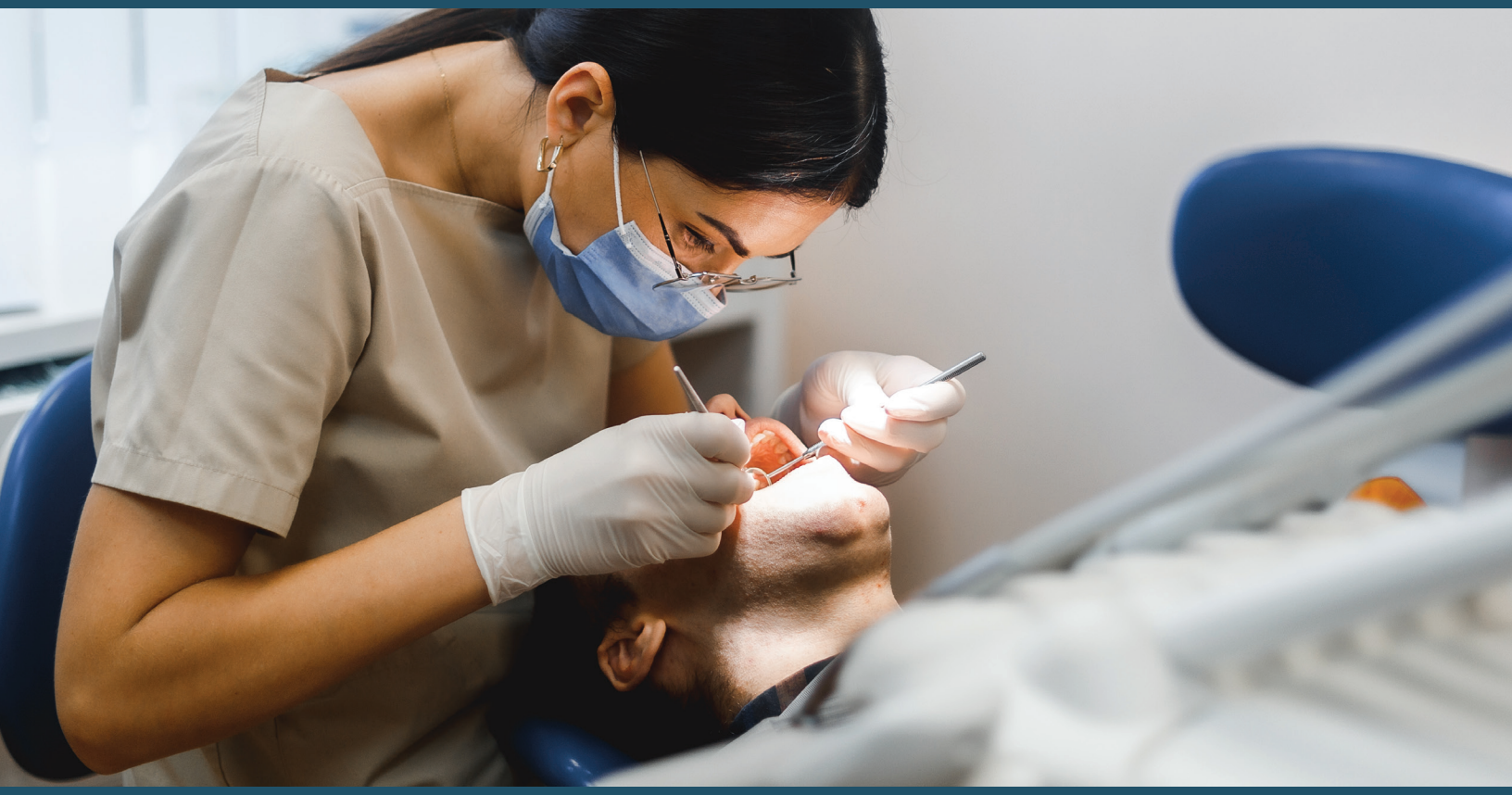

Nevada Department of Health and Human Services
Oral Health Program

HRSA
Health Resources & Services Administration

Nevada Department of Health and Human Services
DIVISION OF HEALTH CARE FINANCING AND POLICY

NEVADA ORAL HEALTH REPORT

The Impact of COVID-19 on Oral Health and Access In Nevada

August 30, 2024

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Executive Summary

The COVID-19 pandemic had a profound impact on public health, extending beyond the immediate effects of the virus to various aspects of healthcare, including oral health and the practice of dentistry due to the direct face-to-face patient-dentist contact, and the risks associated with exposure to the virus for both patients and oral health providers. In Nevada, the repercussions of the pandemic on oral health have been significant, affecting dental practices, access to dental care, the prevalence of oral health issues, and the overall well-being of residents. It has also highlighted the persistent health disparities and inequities that vulnerable populations in accessing oral health in general, and the disproportionate impacts on their oral health during times of crisis.

In Nevada, the first case of COVID-19 was identified on March 5, 2020. One week later, on March 12, then-Governor Steve Sisolak declared a state of emergency,[1] and by March 20, all non-essential businesses were closed, large events were cancelled, and schools were moved to virtual learning to slow the rate of transmission. COVID-19 became a serious public health threat in Nevada, with 1,631 new cases per day during the peak of the initial wave, 1,160 hospitalizations, and 27 deaths. From March 2020 to December 2022, Nevada experienced over 868,000 identified cases, with some racial and ethnic groups, including Hispanic or Latino, non-Hispanic Black Nevadans, and non-Hispanic Asian/Pacific Islanders, more adversely affected than others. Public health infrastructure and systems were overwhelmed due to the influx of COVID cases and the severity of illness. Nevada has since experienced four more statewide outbreaks, following seasonal outbreak patters each summer and winter, with the virus mutating in various ways. By 2023, the virus became endemic and most emergency declarations were expiring.[2]

COVID-19 disrupted the delivery of dental care throughout the nation, leading to the closure of dental care facilities or restriction of services to emergency care only. In recognition of the high transmission risk of COVID-19, on March 16, 2020, the American Dental Association (ADA) issued guidance that dental practices postpone elective procedures and only provide emergency or urgent care to keep dentists and patients safe from the adverse health effects of COVID-19 and to conserve personal protective equipment (PPE).[3] The procedures that the ADA recommended dentists postpone include radiographs, oral examinations, aesthetic dental procedures, routine cleaning and preventive therapies, and orthodontic procedures that don't involve pain management. Urgent dental care includes extensive dental caries involving pain, uncontrolled oral bleeding, facial trauma, dental trauma, tooth fractures and biopsies of abnormal tissues.[4] The Nevada State Board of Dental Examiners concurred with the ADA that healthcare practitioners

[1] State of Nevada. Declaration of Emergency Directive 010 Stay at Home Order. Retrieved from https://gov.nv.gov/uploadedFiles/govnewnvgov/Content/News/Emergency_Orders/2020/2020-03-31%20-%20Declaration%20of%20Emergency%20Directive%20010%20Stay%20at%20Home.pdf

[2] Office of Analytics. Department of Health and Human Services. Symptoms of the Disease: The Epidemiological, Economic, and Public Health Impacts of COVID-19 on the Battle Born State. Carson City, Nevada. June 2023. Retrieved from https://dhhs.nv.gov/uploadedFiles/dhhsnvgov/content/Programs/Office_of_Analytics/Nevada%20COVID-19%20Impact%20Report%20-%20April%202024(1).pdf

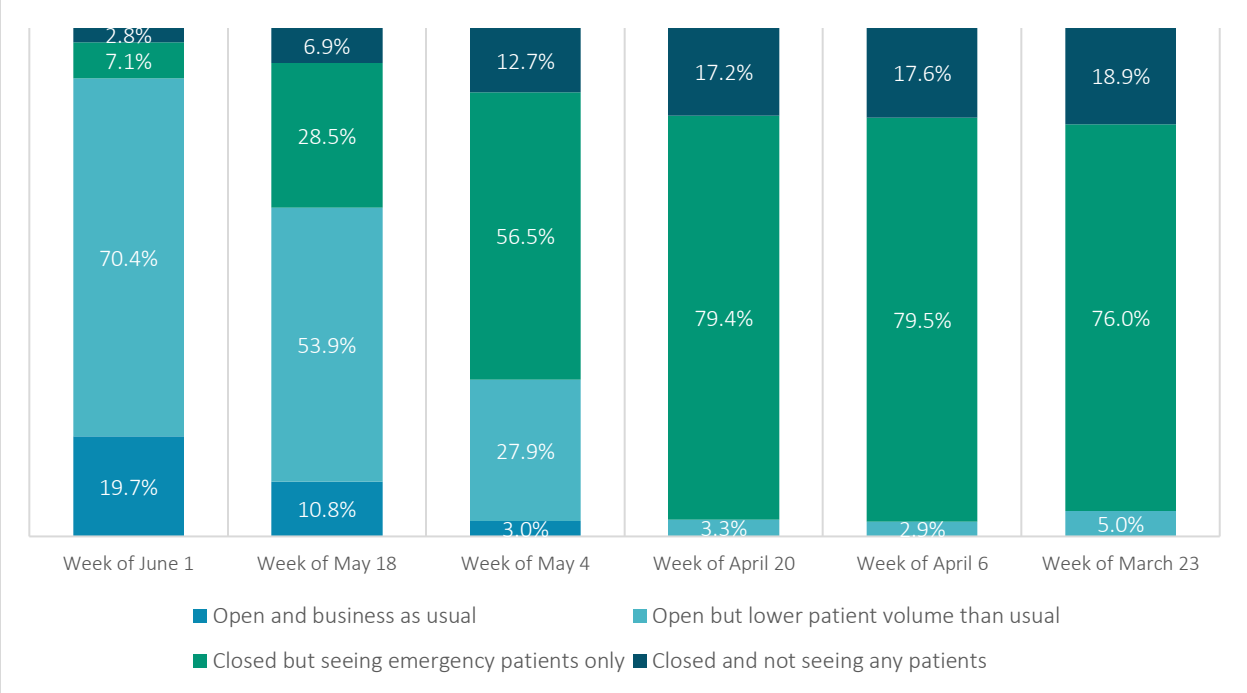
[3] American Dental Association. (2020). ADA calls on dentists to postpone elective procedures. Retrieved from https://www.ada.org/about/press-releases/2020-archives/ada-calls-upon-dentists-to-postpone-elective-procedures

[4] https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/coronavirus/covid-19-practice-resources/ada_covid19_dental_emergency_dds.pdf?rev=51b8c64b2b6e45f1a7edca6343be8985&hash=DB74D9EA759D90C491B3B0EE7D934A88

do their part to mitigate the spread of COVID-19 and recommended that dental healthcare providers postpone elective procedures.[5]

Oral health care providers striving to meet the needs of their patients and communities during the pandemic faced financial and operational challenges, affecting their ability to consistently deliver care. During the week of March 23, 2020, 76.0% of dental practices across the country were closed but seeing emergency patients only, 18.9% were closed and not seeing any patients, and 5.0% were open but experiencing lower patient volume than normal (Graph 1). By June 1, 7.1% of dental practices across the country were closed but seeing emergency patients only, 2.8% were closed and not seeing any patients, 70.4% were open but experiencing lower patient volume than normal, and 19.7% were open with business as usual. [6]

GRAPH 1. STATUS OF DENTAL PRACTICE, WEEK OF MARCH 23 TO WEEK OF JUNE 1, 2020, U.S.



In Nevada, during the week of March 23, 87.3% of dental practices were closed but seeing emergency patients only, 9.3% were closed and not seeing any patients, and 3.4% were open but experiencing lower patient volume than normal.[7] By June 1, 75.0% were open but experiencing lower patient volume than normal, and 25.0% were open with business as usual. [8] See Graph 2 below.

With widespread closures and reduced hours during lockdowns, strict safety protocols and the need for enhanced personal protective equipment (PPE), and decreased patient volumes, dental

[5] Nevada State Board of Dental Examiners. Corona Virus Affecting Dentistry in Nevada. Retrieved from https://dental.nv.gov/Home/COVID-19/
[6] COVID-19 Dashboard Wave. Retrieved from https://public.tableau.com/app/profile/bradley.munson/viz/COVID-19DashboardWave10_16189430520590/Dashboard1
[7] COVID-19 Dashboard Wave. Retrieved from https://public.tableau.com/app/profile/bradley.munson/viz/COVID-19DashboardWave10_16189430520590/Dashboard1
[8] COVID-19 Dashboard Wave. Retrieved from https://public.tableau.com/app/profile/bradley.munson/viz/COVID-19DashboardWave10_16189430520590/Dashboard1

practices incurred increased operational costs. Many practices faced financial strain, challenging their ability to maintain operations and employment of staff. For general practitioners, the average annual net income dropped 17.9% in 2020 compared to 2019, while or specialists, the decline was 6.9%.[9]

These closures also exacerbated the health care inequities and unmet dental needs that vulnerable populations already face, including a lack of dental providers in the Medicaid program.[10] In addition to the closures of dental practices, states, including Nevada, experienced widespread school closures and the suspension of school-based sealant programs that provide critical preventive care, particularly for vulnerable populations of students.

Due to disruptions in care, tele-dentistry was being slowly recognized as a practical tool for some oral health needs across the nation, especially for rural communities. It received a significant boost due to the sudden and widespread closure of facilities and the social distancing guidelines and restrictions imposed during the pandemic.[11] In April 2020, the use of tele-dentistry was approximately 60 times greater in the United States during the pandemic than pre-pandemic levels.[12] However, while tele-dentistry is an option for certain oral healthcare needs, cleanings, diagnostics, and assessment typically require a hands-on approach.

The use of telehealth also skyrocketed in Nevada during the pandemic. However, most policy changes were provisional for the public health emergency.[13] Because telehealth presents numerous opportunities to improve access to care, a new law, Assembly Bill No. 147 (AB147), was passed on June 16, 2023, that focuses on teledentistry. However, it is yet to be implemented. A summary of AB147 is below:[14]

> "AN ACT relating to dentistry; requiring dental hygienists and dental therapists to comply with certain requirements governing the provision of health care; requiring providers of dental care to receive training on teledentistry before providing services through teledentistry; prescribing certain requirements relating to the secure storage of electronic records; providing for the issuance of special endorsements for a dentist, dental hygienist or dental therapist to administer immunizations; imposing certain requirements relating to the administration of immunizations by the holder of such an endorsement; requiring a dentist or dental hygienist to refer a minor to a dental home when appropriate; deeming certain conduct by a provider of dental care to be unprofessional conduct; authorizing the imposition of disciplinary action against a dentist, dental hygienist or dental

[9] Munson, B., Vujicic, M., Harrison, B., Morrissey, R. How Did the COVID-19 Pandemic Affect Dentist Earnings? Retrieved from https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/hpi/hpibrief_0921_1.pdf

[10] CareQuest Institute for Oral Health. (2021). The COVID-19 Pandemic Deepens Oral Health Inequities. Retrieved from https://www.carequest.org/system/files/CareQuest-Institute-COVID-19-Pandemic-Deepens-Oral-Health-Inequalities-Brief.pdf

[11] Werts, M., Patel, E. Teledentistry Trends in the United States During the COVID-19 Pandemic. Rensselaer, NY: Oral Health Workforce Research Center, Center for Health Workforce Studies, School of Public Health, SUNY Albany; October 2022. Retrieved from https://oralhealthworkforce.org/wp-content/uploads/2022/10/OHWRC-TeledentistryCaseStudies-2022Final.pdf

[12] Choi SE, Simon L, Basu S, Barrow JR. Changes in dental care use patterns due to COVID-19 among insured patients in the United States. *J Am Dent Assoc.* 2021;152(12):1033-1043.e3. Retrieved from https://jada.ada.org/article/S0002-8177(21)00417-7/fulltext

[13] Research Division Legislative Counsel Bureau. (2021). Telehealth in Nevada and the U.S. Retrieved from https://www.leg.state.nv.us/Division/Research/Documents/Telehealth_in_Nevada.pdf

[14] Nevada Legislative Counsel Bureau. AB147. Retrieved from https://www.leg.state.nv.us/App/NELIS/REL/82nd2023/Bill/9804/Overview

therapist for certain violations; requiring hospitals and issuers of Medicaid managed care plans to take certain measures to ensure access by recipients of Medicaid to teledentistry; imposing certain requirements relating to the provision of services through teledentistry; providing a penalty; and providing other matters properly relating thereto.

This report was designed to describe the impact of COVID 19 on oral health outcomes in Nevada, and the key findings from the research are listed below:

Key Findings

- Decrease in dental visits:
    - 60.8% of adults ages 18 and over reported having visited the dentist or dental clinic in 2020 and 2022, a decrease from 2018 at 64.7% (Graph 3).
    - The rates of dental visits for all adult populations decreased from 2018 to 2020. In 2020, rates were lower among Hispanic (52.5%), Asian (58.0%), and Black (58.6%) adults, compared to their White counterparts (65.6%) (Graph 4).
    - From 2018 to 2020, the rates of dental visits declined most dramatically for individuals with a household income less than $15,000 (from 43.5% in 2018 to 36.6% in 2020), $15,000-$24,999 (from 49.4% in 2018 to 43.6% in 2020), and $50,000+ (from 79.7% in 2018 to 72.1% in 2020) (Graph 5).
    - Rates of dental visits for preventive care among Nevada children show a decrease for children ages 1-5 from 56.7% in 2018-2019 to 53.2% in 2019-2020 and children ages 6-11 years old from 81.3% in 2018-2019 to 80.2% in 2019-2020 (Graph 6)
    - Between March and April 2020, dental service rates among children enrolled in Medicaid and CHIP (Liberty Dental) declined 4.1% (from 4.7% to 0.6%) and Fee For Service (FFS) 5.6% (from 6.2% to 0.6%). (Graph 7).
- Increased oral health issues:
    - Nevada children ages 1-5 years old saw an increase in fair or poor condition of teeth from 3.7% in 2018-2019, to 4.1% in 2019-2020 and 7.8% in 2020-2021. Children ages 6-11 years old saw an increase from 6.9% in 2018-2019, to 9.3% in 2019-2020 and 10.4% in 2020-2021. Children ages 12-17 years old saw an increase from 7.2% in 2018-2019, to 8.5% in 2019-2020 and a slight decrease in 2020-2021 of 8.2% (Graph 8).
    - Nevada children ages 1-5 years old saw an increase in toothaches, bleeding gums, or decayed teeth from 11.9% in 2018-2019 to 12.9% in 2019-2020. Children ages 6-11 years old saw an increase from 19.4% in 2018-2019 to 22.7% in 2019-2020. Children ages 12-17 years old saw an increase from 17.8% in 2018-2019 to 20.2% in 2019-2020 (Graph 9).
    - Nevada children ages 1-5 years old saw an increase in decayed teeth from 9.5% in 2018-2019 to 10.3% in 2019-2020. Children ages 6-11 years old saw an increase from 15.3% in 2018-2019 to 18.2% in 2019-2020. Children ages 12-17 years old saw an increase from 14.8% in 2018-2019 to 16.6% in 2019-2020 (Graph 10).

    - Adults ages 35-54 and 65+ had an increase in the extractions of permanent teeth in 2020 compared to 2018 and 2022 (Graph 11).
- Impact on vulnerable populations:
    - Lower income children are more likely than children with higher household incomes report higher rates of one or more oral health problems, such as toothaches, bleeding gums, or decayed teeth (Graph 12).
    - While all children reported an increase in one or more oral health problems, during the pandemic, children in families with 0-99% FPL have continued higher incidence in the year following the pandemic (2020-2021) (Graph 12).
    - Children in families with 0-99% FPL have higher rates of decayed teeth or cavities and saw a higher increase (3.5%) during the pandemic, from 15.9% in 2018-2019 to 19.4% in 2019-2020 (Graph 13).
    - Children in families with public health insurance only saw a higher increase (6.3%) during the pandemic, from 14.5% in 2018-2019 to 20.8% in 2019-2020 (Graph 14).
    - Uninsured children reported a large increase (6.6%) from 2019-2020 (6.6%) to 2020-2021 (13.2%) (Graph 14).
    - In 2019-2020, Nevada children ages 1-17 who are Hispanic (24.6%), Black (19.5%) or Other race (18.5%) reported higher rates of one or more oral health problems, such as toothaches, bleeding gums, or decayed teeth compared to White (13.3%) or Asian (12.4%) children (Graph 15).
    - Hispanic children ages 1-17 saw the highest increase (5.4%) in decayed teeth or cavities during the pandemic, from 14.9% in 2018-2019 to 20.3% in 2019-2020 (Graph 16).
    - Children and youth with more complex health needs ages 1-17 had higher rates of decayed teeth or cavities compared to children and youth with less complex health needs (Graph 17).
- Impact on dental professionals:
    - During the week of March 23, 2020, 87.3% of dental practices were closed but seeing emergency patients only, 9.3% were closed and not seeing any patients, and 3.4% were open but experiencing lower patient volume than normal (Graph 2). By June 1, 75.0% of practices had reopened but continued to experience lower patient volumes than usual, while 25.0% were operating as normal.
    - Dental professionals faced increased stress and financial strain due to reduced patient volume, heightened safety protocols, and the costs associated with enhanced personal protective equipment (PPE), leading to staff reductions.
    - During 2020, primary care practices were estimated to have lost $67,000 in gross revenue per full-time equivalent physician.
    - The COVID-19 pandemic exacerbated workforce shortages as some dental professionals retired early or left the field due to health concerns or burnout.

Access to Dental Care

Nevada is the seventh largest state in the nation with a large majority of the state being vast, sparsely populated areas. Nevada is comprised of 17 counties, and three are considered urban – Clark County, Washoe County, and Carson City – and account for approximately 88% of the state's population. Rural/frontier counties experience vastly scattered resources, and for low-income populations, these distances add to the difficulty of accessing general oral or general healthcare.

In Nevada, access to oral health care is compromised by availability, accessibility, accommodation, and affordability of dental services, particularly in the rural and frontier communities.[15] Barriers include a lack of interdisciplinary collaboration, difficulty navigating the dental system, low oral health literacy, fear or anxiety of dental care and misconceptions about preventive oral health. Nevada faces inadequate dental care resources, limited dental health professionals, fragmented service delivery and inadequate transportation without additional financial support to address these needs. The prevalence of unmet oral health needs and challenges to accessibility is higher among low-income and vulnerable populations, including those enrolled in Medicaid or the Children's Health Insurance Program (CHIP), as dentist participation in these programs vary by state, some treat a small number of Medicaid patients or may not be accepting new Medicaid patients, and low reimbursement rates are a continued challenge for both patients and dentists.[16]

Figure 1 provides an overview of the federally designated Nevada dental health professional shortage areas (HPSAs).[17] An estimated 65.5% of the state's population, or 2,147,153 Nevadans, reside in a dental HPSA – 12 of 17 counties in Nevada are single-county dental HPSAs. [18] An estimated 88.3% of the rural and frontier population, or 267,300 residents of rural and frontier Nevada live in a dental HPSA – 11 of 14 rural and frontier counties in Nevada are single-county dental HPSAs. [19]

In Nevada, only 26.5% of the need for dental care is met, with 154 additional practitioners needed to remove the health HPSA designation. [20] The number of dentists per 1,000 population is 1,530:1, compared to the U.S at 1,360:1 in 2024.[21]

[15] 2019 Nevada State Health Needs Assessment. Retrieved from https://dhhs.nv.gov/uploadedFiles/dhhsnvgov/content/Programs/Grants/NV_SHNA_FINAL.pdf

[16] Williams, E., Rudowitz, R. (2024). Variation in Use of Dental Services by Children and Adults Enrolled in Medicaid and CHIP. Retrieved from https://www.kff.org/medicaid/issue-brief/variation-in-use-of-dental-services-by-children-and-adults-enrolled-in-medicaid-or-chip/

[17] Rural Health Information Hub. Health Professional Shortage Areas: Dental Care, by County, July 2024 – Nevada. Retrieved from https://www.ruralhealthinfo.org/charts/9?state=NV

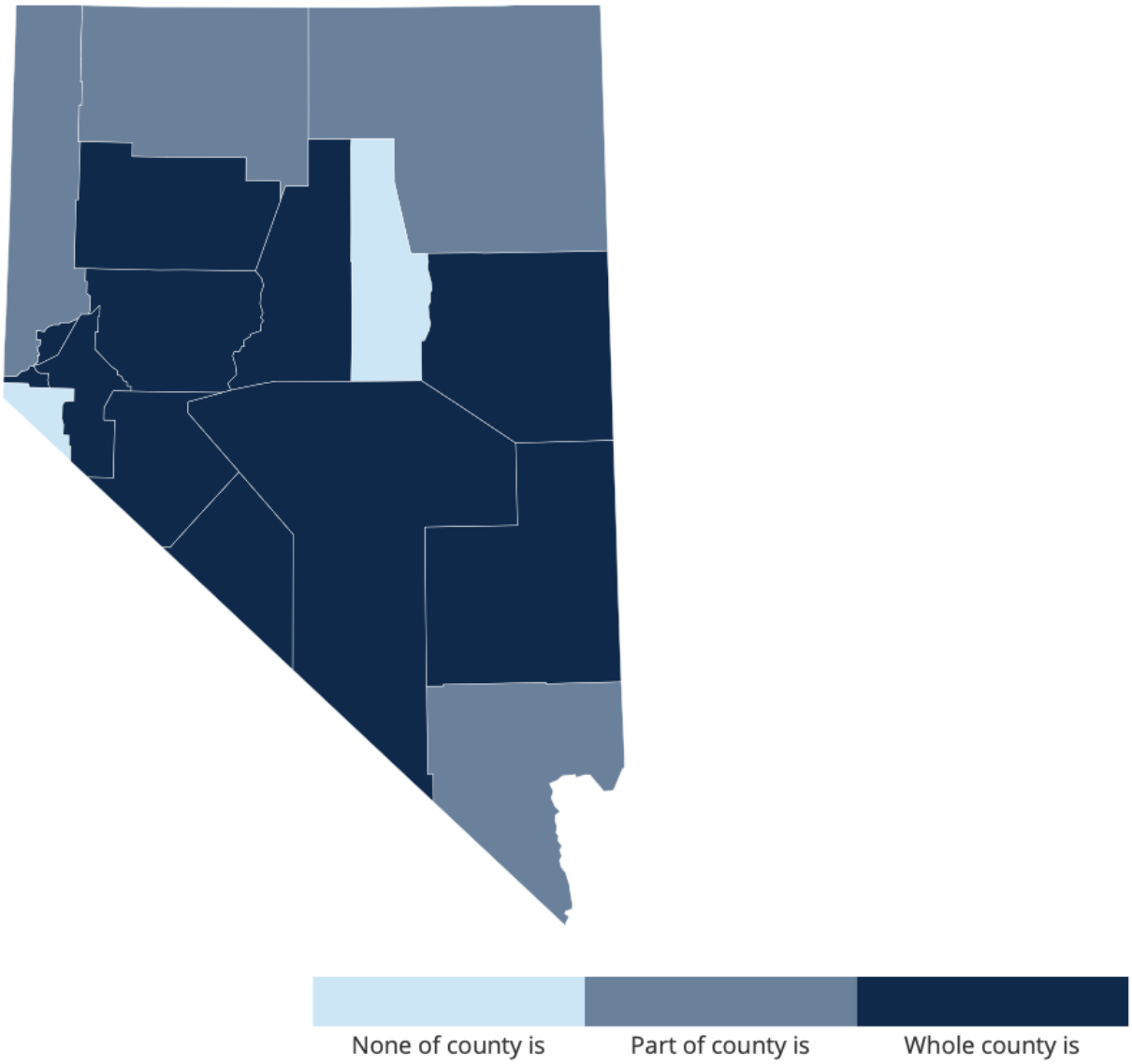
[18] Packham, J., Griswold, T., Mwalili, N., Brown, A., & Etchegoyhen, L. (2023). *Health Workforce in Nevada: A Chartbook*. Retrieved from https://gowinn.nv.gov/wp-content/uploads/2023/12/23-HWIN-Chartbook-Final-May-2023.pdf

[19] Packham, J., Griswold, T., Mwalili, N., Brown, A., & Etchegoyhen, L. (2023). *Health Workforce in Nevada: A Chartbook*. Retrieved from https://gowinn.nv.gov/wp-content/uploads/2023/12/23-HWIN-Chartbook-Final-May-2023.pdf

[20] Kaiser Family Foundation. Dental Health Care Professional Shortage Areas (HPSAs). Retrieved from https://www.kff.org/other/state-indicator/dental-care-health-professional-shortage-areas-hpsas/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

[21] County Health Rankings. Retrieved from https://www.countyhealthrankings.org/explore-health-rankings/nevada?year=2023

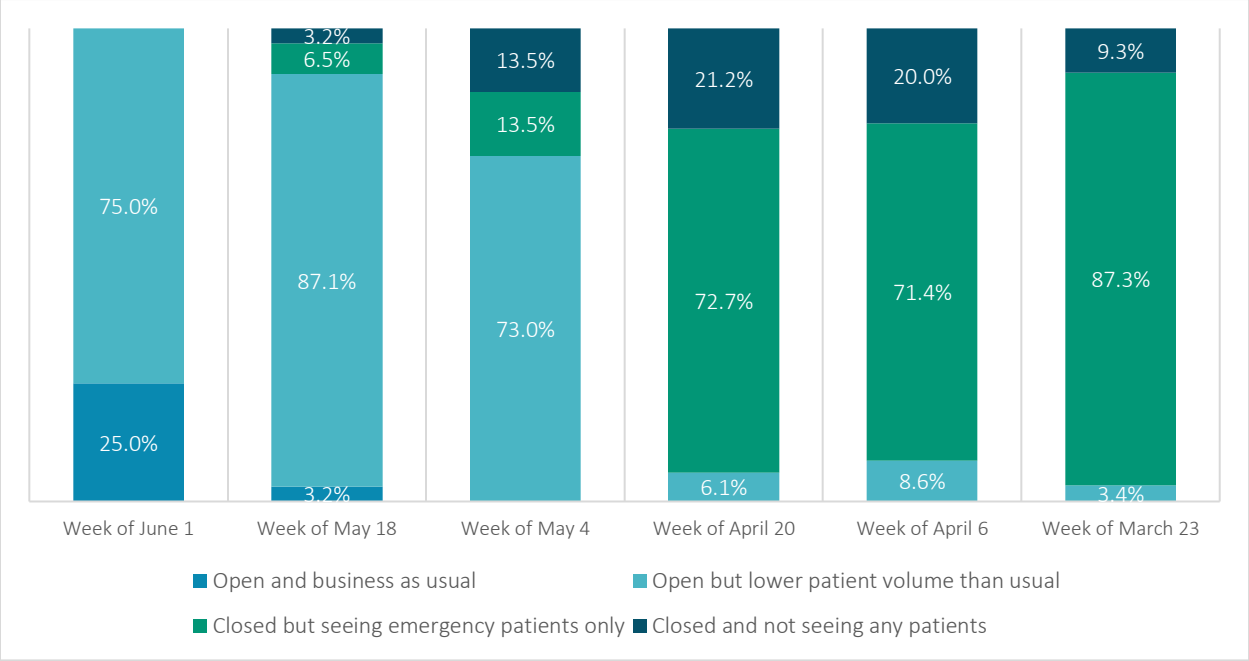
FIGURE 1. NEVADA DENTAL HEALTH PROFESSIONAL SHORTAGE AREAS BY COUNTY, JULY 2024



During the height of the pandemic, many dental practices in Nevada were forced to temporarily close or limit their services to emergency procedures only. During the week of March 23, 2020, 87.3% of dental practices were closed but seeing emergency patients only, 9.3% were closed and not seeing any patients, and 3.4% were open but experiencing lower patient volume than normal (Graph 2). By June 1, 75.0% were open but experiencing lower patient volume than normal, and 25.0% were open with business as usual.[22] This resulted in a substantial reduction in routine dental visits, cleanings, and preventive care. The suspension of non-emergency dental services created a backlog of unmet dental needs, disproportionately affecting vulnerable populations, including low-income families, the elderly, and individuals with pre-existing health conditions.

[22] COVID-19 Dashboard Wave. Retrieved from https://public.tableau.com/app/profile/bradley.munson/viz/COVID-19DashboardWave10_16189430520590/Dashboard1

GRAPH 2. STATUS OF DENTAL PRACTICE, WEEK OF MARCH 23 TO WEEK OF JUNE 1, 2020, NEVADA



Nevada continues to face workforce challenges to ensure access to oral health providers. From 2012 to 2022, the number of licensed dentists in Nevada increased from 1,500 in 2012 to 1,879 in 2022, an increase of 25.3%. This increased the number of licensed dentists per 100,000 population from 54.6% to 58.4%, an increase of 7.0% (below the population growth).[23]

In addition, the number of licensed registered dental hygienists increased from 1,022 in 2012 to 1,376 in 2022, an increase of 34.6%. The number of licensed registered dental hygienists per 100,000 population increased from 54.6 to 58.4, an increase of 7.0%.[24] In rural and frontier counties, the number of licensed registered dental hygienists increased from 98 in 2012 to 129 in 2022, an increase of 31.6%.[25]

Availability of providers is another critical challenge, especially in rural and underserved urban areas where there is a shortage of dental professionals. Even when providers are available, transportation can be a major barrier for those without reliable means of getting to and from dental appointments, particularly in areas lacking public transit options.

Dental Visits

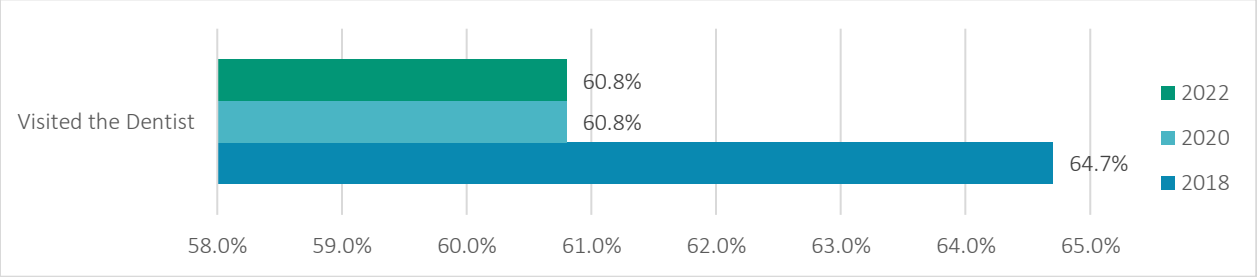
Dental visits decreased during COVID-19 due to widespread lockdowns, fear of virus transmission, and the implementation of strict safety protocols. Many dental practices in Nevada reduced hours

[23] Packham, J., Griswold, T., Mwalili, N., Brown, A., & Etchegoyhen, L. (2023). *Health Workforce in Nevada: A Chartbook*. Retrieved from https://gowinn.nv.gov/wp-content/uploads/2023/12/23-HWIN-Chartbook-Final-May-2023.pdf
[24] Packham, J., Griswold, T., Mwalili, N., Brown, A., & Etchegoyhen, L. (2023). *Health Workforce in Nevada: A Chartbook*. Retrieved from https://gowinn.nv.gov/wp-content/uploads/2023/12/23-HWIN-Chartbook-Final-May-2023.pdf
[25] Packham, J., Griswold, T., Mwalili, N., Brown, A., & Etchegoyhen, L. (2023). *Health Workforce in Nevada: A Chartbook*. Retrieved from https://gowinn.nv.gov/wp-content/uploads/2023/12/23-HWIN-Chartbook-Final-May-2023.pdf

or closed temporarily (Graph 1), prioritizing emergency procedures over routine care, leading to a significant decline in routine and preventive dental visits.

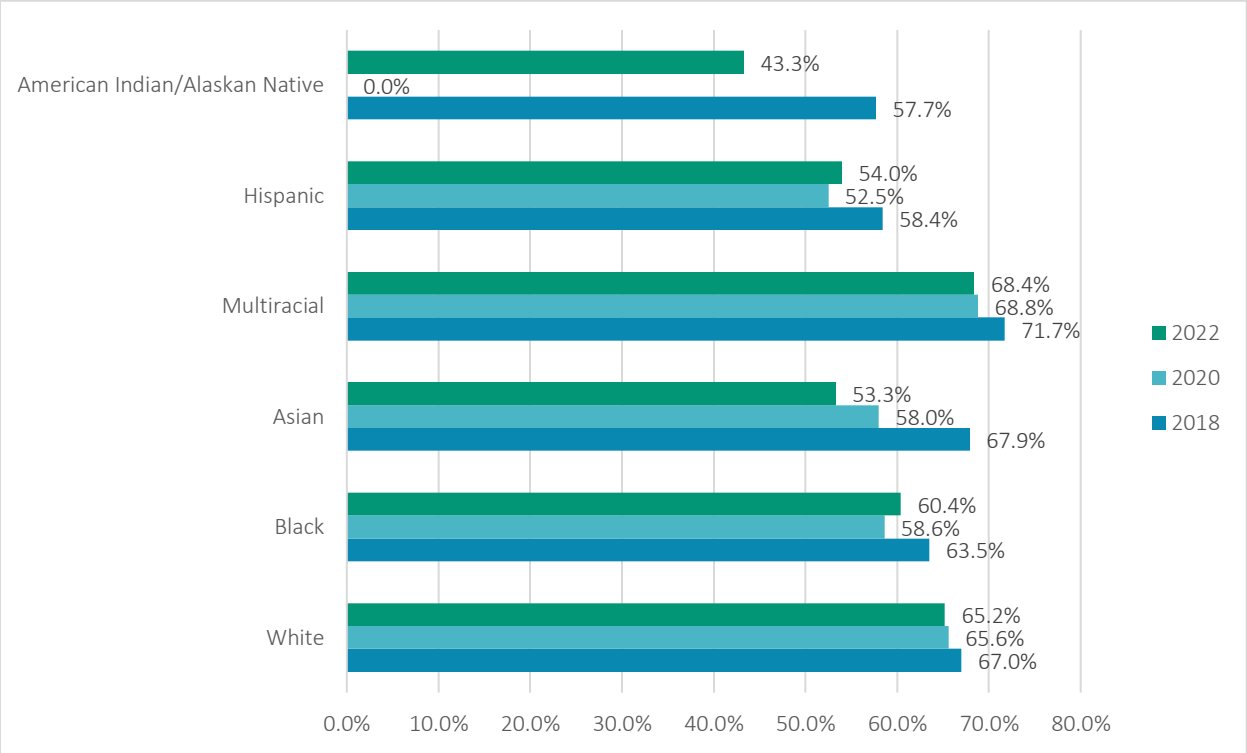
In Nevada, 60.8% of adults ages 18 and over reported having visited the dentist or dental clinic in 2020 and 2022, a decrease from 2018 at 64.7% (Graph 3).[26]

Graph 3. Adults Ages 18 and Over who Visited the Dentist or Dental Clinic, Nevada, 2018, 2020, and 2022



The rates of dental visits for all adult populations decreased from 2018 to 2020. In 2020, rates were lower among Hispanic (52.5%), Asian (58.0%), and Black (58.6%) adults, compared to their White counterparts (65.6%) (Graph 4).[27] Rates for American Indian/Alaskan Native Nevadans were unavailable for 2020.

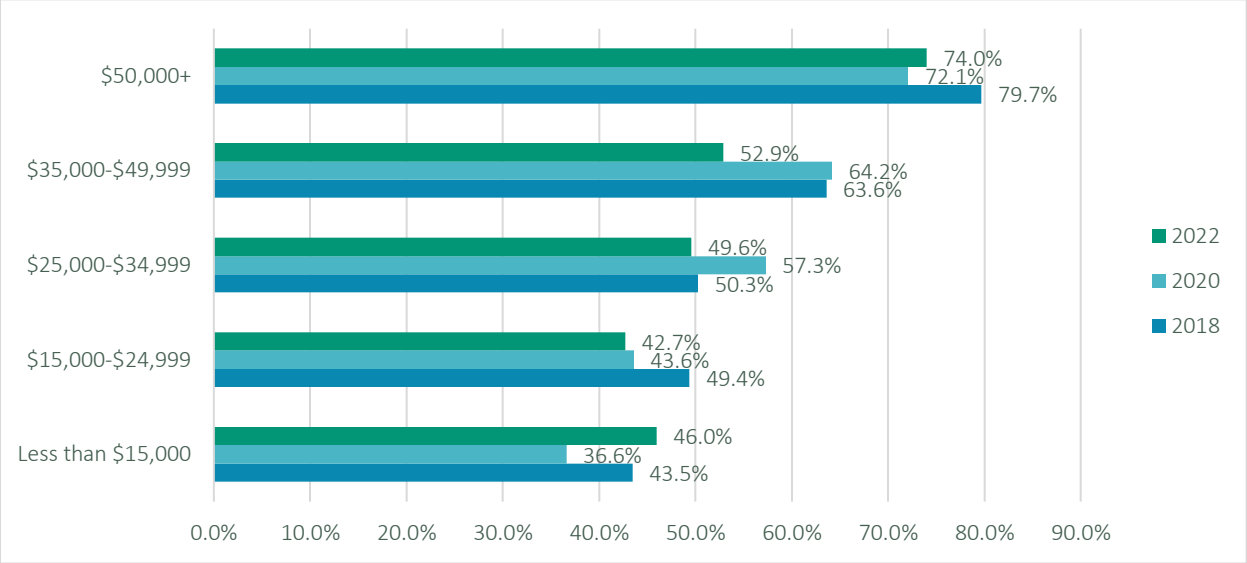
Graph 4. Adults who Visited the Dentist or Dental Clinic within the Past Year for any Reason by Race/Ethnicity, Nevada, 2018, 2020, 2022



[26] BRFSS Prevalence Data. Retrieved from https://www.cdc.gov/brfss/data_tools.htm
[27] BRFSS Prevalence Data. Retrieved from https://www.cdc.gov/brfss/data_tools.htm

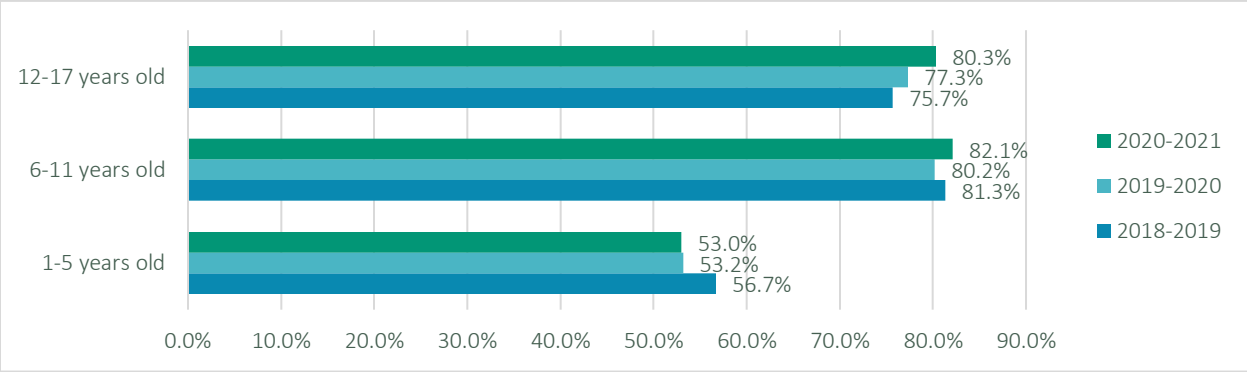
Dental visits are consistently lower among low-income Nevada adults (Graph 5).[28] From 2018 to 2020, the rates of dental visits declined most dramatically for individuals with a household income less than $15,000 (from 43.5% in 2018 to 36.6% in 2020), $15,000-$24,999 (from 49.4% in 2018 to 43.6% in 2020), and $50,000+ (from 79.7% in 2018 to 72.1% in 2020).

Graph 5. Adults who Visited the Dentist or Dental Clinic within the Past Year for any Reason by Household Income, Nevada, 2018, 2020, 2022



Rates of dental visits for preventive care among Nevada children show a decrease for children ages 1-5 from 56.7% in 2018-2019 to 53.2% in 2019-2020 and children ages 6-11 years old from 81.3% in 2018-2019 to 80.2% in 2019-2020 (Graph 6).[29]

Graph 6. Children Ages 1-17 years who Visited the Dentist or Oral Health Care Provider within the Past Year for Preventive Dental Care, Such as Check-Ups, Dental Cleanings, Dental Sealants, or Fluoride Treatments, Nevada, 2018, 2020, 2022

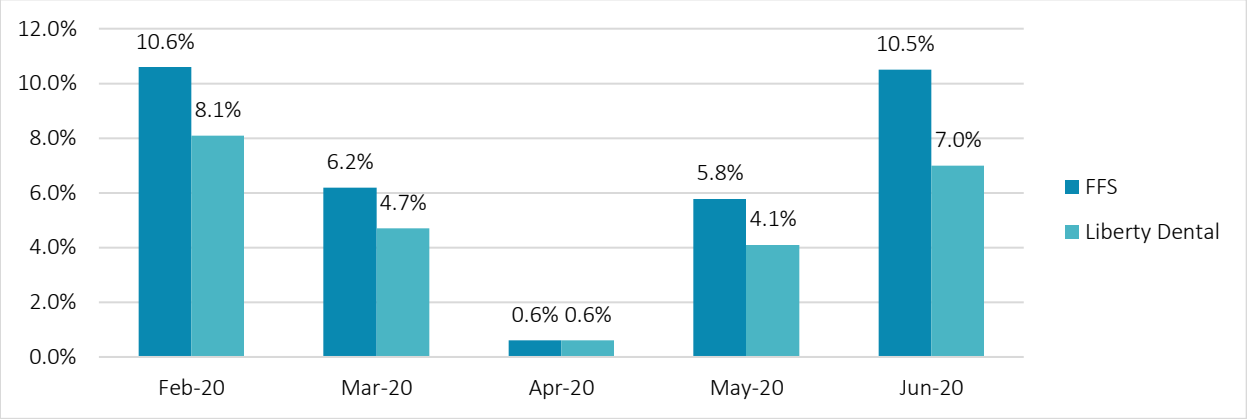


[28] BRFSS Prevalence Data. Retrieved from https://www.cdc.gov/brfss/data_tools.htm

[29] Child and Adolescent Health Measurement Initiative. 2018-2021 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). Retrieved from www.childhealthdata.org.

Rates of dental service use among both children and adults with Medicaid or CHIP declined during the pandemic. In Nevada, between March and April 2020, dental service rates among children enrolled in Medicaid and CHIP (Liberty Dental) declined 4.1% (from 4.7% to 0.6%) and Fee For Service (FFS) 5.6% (from 6.2% to 0.6%). (Graph 7).[30]

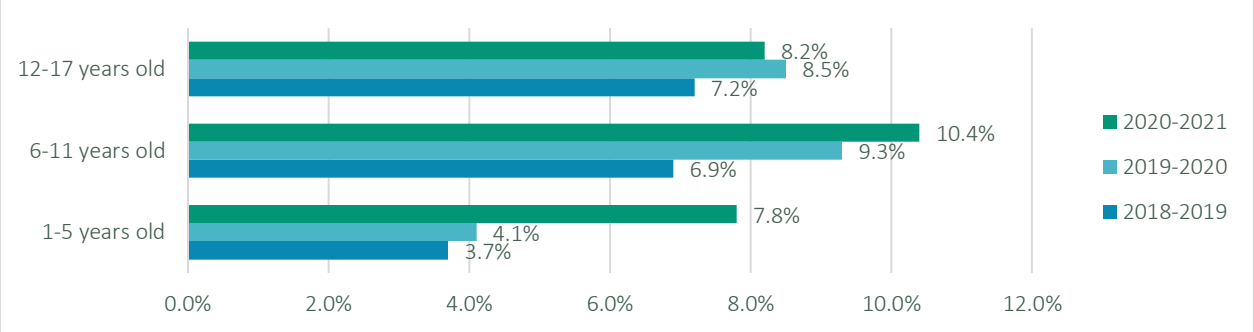
GRAPH 7. CHILDREN AGES 0-20 ENROLLED IN MEDICAID AND CHIP RECEIVING DENTAL SERVICES, FEBRUARY TO JUNE 2020, NEVADA



Increased Oral Health Issues

The decrease in routine dental care led to increased oral health issues. Nevada children ages 1-5 years old saw an increase in fair or poor condition of teeth from 3.7% in 2018-2019, to 4.1% in 2019-2020 and 7.8% in 2020-2021. Children ages 6-11 years old saw an increase from 6.9% in 2018-2019, to 9.3% in 2019-2020 and 10.4% in 2020-2021. Children ages 12-17 years old saw an increase from 7.2% in 2018-2019, to 8.5% in 2019-2020 and a slight decrease in 2020-2021 of 8.2% (Graph 8).[31]

GRAPH 8. CONDITION OF TEETH, FAIR OR POOR, CHILDREN AGES 1-17 YEARS, NEVADA, 2018-2021

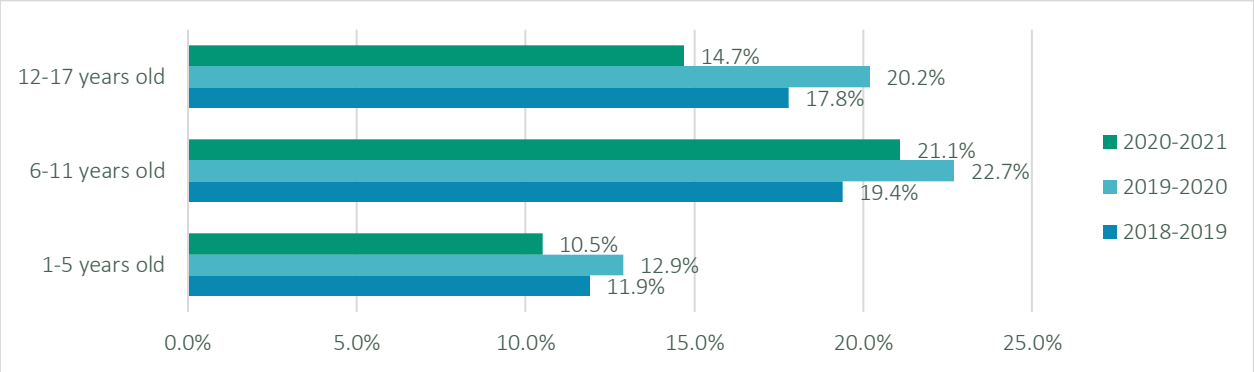


There was a noticeable rise in cases of oral health problems such as toothaches, bleeding gums, or decayed teeth in Nevada children ages 1-17. Nevada children ages 1-5 years old saw an increase in toothaches, bleeding gums, or decayed teeth from 11.9% in 2018-2019 to 12.9% in 2019-2020.

[30] Nevada Department of Health and Human Services. Oral Health in Nevada.
[31] Child and Adolescent Health Measurement Initiative. 2018-2021 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). Retrieved from www.childhealthdata.org.

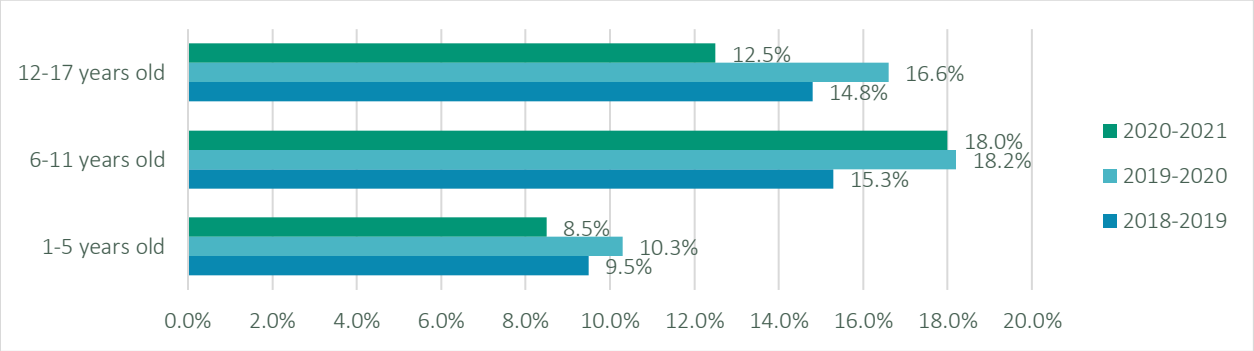
Children ages 6-11 years old saw an increase from 19.4% in 2018-2019 to 22.7% in 2019-2020. Children ages 12-17 years old saw an increase from 17.8% in 2018-2019 to 20.2% in 2019-2020 (Graph 9).[32] Each age category saw a decrease in oral health problems from 2020-2021.

Graph 9. Oral Health Problems Such as Toothaches, Bleeding Gums, or Decayed Teeth or Cavities, Children Ages 1-17 Years, Nevada, 2018-2021



Nevada children ages 1-5 years old saw an increase in decayed teeth from 9.5% in 2018-2019 to 10.3% in 2019-2020. Children ages 6-11 years old saw an increase from 15.3% in 2018-2019 to 18.2% in 2019-2020. Children ages 12-17 years old saw an increase from 14.8% in 2018-2019 to 16.6% in 2019-2020 (Graph 10).[33] Each age category saw a decrease in oral health problems from 2020-2021).[34]

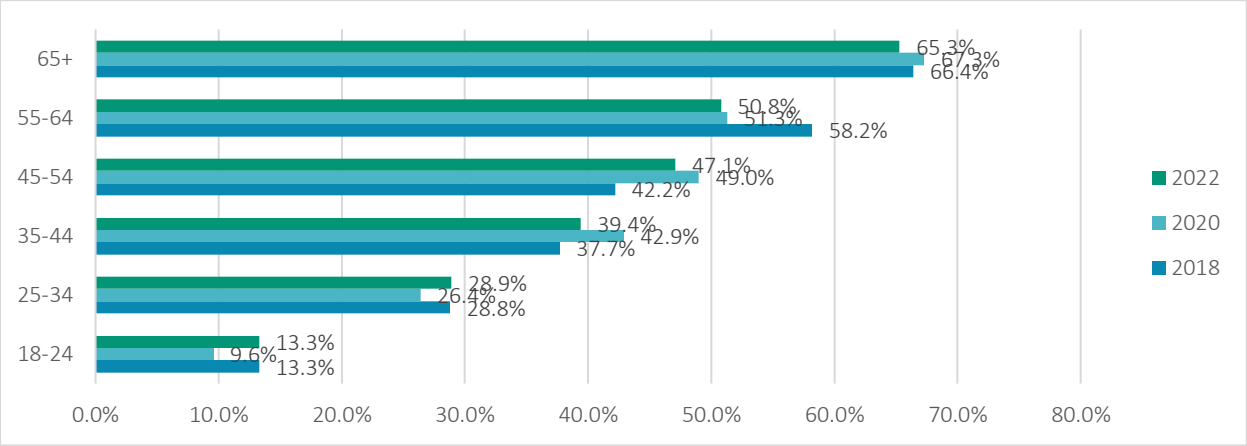
Graph 10.Decayed Teeth or Cavities, Children Ages 1-17 Years, Nevada, 2018-2021



Adults ages 35-54 and 65+ had an increase in the extractions of permanent teeth in 2020 compared to 2018 and 2022 (Graph 11).[35]

[32] Child and Adolescent Health Measurement Initiative. 2018-2021 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). Retrieved from www.childhealthdata.org.
[33] Child and Adolescent Health Measurement Initiative. 2018-2021 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). Retrieved from www.childhealthdata.org.
[34] Child and Adolescent Health Measurement Initiative. 2018-2021 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). Retrieved from www.childhealthdata.org.
[35] BRFSS Prevalence Data. Retrieved from https://www.cdc.gov/brfss/data_tools.htm

Graph 11. Adults Ages 18 and Over who Had Any Permanent Teeth Extracted, Nevada, 2018, 2020, and 2022

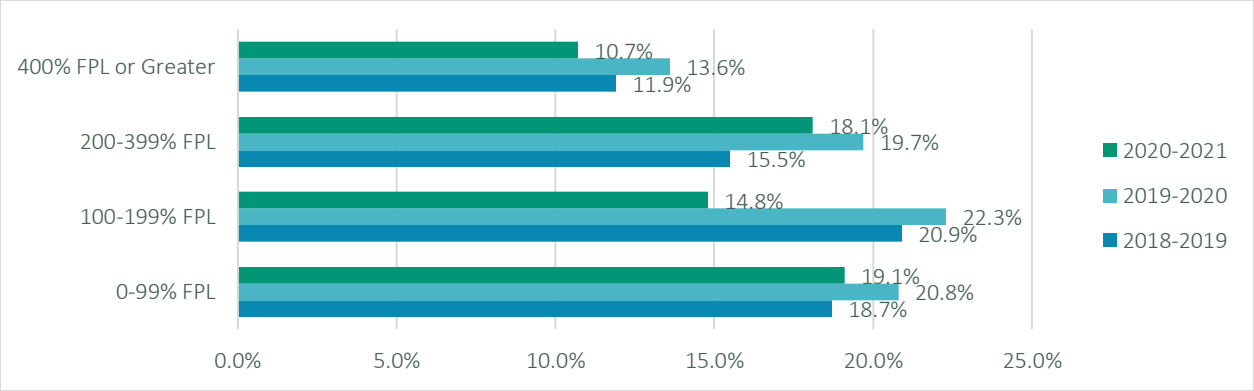


Impact on Vulnerable Populations

Nevada's vulnerable populations have been particularly affected by the pandemic's impact on oral health. Low-income individuals and families, who already face barriers to accessing dental care, experienced exacerbated difficulties due to the economic downturn and loss of employment. This financial strain made it even more challenging to afford dental services, leading to a deterioration in oral health for many.

Lower income children are more likely than children with higher household incomes report higher rates of one or more oral health problems, such as toothaches, bleeding gums, or decayed teeth (Graph 12).[36] While all children reported an increase in one or more oral health problems, during the pandemic, children in families with 0-99% FPL have continued higher incidence in the year following the pandemic (2020-2021).

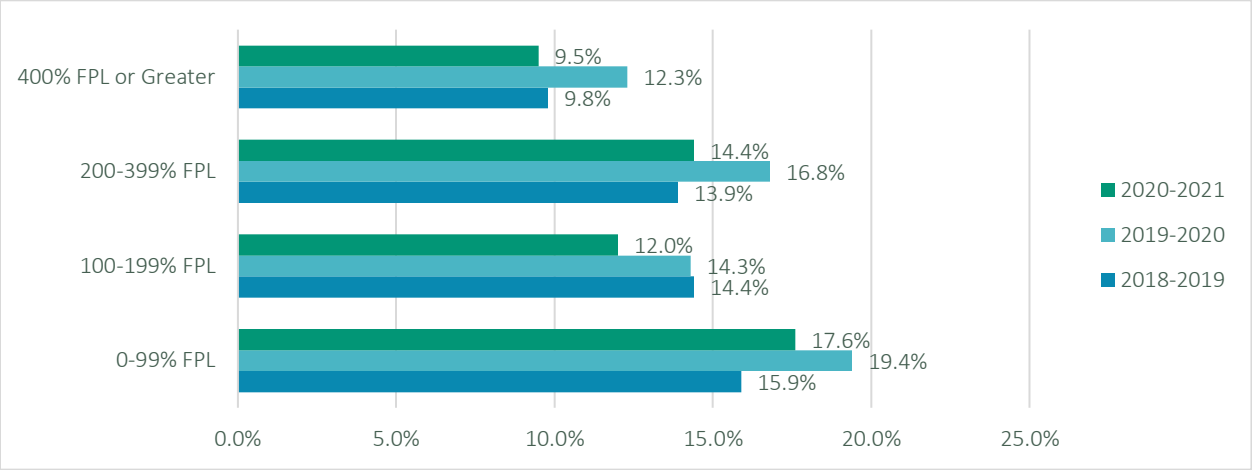
Graph 12. One or More Oral Health Problems Such as Toothaches, Bleeding Gums, or Decayed Teeth or Cavities, Children Ages 1-17 Years by Household Income Level, Nevada, 2018-2021



[36] Child and Adolescent Health Measurement Initiative. 2018-2021 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). Retrieved from www.childhealthdata.org.

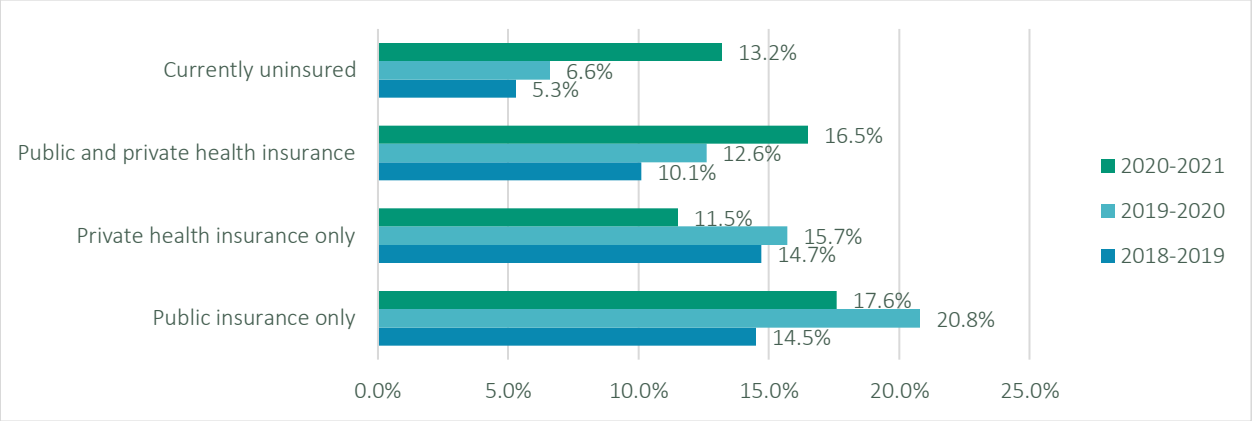
Children in families with 0-99% FPL have higher rates of decayed teeth or cavities (Graph 13) and saw a higher increase (3.5%) during the pandemic, from 15.9% in 2018-2019 to 19.4% in 2019-2020.[37]

Graph 13. Children Ages 1-17 who have Decayed Teeth or Cavities by Household Income Level, Nevada, 2018-2021



Children in families with public health insurance only saw a higher increase (6.3%) during the pandemic, from 14.5% in 2018-2019 to 20.8% in 2019-2020 (Graph 14).[38] However, uninsured children reported a large increase (6.6%) from 2019-2020 (6.6%) to 2020-2021 (13.2%).

Graph 14.Children Ages 1-17 who have Decayed Teeth or Cavities by Type of Health Insurance, Nevada, 2018-2021



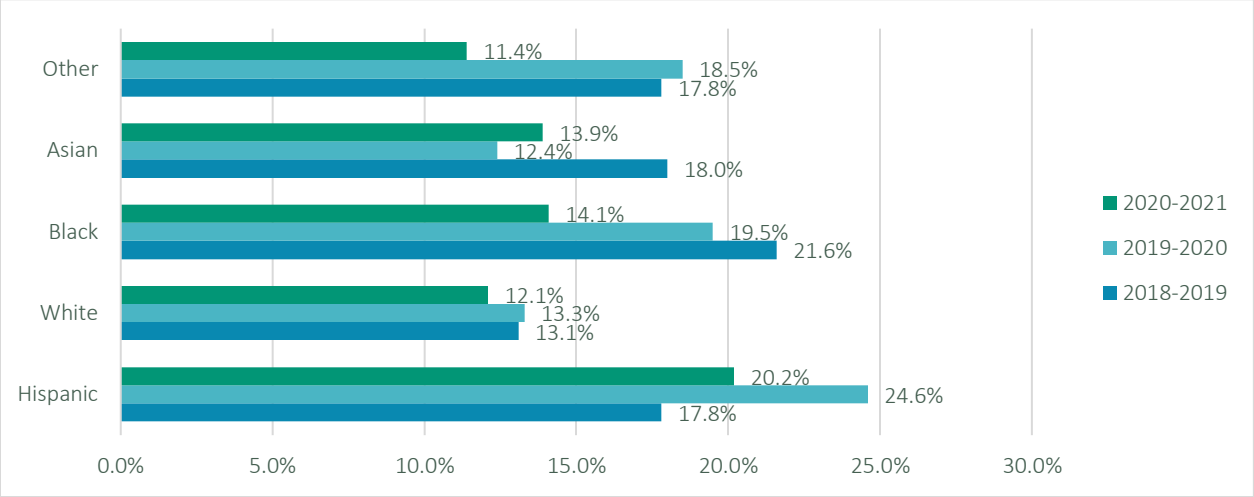
People of color are more likely to experience oral health problems and are less likely to receive dental care compared to White individuals (Graph 4). In 2019-2020, Nevada children ages 1-17 who are Hispanic (24.6%), Black (19.5%) or Other race (18.5%) reported higher rates of one or

[37] Child and Adolescent Health Measurement Initiative. 2018-2021 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). Retrieved from www.childhealthdata.org.

[38] Child and Adolescent Health Measurement Initiative. 2018-2021 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). Retrieved from www.childhealthdata.org.

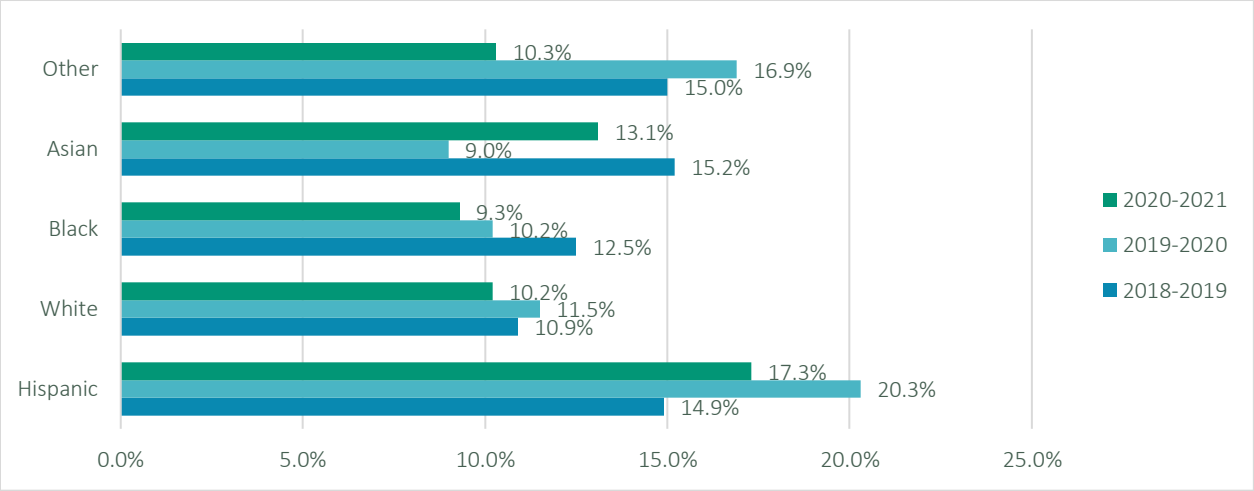
more oral health problems, such as toothaches, bleeding gums, or decayed teeth compared to White (13.3%) or Asian (12.4%) children (Graph 15).[39]

Graph 15. One or More Oral Health Problems Such as Toothaches, Bleeding Gums, or Decayed Teeth or Cavities, Children Ages 1-17 Years by Race/Ethnicity, Nevada, 2018-2021



Hispanic children ages 1-17 saw the highest increase (5.4%) in decayed teeth or cavities during the pandemic, from 14.9% in 2018-2019 to 20.3% in 2019-2020 (Graph 16).[40]

Graph 16. Children Ages 1-17 who have Decayed Teeth or Cavities by Race/Ethnicity, Nevada, 2018-2021

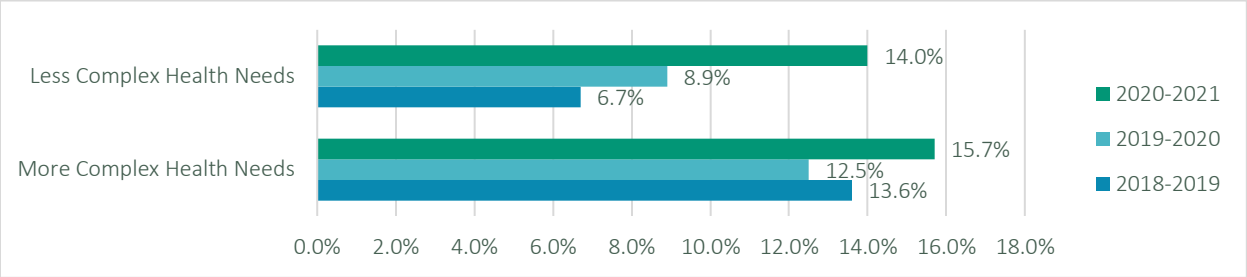


[39] Child and Adolescent Health Measurement Initiative. 2018-2021 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). Retrieved from www.childhealthdata.org.

[40] Child and Adolescent Health Measurement Initiative. 2018-2021 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). Retrieved from www.childhealthdata.org.

Children and youth with more complex health needs ages 1-17 had higher rates of decayed teeth or cavities compared to children and youth with less complex health needs (Graph 17).[41] This data demonstrates the existing gaps in care for children with disabilities and special healthcare needs and speaks to the need for investment in training, education for providers, and increased awareness for parents and caregivers of resources and dentists who can support oral healthcare for this population.

GRAPH 17. CHILDREN AND YOUTH, AGES 1-17, WHO HAVE DECAYED TEETH OR CAVITIES, BY SPECIAL HEALTH CARE NEEDS, NEVADA, 2018-2021



Individuals living in rural areas also experience worse oral health outcomes and have more challenges accessing care than those living in urban areas.[42]

The Impact on Dental Professionals

The COVID-19 pandemic had a profound impact on dental professionals, disrupting dental care delivery and significantly altering the dental industry. Following recommendations from the American Dental Association (ADA) and Centers for Disease Control and Prevention, many dental practices were temporarily closed or operated at reduced capacity, especially in the early stages of the pandemic.[43] This led to a sharp decline in patient visits, delays in routine care, and a backlog of untreated dental conditions. In Nevada, during the week of March 23, 2020, 87.3% of dental practices were closed but still seeing emergency patients, 9.3% were completely closed and not seeing any patients, and 3.4% remained open but had lower patient volumes (see Graph 2). By June 1, 75.0% of practices had reopened but continued to experience lower patient volumes than usual, while 25.0% were operating as normal.

Dental professionals faced increased stress and financial strain due to reduced patient volume, heightened safety protocols, and the costs associated with enhanced personal protective

[41] Child and Adolescent Health Measurement Initiative. 2018-2021 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). Retrieved from www.childhealthdata.org.

[42] CareQuest. Still Searching: Meeting Oral Health Needs in Rural Settings. Retrieved from https://www.carequest.org/resource-library/still-searching-meeting-oral-health-needs-rural-settings?utm_campaign=november_newsletter2&utm_medium=email&_hsmi=282655146&_hsenc=p2ANqtz-_SbZZDL8H2clMhZygh34NSLX_lpDgMlTccOrJH7S4aNA0XR-45D0U713u6GaUIJgqRtuR6cQAuermz7nW02VW2PaeAEdJuqIQwnbufJ45DNG2zzzM&utm_source=newsletter

[43] American Dental Association. (2020) ADA urges dentists to heed April 30 interim postponement recommendation, maintain focus on urgent and emergency dental care only. https://www.ada.org/about/press-releases/2020-archives/summary-of-ada-guidance-during-the-covid-19-crisis

equipment (PPE), leading to staff reductions.[44] During 2020, primary care practices were estimated to have lost $67,000 in gross revenue per full-time equivalent physician.[45]

The impact was particularly challenging for dental professionals serving vulnerable populations, such as Medicaid recipients, where access to care was already limited. Additionally, the COVID-19 pandemic exacerbated workforce shortages as some dental professionals retired early or left the field due to health concerns or burnout.[46] A survey found that over 3,000 dental hygienists permanently retired during the pandemic,[47] and the American Dental Association's Health Policy Institute (HPI) estimated in 2022 that about one-third of dental assistants and hygienists are expected to retire within five years.[48] HPI data also indicates that the median age of dentists is 51.5 years,[49] suggesting an impending wave of retirements. Labor shortages have led to an estimated 11% reduction in dental practice capacity.[50] Over half of dentists reported wanting to hire more staff this year, but 90% said that hiring has been extremely or very challenging. [51]

The pandemic highlighted the critical need for resilient dental care systems and better preparedness for future public health crises. Staffing and workforce challenges significantly impact access to care, especially for underserved populations who already encounter barriers like language differences, coverage gaps, and transportation issues. To address these access issues, dental education should focus on preparing the next generation of professionals by incorporating language requirements and emphasizing training related to public programs like Medicaid.

Adaptation and Response

In response to the challenges posed by the pandemic, dental care providers in Nevada had to adapt quickly. Tele-dentistry (the use of telehealth) emerged as a valuable tool across the country, allowing patients to consult with dental professionals remotely. While tele-dentistry cannot replace in-person examinations and treatments, it has helped to bridge the gap in access to care.

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[44] Filippi M.K., Callen E., Wade A., et al. COVID-19's Financial impact on primary care clinicians and practices. *J Am Board Fam Med.* 2021;34(3):489–497. Retrieved from https://doi.org/10.3122/jabfm.2021.03.200502

[45] Basu S., Phillips R.S., Phillips R., Peterson L.E., Landon B.E. Primary care practice finances in the United States amid the COVID-19 pandemic. *Health Aff (Millwood)* 2020;39(9):1605–1614. Retrieved from https://doi.org/10.1377/hlthaff.2020.00794

[46]Pollock, S. (2024). Dental care is in crisis. But it's also a moment of opportunity. Retrieved from https://www.statnews.com/2024/02/12/dental-labor-crisis-hygienists-dentists-assistants-staffing-pay/

[47] Gurenlian, J. R., Morrissey, R., Estrich, C. G., Battrell, A., Bessner, S. K., Lynch, A., Mikkelsen, M., Araujo, M. W. B., & Vujicic, M. (2021). Employment Patterns of Dental Hygienists in the United States During the COVID-19 Pandemic. *Journal of dental hygiene : JDH*, *95*(1), 17–24. Retrieved from https://jdh.adha.org/content/jdenthyg/96/1/27.full.pdf

[48] American Dental Association Health Policy Institute. (2022). Economic Outlook and Emerging Issues in Dentistry. Insights from Data from January 2022. Retrieved from https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/hpi/jan2022_hpi_economic_outlook_dentistry_slides.pdf?rev=211a33cbe91e4f6e8e61f91e53b009b3&hash=4769CA5831A747FDC040CE4ABC0B0A47

[49] American Dental Association Health Policy Institute. U.S. Dentist Demographics Dashboard. Retrieved from https://www.ada.org/resources/research/health-policy-institute/us-dentist-demographics

[50] ADA Health Policy Institute in collaboration with American Dental Assistants Association, American Dental Hygienists' Association, Dental Assisting National Board, and IgniteDA. Dental workforce shortages: Data to navigate today's labor market. October 2022. Retrieved from https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/hpi/dental_workforce_shortages_labor_market.pdf?rev=e6025d77df184e6c95dc7cefde4adee3&hash=225FCBBCCB67174AAFC760FE2287322D

[51] American Dental Association Health Policy Institute. (2022). Economic Outlook and Emerging Issues in Dentistry. Insights from Data from January 2022. Retrieved from https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/hpi/jan2022_hpi_economic_outlook_dentistry_slides.pdf?rev=211a33cbe91e4f6e8e61f91e53b009b3&hash=4769CA5831A747FDC040CE4ABC0B0A47

Additionally, dental practices implemented enhanced infection control measures to ensure the safety of patients and staff, which has been crucial in restoring confidence in seeking dental care.

Nevada Assembly Bill No. 147 (AB147), passed on June 16, 2023, aims to expand teledentistry services in the state. Although the bill has been approved, its implementation is still pending. The legislation is intended to enhance access to dental care, particularly for underserved and remote populations, by allowing dental consultations and certain services to be provided remotely through technology. Tele-dentistry is defined in Nevada Revised Statutes (NRS) Chapter 631-Dentistry, Dental Hygiene, Dental Therapy and Expanded Functional Dental Assistance section 107.[52] Through the telehealth visits, licensed dental professionals "facilitate the diagnosis, treatment, education, care management and self-management of or consultation with a patient who is located at an originating site" and determine whether in-office dental care is needed.

Conclusion

The long-term implications of the pandemic on oral health in Nevada are still unfolding. The COVID-19 pandemic significantly impacted oral health in Nevada, leading to a decline in dental visits and an increase in untreated oral health issues. With many dental practices temporarily closing or operating at reduced capacity, routine dental care was delayed, exacerbating oral health problems, particularly among vulnerable populations, such as low-income families, children, and those in rural areas. These groups, already facing barriers to care, experienced heightened disparities in access to dental services, further compromising their overall health.

The pandemic also strained the dentistry profession, accelerating retirements among dental hygienists, assistants, and dentists, which contributed to workforce shortages. This reduction in dental professionals led to decreased practice capacity and made it increasingly difficult for patients to receive timely care. As Nevada continues to address the challenges posed by the pandemic, strengthening the dental workforce and expanding access to care, particularly for underserved populations, remain critical priorities to improve oral health outcomes across the state.

There is a pressing need for public health initiatives and policies that address the backlog of dental care, provide support for vulnerable populations, and promote preventive care. Strengthening the state's oral health infrastructure and ensuring equitable access to dental services will be essential in mitigating the lasting effects of the pandemic.

The COVID-19 pandemic has underscored the critical importance of oral health as a component of overall health and well-being. In Nevada, the impact on access to dental care, the increase in oral health issues, and the disproportionate effects on vulnerable populations highlight the urgent need for comprehensive strategies to address these challenges. By prioritizing oral health and implementing innovative solutions, Nevada can work towards improving the oral health outcomes of its residents in the post-pandemic era.

[52] Nevada Revised Statutes (NRS.) Chapter 631-Dentistry, Dental Hygiene, Dental Therapy and Expanded Functional Dental Assistance, Section 107. Retrieved from https://www.leg.state.nv.us/nrs/nrs-631.html#NRS631Sec107

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Strategic Progress, LLC is a Nevada-based company specializing in public policy research and data analytics, federal grant development and strategic positioning of large-scale initiatives. This project was researched, written, and produced by Strategic Progress, LLC.

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