POLICY RESEARCH REPORT

ADEA Policy Research Series Issue 6, February 2024

Dental Schools in the **Community:** Expanding Access to Oral

Health Care Services



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EXECUTIVE SUMMARY

Dental schools play a crucial role in providing essential oral health care services and training future generation of oral health professionals. With 67 dental schools operating a dental clinic in 37 states and Puerto Rico in 2023, they serve as vital anchors within their communities.¹ Unlike most medical schools, dental schools have their own clinics where students receive clinical training, fostering a comprehensive educational experience for aspiring dentists, oral health specialists, dental hygienists, dental assistants, dental therapists and dental laboratory technicians.

Across the United States, dental schools deliver high-quality oral health care to many communities. In the 2021-2022 academic year alone, they facilitated over 2.2 million patient visits, with 90% of these visits taking place on campus.² Nearly 19,000 oral health students—predoctoral, allied, and residents and postdoctoral—deliver oral health care services under the close supervision of one of the more than 6,000 faculty clinicians in dental facilities across the country (practice called "teaching clinics").³ Because of this system of close supervision and the rigorously assessed and implemented clinical education accreditation standards, dental schools are able to provide high-quality oral health care services.⁴ Dental school faculty may also deliver oral health care services directly to patients at a faculty practice associated with the dental school at the schools that have faculty practices.

ADEA conducted the 2021-22 ADEA U.S. Dental School Clinics Survey (henceforth called "ADEA Survey") to investigate the involvement of U.S. dental schools in the provision of oral health care services and their engagement with government programs such as Medicaid and Children's Health Insurance Program (CHIP). (See Methodological Appendix for more information about the ADEA Survey). The results of the survey reflect the dental schools responding to the ADEA Survey. As such, the terms "dental schools" and "dental school clinics" in this report refer to these participating schools.

The following are the main results of the analysis:

A SUBSTANTIAL PORTION OF PATIENTS AT DENTAL SCHOOLS WERE COVERED BY PUBLIC INSURANCE, IN CONTRAST WITH PATIENTS OF PRIVATE PRACTICES.

Nearly four in ten patients at dental schools were covered by public insurance—a figure nearly five times higher than the corresponding share at private dental practices (9%). (See Figure 1.) Thirtyseven percent (37%) of dental school patients received coverage through Medicaid and CHIP. An additional 2% were insured by various public assistance programs like the U.S. Department of Veteran Affairs (VA), state and local initiatives and the U.S. Indian Health Service. Almost all (93%) of dental schools treated Medicaid and CHIP patients in FY 2021-22. During FY 2021-22, the 44 responding dental schools (67% response rate) recorded almost 798,000 patients receiving oral health care provided by their students at on-campus clinics-teaching clinics for predoctoral

Thirty-seven percent (37%) of **dental school patients** received coverage through Medicaid and CHIP. students, advanced program students and allied dental students for which dental schools keep track of reimbursements and patient information. Among them, approximately 311,300 patients were covered by public insurance programs.

Insurance coverage among patients at dental schools presents a contrast when compared to patients at private dental practices. (See Figure 1.) Nearly two-thirds of private-practice patients relied on private insurance coverage in 2020, while only one-fifth of patients at the responding dental school clinics had private insurance as their primary coverage for procedures during FY 2021-22.⁵ The remaining 27% of private-practice patients paid out of pocket for their procedures. For dental schools, that proportion was 38%. In addition, 1.7% of dental school patients received uncompensated care, for which the dental school knew it would not be receiving payment from the patient or an insurer. There are also 1.2% of patients who are uninsured and have unpaid charges, for which the dental schools expected payment (that were considered patients with "bad debt"). The higher prevalence of patients paying out of pocket at dental schools reflects the deliberate approach of these institutions in offering lower fees. By ensuring affordable prices, dental schools attract a diverse pool of patients, facilitating the comprehensive training of future oral health professionals.⁶

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figure 1

Patient Insurance Coverage, Percentage of Patients of Dental Schools, FY 2021-22 and Patients of Private Practice of Dentists, 2022

Insurance Coverage for Patients of Private Dental Practices





Notes: See the Methodology Appendix for an explanation of chart categories.

Sources: 2021-22 ADEA U.S. Dental School Clinics Survey; ADA, Income, Gross Billings, Expenses, Characteristics: Selected 2022 Results from the Survey of Dental Practice, August 2023.

PATIENTS OF DENTAL SCHOOLS WERE MORE LIKELY TO BE HISPANIC AND AFRICAN AMERICAN THAN THE NATIONAL AVERAGE FOR PERSONS WITH DENTAL VISITS.

Almost one in four of the patients reporting race and ethnicity information to dental schools identified as Hispanic, while more than one in five as African American, non-Hispanic. (See Figure 2.) These figures significantly surpass the national averages for Hispanic individuals with dental visits in 2019 and their African American, non-Hispanic counterparts. The national averages for persons with dental visits reflect the number of individuals with a visit to any type of oral health provider in 2019 based on data from the Medical Expenditure Panel Survey (MEPS).⁷ The dental schools reported a much smaller share of white, non-Hispanic patients than the percentage of white, non-Hispanic persons with dental visits in 2019 in the United States. In terms of gender and sex at birth, the patients at dental schools who reported their gender align with the national proportions of male and female patients seeking oral health care.

Patients reporting their age to the responding clinics tended to be older than the overall

Almost **one in four** of the patients reporting race and ethnicity information to dental schools identified as Hispanic, while more than one in five as African American, non-Hispanic

population of dental patients in the United States. A significant 23% of patients at dental schools were 65 years old or older, surpassing the share of older adults with dental visits in 2019, which stood at 19%. Nationwide, only 34% of older adults had any kind of dental insurance coverage in 2015, as Medicare does not include dental benefits, and many states offer limited coverage for adult oral health care.^{8,9} Consequently, older adults often find themselves burdened with out-of-pocket expenses for necessary dental procedures. Dental schools offer an option for this demographic. By providing a range of procedures, including complex treatments, at lower costs compared to private practices, dental schools address some of the financial barriers faced by older adults.

Bental schools serve a higher proportion of medicaid and chip working adults and more diverse patients than the NATIONAL AVERAGE FOR PERSONS WITH DENTAL VISITS.

More than half of the Medicaid and CHIP patients reporting age information to dental schools fell between the ages of 20 and 64, double the national rate of working-age individuals with dental visits covered solely by public insurance. (See Figure 3.) For Medicaid patients with special needs that provided their age information to dental schools, the percentage is even higher (56%). This reflects the higher prevalence of dental schools' active participation in Medicaid than dentists overall. Further, the dental schools' low fee schedule allows individuals on Medicaid and CHIP to lower their out-of-pocket expenses associated with more complex procedures. Even in states where Medicaid provides adult oral health benefits, the coverage varies significantly.¹⁰

Dental schools reported a slightly smaller share of children and teenager patients covered by Medicaid and CHIP (38% for 19 years old or younger) compared to the national rate of young dental patients covered by public insurance (40% for under 17 years old). The oral health benefits for children under Medicaid and through state CHIP programs, as part of a Medicaid expansion program, are comprehensive, referred to as the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit.¹¹ With most children having comprehensive oral health insurance, it is easier to find a provider besides dental school clinics. Nearly 90% of children in the United States have some form of dental benefits coverage, both public and private.¹² A recent study shows that pediatric dentists have higher rates of participation in Medicaid and CHIP (57% in Medicaid and in CHIP) than general dentists (28% in Medicaid and 29% in CHIP).¹³

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FIGURE 2

Sociodemographics of Oral Health Patients, Percentage of Patients With Reported Sociodemographic Data at Dental Schools, FY 2021-22 and Persons With Dental Visits in the United States, 2019



Notes: Totals might not add up to 100% due to rounding. See the Methodology Appendix for an explanation of chart categories.

Sources: 2021-22 ADEA U.S. Dental Schools Clinics Survey; Manski R, Rohde F, Ricks T, Chalmers N. Trends in the Number and Percentage of the Population with Any Dental or Medical Visits, 2019. Statistical Brief #544. October 2022. See Table 1, Number and percent of persons with medical and dental visits by insurance category by demographic category, MEPS 2019. Agency for Healthcare Research and Quality, Rockville, MD. At: https://meps.ahrq.gov/data_files/publications/st544/stat544.shtml. Accessed: May 30, 2023.

Dental schools serve a higher proportion of Hispanic and African American Medicaid and CHIP patients than the national average for persons with dental visits. In terms of race and ethnicity, a total 57% of Medicaid and CHIP patients who disclosed this information to dental schools identified as Hispanic or African American, non-Hispanic. This is significantly larger than the 37% proportion of Hispanic or African American, non-Hispanic of individuals with dental visits in 2019 in the United States and covered by public insurance. In both cases, the proportion of Hispanic and African American, non-Hispanic among Medicaid and CHIP patients is much larger than among the overall patients.



Sociodemographics of Oral Health Patients Covered by Public Insurance, Percentage of Medicaid/CHIP Patients With Reported Sociodemographic Data at Responding Dental Schools, FY 2021-22 and Persons With Dental Visits in the United States Covered Only by Public Insurance, 2019



Notes: Totals might not add up to 100% due to rounding. See the Methodology Appendix for an explanation of chart categories.

Sources: 2021-22 ADEA U.S. Dental Schools Clinics Survey; Manski R, Rohde F, Ricks T, Chalmers N. Trends in the Number and Percentage of the Population with Any Dental or Medical Visits, 2019. Statistical Brief #544. October 2022. See Table 1, Number and percent of persons with medical and dental visits by insurance category by demographic category, MEPS 2019. Agency for Healthcare Research and Quality, Rockville, MD. At: https://meps.ahrq.gov/data_files/publications/st544/stat544.shtml. Accessed: May 30, 2023.

MEDICAID AND CHIP ARE A SIGNIFICANT REVENUE SOURCE FOR DENTAL SCHOOL CLINICS.

They represented about a third of the revenue at dental school clinics, three times higher than the corresponding percentage of these public programs in national dental expenditures. (See Figure 4.) Nationally, Medicaid and CHIP covered only 11% of oral health expenditures in 2021. The reported revenue for school clinics amounted to \$425.4 million, with Medicaid and CHIP contributing \$127.6 million.

Dental schools exhibit higher rates of participation in Medicaid compared to the broader dentist community. The vast majority of dental schools, not

Medicaid and CHIP represented about a **third of the revenue** at dental school clinics, three times higher than the corresponding percentage of these public programs in national dental expenditures. just those responding to the ADEA survey-94% of them—accepted Medicaid and CHIP, as of April 2023.¹⁴ Further, the ADEA Survey reveals that all the responding dental schools that participated in Medicaid in the 2021-2022 fiscal year also saw Medicaid patients. In comparison, a much smaller percentage of oral health providers overall enroll and provide care to Medicaid patients. Based on data collected from 41 states, ADA found that 41% of oral health providers in a state typically were enrolled in Medicaid in 2017, the latest figure available. Many of them did not see any Medicaid patients that year. Based on the same data, ADA estimated that 28% of oral health providers in a state were typically enrolled and provided care to Medicaid patients in 2017.¹⁵

When it comes to the mix of payors, dental schools exhibit a distinct profile compared to the national landscape. (See Figure 4.) The largest revenue source for the dental school clinics is fee-for-service payments, accounting for close to half of their revenue. This pattern reflects the teaching nature of dental schools, as they offer a range of procedures, including specialized ones, at lower prices. This approach allows predoctoral and postdoctoral students the opportunity to gain clinical experience in performing specific treatments and procedures.¹⁶ Nationally, patients-through out-of-pocket spending—and private insurance were the primary payors for oral health services, each representing about 40% of the national dental expenditures in 2021. Private insurance did not play such a significant role for dental schools; 20% of their revenue came from private insurance in FY 2021-22.



FIGURE 4

Main Payors for Oral Health Care, Percentage of the Revenue of Responding Dental Schools and of U.S. National Dental Expenditures, 2021



Notes: See the Methodology Appendix for an explanation of chart categories.

Sources: 2021-22 ADEA U.S. Dental School Clinics Survey; 2022; American Dental Association (ADA) 2022 analysis of Centers for Medicare & Medicaid Services, U.S. Bureau of Economic Analysis, U.S. Census Bureau; Centers for Medicare and Medicaid Services (CMS), 2023 Medicaid & CHIP Beneficiaries at a Glance: Oral Health, as of March 2023.

5 IN THEIR COMMITMENT TO EXPANDING ACCESS TO ORAL HEALTH CARE, DENTAL SCHOOLS DELIVER A SIGNIFICANT AMOUNT OF UNCOMPENSATED CARE.

Dental schools demonstrated their dedication by delivering over \$22 million worth of uncompensated care during FY 2021-22. Twenty-four (24) schools reported the value of uncompensated care delivered FY 2021-22. On average, dental schools reported over \$900,000 in annual uncompensated care, with some schools providing more than \$5 million worth of uncompensated care during the fiscal year.

Dental schools receive few safety net payments from the federal government specifically to offset their uncompensated care costs. One example is the Ryan White Program Part F Dental Reimbursement Program, which provides funding designed to improve access to oral health care services for low-income people with HIV, and to train oral health students to deliver dental care to people with HIV.¹⁷ Dental schools face similar challenges as other health providers due to low Medicaid reimbursement rates. This situation results in some providers, including dental schools, incurring financial losses when caring for Medicaid patients.¹⁸ Other health providers, such as hospitals, receive additional subsidies to cover for uncompensated care. Since 1981, hospitals have been receiving Medicaid disproportionate share hospital (DSH) payments, to defray uncompensated care costs and enhance access to Medicaid and uninsured patients.¹⁹ Dental schools align with the National Academy of Medicine's 2000 definition of safety net practices-serving uninsured, Medicaid and vulnerable patients.²⁰

Dental schools actively fundraise to help them improve access to oral health care services and/or cover the cost of uncompensated care. Most often, the grants reimburse only certain uncompensated oral health care costs. Twenty-nine (29) schools stated receiving private and public grants for this purpose (excluding research grants). Overall, these schools reported close to \$7 million from 83 different grants, gifts and discounts. (See Figure 5.) The federal Ryan White for persons living with HIV/ AIDS is the largest funder in this regard, totaling \$2.6 million in grants, accessed by 13 of the dental schools. Together with other state level programs for oral health care to HIV patients, HIV/AIDS (\$3.8 The ADEA report sheds light both on the revenue sources and patient demographics of dental school clinics, revealing their disproportionate role in **delivering oral health care services to individuals** enrolled in Medicaid and CHIP, people of color, and working age adults.

million) was the largest purpose for grants received by dental schools. Besides HIV/AIDS patients, top purposes of grants were access to care in general (\$657,000), for the elderly (\$455,000) and for children (\$392,000). The grants often cover a mix of objectives, such as coverage for specific age groups, veterans, indigent individuals, the uninsured, people with special needs and those without housing. FIGURE 5 Public and Private Grants Received by the Responding Dental Schools for Improving Access to Care (Grant Name Size by Dollar Amount), FY 2021-22



Source: 2021-22 ADEA U.S. Dental School Clinics Survey.

CONCLUSION

Dental schools serve as essential health providers within their communities, expanding access to oral health care services and contributing to the training of future oral health professionals. Their commitment to providing high-quality care at affordable rates, combined with their engagement in communitybased initiatives, plays a pivotal role in improving oral health outcomes nationwide.

The ADEA report sheds light both on the revenue sources and patient demographics of dental school clinics, revealing their disproportionate role in delivering oral health care services to individuals enrolled in Medicaid and CHIP, people of color, and working age adults. Medicaid and CHIP emerge as vital contributors, representing approximately one-third of the revenue at surveyed dental schools, nearly triple the national average of Medicaid and CHIP in national dental expenditures. The Dental schools serve as **essential health providers** within their communities, expanding access to oral health care services and contributing to the training of future oral health professionals. overwhelming majority of dental schools participate in Medicaid and CHIP. In fact, close to four in ten of the patients at dental schools participating in Medicaid and CHIP are covered by public insurance, a rate almost five times higher than that observed in private dental practices.

The analysis of sociodemographic data provided by patients to dental school clinics reveals that Hispanics and African Americans, as well as older individuals, are more likely to seek oral health care at these institutions compared to the national average. Notably, when considering Medicaid and CHIP patients, a majority of those who disclosed their sociodemographic information to the dental schools were working adults, which is twice the rate observed nationwide. The over-representation of Hispanic and African American patients at dental schools becomes even more pronounced within the Medicaid and CHIP population. It's important to note that the aggregate dental school clinics' revenue and patient numbers in this report are conservative, as the survey results only capture data from two-thirds of the schools. These figures do not include teaching clinics at off-site facilities, nor do they account for revenue and patients seen at dental school faculty practices. Therefore, the impact of dental schools as providers of oral health care services is larger than the survey results suggest.

Dental schools play a crucial role in serving individuals enrolled in Medicaid and CHIP, people of color, and working-age adults. Medicaid and CHIP represent substantial revenue sources for some of the dental school clinics. Despite the challenges posed by the COVID-19 pandemic, dental schools have remained steadfast in their commitment to training the next generation of oral health professionals while continuing to fulfill their vital role as oral health providers for those most in need.

ACKNOWLEDGMENTS:

We are grateful to Carolyn Booker, Ph.D., ADEA Chief of Educational Services; Bridgette DeHart, J.D., ADEA Director of Federal Government Relations; B. Timothy Leeth, CPA, ADEA Chief Advocacy Officer; Phillip Mauller, M.P.S., ADEA Senior Director, State Relations and Advocacy; and Tom Quash, CAE, ADEA Chief Communication and Marketing Officer for sharing their insights regarding an earlier version of this report. We thank the ADEA Division of Communications and Membership for their ideas, creativity and editing expertise.

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METHODOLOGY APPENDIX

ADEA conducted the 2021-22 ADEA U.S. Dental School Clinics Survey (henceforth called "ADEA Survey") to investigate the involvement of U.S. dental schools in the provision of oral health care services and their engagement with government programs such as Medicaid and Children's Health Insurance Program (CHIP). The survey encompassed 66 U.S. dental schools that operated clinics during the fiscal year (FY) 2021-22 and was conducted from November 2022 to January 2023. One dental school was not included in the ADEA Survey because the clinic was too new and did not have sufficient data at the time of the survey.

The ADEA survey results shed light on the on-campus teaching clinics at two-thirds of U.S. dental schools, which are defined as teaching clinics for predoctoral students, advanced program students and allied dental students for which the dental schools keep track of reimbursements and patient information. Forty-four (44) dental schools participated in the survey, of which 41 accepted Medicaid and CHIP. Midwestern University College of Dental Medicine-Arizona, Midwestern University College of Dental Medicine did not participate in Medicaid and CHIP in FY2021-22.

The ADEA Survey achieved a response rate of 66.7% for dental schools overall and a response rate of 66.1% for dental schools that accepted Medicaid and CHIP during FY 2021-22. The survey exclusively focused on on-campus teaching clinics for two primary reasons: most patient visits occur at on-campus clinics, and teaching clinics serve as a defining characteristic that distinguishes U.S. dental schools from other providers of oral health care.

Notes for Figure 1. Patient Insurance Coverage, Percentage of Patients of Dental Schools, FY 2021-22 and Patients of Private Practice of Dentists, 2022

For dental schools, the patients are counted based on who paid the majority of the reimbursement for the costs of the procedures in FY 2021-22 for the patient. The American Dental Association (ADA) collected information on the insurance coverage of patients of primary private dental practice by asking the dentists to state the percentage of patients in 2020 for whom their dental care was paid or partially paid by the following: private insurance, public assistance program or not covered by an insurance program.

For dental schools, "Not Covered by Insurance" category includes patients self-paying, uncompensated care and bad debt; the "Other Public Assistance" category refers to the government programs, at any level of government, that provide public dental insurance coverage, besides Medicaid/CHIP. These include but they are not limited to U.S. Department of Veteran Affairs (VA) coverage, state and local programs, U.S. Indian Health Service and community health centers. Notes for Figure 2. Sociodemographics of Oral Health Patients, Percentage of Patients With Reported Sociodemographic Data at Responding Dental Schools, FY 2021-22 and Persons With Dental Visits in the United States, 2019

Manski et al 2022 analysis of Medical Expenditure Panel Survey (MEPS) data reports an "Other races, non-Hispanic" category, which includes American Indian or Alaska Native, non-Hispanic/ Latino, Asian, non-Hispanic/Latino, Native Hawaiian or Other Pacific Islander, non-Hispanic/Latino, Two or More Races, non-Hispanic/Latino and Other, non-Hispanic/Latino. ADEA Survey collected data on each race and ethnicity category recommended by the U.S. Office of Budget and Management; for comparability reasons, this study reports the data for the combination category.

MEPS collects data by sex at birth, while the ADEA Survey asked the dental schools to report patient aggregate data by gender identity. There were 0.1% patients that reported a different gender than woman or man to the responding dental schools. Manski et al 2022 reports two age groups for children and adolescents: 0-5 years and 6-17. ADEA survey collected a single age group for 0-19 years, to correspond with the age group usually eligible for CHIP benefits.

Notes for Figure 3. Sociodemographics of Oral Health Patients Covered by Public Insurance, Percentage of Medicaid/CHIP Patients With Reported Sociodemographic Data at Responding Dental Schools, FY 2021-22 and Persons With Dental Visits in the United States Covered Only by Public Insurance, 2019

Manski et al 2022 analysis of Medical Expenditure Panel Survey (MEPS) data reports an "Other races, non-Hispanic" category, which includes American Indian or Alaska Native, non-Hispanic/Latino, Asian, non-Hispanic/Latino, Native Hawaiian or Other Pacific Islander, non-Hispanic/Latino, Two or More Races, non-Hispanic/Latino and Other, non-Hispanic/Latino. ADEA survey collected data on each race and ethnicity category; for comparability reasons, it reports the data for the combination category.

MEPS collects data by sex at birth, while the ADEA Survey asked the dental schools to report Medicaid/CHIP patient aggregate data by gender identity. There were 0.1% Medicaid/CHIP patients that reported a different gender than woman or man to the responding dental schools. Manski et al 2022 reports two age groups for children and adolescents: 0-5 years and 6-17. ADEA Survey collected a single age group for 0-19 years, to correspond with the age group usually eligible for CHIP benefits.

Notes for Figure 4. Main Payors for Oral Health Care, Percentage of the Revenue of Responding Dental Schools and of U.S. National Dental Expenditures, 2021

The "Other" category in the national dental expenditures includes the Paycheck Protection Program (PPP) and the Provider Relief Fund (PRF). It does not include the Economic Injury Disaster Loan (EIDL) program. The "Other Public Assistance" category for national dental expenditures includes Medicare, U.S. Department of Defense and U.S. Department of Veterans Affairs. For dental schools, the "Other Public Assistance" category refers to the government programs, at any level of government, that provide public dental insurance coverage, besides Medicaid/CHIP. These include but they are not limited to U.S. Department of Veteran Affairs coverage, state and local programs, Indian Health Service and community health centers.

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SUGGESTED CITATION:

Istrate EC, Singh, P, Lawton KB, Gül G, West KP. Dental Schools in the Community: Expanding Access to Oral Health Care Services. American Dental Education Association (ADEA) Policy Research Series, Issue 6. February 2024.

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ABOUT ADEA: The American Dental Education Association (ADEA) is The Voice of Dental Education. Our mission is to lead and support the health professions community in preparing future-ready oral health professionals. Our members include 80 U.S. and Canadian dental schools, more than 800 allied and advanced dental education programs, over 55 corporations and approximately 15,000 individuals. Our activities encompass a wide range of research, advocacy, faculty development, meetings and communications, including the esteemed *Journal of Dental Education®*, as well as the dental school centralized application services, ADEA AADSAS[®] (ADEA Associated American Dental Schools Application Service), ADEA CAAPID[®] (ADEA Centralized Application for Advanced Placement for International Dentists), ADEA DHCAS[®] (ADEA Dental Hygiene Centralized Application Service) and ADEA PASS[®] (ADEA Postdoctoral Application Support Service). For more information, visit **adea.org**.

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