SUMMARY REPORT

ADEA Education Research Series Issue 4, September 2022

# Dentists of Tomorrow 2022:

An Analysis of the Results of the ADEA 2022 Survey of U.S. Dental School Seniors



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his report summarizes the key findings of the analysis of the results of the American Dental Education Association (ADEA) Survey of Dental School Seniors, Class of 2022 (henceforth called "the ADEA 2022 survey" and the overall survey is called "the ADEA Senior Survey"). The study examines the journey of U.S. dental schools' predoctoral senior class of 2022, from its influences and motivations to pursue careers in dentistry and the students' perceptions of their dental school experience to their plans upon graduation and the investment in their careers. Whenever feasible, the analysis compares the answers of the 2022 survey respondents with their 2017 counterparts. Further, this research attempts to better understand the journey of predoctoral senior students of historically underrepresented race and ethnicity (HURE) groups by comparing the responses of the overall response sample with the responses of the HURE students. This research considers the following four race and ethnicity categories to be part of HURE: non-Hispanic African American, Hispanic or Latino of all races, non-Hispanic American Indian or Alaska Native and non-Hispanic Native Hawaiian or Other Pacific Islander.

For the first time, this annual analysis examines the preferences and decisions of the senior students by demographic generation, with a focus on Generation Z (henceforth called "Gen Z") relative to the rest of the graduating students. The members of this demographic cohort, born between 1997 and 2012, are starting to graduate from U.S. dental schools and enter into the job market.<sup>1</sup> Of the 2,801 students who responded to the ADEA 2022 survey and provided their birth year information, 85 individuals fit into the Gen Z demographic cohort. This is the generation that will increasingly fill the dental school classrooms in the years to come. These preliminary findings give the academic dentistry community a glimpse into the preferences of a new demographic cohort of students.

ADEA surveyed the 66 U.S. dental schools with a graduating class in 2022 between March 8 and June 17, 2022. A total of 6,754 students received the survey and 3,095 responded from all of the 66 U.S. dental schools with a graduating class in 2022. As a result, 46% of the senior students graduating in 2022 responded to the ADEA Senior Survey, compared with 79% for the 2017 graduating class. The response sample to the ADEA survey is representative of the overall senior student population at U.S. dental schools with graduating predoctoral classes in 2022 (see Table A1 in the Methodological Appendix).

<sup>1.</sup> Dimock M, Defining generations: Where Millennials end and Generation Z begins. Pew Research Center, Jan. 17, 2019. Accessed June 14, 2022 at pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins.

# 65% OF THE GEN Z SENIOR STUDENTS RESPONDING TO THE ADEA 2022 SURVEY DECIDED TO BECOME A DENTIST BEFORE COLLEGE

#### THE SENIOR STUDENTS RESPONDING TO THE 2022 ADEA SURVEY INDICATED THEY DECIDED TO PURSUE A CAREER IN DENTISTRY BEFORE COLLEGE AT A HIGHER RATE THAN THEIR 2017 COUNTERPARTS.

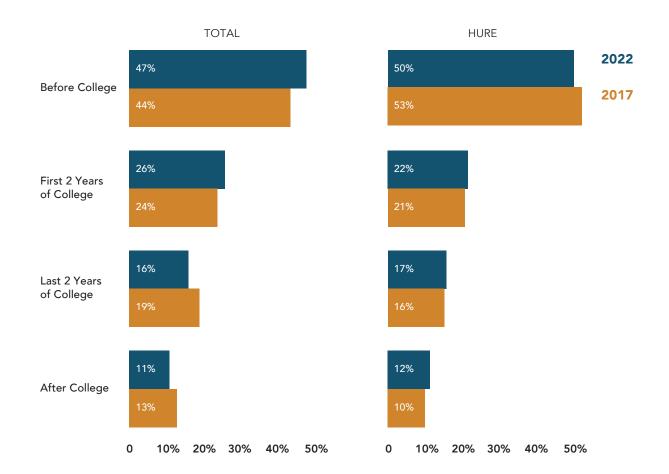
Close to half of all the 2022 respondents decided to become a dentist before college, slightly more than the share of their 2017 counterparts (see Figure 1). HURE students' responses in 2022 are relatively similar with their 2017 HURE colleagues: half of the HURE participants in 2022 decided for a career in dentistry before college, relative to 53% for their 2017 colleagues. Sixty-five percent of Gen Z respondents in 2022 selected a career in dentistry before college.

A lower cost of attendance was the most mentioned reason for 2022 respondents for selecting the dental school they attended. Academic reputation was tied with proximity to family and friends as the second most frequently cited reason for overall 2022 respondents for choosing the school they were graduating from in 2022. For Gen Z respondents, academic reputation and lower cost of attendance were the most frequently cited top selection criterion for selecting the dental school of their choice.

For access to the online storyboard and the data behind the charts, visit: ADEA.org/Seniors2022



Timing of Decision to Pursue a Career in Dentistry, Total and HURE, 2017 and 2022



**Notes:** The number of respondents to this question was 3,035 total and 432 for HURE students in 2022, and 4,772 total and 650 for HURE students in 2017.

Sources: American Dental Education Association (ADEA) Surveys of Dental School Seniors, Classes of 2017 and 2022.

97% OF RESPONDENTS AGREED AND STRONGLY AGREED WITH THE NEED OF CONTINUING EDUCATION REQUIREMENTS FOR PRACTITIONERS

## THE RESPONDENTS TO THE ADEA 2022 SURVEY INDICATED A HIGH LEVEL OF READINESS TO GO INTO THE PROFESSION.

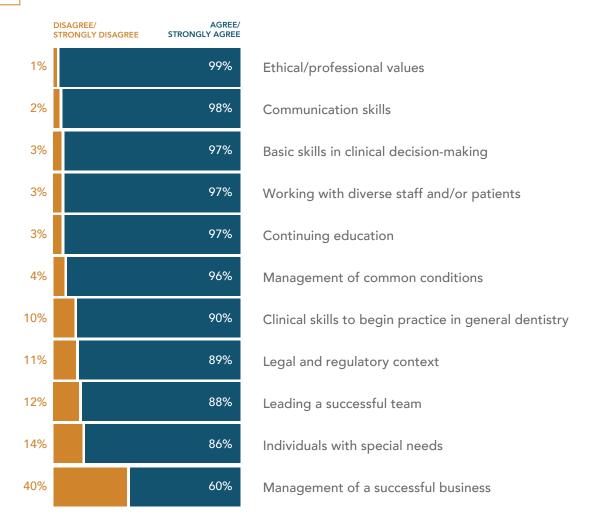
The ADEA 2022 survey asked participants to estimate the adequacy of clinical experience gained across 14 different areas of education. For 12 of the 14 categories, the majority of respondents reported receiving appropriate or above appropriate levels of clinical experience during dental school. Preventive care, examination and diagnosis, and direct restorations were the top three clinical areas in terms of percentage of survey respondents indicating they had acquired an adequate or above adequate level of clinical experience. Gen Z respondents also expressed a high level of readiness, with the majority of respondents reported receiving appropriate or above appropriate levels of clinical experience during dental school in 13 of the 14 different areas of education.

Most of the senior students responding to the ADEA 2022 survey stated high levels of confidence in their skills across the 15 clinical areas mentioned in the survey. On average, 78% of survey respondents were moderately or highly confident in their abilities gained across the 15 clinical areas included in the survey. For Gen Z respondents, the percentage is in the same range (80%). In two clinical areas, confidence in skills exceeded 90% for overall respondents: the ability to perform health promotion and disease prevention, including caries management (94%) and restoration of teeth (93%). In addition to these two fields, more than 90% of Gen Z respondents felt moderately and highly confident in two different areas: patient assessment, diagnosis, comprehensive treatment planning, prognosis and informed consent (92%) and the ability to recognize the complexity of patient treatment and identifying when referral is indicated (91%). Overall, respondents felt the least confident in their skills to deal with malocclusion and space management (50% stated being moderately or highly confident in their abilities gained in this area), as well as hard and soft tissue surgery (53%). Gen Z participants had only a single area in which less than half of them felt less confident: malocclusion and space management (47%).

The overwhelming majority of ADEA 2022 survey respondents (97%) either agreed or strongly agreed with the need of continuing education



#### Preparedness to Practice, Percent of Respondents, 2022



**Notes:** For the full text of the statements, please check Table A2 in the Methodological Appendix. The number of respondents to this question varied between 3,001 and 3,006, depending on the statement.

Sources: American Dental Education Association (ADEA) Survey of Dental School Seniors, Class of 2022.

requirements for practitioners. The ADEA 2022 survey asked respondents' level of agreement to 11 different statements that reflected a variety of abilities needed to enter dental practice, such as continuing education (see Table A2 in the Methodological Appendix for the full text of the statements). On average, 91% of respondents agreed or strongly agreed with the preparedness to practice statements in the survey (see Figure 2). Survey respondents felt most ready about understanding the ethical and professional values that are expected of the profession and the needed communication skills. Clinical skills factored high for 2022 graduating senior students. The survey participants expressed confidence in their basic skills in clinical decision-making and clinical skills needed to practice. Only one area received less than 80% agreement: 60% felt prepared to manage a successful business. Overall, Gen Z responses mirrored the preferences of the 2022 respondent group.

**35%** OF THE 2022 GEN Z RESPONDENTS WHO PLANNED TO GO INTO PRIVATE PRACTICE IMMEDIATELY UPON GRADUATION INTENDED TO JOIN A DSO-AFFILIATED PRACTICE

# THE SENIOR PREDOCTORAL STUDENTS RESPONDING TO THE ADEA 2022 SURVEY WERE MORE LIKELY TO JOIN A PRIVATE PRACTICE UPON GRADUATION THAN THEIR 2017 COUNTERPARTS.

Between 2017 and 2022, the share of ADEA survey respondents who expressed plans to work in a practice immediately after graduation increased to more than half (Figure 3). The proportion of survey respondents indicating plans to enroll in advanced education in 2022 was similar with five years earlier. The share of respondents planning to practice dentistry in a not-for-profit or government agency recorded the only significant decrease between the two annual student cohorts. Gen Z respondents follow the same pattern of plans as their colleagues. The majority of them (55%) planned to join a private practice immediately upon graduation, 40% were interested in attending advanced dental education and 4% intended to practice in a not-for-profit or government agency.

Entering private practice remained the favorite professional choice for senior predoctoral students responding to the ADEA 2022 survey. This choice increased in popularity among the 2022 respondents relative to the 2017 cohort, including for the HURE students (see Figure 3). Almost half of 2022 HURE survey participants stated they planned to join a private practice upon graduation, much more than the 2017 HURE respondents. Almost a third of the 2022 HURE respondents (31%) who planned to go into private practice immediately upon graduation intended to join a Dental Service Organization (DSO), similar with the overall response group (30%). More than a third (35%) of Gen Z respondents who planned to go into private practice immediately upon graduation intended to join a DSO.

The ADEA 2022 survey respondents planning to join a DSO-affiliated private practice upon graduation differed in some regards to their colleagues planning to join a non-DSO affiliated practice. Close to half of them (45%) were people of color (HURE, Asian and multiple races)—relative to a third (33%) of those planning to join non-DSOs. The difference stayed when examining only HURE respondents: 15% of those planning to join a DSO-affiliated practice were HURE students versus 11% planning to join non-DSOs. The respondents planning to work in a DSO-affiliated practice were more likely to have

attended schools in Northeast than those planning to join a non-DSOaffiliated practice.

HURE students planning to join a private practice upon graduation were much more unsure about their future employer than the overall response group. They were more likely to be unsure if they would join a DSO-affiliated or non-DSO-affiliated practice (31% of the HURE respondents who were planning to enter private practice versus 22% for overall response group who were planning to join a private practice) and were unsure if the practice would have single or multiple locations (21% of HURE respondents versus 16% overall response group).

HURE respondents maintained their interest in attending further dental education in 2022 relative to the 2017 response cohorts (see Figure 3). The ADEA 2022 survey allowed respondents to select any or all the delineated types of advanced education they applied to, such as general dentistry programs, approved specialties and specialties not approved by the National Commission on Recognition of Dental Specialties and Certifying Boards (NCRDSB). More than half (57%) of the students planning to pursue graduate dental programs applied to general dentistry programs, both general practice residency (GPR) and advanced education in general dentistry (AEGD). Approved specialties were the second most cited advanced education by students planning to further their education.

Practicing dentistry for a government agency or a nonprofit was selected less by the 2022 students than their 2017 counterparts (see Figure 3). The percentage of survey respondents intending to practice dentistry in government service or nonprofit almost halved from 2017 to 2022. Overall, HURE students were more likely to select it as a career path upon graduation than the 2022 response group and their interest stayed steady relative to their 2017 counterparts. Interest in practicing dentistry in the federal government service dropped by almost half for overall respondents, largely due to a steep decline in plans to serve as a uniformed services dentist. The proportion of HURE students planning to work for the federal government upon graduation also declined over the past five years, but not as much. HURE students responding to the ADEA 2022 survey had fewer plans to serve as a uniformed services dentist than their 2017 counterparts, similar to the overall 2022 response group.

A small percentage of respondents planned to teach in a dental program immediately upon graduation in 2022, similar to the 2017 graduating class (see Figure 3).



Immediate Professional Plans Upon Graduation, Percent of Respondents Total and HURE, 2017 and 2022



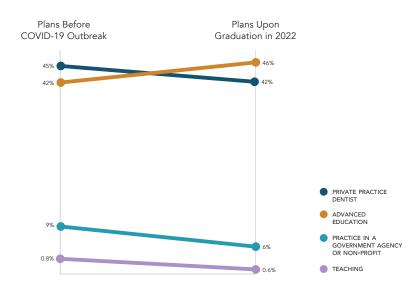


**Note:** The number of respondents to this question in 2022 was 2,853 total and 433 for HURE students, and in 2017 was 4,833 total and 660 for HURE students. The "Other" category includes working in another position related to dentistry, but not those mentioned in the chart; working in a position not related to dentistry; and being unsure about professional plans upon graduation. "Teaching" means working as a faculty/staff member at a dental school immediately upon graduation.

**Source:** American Dental Education Association (ADEA) Survey of Dental School Seniors, Classes of 2017 and 2022.

FIGURE 4

#### Changes of Immediate Professional Plans Upon Graduation Because of the COVID-19 Pandemic, Percent Responses of the 2022 Survey Participants Who Reported Changes Because of the COVID-19 Outbreak



**Notes:** The total number of respondents who reported changes to their professional plans immediately upon graduation and mentioned their plans before and after the COVID-19 pandemic is 523. Besides the categories presented in the chart, there is an "Other" category selected by 4% of respondents before the COVID-19 outbreak and 5% of respondents upon graduation in 2022. The "Other" category includes working in another position related to dentistry, but not those mentioned in the chart; working in a position not related to dentistry; and being unsure about professional plans upon graduation. "Teaching" means working as a faculty/staff member at a dental school immediately upon graduation.

**Source:** American Dental Education Association (ADEA) Survey of Dental School Seniors, Class of 2022. **19%** OF THE ADEA 2022 SURVEY PARTICIPANTS REPORTED THAT THE COVID-19 PANDEMIC AFFECTED THEIR IMMEDIATE PROFESSIONAL PLANS AFTER GRADUATION

## THE COVID-19 PANDEMIC CHANGED THE PROFESSIONAL PLANS OF CLOSE TO ONE IN FIVE OF THE ADEA 2022 SURVEY RESPONDENTS AND SKEWED THEM TOWARD ADVANCED EDUCATION.

Nineteen percent (19%) of the ADEA 2022 survey participants reported they changed their immediate professional plans upon graduation because of the COVID-19 pandemic. Of the respondents who reported changes, a higher proportion decided to continue education upon graduation and a smaller share decided to practice dentistry relative to plans before the COVID-19 outbreak (see Figure 4). A smaller share of participants who mentioned changes in professional plans because of the COVID-19 outbreak decided to practice in a nonprofit or government agency upon graduation.

The pandemic skewed the preferences of the respondents who mentioned that the COVID-19 outbreak affected their professional plans and, as a result, a smaller share planned to join private practice. Out of this group, 17% were thinking before the COVID outbreak that they would join a DSO-affiliated practice. Upon graduation in 2022, 34% mentioned planning to work in a DSO-affiliated practice. They were more likely to join a group practice (58% of the respondents who were planning to enter private practice upon graduation in 2022 versus 45% before the COVID-19 outbreak), an existing practice (88% in 2022 versus 74% before the COVID-19 outbreak) and a multiple locations practice (49% in 2022 vs. 23% before the COVID-19 outbreak).

FIGURE 5

11% DECREASE OF THE AVERAGE EDUCATION DEBT FOR GRADUATING STUDENTS RESPONDING TO ADEA 2022 SURVEY RELATIVE TO THEIR 2017 COUNTERPARTS, WHEN ACCOUNTING FOR INFLATION

Notes: The response rates for this survey question vary between 35% in 2020 and 75% in 2017. A response rate reflects the number of respondents for the debt question relative to the senior student population in that academic year. Education debt is a combination of the dental school debt the senior students graduate with from dental school (the loans contracted to finance partially or all of the cost of the predoctoral degree) and their predental education debt, which is the outstanding education debt the senior students had when they entered dental school. Debt values are adjusted to 2022 dollars with the U.S. Bureau of Labor Statistics (BLS) Consumer Price Index (CPI) for all urban consumers.

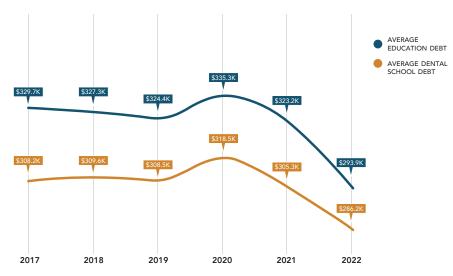
**Source:** American Dental Education Association (ADEA) Survey of Dental School Seniors, Classes of 2017 to 2022.

## AVERAGE EDUCATION DEBT WAS \$293.9 THOUSANDS FOR STUDENTS GRADUATING WITH DEBT AND RESPONDING TO THE ADEA 2022 SURVEY.

When accounting for inflation, this amount was 11% lower from what the 2017 respondents reported. Education debt is a combination of the dental school debt the senior students graduate with from dental school (the loans contracted to finance partially or al the cost of the predoctoral degree) and their predental education debt, which is the outstanding education debt the senior students had when they entered dental school. Annual average education debt amounts varied between 2017 and 2022 given different cohorts and various response rates to the debt question to the ADEA survey over the years (see Figure 5).

Most of the average education debt that predoctoral students reported in the ADEA 2022 survey was from dental school debt (97%). Only 3% of the 2022 average education debt was from predental education debt.

> Average Education Debt and Average Dental School Debt, as Stated by Respondents Graduating With Debt, 2017–2022, in 2022 dollars



**U.S. DENTAL SCHOOLS** CONTINUED THEIR MISSION TO TRAIN AND FDUCATE ORAL HEALTH PROFESSIONALS AND PROVIDE ORAL HEALTH CARE THROUGH THEIR CLINICS TO LOCAL COMMUNITIES

The percentage of ADEA survey respondents graduating with debt decreased between 2017 and 2022. While in 2017, 85% of respondents reported graduating with education debt (dental school debt and/or outstanding predental debt), by 2022 the proportion declined to 83%. For students participating in the ADEA survey, the percent of those graduating with dental school debt recorded a decrease, between 82% in 2017 and 81% in 2022, but the change is not statistically significant at 90% confidence level. Fewer Gen Z respondents finished dental school with any education debt; only 73% of them reported graduating with education debt.

Federal loans persisted as the top source of funding for a doctoral education degree between 2017 and 2022. On average, ADEA 2022 survey respondents financed more than two-thirds of their dental education through loans (65%), the rest covered to a large degree by a combination of financial support from family and friends (20%) and grants and scholarships (10%). Savings (4%), part-time employment (1%) and other sources (0.5%) were small sources of funding for a doctoral degree for the 2022 respondents. Respondents to the ADEA 2017 survey had a similar pattern of funding sources.

Gen Z respondents funded their doctoral education much more through gifts and/or financial support from family and friends and less through debt than their other 2022 colleagues. A quarter of their funding for dental school came from support from family and friends and more than half (56%) from loans. They used less savings (3%) than the other 2022 respondents.

2022 was a year of progress, as dental schools were increasingly adapting to the COVID-19 pandemic on campus, in clinics and in communities. During uncertain economic times, a new generation of dentists graduated from 66 accredited U.S. dental schools in the 2021-22 academic year. U.S. dental schools stood steady in their mission to train and educate oral health professionals and provide oral health care through their clinics to local communities.

#### **METHODOLOGICAL APPENDIX**

TABLE A1

Senior Class Population at U.S. Dental Schools and 2022 ADEA Senior Survey Response Sample by Type of School, Census Region Where the School Is Located and Gender of the Students, 2021–22 Academic Year

	2021–22 SENIOR STUDENT POPULATION		2022 ADEA SENIOR STUDENT SURVEY RESPONSE SAMPLE	
BY TYPE OF SCHOOL	COUNT	%	COUNT	%
PRIVATE	3011	44%	1,008	33%
PRIVATE/ STATE-RELATED	332	5%	217	7%
PUBLIC	3,465	51%	1,870	60%
BY U.S. CENSUS REGION OF THE DENTAL SCHOOL	COUNT	%	COUNT	%
MIDWEST	1,490	22%	676	22%
NORTHEAST	1,848	27%	682	22%
SOUTH	1,992	29%	1,049	34%
WEST	1,478	22%	688	22%
BY GENDER OF SENIOR STUDENT	COUNT	%	COUNT	%
WOMEN	3,591	53%	1,542	50%
MEN	3,199	47%	1,179	38%
NOT LISTED	18	0.3%	374	12%
TOTAL NUMBER OF U.S. DENTAL SCHOOLS WITH A PREDOCTORAL SENIOR CLASS	66	-	66	_
TOTAL SIZE OF SENIOR CLASS	6,808	100%	3,095	100%

**Notes:** Percentages may not total 100% because of rounding. Senior students in dental doctoral degrees at U.S. dental schools include the third-year students at the University of Pacific, Arthur A. Dugoni School of Dentistry (Dugoni School) and the fourth-year students at the remainder of U.S. dental schools. Dugoni School has a three-year dental doctoral degree program. The senior student population figures reflect senior student enrollment at the beginning of the academic year. The ADEA Survey of Dental School Seniors is conducted at the end of the academic year. The total number of seniors students calculated based on Commission on Dental Accreditation reporting is slightly larger (0.1%) than the total number of senior students that received the ADEA 2022 survey, given that some schools did not include their advanced-standing students in the survey. The "Not Listed" gender category for the ADEA 2022 Survey response sample includes respondents who did not respond to this question, do not wish to report their gender identity, are non-binary, transgender and other gender identities.

U.S. Census region according to the U.S. Census Bureau "Region and Division Codes and Federal Information Processing System (FIPS) Codes for States." U.S. Census Bureau, Population Division, Internet Release Date: May 2018

**Source:** Analysis of American Dental Education Association (ADEA) Survey of Dental School Seniors, Class of 2022; American Dental Association, Health Policy Institute, 2021-22 Survey of Dental Education data.



#### Preparedness to Practice Statement and Abbreviated Form, 2022

ABBREVIATED STATEMENT	FULL STATEMENT OF PREPAREDNESS TO PRACTICE	
Ethical/professional values	I understand the ethical and professional values that are expected of the profession.	
Communication skills	I have the communication skills necessary to interact with patients and health professionals.	
Management of common conditions	I have a fundamental understanding of common conditions and their management.	
Continuing education	I believe that continuing education requirements are necessary for practitioners.	
Basic skills in clinical decision-making	I have basic skills in clinical decision-making and the application of evidence-based information to dental practice.	
Working with diverse staff and/or patients	I believe I am adequately prepared to work with diverse, multicultural staff and/or patients.	
Clinical skills to begin practice in general dentistry	I am confident that I have acquired the clinical skills required to begin practice in general dentistry.	
Legal and regulatory context	I understand the legal and regulatory context within which dental care services may be provided.	
Leading a successful team	I am prepared to lead a successful team; I can hire and retain staff, create a positive work culture, manage conflicts, etc.	
Individuals with special needs	I can assess the treatment needs of individuals with special needs.	
Management of a successful business	I am prepared to manage a successful business; I can manage finances, enact a business plan, ensure efficient scheduling and billing, obtain appropriate credentialing, etc.	

Source: American Dental Education Association (ADEA) Survey of Dental School Seniors, Class of 2022.

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# ADEA THE VOICE OF DENTAL EDUCATION

**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 all 79 U.S. and Canadian dental schools, more than 800 allied and advanced dental education programs, over 50 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 application services ADEA AADSAS®, ADEA PASS®, ADEA DHCAS® and ADEA CAAPID®.

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