Council on Scientific Affairs

Khajotia, Sharukh S., 2023, Oklahoma, chair
Kumar, Purnima, 2024, Michigan, vice chair
Clonan, Ellyce, 2023, New York1
da Costa, Juliana, 2025, Oregon
Dhar, Vineet K., 2024, Maryland
Fouad, Ashraf F., 2025, Alabama
Haraszthy, Violet I., 2026, New York
Hasturk, Hatice, 2024, Massachusetts
Holtzman, Jennifer S., 2026
Ioannidou, Effie, 2023, Connecticut
Kademani, Deepak, 2023, Minnesota
MacDonnell, William A., 2025
Masri, Radi M., 2023, Maryland2
Nascimento, Marcelle M., 2024, Florida
Park, Jacob G., 2024, Texas
Schwartz, Kevin G., 2026, Pennsylvania
Tenuta, Livia M., 2026, Michigan
Villa, Alessandro, 2025, Florida

DeLong, Hillary R., senior manager

The Council’s 2022–23 liaisons are Dr. Randall Markarian (Board of Trustees, Eighth District) and Ms. Jenna Chun (American Student Dental Association).

Areas of Responsibility as Set Forth in the Bylaws or Governance and Organizational Manual of the American Dental Association

As described in Chapter VIII, Section K.10., of the ADA Governance and Organizational Manual, the Council’s areas of subject-matter responsibility shall be:

a. Science and scientific research, including:
   i. Evidence-based dentistry;
   ii. Evaluation of professional products;
   iii. Identification of intramural and extramural priorities for dental research every three years; and
   iv. Promotion of student involvement in dental research.

b. Scientific aspects of the dental practice environment related to the health of the public, dentists, and allied health personnel;

c. Standards development for dental products;

d. The safety and efficacy of concepts, procedures and techniques for use in the treatment of patients;

e. Liaison relationships with scientific regulatory, research and professional organizations and science-related agencies of professional healthcare organizations; and

f. The ADA Seal of Acceptance Program.

Advancing ADA Strategic Goals and Objectives: Agency Programs, Projects, Results and Success Measures

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1 New Dentist Member
2 Replaced Dr. Carol Lefebvre, 2023, Georgia
This section presents outcomes from June 2022 to May 2023, advancing the ADA Strategic Plan, Common Ground 2025.

**Objective 9:** The ADA will be the preeminent driver of trusted oral health information for the public and profession.

**Initiative/Program:** ADA Clinical Evaluators (ACE) Panel Program

**Success Measure:** Number of ACE Panel Reports published in *JADA*

**Target:** Four reports per calendar year

**Range:** Three to five reports published each calendar year

**Outcome:** Since June 2022, the Council has published four ACE Panel reports in *JADA*:

1. September 2022: Oral health care practice patterns for geriatric patients
2. December 2022: Intraoral appliance use in dental practice
3. April 2023: Prevalence and applications of 3-dimensional printers in dental practice
4. June 2023: Teledentistry Adoption and Applications (pending publication at the time of this report)

All the above-listed ACE reports also have associated Continued Education (CE) learning opportunities on *JADA*, which are 0.5 hours each. So far in 2023, 98 CE credits have been awarded from ACE Panel CE courses. In 2022, there were 430 ACE Panel CE courses awarded total.

This program has met its stated goal.

**Objective 9:** The ADA will be the preeminent driver of trusted oral health information for the public and profession.

**Initiative/Program:** ADA Seal of Acceptance Program

**Success Measure:** Review of category requirements and product submissions per year

**Target:** Review of 2-3 category requirements/year; no defined product submission review target

**Range:** 1-4 category requirement reviews; no defined product submission review range

**Outcome:** From June 2022 through April 2023, the Council has reviewed and approved eleven product submissions and revised the following two existing product category requirements: fluoride dentifrices and fluoride rinses. In addition to the regular review of those two categories, the Council approved development of a new Seal program product category entitled “Over-The-Counter (OTC) orally-administered analgesic medication for temporary management of Acute Dental Pain,” and will review proposed submission requirements in June 2023. The Council also reviewed the specialty toothbrush category for inclusion of a new sub-category related to suction-enabled toothbrushes. Requirements specific to that subset of specialty toothbrushes are expected to be finalized in June 2023. In total, four Seal product categories were reviewed/developed by the Council. The Council will continue to support the scientific and administrative aspects of the program— including regular program review for efficiency, currentness, and emerging categories— but does not have control over the number of future product submissions.

In addition to Seal program operations, staff have also been involved in marketing the program more broadly, including an April 2023 presentation on the Seal program’s value and impact at the Indiana University School of Dentistry’s Research Day Symposium. The presentation was intended to create
awareness about the Seal program among dental and dental hygiene students and faculty, and was well received.

This program has exceeded its stated goal.

**Objective 9:** The ADA will be the preeminent driver of trusted oral health information for the public and profession.

**Initiative/Program:** Evidence Synthesis and Translational Research

**Success Measure:** Progress of clinical resource development per approved timeline

**Target:** Publications submitted according to approved work plan

**Range:** n/a

**Outcome:** The Council is currently overseeing the development of several peer-reviewed publications, some of which have adjusted targeted submission dates based on staffing changes and Council-approved changes in project direction. The following reflects progress since June 2022:

1. **Caries Management Guideline Series: Restorative Treatments:**
   - STATUS: completed
   - Supporting systematic review and meta-analysis published in *February 2023 JADA*
   - Guideline approved by Council, anticipated publication in June 2023 issue of *JADA*

2. **Caries Management Guideline Series: Caries Prevention:**
   - STATUS: on hold
   - The Caries Prevention guideline project is currently on hold due to resource constraints. A revised project schedule is under development and will be reviewed by the Council at its July 2023 meeting.

3. **ADA/FDA Radiograph Guideline Update**
   - STATUS: delayed
   - The ADA/FDA Radiograph Guideline update is comprised of three separate manuscripts:
     - Safety/regulatory – Council to review in June 2023
     - Diagnostic test accuracy – delayed, with anticipated completion in Q4 2023
     - Indications and frequency of dental radiographs and CBCT imaging – delayed, with anticipated completion in Q1 2024

4. **Adult Dental Sedation and Anesthesia, anticipated completion in Q4 2023 [on track]**
   - STATUS: on schedule for completion
   - The format of the dental sedation guideline was modified in January 2023 after approval from the Council on Dental Education and Licensure (CDEL), who initiated the project request. The new format - a scoping review of the safety issues with moderate sedation in adults in a dental practice – is on track for delivery by December 2023.

In January 2023, the Council approved an algorithmic decision tool for use in responding to requests for the development of scientific materials, which assists the Council in determining the most appropriate format for its scientific publications based on available research, intended audience, and other factors. They also developed authorship criteria for peer-reviewed publications developed by the Council, which helps to provide clarity and transparency about authorship expectations for various internal and external parties involved in development of CSA publications. Both documents guide and support the development of future Council publications.

Some of the deliverables under this program are delayed.

**Objective 9:** The ADA will be the preeminent driver of trusted oral health information for the public and profession.
Initiative/Program: ADA Dental Standards

Success Measure: Participation in SCDP/SCDI via Council representatives, as requested

Range: n/a

Outcome: Following an ADA Standards Program format change in Fall 2022, the Council was asked to identify CSA representatives to sit on the Oversight Committees of both its arms: one on the Standards Committee on Dental Informatics (SCDI) and three on the Standards Committee on Dental Products (SCDP). Those representatives regularly report to the Council on relevant activities. In March 2023, the SCDP and SCDI both approved a resolution to restructure their programs further. The Council is expected to review a recommendation regarding this restructuring effort at its July 2023 meeting.

This program has met its stated goal.

Additional Council Related Projects

Research Priorities Development

In June 2022, the Council approved three-year intramural and extramural research priorities for the ADA (note: this is a CSA subject area of responsibility specified in the ADA Governance and Organizational Manual). The intramural priorities help guide the Council and the ADA in prioritizing the work of the Council; the extramural priorities are developed to assist ADA advocacy and communication efforts in their promotion of dental, oral, and craniofacial research to external stakeholders. Those documents appear as Appendices 1 and 2 to this Annual Report.

Emerging Issues and Trends

The Council on Scientific Affairs is part of a Joint Action Team (JAT) which was formed in early 2023 to identify barriers to ADA membership for dentist faculty members and/or those who may be in ineligible for membership due to licensure requirements. The JAT is being led by the Council on Membership, who has further detailed this effort in their Annual Report.

Responses to House of Delegates Resolutions

The Council has no items of business stemming from the 2022 House of Delegates.

Self-Assessment

The Council is next scheduled to conduct a self-assessment in 2026.

Policy Review


Upon review, the CSA has recommended rescission of the ADA Policy on Tooth Whitening Administered by Non-Dentists (Trans.2008:477) That recommendation was forwarded to the 2023 House of Delegates for consideration via a separate report.

The CSA reviewed the following two policies and determined they should be maintained:

- Human Papillomavirus (HPV) Vaccination for the Prevention of Infection with HPV Types Associated with Oropharyngeal Cancer (Trans.2018:351)
Council Minutes

For more information on recent activities, see the Council’s minutes on ADA.org.
APPENDIX 1
ADA Council on Scientific Affairs
Intramural Scientific Research Priorities: 2023-2026

CSA Intramural Research Priorities (2023-2026)

The CSA recommends that the ADA support scientific research in the following categories for 2023-2026:

1. **Innovative devices, technologies, and therapeutics**
   a. Artificial Intelligence (AI) technology for oral healthcare assessment and patient management
   b. Novel in-office treatments
   c. Oral hygiene products
   d. Regenerative therapies
   e. Tele-dentistry (scientific aspects of clinical use)

2. **Health disparities and population health**
   a. Health inequity and health delivery models
   b. Oral health literacy
   c. Population and practitioner health, including behavioral health
   d. Social and commercial determinants of health
APPENDIX 2

ADA Council on Scientific Affairs
Extramural Research Priorities: 2023-2026

Background/Purpose

As America’s leading voice for oral health, the ADA advocates for strong investment in scientific research for the advancement of oral health care and improvement of patient and population health outcomes. Beginning in 2020, and every three years thereafter, the ADA Council on Scientific Affairs (CSA) has a duty to define intramural and extramural research priorities that are practical and clinically relevant to practicing dentists. These priorities are aimed at improving the safety and effectiveness of existing dental treatments, techniques and products; as well as promoting the development and evaluation of novel treatments, techniques, and products that are most likely to impact dental practice in the near future.

The ADA Extramural Research Priorities are shared with external organizations, dental schools and funding agencies to promote further study and external financial support for these priorities. Triennial updates help ensure that the document addresses existing and emerging research needs and priorities in dentistry, with input from ADA members and other critical stakeholders.

As America’s leading advocate for oral health, the ADA strongly supports the dental research and educational enterprise, and takes a leading role in promoting, conducting and critically reviewing research on topics related to dentistry and its relationship to the overall health of individuals and populations. The ADA will continue to serve as a facilitator of the national dental research effort, identify priority topics for research, and help ensure the timely dissemination of information to the profession.

CSA Extramural Research Priorities (2023-2026)

Priority 1: Strengthen and Support the Nation’s Investment in the Oral Health Research Infrastructure

1. Expand the oral health research infrastructure across the scientific/science continuum to facilitate research conduct and scholarly activity.
2. Invest in training to improve diversity and inclusivity within the oral health research workforce.
3. Support “big data” and health services research, including use of the dental practice-based research network to improve oral health surveillance and monitoring, with the goal of promoting the integration of evidence-based (or scientifically-supported) therapeutics and best practices within the overall health care system.

Priority 2: Integrate Dental and Medical Aspects of Dental and Craniofacial Research to Improve Patient Care

1. Examine the relevance of oral health to the overall health and well-being of individuals and populations and promote the resulting evidence of those examinations.
2. Promote the integration of oral diseases and oral health quality-of-life outcomes into health studies and initiatives.
3. Explore the impact of environmental, behavioral, and social determinants on oral health outcomes across a patient’s lifespan within diverse population groups.
4. Examine the complexity of the human oral microbiome and its interactions with other human ecosystems.

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3 Diverse population groups include, but are not limited to: geriatric individuals, children and adolescents; pregnant and medically-complex patients; and vulnerable populations (e.g., disabilities, etc.). Diversity considerations also include research into gender-specific responses to preventive and therapeutic strategies used to address oral diseases and conditions.
5. Promote the integration of oral health care within precision health care.
6. Support basic and translational scientific efforts to better understand biologic mechanisms that explain the interconnection between oral and overall health in complex models that recognize genetic, epigenetic, molecular, cellular and environmental levels.
7. Support research to develop patient treatment protocols and decision support tools to enhance dental response to pandemics and other public health emergencies. This research includes the following areas:
   • Risks of disease transmission in the dental clinic, with emphasis on aerosolized and airborne infectious agents;
   • Development of contemporary patient care delivery paradigms;
   • Mechanisms for the effective triage of care;
   • Emergency treatment assessment criteria;
   • Facility design and engineering protocols for office environmental safety

Priority 3: Improve Prevention and Management of Oral Diseases and Conditions across a Patient’s Lifespan within Diverse Population Groups

1. Support studies on the etiology, prevention and management of common oral diseases and conditions; including (in alphabetical order):
   • Dental caries
   • Dental acid erosion
   • Oral and oropharyngeal cancer
   • Peri-implant diseases
   • Periodontal disease
   • Pulpitis and apical periodontitis
   • Salivary gland dysfunction

2. Support the development of evidence-based clinical practice guidelines for the prevention and management of oral diseases and conditions. Diseases and conditions of interest include (in alphabetical order):
   • Dental caries
   • Oral and oropharyngeal cancer
   • Peri-implant diseases
   • Periodontal disease
   • Pulpitis and apical periodontitis

3. Support research on the role of tobacco, nicotine, and marijuana products in oral disease etiology and exacerbation (including vaping and e-cigarettes) and promote findings to increase awareness of their impact on oral health.
4. Explore the mechanisms of pain and management of acute and chronic dental pain (including patient expectations and perceptions of pain) and promote pain diagnosis and evidence-based treatment.
5. Expand the understanding of the underpinnings of inflammatory responses associated with oral diseases and conditions to include the innate immune response, modulation of adaptive immune response, neuro-inflammatory pathways and epithelial barrier functions, with the goal of developing applications for individual and population health.

Priority 4: Encourage the Dissemination and Implementation of New Evidence-Based Technologies, Tools, and Strategies to Improve Oral Health Outcomes

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4 Diverse population groups include, but are not limited to: geriatric individuals, children and adolescents; pregnant and medically-complex patients; and vulnerable populations (e.g., disabilities, etc.). Diversity considerations also include research into gender-specific responses to preventive and therapeutic strategies used to address oral diseases and conditions.
1. Support research, including educational research, on the implementation of evidence-based strategies (including barriers of implementation), including clinical practice guidelines, risk assessment protocols, and other clinical decision support tools, to enhance the prevention and management of common oral diseases and conditions, including acute dental pain, caries, periodontal disease, and oral cancer.

2. Support research on the effectiveness of tele-dentistry and other virtual consultation applications to improve patient health outcomes.

3. Support and promote research for the development, testing, and use of safe, novel restorative materials and biomimetic materials for oral and craniofacial health care, including the restoration and regeneration of hard and soft tissues affected by trauma, disease and developmental defects.

Priority 5: Encourage Research into Environmental and Occupational Risks and Concerns for the Oral Care Community

1. Advance the understanding of mental health conditions that impact oral health care providers, particularly during a public health emergency; this includes mental health research aimed at both dental teams and patients.

2. Support studies for the development of safe and effective infection control procedures and protocols for use in dental treatment environments; this includes research to address:
   - Risk of disease transmission within dental settings;
   - Personal protective equipment; and
   - Disease monitoring to protect the health of patients and the dental team.

3. Encourage research that focuses on other occupational health hazards, including but not limited to:
   - Retinal damage
   - Hearing loss
   - Chemical exposure
   - Material allergies
   - Psychological hazards (i.e., stress, mental health)
   - Physical hazards (i.e., musculoskeletal)

4. Promote the development, assessment and use of sustainable products, materials and equipment to conserve natural resources and to minimize the impact on our environmental ecosystems.