

August 18, 2015

Martha J. Somerman, D.D.S., Ph.D.
Director
National Institute of Dental and Craniofacial Research
31 Center Drive, Room 2C39
Bethesda, MD 20892-2190

Dear Dr. Somerman:

On behalf of our 158,000 members, we are pleased to comment on the National Institute of Dental and Craniofacial Research's (NIDCR's) proposed research initiatives for Fiscal Year 2017. We offer these comments in response to your Dear Colleague letter of July 30, 2015.

Enclosed you will find our detailed responses to the research initiatives proposed. We understand these initiatives are not a complete picture of the Institute's planned research portfolio for Fiscal Year 2017. They also do not signal that themes from the previous year have been abandoned. However, they do highlight a number of clinically relevant critical issues needing scientific exploration.

As a science-based organization, the ADA has a vested interest in ensuring that federal dental research agencies are well funded, their research investments reflect the needs of the dental profession, and the knowledge gained advances the oral health of the American public. The research initiatives you have proposed will help advance those goals.

We appreciate the opportunity to comment on NIDCR's proposed research initiatives for Fiscal Year 2017. If you have any questions, please contact Mr. Robert J. Burns at 202-789-5176 or burnsr@ada.org. Information is also available at ADA.org/advocacy.

Sincerely,

/s/

Maxine Feinberg, D.D.S.
President

MF:KTO:rjb
Enclosure

/s/

Kathleen T. O'Loughlin, D.M.D., M.P.H.
Executive Director

Technical Comments

National Institute of Dental and Craniofacial Research Proposed Research Initiatives for Fiscal Year 2017

August 18, 2015

On behalf of our 158,000 members, we are pleased to comment on the National Institute of Dental and Craniofacial Research (NIDCR) proposed research initiatives for Fiscal Year 2017. We offer these comments in response to your Dear Colleague letter of July 30, 2015.

A. Factors Underlying Differences in Female and Male Incidence Rates for Certain Dental, Oral, and Craniofacial Diseases

The ADA is supportive of research efforts to better understand demographic differences, including those that are sex-related, in incidence of dental, oral and craniofacial disease. With increasing access to and availability of big data, evaluating factors contributing to differences in incidence of dental, oral, and craniofacial diseases that derive from gender based factors will lead to improved strategies for their prevention, detection and treatment.

Insight from this initiative will add to our understanding of the social, behavioral and biological determinants of oral and dental diseases as it relates to gender differences.

B. Glycoprofiling HIV and HIV/AIDS-related Oral Pathogens that Persist During Antiretroviral Therapy

The ADA is strongly supportive of efforts to understand the scientific basis of the relationship between oral health and systemic conditions and to evaluate the impact of interventions on these systemic conditions. We are particularly interested in investigations involving the use of salivary and oral fluid diagnostics to detect and monitor disease. With HIV/AIDS and other oral pathogens, there is an opportunity for the dental profession to play a bigger role in monitoring the efficacy of antiretroviral therapy.

C. Tailoring Dental Treatment Guidelines for Patients with Genetic Disorders and Other Conditions Known to Impact Oral Health

The ADA has a long standing commitment to increasing access to dental care for underserved populations which we understand to include individuals with unique treatment needs and are therefore strongly supportive of this initiative to explore means to better meet the needs of individuals with genetic disorders and other conditions affecting oral health. The ADA commitment to Evidence Based Dentistry is a means of providing practice guidance that includes means to tailor dental treatment guidelines to best meet patient needs.

D. Three-dimensional Dental, Oral, and Craniofacial Tissue Models to Mimic Human Diseases

The ADA is strongly supportive of this initiative to develop three-dimensional dental, oral and craniofacial tissue models of human disease. The materials science of dentistry is in the vanguard of meeting patient needs; this initiative takes this area of investigation further to use this expertise to develop models in which to explore approaches and materials that can be used in those with significant pathology. While these efforts will obviously first focus on models of dental, oral and craniofacial disease, there is an opportunity for the knowledge based developed to be extrapolated to other tissues and organ systems.

E. Wireless Biosensors in the Oral Cavity for Precise, Individualized Medical Care

The ADA is strongly supportive of this as an area of emerging issues and therapies to medical care in general and is of great interest to the practice of dentistry. It represents yet another demonstration of the convergence of oral health with overall health.

F. Additional Comments

ADA Research Agenda

The ADA's Council on Scientific Affairs proposes adding the following items to NIDCR's proposed research initiatives for Fiscal Year 2017. Most of these are tied to the Association's biennial research agenda, which highlights scientific issues affecting the oral health of Americans and the practice of dentistry in the United States.

1. Examining the social, behavioral and biological determinants of oral and dental disease and their impact on the provision of dental care is needed to improve oral health. This includes evaluating the application of risk assessment, risk communication and other risk management strategies in the diagnosis and treatment of pediatric and adult cares, periodontal disease, and mucosal disease including oral cancer, and their effectiveness in improving oral health outcomes. Understanding the factors related to access to and utilization of dental services across the age spectrum is needed to help insure that improvements to oral health are equitable.
2. The scientific basis of emerging issues and therapies of interest to the practice of dentistry is required to ensure that advances in oral health keep pace. There is a need to evaluate the safety and effectiveness of new and existing diagnostic devices, therapeutic methods, instrumentation and technologies used in dentistry. This work will require longitudinal assessment of safety, efficacy and patient centered outcomes. Investigation, development and clinical evaluation of therapies and therapeutic materials, such as tissue-, nano-, and biomimetically-engineered materials, appropriate for prophylaxis, healing and regeneration of diseased teeth, bone and soft tissues of the oral cavity are an ongoing need for optimal oral health.
3. Better understanding about the best methods to disseminate and attain implementation of evidence-based dental clinical recommendations and guidelines are needed to optimize the practice of dentistry. Notwithstanding the valuable growth of the literature on evidence based dental practice, there continue to be important gaps in the

implementation of evidence-based clinical recommendations and guidelines. These gaps are seen in both general (e.g. carries risk assessment; use of rubber dam isolation) and specialty practice (e.g. trauma guidelines; microscope, magnification and proper illumination). Methods are needed to test and validate means of assessing outcomes related to the use of the evidence-base. Addressing clinically relevant research questions and promoting collaborative efforts on preventive and therapeutic interventions should be designed and supported which leverage the PPRN as well as others opportunities.

4. Better recognition is needed about the bidirectional impact of systemic disease and oral health. There is a need to more fully integrate oral health with overall medical care from the perspective of better meeting patient needs. Opportunities to utilize the oral exam as a platform to screen for disease (e.g. oropharyngeal cancer) as well as to monitor for oral manifestations of chronic disease (e.g. diabetes) should be explored. Research into how the oral healthcare visit can be better used to prepare patients for planned medical interventions and treatments as well as to optimize the health of medically complicated patients is needed. Investigating use of salivary and other non-invasive oral diagnostics will be of value for to early detection and surveillance of oral and systemic conditions.
5. The impact of dietary patterns and nutritional status on oral health represent two important gaps in the knowledge base that should be examined. The ADA strongly recommends that the bidirectional relationship between the health of the oral cavity and the foods consumed as well as the impact of the foods consumed on oral health should be a long-term research theme.

Diet and Nutrition

Compared to the available research on obesity, there is a dearth of high-quality scientific literature examining how dietary patterns and nutritional status impact oral health. The ADA proposes adding diet and nutrition as a long-term research theme. Areas needing exploration include:

- The extent to which dental caries rates fluctuate with changes in total added sugar consumption, and over what time period(s);
- The extent to which low-pH level acids increase the risk for dental caries, alone or in conjunction with sugar;
- The extent to which science can justify establishing minimum or maximum daily reference value (DRV) and percent Daily Value (DV) declarations for added sugars and other non-nutrients (e.g., low pH-level acids, processed starches, etc.); and
- The extent to which targeted policy interventions have any noticeable impact on oral health outcomes (e.g., imposing excise taxes, restricting portion sizes, etc.); and
- The extent to which nutrition counseling in dental offices lowers the prevalence of dental caries.