The power of your voice in oral health: ADEA International Women’s Leadership Conference VII

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On March 12 and 13, I had the pleasure of spending an inspiring 2 days in New Orleans, Louisiana, attending the seventh ADEA International Women’s Leadership Conference, held for the first time in the United States. It left an indelible mark on my memory, as did the third ADEA leadership conference that I attended in 2005 in Montreal. The American Dental Education Association (ADEA) began offering these wonderful women’s leadership conferences in 1998, with the inaugural event taking place in Mandelieu, France. Subsequent conferences occurred approximately every 4 to 5 years with the goal of recognizing, supporting, and inspiring women in academic and other leadership roles within the various oral health professions. Over the years, these conferences have taken place in Göteborg, Sweden (2003); Montréal, Canada (2005); Salvador, Brazil (2010); Barcelona, Spain (2014); Brescia, Italy (2019), and now this year in New Orleans, USA. This sold-out event had 224 registrants representing 12 countries, offering the opportunity to learn from others and to network with international colleagues.

The 2024 conference goals included:

- Advancing global gender equity by expanding the contributions of women in all facets of dental education, the health professions, and the global health workforce; identifying strategies to improve oral health access globally; provide engaging programming; provide opportunities for networking; take the pulse of global research efforts advancing women’s leadership and gender equity in the oral health & other health professions; and creating sustainable diverse networks of people, projects and collaborations for ongoing work in the health professions towards improving oral health.1

These were very lofty goals. However, with 35 very impressive speakers from numerous countries and organizations around the world, I certainly felt the goals were met. These women speakers ranged from experts in global energy policy and climate change to past presidents of world-renowned organizations such as the World Dental Federation (FDI), International Association of Dental Research (IADR), American Association of Dental Research (AADR), and most impressively, current leaders from the National Institutes of Health (NIH). In addition, conference participants heard a heartfelt story from a woman who was the former minister of education in Afghanistan and how her persistence and perseverance helped many Afghan women.

The conference opened with a powerful, inspirational keynote speaker, Elizabeth Bonker, a young woman who had delivered the valedictory speech at her graduation from Rollins College (Class of 2022). Ms Bonker was not a typical college graduate, as she is a non-verbal autistic person. She spoke about the power of determination and persistence in achieving life’s goals. The title of her presentation was “Be the Light Inspiring Service to Humanity”; the entire audience was totally mesmerized by her presentation. You must wonder how on earth she delivered a valedictory speech as well as her keynote address if she was non-verbal. Well, thanks to modern technology, she used a computer with “text-to-speech” software that enabled her to type in her words while delivering her presentation and the computer spoke for her. It was truly amazing!

Among the many notable speakers was Rena D’Souza, DDS, PhD, who is currently Director of the National Institute of Dental & Craniofacial Research (NIDCR) at the NIH. She is also past president of both IADR and AADR. Her presentations focused on “Gender Equality” and “Turning Oral Health Research into Global Efforts.” She has had an impressive career along with a strong commitment to the development and advocacy of women in the health professions. This became clear to the audience when she presented a slide of the current executive administrators of NIDCR–NIH, where women outnumber men by 11 to 3! She also reminded everyone that the current director of NIH is also a woman: Dr. Monica Bertagnolli.

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I was proud to see our CDHA Chief Executive Officer Ondina Love and CDHA Director of Dental Hygiene Practice Sylvie Martel among the conference panelists, speaking about reducing inequalities and developing partnerships for advocacy using the Canada Dental Benefit as an example. Another Canadian panelist was a dental faculty member from McGill University, Elham Emani, DDS, PhD, who spoke about the macro public health approach to improving oral health.

For me, the most powerful message was delivered by Janine Austin Clayton, MD, FARVO, who is the current director of the NIH Office of Research on Women’s Health. She has been instrumental in promoting and facilitating policy to include the mandatory reporting of sex, gender or both in clinical research. She provided an example from a previously published research study on the effects of a drug treatment for cerebral ischemia to illustrate why it is so important to disaggregate research results by sex. In that study example, when research results were aggregated, the results were almost the same for study subjects and controls. However, when the results were disaggregated by sex, males had significantly reduced rates of infarction while the females had significantly increased rates of ischemic stroke. This example demonstrates how unidimensional research creates knowledge gaps when the default human has typically been a 70 kg male. Furthermore, it carries with it a measure of potential harm, as the application of aggregate findings could lead to the inaccurate prescription or lack of prescription of necessary drugs.

Dr. Clayton emphasized the importance of including sex as a variable right from the preclinical phase of research to support personalized medicine. The term personalized medicine has often been used interchangeably with precision medicine. However precision medicine refers more to cellular level variables such as the “omics” (i.e., microbiome, multi-omics, genomics, metabolomics, transcriptomics, etc.) whereas personalized medicine includes broader variables such as sex, gender, age, race, socioeconomic status, and environmental exposures. There seems to be some disagreement currently over the use of these terms in the literature. Given the recent movement within the oral health professions to incorporate precision medicine into our treatment decision making, it will be important for us as oral health providers to keep up with this literature.

Dr. Clayton also pointed out multiple sex differences in mental health, brain–gut microbiome, aging, microvascular aging, immunity, cardiometabolic health, and hypertension. Of significance for oral health practitioners was the revelation that there are huge differences between males and females in autoimmune diseases such as Sjögren’s disease, systemic lupus erythematosus, thyroid disease, and rheumatoid arthritis which are largely prevalent in females versus males.

These examples provide strong rationale for requiring researchers to include both sex- and gender-based analysis in their research designs. Fortunately, through the hard work and persistence of global leaders such as Dr. Clayton and others, there are now policies at NIH as well as the Canadian Institutes of Health Research (CIHR) and the European Commission (EC) requiring sex- and gender-based analysis in their study designs within grant submissions.

As you can see, this conference was truly inspirational at so many levels, and I have only been able to touch upon a few key elements. As the conference title suggests, let’s not forget to use the “power of our voices” as together, we can make a difference in improving global oral health! I urge you to be on the lookout for the next ADEA International Women’s Leadership Conference, taking place in the next 3 to 5 years, and make plans to attend. I’m sure it will be at another enticing and perhaps even exotic location, so you can plan a vacation around the event!

“When you find the courage to use your voice, it has the power to positively inspire & change the lives of others.”

—Nicole O’Neill

REFERENCES
ISSUE AT A GLANCE

We are pleased to feature 2 original research articles and 4 literature reviews in this issue. Nathalie Vanstraelen, Mihai Tarce, Johanna de Almeida Mello, and colleagues evaluate the effectiveness of single- versus triple-headed manual toothbrushes in removing plaque (pp. 81–87). Nazlee Sharmin, Janki Pandya, Thomas Stevenson, and Ava Chow study the impact of interactive HSP content, incorporated into a dental hygiene course, on the students’ learning experiences (pp. 88–97). Ilena Yim, Lewei Zhang, Iris Lin, and Denise Laronde review controversies surrounding oral lichen planus and lichenoid and dysplastic features (LD), including their malignancy, classification, and categorization, and whether lichenoid inflammation causes dysplastic changes in LD or vice versa (pp. 98–105). Meaghan Bennett examines how research paradigms shape professional knowledge of low-income female caregivers’ oral health literacy as well as the development of strategies to improve outcomes in this population and their children (pp. 106–110). Ilena Yim and Denise Laronde provide an overview of the epithelial-mesenchymal transition, its relation to oral cancer, and the interaction among E-cadherin, beta-catenin, and the Wnt pathway in malignant progression of oral tissue (pp. 111–19). In their umbrella review, Vini Mehta, Ankita Mathur, Snehasish Tripathy, and colleagues compile data from systematic reviews and discuss the effects of herbal oral care products on tooth plaque and gingivitis (pp. 120–34). Finally, this issue of the journal also includes a short communication by Treville Pereira, Subraj Shetty, Cathy Babu, and Swati Shrikant Gotmare, who describe a case of peripheral ossifying fibroma in a 26-year-old female (pp. 135–39).

PLAIN LANGUAGE SUMMARIES


Dental plaque is a common problem that can be managed with good oral hygiene and regular dental care. This study aimed to compare the effectiveness of a triple-headed manual toothbrush versus a single-headed manual toothbrush in removing dental plaque. Twenty-one (21) participants were instructed to allow plaque to build up for 48 hours. The amount of plaque was measured before and after brushing using both toothbrushes. Plaque was assessed both visually (clinically) and with digital tools. Both the triple-headed and single-headed manual toothbrushes were equally effective at removing plaque. However, brushing time was shorter with the triple-headed toothbrush. The triple-headed manual toothbrush could be a good alternative for some patients with limited dexterity.


Dental hygiene education usually includes classroom lectures, lab simulations, and hands-on clinical practice. Despite efforts to make learning more engaging, classroom teaching still often involves students listening passively to the teacher. This study looked at how interactive, online H5P content incorporated into a third-year oral biology course in a Canadian dental hygiene program affected the students’ learning experiences. Researchers analysed anonymous data from the course’s final exam and surveyed students about their experiences with the H5P materials. They found that the 43 students scored higher on exam questions related to topics covered by the H5P supplements. The survey, completed by 19 students, showed that students were satisfied with the H5P content, as it allowed them to actively engage with and understand the material better. Based on these findings, educators may wish to consider using H5P to enhance self-directed and personalized learning.


The World Health Organization considers oral lichen planus (OLP)—a chronic inflammatory condition—potentially cancerous, but it is believed that cancer risk is higher in lesions that show both lichenoid and dysplastic features (LD). This literature review analysed 36 publications, including research articles, reviews, meta-analyses, books, reports, letters, and editorials, to explore issues related to OLP and LD, including their cancer risk, classification, and whether lichenoid inflammation leads to dysplasia or the other way around. Studies suggest that OLP has a small risk of turning cancerous, and LD should not be ignored because dysplasia with or without lichenoid features can become cancer. Studies also note disagreement on how to classify and what to call LD. A major issue in the literature is the inconsistency and subjectivity in diagnosing these conditions, leading to variability among different observers and potentially inaccurate diagnoses. More research is needed to understand OLP and LD, but both should be considered potentially cancerous and taken seriously.

Continued...
IS TOOTH SENSITIVITY GETTING IN THE WAY OF YOUR PATIENTS LIVING THEIR LIVES?

Your recommendation can move them from coping to living.

Many people with dentin hypersensitivity have already learned to cope – even those who seem less bothered with the condition may have changed their lifestyle to manage it.¹

Dentin hypersensitivity can alter the way patients act on a daily basis.¹⁵

Guiding your patients to address dentin hypersensitivity properly can help them to get the most out of life.

60% of Canadians suffer from sensitivity²

50% of sensitivity sufferers may not mention it to you¹⁴

HEALTHY TEETH

DENTIN HYPERSENSITIVITY

GUM PROBLEMS

recommend twice-daily brushing with the right sensodyne or pronamel for every patient

*With twice daily brushing.
†Also prevents cavities.
‡Dentin hypersensitivity relief related to dental whitening treatment experienced by brushing two weeks prior and throughout an in-home professional whitening treatment; based on a study comparing potassium nitrate and sodium fluoride (SENSODYNE Fresh Mint) vs. a standard fluoride toothpaste (Crest Regular). During the 14-day whitening treatment period, the potassium nitrate dentifrice patients experienced significantly more sensitivity-free days (average = 10.1 days) compared to the standard fluoride dentifrice group (average = 8.6). Based on a VAS measure. Applies to all KNO³ SENSODYNE variants.
§Helps relieve tooth sensitivity.

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Despite extensive research and public health efforts, dental cavities are still common among children from low-income families. Given the established connection between female caregivers’ oral health literacy (OHL) and the oral health of their children, this literature review analysed 9 research articles to identify assumptions in research methods and how these assumptions may shape understanding of and response to the OHL needs of low-income female caregivers. Seven (7) of the articles used quantitative methods to explore OHL among low-income female caregivers. This “positivist” approach tended to ignore the voices of female caregivers in favour of the health care professionals. It also identified race and socioeconomic status as barriers to higher OHL but did not seek to understand or address these barriers. Health care professionals need to consider all the factors that affect caregivers’ OHL by seeking out the perspectives of this patient population. Strategies should be developed to empower and support female caregivers in increasing their OHL to improve their own and their children’s overall oral health.


Identifying oral lesions that are likely to become cancerous can lead to early treatment to prevent oral cancer. Diagnosing dysplasia in an oral lesion helps predict this risk but can vary between observers. Biomarkers, such as E-cadherin and beta-catenin, which show changes at the molecular level, may offer a more objective way to assess risk. These markers are involved in a process called epithelial–mesenchymal transition (EMT), which may play a role in early cancer development in oral tissues. The authors of this paper reviewed 60 articles, including research papers, reviews, and consensus statements, and explain EMT, its link to oral cancer, and how E-cadherin, beta-catenin, and the Wnt pathway interact in the progression to oral cancer. Depending on the Wnt pathway activity and loss of E-cadherin in cell membranes, E-cadherin and beta-catenin can play different roles in cancer progression, from preventing tumours to promoting early- and late-stage tumours. Future research should study the long-term role of EMT markers in predicting cancer progression in oral tissues.


Many clinical trials and systematic reviews have looked at how well herbal and regular oral care products reduce plaque and gingivitis, but their results have been mixed. This umbrella review gathered data from systematic reviews to provide a summary of how herbal oral care products (such as mouthrinse and toothpaste) affect plaque and gingivitis. Some herbal oral care products, especially mouthrinses, appear to be as effective as traditional oral care products in reducing plaque and gingivitis and so can be used alongside traditional toothpastes. However, because many clinical trials were short (less than 4 weeks), lacked sufficient sample sizes, and had an uncertain risk of bias, oral health professionals should be cautious when recommending herbal products to their patients. To better understand the effects of herbal extracts on gum health, long-term, well-designed controlled trials following standardized research methods are needed.