

**CAPHD Scientific Session**  
Sunday, September 24, 2023

**Part 1 | 8:30am-10:00am | Green Room**

1. **Invited Speaker: Doug Brothwell | An Update on Dental Therapy**
2. Validation of the Quality of Preventive Oral Health Services Scale for Indigenous Communities (ARRIOLA-PACHECO)
3. Perceived Impact of Cannabis Consumption on the Oral Health of Urban Indigenous Peoples in Canada: A Mixed Methods Study (LAWRENCE)
4. Practice Trends and Job Satisfaction of Dental Therapists in Canada: Results from a National Survey (DA SILVA)

**Break | 10:00am-10:30am | Grand Salons - Upper Level**

**Part 2 | 10:30am-12:00pm | Green Room**

5. **Invited Speaker: Abbas Jessani | Community Service Learning in Dentistry: A Step Toward Person-Centered Care**
6. A Scoping Review of Oral Health Outcomes and Oral Health Service Utilization of 2SLGBTQ+ People (FAKHRJAHANI)
7. Measuring Financial Hardship from Dental Care Use – A Scoping Review (PROAÑO)
8. Economic Evaluations of Preventive and Non-Invasive Interventions for Dental Caries in Children: A Scoping Review (SIHUAY-TORRES)
9. The Use of Panoramic Radiographs to Address the Dental Needs of Vulnerable Canadian Populations (RABIE)

## VALIDATION OF THE QUALITY OF PREVENTIVE ORAL HEALTH SERVICES SCALE FOR INDIGENOUS COMMUNITIES

ARRIOLA-PACHECO F<sup>1\*</sup>, BROWN-WALKUS J<sup>1</sup>, LAWRENCE HP<sup>1</sup>

<sup>1</sup> Faculty of Dentistry, University of Toronto

**Objective:** Examine the psychometric properties of the Quality of Preventive Oral Health Services Scale for Indigenous Communities (QPOHSIC).

**Methods:** Items were generated from Brown-Walkus *et al.*'s (2023) Concept-Mapping study conducted in Norway House Cree Nation, Manitoba. Psychometric evaluation was accomplished with caregivers completing the instrument as part of a preventive early childhood caries trial in First Nations communities in Ontario and Manitoba. Bombardier's Framework tested for sensibility, content validity, face validity and feasibility. Internal consistency of scale domains was measured by Cronbach's Alpha Coefficient and Mean Inter-item Correlation scores. Construct validity was assessed through Spearman's correlations between the QPOHSIC total and domain scores and measures of oral health services satisfaction, Oral Health-Related Quality of Life (OHRQL), caregiver's oral health knowledge and perceived child's oral health.

**Results:** 102 caregivers (76.5% mothers) took the QPOHSIC consisting of 53 items across seven domains (Character and Skills of Dental Staff, Working with the Community, Responsibilities in Preventative Education, Inclusive Preventative Strategies, Accessibility to Appointments, Logistics to Provide Services, and Dental Environment). 62.8% agreed/strongly agreed that the questionnaire was completed with no difficulty, and 73.5% reported they understood the questions. Further sensibility measures reflected adequate face and content validity and feasibility. All scale domains, except "Logistics to Provide Services" ( $\alpha=.66$ ), had adequate Cronbach's Alpha coefficients, with all domains having acceptable mean inter-item correlations. Convergent construct validity measures displayed weak associations with some dental services satisfaction items, but no correlation to OHRQL or items of maternal oral health knowledge, and pediatric oral health perceptions, suggesting that QPOHSIC is novel and non-repetitive when compared with other validated scales.

**Conclusion:** QPOHSIC demonstrated acceptable psychometric properties suggesting it is an adequate tool to measure the quality of preventive oral health care in First Nations communities and could serve as a future framework for similar populations.

**Funding:** CIHR Team Grant in Indigenous Oral Health # PI1-151324: "Nishtam Niwiiipitan (My First Teeth): A Multi-Pronged Approach for Improving Mother and Child Oral Health in Aboriginal Communities."

## PERCEIVED IMPACT OF CANNABIS CONSUMPTION ON THE ORAL HEALTH OF URBAN INDIGENOUS PEOPLES IN CANADA: A MIXED METHODS STUDY

SCHUMACHER A<sup>1</sup>, DESIMONE L<sup>1</sup>, FIGUEIREDO R<sup>2</sup>, PYNN B<sup>3</sup>, LAWRENCE HP<sup>1\*</sup>

<sup>1</sup> University of Toronto, Faculty of Dentistry

<sup>2</sup> Alberta Health Services, Provincial Population and Public Health

<sup>3</sup> Thunder Bay Pterosaur Health Care Inc.

**Objectives:** To understand and measure the perceived oral health impact of recreational cannabis consumption among urban Indigenous peoples.

**Methods:** A mixed methods convergent design consisting of semi-structured individual interviews (qualitative descriptive) and a structured questionnaire assessing cannabis exposure and its perceived impact on oral health. Data collection instruments were validated for cultural sensitivity and safety by the Indigenous Wellness Core, Alberta Health Services. The study, conducted virtually in 2021–22, sampled self-identified Indigenous recreational cannabis users in Calgary, Toronto, and Thunder Bay, in collaboration with Alberta Health Services, YWCA Toronto, Pterosaur Healthcare in Thunder Bay, Thunder Bay Indigenous Friendship Centre, Matawa and Fort William First Nations, and the Thunder Bay District Health Unit.

**Results:** Thematic analyses of 15 interviews indicated that our study sample had: (1) decreased access to dental care; (2) recognized the impact of cannabis on overall health but not on oral health; (3) few discussions with their dentist about cannabis use; (4) an increased use of cannabis and a need for increased education; (5) mixed opinions on traditional uses of cannabis among Indigenous peoples; (6) and a lack of trust for government authorized dispensaries. Odds ratios and Chi-squared analyses of 49 survey responses revealed that duration and frequency of cannabis use, as well as potency (concentration of  $\delta$ -9-tetrahydrocannabinol) significantly influenced oral health outcomes. Self-perceived oral health and oral symptoms also varied significantly with mode of consumption, and variability in patterns of cannabis use were identified for select demographic characteristics (sex/gender, Indigenous status, living situation, and employment status).

**Conclusions:** The qualitative findings of our study showed that urban Indigenous peoples were unaware of the oral health impacts of cannabis, and the quantitative findings highlights a need for further research on the oral health effects of cannabis, especially as they relate to mode of use and concentration of  $\delta$ -9-tetrahydrocannabinol.

**Funding:** CIHR Team in Indigenous Peoples' Oral Health (Grant # CA4-170127).

# **PRACTICE TRENDS AND JOB SATISFACTION OF DENTAL THERAPISTS IN CANADA: RESULTS FROM A NATIONAL SURVEY**

KHAWER M<sup>1</sup>, DA SILVA K<sup>1\*</sup>

<sup>1</sup> College of Dentistry, University of Saskatchewan

**Objective:** To evaluate the workforce practice trends and job satisfaction of dental therapists in Canada including the nature and volume of clinical services being provided by Canadian dental therapists.

**Methods:** 124 dental therapists were recruited via the Saskatchewan Dental Therapists Association and the Canadian Dental Therapists Association to participate in this cross-sectional quantitative study. A 41-item electronic questionnaire utilizing a five-point Likert-type scale was completed by participants.

**Results:** 124 dental therapists completed the electronic survey (~68% response rate), with 57.3% of respondents being over the age of 50. Most respondents were actively engaged in full-time clinical practice in private dental offices. Indigenous dental therapists were significantly more likely to work outside of private dental offices providing care for Indigenous communities. Just over half of respondents were compensated by an annual salary, with the highest proportion of full-time practitioners earning between \$75,000 and \$99,000 per year. Dental therapists who were active in clinical practice performed a wide range of preventive, diagnostic, and treatment services consistent with their scope of practice.

**Conclusions:** Canadian dental therapists are highly engaged and satisfied with their profession. They provide a range of oral health services in private and public settings. Dental therapists can facilitate improved access to oral health care in less accessible areas of Canada, however, compensation packages and incentives to work in these less accessible areas must be addressed, as well as legal and regulatory requirements to ensure that dental therapists are licenced providers throughout Canada.

**Keywords:** Health Services Accessibility; Oral Health Workforce; Dental Care for Children

## A SCOPING REVIEW OF ORAL HEALTH OUTCOMES AND ORAL HEALTH SERVICE UTILIZATION OF 2SLGBTQ+ PEOPLE

FAKHRJAHANI I<sup>1\*</sup>, JESSANI A<sup>1,2</sup>

<sup>1</sup> Department of Epidemiology and Biostatistics, Schulich School of Medicine and Dentistry, Western University

<sup>2</sup> Department of Dentistry, Schulich School of Medicine and Dentistry, Western University

**Objective:** This review aimed to investigate the scope of literature describing 2SLGBTQ+ oral health status, including the unmet oral health treatment needs and patterns of oral healthcare utilization of this sub-population, and associated risk factors.

**Methods:** A comprehensive search of the literature regarding unmet oral health needs and factors influencing access to oral healthcare utilization for 2SLGBTQ+ people was conducted. The search strategy identified 138 articles according to the following breakdown: Medline ( $n=23$ ), Embase ( $n=32$ ), Scopus ( $n=14$ ), CINAHL ( $n=43$ ), Google Scholar ( $n=3$ ), and Dissertations & Theses Global ( $n=23$ ). Following the removal of 33 duplicates and a two-stage screening process, 10 studies were included in the review.

**Results:** The review included 10 studies; most ( $n=8$ ) focused upon the oral health status of gender minorities such as transgender people, while only two studies collected information regarding the sexual orientation of participants. No studies were identified that investigated the oral health status of intersex or non-binary individuals. Five studies were based in India, four in the United States, and one in Brazil. Comparisons of transgender and cisgender people in two studies revealed poorer oral health outcomes for transgender people, with two studies reporting similar patterns of oral healthcare utilization between transgender and cisgender people. Five studies sought to understand personal and structural risk factors associated with poor oral health, including affordability, income, and perceived discrimination in oral healthcare settings.

**Conclusions:** The review found that the scope of the literature is sparse and limited. Existing evidence indicates poorer oral health status among 2SLGBTQ+ people – especially transgender people – however wider studies with further representative samples are necessary to gain a full understanding of the oral health outcomes of 2SLGBTQ+ people.

## MEASURING FINANCIAL HARDSHIP FROM DENTAL CARE USE – A SCOPING REVIEW

PROAÑO D<sup>1\*</sup>, ALLIN S<sup>2,3</sup>, ESSUE BM<sup>2</sup>, SINGHAL S<sup>1,4</sup>, QUIÑONEZ C<sup>1,5</sup>

<sup>1</sup> Faculty of Dentistry, University of Toronto

<sup>2</sup> Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health, University of Toronto

<sup>3</sup> North American Observatory on Health Systems and Policies, University of Toronto

<sup>4</sup> Public Health Ontario

<sup>5</sup> Schulich School of Medicine & Dentistry, University of Western Ontario

**Objective:** To evaluate how financial hardship from dental care has been conceptualized, defined, and measured in the literature.

**Methods:** This ongoing scoping review synthesizes and highlights research gaps in the literature and follows Arksey and O'Malley's methodological framework. The literature was systematically searched in Ovid-Medline, Ovid-Embase, Pubmed, Web of Science, Scopus, EconLit, Business Source Premier, and the Cochrane Library. Grey literature was searched on institutional websites. We employed a defined inclusion and exclusion criteria to select studies and manually searched for references of these studies.

**Results:** We retrieved 1675 sources, from which 392 were duplicates, 568 were excluded in the title and abstract screening, and 239 were excluded in the full-text revision. Our final sample consisted of 69 sources. Most of the included studies defined financial hardship as a contributing factor to catastrophic health expenditure. Some studies have modified this indicator and only included dental out-of-pocket costs (i.e., catastrophic dental health expenditure). Some studies assessed the proportion of the total out-of-pocket spending among those experiencing catastrophic spending or the proportion of those making any dental out-of-pocket spending among catastrophic health spenders. Other researchers employed regression analysis to determine the likelihood of experiencing catastrophic health expenditure when dental out-of-pocket spending is made. We found no studies measuring the extent to which dental out-of-pocket spending affects the financial hardship indicators of catastrophic health expenditure and impoverishment. Similarly, we only found one study measuring the intensity of catastrophic dental health expenditure (overshoot and mean positive gap).

**Conclusion:** Our study provides evidence on how financial hardship has been conceptualized measured and defined in the dental care context. Most of the sources reviewed assessed financial hardship as catastrophic health expenditure but have not explored the intensity of these costs or the impoverishment effects of dental out-of-pocket costs.

## **ECONOMIC EVALUATIONS OF PREVENTIVE AND NON-INVASIVE INTERVENTIONS FOR DENTAL CARIES IN CHILDREN: A SCOPING REVIEW**

SIHUAY-TORRES K<sup>1\*</sup>, ARRIOLA-PACHECO F<sup>1</sup>, GHONEIM A<sup>1</sup>, LAWRENCE HP<sup>1</sup>

<sup>1</sup> Faculty of Dentistry, University of Toronto

**Objective:** To identify and map the relevant literature on Economic Evaluations (EEs) for preventive and non-invasive interventions for dental caries in children.

**Methods:** A systematic search using Medline, EMBASE, Scopus, Web of Science, Cochrane, LILACS, and PEDE was conducted up to October 5th, 2022. Two independent reviewers conducted the title and abstract screening, full-text assessment, and data extraction using the COVIDENCE software. Conflicts were resolved by a third reviewer. Inclusion criteria comprised full-text original articles published in peer-reviewed journals, in English, Spanish, or Portuguese, without any date restrictions. We focused on EEs among children under 12 years old who received preventive or non-invasive professionally applied dental interventions. Data synthesis included reporting the methodological characteristics of different types of EEs. The CHEERS 2022 checklist was used to appraise the included studies.

**Results:** Among 1108 studies screened, 56 met the criteria for data extraction. They included 52 cost-effectiveness analyses (CEA), five cost-benefit analyses (CBA), four cost-utility analyses (CUA), two cost-minimization analyses, and one cost-consequences analysis (some EEs included more than one type of analysis). EEs were predominantly trial-based (n=36), followed by model-based (n=16), and hybrid (n=4). The top countries where EEs were conducted were the United States (n=31), Chile and the United Kingdom (n=4 each). Most of the EEs (71%, n=40) compared only preventive interventions (e.g., sealants, fluoride varnish), and 46% (n=26) targeted children under six years. The CHEERS items least reported were related to the health economic analysis plan (n=51), characterizing heterogeneity (n=35) and distributional effects (n=39), and/or approach to engagement with study participants (n=56).

**Conclusion:** EEs have gained significance in pediatric dentistry. While CUA and CBA hold promise for informing policymakers and resource allocation by comparisons with interventions from other fields, EEs in this area predominantly focus on CEA using clinical outcomes.

**Funding:** CIHR Team Grant in Indigenous Oral Health # PI1-151324: “Nishtam Niwiiipitan (My First Teeth): A Multi-Pronged Approach for Improving Mother and Child Oral Health in Aboriginal Communities.”

## THE USE OF PANORAMIC RADIOGRAPHS TO ADDRESS THE DENTAL NEEDS OF VULNERABLE CANADIAN POPULATIONS

ALMEIDA FT, GIANONI-CAPENAKAS S, RABIE H\*, FIGUEIREDO R, PACHECO-PEREIRA C

**Objective:** The high demand for dental services for vulnerable individuals combined with limited available resources requires effectiveness in the provision of dental services. This study aimed to determine the usefulness of the dental panoramic radiograph (DPR) as an imaging tool to assess oral health and prioritize dental interventions in vulnerable patients.

**Methods:** This observational and retrospective study evaluated charts of patients who attended Public Health Dental Clinics (PHDC), Alberta Health Services (AHS), Edmonton, Canada between January 2018 and December 2019. Data collected included sex and age at the time of image acquisition. The radiographic findings were gathered as follows: the number of missing, present, decayed, restored, and impacted teeth; periapical lesions; retained root; periodontal bone loss; odontogenic and non-odontogenic lesions in the jaws, carotid calcification, and incidental radiographic findings with clinical relevance.

**Results:** From 526 DPRs evaluated, 57.6% were males and 42.6% were females, with a mean age of 38.5 years. The average number of present teeth in females and males was 23.7 and 22.6, respectively. The most prevalent dental-related finding was periodontal bone loss (81.5%), followed by periapical lesions and impacted teeth representing 59.6% and 27%. Regarding non-dental related findings, osseous lesions of the jaws were found in 10.4% of the patients, and carotid atheroma had a frequency of 3.2%.

**Conclusion:** The DPR is a useful adjunctive tool to be used with the clinical exam in this specific population. It provides an opportunistic overview of their oral health and necessary support to establish priorities in dental care in a public health setting.