

Title: Dental Hygiene: Links Between Research, Theory and Practice

Objective: Dental hygiene leaders and dental hygiene organizations have been working to advance the professional status of dental hygienists. These efforts have met with mixed results. This presentation is based on the concepts that the use of research to guide practice is seen as fundamental to evidence-based practice, and similarly the use of theory to guide research and practice is seen as fundamental to advance the discipline of dental hygiene. **Approach:** This presentation will trace the development of dental hygiene. It will include a review of literature and a chronology of events in recent decades that have contributed to advancing dental hygiene. **Findings:** It will also consider recent trends and will raise questions about options for dental hygiene in the future. **Outcomes:** Recommendations will be made for directions needed to further the advancement of dental hygiene. This presentation will offer one perspective on the links between dental hygiene research, theory, and practice, and the advancement of dental hygiene.

Title: The effects of exposure of *Xenopus laevis* neural crest cells to low concentrations of ethanol *in vitro*.

Objective: High concentrations of alcohol are known to induce facial defects. However, little is known about the effects of low concentrations of alcohol on facial development. In this study neural crest cells, which in the head give rise to the majority of the craniofacial skeleton, were exposed to low concentrations of alcohol to investigate the possible morphological effects. **Methods:** *Xenopus laevis* cranial and trunk neural crest cells were cultured in 0.05 % alcohol (concentrations equivalent to a human blood alcohol levels following the ingestion of one standard drink) under various growing conditions. Photographs were taken using phase contrast a microscope and analyzed with a MetaMorph program. The results were calculated using Wilcoxon rank sum test and subsequently the data was tabulated and graphically illustrated. **Results:** Both cranial and trunk neural crest cells were effected by alcohol. However, the two cell populations responded differently. Although alcohol-treated cranial neural crest cells moved away from the explant, their individual cell count was reduced. Their displacement was also decreased and morphological changes were observed. In contrast, trunk neural crest cells appeared less affected with alcohol enhancing only their migration. **Conclusion:** This study showed that neural crest cells were affected even by low concentrations of alcohol, with cranial neural crest cells being especially sensitive, therefore care must be taken when interpreting results from other experiments arguing otherwise. Supported by Dentistry Fund 2003, 2004, 2005

Title: Working Together to Improve the Oral Health of Seniors: Nova Scotia Action Plan

Oral health is integrally linked with overall health and quality of life. Substantive health and human costs are created by the lack of attention to oral health and yet it remains overlooked as an important health care issue in Canada. With Canadians living longer and retaining more of their natural dentition than in previous generations, social and health institutions are challenged to develop a better understanding of the needs associated with this changing demographic. The complexity of the issue requires input from a variety of stakeholders, including government, dental industry, oral health practitioners, educational institutions, and seniors.

Objective: In 2001 an interdisciplinary team conducted research to determine the key components of a comprehensive oral health services model that would improve access to oral health care for Nova Scotian seniors. **Method:** Data were collected through focus groups, key informant interviews, informal surveys, and a literature-based promising practices scan. **Results:** The key findings impacting seniors' oral health: financial barriers, lack of education, research, accessibility, and policies were presented at a provincial forum to over 75 stakeholders. These findings highlighted the complexity of the issue and served as the foundation for the development of an action plan to address the identified needs. **Outcomes:** This project identified the key factors to be addressed and developed an action plan. The resulting plan recommended areas of action in program and policy development, education, prevention and promotion strategies, and research initiatives.

Title: Dentures vs. Dentition – A Paradigm Shift?

Objective: The purpose of this study was to investigate whether the number of new residents with natural dentition had increased over the years. Secondly, if the numbers had increase, had the delivery of oral care to residents changed to accommodate this shift to natural dentition. **Method:** Admissions records for the past 5 years were analyzed to identify residents that had natural dentition. The presence of only one tooth was classified as a dentate file. Data was not electronically available for a period longer than 5 years. The second phase included an interview. A standard set of semi-structured questions were developed and asked to healthcare providers (n=30) that were responsible for providing oral care for residents. **Results:** The results confirmed that there are more residents entering facility care with natural dentitions. There was a 26% increase, over the past 5 years, in the number of new admissions that had natural teeth. The interview results indicated that the staff providing oral care for residents was generally not informed about why daily oral care was necessary for natural dentitions and subsequently they were not providing adequate oral care for the dentate residents. **Conclusions:** The growing need for the provision of oral care to dentate residents of residential care facilities is not being realized by the care providers. This shortfall in care appears to be partially due to the lack of understanding of the need.