

Healthy Populations Institute Flagship Project Snapshot: Putting 'Oral Health is Health' into Action

The case for action

Oral health is health.

Oral health has been recognized as a human right. The oral health of an individual is defined as "a state of being free of mouth and facial pain, oral and throat cancer, oral infection and sores, birth defects such as cleft lip and palate, periodontal disease, tooth decay and tooth loss, and other disease and disorders that limit an individual's capacity in biting, chewing, smiling, speaking, and psychological wellbeing"².

Beyond its function, the oral cavity has been described as the "window to general health"³. A healthy mouth is important to the health of the entire body. There is evidence that poor oral health is associated with cardiovascular disease, type 1 and type 2 diabetes, low-birth weight and preterm babies, rheumatoid arthritis, osteoporosis, and several other chronic diseases ^{3, 4}. The links between oral health and systemic diseases (diseases that affect the entire body) are not always clear and further research is needed to better understand the underlying mechanisms. Nevertheless, oral health promotion and prevention that addresses the associated risk factors (see below) are required to reduce the impact of oral diseases including the adverse effects on systemic conditions.

Despite being largely preventable⁵, oral disorders combined are the most common chronic diseases and a major public health problem worldwide⁶. The most common oral disorders are dental caries (cavities) and periodontitis (gum disease)^{7,8,9}. Dental caries is the major cause of tooth loss in children ¹⁰ and severe periodontitis is the major cause of tooth loss in adults (in particular older adults)¹¹, both have potentially serious health consequences such as infections and malnutrition, and negative impacts on social interactions and self-esteem^{12,13,14}. Aside from dental caries and periodontal disease, oral conditions that are of global concern include oral cancer, the oral-related symptoms associated with HIV/AIDS, Cleft Lip and Palate, and oral trauma ^{15,16}.

How can we transition to a general health strategy and policy that includes oral health?

Oral health has historically been neglected in public health strategy and policy ¹⁷ despite the burden of oral diseases. Oral health care delivery and expenditures in Canada are mostly independent of universal publicly funded health care (Medicare). Yet, oral diseases accrue high costs¹⁸ to the primary system due to their impact on overall health¹⁹ and in the utilization of hospital emergency department resources for the treatment of preventable oral diseases. Moreover, societal costs including the time missed from school and work as well as the negative implications on overall well-being and quality of life all add to the costs to society¹⁷. Consequently, efforts are being made to reinforce the commitment to oral health among policymakers. At the national level, two documents, the *Canadian Oral Health Strategy* (2005)²⁰ and the *Canadian Oral Health Framework* (2013-18)²¹ exist to guide oral health policy and programming. Globally, the World Health Organization (WHO) is currently developing a Global Oral Health Report, as part of their Oral





Health Programme to further develop a global oral health action plan towards 2030 and the Sustainable Development Goals.

Oral diseases and associated non-communicable diseases (NCDs) share well-documented modifiable risk factors, such as excess sugar consumption, unhealthy diet, substance use, mental health issues, and socioeconomic determinants. Therefore, it is crucial to integrate oral health into local, national and global health agendas, focusing on health promotion and disease prevention with emphasis on common risk factors and through effective multidisciplinary work²².

Why is oral health a population health issue?

There is a direct association between oral disease and social determinants of health such as education, income, and geographic location. Disparities in access to care need to be investigated in all aspects of oral health care, including the allocation of resources, oral health care services usage, the quality of services, workforce, and the financing of oral health care²³. Below, some characteristics of oral health across Canada²⁴ are summarized and followed by a list of the most vulnerable populations in the country²⁵. There is a knowledge gap for baseline data in Nova Scotia where, to our knowledge, the last province-wide data was published almost two decades ago²⁶. Moreover, recent evidence suggests that socio-economically disadvantaged populations in Nova Scotia are inadequately addressed²⁷.

Populations most at risk for oral diseases:

- those with low incomes;
- young children living in low-income families;
- young adults and others working without dental insurance;
- elderly people living in institutions or with low incomes;
- aboriginal peoples;
- refugees and immigrants;
- those with disabilities; and people living in rural and remote regions.

Oral health statistics in Canada

- 57% of 6–11 year olds have or have had a cavity.
- 59% of 12–19 year olds have or have had a cavity.
- 6% of adult Canadians no longer have any natural teeth.
- 96% of adults have had a history of cavities.
- 21% of adults with natural teeth have, or have had, a moderate or a severe periodontal (gum) problem.
- 12% of Canadians avoid certain foods because of problems with their teeth or mouth; and
- 12% of Canadians report that they had ongoing pain in their mouth in the past year.
- an estimated 2.26 million school-days and 4.15 million working-days lost annually due to dental visits or dental sick-days





Canadian provincial dental and dental hygiene associations undertake preventive oral health initiatives, many of which are intended to decrease the barriers to clinical oral health delivery for priority populations²⁸. For example, the Nova Scotia Dental association organizes annual public education campaigns and education websites such as HealthyTeeth.org. In addition, a suite of open access resources (brushingup.ca) supports the delivery of optimum daily mouth care for those who are dependent on caregivers for activities of daily living. These resources were developed as a result of HPI research at Dalhousie University, which examined oral care in a number of continuing-care settings in Nova Scotia²⁹.

HPI's *Putting "Oral Health is Health"* into action Flagship Project is committed to improving the oral and overall health status of Nova Scotians by enhancing oral health care strategies and accessibility through interdisciplinary research. Improved oral health care for priority populations may be achieved by integrating oral health into primary health care; employing collaborative approaches among the public and private sectors; and utilizing oral health service providers to their full scope of practice ³⁰. An exploration of the feasibility of implementing such innovative oral health strategies in Nova Scotia is required.





References

- 1. Glick, M., Monteiro da Silva, O., Seeberger, G.K., Xu, T., Pucca, G., Williams, D.M., Kess, S., Eiselé, J.-L. and Séverin, T. (2012), FDI Vision 2020: shaping the future of oral health. Int Dent J, 62: 278-291. doi:10.1111/idj.12009
- 2. Petersen, P. E. & WHO Oral Health Programme. (2003). The world oral health report 2003: Continuous improvement of oral health in the 21st century the approach of the WHO Global Oral Health Programme / Poul Erik Petersen. World Health Organization. http://www.who.int/iris/handle/10665/68506d
- 3. Alpert, P. T. (2017) Oral health: the oral-systemic health connection. Home Health Care Manag Pract. 29(1):56-59. 2.
- 4. Seymour, G. J. (2007) Good oral health is essential for good general health: the oral-systemic connection. Clin Microbiol Infect.13(Suppl 4):1-2
- 5. Balakrishnan, M., Simmonds, R. S., & Tagg, J. R. (2000). Dental caries is a preventable infections disease. Australian Dental Journal, 45(4), 235-245.
- 6. World Health Organization. Oral Health. Fact sheet no 318. April 2012. Available at: www.who.int/mediacentre/ factsheets/fs318/en/index.htm.
- 7. Fox, C. H. (1992). New considerations in the prevalence of periodontal disease. Current Opinion in Dentistry 2:5-11.
- 8. Krol, D. M. & Nedley, M. P. (2007) Dental caries: State of the science for the most common chronic disease of childhood. Advances in Pediatrics, 54:215-239.
- 9. Benigeri, M., Brodeur, J-M., Payette, M., Charbonneau, A., Ismail, A. I., (2000). Community periodontal index of treatment needs and prevalence of periodontal conditions. J Clin Periodontol, 27:308-312.
- 10. Krol, D. M. & Nedley, M. P. (2007) Dental caries: State of the science for the most common chronic disease of childhood. Advances in Pediatrics, 54:215-239.
- 11. Ong, G. (1998). Periodontal disease and tooth loss. International Dental Journal, 48:233-238.
- 12. Sheiham and Steele, J. (2001), "Does the condition of the mouth and teeth affect the ability to eat certain foods, nutrient and dietary intake and nutritional status amongst older people?" Public Health Nutrition, vol. 4, no. 3, pp. 797–803.
- 13. Psoter, W. J., Reid, B. C., & Katz, R. V. (2005). Malnutrition and dental caries: A review of the literature. Caries Res, 39:441-447.
- 14. Huff, M., Kinion, E., Kendra, M. A., Klecan, T. (2006). Self-Esteem: A hidden concern in oral health. Journal of Community Nursing, 23: 245-255.
- 15. Siegel R. L., Miller K. D., & Jemal, A. (2020). Cancer Statistics, 2020. CA: A Cancer Journal for Clinicians, 70:7-30.
- 16. Helmick, C. G., Felson D. T., Lawrence R. C., Gabriel S., Hirsch R., Kwoh C. K., ... Stone J. H.; National Arthritis Data Workgroup. (2008). Estimates of the prevalence of arthritis and other rheumatic conditions in the United States: Part 1. *Arthritis and Rheumatology*, 58(1), 15-25.
- 17. Jin, L. J., Lamster, I. B., Greenspan, J. S., Pitts, N. C., Scully, C., Warnakulasuriya, S. (2016) Global burden of oral diseases: emerging concepts, management and interplay with systemic health. Oral Dis 22(7):609-619.
- 18. Singhal, S., McLaren, L., Quinonez, C. (2017) Trends in emergency department visits for non-traumatic dental conditions in Ontario from 2006 to 2014. Can J Public Health 14;108(3):e246-50.
- 19. Kim, J. & Amar S. (2006) Periodontal disease and systemic conditions: a bidirectional relationship. Odontology 94(1):10-21.





- 20. Available at:
 - http://www.caphd.ca/sites/default/files/Canadian%200ral%20Health%20Strategy%20-%20Final.pdf
- 21. Available at: http://www.caphd.ca/sites/default/files/FrameworkOctober%202014%20-%20FINAL%20English.pdf
- 22. Sgan-Cohen, H. D., Evans, R.W., Whelton, H., Villena, R.S., MacDougall, M., Williams, D. M., IADR-GOHIRA Steering and Task Groups (2013) IADR Global Oral Health Inequalities Research Agenda (IADR-GOHIRA(R)): a call to action. J Dent Res 92: 209-211.
- 23. Northridge, M. E., Kumar, A. & Kaur, R. (2020) Disparities in Access to Oral Health Care. Review of Public Health 41:1.
- 24. Report on the Findings of the Oral Health Component of the Canadian Health Measures Survey 2007–2009. Available at: http://www.caphd.ca/sites/default/files/CHMS-E-tech.pdf
- 25. Canadian Academy of Health Sciences, 2014. Improving access to oral health care for vulnerable people living in Canada.
- 26. Ismail, A. I. & Sohn, W. (2001) The impact of universal access to dental care on disparities in caries experience in children. J Am Dent Assoc. 132:295–303
- 27. Hachey S., Clovis, J. & Lamarche, K. (2019) Children's oral health and barriers to seeking care: perspectives of caregivers seeking pediatric hospital dental treatment. Healthc Policy. 15(1):29-39.
- 28. The State of Oral Health in Canada. Overview of dentistry and the oral health landscape in Canada and worldwide. Canadian Dental Association (2017). https://www.cda-adc.ca/stateoforalhealth/flip/#1.
- 29. Matthews, D. C., Clovis, J. B., Brillant, M. G., Filiaggi, M. J., McNally, M. E., Kotzer, R.D., Lawrence, H. P. (2012) Oral health status of long-term care residents A vulnerable population. Journal of the Canadian Dental Association;78:c3.
- 30. Hachey, S., Clovis, J., Lamarche, K. (2019) Strengthening the approach to oral health policy and practice in Canada. Paediatrics & Child Health, pxz104.

