Commentary

Strengthening the approach to oral health policy and practice in Canada

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Abstract

Evidence suggests that Canadian children from marginalized populations experience higher rates of oral diseases than their more fortunate counterparts. Oral health care in Canada is a nearly exclusively privatized and siloed system. In order to close the gap in child oral health, a combination of cohesive strategies and accessible providers is essential. The Health Impact Pyramid is a paradigm to guide health policy and programming with ready application to oral health care in Canada for the delivery of evidence-based oral health interventions with high impact. A collaborative approach among primary care providers (oral health and nonoral health), educators and the public sector, and the utilization of oral health service providers to their full scope of practice is needed to access priority populations and to deliver the most impactful interventions. Strengthening the approach to oral health care in Canada is necessary to reduce the inequities in oral health and, in turn, overall child health.

Keywords: *Health impact pyramid; Oral health; Dental therapists; Dental hygienists; Primary care.*

Dental caries (decay) is a chronic and generally preventable disease, which can gravely impact quality of life, growth, and development; in rare instances, the outcome can be fatal. Indigenous children, children living in poverty and those living in rural neighbourhoods are among the priority, or vulnerable, populations most affected by dental caries. Treatment of dental caries is the leading cause of day surgery for Canadian children. Surgical rates are found to be 8.6 times higher in neighbourhoods with high (compared to low) Indigenous populations, 3.9 times higher among children from less (compared to the most) affluent neighbourhoods, and 3.1 times higher among children from rural (compared to urban) neighbourhoods (1). These statistics (1) suggest an inadequate public policy and programming response to address child oral health in priority populations. An evaluation of current initiatives combined with evidence of effective policy and programming can guide health

advocates and policymakers toward improvements to reduce the burden of oral diseases.

THE HEALTH IMPACT PYRAMID AS A FRAMEWORK TO GUIDE ORAL HEALTH POLICY AND PRACTICE

The Health Impact Pyramid (HIP) (2) conceptualizes the impact of public health interventions and can guide evidence-based policy and program decision making, which is adapted for oral health in Figure 1. This framework can guide delivery of impactful oral health care interventions across multiple levels, with socioeconomic factors and the unique needs of priority populations considered at each level.

At the base of the pyramid are socioeconomic factors, such as reducing poverty and improving the quality of education, that should be considered at all levels and have the greatest impact

Figure 1. The health impact pyramid. Used with permission from the American Public Health Association. Original source: ref. (2).

on population health. The HIP includes the social determinants of health, which are fundamental to public health initiatives but are often overlooked (2).

The second level identifies interventions that can be offered widely or universally to populations to make individuals' default decisions healthier (2). One such example is the effective public health action of community water fluoridation (CWF). Despite the endorsement of health organizations (3) and recent Canadian studies demonstrating both the effectiveness of CWF in dental caries prevention and increased rates of caries after cessation (4), only one-third (38.7%) of Canadians benefit from this intervention (5). Even more concerning is a current trend among Canadian cities to discontinue CWF, thus placing priority populations at further risk for dental caries (6).

The third level of the HIP involves single or infrequent clinical interventions not requiring ongoing care (2) that can be delivered in public programs to improve the oral health of priority populations (7,8). This level includes interventions such as fluoride varnish and dental sealant programs, which are recommended by the Centers for Disease Control and Prevention (CDC) (3) as an alternative or adjunct to CWF. Fluoride varnish and sealants can be delivered in easily accessible community or school-based programs and can target the populations who may not otherwise receive preventive care (7,8). Much evidence supports these programs as viable options to reducing dental caries in children.

Evidence-based clinical interventions such as debridement (plaque and calculus removal) and tooth restorations (fillings), the fourth level of the HIP, improves oral health but has limited impact for families who have difficulties accessing care within the current nearly exclusively privatized delivery model. Therefore, collaboration among dental, dentists, dental hygienists and dental

therapists, and all nonoral health primary care professionals, community agencies, and government is recommended to expand oral health care (9). The HIP also emphasises that successful comprehensive public health programming involves a synergistic approach of various intervention strategies (2).

The very top of the HIP involves counselling and education, which when alone, is the least effective mechanism to influence change in population health. However, counselling and education strategies can be incorporated with other interventions for synergistic and comprehensive public health programming (2).

When considering elements of effective public policy and programming, the collective impact across all tiers—protective and clinical interventions, counselling, and education—is dependent on the ability to offer oral care in settings that are accessible for those most in need. Evidence suggests direct delivery of oral care including utilizing all levels of oral health care providers to their full scope of practice and integrating of oral health into primary care will reduce the inequities in the oral health among children (10).

UTILIZE ORAL HEALTH CARE PROVIDERS FULL SCOPE OF PRACTICE TO REDUCE INEQUITIES

Dentists, dental therapists, and dental hygienists are all skilled professionals who can improve access to care and reduce oral health care inequities. The scope of practice of dentists is widely known, compared with that of dental therapists and hygienists, and can be utilized in all intervention levels. While there is variance across the globe, dental therapists are educated to perform preventive and therapeutic procedures. Canada once had dental therapy programs, which no longer exist due

to lack of government support (11), though dental therapists currently practice in 54 countries and territories, including Canada and the USA (12). In many provinces, dental hygiene is a self-regulated profession with the ability to practice independently. Dental hygienists are educated to provide preventive and therapeutic services and programs for the promotion of optimal oral health (13). Both dental therapists and dental hygienists are assets to oral health policy and programming including the promotion of healthy 'default decisions' and the delivery of 'long-lasting protective and clinical interventions, and counselling and education' in accessible settings such as school and community-based clinics for priority populations.

INTEGRATING ORAL HEALTH INTO PRIMARY CARE

It is imperative for children to be screened once the first tooth erupts to prevent and control dental caries. For children who are at higher risk for oral disease, having a first dental visit by age one and establishing a dental home, an ongoing relationship with an oral health care provider, are especially important (9). Children who receive screening and preventive oral health care are less likely to need costly restorative or emergency treatments (14). This speaks to the need to reach children at their first point of contact in the health care system. While school-based programs are effective, collaboration with nonoral health primary health care professionals can increase access for both toddlers and school-aged children. Paediatricians and family physicians have been called to identify and advocate for children who are at high risk for oral diseases (15). Integrating oral health interventions into primary care facilitates early screening and referrals to a dental home for counselling and education, clinical and long-lasting protective interventions. Interprofessional collaboration and integration of basic oral health interventions including screening and referrals, parental counselling and education, and fluoride varnish application, a long-lasting protective intervention, have been found to increase access to care and improve oral health for priority children at an early age (10).

To facilitate the integration of oral health into primary health practice of nonoral health practitioners, oral health education must be incorporated into nonoral health academic programs and inexpensive resources must be readily available for all students and practitioners. Recent nonoral health graduates are encouraged to share and implement their oral health knowledge and skills in primary practice settings that are suitable for oral health interventions. Collaborations between oral health and the nonoral health care practitioners who work in the community are recommended to expand oral health care capacity. Finally, policies that expand and support oral health interventions by nonoral health care practitioners in community health settings are needed (10).

CONCLUSION

The current delivery model of oral care in Canada is failing those who need it most. An evaluation of current initiatives is required. A combination of strategies and providers who are easily accessed are essential for improvements in oral health. A collaborative approach among primary care providers (oral health and nonoral health), educators and the public sector is needed to reduce the inequities in oral health and, in turn, overall health. The Health Impact Pyramid is a useful paradigm to guide the delivery of evidence-based oral health strategies into programming and health policy and programming in Canada. Stakeholders and policymakers should consider a shift in approach, from 'How can priority populations access care?' to 'How can care providers access priority populations?'

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