

[cda-adc.ca](http://cda-adc.ca)

# The State of Oral Health in Canada



# Contents

Executive Summary .....	3
Oral health: A global perspective .....	5
Oral health in Canada compared to the world.....	7
A snapshot of oral health in Canada .....	10
Dental usage in Canada.....	12
Dental health services in Canada.....	13
Publicly financed oral health programs in Canada .....	16
Provincial public oral health programs.....	17
Vulnerable Canadians and the need for targeted oral health programs .....	18
The Canadian Oral Health Roundtable .....	21
The CDA: Working to improve access to care.....	22
Access-to-care initiatives by provincial dental associations.....	23
Volunteerism by Canadian dentists.....	26



# Executive Summary

Good oral health is essential to overall health and quality of life. Good oral health enables us to speak, smile, breathe, drink, and eat. The oral cavity also plays a central role in the intake of basic nutrition and protection against microbial infections.

As the national voice for the dental profession, the Canadian Dental Association (CDA) is pleased to present this overview of oral health in Canada. In the following pages, you will find insights and information on:

- the state of oral health around the world;
- how Canada compares against other countries;
- information on funding models, statistics on dental usage and access to oral care;
- key trends;
- priority areas for improving oral health;
- programs being spearheaded by provincial dental associations and more.

Based on a wide range of metrics, we can state definitively that Canada is among the world leaders when it comes to the overall oral health of its citizens. In addition to ranking favourably in terms of oral health indicators such as decayed, missing and filled teeth (DMFT), severe chronic gum disease and instances of oral and lip cancer, Canadians also enjoy among the best access to oral health care in the world. Three out of every four Canadians visit a dental professional at least once per year, and 84% of Canadians believe they have good or excellent oral health. In Canada, wait times to see a dentist and receive treatment are among the shortest in the world. And for most Canadians, choice and availability of dentists is a non-issue.

However, there is still work that needs to be done in order to improve the state of oral health in Canada for specific groups. Like many other countries around the world, Canada faces challenges providing the most vulnerable segments of its population (e.g. seniors, low-income populations, people with special needs, children, Indigenous peoples, new immigrants with refugee status, etc.) with the oral health services they require. Research indicates that poor oral health is experienced by those Canadians who do not have access to regular dental care. In the following pages, we outline some of these challenges, along with work being done to address them.

Canada is among the world leaders when it comes to the overall oral health of its citizens.

**Oral health has  
been recognized as  
a basic human right.**



# Oral health: A global perspective

## What is oral health?

The World Health Organization (WHO) defines oral health as a state of being free from mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum) disease, tooth decay, tooth loss and other diseases and disorders.<sup>1</sup>

According to the FDI World Dental Federation, oral health is multi-faceted and includes the ability to speak, smile, smell, taste, touch, chew, swallow and convey a range of emotions through facial expressions with confidence and without pain, discomfort and disease of the craniofacial complex.<sup>2</sup>

## Oral health disease worldwide

Worldwide, the most common oral diseases are dental caries (cavities, decay), periodontal (gum) disease, oral cancer, oral infectious diseases, trauma from injuries and hereditary lesions.<sup>3</sup> Around the globe, 60-90% of school-aged children and nearly 100% of adults have tooth decay.<sup>1,2,3</sup> In fact, dental caries (which includes all stages of tooth decay) is the most common, yet preventable, chronic disease on the planet and constitutes a major global public health challenge.

In Canada, an estimated 2.26 million school-days are missed each year due to dental-related illness<sup>4</sup> and tooth decay accounts for one-third of all day surgeries performed on children between the ages of 1 and 5.<sup>5</sup>

In the United States, a child is five times more likely to seek emergency room treatment for dental problems than for asthma, often because they are unable to see a dentist, are uninsured or cannot afford routine dental care and half of all children enter kindergarten with tooth decay.<sup>6</sup>

The accompanying chart (**Table 1**) shows the worldwide prevalence and ranking of various oral health and other conditions:

**Table 1.**

Oral health condition	World prevalence	World ranking of disease in prevalence
Untreated decay (caries) of permanent teeth	35% of population	1 <sup>st</sup>
Severe periodontal (gum) disease	11% of population	6 <sup>th</sup>
Severe tooth loss	2% of population	36 <sup>th</sup>
Oral cancer	1 to 10 cases per 100,000 people	-
<b>Other conditions</b>		
Tension-type headache	21% of population	2 <sup>nd</sup>
Migraine	15% of population	3 <sup>rd</sup>
Low back pain	9% of population	9 <sup>th</sup>
Diabetes	8% of population	
Asthma	5% of population	

**Source:** Global Burden of Disease 2010<sup>7</sup>

## The economic impact of oral diseases

Across OECD countries, on average, 5% of total health expenditures originate from treatment of oral diseases.<sup>8</sup> Direct treatment costs due to dental diseases worldwide have been estimated at US\$298 billion yearly, corresponding to an average of 4.6% of global health expenditure. Indirect costs due to dental diseases worldwide amounted to US\$144 billion yearly, corresponding to economic losses within the range of the 10 most frequent global causes of death. The global economic impact of dental diseases amounted to US\$442 billion in 2010. Overall improvements in oral health may imply substantial economic benefits, not only in terms of reduced treatment costs, but also because of decreased productivity losses in the labour market.<sup>9</sup> Recent findings suggest that oral diseases account for productivity losses of over \$1 billion per year in Canada alone.<sup>10</sup>

## Priority areas for improving oral health

While oral health has been recognized as a basic human right by numerous dental and public health organizations internationally, more than 70% of the world's population (mostly in low- and middle-income countries) are in need of appropriate and affordable oral health care.<sup>11</sup> Poor oral health results from a number of factors, including a lack of resources, oral hygiene habits, oral health education and accessible oral health care.<sup>12</sup>

The WHO has identified priority areas for countries to consider when initiating or strengthening oral health programs.<sup>13</sup> These include:

- Effective use of fluorides for the prevention of dental caries,
- Oral health and prevention of oral disease through a healthy diet,
- Control of tobacco-related oral disease by involving oral health professionals in tobacco cessation,
- Oral health promotion in schools,
- Oral health improvement in the elderly through health promotion and older adult-friendly primary health care,
- Integration of oral health into national and community health programs,
- Development of oral health systems and orientation of services towards prevention and health promotion.

A recent study found that oral health is a major public health problem in Europe and that oral diseases have considerable negative impacts on the quality of life of populations.<sup>14</sup> The study indicated that, 'vulnerable and low-income groups as a whole receive oral health care services less frequently than the general population and more so for emergency situations when in pain, rather than for preventive care'.

The conclusion of the review of dozens of public health programs across European countries was that in the case of oral health, investment in simple preventive programs is cost-effective and that 'solving the problem of poor oral health in Europe does not require an entirely new policy in every case or a reinvention of the wheel'.<sup>14</sup>

There are many programs in place to address the oral health inequalities for vulnerable groups, with new models and approaches to care being introduced and explored on an ongoing basis.

# Oral health in Canada compared to the world

When considering access to oral health care for entire populations, statistics show that Canada has among the best access to oral health care in the world (**Table 2**). These figures also reveal that all countries face similar challenges with regard to access to oral health for the poorest segments of society, regardless of whether oral health care is publicly or privately delivered.

**Table 2:** Percentage of population visiting dentist in past year

	Poorest	Average	Richest
France <sup>1</sup>	63.9	74.9	82.3
Czech Republic	50.3	71.0	77.8
United Kingdom	58.1	68.8	74.5
Slovak Republic	47.6	68.8	76.3
Canada	46.5	64.6	78.5
Austria	51.6	61.0	70.2
Finland	51.3	58.6	68.5
Belgium	39.8	58.1	69.5
Slovenia	42.6	56.1	64.4
New Zealand	43.8	51.2	59.8
Estonia	31.0	48.0	55.8
Spain	34.5	44.9	57.8
United States	26.2	42.4	56.9
Poland	26.8	42.3	54.6
Hungary	28.1	37.5	50.5
Denmark <sup>2</sup>	28.1	35.3	40.0

<sup>1</sup>. Visits in past 2 years.

<sup>2</sup>. Visits in past 3 months.

Source: Health at a Glance 2011, OECD Indicators, 2011.<sup>15</sup>

One key oral health measure for comparative purposes is the decayed, missing and filled teeth (DMFT) index measure. This represents the number of decayed (D), missing due to caries (M) and filled (F) teeth (T). There are no other well-established and universally accepted measures of oral health.<sup>16</sup> The DMFT is usually measured in 12-year-olds and compared internationally. Recent DMFT data from Canada indicate that 38.7% of 12-year-olds had one or more permanent teeth affected by caries and the mean DMFT was 1.02.<sup>17</sup> This measure is better than the OECD average, which was 1.6 in 2006. It also compares favourably with other DMFT scores for 12-year-olds from most OECD countries (**Table 3**).<sup>18</sup>

The FDI World Dental Federation has developed a comprehensive world health atlas, comparing select oral health indicators. Canada ranks favourably in terms of low DMFT scores (0.0-1.1 DMFT range), low prevalence of severe chronic periodontitis (less than 10% of the population aged 15 and over), moderate incidence of oral and lip cancer (2.5-4.9 per 100,000 people).<sup>19</sup>

Canada also ranks on the low end of the scale in terms of the proportion of the population and of seniors who have no natural teeth, a condition known as edentulism.<sup>20,21,22</sup> This is an important measure, since the loss of all natural teeth can lead to changes in eating patterns, nutrient deficiency and involuntary weight loss, as well as speech difficulty (if left uncorrected). In 2010, approximately 6% of the Canadian population aged 20-79 had no teeth and 22% of the population aged 60-79 had no natural teeth.<sup>17</sup>

These findings demonstrate that Canada compares favourably to other similar industrialized OECD countries in terms of the overall oral health of its population. What Canada has in common with every other industrialized country, however, are the challenges faced by the more vulnerable segments of society who, face difficulty accessing appropriate and timely oral health services.<sup>4,5,17,23-35</sup>

**Table 3:** 12-year-old DMFT Comparison of OECD countries

Country	DMFT 12-year-olds
Germany	0.7
United Kingdom	0.7
Sweden	1.0
Canada	1.0
Australia	1.1
Finland	1.2
France	1.2
United States	1.3
OECD Average	1.6
New Zealand	1.6
Norway	1.6
Japan	1.7

Source: OECD Health at a Glance

**Canadians have experienced significant decreases in levels of dental decay over the past 40 years.**



# A snapshot of oral health in Canada

In 2010, Health Canada published a report on the dental health of Canadians, based on the Canadian Health Measures Survey (CHMS) conducted by Statistics Canada.<sup>4,17</sup> The results showed that 75% of Canadians visit a dental clinic annually and 86% do so at least once every 2 years. This is a significant improvement from the early 1970s, when barely half of the population consulted a dentist on an annual basis.<sup>17</sup>

Collectively, Canadians have experienced significant decreases in levels of dental decay over the past 40 years. According to Health Canada's Report on the Findings of the Oral Health Component of the Canadian Health Measures Survey:<sup>4,17</sup>

- The percentage of the population that consults a dentist per year increased from 49.5% to 74.5%,
- The percentage of children with at least one decayed tooth decreased from 74% to 23.6%,
- The percentage of adolescents with at least one decayed tooth decreased from 96.6% to 58.8%,
- The average number of decayed, missing or filled teeth (per child) decreased from 6 to 2.5,
- The percentage of adults with no natural teeth decreased from 23.6% to 6.4%.

Overall, the survey indicates that Canadians have very good levels of oral health. The following are a few of the survey's high-level findings:

## Access to dental care

- Roughly 80% of Canadians have a dentist,
- Approximately 85.7% of Canadians visit a dentist within a 2-year period,
- 32% of Canadians have no dental insurance,
- 53% of adults between 60 and 79 years of age have no dental insurance and 50% of Canadians in the lower-income bracket have no dental insurance.

## Clinical oral health indicators in Canada

- 84% of Canadians report their oral health as good or excellent,
- 6.4% of Canadians have no teeth (are edentulous),
- 5.5% of Canadians have untreated coronal cavities,
- Most Canadians (73%) brush twice or more a day and over a quarter (28%) floss 5 times a week.

## Need for care

- 34% of dentate Canadians 6-79 years of age had some sort of treatment need identified,
- 47% of lower-income Canadians had a need identified, compared to 26% of the higher-income group,
- Approximately 2 out of 3 Canadians have no dental needs,

- 1 out of 3 Canadians has a need and only 1 out of 6 says they cannot address this need because of financial reasons,
- Overall, Canadians from lower-income families were found to have two times worse outcomes compared to higher income families in many measures.

### **Economic burden of oral health disease**

- The percentage of Canadians who have experienced time-lost from normal activities for oral health reasons is 39.1%,
- It is estimated that 2.26 million school-days are lost annually due to dental visits or dental sick-days,
- It is estimated that 4.15 million working-days for adults are lost annually due to dental visits or dental sick-days,
- Overall, an average of 3.54 hours per year is lost per person due to dental disease in Canada, including professional treatment.

### **Spotlight on Inuit oral health**

The Inuit Oral Health Survey (IOHS), conducted in 2008-2009, found that compared to non-Indigenous Canadians, more Inuit reported poor oral health and higher frequency of food avoidance and oral pain.<sup>26</sup> Fewer than half made a visit for dental care, even though very few reported that costs were a factor in avoiding a visit or accepting recommended treatment.<sup>26</sup>

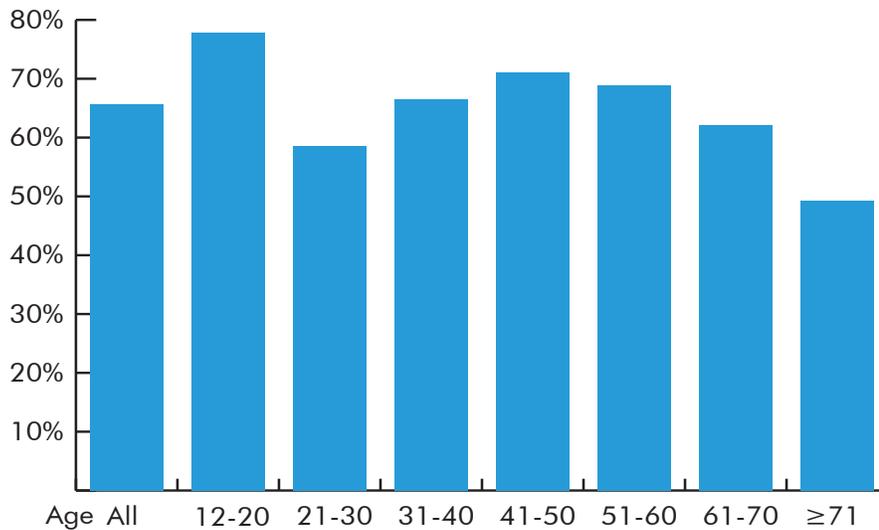
The prevalence of coronal caries was very high among Inuit. More than 85% of preschoolers had dental caries with a mean of 8.22 deciduous (baby) teeth affected. By adolescence, 97.7% had been affected and among the oldest adults, the disease had affected the entire population. Counts of decayed, missing or filled permanent teeth increased at every age, from 2 (aged 6-11 years), to 9.5 (for adolescents), to 15 (aged 20-39 years) and over 19 (for older adults). The prevalence and mean DMFT counts exceeded similar counts for non-Indigenous Canadians by a significant margin. Much of the disease remained untreated and there were more extractions among the Inuit. Among Inuit adolescents, there were 20.3 extractions per 100 teeth filled, much higher than findings for non-Indigenous adolescents, who had only one tooth extracted per 100 filled.<sup>26</sup>

While Canada's oral health care measures are generally above average compared with countries around the world, there are inequities in oral care. In particular, Canadian families and individuals with lower incomes and of lower socio-economic status, those without dental insurance, older Canadians and Indigenous Canadians experience worse overall oral health outcomes than the general population.

# Dental usage in Canada

A survey of Canadians (Canadian Community Health Survey) provided data on the percentage of Canadians (aged 12 and over) that have visited a dentist annually. It is clear that Canadians aged 71 and over (seniors) have access issues, primarily because of a lack of dental insurance in retirement years (**Figure 1**). One positive trend is that the proportion of Canadians reporting an annual dental visit has increased significantly, from 60.3% in 2001 to over 75% in 2012.<sup>24</sup>

**Figure 1:** Percentage of Canadians Aged 12 and Over that Consulted with a Dentist or Orthodontist in Canada in 2012



Source: Statistics Canada, Canadian Community Health Survey (CCHS), 2012<sup>36</sup>

**In Canada, income and dental insurance are the two most important determinants of dental care utilization.<sup>37-40</sup>**

There is substantial research to show that Canadians from lower-income families have worse outcomes in terms of oral health, more instances of untreated disease, lower rates of visiting a dentist, higher proportions of avoiding dental visits and greater frequency of declining recommended care because of costs.<sup>4,5,17,23-40</sup>

Research shows that access to dental care may be getting more difficult for the middle-income segment of the Canadian population as well. Middle-income workers have experienced significant changes in their work environments, which includes decreases to both the amount and availability of employment-based dental insurance.<sup>41</sup> In addition, the provision of public dental benefits does not always ensure access to dental care for those who are covered, since there are often complicated insurance-related barriers to accessing dental treatment.<sup>30,42,43</sup>

Organized dentistry continues to work closely with the private sector to ensure that dental care is adequately insured and funded and that there are minimal barriers to care.

# Dental health services in Canada

While the Canadian health care system and medical services plans provide coverage for virtually all physician and hospital health care costs, the majority of the responsibility for health care planning and delivery lies with the provinces and territories.

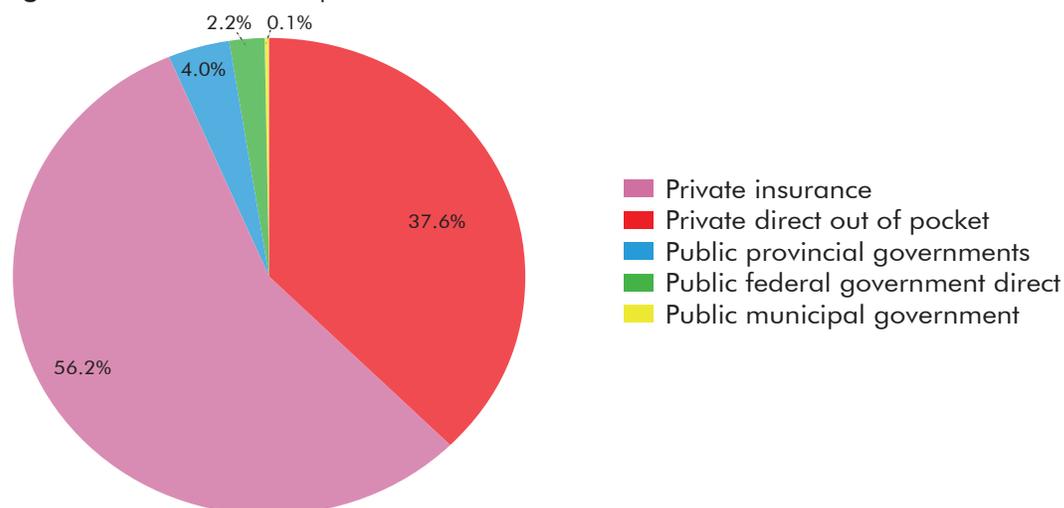
While 70% of the total cost of health care is covered by public insurance, a strong role has always been played by private out-of-pocket and employer-based insurance for services not covered publicly, such as dentistry, drugs and vision care.

For the most part, Canadians are responsible for financing their own dental care and typically do so in the following four ways:

- 1.) Third-party insurance (employment-related dental coverage),
- 2.) Private dental insurance (not-employment related coverage),
- 3.) Directly out-of-pocket, and
- 4.) Government-subsidized programs.

The sources of funding for dental care services in Canada (and their relative proportions) can be seen in **Figure 2**. In this chart, for illustrative purposes private insurance refers to all sources of private insurance including employment and non-employment related dental coverage.

**Figure 2:** Dental Service Expenditures in Canada 2015



Source: Health Expenditure Trends, CIHI, 2015<sup>44</sup>

This figure illustrates how small a proportion public dental services represent compared with other sources of funding for dental services in Canada. Public-sector dental expenditures are targeted primarily to children, seniors, eligible Indigenous individuals and the disabled.

It is estimated that total expenditures on dental services in Canada in 2015 amounted to \$13.6 billion. Private-sector expenditures were estimated at \$12.7 billion (93.8% of total spending), while public-sector expenditures were estimated at \$846 million (6.2% of total spending).<sup>45</sup> Total health care expenditures in Canada in 2015 were estimated at \$219.2 billion, meaning that dental expenditures make up about 6.2% of all health

care spending in Canada. Private-sector expenditures in health care in 2015 were estimated at \$64.2 billion, with dental services spending accounting for one-fifth of the total.<sup>44,45</sup>

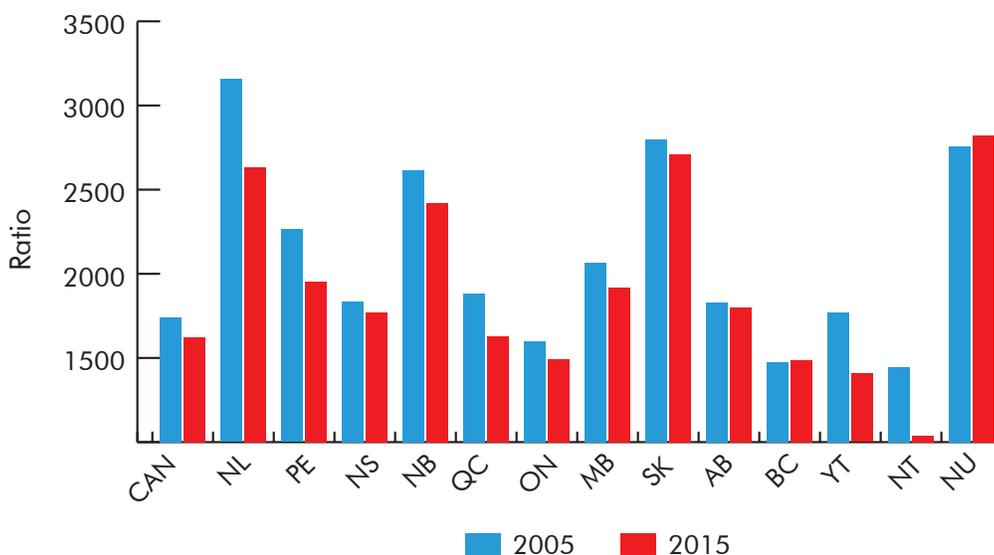
Approximately 60% of all private dental care expenditures originate from private insurance sources and 40% directly out-of-pocket.<sup>44,45</sup> Therefore, private health insurance plays a crucial role in the provision of dental care in this country.

On a per capita basis, total spending per Canadian on dental services was estimated at \$378.60 (compared to \$959 on drugs and \$946 on physician services). Private per capita spending on dental services was estimated at \$355 and public per capita spending at \$23.60.<sup>44,45</sup>

In summary, oral health care occupies a relatively separate position in the Canadian health system. The federal government covers a portion or all of oral health care costs to veterans, refugees and eligible Indigenous individuals and every province recognizes some dental care as medically necessary and “targets oral health care resources to marginalized groups, using different ways and varied health and social services provisions.”<sup>20</sup>

### Population/dentist ratio

In January 2016, the population/dentist ratio in Canada stood at 1,622, meaning that for every dentist in Canada there are 1,622 people. However, the distribution of dentists varies widely by province (**Figure 3**) and the ratio has been generally declining over time, signifying that there are increasing numbers of dentists relative to the population and suggesting greater overall availability of oral health care. However, rural and remote areas across Canada have proportionally fewer dentists than urban areas, making access to oral care in these regions more challenging.<sup>46</sup>



There is no 'one-size-fits-all' remedy for oral health for vulnerable groups across Canada.



# Publicly financed oral health programs in Canada

## Oral health services

In Canada, dental care is largely a publicly uninsured service. In some cases, however, if care is received in-hospital or the patient belongs to a particular institutionalized and/or at-risk population, dental services may be publicly insured.

## Federal public oral health programs

Dental services spending in the public sector in Canada was estimated at \$846 million in 2015. This includes \$542 million in the provincial government sector (federal transfers included), \$295 million in the federal direct government sector and the remainder in municipal government and social security funds.<sup>44</sup>

Dental services that are financed by the federal government are available to:

- Military personnel,
- Those with recognized indigenous status,
- Veterans,
- Federal prisoners,
- Refugees,
- Royal Canadian Mounted Police.

In 2013-2014, approximately \$277 million was spent on federal public dental care expenditures (not including Department of National Defence figures).<sup>47</sup>

Of the \$246 million in expenditures by Health Canada:<sup>47</sup>

- \$231 million (94% of total) was spent on the Non-Insured Health Benefits Program,
- \$7 million (3% of total) was spent on the Children's Oral Health Initiative,
- \$9 million (3% of total) was spent on the Dental Therapy Program.

According to a comprehensive environmental scan of publicly financed dental care in Canada prepared by the Public Health Agency of Canada,<sup>47</sup> "these expenditures by Health Canada primarily target one of Canada's most high-risk group for oral health, namely, First Nations and Inuit populations, particularly children. Despite the large sums of money spent annually for this group, large disparities continue to exist. Access to care is an issue due to both the long distances these people must travel to reach dental clinics, as well as a shortage of providers willing to work in these communities. In addition, First Nations and Inuit populations are increasing at a higher rate than the rest of the Canadian population, therefore, considerable changes are needed in order to decrease the disparities."<sup>47</sup>

A survey of Canada's Indigenous population confirmed that the burden of oral health conditions across all areas of Canada's North (except Nunavik) is much worse than the general population.<sup>26</sup>

# Provincial public oral health programs

Most public oral health programs fall under provincial/territorial jurisdiction. These include programs administered at the regional and municipal level, as well as through universities. While certain services are covered by public insurance, many of these oral health care services are delivered by allied oral health care professionals, such as dental hygienists and dental therapists.

Public oral health programs at the provincial/territorial level include:

- Surgical-dental services requiring hospitalization or associated with a congenital anomaly or medical need,
- Social assistance recipients and their dependents,
- Targeted child and adult populations (e.g., low-income families),
- Targeted disabled and institutionalized populations (e.g., those in long-term care),
- Some seniors,
- Targeted individuals with developmental disabilities,
- Provincial prisons.

Meanwhile, health regions and municipalities provide programs for the following:

- Social assistance recipients and their dependents,
- Targeted child and adult populations (e.g., low-income families),
- Targeted disabled and institutionalized populations (e.g., those in long-term care).

Universities and social welfare groups deliver care to a variety of vulnerable populations through their clinics, usually with discounted fees.

**There is no 'one-size-fits-all' remedy for oral health for vulnerable groups across Canada.** While different models are required based on the circumstances in each region, the CDA and organized dentistry believe that creating new minimum mandatory standards for Canadian dental public health programs and providing sufficient resources to meet these standards is an overarching goal.

# Vulnerable Canadians and the need for targeted oral health programs

## **Canadians with access-to-care challenges**

The Report of the Oral Health Component of the Canada Health Measures Survey reveals most Canadians have access to professional dental care and, as a result, have good oral health.<sup>4</sup> In general, poor oral health is experienced by those Canadians who do not have access to regular dental care.<sup>48-58</sup> Below, we highlight vulnerable groups, along with the key oral health challenges associated by each.

## **Children**

The term 'children' refers to all Canadians from 0 to 18 years of age. While children between 0-6 years are often not considered in surveillance studies, oral diseases frequently begin in the preschool years. These are also important years for establishing good oral self-care behaviours. For this group, early childhood caries are of primary concern. Accordingly, universal coverage of dental services for children 18 years or under is of important consideration.

## **Seniors in long-term care**

Most people living in long-term care facilities are already medically compromised and that new oral health methodologies and standards of oral care must be developed for those co-morbidity situations.

## **Indigenous peoples**

Indigenous peoples are comprised of three separate peoples with unique heritages, languages, cultural practices and spiritual beliefs: First Nations, Inuit and Métis. Recognition of the diversity and nuances between these groups is important to future deliberations. Cultural sensitivity and understanding is essential in developing initiatives to improve oral health.

## **New immigrants with refugee status**

These individuals have significant oral health care needs. Organized dentistry is working with governments to ensure their needs are met. Many dentists across Canada continue to volunteer their time to ensure immigrants receive the urgent care they need.

## **People with special needs**

People with physical and developmental disabilities have special dental care needs because the ability to eat and interact socially is critical to their well-being and good health. However, they are particularly prone to dental caries and periodontitis that can have a catastrophic impact on their survival and ability to thrive.

### **Low-income population**

A proportionally small number of Canadians cannot access oral health care due to lack of finances. Many of them do not have dental insurance, cannot access dental care or are likely to forgo or delay essential dental treatment. A strong social safety net can help reduce these health risks.

### **Position of the CDA**

The CDA believes the provision of equitable access to care is an important goal for professional dentistry organizations. Collaboration between dentistry, health professional colleagues, charities and the federal and provincial governments continues to improve access. In addition to maintaining existing professional, charitable and non-governmental programs, new models should also be developed to further strengthen our oral health delivery system.

**While Canada is among the world leaders in terms of overall quality of oral health, there is still work to be done.**



# The Canadian Oral Health Roundtable

The Canadian Oral Health Roundtable (COHR) is a group made up of oral health care providers, dental insurance carriers, the dental industry, dental academia, government, special interest groups and related health professionals such as physicians, pharmacists and nurses. The group agrees on the urgent need to address the oral health needs of seniors, preschool children, individuals living in poverty and the working poor, people with disabilities and recent immigrants and refugees.

Participating organizations have highlighted three specific priorities:

- 1.) A common position on community water fluoridation,
- 2.) Oral health standards in long-term care facilities,
- 3.) Oral health education programs for children and parents.

## **Community water fluoridation**

In the absence of focused efforts to promote community water fluoridation, a vocal anti-fluoride movement may have influenced many Canadian cities to stop fluoridating their water. Currently, only about 37% of Canada's water supply is fluoridated. According to the COHR, "...our organizations strongly support water fluoridation as a safe, effective and cost-effective public health measure to help prevent dental cavities. The safety and efficacy of water fluoridation has been frequently studied and continues to be supported by current science and the beneficial effects of fluoride in the prevention of dental cavities have been well documented in scientific literature."

## **Oral health standards in long-term care facilities**

Seniors represent one of the fastest-growing groups of Canadians. The overall increasing proportion of seniors, along with their considerably higher rates of dental diseases and the presence of barriers to dental care access, justify concerns about access and delivery of dental health services for seniors, particularly those in long-term care facilities. The COHR has recommended minimum oral care requirements for all long-term care residents, including regular oral health assessments, a referral process to a dentist for examination and a daily mouth care plan implemented by staff.

## **Education programs for children and parents**

Early childhood caries account for about one-third of all day surgeries performed on Canadian children between the ages of 1 and 5. Pediatric dentistry programs are expanding to meet the burden of care and to reduce wait times for surgeries. Targeting oral health promotion to preschoolers and their parents is an opportunity to prevent the high caries rate observed in school-age children. The earlier oral health promotion starts, the better the outcomes. Programs that educate caregivers and teachers about how to teach proper oral health self-care to children have been suggested as good health promotion models. The COHR advocates for the initiation and promotion of educational programs for children and their caregivers, which can improve the oral health of vulnerable children.

# The CDA: Working to improve access to care

We know that Canadians who do not have access to regular dental care experience poor oral health. And while this reality reflects only a minority of Canadians, it is imperative that the dental profession advocates for improved access to care on their behalf.

The CDA uses the National Coordinating Group on Access to Care in order to focus on issues faced by children and seniors:

## **First visit by age one**

The CDA supports a first visit with a dentist by 12 months of age (or within 6 months of first tooth eruption) to help reduce early childhood caries. A child's first visit by age one is critical for the early diagnosis and prevention of dental decay and to instill the importance of daily oral hygiene and regular professional dental care.

## **Seniors**

The National Coordinating Group on Access to Care produced an advocacy toolkit that can be used by dentists who advocate for improving dental conditions for seniors in long-term care facilities. The kit contains sample draft legislation, a guide on conducting political meetings, a sample op-ed for newspapers and leave-behind documents for meetings.

In the coming years, the group plans on leveraging that work by collaborating with other stakeholders on seniors' issues and focusing on working with long-term care facilities to improve their oral health standards.

# Access-to-care initiatives by provincial dental associations

The following are just a few of the preventive oral health initiatives being undertaken by provincial dental associations. Many of these initiatives are intended to decrease barriers to clinical oral health delivery for vulnerable population groups.

**British Columbia:** The British Columbia Dental Association (BCDA)—in conjunction with the University of British Columbia (UBC)—completed a project that showed the value of having a dentally-trained coordinator working with long-term care facilities to improve the oral health outcomes of frail seniors. The pilot results will be used in BCDA's continuing advocacy efforts to improve access to care for seniors, including a dental plan for low-income seniors. The BCDA also runs the bi-annual Your Dental Health (YDH) public education campaign with the goal of increasing the overall demand for dental care and the value of regular dental exams.

**Alberta:** To help increase seniors' access to oral health care, the Alberta Dental Association and College has purchased two mobile dental clinics. A 12-metre mobile clinic with three dental chairs is used to provide fee-for-service dental services on-site by a team of dentists, dental hygienists and dental assistants.

**Manitoba:** *Healthy Smile Happy Child (HSHC)* is a partnership that takes an upstream approach to engage communities in preventing early childhood caries and promoting of early childhood oral health. The program was developed in response to a high prevalence of early childhood cavities as well as long wait times for pediatric dental surgery under general anaesthesia.

**Saskatchewan:** The province has seen success with an initiative that provides oral health care to seniors in long-term care facilities through a coalition of interested parties, including the University of Saskatchewan College of Dentistry, the College of Dental Surgeons of Saskatchewan, the Saskatchewan Dental Assistants' Association, the Saskatchewan Dental Hygienists' Association, the Saskatchewan Dental Therapists Association, the Saskatoon Health Region and the Saskatoon Oral Health Coalition.

**Ontario:** There are several public education campaigns aimed at oral health awareness. *TVOKids* has launched a show (featuring scripts written by the Ontario Dental Association) in response to rising rates of tooth decay in young kids in Ontario. The show highlights good oral health habits and the importance of parent involvement in tooth brushing.

**Nova Scotia:** There are annual public education campaigns aimed at public oral health awareness focusing on specific issues such as sugar reduction. The NSDA operates a website designed to communicate the community-building efforts of dentists: <http://www.yourdentists.ca/stories/>. Annually, the association issues a provincial oral health report to the public and government highlighting one aspect of oral health and providing dentistry's recommendations for improvement.

**New Brunswick:** The New Brunswick Dental Society encourages the implementation of health treatment rooms in long-term care (seniors) facilities around the province. These treatment rooms are equipped with dental equipment (often donated) and allow a local dentist and/or hygienist to regularly provide oral health care on-site for the residents.

**Prince Edward Island:** The Dental Association of Prince Edward Island has a Free First Visit campaign where children as young as 6 months may visit one of our member dentists at no charge for an initial examination and talk to parents on the need for good oral care even of deciduous teeth and prevention of early childhood caries (ECC). This is up to the age of 3 when they become covered under the provincial governments children's dental plan. Brochures and toothbrushes on EEC are distributed on behalf of the association by public health nurses in government health centers.

**Newfoundland and Labrador:** The Newfoundland and Labrador Dental Association (NLDA) has with the cooperation and funding from government developed a universal program to cover children from birth to 13 years. This program has been active and supported for ten years and we are seeing positive results. While children are visiting the dentist at the same rate as they did when the program was first introduced the costs are reducing because the state of children's oral health has dramatically improved. Furthermore, the NLDA has an outreach program that takes dentists into the classroom or to children focused trade shows as a method of getting the message out. For seniors the NLDA is in negotiations with the provincial government to open dental clinics in long-term care facilities.



**Nearly half of the dentists in Canada were involved in community-based volunteer activities.**

# Volunteerism by Canadian dentists

In addition to programs in which dentists volunteer their time and services to Canadians who cannot afford them, dentists forego a considerable amount of revenue in order to bridge the gap between the services they provide and what their patients can pay.

A survey of Canadian dentists in 2005 found that the overwhelming majority of dentists provide dental care services at a reduced rate from their customary fees.<sup>59</sup> Specifically, it was projected that dentists provided over \$80 million of dental care services free of charge and donated over \$8 million in dental supplies. In today's values, this would work out to approximately \$125 million dollars of volunteer dental services, which translates to over 300,000 Canadians gaining access to pro bono dental services.

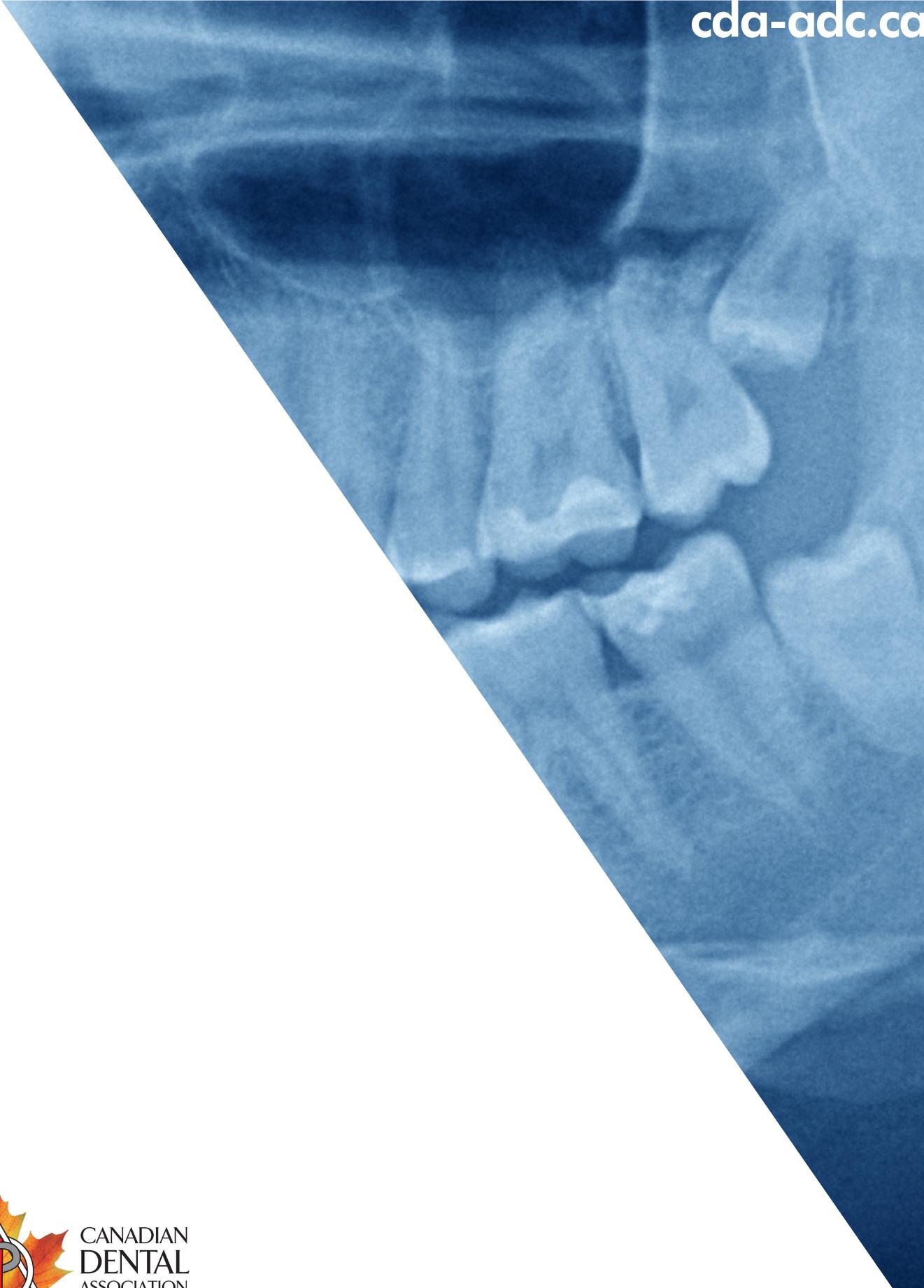
The same survey found that nearly half of the dentists in Canada were involved in community-based volunteer activities and donated a projected total of almost one million volunteer hours. In addition to some of the programs highlighted earlier in this report, dentists and dental students volunteer their time and expertise, serving as a final safety net to ensure that vulnerable Canadians are receiving needed care.

# References

- Petersen PE, World Health Organization. *The World Oral Health Report 2003: Continuous improvement of oral health in the 21st century - the approach of the WHO Global Oral Health Programme*. Geneva (Switzerland): WHO; 2003. Available: [http://www.who.int/oral\\_health/media/en/orh\\_report03\\_en.pdf](http://www.who.int/oral_health/media/en/orh_report03_en.pdf).
- World Dental Federation. *FDI's definition of oral health*. Available: <http://fdiworldental.org/oral-health/vision-2020/fdis-definition-of-oral-health.aspx> [cited 2016 Nov 1].
- FDI World Dental Federation. *Oral Health Worldwide. A report by FDI World Dental Association*. Switzerland; 2014. Available: <https://www.ond.pt/noticias/2014/03/fdioralhealthworldwide.pdf>
- Health Canada. *Summary report on the findings of the oral health component of the Canadian Health Measures Survey, 2007-2009*. Ottawa (ON): Health Canada; 2010. Available: <http://publications.gc.ca/site/eng/369653/publication.html#>
- Canadian Institute for Health Information. *Treatment of Preventable Dental Cavities in Preschoolers. A Focus on Day Surgery under General Anaesthesia*. Ottawa, ON: CIHI; 2013. Available: [https://secure.cihi.ca/free\\_products/Dental\\_Caries\\_Report\\_en\\_web.pdf](https://secure.cihi.ca/free_products/Dental_Caries_Report_en_web.pdf)
- National Maternal and Child Oral Health Policy Center. *Key Oral Health Messages: Messages and talking points for use with policymakers, stakeholders, and the public*. 2014. Available: <http://nmcohpc.net/resources/Key%20Oral%20Health%20Messages.pdf>
- Marcenes W, Kassebaum NJ, Bernabé E, Flaxman A, Naghavi M, Lopez A, et al. Global burden of oral conditions in 1990-2010: a systematic analysis. *J Dent Res*. 2013 Jul;92(7):592-7.
- OECD (2013). *Health at a Glance 2013: OECD Indicators*. Paris: OECD Publishing; 2013. Available: [http://www.oecd-ilibrary.org/social-issues-migration-health/health-at-a-glance-2013\\_health\\_glance-2013-en](http://www.oecd-ilibrary.org/social-issues-migration-health/health-at-a-glance-2013_health_glance-2013-en)
- Listl S, Galloway J, Mossey PA, Marcenes W. Global Economic Impact of Dental Diseases. *J Dent Res*. 2015;94(10):1355-61.
- Hayes A, Azarpazhooh A, Dempster L, Ravaghi V, Quiñonez C. Time loss due to dental problems and treatment in the Canadian population: analysis of a nationwide cross-sectional survey. *BMC Oral Health*. 2013;13:17.
- van Palenstein Helderman WH, Benzian H. Implementation of a Basic Package of Oral Care: towards a reorientation of dental NGOs and their volunteers. *Int Dent J*. 2006;56(1):44-8.
- Auluck A. Oral health of poor people in rural areas of developing countries. *J Can Dent Assoc*. 2005;71(10):753-5.
- Petersen PE. Global policy for improvement of oral health in the 21st century – implications to oral health research of World Health Assembly 2007, World Health Organization. *Community Dent Oral Epidemiol*. 2009;37(1): 1-8.
- Platform for Better Oral Health in Europe. Best Practices in Oral Health Promotion and Prevention from Across Europe: An overview prepared by the platform for better oral health in Europe. 13th October 2015. Available: <http://www.oralhealthplatform.eu/our-best-practices/>
- OECD (2011). *Health at a Glance 2011: OECD Indicators*. France: OECD Publishing; 2011. Available: <http://www.oecd.org/els/health-systems/49105858.pdf>
- Glick M, Meyer DM. Defining oral health: A prerequisite for any health policy. *J Am Dent Assoc*. 2014; 145(6):519-20.
- Health Canada. Report on the findings of the oral health component of the Canadian Health Measures Survey, 2007-2009. Ottawa (ON): Health Canada; 2010. 124 p. Available: <http://publications.gc.ca/site/eng/369649/publication.html#>
- OECD (2009). *Health at a Glance 2009: OECD Indicators*. France: OECD Publishing; 2009. Available: <http://www.oecd.org/health/health-systems/44117530.pdf>
- FDI World Dental Federation. *The Challenge of Oral Disease – A call for global action. The Oral Health Atlas*. 2nd ed. Geneva: FDI World Dental Federation; 2015. Available: [http://www.fdiworldental.org/publications/oral-health-atlas/oral-health-atlas-\(2015\).aspx](http://www.fdiworldental.org/publications/oral-health-atlas/oral-health-atlas-(2015).aspx)

20. Neumann DG, Quiñonez C. A comparative analysis of oral health care systems in the United States, United Kingdom, France, Canada, and Brazil. NCOHR Working Papers Series 2014; 1:2. Available: <http://ncohr-rcrsb.ca/knowledge-sharing/working-paper-series/content/garbinneumann.pdf>
21. Emami E, de Souza RF, Kabawat M, Feine JS. The impact of edentulism on oral and general health. *Int J Dent.* 2013;2013:498305. doi: 10.1155/2013/498305.
22. Statistics Canada. *Oral Health: Edentulous people in Canada 2007 to 2009*. Health Fact Sheet. Available: <http://www.statcan.gc.ca/pub/82-625-x/2010001/article/11087-eng.htm> [cited 2016 Oct 15].
23. Vujcic M, Bernabé E, Garbin Neumann D, Quiñonez C, Mertz E. Dental Care. In: Scheffler RM, editor. *World Scientific Handbook of Global Health Economics and Public Policy*. Volume 2 – Health Determinants and Outcomes. World Scientific Publishing Company; 2016. p. 86-121.
24. Ramraj C, Weitzner E, Figueiredo R, Quiñonez C. A Macroeconomic Review of Dentistry in Canada in the 2000s. *J Can Dent Assoc.* 2014;80:e55. <https://www.ncbi.nlm.nih.gov/pubmed/25192447>
25. Canadian Institute for Health Information. *Trends in Income-Related Health Inequalities in Canada: Summary Report*. Ottawa, ON: CIHI; 2015. Available: [https://www.cihi.ca/en/summary\\_report\\_inequalities\\_2015\\_en.pdf](https://www.cihi.ca/en/summary_report_inequalities_2015_en.pdf)
26. Health Canada, Nunavut Tunngavik Incorporated, Nunatsiavut Government, Inuvialuit Regional Corporation, Inuit Tapiriit Kanatami. *Inuit Oral Health Survey Report 2008–2009*. Ottawa: Health Canada; March 2011. Available: [http://www.hc-sc.gc.ca/fniah-spnia/alt\\_formats/pdf/pubs/promotion/\\_oral-bucco/oral-inuit-buccal-eng.pdf](http://www.hc-sc.gc.ca/fniah-spnia/alt_formats/pdf/pubs/promotion/_oral-bucco/oral-inuit-buccal-eng.pdf)
27. Elani HW, Harper S, Allison PJ, Bedos C, Kaufman JS. Socio-economic inequalities and oral health in Canada and the United States. *J Dent Res.* 2012;91(9):865-70.
28. Wallace B, Browne AJ, Varcoe C, Ford-Gilboe M, Wathen N, Long PM, et al. Self-reported oral health among a community sample of people experiencing social and health inequities: cross-sectional findings from a study to enhance equity in primary healthcare settings. *BMJ Open.* 2015;5(12):e009519.
29. Quiñonez C, Figueiredo R. Sorry doctor, I can't afford the root canal, I have a job: Canadian dental care policy and the working poor. *Can J Public Health.* 2010;101(6):481–5.
30. Canadian Academy of Health Sciences. *Improving access to oral health care for vulnerable people living in Canada*. Ottawa (ON): Canadian Academy of Health Sciences; 2014. [http://www.caahs-acss.ca/wp-content/uploads/2014/09/Access\\_to\\_Oral\\_Care\\_FINAL\\_REPORT\\_EN.pdf](http://www.caahs-acss.ca/wp-content/uploads/2014/09/Access_to_Oral_Care_FINAL_REPORT_EN.pdf)
31. Hill KB, Chadwick B, Freeman R, O'Sullivan I, Murray JJ. Adult Dental Health Survey 2009: Relationships between Dental Attendance Patterns, Oral Health Behaviour and the Current Barriers to Dental Care. *Brit Dent J.* 2013;214(1):25-32.
32. Raittio E, Kiiskinen U, Helminen S, Aromaa A, Suominen AL. Income-Related Inequality and Inequity in the Use of Dental Services in Finland after a Major Subsidization Reform. *Community Dent Oral Epidemiol.* 2015;43(3):240-54.
33. Parliament of the Commonwealth of Australia. Standing Committee on Health and Ageing. *Bridging the Dental Gap: Report on the Inquiry into Adult Dental Services, Standing Committee on Health and Ageing*. Australia: Canberra Parliament of the Commonwealth of Australia; 2013. Available: <http://trove.nla.gov.au/work/182790162?selectedversion=NBD51996295>
34. The Scottish Parliament. Health and Sport Committee - Report on Health Inequalities, 1st Report, Session 4 (2015). Scotland: APS Group Scotland; 1995. Available: <http://www.parliament.scot/parliamentarybusiness/CurrentCommittees/85035.aspx>
35. Chrisopoulos S, Harford JE. Oral health and dental care in Australia: key facts and figures 2012. Cat. no. DEN 224. Canberra: AIHW. Available: <http://www.aihw.gov.au/publication-detail/?id=60129543390>
36. Government of Canada. Canadian Community Health Survey (CCHS), 2011 and 2012. [Custom tabulation 2016]. Statistics Canada; 2012.
37. Millar WJ, Locker D. Dental insurance and use of dental services. *Health Rep.* 1999;11(1):55-67(Eng); 59-72(Fre).

38. Bedos C, Brodeur JM, Benigeri M, Oliver M. [Utilization of preventive dental services by recent immigrants in Canada] [Article in French]. *Can J Public Health*. 2004;95(3):219-23.
39. Locker D, Maggirias J, Quiñonez C. Income, dental insurance coverage, and financial barriers to dental care among Canadian adults. *J Public Health Dent*. 2011;71(4):327-34.
40. Bhatti T, Rana Z, Grootendorst P. Dental insurance, income and the use of dental care in Canada. *J Can Dent Assoc*. 2007;73(1): 57a-h.
41. Ramraj C, Sadeghi L, Lawrence HP, Dempster L, Quiñonez C. Is accessing dental care becoming more difficult? Evidence from Canada's middle-income population. *PLoS One*. 2013;8(2):e57377.
42. Wallace BB, MacEntee MI. Access to dental care for low-income adults: perceptions of affordability, availability and acceptability. *J Community Health*. 2012;37(1):32-9.
43. Bedos C, Brodeur JM, Boucheron L, Richard L, Benigeri M, Olivier M, et al. The dental care pathway of welfare recipients in Quebec. *Soc Sci Med*. 2003;57(11):2089-99.
44. Canadian Institute for Health Information. *National Health Expenditure Trends, 1975 to 2015*. Ottawa: CIHI; 2015. Available: [https://www.cihi.ca/sites/default/files/document/nhex\\_trends\\_narrative\\_report\\_2015\\_en.pdf](https://www.cihi.ca/sites/default/files/document/nhex_trends_narrative_report_2015_en.pdf)
45. Canadian Institute for Health Information. *National Health Expenditure Trends, 1975 to 2015*. Ottawa: CIHI; 2015. Data tables, Nhex-Series-A-2016\_en. Available: <https://www.cihi.ca/en/spending-and-health-workforce/spending/national-health-expenditure-trends>
46. Canadian Institute for Health Information. *Distribution and Internal Migration of Canada's Dentist Workforce*. Ottawa: CIHI; 2007. Available: [https://secure.cihi.ca/free\\_products/2007\\_Dentists\\_EN\\_web.pdf](https://secure.cihi.ca/free_products/2007_Dentists_EN_web.pdf)
47. Shaw JL, Farmer JW. An environmental scan of publicly financed dental care in Canada: 2015 update. Available: [https://www.researchgate.net/publication/311409250\\_An\\_environmental\\_scan\\_of\\_publicly\\_financed\\_dental\\_care\\_in\\_Canada\\_2015\\_Update](https://www.researchgate.net/publication/311409250_An_environmental_scan_of_publicly_financed_dental_care_in_Canada_2015_Update)
48. Hosseinpoor AR, Itani L, Petersen PE. Socio-economic inequality in oral healthcare coverage: results from the World Health Survey. *J Dent Res*. 2012;91(3):275-81.
49. Grignon M, Hurley J, Wang L, Allin S. Inequity in a market-based health system: Evidence from Canada's dental sector. *Health Policy*. 2010;98(1):81-90.
50. Locker D. Deprivation and oral health: a review. *Community Dent Oral Epidemiol*. 2000;28(3):161-9.
51. Watt RG. From victim blaming to upstream action: tackling the social determinants of oral health inequalities. *Community Dent Oral Epidemiol*. 2007;35(1):1-11.
52. Main P, Leake J, Burman D. Oral health care in Canada – a view from the trenches. *J Can Dent Assoc*. 2006;72(4):319.
53. Snow P, McNally ME. Examining the implications of dental treatment costs for low-income families. *J Can Dent Assoc*. 2010;76(2):a28.
54. Sabbah W, Tsakos G, Chandola T, Sheiham A, Watt RG. Social gradients in oral and general health. *J Dent Res*. 2007;86(10):992-6.
55. World Health Organization. *Oral health - Fact Sheet Number 318, April 2012*. Available: <http://www.who.int/mediacentre/factsheets/fs318/en/> [cited 2016 Nov 1].
56. Steele J, Rolland S, Fuller E. *Children's Dental Health Survey 2013. Report 4: The Burden of Dental Disease in Children: England, Wales and Northern Ireland*. Leeds: Health and Social Care Information Centre; 2015. Available: <http://www.hscic.gov.uk/catalogue/PUB17137/CDHS2013-Report4-Burden-of-Dental-Disease.pdf>
57. Dye BA, Thornton-Evans G, Li X, Iafolla TJ. Dental caries and sealant prevalence in children and adolescents in the United States, 2011–2012. *NCHS Data Brief*. 2015;(191):1-8.
58. Labrie Y. *The Other Health Care System: Four Areas Where the Private Sector Answers Patients' Needs*. Canada: Montreal Economic Institute; 2015. Available: [http://www.iedm.org/files/cahier0115\\_en.pdf](http://www.iedm.org/files/cahier0115_en.pdf) [cited 2016 Nov 15]
59. Summit Strategy Group. *Survey of Canadian Dentists on pro Bono and Other Community-based Volunteer Activities (Market research)* [Personal communication]. April 2007.



CANADIAN  
DENTAL  
ASSOCIATION