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Factors associated with the use of oral health care services among Canadian children and youth

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ABSTRACT

Background

This study investigates the association between dental insurance, income, and dental care access for Canadian children and youth aged 1 to 17 years. It contributes to a baseline understanding of oral health care use before the implementation of the Canadian Dental Care Plan (CDCP).

Data and methods

This study used data from the 2019 Canadian Health Survey on Children and Youth (n=47,347). Descriptive statistics and logistic regression models were employed to assess the association of dental insurance, adjusted family net income, and other sociodemographic factors on oral health care visits and cost-related avoidance of oral health care.

Results

A large percentage of children under the age of 5 had never visited a dentist (79.8% of 1-year-olds to 16.4% of 4-year-olds). Overall, 89.6% of Canadian children and youth aged 5 to 17 had visited a dental professional within the past 12 months: 93.1% of those who were insured and 78.5% of those who were uninsured. Insured children and youth had a 4.5% cost-related avoidance of dental care, contrasting with 23.3% for uninsured children and youth. After adjustment for sociodemographic variables, children and youth with dental insurance were nearly three times more likely (odds ratio [OR]: 2.94; 95% confidence interval [CI]: 2.60 to 3.33) to have visited a dental professional in the past 12 months than uninsured children and youth. Having dental insurance (OR: 0.19; 95% CI: 0.16 to 0.21) was protective against barriers to seeing a dental professional because of cost. There was a strong income gradient for both dental service outcomes.

Interpretation

The study emphasizes the significant association of dental insurance and access to oral health care for children and youth. It highlights a significant gap between insured and uninsured children and youth and points out the influence of sociodemographic and income factors on this disparity.

Keywords

dental access, dental care, dentist, cost barriers, dental insurance, dental coverage, CDCP

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What is already known on this subject?

- Oral health is an important component of overall health and can affect functional capacities and social integration among children.
- An association has been identified between dental insurance coverage and the use of oral health care services in Canada.
- To help reduce financial barriers to access oral health care for eligible Canadian residents with an adjusted family net income (AFNI) below \$90,000, and who do not have access to dental insurance, the Canadian government announced the launch of the Canadian Dental Care Plan (CDCP) in 2022.

What does this study add?

- This study uses data from the 2019 Canadian Health Survey on Children and Youth, which collected data from all provinces and territories, and contributes to benchmark estimates of access to and use of oral health care services in Canada before the implementation of the CDCP program.
- This study found that a large percentage of Canadian children under the age of 5 had never visited a dentist (79.8% of 1-year-olds to 16.4% of 4-year-olds). For children and youth aged 5 to 17 years, 89.6% had visited a dental professional within the past 12 months: 93.1% of those who were insured and 78.5% of those who were uninsured.
- Canadian children and youth with dental insurance were nearly three times more likely (odds ratio [OR]: 2.94; 95% confidence interval [CI]: 2.60 to 3.33) to have visited a dental professional in the past 12 months than uninsured children and youth, even after adjustment for income and other sociodemographic factors. Having dental insurance (OR: 0.19; 95% CI: 0.16 to 0.21) was protective against barriers to seeing a dental professional because of cost.
- The results of this study demonstrate that dental insurance is a key predictor of oral health care access and use among Canadian children and youth, but they also emphasize that affordability is not the sole determinant of comprehensive dental care. Sociodemographic factors are also critical in influencing access to dental services.

Oral health is an important component of overall health.^{1,2} Children's oral health can affect functional capacities, psychological well-being, and social integration.^{3,4} Additionally, health behaviours established in childhood extend into adulthood and can influence oral health outcomes later in life.⁵ Although there are some public programs targeted at certain age groups and at-risk populations,⁶ historically, most Canadians have relied on employer-provided or private dental insurance coverage. For children, most provincial and territorial jurisdictions offer some form of dental coverage, though it is often based on financial need or health status.⁶ Consequently, there are disparities in access to and use of oral health care among Canadians.⁷

To help address these disparities and ultimately improve the oral health of Canadians, the Canadian government has introduced the new Canadian Dental Care Plan (CDCP), with an estimated budget of \$13 billion over the next five years. The CDCP is intended to help ease financial barriers to accessing oral health care and fill existing gaps in coverage by providing dental insurance for uninsured Canadian residents with an adjusted family net income (AFNI) of less than \$90,000.⁸ The CDCP is expected to provide coverage to approximately 9 million uninsured individuals. Additionally, the federal government introduced the interim Canada Dental Benefit (CDB) in December 2022 to alleviate dental costs for eligible families. Specifically, the CDB is an interim measure that aims to help parents and guardians of a child under 12, earning less

than \$90,000 annually, and without access to a private dental insurance plan, until June 2024.⁹

Visits to an oral health care provider are important for children, aiding in the prevention of oral health problems such as caries and establishing a healthy oral care routine.¹⁰ According to Cycle 1 of the Canadian Health Measures Survey (CHMS), from 2007 to 2009, 91% of children aged 6 to 11 and 84% of youth aged 12 to 19 had visited a dental professional in the preceding 12 months.¹¹ A recent report from the 2022 Canadian Community Health Survey (CCHS), which collected some of its data during the COVID-19 pandemic, revealed that 79.3% of youth aged 12 to 17 years had visited a dentist in the past year. However, 8.3% had avoided going to a dental professional because of cost.¹² Socioeconomic status strongly influences oral health, with children from lower-income families lacking dental care coverage being less likely to visit the dentist.^{3,11} Variability in public dental care spending across Canadian jurisdictions also leads to unequal access. A study comparing provinces and territories found that children in areas without publicly funded dental programs visited oral health care providers less frequently.¹³

There is limited national-level oral health care data available for children under the age of 12. Representative data sources include Cycle 1 of the CHMS,¹⁴ which covers the 10 provinces but excludes the territories. Having territory-level information is an important component for Canadian estimates, yet the

territories are typically excluded from oral health surveys. Furthermore, though there are recommendations in place for when a child should first visit a dentist, there is a scarcity of information on this younger age group. According to the Canadian Dental Association, the first visit to the dentist should take place by 1 year of age or within six months of the eruption of the first tooth.¹⁵ While early first dental visits may be protective against early childhood caries, they can also reduce the need for future restorative appointments and visits to the emergency room, while also decreasing associated costs.¹⁶ Unfortunately, early first dental visits are uncommon. A study found that less than 1% of healthy urban Canadian children visited the dentist by age 1, and about 2% of children visited the dentist by age 2.¹⁰

This study aimed to estimate the prevalence of visiting a dental professional in the past year, as well as cost-related avoidance of oral health care in Canadian children and youth aged 1 to 17 years. Additionally, it sought to examine the association of dental insurance and other socioeconomic factors with the use of oral health care services. These estimates are intended to contribute to a benchmark for the use of oral health care services among children before implementing the CDCP.

Data and methods

The 2019 Canadian Health Survey on Children and Youth (CHSCY) was designed to collect information on issues that impact the physical and mental health of children and youth in Canada. The target population was Canadians aged 1 to 17 years (as of January 31, 2019) living in the 10 provinces and the 3 territories. Excluded from the population were children and youth living on First Nations reserves and in other Indigenous settlements in the provinces, children and youth living in foster homes, and the institutionalized population. Approximately 98% of the Canadian children and youth are represented in the provinces and 96% in the territories.¹⁷ Additional details on the CHSCY can be found in the survey documentation.¹⁷

Data collection for the 2019 CHSCY took place between February 11 and August 2, 2019. Two questionnaires were used for the survey: one was administered to the person most knowledgeable (PMK) about the selected child or youth aged 1 to 17 years, most often a parent, and a second questionnaire was administered directly to the selected youth aged 12 to 17 years. Information related to dental visits and insurance was reported by the PMK. Data were collected either with a self-completed electronic questionnaire or with an interviewer over the telephone. Verbal consent was required from the parent or guardian before an interview could be conducted with a 12- to 14-year-old youth, but verbal consent was not required by a parent or guardian for youth aged 15 to 17 years.

AFNI was obtained by linking the PMK to tax data (2018 T1 Family File) where possible (98.9%). AFNI was computed based on summing the following tax variables: net family income minus the Canada Child Benefit minus the amount of

Registered Disability Savings Plan plus the Canada Child Benefit repaid.

Of the 91,796 households selected for the 2019 CHSCY, the final sample consisted of 47,871 Canadian children and youth, for a final response rate of 52.1%.¹⁷ For this study, records with missing AFNI information were excluded (n=524), resulting in a final analytical sample size of 47,347.

Definitions

Dental care use

To collect information on dental care use, the PMK of the selected child or youth was asked whether the child or youth had ever been to see a dental professional, such as a dentist or dental hygienist, in their lifetime and, if so, whether they had visited a dental professional in the past 12 months for preventive health care, such as a check-up or cleaning. Respondents were also asked whether, in the past 12 months, the child or youth had been unable to go see a dental professional because of the cost and whether any of their dental expenses were covered by any insurance plan or government program.

Demographic characteristics

Gender was reported by the PMK and categorized as male, female, or gender diverse; however, given the small number of gender-diverse children and youth, this category was not examined specifically. Age group was categorized as 1 to 4 years, 5 to 11 years, and 12 to 17 years, based on the data distribution that showed that a large percentage of children under the age of 5 have never been to an oral health care provider, which is in line with other Canadian literature.^{10,18} Indigenous identity was defined based on “yes” responses to the question asking whether the selected person was First Nations, Métis, or Inuk (Inuit), and Indigenous people were compared with those who responded “no.” Respondents who identified as non-Indigenous were asked which population group they belonged to, including South Asian, Chinese, Black, Filipino, Arab, Latin American, Southeast Asian, West Asian, and other (Korean, Japanese, group not defined elsewhere, and multiple population groups), and examined as a dichotomy of non-racialized (Non-Indigenous, White) versus racialized (Non-Indigenous, other) population groups. Immigrant status was defined as non-immigrant or immigrant (including non-permanent residents).

Socioeconomic characteristics

Two income variables were used in this analysis, both based on the AFNI. AFNI quintiles were based on the AFNI distribution of all respondents: the lowest quintile comprised families with AFNI less than \$39,481, quintile 2 was for AFNI of \$39,481 to less than \$73,295, quintile 3 was for AFNI of \$73,295 to less than \$105,787, quintile 4 was for AFNI of \$105,787 to less than \$149,704, and the highest quintile was for AFNI of \$149,704 or more. AFNI cut-offs were broken into three categories to align

with the CDCP's policy framework: less than \$70,000, \$70,000 to under \$90,000, and \$90,000 or more. Rurality status was defined based on whether the respondent lived in a population centre or a rural area. Province or territory was based on the respondents' province or territory of residence; the three territories were combined because of small sample sizes.

Analysis

Descriptive statistics were used to estimate the prevalence of Canadian children and youth who have never visited a dentist and those who have visited a dentist for preventive health care in the past year, by important covariates such as dental insurance and AFNI. Independent t-tests were conducted to test for statistically significant differences between estimates. Logistic regression was conducted to assess the relationship between dental care use, dental insurance, and AFNI, first in the absence of covariates and second, while controlling for other sociodemographic factors. Models were done on the Canadian children and youth aged 5 to 17 years with complete data (i.e., no missing data for any of the dependent or independent variables; $n=31,781$); children under the age of 5 were excluded from the models because of the high percentage who had never seen an oral health care professional. Adjusted odds ratios (ORs) are reported. The significance level was set at $p < 0.05$. All estimates were weighted to represent the Canadian population. The bootstrap technique was used to estimate variance and 95% confidence intervals (CIs) to account for the complex survey design. Analyses were conducted in SAS v9.4 and SUDAAN v.11.0.3.

Results

The characteristics of the study sample ($n=47,347$) are presented in Table 1, by age group. In 2019, approximately 80% of Canadian children and youth had dental insurance and close to 50% lived in households with AFNI of \$90,000 per year or more. The proportion of Canadian children and youth who had never been to the dentist decreased by increasing age group. In contrast, cost was a barrier to a dental visit for just under 10% of Canadian children, and this rose by increasing age group.

According to the 2019 CHSCY, a large percentage of Canadian children under the age of 5 have never been to the dentist (Table 2). With the exception of 1-year-olds, a higher percentage of young Canadian children without dental insurance and in households with AFNI of less than \$70,000 per year had never been to the dentist compared with those with dental insurance and in higher-AFNI households, respectively. At age 3, half of those without dental insurance had never been to the dentist, compared with just one-quarter of those with dental insurance. Among children aged 1 to 3 years, the percentage of those who had not been to the dentist was significantly higher in Ontario when compared with Newfoundland and Labrador, Nova Scotia, British Columbia, and the territories.

Similar results were seen among older Canadian children and youth (data not shown). On average, 3% of children and youth

aged 5 to 17 years had never been to the dentist. Prevalence was higher for children and youth without dental insurance and among those with AFNI of less than \$70,000. In fact, a strong negative gradient was seen for AFNI quintiles, with the prevalence of never having been to the dentist going down with increasing AFNI quintile, from about 6% among the lowest AFNI quintile, to less than 1% in the highest AFNI quintile.

Table 3 shows that close to 90% of Canadian children and youth aged 5 to 17 years ($n=33,382$) had visited a dental professional for preventive health care within the past 12 months. A slightly higher percentage of girls and younger children (aged 5 to 11), compared with boys and older youth (aged 12 to 17), had visited a dentist in the past 12 months. A lower proportion of non-Indigenous, racialized children and youth (83.7%) and immigrant children and youth (76.9%) had visited a dentist in the past year compared with non-Indigenous, non-racialized children and youth (92.4%) and non-immigrant children and youth (91.4%), respectively. By income, 82.2% of children and youth in households with AFNI of less than \$70,000 had visited a dentist in the past year, whereas 95.0% of those in households with AFNI of \$90,000 or more had done so. A lower percentage of Canadian children and youth who had cost barriers to dental care (60.8%) had visited a dentist in the past 12 months, compared with those who did not have cost barriers to dental care (92.2%).

Table 3 also shows that a higher percentage of those with dental insurance (93.1%) had visited a dental professional in the past 12 months for preventive health care than those without dental insurance (78.5%). This difference is also observed across the sociodemographic groups analyzed. Among children and youth in lower-AFNI households (less than \$70,000), 71.3% of those without insurance had visited a dental professional in the past 12 months versus 88.5% of those with insurance. Among those in the highest AFNI cut-off (\$90,000 or more), 95.8% of insured children and youth had seen a dentist in the past 12 months compared with 89.9% of uninsured children and youth.

Cost was reported as a barrier to seeing a dental professional for a higher percentage of Canadian children and youth without dental insurance (23.3%) compared with those with dental insurance (4.5%) (Table 4), and this was evident for all subpopulations of Canadian children and youth. Less than 10% of insured Canadian children and youth in households with AFNI of less than \$70,000 faced a cost barrier to seeing a dental professional compared with 30% of uninsured children and youth in the same AFNI bracket. Cost was a barrier to seeing a dental professional even among those in the highest AFNI group (\$90,000 or more): less than 2% of the insured versus over 13% of the uninsured.

Results of the logistic regression analyses associated with having visited a dental professional in the past 12 months are shown in Table 5. Having dental insurance and having higher AFNI were strong predictors of having visited a dental professional in the past 12 months (Model 1), even after adjustment for other sociodemographic differences across the groups (Model 2). Children and youth with dental insurance had

nearly three times the odds of having visited a dental professional in the past 12 months than uninsured children and youth. Those in households with AFNI of \$70,000 to less than \$90,000 and \$90,000 or more were one-and-a-half times (OR: 1.61; 95% CI: 1.35 to 1.93) and almost three times (OR: 2.82; 95% CI: 2.44 to 3.25) more likely, respectively, to have seen a dental professional in the past 12 months than those with AFNI of less than \$70,000.

Table 6 presents the results of the logistic regression associated with barriers to having seen a dental professional in the past 12 months because of cost. As anticipated, both dental insurance and AFNI were highly associated with this dental outcome, both before (Model 1) and after (Model 2) adjustment for relevant covariates, and had very similar ORs among both models. In particular, having dental insurance and having higher AFNI were protective against experiencing cost barriers to seeing a dental professional.

Table 1
Characteristics of the study population, household population aged 1 to 17 years, Canada

| Characteristic | Ages 1 to 17 years | | | Ages 1 to 4 years | | | Ages 5 to 11 years | | | Ages 12 to 17 years | | |
|---|--------------------|-------------------------|------|-------------------|-------------------------|------|--------------------|-------------------------|------|---------------------|-------------------------|------|
| | % | 95% confidence interval | | % | 95% confidence interval | | % | 95% confidence interval | | % | 95% confidence interval | |
| | | from | to | | from | to | | from | to | | from | to |
| Outcome measures | | | | | | | | | | | | |
| Visited a dentist in past 12 months for prevention | | | | | | | | | | | | |
| Yes | 80.1 | 79.6 | 80.5 | 48.7 | 47.5 | 49.8 | 90.3 | 89.7 | 90.9 | 88.8 | 88.0 | 89.5 |
| No | 6.9 | 6.6 | 7.3 | 5.4 | 4.9 | 6.0 | 6.3 | 5.8 | 6.8 | 8.7 | 8.1 | 9.5 |
| Never been to the dentist | 13.0 | 12.7 | 13.3 | 46.0 | 44.8 | 47.1 | 3.4 | 3.1 | 3.8 | 2.5 | 2.1 | 2.9 |
| Cost preventing visit to a dentist | | | | | | | | | | | | |
| Yes | 8.0 | 7.6 | 8.3 | 6.9 | 6.4 | 7.5 | 7.6 | 7.1 | 8.1 | 9.1 | 8.5 | 9.8 |
| No | 92.0 | 91.7 | 92.4 | 93.1 | 92.5 | 93.6 | 92.4 | 91.9 | 92.9 | 90.9 | 90.2 | 91.5 |
| Predictors | | | | | | | | | | | | |
| Dental insurance | | | | | | | | | | | | |
| Yes | 81.9 | 81.4 | 82.4 | 83.5 | 82.6 | 84.3 | 83.9 | 83.1 | 84.6 | 78.5 | 77.5 | 79.5 |
| No | 18.1 | 17.6 | 18.6 | 16.5 | 15.7 | 17.4 | 16.1 | 15.4 | 16.9 | 21.5 | 20.5 | 22.5 |
| Adjusted family net income (cut-off) | | | | | | | | | | | | |
| Less than \$70,000 | 38.1 | 37.4 | 38.7 | 41.7 | 40.6 | 42.9 | 39.1 | 38.1 | 40.1 | 34.4 | 33.3 | 35.4 |
| \$70,000 to less than \$90,000 | 12.7 | 12.3 | 13.1 | 14.4 | 13.6 | 15.2 | 12.4 | 11.8 | 13.1 | 11.9 | 11.1 | 12.7 |
| \$90,000 or more | 49.3 | 48.6 | 49.9 | 43.9 | 42.8 | 45.0 | 48.4 | 47.4 | 49.5 | 53.8 | 52.6 | 54.9 |
| Adjusted family net income (quintiles) | | | | | | | | | | | | |
| Quintile 1 (lowest) | 20.0 | 19.5 | 20.5 | 21.8 | 20.8 | 22.8 | 21.2 | 20.4 | 22.1 | 17.3 | 16.5 | 18.3 |
| Quintile 2 | 20.0 | 19.5 | 20.5 | 22.2 | 21.3 | 23.2 | 19.9 | 19.1 | 20.7 | 18.7 | 17.8 | 19.6 |
| Quintile 3 | 20.0 | 19.5 | 20.5 | 22.6 | 21.7 | 23.6 | 19.5 | 18.7 | 20.3 | 18.9 | 18.0 | 19.8 |
| Quintile 4 | 20.0 | 19.5 | 20.5 | 19.5 | 18.6 | 20.4 | 19.7 | 18.9 | 20.5 | 20.7 | 19.8 | 21.6 |
| Quintile 5 (highest) | 20.0 | 19.5 | 20.5 | 13.9 | 13.2 | 14.7 | 19.7 | 18.9 | 20.4 | 24.4 | 23.5 | 25.4 |
| Gender | | | | | | | | | | | | |
| Boys | 51.3 | 51.2 | 51.4 | 51.3 | 51.1 | 51.5 | 51.2 | 51.0 | 51.4 | 51.4 | 51.3 | 51.5 |
| Girls | 48.7 | 48.6 | 48.8 | 48.7 | 48.5 | 48.9 | 48.8 | 48.6 | 49.0 | 48.6 | 48.5 | 48.7 |
| Indigenous identity | | | | | | | | | | | | |
| Indigenous | 5.0 | 4.7 | 5.3 | 5.1 | 4.6 | 5.6 | 5.2 | 4.7 | 5.6 | 4.8 | 4.3 | 5.2 |
| Non-Indigenous | 95.0 | 94.7 | 95.3 | 94.9 | 94.4 | 95.4 | 94.8 | 94.4 | 95.3 | 95.2 | 94.8 | 95.7 |
| Population group | | | | | | | | | | | | |
| Non-Indigenous, non-racialized | 68.7 | 68.2 | 69.3 | 69.2 | 68.2 | 70.3 | 69.5 | 68.6 | 70.4 | 67.5 | 66.4 | 68.5 |
| Non-Indigenous, racialized | 31.3 | 30.7 | 31.8 | 30.8 | 29.7 | 31.8 | 30.5 | 29.6 | 31.4 | 32.5 | 31.5 | 33.6 |
| Immigrant status | | | | | | | | | | | | |
| Non-immigrant | 90.1 | 89.7 | 90.4 | 97.5 | 97.2 | 97.9 | 91.0 | 90.4 | 91.5 | 84.1 | 83.2 | 84.9 |
| Immigrant or non-permanent resident | 9.9 | 9.6 | 10.3 | 2.5 | 2.1 | 2.8 | 9.0 | 8.5 | 9.6 | 15.9 | 15.1 | 16.8 |
| Rurality status | | | | | | | | | | | | |
| Population centre | 82.1 | 81.6 | 82.5 | 81.8 | 80.9 | 82.7 | 82.3 | 81.5 | 83.0 | 82.0 | 81.1 | 82.8 |
| Rural | 17.9 | 17.5 | 18.4 | 18.2 | 17.3 | 19.1 | 17.7 | 17.0 | 18.5 | 18.0 | 17.2 | 18.9 |
| Province or territory | | | | | | | | | | | | |
| Newfoundland and Labrador | 1.3 | 1.3 | 1.3 | 1.1 | 1.1 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.4 |
| Prince Edward Island | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 |
| Nova Scotia | 2.3 | 2.3 | 2.3 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.4 | 2.4 | 2.4 |
| New Brunswick | 1.9 | 1.9 | 1.9 | 1.8 | 1.7 | 1.8 | 1.9 | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 |
| Quebec | 22.2 | 22.0 | 22.3 | 22.3 | 22.1 | 22.5 | 23.0 | 22.8 | 23.2 | 21.1 | 20.9 | 21.2 |
| Ontario | 38.9 | 38.8 | 39.0 | 38.3 | 38.1 | 38.5 | 38.0 | 37.8 | 38.2 | 40.3 | 40.2 | 40.4 |
| Manitoba | 3.9 | 3.8 | 3.9 | 4.0 | 3.9 | 4.1 | 3.8 | 3.8 | 3.9 | 3.8 | 3.8 | 3.8 |
| Saskatchewan | 3.5 | 3.4 | 3.5 | 3.6 | 3.6 | 3.6 | 3.6 | 3.5 | 3.6 | 3.3 | 3.3 | 3.3 |
| Alberta | 13.3 | 13.2 | 13.4 | 14.2 | 14.0 | 14.4 | 13.5 | 13.3 | 13.6 | 12.5 | 12.4 | 12.5 |
| British Columbia | 12.0 | 11.9 | 12.1 | 11.5 | 11.4 | 11.6 | 11.8 | 11.6 | 11.9 | 12.6 | 12.5 | 12.6 |
| Territories | 0.5 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 |

Source: Statistics Canada, 2019 Canadian Health Survey on Children and Youth.

Discussion

This is the first national-level study to report on access to dental care services among Canadian children and youth since the 2007 to 2009 CHMS that reported only on children and youth

aged 6 years and over. This study is part of a broader series of reports by the Oral Health Statistics Program at Statistics Canada, with the collective aim of establishing benchmark measures to help assess the impact of the CDCP program following its implementation among the Canadian population.

Table 2
Prevalence of never having been to the dentist, by selected characteristics, household population aged 1 to 4 years, Canada

| Characteristic | Ages 1 to 4 years | | | Age 1 year | | | Age 2 years | | | Age 3 years | | | Age 4 years | | |
|---|-------------------|-------------------------|------|-------------------|-------------------------|------|---------------------|-------------------------|------|---------------------|-------------------------|------|---------------------|-------------------------|------|
| | % | 95% confidence interval | | % | 95% confidence interval | | % | 95% confidence interval | | % | 95% confidence interval | | % | 95% confidence interval | |
| | | from | to | | from | to | | from | to | | from | to | | from | to |
| Total | 45.9 | 44.7 | 47.0 | 79.8 | 77.9 | 81.6 | 56.0 | 53.7 | 58.2 | 32.0 | 29.9 | 34.1 | 16.4 | 14.7 | 18.3 |
| Cost preventing visit to a dentist | | | | | | | | | | | | | | | |
| Yes | 60.3 * | 55.9 | 64.5 | 89.7 * | 82.3 | 94.2 | 73.8 * | 65.3 | 80.8 | 63.7 * | 55.8 | 70.9 | 29.7 * | 22.4 | 38.1 |
| No [†] | 44.8 | 43.6 | 45.9 | 79.3 | 77.3 | 81.1 | 54.9 | 52.6 | 57.2 | 29.1 | 27.0 | 31.4 | 15.3 | 13.6 | 17.1 |
| Dental insurance | | | | | | | | | | | | | | | |
| Yes | 41.2 * | 40.0 | 42.5 | 77.8 | 75.5 | 79.9 | 51.8 * | 49.3 | 54.3 | 25.7 * | 23.4 | 28.1 | 13.1 * | 11.4 | 15.0 |
| No [†] | 56.1 | 53.2 | 59.0 | 82.8 | 77.7 | 86.9 | 65.0 | 59.2 | 70.4 | 51.0 | 45.3 | 56.7 | 24.4 | 19.5 | 29.9 |
| Adjusted family net income (cut-off) | | | | | | | | | | | | | | | |
| Less than \$70,000 [†] | 53.2 | 51.3 | 55.1 | 80.4 | 77.4 | 83.2 | 64.2 | 60.8 | 67.6 | 42.3 | 38.7 | 46.0 | 24.0 | 20.8 | 27.5 |
| \$70,000 to less than \$90,000 | 47.9 * | 44.9 | 50.8 | 84.0 | 79.5 | 87.6 | 54.1 * | 48.1 | 60.0 | 32.8 * | 27.4 | 38.7 | 20.3 | 15.9 | 25.5 |
| \$90,000 or more | 38.2 * | 36.6 | 39.9 | 77.6 | 74.5 | 80.4 | 49.2 * | 45.9 | 52.5 | 21.9 * | 19.2 | 24.9 | 8.5 * | 6.9 | 10.6 |
| Adjusted family net income (quintiles) | | | | | | | | | | | | | | | |
| Quintile 1 (lowest) [†] | 53.8 | 51.3 | 56.3 | 80.4 | 76.1 | 84.1 | 64.5 | 59.5 | 69.1 | 43.1 | 38.4 | 48.0 | 24.1 | 19.9 | 28.8 |
| Quintile 2 | 52.4 | 49.9 | 54.9 | 81.0 | 76.8 | 84.7 | 63.8 | 59.0 | 68.4 | 40.9 | 36.1 | 45.9 | 23.6 | 19.3 | 28.4 |
| Quintile 3 | 46.1 * | 43.6 | 48.5 | 80.8 | 76.8 | 84.2 | 53.8 * | 49.0 | 58.5 | 31.0 * | 26.6 | 35.7 | 17.2 * | 14.0 | 20.9 |
| Quintile 4 | 39.6 * | 37.2 | 42.1 | 78.0 | 73.6 | 81.9 | 52.1 * | 47.2 | 56.9 | 21.1 * | 16.9 | 26.1 | 7.0 * ^C | 5.0 | 9.6 |
| Quintile 5 (highest) | 31.4 * | 28.6 | 34.4 | 76.8 | 70.4 | 82.2 | 41.7 * | 36.2 | 47.4 | 17.7 * | 13.7 | 22.5 | 7.3 * ^C | 4.6 | 11.4 |
| Gender | | | | | | | | | | | | | | | |
| Boys [†] | 46.5 | 44.9 | 48.1 | 78.1 | 75.3 | 80.7 | 56.7 | 53.6 | 59.8 | 32.5 | 29.7 | 35.5 | 17.9 | 15.4 | 20.7 |
| Girls | 45.2 | 43.6 | 46.8 | 81.7 | 79.1 | 84.2 | 55.2 | 52.0 | 58.4 | 31.4 | 28.4 | 34.6 | 14.9 | 12.8 | 17.4 |
| Indigenous identity | | | | | | | | | | | | | | | |
| Indigenous | 35.6 * | 30.9 | 40.6 | 66.1 * | 55.5 | 75.3 | 44.9 * | 34.8 | 55.5 | 20.4 * ^C | 13.7 | 29.1 | 11.6 ^D | 6.6 | 19.5 |
| Non-Indigenous [†] | 46.4 | 45.2 | 47.6 | 80.7 | 78.8 | 82.4 | 56.5 | 54.2 | 58.8 | 32.7 | 30.5 | 34.9 | 16.6 | 14.9 | 18.6 |
| Population group | | | | | | | | | | | | | | | |
| Non-Indigenous, non-racialized [†] | 43.9 | 42.5 | 45.4 | 81.2 | 78.9 | 83.3 | 55.3 | 52.4 | 58.2 | 28.7 | 26.2 | 31.4 | 11.9 | 10.1 | 14.0 |
| Non-Indigenous, racialized | 51.9 * | 49.9 | 54.0 | 79.1 | 75.6 | 82.1 | 59.2 | 55.2 | 63.1 | 41.6 * | 37.4 | 46.0 | 27.8 * | 24.1 | 31.9 |
| Immigrant status | | | | | | | | | | | | | | | |
| Non-immigrant [†] | 45.7 | 44.6 | 46.9 | 80.0 | 78.1 | 81.8 | 55.9 | 53.6 | 58.1 | 31.2 | 29.1 | 33.4 | 15.3 | 13.6 | 17.1 |
| Immigrant or non-permanent resident | 50.5 | 43.7 | 57.2 | 79.2 ^C | 46.1 | 94.4 | 59.9 | 42.3 | 75.3 | 54.5 * | 42.5 | 65.9 | 40.8 * | 30.5 | 52.0 |
| Rurality status | | | | | | | | | | | | | | | |
| Population centre [†] | 45.9 | 44.6 | 47.2 | 79.3 | 77.1 | 81.3 | 56.4 | 53.9 | 58.8 | 32.2 | 29.8 | 34.6 | 17.0 | 15.1 | 19.1 |
| Rural | 45.8 | 43.1 | 48.5 | 82.2 | 78.2 | 85.7 | 54.3 | 48.9 | 59.6 | 31.2 | 26.5 | 36.3 | 13.9 | 10.9 | 17.7 |
| Province or territory | | | | | | | | | | | | | | | |
| Newfoundland and Labrador | 34.8 * | 29.7 | 40.3 | 61.8 * | 49.5 | 72.7 | 44.3 * | 34.3 | 54.7 | 23.5 * ^C | 15.3 | 34.2 | F | ... | ... |
| Prince Edward Island | 43.8 | 39.2 | 48.4 | 76.6 | 67.9 | 83.5 | 40.8 * | 32.8 | 49.3 | 27.9 | 20.6 | 36.7 | 21.6 ^C | 13.6 | 32.5 |
| Nova Scotia | 31.9 * | 27.3 | 36.9 | 62.9 * | 53.2 | 71.7 | 42.3 * | 32.4 | 52.9 | 8.9 * ^D | 4.7 | 16.2 | 12.3 ^D | 6.6 | 21.9 |
| New Brunswick | 57.6 * | 52.5 | 62.4 | 87.4 | 78.7 | 92.8 | 69.1 | 58.5 | 78.1 | 47.6 * | 38.2 | 57.2 | 30.0 * | 21.8 | 39.8 |
| Quebec | 52.2 * | 49.0 | 55.3 | 90.0 * | 85.4 | 93.3 | 66.3 | 59.7 | 72.3 | 34.2 | 28.5 | 40.5 | 18.9 | 14.4 | 24.4 |
| Ontario [†] | 47.4 | 45.9 | 49.0 | 81.6 | 79.0 | 84.0 | 59.8 | 56.7 | 62.7 | 34.6 | 31.7 | 37.7 | 14.8 | 12.7 | 17.2 |
| Manitoba | 47.6 | 42.2 | 53.0 | 80.8 | 70.6 | 88.1 | 47.4 * | 36.9 | 58.1 | 36.3 | 26.8 | 47.1 | 25.4 * ^C | 17.4 | 35.5 |
| Saskatchewan | 44.7 | 39.8 | 49.8 | 74.0 | 64.1 | 81.9 | 61.9 | 52.1 | 70.8 | 30.4 ^C | 21.8 | 40.6 | 14.7 ^C | 9.0 | 23.2 |
| Alberta | 44.2 | 40.9 | 47.5 | 78.1 | 72.1 | 83.1 | 45.4 * | 39.3 | 51.7 | 32.3 | 26.1 | 39.1 | 21.0 * | 16.0 | 27.1 |
| British Columbia | 33.0 * | 29.9 | 36.4 | 62.4 * | 55.4 | 68.9 | 42.0 * | 35.2 | 49.1 | 21.5 * | 16.3 | 27.9 | 8.6 * ^C | 5.6 | 13.2 |
| Territories | 30.6 * | 25.7 | 36.0 | 55.3 * | 43.6 | 66.4 | 33.3 * ^C | 23.5 | 44.7 | 15.7 * ^C | 9.5 | 24.6 | F | ... | ... |

... not applicable

[†] reference category

* significantly different from reference category (p < 0.05)

^C use with caution; high sampling variability (coefficient of variation = 15% to ≤ 25%)

^D use with caution; high sampling variability (coefficient of variation = 25% to ≤ 35%)

F too unreliable to be published

Source: Statistics Canada, 2019 Canadian Health Survey on Children and Youth.

This study is jointly published with a parallel study focused on Canadian adults using data from the 2022 CCHS.¹⁹ A forthcoming study in this program will focus on Canadian seniors using data from the 2019/2020 Canadian Health Survey on Seniors.

Table 3
Prevalence of having visited a dental professional for preventive health care in the past 12 months, by dental insurance status, household population aged 5 to 17 years,¹ Canada

| Characteristic | All Canadians | | | With dental insurance | | | Without dental insurance | | |
|---|---------------|-------------------------|------|-----------------------|-------------------------|--------|--------------------------|-------------------------|------|
| | % | 95% confidence interval | | % | 95% confidence interval | | % | 95% confidence interval | |
| | | from | to | | from | to | | from | to |
| Total | 89.6 | 89.1 | 90.0 | 93.1 | 92.7 | 93.6 ‡ | 78.5 | 77.0 | 79.9 |
| Cost preventing visit to a dentist | | | | | | | | | |
| Yes | 60.8 * | 58.2 | 63.4 | 71.7 * | 67.8 | 75.4 ‡ | 54.4 * | 50.7 | 58.0 |
| No† | 92.2 | 91.7 | 92.6 | 94.1 | 93.7 | 94.6 ‡ | 85.7 | 84.2 | 87.1 |
| Adjusted family net income (cut-off) | | | | | | | | | |
| Less than \$70,000† | 82.2 | 81.2 | 83.2 | 88.5 | 87.4 | 89.5 ‡ | 71.3 | 69.0 | 73.5 |
| \$70,000 to less than \$90,000 | 89.6 * | 88.2 | 90.9 | 93.2 * | 91.9 | 94.3 ‡ | 78.2 * | 73.8 | 82.0 |
| \$90,000 or more | 95.0 * | 94.4 | 95.4 | 95.8 * | 95.3 | 96.3 ‡ | 89.9 * | 87.8 | 91.7 |
| Adjusted family net income (quintiles) | | | | | | | | | |
| Quintile 1 (lowest)† | 80.9 | 79.3 | 82.3 | 88.5 | 87.1 | 89.9 ‡ | 68.8 | 65.6 | 71.9 |
| Quintile 2 | 84.1 * | 82.7 | 85.3 | 88.8 | 87.3 | 90.1 ‡ | 74.3 * | 71.1 | 77.3 |
| Quintile 3 | 91.0 * | 90.0 | 92.0 | 93.6 * | 92.6 | 94.4 ‡ | 82.9 * | 79.6 | 85.7 |
| Quintile 4 | 94.3 * | 93.4 | 95.1 | 95.1 * | 94.1 | 95.9 ‡ | 88.8 * | 85.3 | 91.6 |
| Quintile 5 (highest) | 96.7 * | 96.0 | 97.2 | 97.3 * | 96.7 | 97.8 ‡ | 92.4 * | 89.2 | 94.8 |
| Gender | | | | | | | | | |
| Boys† | 88.8 | 88.1 | 89.5 | 92.6 | 92.0 | 93.3 ‡ | 77.0 | 74.8 | 79.1 |
| Girls | 90.4 * | 89.7 | 91.0 | 93.6 * | 93.0 | 94.2 ‡ | 80.0 * | 77.9 | 82.0 |
| Age group | | | | | | | | | |
| 5 to 11 years | 90.3 * | 89.7 | 90.9 | 93.2 | 92.6 | 93.8 ‡ | 79.2 | 77.1 | 81.1 |
| 12 to 17 years† | 88.8 | 88.0 | 89.5 | 93.1 | 92.4 | 93.7 ‡ | 77.8 | 75.5 | 79.9 |
| Indigenous identity | | | | | | | | | |
| Indigenous | 88.5 | 86.3 | 90.4 | 91.1 * | 88.8 | 92.9 ‡ | 77.2 | 69.0 | 83.8 |
| Not Indigenous† | 89.6 | 89.2 | 90.1 | 93.2 | 92.8 | 93.7 ‡ | 78.5 | 77.0 | 80.0 |
| Population group | | | | | | | | | |
| Non-Indigenous, non-racialized† | 92.4 | 91.9 | 92.9 | 94.6 | 94.1 | 95.1 ‡ | 84.1 | 82.2 | 85.8 |
| Non-Indigenous, racialized | 83.7 * | 82.6 | 84.6 | 90.0 * | 89.0 | 90.9 ‡ | 69.2 * | 66.3 | 72.0 |
| Immigrant status | | | | | | | | | |
| Non-immigrant† | 91.4 | 90.9 | 91.8 | 94.0 | 93.6 | 94.5 ‡ | 81.6 | 79.9 | 83.1 |
| Immigrant or non-permanent resident | 76.9 * | 75.0 | 78.7 | 85.1 * | 83.1 | 87.0 ‡ | 64.6 * | 60.3 | 68.6 |
| Rurality status | | | | | | | | | |
| Population centre† | 89.4 | 88.9 | 89.9 | 93.1 | 92.5 | 93.6 ‡ | 77.7 | 76.1 | 79.3 |
| Rural | 90.4 | 89.2 | 91.4 | 93.5 | 92.4 | 94.4 ‡ | 81.1 | 77.7 | 84.1 |
| Province or territory | | | | | | | | | |
| Newfoundland and Labrador | 91.1 | 88.7 | 93.0 | 93.8 | 91.5 | 95.5 ‡ | 79.1 | 68.8 | 86.7 |
| Prince Edward Island | 92.3 | 90.3 | 93.9 | 94.8 | 92.8 | 96.3 ‡ | 80.3 | 71.0 | 87.2 |
| Nova Scotia | 92.4 | 90.1 | 94.3 | 94.0 | 91.8 | 95.7 ‡ | 80.8 | 68.8 | 88.9 |
| New Brunswick | 88.9 | 86.4 | 91.1 | 92.2 | 89.8 | 94.1 ‡ | 72.7 | 63.6 | 80.2 |
| Quebec | 90.2 | 88.7 | 91.5 | 93.2 | 91.7 | 94.5 ‡ | 85.3 * | 81.6 | 88.4 |
| Ontario† | 90.5 | 89.9 | 91.1 | 94.2 | 93.6 | 94.7 ‡ | 78.2 | 76.2 | 80.0 |
| Manitoba | 83.7 * | 80.7 | 86.3 | 88.8 * | 85.9 | 91.2 ‡ | 65.7 * | 57.3 | 73.2 |
| Saskatchewan | 86.3 * | 83.8 | 88.5 | 89.6 * | 87.0 | 91.8 ‡ | 71.5 | 62.9 | 78.7 |
| Alberta | 86.5 * | 84.8 | 88.0 | 90.5 * | 88.9 | 92.0 ‡ | 69.0 * | 63.5 | 74.1 |
| British Columbia | 91.2 | 89.8 | 92.4 | 94.9 | 93.7 | 95.9 ‡ | 78.8 | 74.0 | 83.0 |
| Territories | 83.4 * | 80.3 | 86.0 | 87.4 * | 84.3 | 89.9 ‡ | 62.4 * | 50.3 | 73.2 |

† reference category

* significantly different from reference category (p < 0.05)

‡ significantly different from uninsured category (p < 0.05)

1. Children aged 1 to 4 years are excluded because of the high percentage who have never been to the dentist.

Source: Statistics Canada, 2019 Canadian Health Survey on Children and Youth.

This study showed that dental insurance was a significant facilitator to visiting a dental professional, regardless of income. Canadian children and youth with dental insurance visited a dentist earlier in their lifetime and were more likely to have seen a dental professional in the previous 12 months than uninsured

children and youth. These findings support prior research from earlier national-level Canadian surveys, as well as studies in the United States.^{11,20}

Table 4
Prevalence of being unable to see a dental professional because of the cost, overall and by dental insurance status, household population aged 5 to 17 years,¹ Canada

| Characteristic | All Canadians | | | With dental insurance | | | Without dental insurance | | |
|---|--------------------|-------------------------|------|-----------------------|-------------------------|--------|--------------------------|-------------------------|------|
| | % | 95% confidence interval | | % | 95% confidence interval | | % | 95% confidence interval | |
| | | from | to | | from | to | | from | to |
| Total | 8.3 | 7.9 | 8.7 | 4.5 | 4.1 | 4.8 ‡ | 23.3 | 21.8 | 24.9 |
| Adjusted family net income (cut-offs) | | | | | | | | | |
| Less than \$70,000 [†] | 15.1 | 14.2 | 16.0 | 8.7 | 7.9 | 9.6 ‡ | 30.0 | 27.8 | 32.2 |
| \$70,000 to less than \$90,000 | 8.4 * | 7.3 | 9.7 | 4.9 * | 4.0 | 6.0 ‡ | 22.0 * | 18.0 | 26.6 |
| \$90,000 or more | 3.4 * | 3.0 | 3.8 | 1.9 * | 1.6 | 2.2 ‡ | 13.4 * | 11.2 | 15.9 |
| Adjusted family net income (quintiles) | | | | | | | | | |
| Quintile 1 (lowest) [†] | 16.9 | 15.6 | 18.3 | 9.9 | 8.6 | 11.4 ‡ | 32.0 | 29.1 | 35.1 |
| Quintile 2 | 12.7 * | 11.6 | 13.8 | 7.4 * | 6.5 | 8.5 ‡ | 26.7 * | 23.6 | 29.9 |
| Quintile 3 | 7.3 * | 6.4 | 8.2 | 3.8 * | 3.2 | 4.5 ‡ | 21.8 * | 18.2 | 25.8 |
| Quintile 4 | 4.1 * | 3.4 | 4.8 | 2.6 * | 2.1 | 3.3 ‡ | 14.2 * | 11.1 | 18.1 |
| Quintile 5 (highest) | 1.5 * | 1.2 | 2.0 | 0.8 * ^C | 0.6 | 1.2 ‡ | 7.6 * ^C | 5.2 | 11.0 |
| Gender | | | | | | | | | |
| Boys [†] | 8.5 | 7.9 | 9.1 | 4.8 | 4.3 | 5.3 ‡ | 22.6 | 20.6 | 24.8 |
| Girls | 8.1 | 7.5 | 8.7 | 4.1 | 3.7 | 4.6 ‡ | 24.1 | 21.9 | 26.4 |
| Age group | | | | | | | | | |
| 5 to 11 years | 7.6 * | 7.1 | 8.1 | 4.3 | 3.9 | 4.8 ‡ | 23.0 | 21.0 | 25.1 |
| 12 to 17 years [†] | 9.1 | 8.5 | 9.8 | 4.6 | 4.1 | 5.2 ‡ | 23.6 | 21.5 | 25.9 |
| Indigenous identity | | | | | | | | | |
| Indigenous | 10.7 * | 8.7 | 13.0 | 6.3 ^C | 4.6 | 8.6 ‡ | 36.9 * | 28.5 | 46.3 |
| Not Indigenous [†] | 8.2 | 7.8 | 8.6 | 4.4 | 4.0 | 4.7 ‡ | 22.9 | 21.3 | 24.5 |
| Population group | | | | | | | | | |
| Non-Indigenous, non-racialized [†] | 7.0 | 6.5 | 7.5 | 3.9 | 3.5 | 4.3 ‡ | 20.9 | 19.1 | 23.0 |
| Non-Indigenous, racialized | 10.6 * | 9.8 | 11.4 | 5.6 * | 4.9 | 6.3 ‡ | 25.8 * | 23.4 | 28.4 |
| Immigrant status | | | | | | | | | |
| Non-immigrant [†] | 7.6 | 7.2 | 8.1 | 4.2 | 3.8 | 4.6 ‡ | 22.7 | 21.0 | 24.4 |
| Immigrant or non-permanent resident | 13.4 * | 12.1 | 14.8 | 7.3 * | 6.2 | 8.6 ‡ | 26.5 | 22.8 | 30.4 |
| Rurality status | | | | | | | | | |
| Population centre [†] | 8.2 | 7.8 | 8.7 | 4.4 | 4.1 | 4.8 ‡ | 23.5 | 21.8 | 25.3 |
| Rural | 8.7 | 7.8 | 9.8 | 4.6 | 3.9 | 5.6 ‡ | 22.7 | 19.7 | 26.1 |
| Province or territory | | | | | | | | | |
| Newfoundland and Labrador | 6.1 * | 4.6 | 8.1 | 3.4 ^C | 2.2 | 5.2 ‡ | 19.8 ^C | 12.3 | 30.3 |
| Prince Edward Island | 6.7 | 5.2 | 8.5 | 4.2 ^C | 3.0 | 5.9 ‡ | 23.4 ^C | 16.0 | 32.9 |
| Nova Scotia | 5.6 * ^C | 4.1 | 7.5 | 2.7 ^C | 1.7 | 4.3 ‡ | 31.1 ^C | 21.5 | 42.7 |
| New Brunswick | 7.1 | 5.4 | 9.2 | 3.4 ^C | 2.1 | 5.3 ‡ | 28.1 ^C | 20.3 | 37.5 |
| Quebec | 6.3 * | 5.3 | 7.4 | 3.4 | 2.6 | 4.5 ‡ | 14.8 * | 11.9 | 18.4 |
| Ontario [†] | 8.3 | 7.7 | 8.8 | 3.8 | 3.5 | 4.3 ‡ | 26.2 | 24.1 | 28.4 |
| Manitoba | 10.2 | 8.1 | 12.6 | 5.5 ^C | 3.9 | 7.8 ‡ | 27.5 | 20.6 | 35.7 |
| Saskatchewan | 9.0 | 7.2 | 11.1 | 4.9 ^C | 3.5 | 6.8 ‡ | 31.3 | 23.7 | 40.1 |
| Alberta | 11.7 * | 10.3 | 13.3 | 7.5 * | 6.2 | 8.9 ‡ | 32.0 * | 26.9 | 37.5 |
| British Columbia | 8.7 | 7.5 | 10.1 | 5.3 * | 4.2 | 6.5 ‡ | 21.9 | 17.5 | 27.1 |
| Territories | 6.1 * | 4.6 | 8.1 | 4.4 ^C | 2.9 | 6.5 ‡ | 22.4 ^C | 14.6 | 32.7 |

[†] reference category

* significantly different from reference category (p < 0.05)

‡ significantly different from uninsured category (p < 0.05)

^C use with caution; high sampling variability (coefficient of variation = 15% to ≤ 25%)

1. Children aged 1 to 4 years are excluded because of the high percentage who have never been to the dentist.

Source: Statistics Canada, 2019 Canadian Health Survey on Children and Youth.

Table 5
Multivariable logistic regression analysis for having visited a dental professional in the past 12 months, household population aged 5 to 17 years,¹ Canada

| | Model 1 | | | Model 2 | | |
|--|---------------------|-------------------------|------|---------------------|-------------------------|------|
| | Adjusted odds ratio | 95% confidence interval | | Adjusted odds ratio | 95% confidence interval | |
| | | from | to | | from | to |
| Dental insurance | | | | | | |
| Yes | 2.99 * | 2.66 | 3.37 | 2.94 * | 2.60 | 3.33 |
| No [†] | 1.00 | ... | ... | 1.00 | ... | ... |
| Adjusted family net income (cut-offs) | | | | | | |
| Less than \$70,000 [†] | 1.00 | ... | ... | 1.00 | ... | ... |
| \$70,000 to less than \$90,000 | 1.63 * | 1.38 | 1.94 | 1.61 * | 1.35 | 1.93 |
| \$90,000 or more | 3.14 * | 2.74 | 3.59 | 2.82 * | 2.44 | 3.25 |
| Gender | | | | | | |
| Boys [†] | ... | ... | ... | 1.00 | ... | ... |
| Girls | ... | ... | ... | 1.22 * | 1.09 | 1.37 |
| Age group | | | | | | |
| 5 to 11 years | ... | ... | ... | 1.05 | 0.93 | 1.18 |
| 12 to 17 years [†] | ... | ... | ... | 1.00 | ... | ... |
| Population group | | | | | | |
| Indigenous | ... | ... | ... | 0.86 | 0.66 | 1.11 |
| Non-Indigenous, racialized | ... | ... | ... | 0.65 * | 0.56 | 0.75 |
| Non-Indigenous, non-racialized [†] | ... | ... | ... | 1.00 | ... | ... |
| Immigrant status | | | | | | |
| Non-immigrant [†] | ... | ... | ... | 1.00 | ... | ... |
| Immigrant or non-permanent resident | ... | ... | ... | 0.59 * | 0.50 | 0.69 |
| Province or territory | | | | | | |
| Newfoundland and Labrador | ... | ... | ... | 0.69 * | 0.51 | 0.94 |
| Prince Edward Island | ... | ... | ... | 1.01 | 0.74 | 1.36 |
| Nova Scotia | ... | ... | ... | 0.89 | 0.64 | 1.25 |
| New Brunswick | ... | ... | ... | 0.61 * | 0.46 | 0.80 |
| Quebec | ... | ... | ... | 0.94 | 0.77 | 1.14 |
| Ontario [†] | ... | ... | ... | 1.00 | ... | ... |
| Manitoba | ... | ... | ... | 0.53 * | 0.41 | 0.67 |
| Saskatchewan | ... | ... | ... | 0.52 * | 0.41 | 0.66 |
| Alberta | ... | ... | ... | 0.53 * | 0.45 | 0.63 |
| British Columbia | ... | ... | ... | 1.06 | 0.87 | 1.30 |
| Territories | ... | ... | ... | 0.35 * | 0.26 | 0.48 |

... not applicable

[†] reference category

* significantly different from reference category (p < 0.05)

1. Children aged 1 to 4 years are excluded because of the high percentage who have never been to the dentist.

Note: Model 1 included dental insurance and adjusted family net income (AFNI) cut-offs only. Model 2 included dental insurance, AFNI cut-offs, gender, age group, population group, immigrant status, and province.

Source: Statistics Canada, 2019 Canadian Health Survey on Children and Youth.

Even though many public dental programs are targeted for children in Canada, there is considerable variation in publicly funded programs across jurisdictions, creating nationwide inconsistencies.⁶ A recent environmental scan⁶ revealed that regions such as Newfoundland and Labrador, Nova Scotia, and the territories, where publicly funded programs are not restricted to those in financial need, show higher rates of dental visits for children aged 1 to 3 compared with Ontario, as observed in this study. This program variability extends to school-age children, with certain provinces and territories conducting prevention initiatives by oral health care professionals in schools rather than clinics. This variability in program delivery, especially in regions such as Yukon and the

Northwest Territories, where dental services are integrated into school settings, might lead to a misunderstanding among parents or caregivers about what constitutes a dental visit. Consequently, this could result in an underestimation of reported dental visits when parents or caregivers are asked to recall their children’s dental history over the past 12 months.

While dental insurance is a major factor in dental care use, it does not fully address access. Consistent with other research, the findings of this study showed that income is also highly relevant to accessing dental care. For almost all oral health care outcomes studied, there was an income gradient by AFNI quintile, such that as AFNI increased, the prevalence of having

visited a dental professional also increased and that of reporting a cost barrier to dental care decreased. The same was found in the analysis by AFNI cut-off (less than \$70,000, \$70,000 to less than \$90,000, \$90,000 or more). This study shows that income (AFNI) and dental insurance together are strong predictors of dental care use among children and youth.

However, this study indicates that despite having dental insurance and belonging to high-AFNI families, some Canadian children and youth still avoid visiting an oral health care professional. This points to additional barriers that may influence oral health-related behaviours. Therefore, it is clear that affordability is just one component of accessing dental care.

The other key elements include availability, accessibility, accommodation, and acceptability.²¹ Availability means having enough oral health care providers available. Accessibility involves the ease of reaching an oral health care location. Accommodation pertains to the oral health care provider’s capability to cater to the client’s requirements, including convenient operating hours and effective communication. Acceptability is about the mutual comfort level between the client and the provider, influenced by factors such as age, gender, social status, and cultural differences.²²

This study, along with two new surveys from Statistics Canada—the Canadian Oral Health Survey (COHS)²³ and

Table 6
Multivariable logistic regression analysis for being unable to see a dental professional in the past 12 months because of the cost, household population aged 5 to 17 years,¹ Canada

| | Model 1 | | | Model 2 | | |
|--|---------------------|-------------------------|------|---------------------|-------------------------|------|
| | Adjusted odds ratio | 95% confidence interval | | Adjusted odds ratio | 95% confidence interval | |
| | | from | to | | from | to |
| Dental insurance | | | | | | |
| Yes | 0.19 * | 0.17 | 0.22 | 0.19 * | 0.16 | 0.21 |
| No [†] | 1.00 | ... | ... | 1.00 | ... | ... |
| Adjusted family net income (cut-offs) | | | | | | |
| Less than \$70,000 [†] | 1.00 | ... | ... | 1.00 | ... | ... |
| \$70,000 to less than \$90,000 | 0.60 * | 0.50 | 0.72 | 0.59 * | 0.49 | 0.72 |
| \$90,000 or more | 0.26 * | 0.23 | 0.31 | 0.26 * | 0.22 | 0.30 |
| Gender | | | | | | |
| Boys [†] | ... | ... | ... | 1.00 | ... | ... |
| Girls | ... | ... | ... | 0.95 | 0.84 | 1.08 |
| Age group | | | | | | |
| 5 to 11 years | ... | ... | ... | 0.88 * | 0.78 | 0.99 |
| 12 to 17 years [†] | ... | ... | ... | 1.00 | ... | ... |
| Population group | | | | | | |
| Indigenous | ... | ... | ... | 1.22 | 0.92 | 1.60 |
| Non-Indigenous, racialized | ... | ... | ... | 0.98 | 0.85 | 1.14 |
| Non-Indigenous, non-racialized [†] | ... | ... | ... | 1.00 | ... | ... |
| Immigrant status | | | | | | |
| Non-immigrant [†] | ... | ... | ... | 1.00 | ... | ... |
| Immigrant or non-permanent resident | ... | ... | ... | 1.08 | 0.90 | 1.30 |
| Province or territory | | | | | | |
| Newfoundland and Labrador | ... | ... | ... | 0.88 | 0.61 | 1.27 |
| Prince Edward Island | ... | ... | ... | 0.88 | 0.65 | 1.20 |
| Nova Scotia | ... | ... | ... | 0.79 | 0.56 | 1.11 |
| New Brunswick | ... | ... | ... | 0.89 | 0.64 | 1.23 |
| Quebec | ... | ... | ... | 0.66 * | 0.53 | 0.82 |
| Ontario [†] | ... | ... | ... | 1.00 | ... | ... |
| Manitoba | ... | ... | ... | 1.18 | 0.89 | 1.58 |
| Saskatchewan | ... | ... | ... | 1.28 | 0.97 | 1.68 |
| Alberta | ... | ... | ... | 1.89 * | 1.57 | 2.27 |
| British Columbia | ... | ... | ... | 1.14 | 0.93 | 1.39 |
| Territories | ... | ... | ... | 1.03 | 0.69 | 1.54 |

... not applicable

[†] reference category

* significantly different from reference category (p < 0.05)

1. Children aged 1 to 4 years are excluded because of the high percentage who have never been to the dentist.

Note: Model 1 included dental insurance and adjusted family net income (AFNI) cut-offs only. Model 2 included dental insurance, AFNI cut-offs, gender, age group, population group, immigrant status, and province.

Source: Statistics Canada, 2019 Canadian Health Survey on Children and Youth.

Cycle 7 of the CHMS¹⁴—contributes to benchmark estimates preceding the implementation of the CDCP. The COHS is actively gathering data from households across the provinces, aiming to provide detailed insights into the factors influencing oral health care visits. This survey targets Canadians aged 1 year and over, offering a comprehensive overview of oral health demographics. Additionally, CHMS Cycle 7 is currently underway, focusing on updated direct assessments of oral health outcomes, such as dental caries and periodontal health, before the initiation of the CDCP.

Strengths of this study include the large sample size, representative of Canadians aged 1 to 17 years across all provinces and, for the first time, in the territories as well. Additionally, the 2019 CHSCY included children and youth from the age of 1 and over, which is a population rarely measured or reported. Another strength of the 2019 CHSCY is the availability of AFNI information, based on linked tax data, which allows for an appropriate examination of Canadian children within the CDCP policy framework. The COVID-19 pandemic affected visits to dental professionals partly because of service restrictions and also for fear of contracting COVID-19.²⁴ However, data from the 2019 CHSCY were collected before the pandemic and might be more reflective of the current expected prevalence. Thus, the 2019 CHSCY is an appropriate source of data contributing to a benchmark before CDCP implementation.

This study also has several limitations. The information collected in the CHSCY is based on self-reported behaviours over the past 12 months, which can be subject to recall bias. There was no information for children under 12 months of age. Though it can be estimated when children first see a dentist, through the question on those who have never been, the reason for their initial visit or non-visit, such as the presence of any (erupted) teeth, which is typical up to 1 year of age, cannot be determined.²⁵ The AFNI calculated for the CHSCY does not reflect any increase in income (e.g., inflation) since 2019. Unfortunately, this study could not distinguish between private and public insurance as the CHSCY questionnaire asked about overall coverage.

Conclusion

This national-level study, significant for its focus on Canadian children and youth aged 1 to 17, is a critical step in understanding access and barriers to oral health care across the country in this age group. It further supports the body of literature that demonstrates dental insurance is a key predictor of oral health care access and use. However, the study also underscores that affordability alone is insufficient to ensure comprehensive dental care. Other sociodemographic factors, detailed in the paper, also play a crucial role in determining access to dental services. These findings emphasize the need for a multifaceted approach to improve dental care access, one that goes beyond addressing only financial barriers.

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