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Oral Health in Simcoe and Muskoka

Dental decay can be prevented. Yet in Canada, poor dental health related to decay is widespread. In 2006, Canadians spent a total of \$9.45 billion on dental care, which is 6.7% of all health expenditures in the country.¹

This report identifies that early childhood caries (tooth decay) is an increasingly serious issue in Simcoe and Muskoka, and in fact is worse than in most other parts of Ontario. It discusses the lifelong issues related to oral health and the populations that are most vulnerable to tooth decay—those with low income, seniors and children.

The report highlights where efforts to maintain good oral health have succeeded—and where further action is needed.



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Keeping healthy teeth is one important facet of maintaining lifelong overall health and wellbeing – not just for individuals but for the whole Simcoe Muskoka community.

Towards Good Oral Health

There are simple, effective and safe methods to prevent tooth decay.

They include:

- tooth brushing using a fluoride toothpaste
- professionally applied topical fluoride for individuals with higher risks of decay
- fluoridation of community water supplies
- dental sealants
- and diet (amount, texture and frequency of sugars, carbohydrates, etc.).²

Barriers to good oral health

As with many other health conditions, social determinants are a significant risk factor for poor oral health. Studies have shown that the following factors increase risk of decay in children under 6 years old:

- family income
- education of parents
- employment status of parents
- age at first dental visit, or failure to visit the dentist regularly.³

Some preventative measures are widely understood, reasonably accessible and generally adhered to—notably, the use of fluoride toothpaste and frequency of brushing. However, others are not. For instance:

- regular dental visits may not be possible for those without dental insurance
- there are knowledge gaps such as how to prevent caregiver-to-child transmission of cavity-causing bacteria
- community-wide interventions such as water fluoridation do not exist in many areas.

The role of the public health unit

The Simcoe Muskoka District Health Unit has a mandate to promote oral health and prevent dental diseases in children, youth and, to a lesser degree, in adults and seniors. Responsibilities include:

- a variety of programs in schools including oral health education, elementary school screening, an annual Dental Indices Survey (DIS) to identify children and school populations at high risk, preventive dental services and follow-up monitoring to ensure care has been provided,
- helping families who need financial support to get urgent dental care for their children through the Children In Need of Treatment (CINOT) Program,
- monitoring fluoridation levels of local municipal or regional water supplies.

The tools and strategies used work in two ways: targeting vulnerable populations such as through school screenings; and at the societal level by promoting preventive techniques such as fluoridation of municipal water supplies. In providing these services the health unit employs data management assistants, dental hygienists, dental assistants, a manager and a dental consultant.



Financial assistance

In addition to the CINOT program, the health unit helps low-income families obtain basic dental care for children (up to age 18) and emergency dental care for adults through the Ontario Works program. In Simcoe County, a special extension of the CINOT program has been available to high school students.

Health Impacts of Poor Oral Health

Young Children

Early childhood caries is a rapid form of dental decay. Due to the extensive nature of the decay, the developmental stage of the child, and the high cost of clinic-based treatment, those affected usually require treatment under general anaesthetic in hospital. Waiting lists for treatment can be as long as 12 months, leaving the child in pain, with disrupted sleep and eating habits that could result in impeded normal weight gain and growth.⁴

Children

Evidence has shown that the quality of life of children who experience tooth decay and tooth loss may be affected.⁶

Children who lose teeth at a young age may:

- be forced to limit their food choices
- have impaired speech development
- have repeated absences from school
- have trouble concentrating or learning when in school
- suffer loss of self-esteem due to their appearance and poor school performance.⁵

Children who experience decay early in life tend to have increased incidence of dental

diseases for the rest of their life.⁶ Preventing decay in the very youngest members of our society pays off over a lifetime.

Adults

For one in seven adults in Canada poor oral health impacts on psychological and social wellbeing; it detracts from the pleasure of eating and affects communication, social relationships and other daily activities.² Something as commonplace as an untreated toothache can cause intense pain and lead to infection and serious long-term health impacts.

Seniors

Poor oral health and tooth loss in the elderly result in a reduction in the ability to chew and marked changes in dietary preferences. Those with no natural teeth have reduced intakes of fibre, protein, calcium and vitamin C.

Without healthy food intake seniors are likely to experience involuntary weight loss and reduced quality of life. Increased illness and even premature death can result.²

Societal Costs

Poor oral health has substantial social costs. A 2004 report showed that annually across Canada, oral health problems accounted for:

- 100,000 lost school days per year
- 270,000 lost work days a year
- 410,000 restricted activity days per year.²

These impacts are felt in business as well as the community at large. The hardest hit are among those who can afford it the least, such as low-income families, seniors and those without dental insurance.

Snapshot of dental decay in children

Despite the fact that dental disease is largely preventable large numbers of local children are showing dental decay.

Decay rates from surveys conducted from 2005-2007 were compared across most of Ontario's 36 health unit areas. Consistently, the oral health of 5, 7, 9, and 13-year-olds in Simcoe and Muskoka ranked in the bottom 15% to 30% of surveyed health units.^{7,8}

Table 1 summarizes the findings of the survey. This table depicts the high levels of decay in children in our region.

Thirteen-year-olds tended to fare better than other age groups in that the decay rates have remained fairly consistent for the past 12 years. This may partly be due to this group recently losing their baby teeth and the permanent teeth have not been in place for long.

Decay Rates

In recent years, serious decay problems in 5-year-olds in Simcoe County and the District of Muskoka have increased dramatically, well ahead of the provincial average. By 2007-2008 the incidence reached a level not seen since 1981 (Figure1).^{8,9}

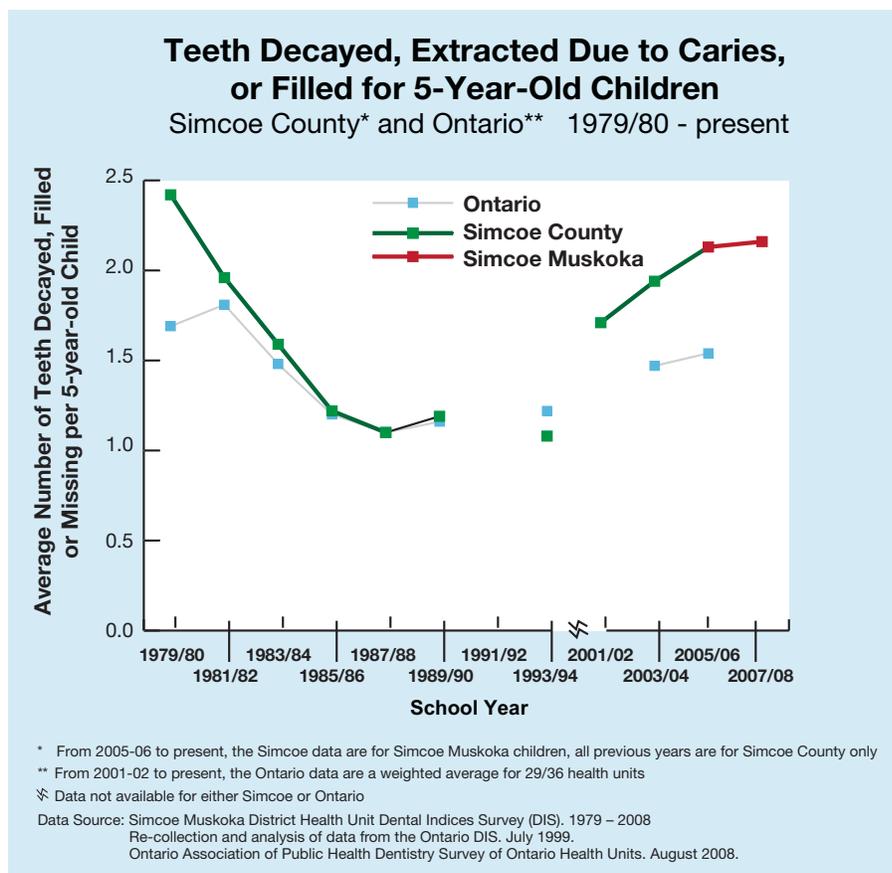
The health unit is examining the factors influencing this dramatic shift to poorer oral health status for local children.

Table 1: Measures of Oral Health in 5 to 13-year-old children in Simcoe Muskoka compared to other health unit areas in Ontario, 2005-07

AGE	5 yrs	7 yrs	9 yrs	13 yrs
SIMCOE MUSKOKA				
DMFT= Average number of teeth decayed, missing (due to caries), or filled per child	2.12	3.10	2.92	1.4
Proportion (%) of children with decay	40%	60%	64%	47%
ALL SURVEYED HEALTH UNITS				
Proportion (%) of children with decay	34%	52%	54%	43%

Data Source: Ontario Association of Public Health Dentistry Survey of Ontario Health Units, August 2008. Simcoe Muskoka District Health Unit Dental Indices Survey (DIS), 1979 – 2008.

Figure 1



Impacts of Dental Care Costs

Lack of dental insurance is a reality for many Simcoe Muskoka adults, most evident in those age 65 and over (Figure 2).

Age and insurance coverage play a large part in the choices people make about oral health care.

- People 12 and over without insurance are much less likely to have visited a dentist in the past year than those with insurance.¹⁰

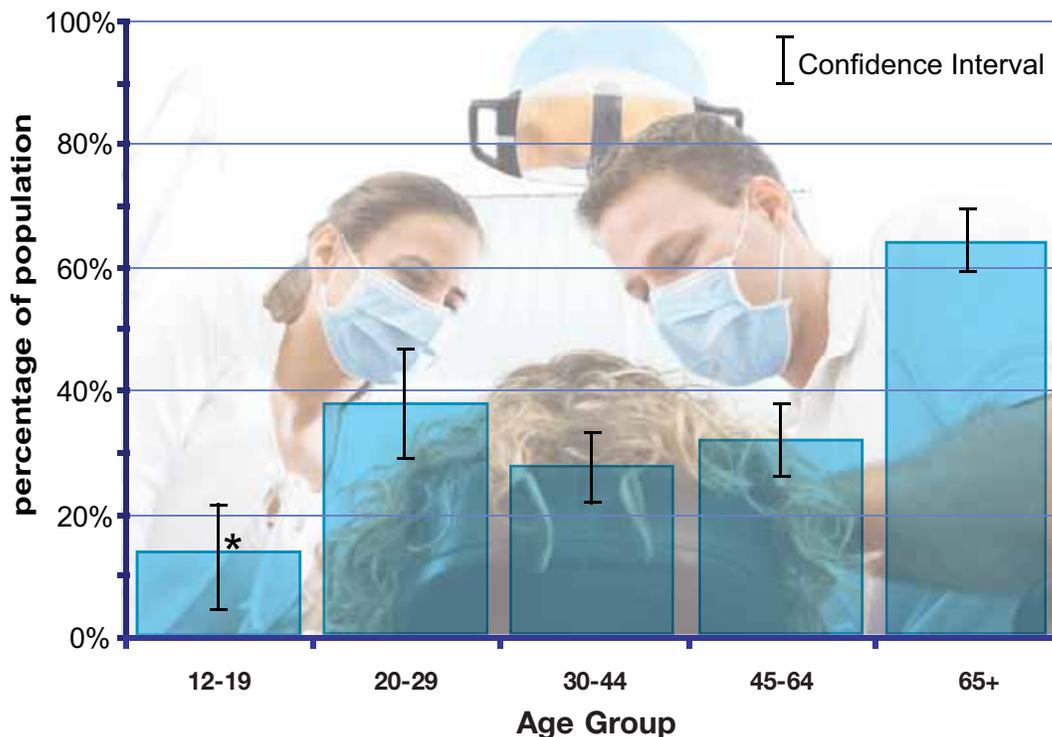
About 154,000 people in Simcoe Muskoka do NOT have dental insurance^{10,11}

- The older people get the more likely they are to visit the dentist for emergencies only.¹⁰

- The proportion of people who have not visited the dentist in three years or more increases significantly in those over age 65—jumping from 12% of those between the ages of 20 and 64 to 30% of those over age 65.¹⁰
- People in the lowest income bracket (bottom 20%) are significantly more likely to have chewing problems.¹²

Figure 2

People Without Dental Insurance Simcoe Muskoka - 2005



*Interpret with caution, high variability.

Data Source: Canadian Community Health Survey (CCHS), Cycle 3.1 Share File Statistics Canada, 2005

Water Fluoridation

Fluoridation of drinking water has been called one of public health's 10 greatest achievements of the 20th century.¹³

In Muskoka District, Huntsville, Bracebridge, Gravenhurst, Bala, Port Carling, Baysville and MacTier all have fluoride added to their public drinking water supply. However, Tottenham and Base Borden are the only fluoridated communities in Simcoe County.

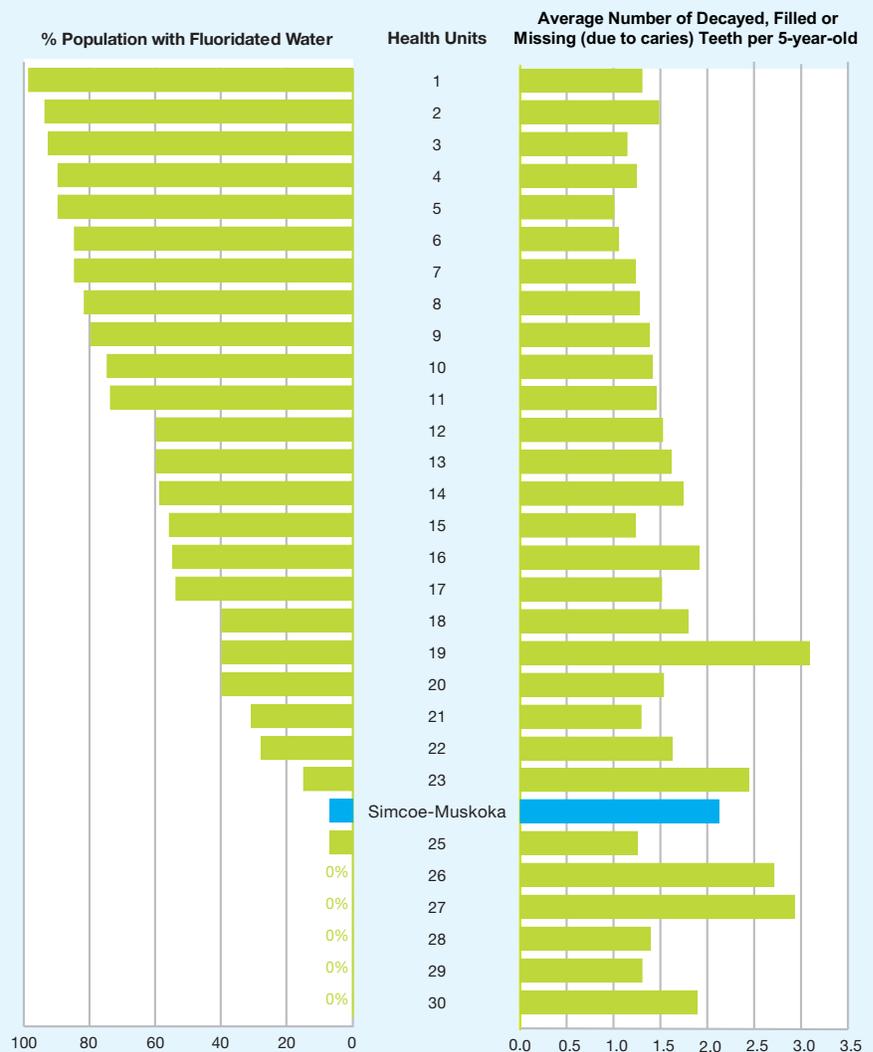
Figure 3 compares the oral health status of children in 30 of Ontario's 36 health units to the proportion (%) of the population with fluoridated municipal water.

This figure shows that as the proportion of people in a health unit with fluoridated water increases, the average number of decayed, missing or filled teeth decreases. This does not suggest that fluoride is the only factor but it shows a significant relationship.

Reliable information sources on the safety and benefits of water fluoridation are available at Health Canada, Canadian Dental Association, and the World Health Organization.

Figure 3

Relationship Between Oral Health of 5-year-olds and Percentage of Population with Fluoridated Water by Ontario Health Units* 2005-07



* 30 out of 36 Ontario Health Units provided data
Data Source: Ontario Association of Public Health Dentistry Survey of Ontario Health Units. August 2008

Getting Needed Dental Care

In the 2007-2008 school year, health unit staff screened 25,129 children in elementary schools across Simcoe Muskoka for dental disease. Of those screened 2,172 children (almost 1 in 9), were found to have unmet urgent dental care needs such as large open cavities and oral infections.¹⁴

These children were referred to a dentist and 2,153 received financial assistance for dental treatment under the CINOT program at a total cost of \$571,939.¹⁵ A total of 1,946 children were provided with pit and fissure sealants and 1,418 had topical fluoride treatments by health unit staff.¹³

Ontario Works

In 2007-2008 approximately 1,070 children (up to age 18) of Ontario Works recipients were provided basic dental care and approximately 950 adults up to age 65 received emergency dental treatment.¹⁵

Project in Day Cares

Since 2007 a pilot project has been under way in Midland. To date 111 preschoolers in daycare centres were screened and 108 qualified for the fluoride varnish program. Six children who needed urgent dental treatment were also identified.

Action Needed

Preschoolers

Given the long-term consequences of early childhood decay early assessment is critical.^{16,17} Preschoolers should receive a dental assessment by age one. This screening identifies early signs of decay and provides the opportunity to educate parents about the health practices that influence dental disease (feeding routines, nutrition, and oral care).

Children, teenagers, low-income adults and seniors

There has been a significant increase in poor dental health in children in Simcoe Muskoka since the late 1990s.⁸ As well, because many families are unable to access—or are unaware of—available dental care and preventive treatment, minor problems tend to become serious decay issues that require emergency treatments.

In January 2009 an expected expansion of the CINOT program will provide needed dental care to teenagers up to age 18 from the current age 14.

Issues of poverty, lack of dental insurance and other social factors play a large role in poor oral health, both for adults and their children. These issues create barriers to knowledge and

understanding of important personal health care practices, as well as access to nutritious foods, preventive oral health measures and dental care. Public health is working collectively with many partners to address the broader issues of social determinants of health.

Public health is well positioned to provide greater access to screening and preventive services to preschoolers, school-age children and to teens. Public health can also work effectively with community partners to increase access for adults and seniors with limited incomes. Additional public health dental funding is required if these health gaps are to be addressed.

Fluoridation

Water fluoridation has a long track record of reducing decay, yet only 7% of Simcoe Muskoka's population has access to fluoridated municipal water.¹⁶ Fluoride in water benefits everyone who drinks it: young and old, rich and poor. It is our recommendation that more municipalities begin fluoridating their water supplies with an ultimate goal of seeing fluoridated water universally available in all communities.

Preventing cavities could be within our grasp. With access to dental check-ups, fluoride toothpaste, water fluoridation, pit and fissure sealants and healthy foods and snacks, we could have a generation of cavity-free children.

Definitions and Data Sources

Dental Indices Survey (DIS):

DIS is a clinical survey conducted annually by Ontario public health units on the oral health status of a sample of children ages 5, 7, 9 or 13 years who attend schools with more than 50 students. Children who are absent from school on the day of the DIS, schooled at home or who refuse are excluded.

Children in Need of Treatment (CINOT) program:

CINOT is a program that provides funding to cover urgent dental needs of children up to age 14 or the end of Grade 8 whose parents do not have dental insurance and indicate financial hardship in obtaining this treatment. Health unit dental staff identify children with urgent unmet dental needs through the mandatory screening program in elementary schools. Once identified and deemed eligible, the child may attend any dental office in Ontario that agrees to treat CINOT patients with dental practitioners willing to accept reduced fees for their services. The CINOT Schedule of Dental Services and Fees covers the provision of basic dental care with a number of limitations and restrictions on the use of selected services.

The health unit also administers a High School CINOT Dental Program for Simcoe County Social Services. Similar to the regular CINOT dental program it covers limited basic dental services for low-income students from Grades 9 to 12 enrolled in Simcoe County high schools.

Ontario Works (OW):

OW is the provincial program that delivers social assistance to residents of Ontario who are in financial need. The OW program provides basic dental care for children of OW recipients up to 18 years. In addition, qualified adults are also covered for emergency dental treatments. The funding for the OW programs was given to the local municipal Social Services Departments in Simcoe County and Muskoka District which contracted with the Simcoe Muskoka District Health Unit to help administer the OW program.

Canadian Community Health Survey (CCHS):

The CCHS Cycle 3.1 was conducted by Statistics Canada to provide cross-sectional (at one point in time) estimates of the factors that influence the health of the population, health status of the population and use of the health system by the population for 126 health regions across Canada. The CCHS Cycle 3.1 (2005) Sharing File—Ontario Sample consisted of 39,486 respondents, aged 12 and over. Respondents were randomly selected, one per household. The target population of the CCHS included household residents in all provinces and territories, with the exclusion of populations on Indian Reserves, Canadian Forces Bases and some remote areas.

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For more information about the data presented in this report, contact *Your Health Connection* at (705) 721-7520, toll free at 1-877-721-7520 or email at hconnect@smdhu.org, or visit www.simcoemuskokahealth.org