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SUMMARY REPORT

on **THE FINDINGS** *of the* **ORAL HEALTH COMPONENT** *of the*

CANADIAN HEALTH MEASURES SURVEY

2007–2009

Canada 



Health Canada is the federal department responsible for helping the people of Canada maintain and improve their health.
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Sincerely,
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INTRODUCTION



ORAL HEALTH

Everyone is affected by their oral health. Good oral health is a key component to a healthy life because it affects how we eat, speak and how we relate to each other with confidence in our healthy smiles.

Pain and infection that may arise from oral diseases can affect our capacity to function as full members of society. For example, if you are kept from going to school, or from getting a job because of the condition of your teeth and mouth, then it may have economic and social impacts in your life. In some extreme cases, oral diseases can cause severe disability or even death, as is the potential with oral cancer.

While oral conditions are important in and of themselves, there is an increasing awareness regarding their contribution to the incidence and severity of other diseases. Conditions that may be affected by poor oral health include diabetes, respiratory diseases and cardiovascular health.

For all of these reasons, it is important that Canadians, and Canadian public, private and professional policy makers become informed as to the extent and severity of oral health conditions in Canada. It is the responsibility of the public health system to provide information on the nation's health status, in this case the oral health status, so that appropriate efforts can be taken to reduce the burden of illness for the benefit of all Canadians.

EXECUTIVE SUMMARY

The Canadian Health Measures Survey

Before Statistics Canada's Canadian Health Measures Survey (CHMS) began data collection in 2007, there was no current, nation-wide, clinical information on the oral health of Canadians.

In 2003, to enrich health data sets in Canada, Health Canada and the Public Health Agency of Canada supported Statistics Canada in obtaining funding to conduct a "direct measures" health survey among the Canadian population aged 6 – 79 years of age. This was done to address longstanding limitations within Canada's health information system.

Statistics Canada collected data for the Canadian Health Measures Survey (CHMS) from about 6,000 people in 15 communities randomly selected across Canada between March 2007 and February 2009. The sample represents 97% of the Canadian population aged six to seventy-nine years old

The Oral Health Component of the Canadian Health Measures Survey (CHMS) is a result of a collaborative partnership between three federal departments: Statistics Canada, Health Canada and the Department of National Defence. The comprehensive findings obtained

through the Oral Health Component resulted from participation between these departments, which we acknowledge as an important element to the success of the project.

The Canadian Health Measures Survey collected key information relevant to the health of Canadians in two phases. The first phase consisted of a personal interview designed to collect information related to nutrition, smoking habits, alcohol use, medical history, oral health, and current health status, as well as demographic and socioeconomic characteristics of the family. The second phase gathered information using direct measurements such as blood pressure, height and weight, blood and urine sampling, clinical oral examination and physical fitness testing, in a clinical setting. Specially trained Canadian Forces dentists performed the oral health clinical examinations.

The information drawn from the Canadian Health Measures Survey describes the extent and severity of dental diseases among Canadians.

With further analysis, the information can be used to investigate the association of oral health with such major health concerns as diabetes, obesity, hypertension, cardiovascular disease, infectious disease, and exposure to environmental contaminants.

However, this report will focus only on the nation's oral health and relevant oral disease levels.





Highlights

The results from the Oral Health Component of the CHMS demonstrate that, overall, Canadians have very good oral health:

- Three of every four Canadians visit a dental professional annually.
- Two out of every three Canadians with natural teeth do not need dental treatment.

There is always room for improvement. Results from the survey indicate that 17% of Canadians report that they did not make an appointment to see a dental professional due to the cost in the past 12 months. In another question from the survey, 16% responded that they avoided getting all their recommended treatment done due to the cost in the past year.

Some of the other highlights from the CHMS are as follows:

- 57% of 6–11 year olds have or have had a cavity.
- 59% of 12–19 year olds have or have had a cavity.
- The average number of teeth affected by decay in children aged 6–11 and 12–19 years old is 2.5.
- 6% of adult Canadians no longer have any natural teeth.
- Although cavities are largely preventable, 96% of adults have had a history of cavities.
- 21% of adults with natural teeth have, or have had, a moderate or a severe periodontal (gum) problem.

The report that follows will present other highlights from the results of the oral health module of the Canadian Health Measures Survey. To find more detailed results, a technical report is available called the *Report on the Findings of the Oral Health Component of the Canadian Health Measures Survey 2007–2009*.



BACKGROUND

The data collected and analyzed helps to inform dental public health policy and programming. It also provides a baseline for noting any improvements that may occur as a result of new oral health promotion and disease prevention initiatives with the goal of achieving better outcomes.

One of the reasons oral health was included as a component of the CHMS was to enable future evaluation of the association of oral health with major health concerns such as diabetes, respiratory and cardiovascular diseases. It will also enable the investigation of the relationships between oral health and known risk factors such as poor nutrition and smoking, as well as the effect of socioeconomic factors such as low income and education. In addition, the clinical oral examination provides the national estimate of decayed, missing, and filled teeth (DMFT), periodontal and other oral conditions of Canadians.

The Office of the Chief Dental Officer (OCDO) of Health Canada entered into a partnership with the Department of National Defence (DND) to conduct the Oral Health Component of the CHMS. The Department of National Defence supplied 12 military dentists to conduct the dental examinations. These dentists travelled in teams of two and conducted the oral health examination for the 6,000 respondents of the CHMS. The specialized training in survey methods that the military dentists received to conduct the survey enriched their dental public health experiences which will, in turn, contribute to their overall professional development.

SETTING THE STAGE

The oral health care system in Canada is mostly privately operated, which means the majority of dental practices are owned and operated by dental professionals. Most Canadians pay for their oral health services through either insurance from their place of employment or by paying for it themselves. Some dental services are paid through the public system, including those covered under the Canada Health Act, or by federal government departments (for example dental coverage for First Nations and Inuit) or through provincial/territorial or municipal dental programs across Canada.

Studies have shown that having dental insurance coverage is one of the main factors that determine whether or not Canadians go to see a dental professional for dental care. The Oral Health Component of the CHMS asked all respondents

whether they had insurance or a government program that covered all or part of their dental expenses. The results indicate that:

- 62% of Canadians have private dental insurance (usually an employee benefit);
- 6% have public insurance; and
- 32% have no dental insurance.

Dental insurance coverage:

- 78% of respondents from the higher income bracket have private insurance coverage;
- 53% of adults between 60 and 79 years of age do not have any dental insurance; and
- 50% of respondents from the lower income bracket do not have any dental insurance.





Nova Scotia

In 2008, the Nova Scotia Department of Health Promotion and Protection partnered with the Office of the Chief Dental Officer (Health Canada) to review the need, role, responsibilities, and mandate of oral health expertise within the department and the province. A result of this review is the creation of a new Chief Dental Officer position to assume the leadership of oral health issues in Nova Scotia with the goal of improving the health and well-being of Nova Scotians. To read the complete *Nova Scotia Oral Health Review*, visit www.gov.ns.ca/hpp/publications/08-35069-Oral_Health_Review.pdf

report card

ORAL HEALTH STATUS OF CANADIANS

Oral health refers to the health of one's mouth and teeth. Having good oral health is about more than just a nice smile – it is an important part of being healthy overall. Poor oral health and poor oral hygiene affect more than just the mouth and teeth. There is research that demonstrates a connection between poor oral health and systemic disease such as diabetes in people of all ages, and respiratory diseases particularly among older adults.

Research also points to possible connections between poor oral health and certain systemic conditions such as heart disease and premature, low birth weight babies. Due to these connections, the significance of maintaining the health of one's mouth and teeth throughout a lifetime takes on greater importance.

Canadians were asked how they felt about their oral health:

- 84% of Canadians reported that they have good or excellent oral health;
- 12% of Canadians avoid certain foods because of problems with their teeth or mouth; and
- 12% of Canadians report that they had ongoing pain in their mouth in the past year.

Canadians were asked about mouth pain:

- 16% of Canadians from the lower income group report that they had pain in their mouth in the past year;
- 17% of Canadians who are current smokers report that they had pain in their mouth in the past year; and
- 18% of Canadians who are publicly insured report that they had pain in their mouth in the past year.



Visiting a Dental Professional



Making regular visits to a dental professional is one of the recommended steps to maintain good oral health. According to the results, the large majority of Canadians regularly access dental care. However, there remains a percentage of people who are either not going to a dental professional, or are not receiving all of the recommended dental services due to the cost. Specifically, the findings show that:

- 74% of Canadians have seen a dental professional in the last year;
- 17% of Canadians avoided going to a dental professional in the last year because of the cost; and
- 16% of Canadians report that they avoided having the full range of recommended treatment in the last year due to the cost.

According to the results, respondents from families with lower incomes and from families with no insurance report that they did not seek care three times more often than both respondents from families with higher income and from those with private insurance.



Yukon Children's Dental Program

Since the 1970s, the Yukon Children's Dental Program (YCDP) has been providing school-based, clinical and preventive dental care to school-aged children. Currently services are provided to children from kindergarten through to grade 8 in Whitehorse, and kindergarten to Grade 12 in rural communities. Services are also provided to preschoolers. Dental care is provided by dental therapists employed by the Government of Yukon, and may include cleanings, fluoride treatments, oral hygiene education and instruction, sealants, fillings, and extractions. Dentists in private practice are contracted to complete examinations, and provide these services to children with special needs (e.g., children with certain medical conditions). The program currently has 8 dental therapists who serve approximately 3,000 clients, and is an important part of the dental health community in the North.

TIME LOST

DUE TO ORAL HEALTH ISSUES

In order to assess the amount of time that is generally spent either taking time off because of problems with the mouth or visiting a dental professional for care, participants were asked the following question:

Have you taken time away from work, school or your normal activities because of the need to have dental treatment including dental check-ups or because of problems with your mouth?

If the respondents answered yes to the question above they were then asked:

How many hours did you take away from your normal activities?

An analysis of the results found that an estimated total of **40.36 million hours** are lost from school or work or normal activities in one year due to check-ups or problems with teeth.

When we look at these results in terms of either a school-day or a work day this means that there are an estimated **2.26 million school-days** and **4.15 million working-days** lost annually due to dental visits or dental sick-days.



British Columbia

In 2003, British Columbia introduced an innovative program to address the issues of early childhood caries (ECC). The program involves dental public health staff contacting new parents after the birth of their child (no later than 12 months) to identify parents at risk of having children with cavities at an early age. Once identified as being high risk, the children receive applications of fluoride varnish and the parents are engaged in motivation interviewing to increase their knowledge of risk factors pertaining to ECC. The Provincial Government is committed to helping British Columbians achieve and maintain excellent dental health through its focus on children and the more vulnerable members of society. The development of not-for-profit dental clinics has also been supported where access to private clinic dental services is limited.



Cavities

Even though cavities are largely preventable, they remain the number one chronic disease among Canadians.

Dental decay (or “cavity” as it is commonly known) is a disease that damages the structure of a tooth. The decay starts by attacking the tooth’s protective coating, also known as enamel, and causes a hole (cavity) to develop. If the cavity is left untreated, it can get bigger and, in addition to causing pain, it could also lead to the loss of the tooth.

The Canadian Health Measures Survey collected information on cavities in two ways:

- First, it collected information on the average number of baby (or primary) teeth that were either decayed (**d**) missing (**m**), or filled (**f**) (for example a filling). This is known as the *dmft count*.^{*} The dmft is an indicator of the severity of the disease. For example, a dmft of 4 means that there are 4 teeth that are either decayed, missing, or filled.
- Second, the survey looked at the percentage of children who have a dmft of at least 1. A dmft score that is greater than 1 means that active disease is, or was, present in the mouth.

^{*}NOTE: *dmft* (lower case letters) is used to refer to baby or primary teeth and *DMFT* (UPPER CASE LETTERS) is used to refer to adult or permanent teeth.

Cavities continues on page 10

Alberta's Re-Think Your Drink Campaign

Alberta's *Re-Think Your Drink* is a health promotion campaign designed to encourage awareness about high sugar content in everyday beverages, and advocate for healthier choices. Led by Community Oral Health staff, the campaign is a unique collaboration of dental, nutrition and school health stakeholders, and has since been widely distributed across Canada and beyond, serving as a template for similar public health initiatives in many jurisdictions. Promoted with eye-catching graphics, *Re-Think Your Drink* has been at the leading edge of a movement that led to regulations limiting “junk-beverages” in Calgary schools. From its simple start as a theme during April’s Oral Health Month, *Re-Think Your Drink* developed into an effective community initiative.

www.calgaryhealthregion.ca/programs/dental/rtyd.html





Nunavut

Nunavut partnered with the Northwest Territories in 2009 to raise awareness of early childhood tooth decay. The *Lift the Lip* educational materials

provide tips to parents and caregivers on how to improve oral health. Dental health kits including information, toothbrushes, infant wipe cloths, floss and toothpaste are distributed to preschools, daycares, health program participants and dental health professionals in all of Nunavut's 25 communities. The campaign also includes television, newspaper and radio public service announcements. This campaign is funded under the Pan Territorial Oral Health Initiative.

Cavities continued from page 9

Children (6–11 years of age)

Children who are between the ages of 6 and 11 have a mix of baby teeth and adult teeth in their mouth. As a result, dmft and DMFT scores were collected on both sets of teeth and then a combined dmft + DMFT score was determined.

Primary (or baby) teeth

- The survey found that 48% of children aged 6–11 years of age have a dmft count of at least 1.
- The average number of primary teeth that are decayed, missing, or filled is 1.99.

Permanent (or adult) teeth

Since children in this age group do not have all their adult teeth, the average count and the amount of disease present is lower.

- 24% of children aged 6–11 years of age have a DMFT count of at least 1.
- The average number of permanent teeth that are Decayed, Missing, or Filled is 0.49.

Combined primary and permanent teeth

- 57% of children aged 6–11 years of age have a combined dmft + DMFT count of at least 1.
- The average number of teeth that have a dmft + DMFT is 2.5 primary or permanent teeth.

Adolescent (12–19 years of age)

The Decayed Missing Filled Teeth (DMFT) scores for an adolescent are calculated on the permanent teeth. The survey found:

- 59% of adolescents (12–19 years of age) have a DMFT count of at least 1.
- The average number of DMFT is 2.49 in adolescents.

Edentulism

(Complete loss of all natural teeth)

The edentulous rate of people in Canada refers to the percentage of people in Canada who do not have any of their natural teeth. People who do not have any of their own teeth, have usually lost them due to extensive cavities or as a result of severe conditions with their gums.

Not having any natural teeth can cause eating problems which can affect how many nutrients a person gets in their body. Edentulism can also affect the way a person talks. The survey found that:

- 6% of adults (20–79 years of age) do not have any of their natural teeth; and
- 22% of adults from 60–79 years of age are edentulous compared to 4% among 40–59-year-olds.



Alberta's mobile dental clinics

To help address the access barriers that seniors experience in relation to obtaining oral health care, the Alberta Dental Association and College has purchased two mobile dental clinics to offer as an option in the provision of dental health care. A 38-foot Winnebago 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. The clinic, a state-of-the-art, fully-equipped dental clinic with a computerized patient management system, is also equipped with an under vehicle lift to improve access for patients requiring assistance. Funding was provided through the Government of Alberta Seniors and Community Supports.

Adults still get cavities

Adults (20–79 years of age) can develop two different types of cavities. The first type is called a **coronal cavity**. A coronal cavity is a cavity that develops anywhere on the tooth – except on the root.

- 96% of adults (who have teeth) have a coronal DMFT of at least 1.
- The average number of coronal DMFT for adults is 10.67.

The second type of cavity that an adult can develop is called a **root cavity**. A root cavity is a cavity that is found along the root (or the part of the tooth that is usually hidden by the gums) of a tooth. A root cavity is difficult to find on the tooth and can be more difficult to treat as well.

- 20% of adults (20–79 years of age) have at least 1 decayed or filled root cavity.
- Canadian adults have an average of 0.66 Root, Decayed or Filled Teeth (RDFT).

Older adults

- Older adults from 60–79 years of age have more root cavities (43%) than adults 20 to 39 years of age (6%).

Untreated coronal and root cavities

- 20% of adult Canadians (20–79 years of age) have on average 2.97 coronal cavities that need a filling.
- 7% of adult Canadians (20–79 years of age) have on average 2.81 root cavities that need a filling.

Economic factors

- Twice as many lower income Canadians have cavities that need a filling compared to Canadians from the higher income group.

PERIODONTAL CONDITIONS

Periodontal refers to the structures that surround teeth to keep them in place, such as gums, bone and the tissue (called the periodontal ligament) that attach the teeth to the bone. These periodontal structures can be affected by disease which can affect the health of affected teeth and surrounding tissue. The information collected as part of the survey included debris, calculus, gingivitis, pocket depth and loss of attachment (LOA).

Debris and Calculus

Debris is the soft, cream-coloured build up or stains that can be found on teeth. **Calculus** is the hard material that can develop on the tooth (also known as tartar).

- Those Canadians with lower income, who are publicly insured or who are infrequent visitors to a dental professional tend to have higher debris scores.
- 11% of Canadian adults were found to have calculus scores in the highest range.

Both of these conditions can be prevented by brushing or flossing, but calculus can only be removed by a dental professional. Neither debris nor calculus is a measure of disease, but they can increase the risk for the development of gingivitis.

Gingivitis

Gingivitis is a reversible form of gum disease and refers to inflammation of the gum tissue. Gingivitis begins with the build-up of plaque on your teeth. The bacteria in plaque produce materials that can inflame the gums.

- 32% of Canadian adults (20–79 years of age) have gingivitis.
- 48% of Canadian adults who have not been to a dental professional in the last year have gingivitis.
- 48% of Canadian adults from the lower income group have gingivitis compared to 25% of Canadians with higher incomes.

Pocket depth is the measure of the depth of the pocket below the gum line that is between the root and the gums around the tooth.

- 16% of Canadian adults have moderate disease (pocket depth of 4 or 5 mm).
- 4% of Canadian adults have severe disease (pocket depth greater than or equal to 6 mm).

- 24% of older adults, 60 to 79 years of age, have moderate disease (or pocket depth of 4 or 5 mm).
- 22% of current smokers have signs of moderate disease (pocket depth of 4 or 5 mm).

Loss of attachment (LOA) is the distance (in millimetres) from where the enamel of the tooth meets the root to the bottom of the pocket between the gum tissue and the tooth. LOA is considered the true measure of the effects of disease on the periodontal structures.

- A person with a LOA of 3 mm or less is considered to be healthy.
- A person with a LOA of 4–5 mm is considered to have, or have had, moderate disease.
- A person's ability to chew can be affected at a LOA of 5 mm or greater.
- A person with a LOA of 6 mm or more is considered to have, or to have had, severe disease.
- A person is at risk of losing their tooth if the LOA is 6 mm or greater.

Age is an important factor when looking at loss of attachment. For example, a 70-year-old with a LOA of 4 mm may be considered to have aged successfully, but a 20-year-old with a LOA of 4 mm would seem to be at increased risk for losing the tooth.

- The survey found that 79% of Canadian adults (who have teeth) are considered to be healthy in terms of LOA (LOA = 0–3 mm).
- 6% of Canadian dentate adults have had severe disease (LOA of 6 mm or more).

It is important to note that LOA is usually not reversible, but can mostly be prevented through good oral hygiene habits including brushing and flossing, professional care, and avoiding tobacco.



ORAL LESIONS

Oral lesions are any open sores, lumps, bumps, or red or white patches in the mouth. Oral lesions can develop on the lips, tongue, cheeks or gums. An oral lesion could be minor or could be a sign of larger health issues. It is important to have any oral lesions checked by a dental professional.

- 12% of adults have at least one oral lesion in their mouth.
- 41% of adults who are edentulous (do not have any teeth) have at least one oral lesion in their mouth.

OCCLUSAL CONDITIONS

Occlusal conditions refer to any conditions that affect the way your teeth bite together.

- 76% of Canadians between the ages of 12 and 59 (who have teeth) have acceptable occlusion.



Quebec

In April 2009, the Québec Ministry of Health and Social Services implemented a dental care program for patients requiring radiation due to head and neck cancer. The 10 clinics that provide radio-oncology services also provide basic oral health coverage without any additional cost for the head and neck cancer patients. Services include complete dental examinations, fluoride treatments, dental extractions, cleanings, fillings, periodic examinations and removable dentures. All dentists involved in this program have completed a 2-day training session to augment their skills for this specialized service.

Fluorosis

Fluoride is a mineral that is found in soil, water (both fresh and salt) and in various foods. It has a positive effect on oral health by making the tooth more resistant to decay. Fluoride can also prevent or even reverse tooth decay that has already started.

Dental fluorosis is a condition caused by a child receiving too much fluoride during tooth development, i.e., under the age of 6. In its mildest form, fluorosis may affect the look of a tooth, but will not affect its function. For example, mild fluorosis can lead to white stains on the teeth.

Moderate fluorosis is the point at which a person could notice visible changes on the surface of the tooth. Severe fluorosis, caused by excessive intake of fluoride, may cause damage to tooth enamel. Severe fluorosis can be painful and lead to problems with chewing.

After a thorough scientific review on the safety of fluoride that began in 2006, Health Canada has set the level of cosmetic concern associated with fluorosis to be at a moderate level. Moderate fluorosis was chosen as the level of cosmetic concern because it is the point at which people without a dental background can begin to see a difference on a tooth. Mild fluorosis is generally not noticeable to most people and is not associated with any problems of chewing or pain.

The Canadian Health Measures Survey examined the teeth of children 6–12 years of age for an indication of fluorosis.

Potential fluorosis was measured by the dental examiners on children from the ages of 6–12 using the **Dean's Index**. The criteria for the index are as follows.

Code	Description	Definition
0	Normal	The enamel surface of the tooth is smooth, glossy and usually a pale creamy-white colour.
1	Questionable	The enamel shows slight aberrations from the translucency of normal enamel, which may range from a few white flecks to occasional spots.
2	Very mild	Small opaque, paper-white areas scattered irregularly over the tooth, but involving less than 25% of the labial tooth surface.
3	Mild	The white opacity of the enamel of the teeth is more extensive than for code 2, but covers less than 50% of labial tooth surface.
4	Moderate	The enamel surfaces of the teeth show marked wear and brown stain is frequently a disfiguring feature.
5	Severe	The enamel surfaces are badly affected and hypoplasia* is so marked that the general form of the tooth may be affected. There are pitted or worn areas and brown stains are widespread; the teeth often have a corroded appearance.
6	All 4 anterior teeth absent	Could also be unavailable for assessment since banded (i.e., braces)

* Flaws in the surface of the enamel related to fluoride intake.

The results found that, according to the Dean's Index:

- 60% of the children (6–12 years of age) have teeth that are normal;
- 24% of children have enamel with white flecks or spots where the cause is questionable (*possibly as a result of the use of medications, fevers or fluoride exposure during younger years which have caused slight aberrations on the tooth enamel*); and
- 12% have one or more teeth with fluorosis classified as very mild and 4% with fluorosis classified as mild.

So few Canadian children have moderate or severe fluorosis that, even combined, the prevalence is too low to permit reporting. This finding provides validation that dental fluorosis remains an issue of low concern in this country.

Preventive Behaviours

Brushing your teeth twice a day and flossing once a day are two key recommended actions to maintain a healthy mouth.

According to the Canadian Health Measures Survey results:

- 73% of Canadians brush twice a day; and
- 28% floss at least 5 times a week.

Sealants

Sealants are clear or tinted plastic coverings placed on the chewing surfaces of permanent molar (back) teeth. A sealant provides a barrier and keeps food from getting stuck in the grooves and pits of a tooth. This helps to keep teeth free from decay. Sealants can be applied to a tooth by a dental professional as soon as the tooth appears in the mouth.

In Canada, according to the CHMS results, 32% of children aged 6–11 have one or more sealants.

- The average number of teeth that are sealed in children aged 6–11 years of age is 2.88.
- The average number of teeth that are sealed in adolescents (12–19 years of age) is 3.51.
- Sealants are found on 51% of adolescents (12–19 years of age).



2008–2009, almost all of the 300 dental hygienists working for the public health sector in the province received formal training from two national training teams on applying pit and fissure sealants in a school setting. The program has been very well received in the province.

PEI'S Children's Dental Care Program

The Prince Edward Island *Children's Dental Care Program* (CDCP) provides dental services for all children aged 3 years to 17 years and has been operating since 1971. The CDCP provides free preventive services (annual cleaning and fluoride, oral health education, and sealants) to all eligible children. No registration is required to receive *preventive* services, but children must register with their dentist to receive free *treatment*, which includes annual examinations, x-rays, fillings, basic emergency services for relief of pain or infection, and a limited program to treat minor orthodontic problems. For more information, please review the following link:

www.gov.pe.ca/infopei/index.php3?number=42380&lang=E



Sealant Program in Quebec

As part of their *Dental Public Health Action Plan 2003–2012* (DPHAP), the province of Quebec implemented a pit and fissure sealants program for high risk children aged 5, 7–8, and 12–13. In



NEED FOR CARE

At the end of the dental examination, the dentists recorded whether or not the respondent needed care and, if so, what kind, and if it were needed urgently (i.e., within a week).

From the assessments and evaluation of the dentists, a list outlining a priority of needed care was created. The results from the respondents were placed in order ranging from a threat to life (i.e., severe infection or suspected oral cancer) or current severe pain, to the need for a filling, to oral health requirements that could be met over a longer period of time.

The priority list put urgent needs first on the list, followed by surgical needs, those requiring a root

canal, those needing fillings, crown and bridge, gum care, braces, a group of services including problems with the jaw, aesthetics and soft tissue, and ended with those who have no dental needs. The priority highlights the greatest need of the participant, but it was also possible that they had other, less urgent needs. For example, a person who was identified as needing fillings could have crown and bridge, gum care and preventive needs as well.

Of the needs identified, half were for fillings (restorative), one quarter were for surgical services and the other quarter were for other services such as dentures, gum care, root canals, etc.

- 34% of dentate Canadians 6–79 years of age have some sort of treatment need identified.
- 47% of lower income Canadians have a need identified compared to 26% of the higher income group.
- 49% of the current smokers have some sort of treatment need identified compared to 30% of those who have never smoked.



Manitoba's Healthy Smile Happy Child

The *Healthy Smile Happy Child* (HSHC) program is a Manitoba Collaborative Project implemented in 2005 in response to a growing wait list for pediatric dental surgery and the need to address Early Childhood Caries (ECC) province wide. This project uses a community-development approach to engage communities in how to prevent ECC and promote early childhood oral health. Existing health services, health providers, and the community at large were targeted for this collaborative project. *Healthy Smile Happy Child* resulted in significant improvement in preschool oral health knowledge and a decline in dental caries rates in targeted areas. The project will continue until 2011. Resources and information can be found at the links below.

www.wrha.mb.ca/healthinfo/preventill/oral_child.php

www.wrha.mb.ca/healthinfo/preventill/files/Oral_HSHCActivites.pdf

Manitoba Family Services and Consumer Affairs have introduced a new program entitled the *Rewarding Work Health Plan* (RWHP). As of December 2008, single parents and persons with disabilities, who were previously on Employment Income Assistance and are no longer receiving these benefits, will continue to have basic dental coverage for up to 24 months. The *Rewarding Work Health Plan* has been well received and utilized by eligible clients. It has aided in their transition to employment by providing a benefit they may not have when starting a new job. More information can be found on the link below.

www.gov.mb.ca/fs/rewardingwork/yeartwo.html

Ontario's poverty reduction strategy related to dental health

Ontario's Children In Need Of Treatment (CINOT) program provides basic treatment and prevention for children and teens with urgent dental conditions whose families have no dental insurance or other coverage. The CINOT program initially provided these dental services to children from birth to age 13 from low income families, but expanded to include children who are 17 and under in 2009.

Ontario is also moving forward with the implementation of a low-income dental program. This program will build on and expand existing public health dental programs (i.e., health promotion, screening, prevention and CINOT) and provide access to additional prevention and early treatment services for low income children and youth 0–17 years.



How do we measure up?

The last national Canadian oral health clinical survey was the *Canada Nutrition Survey* which was completed in 1972. Although some of the indicators were not collected in the same manner as the CHMS, the *Canada Nutrition Survey* is the best point of comparison to note any changes in the oral health status of Canadians. Here is how some of the CHMS clinical results compare to the oral health results from 1972.

Indicator	Canada Nutrition Survey 1972	Canadian Health Measures Survey 2009
% of children (6–11 years of age) who had at least one cavity (DMFT)	74% (Ages 8–10)	< 25%
Average number of Decayed, Missing, Filled Teeth (DMFT) on children 6–11 years of age	2.5 (Ages 8–10)	0.49
% of adults (who have teeth) who had at least one cavity	96%	96%
Average number of Decayed Missing Filled Teeth (DMFT) in adults who have teeth	17.5	10.7
% of adults who have lost their teeth	24%	6%

Overall it seems as though the oral health of Canadians has been improving over the last few decades. This improvement can be attributed to the increase in the use of fluorides and an increase in the overall access to professional oral health care.

How do we measure up? continues on page 18

Comparisons with results from the United States

The United States' National Health and Nutrition Examination Survey (NHANES) of 2004 collected oral health information on its participants using very similar methods as the CHMS. NHANES is a reliable point of comparison for the Canadian data.

Indicator	National Health and Nutrition Examination Survey 2004 United States	Canadian Health Measures Survey 2009
% of children 6–11 years of age with Decayed, Missing, Filled Teeth (DMFT) of at least 1	21%	24%
Average DMFT count for children (6–11 years of age)	0.45	0.49
% of children 6–11 years of age with at least one sealant	31%	32%
Average number of sealants per child (6–11 years of age)	3.38	2.88
% of adolescents 12–19 years of age with a DMFT of at least 1	59%	59%
Average DMFT count on adolescents 12–19 years of age	2.55	2.49
% of adolescents 12–19 years of age with at least one sealant	38%	51%
Average number of sealants per adolescent (12–19 years of age)	5.10	3.50

Canadian and American children have very similar oral health indicators except Canadian adolescents have somewhat fewer cavities and fewer teeth with sealants.



Saskatchewan Northern Oral Health Working Group

The Saskatchewan Northern Oral Health Working Group (NOHWG) is a cross-jurisdictional group of dental professionals and contractors who have been successful in increasing access to regular dental services in many northern communities where there previously were none. The group, made up of dental professionals from regional health authorities, First Nations health jurisdictions, the Athabasca Health Authority and the College of Dentistry at the University of Saskatchewan, is working together to improve oral health and access to oral health services to a predominantly aboriginal population in northern Saskatchewan. Their work entails prevention and health promotion programs based on best practices, as well as standardization of treatment.

Conclusion

The Oral Health Component of the Canadian Health Measures Survey has provided data on the oral health status of Canadians from 6 – 79 years of age.

The Oral Health Component of the CHMS survey is the result of a partnership between three departments of the Government of Canada: Statistics Canada, Health Canada, and the Department of National Defence.

Information resulting from the survey may be used to guide human resource training, oral health program planning and public policy development for the next several years. More analyses remain to be done on the many possible connections between oral health and other indicators from the CHMS including diabetes and nutrition.

The Oral Health Component of the Canadian Health Measures Survey is vital to understanding the severity and distribution of oral diseases affecting Canadians. The CHMS provides a baseline of the current oral health status of Canadians and the findings demonstrate that oral health disparities exist for a number of population groups. Key to addressing these disparities is research that asks why and how disparities occur, who are the most vulnerable, and what can be done to improve oral health for all.

In 2008, the Canadian Institutes of Health Research (CIHR) had already identified “Disparities in Oral Health” as a key area of concern when researchers from four Canadian universities received funding to look at the issue more closely. The four research teams are examining social and economic factors that impact oral health and are especially concerned with the unique challenges facing those who live in remote and isolated areas. By including members of the community and those who make health policy decisions throughout the research process, these teams are working to ensure that activities resulting from research will be meaningful. Overall, this research

is focused on finding ways to influence health and economic policies, education and dental services for the benefit of Canadians who have difficulty accessing oral health care.

While the CIHR funding initiative has resulted in a timely national discussion about disparities research in Canada, this research focus is not new. A recent survey of over 30 university-based researchers and dental public health professionals revealed a broad range of Canadian research that addresses: oral health inequalities, level and severity of oral disease, oral health promotion and disease prevention, and oral health policy and service delivery. In spite of much activity over the past decade, it was also found that research findings are not always reported publicly. This leads to an underestimation of research activity and important findings are sometimes not available to be shared.

The findings of the CHMS provide the focus for continued national discussion and research on oral health disparities and access to care. Strengthening partnerships between academics, community oral health planners and service providers is essential for developing, sharing and evaluating relevant research and programs. Also, to better understand the significance of oral health disparities, granting agencies must continue to support research that goes beyond the dental and health communities to include a broad range of perspectives such as social and political scientists, ethicists and economists.

This report presents highlights from the complete technical report that gives more detail on the results from the Oral Health Component of Statistics Canada’s Canadian Health Measures Survey. For more information on all of the results, you are encouraged to review the *Report on the findings of the Oral Health Component of the Canadian Health Measures Survey 2007–2009*.

