Grey Bruce Oral Health Status Report: 2005–2010

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Executive Summary

Public health has recognized the importance of oral health for the overall social, psychological, and physical well-being of people of all ages. The Grey Bruce Oral Health Status Report 2005–2010 combines local, provincial, and national information to create a snapshot of the oral health of Grey Bruce residents, in order to report on and better guide programming.

The Rapid Risk Factor Surveillance System surveys about 100 Grey Bruce adults each month about their health behaviours, asking also about their oral health. Overall, the results indicate that higher income improves the outcome of most of the oral health indicators about which respondents were asked, including self-rated oral health, dentate status and dental care provider visits. Those with a higher income were more likely to have dental insurance, which may be causal in terms of better oral health outcomes.

We know that good oral health begins at a very early age. Results from the Southern Ontario Infant Feeding Survey suggest that while mothers in Grey Bruce understand feeding practices that are harmful to the oral health of infants, half of mothers do not clean the mouth of their infant daily. To target parents of young children, the Early Childhood Education Initiative Project gave oral health presentations to children at childcare facilities and distributed oral health information packages to the parents of each child at the facility. Feedback from the childcare facilities suggested that the information provided was useful.

Oral health practices remain very important for seniors. The Seniors Oral Health Outreach Study, conducted in long-term care facilities within Grey Bruce in 2008, found that the majority of residents required some form of oral treatment. Given the findings, it appears there is a need for an oral health program in the senior population.

Grey Bruce Health Unit also provides service to two First Nations reserves. The First Nations Regional Longitudinal Health Survey suggests that the oral health of First Nations people in Canada is poor compared to the general Canadian population. It is estimated that close to 60% of First Nations people visited a dental care provider in the past year, which is 10 to 15 percentage points lower than the estimates for Grey Bruce and all Canadians.

In terms of health promotion and health protection activities, Grey Bruce Health Unit engages in a number of initiatives across the region, and these start in the early years. Let's Learn Kindergarten Registrations are an opportunity for Public Health to provide information on oral health to parents and offer oral screening to pre-school aged children. In 2009, the majority of pre-school aged children preparing to begin school at Let's Learn Registrations had never been to a dentist.

Further to oral health promotion, the Oral Health Services program provides dental screening to over 9000 children each year in elementary schools throughout Grey and Bruce Counties. The results of these screenings reveal that younger Grey Bruce children have a higher number of decayed, missing and filled teeth and higher decay rates than do those in Ontario.

To address the oral health needs of older children from low-income, uninsured families, the Children in Need of Treatment program was expanded in 2009 to include children and youth age 17 and under from low-income families. This program was previously only open to children up to age 14. This program provides emergency dental services to children in low-income families with no dental insurance who have severe oral health problems or injuries. Since its expansion, there has been an increase in the number of clients participating in the program, and an increase in the average cost per client.

Each year, the Oral Health Services program screens about 100 children in our two First Nations communities through the Children's Oral Health Initiative. Most of these children also receive at least one preventive fluoride treatment.

Finally, water fluoridation has been demonstrated to lower the dental caries rate in the general population. Only 7% of the population in Grey Bruce has access to community water fluoridation. Fluoride is known to contribute to the prevention of dental caries—in areas where a higher percentage of the population has access to community-fluoridated water, caries rates tend to be lower.

Introduction

Purpose of Report

Grey Bruce Oral Health Status Report provides a snapshot of the oral health of the residents of Grey and Bruce Counties over the past five years. Through the compilation of information from a number of sources, the report presents some of the known oral health issues within various groups including age groups and First Nations. This report also describes the oral health programs offered by the Grey Bruce Health Unit.

The combination of local, provincial and national information in the Grey Bruce Oral Health Status Report allows for the identification of local areas of need as well as areas of success. This report may serve to inform those with an interest in the oral health status of the residents of the Grey Bruce, including local decision makers, community partners and the general public.

The Importance of Oral Health[1]

Oral health is important for people of all ages because it impacts the overall social, psychological and physical well-being of the individual. Poor oral health can cause pain and discomfort, leading to poor nutrition and disrupted sleep. Poor oral health can affect a person's appearance, impacting the way they are received and treated by others in society. Moreover, oral health issues can have long-term impacts on growth and development, speech, and self-esteem. Poor oral health is associated with major chronic diseases and can easily affect one's quality of life.

The prevention of dental disease through good oral health habits begins at an early age, and both baby teeth and permanent teeth are important to maintain. Dental decay is caused when sugar combines with bacteria in saliva in the mouth to produce acid, which erodes the enamel of teeth. Good oral health habits, such as making healthy food choices, brushing teeth twice daily with fluoridated toothpaste, regular flossing and regular visits to a dental care provider can all help to prevent dental decay.

Ontario Public Health Standards[2]

The Grey Bruce Health Unit is mandated to provide programs and services that promote good oral health. The Ontario Public Health Standards (OPHS) outline the minimum requirements for programs that each health unit in Ontario is required to provide for their residents. Oral Health is included in the OPHS under the area of Family Health. Required activities include increasing public awareness, outreach to priority populations, surveillance in schools and referrals for children at risk, the provision of clinical preventive oral health services, and the Children in Need of Treatment (CINOT) program. The OPHS also include more detailed protocols for childhood dental screening, the administration of the CINOT program, and the monitoring of water fluoridation levels in municipal systems.

[1] Information from: (Government of Ontario, 2009).
[2] Information from: (Ministry of Health and Long-term Care, 2008).

Oral Health in Grey Bruce

A snapshot of the oral health of the various age groups and populations of Grey Bruce can be created by drawing from a number of available sources. This report highlights the results from the Rapid Risk Factor Surveillance System (RRFSS), the Grey Bruce Infant Feeding Survey, the Early Childhood Education Initiative Project, the Seniors Oral Health Outreach (SOHO) Study, and the First Nations Regional Longitudinal Health Survey (RHS).

Rapid Risk Factor Surveillance System[3,4,5]

RRFSS is a 20-minute random digit dialing telephone survey of adults aged 18 and over that asks questions on various health topics. Each month, about 100 people from each of the 21 participating health units complete the survey. The information provided below represents surveys administered to Grey Bruce residents for periods between the years 2003 and 2009. A series of questions about oral health were asked regarding issues surrounding condition of dentition, dental insurance, and visits to a dental care provider.

Self-Rated Oral Health

Only 1/5 of Grey Bruce residents rated their oral health as very good or excellent. Those with higher household income tend to have better self-rated oral health.

Dentate Status

Less than half of Grey Bruce residents surveyed have all of their teeth. Those who are more likely to be fully dentate include non-seniors, people with higher incomes, and people with dental insurance. About 8% of respondents indicated that they were edentulate, meaning that they have none of their natural teeth. Seniors, people with incomes below $30,000 and people with no dental insurance are at an increased risk of having none of their natural teeth.

Just over half of people who do not have all of their teeth have an appliance such as a denture, bridge or implant. Those who are more likely to have a dental appliance if they're missing teeth are seniors (in particular, female seniors), people with lower incomes, and people with no dental insurance. These trends appeared to be related to having lost a greater number of teeth.

Dentate Status of persons age 65 and over

Less than 1/5 of Grey Bruce residents age 65 and over have all of their natural teeth, and just over 1/5 of those 65 and over are edentulate. Individuals in this age group who are missing teeth are most likely to have an appliance, possibly because they are missing a larger number of teeth. Those aged 65 and over are half as likely to have dental insurance as the younger age group.

Dental Insurance

The Canadian Health Measures Survey (CHMS) 2007–2009 estimates that 68% of Canadians have either private or public dental insurance (CHMS). By comparison, approximately 55% of Grey Bruce residents

[3] Information from: (McFarland, V. & Leffley, A., 2010).
[4] Information from: (Leffley, A., 2010).
[5] Information from: (Health Canada, 2010).

have dental insurance (RRFSS). In Grey Bruce, those with an income of less than $30,000 were much less likely to have dental insurance when compared to those with an income of $50,000 or more. As well, seniors (those aged 65 and over) were about half as likely as non-seniors to have dental health insurance.

Dental Care Provider Visits

Just over 70% of the people surveyed in Grey Bruce reported visiting a dental care provider in the past year. Factors increasing the chances of having visited a dental care provider were income, age and insurance status. Those with dental insurance were on average about 20% more likely to have visited a dental care provider in the past year than those without dental insurance. As income increases, so does the proportion of those who had visited a dental care provider in the past year, with people with household incomes over $50,000 about twice as likely to have visited a dental care provider than people with household incomes less than $30,000. Seniors were about 10 percentage points less likely than non-seniors to have visited a dental care provider in the last year.

Southern Ontario Infant Feeding Survey[6]

The Southern Ontario Infant Feeding Survey was conducted by several health units across Ontario in 2002 and 2003. Telephone surveys were administered to mothers on two occasions: once at three months postpartum and once at nine months postpartum. The survey questions asked about the feeding practices that mothers used with their baby. Included in the nine month postpartum survey was a series of questions on the topic of infant oral health beliefs and behaviours.

Good oral health habits begin at an early age. Proper feeding practices and care of primary teeth in infants and toddlers prevents the occurrence of early childhood tooth decay. The results obtained from respondents residing in Grey Bruce are described below.

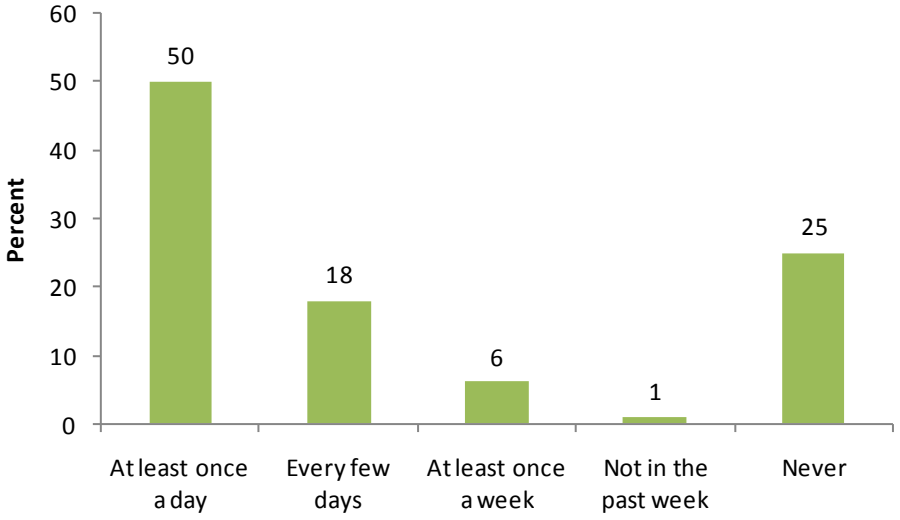
Overall, the results from the Southern Ontario Infant Feeding Survey suggest that almost all new mothers in Grey Bruce have a good understanding of the importance of baby teeth and understand harmful feeding practices that should be avoided. Harmful practices that were specified in the survey include putting a baby to sleep with a bottle of sweetened liquids such as pop and juice, and dipping a soother in something sweet.

In the survey, mothers were asked how often in the past week their baby was put to bed with a bottle or sippy cup with anything in it, except plain water. The large majority (86%) of mothers indicated that they never did this, however some (6%) indicated that they did this every day.

At the time of their interviews, most mothers (84%) indicated that some of their baby's teeth had come in. All mothers were asked if they ever cleaned their baby's mouth or teeth, and the majority (75%) said that they did. The frequency of this cleaning appears in Figure 1. Half of the Grey Bruce mothers surveyed cleaned their infant's mouth at least once a day, while a quarter of mothers indicated that they did so every few days to once a week. The remaining quarter of mothers never cleaned the mouth of their infant.

[6] Information from: (Grey Bruce Health Unit, 2003).

Figure 1. Frequency of Infant Oral Cleaning in the Past Week



Data source: 9 month Postpartum Survey (2003). Grey Bruce Infant Feeding Survey

Early Childhood Education Initiative[7]

The goals of the Early Childhood Education Initiative were to provide parents of pre-school-aged children with educational material about oral health and to reduce the prevalence of childhood dental disease and risk of decay in entry-grade school children over the long term. Grey Bruce Health Unit conducted the pilot phase of this initiative in 2008. During the initiative, a dental educator visited 45 daycares, nursery schools and other childcare facilities to give a presentation on oral health. The presentation was targeted to a young, pre-school aged audience and included a story as well as a hands-on activity. A total of 860 children viewed the presentation. A second component of the initiative was the distribution of dental health information packages to the facilities and to the parents of the children who attend the facilities. The staff members at each facility were asked to complete an evaluation on the appropriateness and effectiveness of the presentation. The evaluation also requested comments and suggestions to guide similar presentations and programs which may take place in the future. Most (95%) of the facilities provided feedback. Overall, the responses reflected very positively upon the Early Childhood Education Initiative. All of the respondents indicated the presentation was informative and age-appropriate, and that the educational information packages would be useful for both the facility and parents.

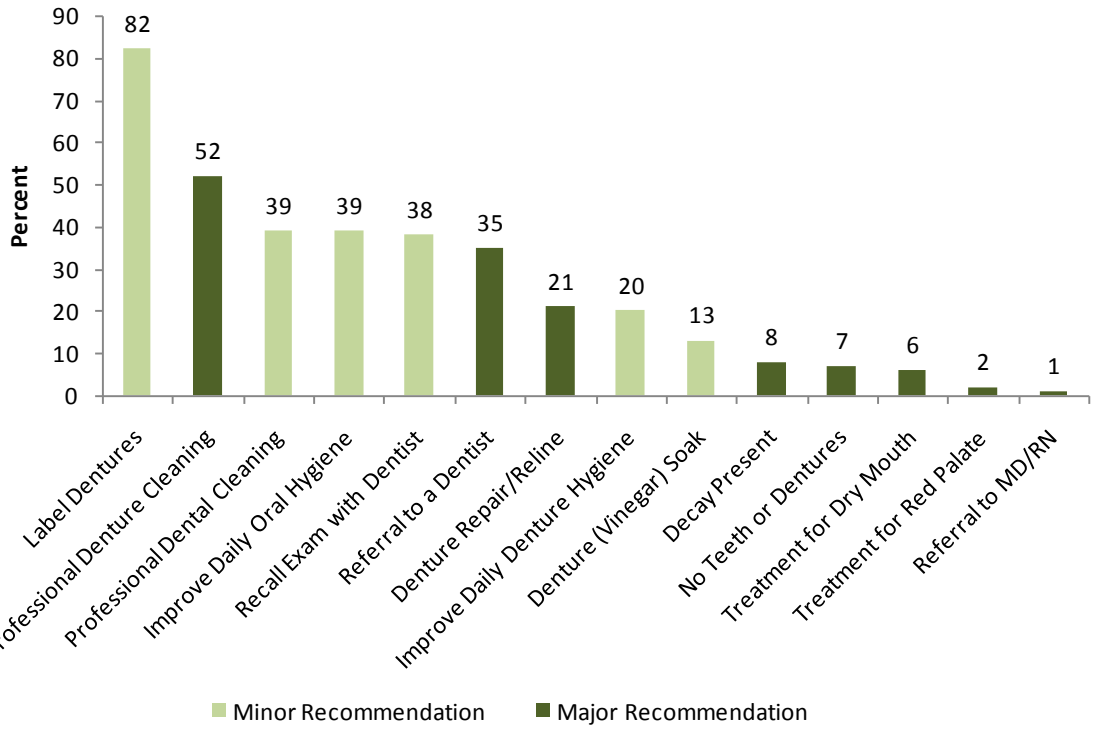
Seniors Oral Health Outreach Study[8]

In 2008, the SOHO Study was conducted by the Grey Bruce Health Unit to evaluate the oral health status of seniors in long-term care facilities. A total of 8 long-term care facilities in Grey Bruce were randomly selected to participate in the study and included two homes for the aged, four nursing homes

[7] Information from: (Muzzell, T., 2008).
[8] Information from: (Leffley, A., 2008).

and two retirement homes. Overall, a total of 250 seniors were screened by a dental team consisting of both a dental hygienist and a dental educator. A report with the findings from each screening was given to the participant, as well as the long-term care facility's Director of Care, for referral to a dental professional. The majority of residents were provided with a recommendation for some form of oral treatment. The recommendations were categorized into major and minor issues, which appear below.

Figure 2. Proportion of Residents in the SOHO Study with Major and Minor Recommendations



Data source: Seniors Oral Health Outreach Study—Final Report (2008)

The Grey Bruce Health Unit currently does not have programs in place to aid seniors in the maintenance of their oral health. The final recommendations of this study recognize the need for an oral health program in the senior population. Unfortunately, there is currently no Public Health funding to administer a seniors' oral health program.

First Nations Regional Longitudinal Health Survey[9]

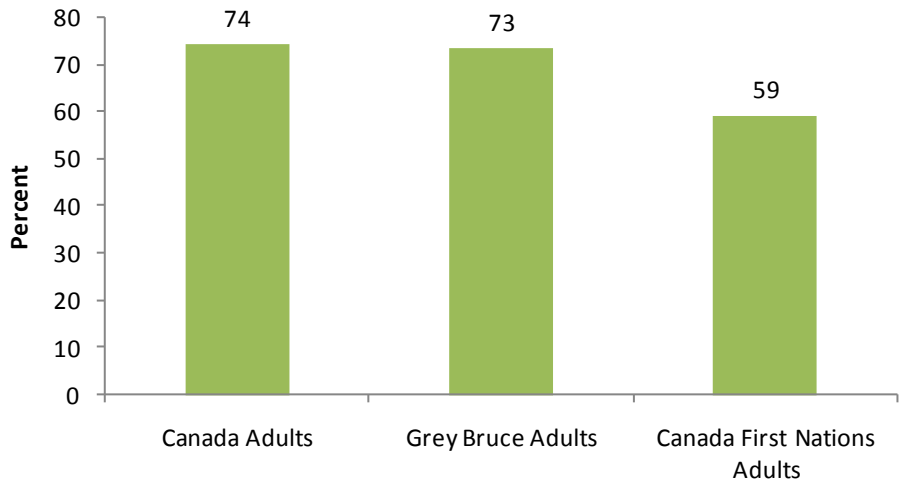
The RHS is conducted by the First Nations Assembly of Canada to examine the health of First Nations people in Canada. The RHS began in 1997 and is completed every 4 years; the most recent data available are from the second round in 2002/2003. The survey is administered as an 80-minute in-person interview. A total of 22,602 surveys were completed in the 2002/2003 cycle, consisting of adult, youth and child respondents. Nearly all provinces and territories in Canada were included in the survey, with the exception of Nunavut. Approximately 2.1% of the First Nations population in Ontario living on a

[9] Information from: (RHS National Team, 2007).

reserve were included in the sample. The RHS 2002/2003 contained a series of questions on the topic of oral health. Adults, youth, and children were asked when their last visit to the dentist had occurred. A higher proportion of First Nations females than males had been to a dental professional in the past year. Approximately 3 out of every 5 First Nations adults reported visiting a dental professional in the past year.

Figure 3 compares this estimate to the results of a similar question asked in CHMS 2007–2009 and in RRFSS 2009. Fewer First Nations adults had visited a dental professional in the past year when compared with these Canadian and local surveys. In the RHS, First Nations adults identified barriers to accessing dental care as: wait times, costs, lack of dental coverage, and lack of service availability. Overall, the study suggests that the oral health of First Nations is poor in comparison to the rest of the Canadian population.

Figure 3. Proportion of Individuals Who Have Visited a Dental Professional in the Past Year



Data source: Oral Health Component of the Canadian Health Measures Survey 2007–2009, Rapid Risk Factor Surveillance System 2009, First Nations Regional and Longitudinal Health Survey 2002/2003.

A much larger proportion of First Nations youth and children aged 3 to 17 had visited a dental professional in the past year when compared to First Nations adults. Parents of children 5 years of age and under were asked if their children had ever had early childhood caries (ECC). Reportedly, 11.9% of children under 3 and 28.4% of children aged 3 to 5 had ECC.

Grey Bruce Health Unit Oral Health Programs

There are a number of oral health programs administered by the Grey Bruce Health Unit. Each of these programs is targeted towards a certain population group, and each contributes to the maintenance and improvement of the oral health of Grey Bruce residents.

Let's Learn Kindergarten Registration[10]

Each fall, Grey Bruce Health Unit holds Let's Learn Kindergarten Registrations at elementary schools across Grey and Bruce counties to provide an opportunity for the parents of pre-school-aged children (age 3 to 4) to access resources that may be useful in preparation for their child to begin school. Let's Learn Registrations include information and assessments relating to childhood health and development, as well as a chance to meet school staff. A Public Health Dental Hygienist and/or Dental Educator will often attend Let's Learn Kindergarten Registrations at various schools to promote good oral health habits and share information on dental issues such as healthy food choices.

In 2007, Public Health dental teams began to target high-risk schools by ensuring that Let's Learn Clinics at high-risk schools are attended each year. High-risk schools are identified on the basis of the rates of decay in grade 2 students for the previous year (previous to 2007, based on decay rates in entry-level students). Children who visit the oral health station at a Let's Learn Clinic are offered visual dental screening by a dental hygienist and education on oral hygiene. Over the past three school years, approximately 258 children have been screened each year at Let's Learn clinics. Approximately 15% of these children currently have—or have had—decay present. One out of every fifty children screened required urgent treatment and met the additional requirements for referral to the CINOT program.

The Public Health oral health station at the Let's Learn Clinic also provides an opportunity for parents to ask any questions about oral health that they may have. At this event, Parents are also encouraged to have their child visit a dentist before they begin school, if they have not already done so. At the 2009 Let's Learn clinics, a total of 781 parents were asked if their child had ever visited the dentist before and the majority (60%) responded that their child had never before been to a dentist.

Childhood Dental Screening[11]

Dental screenings are conducted annually at all consenting elementary schools in Grey and Bruce Counties to provide a means of surveillance of childhood tooth decay. Over the past 5 years, students in Junior Kindergarten, Senior Kindergarten, Grade 2, Grade 4, Grade 6 and Grade 8 have been screened. Parents are directed to notify the Health Unit if they do not want their child to participate in the program. Public Health dental screenings for children can also be requested at any time. Each oral screening is conducted by a team consisting of both a dental hygienist and a dental educator.

The dental hygienist conducts a visual screening of the mouth, using a light and dental mirror to look for decay in primary and permanent teeth and determine eligibility for preventive care. Notices of the screening results are sent home to parents. Referrals for additional care are sent by mail to the child's home. Dental caries are to be treated by the child's dentist and, if the child meets the criteria, referral may be made to the CINOT program. Preventive services such as fluoride, sealants and oral hygiene instruction are provided to eligible children by the Grey Bruce Health Unit dental teams in a subsequent visit to the school.

[10] Information from: (Grey Bruce Health Unit, 2010a).
[11] Information from: (Ito, D., 2008).

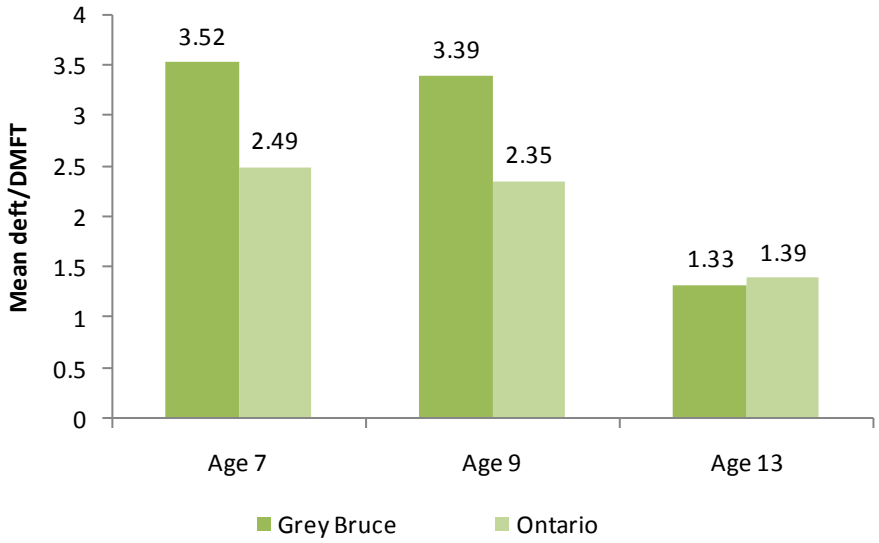
Children who have been referred for dental treatment are screened the following year for follow-up of the outcome of their care. Many of the children who were identified as having untreated decay are screened again the following year—regardless of their grade—to assess the severity of any decay that remains untreated.

An average of 9,156 students have been screened each school-year since 2005–2006. In 2009–2010, 67 schools were attended, and an overall total of 9,308 students were screened both at the schools and through separate screening requests.

Based on the past 5 years, approximately 1000 students a year are referred for fluoride treatment, while approximately 450 are referred for sealants on permanent molars. About 90 children a year who are referred for sealants get these preventive procedures completed by the Public Health dental teams. Unfortunately, it is unknown to what extent the other children referred for sealants have their treatment performed by another dental care provider. An estimated 1 in every 8 children screened are referred to the CINOT program (approximately 1150 chidren).

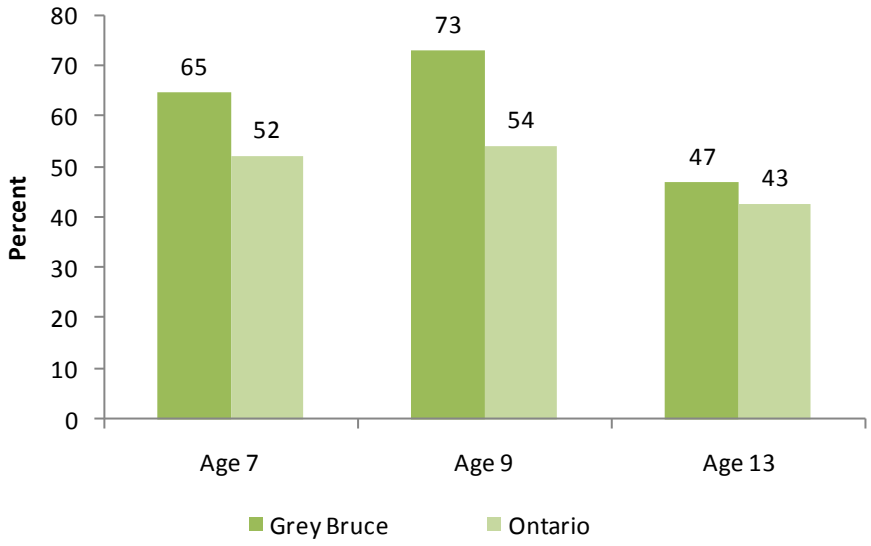
In the school years prior to 2007–2008, dental surveys were also conducted on a portion of children who were screened as a requirement of the Ministry of Health and Long-term Care. Dental surveying involves charting and recording a complete record of the student's dentition. From these surveys, information such as the number of deft/DMFT (decayed extracted/missing and filled teeth) was obtained. In recent years, dental surveying has not been conducted. Figure 4 and Figure 5 below contain the Grey Bruce Health Unit and Ontario-wide results from dental surveying for the years 2005 to 2007. In comparison to the rest of Ontario, Grey Bruce has higher deft/DMFT scores and rates of decay, particularly in 7-year-olds and 9-year-olds. Appendix B: deft/DMFT Scores contains further explanation of the deft/DMFT score and its use.

Figure 4. Mean deft/DMFT Scores, 2005–2007



Data source: Ontario Association of Public Health Dentistry Survey of Ontario Health Units. August 2008. Ontario Dental Indices Survey.

Figure 5. Proportion of Children with Tooth Decay, 2005–2007



Data source: Ontario Association of Public Health Dentistry Survey of Ontario Health Units. August 2008. Ontario Dental Indices Survey.

Mennonite and Amish communities are unique populations within Grey Bruce. Mennonite and Amish schools are often small in size and include students from grades 1 to 8. With consent, all children in these small, priority schools are screened, regardless of their grade.

In upcoming years, a number of changes are set to take place in the dental screening program. A new centralized computer system, called the Oral Health Information Support System (OHISS) will provide an electronic database for all dental screening information collected. In accordance with the OPHS, Grade 2 students will be screened to determine the risk level of each school.

School Risk Levels[12]

Risk levels serve as an indicator for schools that have a high proportion of children with dental caries and are useful for planning in subsequent years. The risk level of each participating school is calculated as the proportion of grade 2 children at a school who have two or more teeth with untreated caries. Previous to 2007, this was calculated for entry-level grade children, which includes both junior and senior kindergarten in most schools, or Grade 1 in some school systems. The risk level categories are listed in Table 1 below.

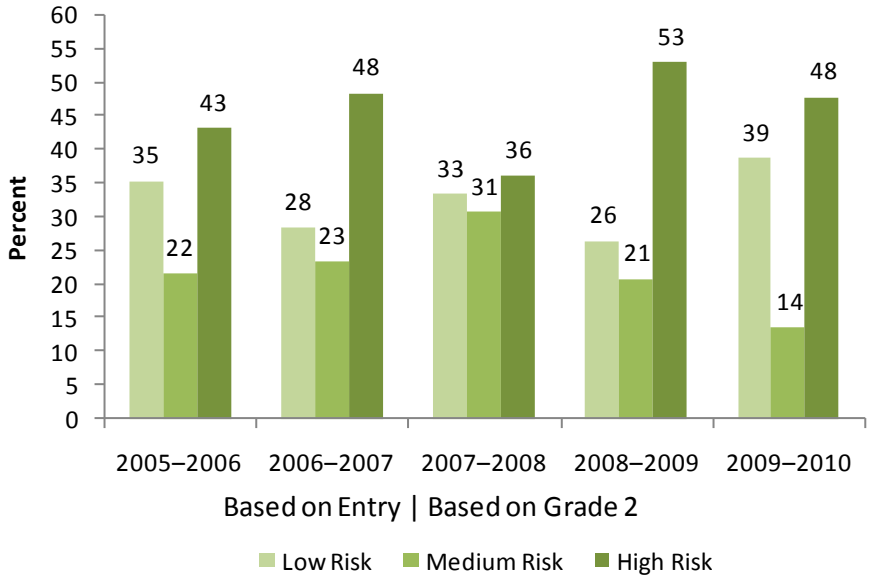
Table 1. School Risk Level Classification

Proportion of Children with 2+ Caries	Classification
≥ 14%	High Risk
9.5% – 13.99%	Medium Risk
< 9.5%	Low Risk

Each year, dental screenings are conducted at approximately 65 elementary schools in Grey Bruce. Figure 6 presents the proportion of all participating schools in each risk category over the past five years. Figure 7 presents the schools in each risk category over the same five years, after removing the small schools which have ten or fewer students per year in the reference grade.

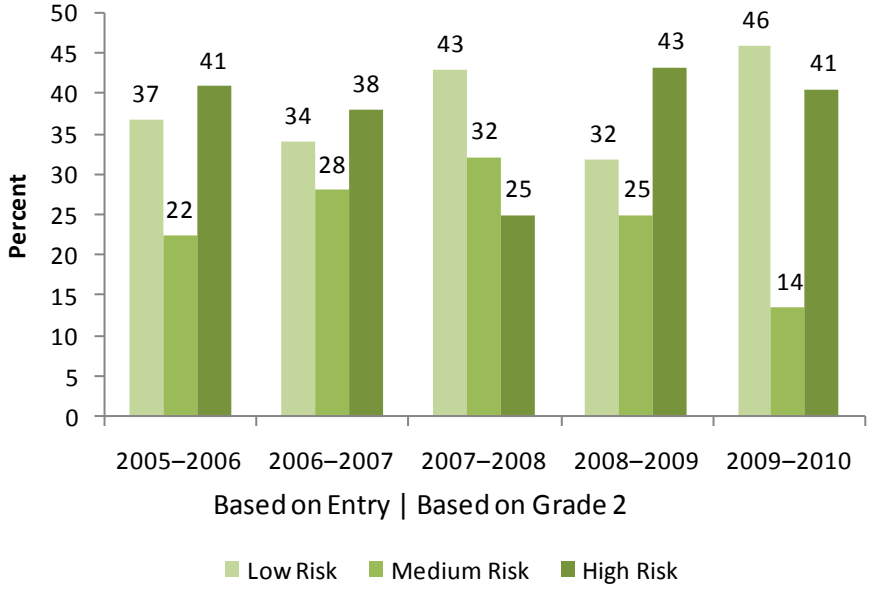
[12] Information from: (Grey Bruce Health Unit, 2010b).

Figure 6. Proportion of Participating Grey Bruce Schools Classified as Low, Medium and High Risk, 2005–2010



Data source: Grey Bruce Health Unit School Risk Levels 2005 – 2010

Figure 7. Proportion of Participating Grey Bruce Schools with More Than 10 Students in the Reference Grade Classified as Low, Medium and High Risk, 2005–2010



Data source: Grey Bruce Health Unit School Risk Levels 2005 – 2010

Children in Need of Treatment

The CINOT program is co-funded by the Government of Ontario and the health unit to provide emergency dental care to children and youth age 17 who qualify for the program. Previous to 2009, the program included only children up to grade eight (age 14). However, it was expanded in 2009 to include older youth ages 14 to 17, and the provision of coverage for out of hospital anesthetics for children ages 5 to 17.

Eligibility criteria for CINOT treatment include:

- Not having dental insurance
- Low-income status
- And the child must either be suffering from or be imminently suffering the following as a result of dental problems or trauma:
    - Pain
    - Infection
    - Haemorrhage
    - Trauma
    - Pathology
    - Caries
    - Periodontal disease

Entry into the CINOT program occurs through referral by a public health dental hygienist, a public health dentist, or on occasion by a dentist in private practice. Often, children are referred as a result of a public health dental screening which is used to determine the need for emergency treatment. Parents and teachers can request to have a child screened with permission from a parent or guardian.

The number of participants and costs of the CINOT program are outlined in Table 2. The expansion of the CINOT program to include children up until the age of 17 has resulted in an estimated increase of over 160 clients per year and a corresponding increase in total cost of approximately $77,000 per year.

Table 2. CINOT Program Costs, 2005–2010

School Year	# of Clients Participated	Average Cost Per Client	Total Cost per School Year	Ages Eligible
2005–2006	408	$292.95	$119,523.57	0–14
2006–2007	430	$330.02	$141,907.81	0–14
2007–2008	413	$338.48	$139,791.83	0–14
2008–2009	585	$310.16	$181,443.63	0–14 for 2008 0–17 for 2009
2009–2010*	581	$363.43	$211,150.27	0–17
Each school year runs from September to August of the following year ****Complete data not available, only until June 2010***				
Data Source: 2005–2008 MOHLTC, CINOT 5.2 database; 2009–2010 MOHLTC, Oral Health Information Support System (OHISS)				

Ontario Works[13]

The Ontario Works (OW) program is funded by the Government of Ontario to financially assist adults who are looking for work to support themselves and their children pay basic costs (housing costs and food) of the unemployed person and their dependents. Children under the age of 18 who have parents receiving OW benefits (or who are themselves receiving OW benefits) are eligible for basic dental care coverage. As well, children over 18 years of age may be able to get coverage through discretionary benefits. The Grey Bruce Health Unit administers the OW dental program for children. In the year 2009, a total of 443 clients had claims processed. The average cost per client was $218. This represents a total cost of $96,661.36 in claims for OW child dental benefits for the year 2009.

Children's Oral Health Initiative[14,15,16]

Health Canada began the Children's Oral Health Initiative (COHI) in order to prevent and control tooth decay in First Nations and Inuit children living on reserves. With the permission of a parent or guardian, First Nations children from birth to age seven are eligible for dental screening and preventive services. The initiative also targets parents of young children by providing oral health education for both parents and their child(ren).

The COHI program began at the Grey Bruce Health Unit in January of 2006. Both the Saugeen First Nation and Chippewas of Nawash Unceded First Nation communities are visited by a dental hygienist and dental educator to screen participating children. Screening involves a visual assessment of the mouth for tooth decay to determine what preventive services each child requires. Preventive services provided through COHI include fluoride varnish applications and sealants for permanent molars. These services are provided during on-site visits to the participating communities.

Over the past 4 years, the COHI program within the Grey Bruce Health Unit has screened an average of 101 children each year, representing an estimated participation rate of 61%. Of the children screened,

[13] Information from: Ontario Works, Oral Health Information Support System (OHISS).
[14] Information from: (Grey Bruce Health Unit, 2010c, 2010d).
[15] Information from: (Health Canada, 2007).
[16] Information from: (Health Canada, 2005).

about 60% are aged 0 to 4, while the remaining 40% are age 5 to 7. Just over half of the children screened reside at Saugeen First Nation, and the other half at Chippewas of Nawash Unceded First Nation.

Almost all (99%) children screened receive a minimum of 1 fluoride varnish application. The majority (73%) of children who are screened receive all of the recommended fluoride applications. The frequency of recommended fluoride applications varies from twice per year for children without caries, to four times per year for children with dental caries. Sealants are also applied to permanent molars. Each year about 14 children require sealants.

Children who require dental treatment because of tooth decay or another oral health issue are referred to their dentist. Registered First Nations people who do not have dental insurance are covered for basic dental procedures through the Non-Insured Health Benefits program offered by the First Nations and Inuit Health Branch of Health Canada.

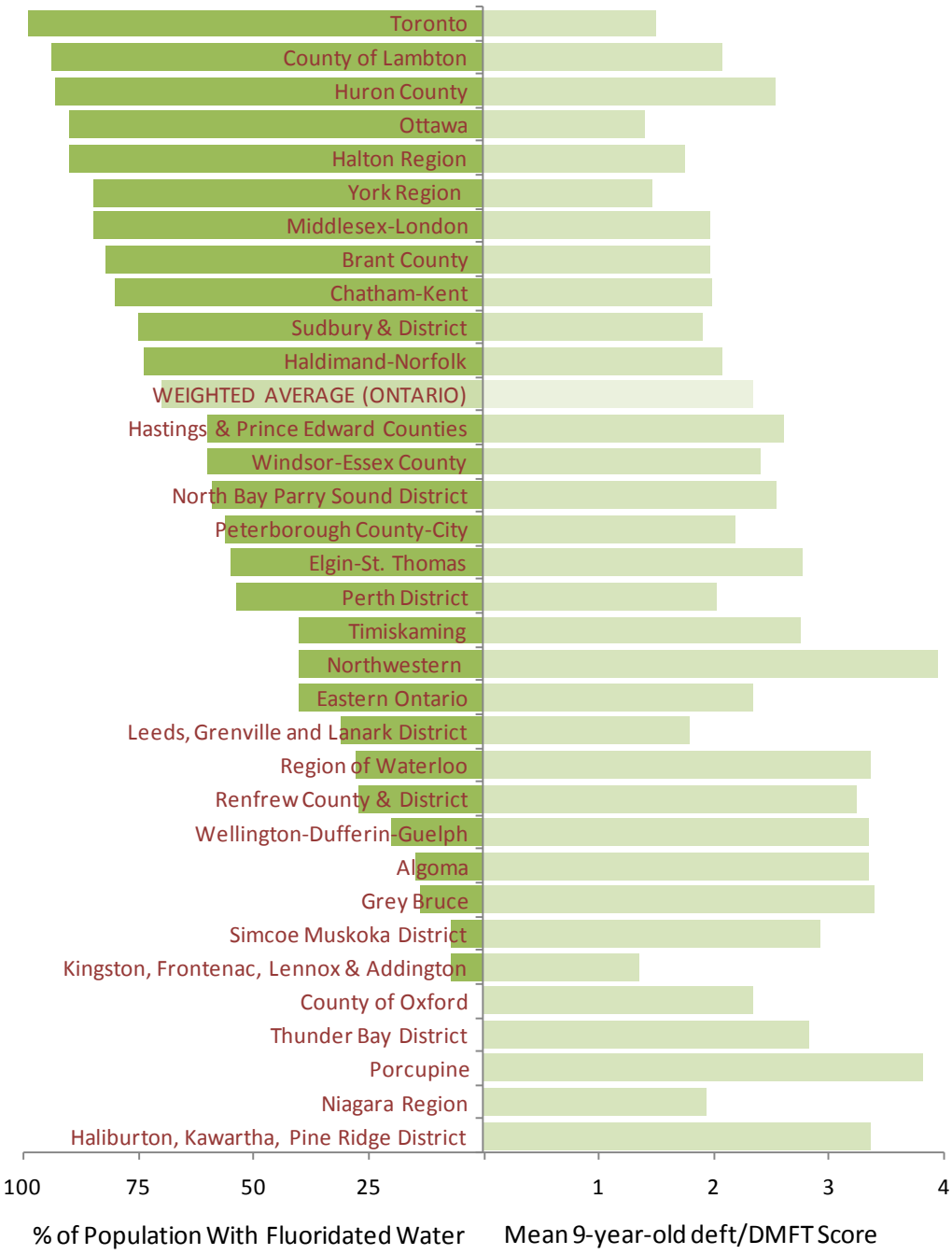
Fluoride[17]

Fluoride has been demonstrated to prevent dental caries. Fluoride is naturally found in some foods, and some water sources. It is also added to the water of many municipalities and to other products such as toothpaste. Approximately 7% of the total population in Grey Bruce has access to community-fluoridated water, and these 7% reside in Owen Sound, which has the only municipal system within Grey Bruce that currently fluoridates its water supply. In Owen Sound, the fluoride concentration averages 0.51 mg/L, which is within the recommendations of the Ontario Public Health Standards Protocol for the Monitoring of Community Water Fluoride Levels

Figure 8 compares the proportion of the population with access to community water fluoridation to the oral health status of 9-year-old children in 33 of the 36 health units in Ontario, as well as a weighted average derived from 32 of the 33 health units that represents the Ontario rates. As the proportion of the population in each health unit with fluoridated water increases, the average number of decayed, missing or filled teeth (DMFT) decreases. This is the general trend observed, however there are other factors that impact the DMFT scores of children. In Figure 8, the Ontario average is shown in medium green, and the Grey Bruce Health Unit is shown in light green.

[17] Information from: (Ito, D., 2008).

Figure 8. Relationship Between Oral Health and Percentage of Population with Fluoridated Water by Ontario Health Unit



Data source: Ontario Association of Public Health Dentistry Survey of Ontario Health Units. August 2008.

Conclusion

In our area, self-rated health, dentate status, and visits to a dental care provider are positively affected by income levels (i.e., higher-income people tend to report better oral health and oral health outcomes). This may be because those with higher household incomes are more likely to have some form of dental insurance. Further, a lower percentage of Grey Bruce residents than Canadians have dental insurance, putting our population at higher risk of unchecked dental decay.

Of particular concern, the Southern Ontario Infant Feeding Study found that a quarter of mothers clean their infants mouth too infrequently (less than daily), and another quarter never clean their infant's mouth. As well, 6% of mothers put their baby to bed with a bottle or sippy cup with a non-water beverage every day. According to Let's Learn data, 3 in 5 children preparing for entry to school had never before visited a dentist, about 1 in 7 had decay present or have previously suffered from decay, and 1 in 50 were referred to the CINOT program for urgently required treatment.

In the two First Nations communities in our area, it is estimated that 60% of residents had seen a dental professional in the past year. This percentage is lower than the estimate for Grey Bruce residents provided by RRFSS.

The Seniors Oral Health Outreach Study, which saw 250 seniors screened by a dental team, made 363 recommendations to clients, ranging from minor recommendations such as labeling dentures to major recommendations such as having dentures professionally cleaned. There is a need for seniors dental services within the community, but unfortunately there is no funding at the public health unit level to carry it out.

On average, more than 9000 dental screenings are performed in schools and through separate screening requests each school year by teams consisting of a dental educator and dental hygienist. Approximately 11% are referred for fluoride treatment and 5% are referred for sealants on permanent molars. Less than 20% of those referred get these preventive procedures completed by public health dental teams, and it is not possible to determine to what extent the remaining 80% are having procedures completed by dental professionals in the community.

Grey Bruce Health Unit 9-year-olds have the third highest deft/DMFT score (3.39) of the 33 health units for the 2006 school year (Figure 8). Nearly half (48%) of all schools where screenings took place in the 2009–2010 school year were found to be high-risk based on the rate of grade 2 students with two or more teeth with untreated caries. In the 2009–2010 school year, 581 children received urgent dental treatment through the CINOT program. This is an increase in clients of 42% over the 2005–2006 school year, which is attributable to the inclusion of children aged 15 to 17 from 2009 on. Previous to that, the program had been limited to serving children 0 to 14 years of age. The OW child dental benefits services administered by Grey Bruce Health Unit provided service to 443 clients in 2009.

Through COHI, the health unit also provides service to children from 0 to 7 on the Saugeen First Nation and the Chippewas of Nawash Unceded First Nation reserves. On average, 100 children are screened per year. Nearly all of these children receive at least one fluoride varnish application and 73% receive the

recommended number of fluoride applications (which varies depending on dental health status). On average, 14 children require and receive sealants to permanent molars through this program. Children who require treatment are referred to their dentist—registered First Nations without dental insurance are provided coverage for basic dental procedures through the Non-Insured Health Benefits program for First Nations and Inuit offered by the First Nations and Inuit Health Branch of Health Canada.

Given the proven effectiveness of water fluoridation, other municipalities should be encouraged to fluoridate their municipal water supplies. Those residents who do not have access to municipal water (those on private well water) should be encouraged to have their children receive fluoride applications from their dental care provider.

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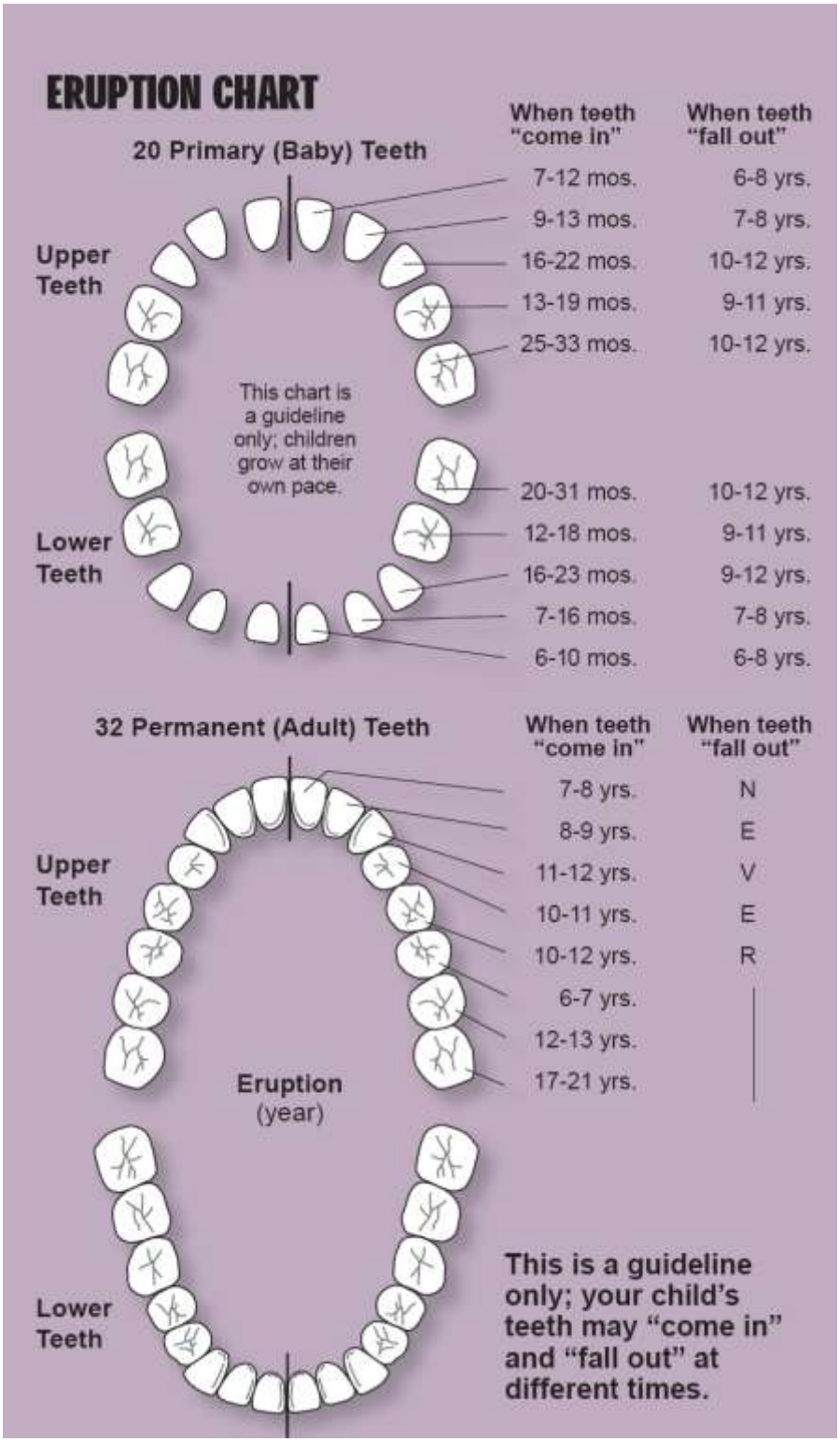
Appendix A: Dental Eruption Chart



Source: Government of Ontario. (2009). Oral Health: Different Ages / Different Stages Birth to 12 Years.

Appendix B: deft/DMFT Scores[18]

The dental status of a population can be described by compiling deft/DMFT data for the total group. The deft/DMFT rate is the average number of decayed, missing or extracted and filled teeth per child in a certain age group.

deft/DMFT Rate = Σ (def/DMF counts for all children examined) ÷ Number of children examined

DMFT in uppercase refers to permanent teeth, while deft in lowercase refers to deciduous (baby) teeth.

The deft/DMFT score is obtained by a visual examination of the mouth. The number of def/DMF teeth for children of different ages is never added together for the purpose of computing an average rate for the population group. Therefore the deft/DMFT rate for a group of children has meaning only in terms of one specific age group.

[18] Information from: (Association of Public Health Epidemiologists of Ontario (APHEO), 2010).