



Healthy Teeth, Healthy Lives

INUIT ORAL HEALTH ACTION PLAN 2013



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INUIT TAPIIRIT KANATAMI

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INUIT TAPIIRIT KANATAMI

In collaboration with:



Inuvialuit Regional Corporation



NUNATSIAVUT
Inosikagittoitsigasuannimi amma Nunalinnik Pivaatiksigsasuannimi
Health and Social Development



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The involvement of all partners is essential to implementing this Action Plan. Links between federal, territorial, provincial and Inuit organizations need to be enhanced so that the Inuit-specific perspective is reflected in the planning and implementation of all oral health initiatives.

Executive Summary

The 2008-2009 Inuit Oral Health Survey highlighted the need for urgent and comprehensive measures to overcome the unacceptably high rate of oral disease that is two to three times that of the rest of Canada.

These survey results demand a focused approach to improving the oral health of Inuit: raising awareness of the importance of oral health and its link to overall good health; building partnerships between all levels of government; engaging dental training institutions and organizations in finding creative solutions to service delivery and skill shortages amongst Inuit; and, in general, ensuring that Inuit of all ages, receive quality, timely and culturally safe dental care, both in treatment and prevention.

Currently access to regular dental care is not consistent; treatment is often not timely; and there is not sufficient access to prevention. Inadequate funding arrangements and jurisdictional issues, lack of leadership at all levels, lack of access to services, limited emphasis on prevention, poor-nutrition, and difficulty in recruiting and retaining oral health service providers mean ongoing challenges in achieving an acceptable oral health standard for Inuit.

A multi-faceted approach for the stabilization of current disease levels and prevention of further diseases will require the active engagement of Inuit in the development of sustainable solutions. This Action Plan outlines initiatives that will begin to address the oral health disparity. It is described through five goals, eight areas for action, and 39 recommended initiatives.



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The eight primary actions:

1. Strengthen leadership
2. Link oral health to overall health
3. Increase prevention
4. Improve treatment
5. Engage and mobilize parents and caregivers
6. Engage and mobilize adolescents
7. Increase the number of Inuit oral health service providers
8. Improve use and access to nutritional foods



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Vision for Inuit Oral Health

Oral health for all Inuit, with healthy teeth and mouths throughout their lifetime based on the best oral care practices, food security, and access to effective and timely oral health services.



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The Inuit Oral Health Survey was conducted by the Office of the Chief Dental Officer of Canada, Health Canada, in 2008-2009. This survey was undertaken with the cooperation and involvement of the Inuit Tapiriit Kanatami and the

Government of Nunatsiavut, Department of Health and Social Development (Newfoundland and Labrador); Nunavut Tunngavik Incorporated (Nunavut); and the Inuvialuit Regional Corporation (Northwest Territories).

Both the Inuit Oral Health Survey (OHS) (2008-2009) and the Canadian Health Measures Survey (CHMS) (2007-2009) give recent data on rates of disease and provide the basis for comparison of these rates in Inuit communities to the rest of Canada. The results indicate that Inuit communities are suffering from unacceptably high levels of dental decay¹, two to three times higher than that experienced by those in the rest of Canada.

This Inuit Oral Health Action Plan is a response to the above surveys, which outline the vision, goals, and actions required to improve oral health for Inuit. ITK has collaborated with



I would like to acknowledge the immense support provided by the Inuit organizations. The National Inuit Committee on Health (NICoH), within Inuit Tapiriit Kanatami (ITK) helped to craft the interview questions, found the recipients for the contribution agreements to hire the community survey staff, and brought their support and expertise to draft the participant's consent form, information brochure and poster.

Dr. Peter Cooney, Canadian Oral Health Advisor

two subcommittees of the National Inuit Committee on Health (NICoH), the Inuit Non-Insured Health Benefits Working Group and the Inuit Public Health Task Group, to develop the *Inuit Oral Health Action Plan*. Approval of the Action Plan was received from the NICoH on November 28, 2012.

It is our hope that this document will act as a guide for collective action by all levels of government and other stakeholders involved in Inuit oral health.

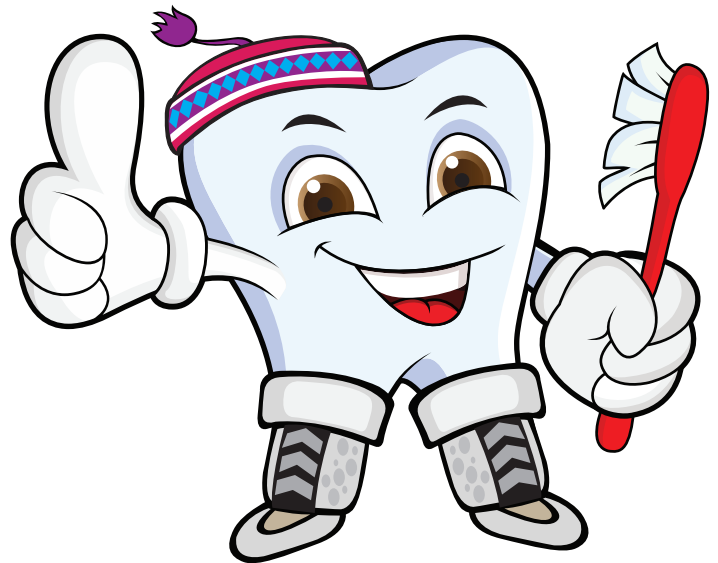
Principles

The vision is based on the following principles:

1. Respect for Inuit values, language, knowledge and culture.
2. Equitable access to quality dental services across Inuit Nunangat.
3. Solutions and actions that are Inuit-specific and work within the geography, climate and isolated conditions of Inuit communities and hamlets.
4. Communication that includes collaboration and partnerships across jurisdictions and with other stakeholder groups.
5. The place to start is with the children.



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Goals

There are five broad goals for the Inuit Oral Health Action Plan:

1. Overall oral health of Inuit to parity with the Canadian norm (table 1) through reducing the incidence of oral disease;
2. Inuit children reach the World Health Organization's goal of 50% children entering school without a cavity².
3. Appropriate oral disease prevention, health promotion and treatment is available, reducing practices such as extractions as the preferred treatment alternative for diseased teeth³.
4. Awareness of oral health and its link to better overall health; and
5. Families that have support to help them achieve better oral health outcomes.

Actions

1. Strengthen leadership
2. Link oral health to overall health
3. Increase prevention
4. Improve treatment
5. Engage and mobilize parents and caregivers
6. Engage and mobilize adolescents
7. Increase the number of Inuit oral health service providers
8. Improve use and access to nutritional foods



Approximately 55,000 Inuit live in Canada, the majority of whom live in 53 communities across the four Inuit land claim regions: Inuvialuit Settlement Region (Northwest Territories), Nunavut, Nunavik (Northern Quebec), and Nunatsiavut (Northern Labrador). Inuit call this vast region *Inuit Nunangat*, or the Inuit homeland. The Inuit population is young, with more than twice the proportion of the Canadian population four years of age or under.

Current Environment

The current model for the provision of dental services in the Northwest Territories (NWT), Yukon and Nunavut is not meeting the basic needs of all residents.

Pan-Territorial Oral Health Initiative Report. Government of Northwest Territories: G. Uswak, Department of Health and Social Services; 2007. PTOHI Phase One Report.

The Inuit Oral Health Survey (IOHS): Results

The IOHS outlines a pattern of oral disease that begins early in a child’s development and continues throughout life. Cavities are pervasive; severe disease among young children, requiring extensive extractions under general anesthetic (known as GAs)⁴, is common. People have pain in their mouths, and often have difficulty chewing food. The high rate of disease means that teeth are more likely to be replaced by dentures early in life. Table 1 shows a comparison of dental carries, and decayed, missing, or filled teeth (DMFT) as compared to the general Canadian public.

The Inuit Oral Health Survey further reports that:

- Half of Inuit had made a visit to a dental professional within the last year.

- Children tended to have the highest visit rates (58%) and older adults, the lowest (33%).
- 30% of Inuit reported staying away from certain types of food because of problems with their mouth.
- 30% of Inuit reported they had ongoing pain in their mouths.

The Survey noted that, while dental expenditures from both the Federal and the Territorial Governments continue to grow, Inuit oral health status is not improving:

- 85% of 3-5 year olds have or have had a cavity.
- 93% of 6-11 year olds have or have had a cavity.
- 97% of 12-19 year olds have or have had a cavity.
- 99% of 20-39 year olds have or have had a cavity.
- 100% of 40 year olds and up have or have had a cavity.

Table 1: Inuit Oral Health Compared to the General Canadian Public⁵

	% with dental caries		Mean count of decayed, missing, or filled teeth	
	Inuit	Others	Inuit	Others
Pre-school	85.3	Not available	8.22	Not available
School aged (6 – 11)	93.4	56.8	7.08	2.48
Adolescents (12–17)	96.6	58.8	9.49	2.49
Adults (18 +)			15.1	6.85



Figure 1. Map of Inuit Nunangat.

Funding and Delivery

Although delivered as part of Primary Care, dental services are not insured medical services under the Canada Health Act. This often means that dental services are not seen by the Inuit as ‘regular’ health services and their use may only be triggered by an emergency situation (pain in their mouth). This is particularly an issue with young children⁶ where their first ‘visit to the dentist (or other health professional)’ can be when they are experiencing pain and involves extractions, needles or a general anesthetic. This can be a traumatic initial experience and can establish a negative relationship to dental professionals and a reluctance to maintain regular visits⁷.

The delivery of dental services throughout Inuit Nunangat is provided in a variety of ways: through dental therapists and dental hygienists; itinerant dentists (or other oral health professionals); or ‘fly out’ access to services in other (often southern) communities. Prevention programs, such as the

Children’s Oral Health Initiative⁸ (COHI), are in a limited number of communities due to funding restrictions and lack of access to community based dental professionals (primarily dental therapists).

For dental services unavailable at the community level, travel for the patient and an escort if necessary, accommodation, ground transportation, and meals are paid by the Non-Insured Health Benefits (NIHB) program. In some Inuit self-governing areas these costs are paid by Inuit self-governments from NIHB transfer dollars. Where the federal NIHB transportation program has not been transferred, the costs are covered directly by the NIHB federal program.

Who Delivers Dental Services?

Health professionals who deliver dental services in a community are a community’s ‘dental team’. This team can consist of dental specialists, general practitioner dentists, denturists, dental therapists⁹ (DTs), dental hygienists, dental

assistants and, more recently, COHI aides (community members who have been trained to deliver such services as fluoride varnish application).

Inuvialuit Settlement Region

Dental care is provided by salaried dental therapists through the Beaufort Delta Health Authority. Dentists are contracted through a Request for Proposal (RFP) process and are paid a fee-for-service through contributions by the Government of the Northwest Territories (GNWT) and Health Canada's NIHB Program. COHI is delivered in a limited number of communities. Dentists are reimbursed on a fee-for-service basis (direct billings) through the Health Canada's NIHB Program.

Nunavut

Dental therapists are salaried employees of the Government of Nunavut (GN) through the Department of Health and Social Services. 17 of the 26 communities in Nunavut have positions for DTs, few of which are filled¹⁰.

Dentists are contracted by the Government of Nunavut and operate on a fee-for-service basis through two primary private companies: Aqsaqniit Dental Services and Kivalliq Smiles¹¹. COHI is in a limited number of communities. Dentists are reimbursed on a fee-for-service basis (direct billings) through the Health Canada's NIHB Program.

Nunavik

The Nunavik Regional Board of Health and Social Services (NRBHSS) employs seven dentists: four are hired by the Inuulitsivik Health Centre, serving the Hudson Coast and three are hired by the Tulattavik Health Centre, serving the Ungava Coast. Salaries for these dentists are paid by the Régie de l'assurance maladie du Québec (RAMQ).

Fees for dental care are received as part of a block payment for all health care under the James Bay and Northern Quebec Agreement (JBNQA). Salaries of dentists are competitive and positions are readily filled. Dentists operate out of the local community service centers (LCSCs) that are located in each Nunavik community. Dental therapists cannot be licensed in Québec and do not practice in Nunavik. Although dental hygienists play a primary role in prevention and promotion of good oral habits, it has been difficult for the NRBHSS to recruit and retain them.

Nunatsiavut

The Nunatsiavut Government Department of Health and Social Development manages the NIHB program, including dental, for Health Canada, under its Fiscal Finance Agreement. They use a per diem system — each community receives a fixed number of days of services per year based on community size and measured need. Within the land claim area, per diem dentists visit each community every four to six weeks. The contractual fee is supported by the NIHB framework, with partial recovery of expenditures deriving from billings to provincial health care plans and private insurers. In the two larger communities, a hygienist, and fourth-year dental students from Dalhousie Dental School accompany the dentist. This results in savings from the lower cost of the Dalhousie service and reduced travel by contract dentists. Outside of the land claim area, beneficiaries receive dental service through fee-for-service payments.

COHI is delivered in all communities in the land claim.

Nunatsiavut strongly supports and has advocated for Dental Therapy in the land claim communities but has met resistance from the province of Newfoundland and Labrador who will not licence Dental Therapists. (Dental therapy services are delivered in the two First Nation reserves in Labrador).

Nunatsiavut currently has a return of service agreement with Inuit dental students at Dalhousie University, completing in 2014.

There is preliminary evidence in the Oral Health Survey of Labrador Aboriginal Children that the outcomes for children in this region are better than those Inuit children in the Inuit Oral Health Survey (2009), which may be partially explained by the use of the per diems for dentists. This funding arrangement facilitates greater consistency with the dental provider (one dentist goes into the same community on an ongoing basis), a better matching of skills required to community needs and greater control of costs since the parameters of the service to be delivery are described.¹²



There is a lack of leadership at the federal government level and some provincial and territorial levels in oral health planning, programs and evaluation.

Canadian Oral Health Strategy, Federal, Provincial and Territorial Dental Directors

Actions for Promoting Good Oral Health

Although there are examples of promotion and prevention activities throughout the North (COHI, school based programs, CPNP, posters and public awareness campaigns), the current oral health resources are primarily aimed at treating disease after it occurs. Without prevention (of disease) there will continue to be a greater need for expensive treatments, such as fillings, extractions under general anaesthetics, root canals and crowns, once disease occurs. Too often, there is an acceptance that poor oral outcomes, such as dentures, are inevitable¹³.

Real change requires a better balance of treatment and prevention activities. Oral health awareness needs to be improved, early intervention programs put in place, accessible treatment approaches implemented, good oral habits established to last throughout a lifetime, smoking cessation program enhanced and linked to healthy mouths, and partnerships with all stakeholders enhanced in order to move forward towards the common goal of improving the oral health of Inuit.

Inuit Oral Health Action Plan focuses on eight areas of action:

1. Strengthen leadership
2. Link oral health to overall health
3. Increase focus on prevention initiatives
4. Improve access to treatment
5. Engage and mobilize parents and caregivers
6. Engage and mobilize adolescents
7. Encourage Inuit to pursue careers as oral health service providers
8. Improve use of and access to affordable nutritional foods

Action One: Strengthen leadership

The Inuit Oral Health Survey provides the impetus for all levels of government and stakeholders in the oral health field to work together to provide the leadership to create a path forward. Dental health care professionals working in Inuit Nunangat, are eager to participate in improving oral health status, but they require leadership to establish this as a public health priority.

New ways must be explored to engage organized oral health professional associations and training institutions working with Inuit, in finding creative solutions to the oral health crisis. This collaborative approach was a primary recommendation of the 2003 House of Commons Report from the Standing Committee on Health, First Nations and Inuit Dental Health¹⁴. An outstanding model of this type of collaboration was the Inuit Oral Health Survey, where Inuit were intensely involved throughout the design and implementation of the survey.

Actions:

1. Enable ongoing high-level discussions between representatives of the four Inuit land claim organizations and federal/provincial/territorial policy and service decision makers, with the goal of collectively developing solutions (i.e. at the Inuit Public Health Task Group).
2. Empower this forum to make decisions and mobilize the resources needed for improving oral health outcomes.
3. In partnership with government and Canadian oral health institutions, promote and fund the replication of northern promising practices and training programs to support innovative dental service delivery.

4. Ensure that oral health professionals training (Dentists, dental hygienists, dental therapists, etc.) is incorporated into action taken under the Inuit Health Human Resources Action Plan.

We want to ensure people understand that good oral health is a public health issue — that the mouth is the gateway to the body and a healthy mouth and teeth are an important first step in good overall health.

Inuit Non-Insured Health Benefits Working Group (Inuit Caucus), 2012

Action Two: Link oral health to overall health

Oral health is an integral and inseparable part of being healthy¹⁵. Good oral health means: happier infants and young children; children and adolescents who can concentrate in school and learn better; people who have more confidence; healthier weights because people can chew and digest their food better; seniors who are healthier; and a population that has better overall health.

Poor oral health is linked to an increasing number of diseases^{16, 17, 18}. Cavities and gum disease may contribute to many serious conditions, such as diabetes, cardiovascular and respiratory diseases. Untreated cavities can be painful and can lead to serious infections, and are linked to heart disease and pre-term low birth weight babies¹⁹. In rare cases, bacteria from the mouth can enter the blood stream and lead to strokes in infants. Substance abuse²⁰ and smoking can lead to unhealthy oral conditions including chronic pain, periodontal disease and oral and throat cancers²¹.

Ensuring that there is an increased understanding that a healthy mouth and teeth can lead to better overall health must be a message that is integrated in to all public health initiatives.

Actions:

1. Launch a social marketing campaign that emphasizes the value of healthy teeth and mouths for all Inuit.

2. Promote good oral health as part of the overall public health agenda, including it in outreach to such community-based activities as seniors' lunches, home and community care assessments, well-baby clinics, preschool health checks, and activities under the Canada Prenatal Nutrition Program.
3. Make tools available that have messaging developed by the community.
4. Develop health promotion campaigns and educational material that originate from within the communities and are focused on oral disease prevention that respond to the needs and values of the community.
5. Ensure that when treatment is given (i.e. GAs), it is accompanied by good oral hygiene instruction (i.e. to keep your child's mouth healthy, you need to brush).
6. Incorporate health promotion within the education curriculum for all ages, promoting oral health as a part of overall good health.
7. Enhance smoking cessation programs to include the link to healthy teeth and mouths.

Action Three: Increase focus on prevention initiatives

Most funding for dental services in Inuit Nunangat is directed towards restorative treatments for caries and dental disease. When dentists arrive in a community, the backlog of required treatment means that they can provide little support for prevention activities. Early preventative care and effective, culturally appropriate promotion for good early childhood health requires greater attention. COHI has provided an excellent model for this type of intervention.

The prevention of oral health diseases will have several components, requiring a multi-faceted approach and

The cost of waiting until tooth decay has manifested is significantly higher than the cost of preventing it in the first place.

Ontario Dental Association, 2011

diverse teams of dental service providers. There is a need to have greater engagement of these teams of both dental service providers (such as dental therapists, dental hygienists or COHI aides) and allied health workers (such as community health workers, nurses, and workers in Head Start and Canada Prenatal Nutrition Programs) involved in public health prevention and promotion activities.

The members of the Inuit Public Health Task Group noted that any measures that can be provided on a public health basis (such as fluoride in drinking water, where possible) are most effective. Measures may include:

- Fluoride²²
 - Drinking water
 - Topical (varnish/gels) or systemic (tablets/food additives) treatments
 - Dietary fluoride supplements
- Good oral health habits
 - Tooth brushing and flossing
- Education
 - One-on-one instruction
 - Group instruction, i.e. prenatal, diabetes
 - Class room presentations
 - Building capacity with community partners i.e. working with the Head Start workers so that they know the best way to help children brush teeth
 - Media campaigns -pamphlets, posters, social media (particularly with younger community members)
- Making healthy food choices
 - Increasing food security
 - Promoting good eating habits, including breast feeding
 - Emphasizing the importance of the contents of baby bottles – limited fruit juices and no sugar sweetened beverages
 - Increased emphasis on calcium (milk, fish bones, dairy products) especially in pregnant women and young children.
- Early intervention techniques
 - Sealants
 - Fluoride varnishes/gels
 - Alternate Restoration Treatment (ART)
 - Xylitol
- Early and regular visits to an oral health provider

We all have the responsibility as parents to ensure our children's diets are made up of nutritious foods, and reduce the amount of candy and soda pop they are consuming. These contribute to the high rate of cavities. Parents must also tell their children that cleaning their teeth is very, very important.

ITK President Mary Simon's Statement — Inuit Oral Health Survey Highlights Need for Prevention and More Dental Care in Arctic Regions
NationTalk, May 17, 2011

Start with the parents

Understanding the transmission of the bacteria that causes tooth decay from parent/caregiver/family members²³ to the child is an effective way to motivate good oral health practices in the family²⁴. However, neither transmission nor the critical effect of proper prenatal diet on the growth of a baby's teeth²⁵ is well understood either by many community members or all health care professionals.

Because pregnancy is a time when prospective parents are open to lifestyle changes, programs offered for this group are very effective²⁶. One of the missed opportunities is with those pregnant women who have been transported to southern boarding homes to await their baby's birth. The time spent in these centres could be used so that the oral health needs of the mother are addressed and dental health education emphasizing the importance of keeping their baby's mouth healthy is added to the information they receive.

Strengthen preschool and school based prevention services

Public health early interventions such as preschool health checks, COHI, school/pre-school based fluoride application, and tooth brushing programs have been effective preventive



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programs. These programs, that deal with the population of children in a community rather than simply treat one child at a time, can improve the oral health of all children who live in that community. One of the most effective early intervention programs is the combination of fluoride varnish sealant application, tooth brushing, oral hygiene instruction and nutrition counselling²⁷.

Actions:

1. Integrate oral health messages into all programming for pregnant women making sure that these programs have an active outreach component.
2. Expand the access to oral health services for pregnant women, particularly when they are awaiting delivery.
3. Expand the number and extend the grades reached by integrated, multifaceted oral public health programs, such as COHI.
4. Review and monitor programs such as COHI and CPNP to assess impact and identify emerging practices that have success in the North.
5. Pursue funding for wide distribution of age appropriate tooth brushes and tooth paste and ensure that these are covered by subsidized food programming.
6. Ensure that all those involved in programs for children are trained in proper tooth brushing, flossing and that this is incorporated in school/daycare/Head Start curriculum.

7. Partner with the CDA and CDHA to create and implement a coordinated national prevention approach, grounded in regional/community needs/values.
8. Identify and work with local, community champions so that messaging can have more impact.
9. Add fluoride to a product already in use, such as water, salt or milk, to increase and target protection of teeth²⁸.

Action Four: Improve treatment

Treatment cannot, with current practices and funding levels, respond to the need in Inuit Nunangat. The Inuit Oral Health Survey notes that “much of the disease remained untreated” (in the communities surveyed). As an example, the proportion of the affected teeth that remained decayed for adolescents and young adults was 38.1% and 16.7% respectively compared to 14.9% and 12.6% among southern Canadians. In addition, more of the disease is treated by extractions among Inuit. Among adolescents, there were 20.3 extractions per 100 filled; the OHM-CHMS found that among adolescents, only 1.0 tooth had been extracted per 100 filled.”²⁹

Gaps in the timeliness of treatment often mean that more invasive treatment is required. Children may be screened and because of limited decay are scheduled for local treatment (for example by an itinerant dentist). However, delays in treatment may mean the decay has progressed and the child may now need a general anaesthetic (GA). Once a child returns to the community, there is often no support to improve oral hygiene behaviours. When such procedures have no follow-up, there may be relapse, requiring another GA procedure.

However, a number of innovative pilots for the delivery of services in communities, making them more accessible and timely, are underway. Health Canada’s Ontario Region tele-oral health pilot pairs community-based service providers with dentists (or other specialists) based at a southern community college. It uses Telehealth technology to help identify the treatment needed in the community so that the service provider who is in the community (dentist, dental hygienist, dental therapist, dental assistant or community health nurse) can proceed with treatment on a

timely basis. To affect change in the oral health status of Inuit the current treatment mode also needs to be accompanied by extensive oral health promotion and prevention. Dalhousie is integrating community practice in northern communities for fourth-year students, with the potential of timely community-based service delivery.

Actions:

1. Promote immediate and intensive action to stabilize the oral health of the Inuit population with a ‘healthy teeth treatment blitz.’
 - a. All children receive sealants.
 - b. Dental teams to do an extensive ‘clean-up,’ then provide follow-up and support.
 - c. Engage the Canadian Armed Forces in this partnership – as a meaningful activity that they could support when involved in ‘exercises’ in the Arctic.
2. Provide focus for a more aggressive examination of best practices — when there are procedures that demonstrate improved dental health — these should be actively implemented (i.e. COHI, Telehealth diagnostic tools, use of registered dental hygienists, dental assistants, and supervised student practitioners).
3. Regular checkups, starting at the age of one year, at the community level to ensure that treatment required is identified early and consistently.

Action Five: Engage and mobilize parents and caregivers

Parents and caregivers are key partners in encouraging good oral hygiene practice for their children³⁰. To be successful, any oral health program must make oral health a family issue, building family knowledge³¹. For example, if caregivers do not understand the importance of primary (baby) teeth in the development and placement of permanent teeth, they may not understand the importance of brushing a young child’s teeth thus leading to the high number of GAs; if they do not understand that dental disease can be transmitted through their saliva to a baby, they may not understand the importance of good oral hygiene for themselves.

Tools for transmitting such information, such as the anticipatory guidelines have been effectively used in a

The values of the unit — in this case the family — were a key component of (the success of) this project.

Preschool Oral Health Initiative Evaluation, Inuvialuit Regional Corporation and Beaufort Delta Health and Social Services Authority, 2011.

number of programs. Both the *Healthy Smile Happy Child* and the *Oral Health Initiative Evaluation* (Inuvialuit Regional Corporation and Beaufort Delta Health and Social Services Authority, 2011) have demonstrated the importance of community-developed educational and promotional materials. Educational programmes must be relevant and applicable to the community, where traditional practices can vary from community to community, and to the Inuit lifestyles^{32, 33}.

Actions:

1. Develop awareness campaigns and/or networks for parents and caregivers, which educate about the importance of oral health care, and good feeding practices and healthy food choices; provide tools such as community developed anticipatory guidelines, that can be used to improve oral health; and help mobilize communities to support parent/caregiver-based solutions.
2. Build a partnership with the Canadian Dental Association and the Canadian Dental Hygienists Association, engaging them in helping to promote the oral health message to Inuit patients — particularly promoting prevention.
3. Engage universities and training institutions in building opportunities for practical education for dental and dental hygiene students in the North — learning about oral health promotion for northern communities and promoting practicums in northern communities.
4. Engage parents as partners in preschool and school programs by encouraging their participation in developing guidelines and promotion material used



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in their community so that it is culturally and community appropriate.

Action Six: Engage and mobilize adolescents

The Inuit Oral Health Survey Report, 2008-2009, noted that 97% of adolescents have dental disease. As many as 20 times the number of extractions are done as a way of controlling dental diseases in Inuit adolescents compared to those done in southern Canada on a similar population. Inuit adolescents have on average 3.61 untreated decayed teeth, nearly 10 times greater than southern Canadians (0.37).

Helping adolescents make decisions that will positively affect their health and their prospects for the future means having their involvement in solutions; they need to see educational programs as relevant and applicable to themselves and their lifestyles. Strategies need to be ‘youth friendly’ and have a higher rate of success when they are introduced by peers. The use of peers in ‘passing on’ positive

health related messaging is meeting with some success in the Healthy Buddies™³⁴ program. This has been adapted for Inuvialuit and delivered in the schools in the region; older children are educated on the keys to healthy living, physical activity, good mental health and nutrition, and act as buddies to younger children — passing on the health related messages. Acceptance of this approach³⁵ has been strong and adding the element of good oral health would be a natural addition to the program.

School based programs across Inuit Nunangat vary but are usually limited to children under the age of 12. These programs emphasize prevention procedures, such as the simple application of fluoride varnish and sealants, and brushing programs to improve the cleanliness of the mouth and teeth (oral hygiene) to prevent dental problems. These programs need to be expanded to include teenagers.

Social marketing techniques, such as those that have been effectively used in tobacco reduction, need to be incorporated into youth focused campaigns. Sweetened beverages, closely

associated with tooth decay, are potentially a similar target for promoting reduced use. The most effective behaviour modification campaigns for youth have involved youth in the design and implementation of these programs. Current examples of the effectiveness of Inuit youth creativity are available in can be found in issues of *Nipiit* magazine.

Actions:

1. Involve National Inuit Youth Council (NIYC) in advising on the development of an adolescent oral health outreach action plan in each region.
2. Ensure that there are resources to implement the plan, once developed.
3. Engage youth in developing a social marketing campaign for their own communities and in peer oral health promotion, such as an expanded Healthy Buddies™ program.
4. Develop a social media approach to promoting oral health.
5. Promote ‘drop the pop’ campaigns.

Action Seven: Increase the number of Inuit oral health service providers

Access to trained oral health professionals is at a critical stage in Inuit Nunangat. Many communities rely on dental therapists. With the closing of the National School of Dental Therapy, these positions will need to be filled by other dental professionals, with different skills. This will mean changes in the way services are delivered in the community.

It continues to be very difficult to recruit oral health hygienists. Therefore, encouraging health care providers to work with families on a consistent basis is crucial to oral health.

Preschool Oral Health Initiative Evaluation, Inuvialuit Regional Corporation and Beaufort Delta Health and Social Services Authority 2011.



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The oral health human resource issue can best be addressed with Inuit oral health providers³⁶ who have a desire to work in their own communities. There is a unique opportunity to rethink the configuration of oral health teams in the North.

A northern training program is required to train service providers for Inuit communities which would enable a program of dental health education and preventive dentistry in each community.

Some key factors for the success of any northern based training program are:

- Recruit students from the areas that need to be served;
- Have the training site in an appropriate location; and
- Have communities participate in the process and be committed to the process.

Actions:

1. Establish a working group to consider how to best increase the number of dental service providers in the

Food insecurity — Three in 10 Inuit children aged 6 to 14 were reported by their parents to have experienced being hungry at some point in their lives because the family had run out of food or money to buy food. However, on the positive side, the majority of Inuit men and women of all ages had harvested country food — that is, food from the land and sea such as seal, caribou, fish, whale, etc. Country food makes up a large percentage of the fish and meat eaten by many Inuit families across Inuit Nunaat and is widely shared with others in the community.

Inuit Oral Health Survey
2008-2009

- Arctic. Include Dental and Dental Hygiene Schools and involve them in developing a path forward.
2. In light of the closing of Northern School of Dental Therapy, revisit and update the 2010 Feasibility Study for a Northern School of Dental Therapy and explore possible links with dental hygiene.
 3. Examine programs like COHI where services have been provided by community-based service providers and develop similar training programs.
 4. Establish a cooperative program for training oral health professionals, in conjunction with an established dental school in the North³⁷.

Action Eight: Improve use of and access to affordable nutritional foods

Good nutritional choices are essential for good oral health. Underlying the ability to make these healthy choices is ensuring access as well as a good understanding of the effect of food choices.

The shift towards southern foods in the Inuit diet has fostered obesity, diabetes, and heart disease, and has also resulted in a decline in the oral health of Inuit. Traditionally, Inuit had excellent dental health with minimal caries, and little tooth loss even among the elderly. Inuit adults who continue to eat a more traditional diet have better teeth and better oral health than children brought up on store-bought foods.

Sugar sweetened drinks are an increasing concern for all children and youth. Use of such sweetened beverages, including fruit juice, has been associated with an increased risk of cavities and are a significant contributor to early childhood tooth decay^{38, 39}. Initiatives such as Drop the Pop⁴⁰ have been successful in raising awareness and providing alternatives in schools, grocery stores and other businesses.

Actions:

1. Link healthy food and good oral health. Ensure Nutrition North Canada is aware of the concerns around good oral health and healthy foods in order to augment the community-based activities proposed in this initiative.
2. Advocate for partnerships with private sector partners such as the Northwest Company who have recently announced subsidies making such things as milk and country foods more affordable.
3. Augment prenatal and early childhood care programs with access to healthy foods and education related to nutritional choices and the link to preventing tooth decay.
4. Increase access to country and traditional foods leading to a healthier diet and better oral health outcomes.





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Conclusion

The Inuit Oral Health Action Plan presents an overall approach to improving oral health among Inuit.

In order to achieve these improved outcomes, action is required to: stop the current disease; create a better balance between treatment and oral health promotion activities; prevent future disease with active oral health promotion programs — engaging families and youth; ensure that the healthy food choice is the easy food choice with both knowledge of healthy choices and access to healthy foods; and promote the important relationship between oral health and general health. Improved oral health would result in a stronger Inuit population with oral health outcomes in line with the overall Canadian oral health status, at least half of all Inuit children would enter grade one with no tooth decay, and there would be reduced dental caries, extractions, and periodontal disease.

The involvement of all partners is essential to implementing these actions. Links between federal, territorial, provincial and Inuit organizations need to be enhanced so that the Inuit-specific perspective is reflected in the planning and implementation of all oral health initiatives. Programs for both treatment and prevention need to be expanded and improved. Partnerships with formal associations and oral health professional training institutions need to be strengthened in order to foster the collaborative development of creative solutions for improved oral health in Inuit Nunangat.



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More emphasis on community based preventive measures backed by early detection and PROMPT basic treatment would appear to be the best course to make a difference.

Inuit Oral Health Survey Report,
2008-2009
Health Canada



Endnotes

- 1 Dental caries, or cavities, is a chronic condition that can be prevented. The Canadian Dental Association (CDA) defines caries as “an infectious, transmissible disease in which bacterial by-products dissolve the hard surfaces of teeth. Unchecked, the bacteria can penetrate the dissolved surface, attack the underlying dentin, and reach the soft pulp tissue. Dental caries can result in loss of tooth structure, pain, and tooth loss, can progress to acute systemic infection”.
 - 2 In 1981 the World Health Organization (WHO), in developing the “Global Oral Health Goals for the Year 2000”, included the goals of having half of five to six year olds free of dental cavities. To meet the WHO oral health goals, Canadian public oral health programs incorporated preventative measures, such as water fluoridation and health promotion, as part of public oral health programs.
 - 3 Oral disease is treated in the Inuit adult population by extracting disease with greater frequency than in the rest of Canada (58.7 teeth for every 100 restorations compared to 6.9 teeth extracted in the rest of Canada) *Oral Health Promotion and Disease Prevention: A Call to Action*, Canadian Dental Hygienists, (based on the Inuit Oral Health Survey), A submission to the House of Commons Standing Committee on Health , February 7, 2012
 - 4 General anaesthetics are used as a procedure when the decay in a child’s mouth has reached the point where a dental service provider is unable to effectively provide treatment in the community. This procedure, commonly called a GA, is undertaken in a hospital operating room with the child given a general anaesthetic and the decayed teeth being extracted. Often this is accompanied by the stainless steel crowns being applied to the other teeth. Not only is the practice very invasive but, unless it is accompanied by improved oral health supports so that the parent/caregiver is given information on how to improve the cleaning the child’s mouth (oral hygiene) and can have access to a tooth brush and tooth paste, this procedure does not resolve the ongoing problem of disease in the mouth and reoccurring decay.
 - 5 *Oral Health Promotion and Disease Prevention: A Call to Action*, Canadian Dental Hygienists, (based on the Inuit Oral Health Survey), A submission to the House of Commons Standing Committee on Health , February 7, 2012
 - 6 For Inuit children the % of children 6-11 who have visited an oral health professional in the last year is 50% - the Canadian norm is 74%
 - 7 Whereas 75% of the general population have visited an oral health professional in the past year, only 43% of the Inuit population has.
 - 8 The Children’s Oral Health Initiative is a program for the prevention of dental disease and the promotion of good oral health for children under the age of eight, their parents and caregivers and pregnant women.
 - 9 Dental therapists have been key team members of dental services being delivered in eleven communities in the North, five in the Northwest Territories and six in Nunavut. In Northwest Territories and Nunavut they can:
 - perform uncomplicated dental restorations;
 - remove teeth (uncomplicated);
 - clean teeth;
 - undertake the promotion of good oral hygiene practices and the prevention of dental disease;
 - apply topical fluorides; and
 - take and develop of x-rays of teeth.
- However, the only training facility in Canada, the Northern School for Dental Therapy (NSDT), ceased to receive funding from Health Canada as of March 31, 2011 and has closed. This means that no more dental therapists are being trained in Canada and whereas it has been difficult to recruit dental therapists in the North, it will now be highly unlikely. There is an urgent need to rethink how dental services are provided in the Arctic and who funds them. Can/should dental therapists be replaced by other dental service providers and what skills will best suit the urgent needs in the communities?
- 10 At the time of writing this report, six positions were filled.
 - 11 The University of Manitoba has also been used, through contracts, to serve Baffin Island but in recent years has not been so contracted.

- 12 Based on interviews with Dr. Greg Jones, Atlantic Regional Dental Officer and Instructor, Department of Dental Clinical Sciences, Division of Comprehensive Care AT Dalhousie University
- 13 General anaesthetics are accepted as the norm and dentures referred to as ‘third teeth’.
- 14 House of Commons Report from the Standing Committee on Health, First Nations and Inuit Dental Health, June 2003
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- 18 Oral Health in America: A Report of the Surgeon General. Executive Summary. May 2000. <http://www2.nidcr.nih.gov/sgr/execsumm.htm#partFive>
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- 20 Inuit are more likely than other Canadians to be daily smokers.
- 21 Throat and mouth cancers are also linked to high salt cured food consumption – and Inuit consume about three times that of all adults in Canada.
- 22 Frequently a concern raised about the use of fluoride is the potential of fluorosis . The recent Canadian Health Measures Survey data have shown that the prevalence of Canadian children with moderate dental fluorosis is too low to be reported. Recently guidelines have been reviewed and renewed by Health Canada <http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/2011-fluoride-fluorure/index-eng.php>
- 23 Babies are not born with the bacteria that cause tooth decay. It can unknowingly be transmitted by anyone who has tooth decay in their mouth or is a carrier of tooth decay-causing bacteria (parents, caregivers and other children). It is transmitted through regular daily practices from tasting baby’s food to sharing cups and utensils.
- 24 *Pan-Territorial Oral Health Initiative, Phase 1, Background report,* Dr. Gerry Uswak, December 2007.
- 25 For example, maternal weight and the intake of sugar and fat in pregnancy are associated with tooth decay in preschool children.
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An initiative of BC Children's Hospital funded by the Provincial Health Services Authority
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Appendix

What Works in Improving Oral Health

What Works in Improving Oral Health		
<p>Prevention:</p> <p>Primary – general initiatives for overall health and oral health, including education (e.g. about nutrition, brushing and flossing) and resource allocation (like tooth brushes and milk), regular screenings or visits to the dentist</p> <p>Secondary – targeted strategies/initiatives for at-risk populations, sometimes for specific reasons (e.g. fluoride varnish)</p> <p>Tertiary – reduction of disease (symptoms) in a population already affected by disease</p>		
0 – 4 years (primarily parental/ prenatal focused)	What works: forms of Interventions	Program examples that use these interventions
<p>What is needed:</p> <p>Policy and programs that engage families and new parents to create good oral health habits as an aspect of a holistic approach to health.</p> <p>Resources (human and physical) to administer early prevention programs and provide adequate material support to new and expectant parents.</p>	Education – (directed at new and expectant parents)	Oral Health Passports Inuvialuit Regional Corporation (IRC) and Beaufort Delta Health and Social Services Authority (BDHSSA)
	Good oral health practices that become habit forming	Well-baby visits - COHI Aboriginal Head Start
	Fluoride treatment	Baby Teeth, Sioux Lookout Zone (SLZ) COHI
	Food security/nutrition provision	Canadian Prenatal Nutrition Program Aboriginal Head Start
	Oral health resource allocation	Clinics providing personnel and programs for early interventions Treatment closer to home in an environment that is culturally safer i.e. pediatric dentists from Dalhousie currently in Nain and Hopedale, Nunatsiavut and the pediatric surgical clinic in Goose Bay.
	Targeted oral health tools	“Angel Brushes”(given out at 12 and 18 mo in Nunatsiavut through well baby clinics) Xylitol gum
	Public Service Announcements/ Social media	“Healthy Smiles in Nunatsiavut” – poster campaign reflecting smiles of actual beneficiaries IRC and Beaufort Delta HSSA (Little teeth are a BIG deal)

Ages 4 – 7 years	What works: forms of Interventions	Program examples that use these interventions
<p>What is needed: Early childhood programs that are supported within the education system, families, health care system, and are embraced through community development.</p> <p>Targeted programs for parents as role models (social norm setters) and children who are forming independent/early oral health habits.</p> <p>Inter-professional collaboration between service providers, (teachers, community workers, nurses, dental therapists) to build a complete understanding of oral health.</p>	<p>Good oral health practices that become habits Nutrition/ Education</p>	<p>Healthy school food programs (e.g. Drop the Pop, Nunatsiavut) Emphasis on traditional foods (within IRC BDHSSA Initiative) Care for a Smile program</p>
	<p>Prevention through fluoride treatment and early detection</p>	<p>Hartley Bay’s School-Based Oral Health Program</p>
Ages 7 – 12 years	What works: forms of Interventions	Program examples that use these interventions
<p>What is needed: Further support in schools. Community and family-based programming that continues early childhood prevention programs. This is the age group where COHI has ended; additional school based programs are needed to continue preventative measures</p>	<p>Good oral health practices that become habits Nutrition/Education</p>	<p>Drop the Pop School Nutrition programs</p>
	<p>Public health interventions that encompass education, nutrition, and fluoride varnish. Peer mentoring programs.</p>	<p>Hartley Bay Program – brush, education, fluoride rinse (weekly) Tuba City – at point of immunization, application of fluoride varnish and parental education COHI – application of fluoride varnish, sealants Dental therapy school-based program (Care for a Smile, Circle of Smiles)</p>
Ages 12-19 years (Adolescents)	What works: forms of Interventions	Program examples that use these interventions
<p>What is needed: Programs that can access adolescents as they progress into later school grades. Public health education that targets habit forming behaviour prior to and during child-bearing ages.</p>	<p>Education/Nutrition</p>	<p>Drop the Pop School-based nutrition programs</p>
	<p>Fluoride varnish application Sealants</p>	<p>Dental therapists, Dental Hygienists</p>
	<p>Public Service/social media targeting teens Youth engagement models to develop peer to peer strategies</p>	<p>Anti-smoking-type campaigns (with reference to oral health)</p>

20-39 Adults	What works: forms of Interventions	Program examples that use these interventions
<p>What is needed: Continued support after school and into adulthood that emphasizes oral health.</p> <p>Periodontal disease, which becomes an increasing problem with aging, is associated with lack of brushing to brushing and flossing to eliminate bacterial plaque and the use of tobacco use.</p>	Education/Nutrition	<p>Campaigns that remind adults that good eating and oral hygiene habits need to continue for teeth to remain healthy</p> <p>Emphasis on the need for regular dental visits</p>
	Fluoride	<p>Oral health visits/dental therapists/dental hygienists/NIHB</p> <p>Water Fluorination</p>
	Social media	<p>“Healthy Smiles in Nunatsiavut” – poster campaign</p>
	Smoking cessation programs	<p>Anti-smoking-type campaigns (with reference to oral health)</p>
Seniors	What works: forms of Interventions	Program examples that use these interventions
<p>What is needed: Periodontal disease, which becomes an increasing problem with aging, is associated with lack of brushing to brushing and flossing to eliminate bacterial plaque and the use of tobacco use.</p>	Nutrition/Education	<p>Campaigns that remind seniors that good eating and oral hygiene habits need to continue for teeth to remain healthy</p> <p>Emphasis on the need for regular dental visits</p> <p>Denture care education sessions when teeth are replaced by dentures</p> <p>“Healthy Smiles in Nunatsiavut” – poster campaign emphasizing healthy teeth at all ages</p>
	Smoking cessation programs	<p>Anti-smoking-type campaigns (with reference to oral health)</p>
	Regular check –ups	<p>Access to dental services for scaling calcified accretions off the teeth.</p> <p>Monitoring for oral cancers, often associated with smoking</p>

Decision Makers	What works: forms of Interventions	Program examples that use these interventions
<p>What is needed: Policies and approaches that are cost effective and have long-term impacts as well as short term benefits.</p> <p>Emphasis on service provision options that exist in other settings or within the scope of oral health but are not being applied.</p> <p>Shift in thinking about oral health as integral to overall/holistic health</p>	<p>Advocacy and lobbying from professional associations and representative bodies</p>	<p>Advocacy on the part of dental hygienists leading to the Alberta/ Ontario initiative of billing (because of cost and human resource demands) to extend NIHB to pay dental hygienists directly.</p>
	<p>Oral health coalition building</p>	<p>ITK committee/working group on health</p> <p>Pan-Territorial Initiative on Oral Health</p> <p>Annual summit on oral health (bringing together policy makers, service providers and community stakeholders)</p>
Health Care Providers	What works: forms of Interventions	Program examples that use these interventions
<p>What is needed: Common understanding of oral health and the role different practitioners play in developing good oral health.</p> <p>Program evaluation that places an emphasis on oral health within holistic health models.</p> <p>Policy and practices that link oral health other health outcomes.</p> <p>Promising practice models shared within and between regions.</p>	<p>Standardized monitoring</p>	<p>OCDO and other regional health authorities surveys/reports</p>
	<p>Program evaluation</p>	<p>IRC BDHSSA evaluation of Oral Health Initiatives</p>
	<p>Inter-professional collaboration/ coordination</p>	<p>Northern/Inuit coordinator for Inuit Oral Health</p>
	<p>Capacity building through education for Inuit oral health professionals</p>	<p>Northern School of Dental Therapy (NSDT), now closed for</p> <p>Partnering with Universities and Schools to provide care/exposure/evaluation</p>

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