



Health
Canada

Santé
Canada

*Your health and
safety... our priority.*

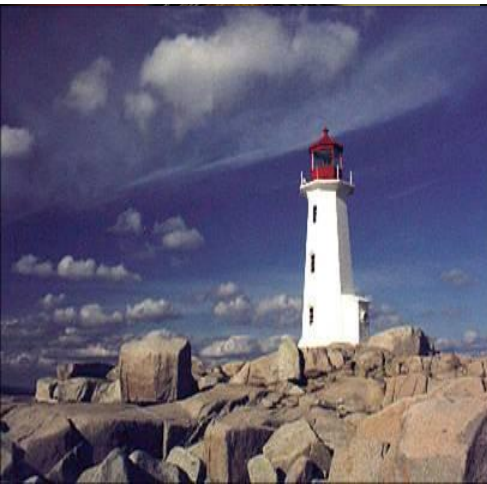
*Votre santé et votre
sécurité... notre priorité.*

The Oral Health of Canadians

Manitoba Dental Hygienists Association

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June 9, 2012



Canada 

Introduction

- Oral Health Status in Canada;
- Specific Areas of Interest;
 - Sub group analysis (seniors);
 - Sub group needs assessments (Aboriginal Results);
- Implication for the Dental Hygiene Profession.

- ***Ontario Region Oral Health Programs and Partnerships***



Oral Health and Overall General Health

Dental disease is:

➤ the #1 chronic disease in children & adolescents;
(U.S. Surgeon General's Report, May 2000)

<http://www.surgeongeneral.gov/library/oralhealth/>

➤ five (5) times more common than asthma;

➤ one of the main reasons preschool children receive a general anaesthetic;

➤ the second most expensive disease category in Canada;

<http://www.fptdwg.ca/English/e-documents.html>

➤ 47% of Canadians have had dental disease by 6 years of age, 96% have had it in their lifetime.

<http://www.fptdwg.ca/English/e-documents.html>

➤ Oral health is linked to a number of systemic diseases.



National / International Research

Solid Oral Health / Systemic Health Linkages with:

- Periodontal Disease / Diabetes (bi-directional)
- Oral Cancers

Summer / Fall 2006 Systemic Reviews

- Periodontal Disease / Aspiration pneumonias
-

Work Continues on :

- Cardiovascular diseases (National Institutes of Health / National Institute of Dental and Craniofacial Research / Europe / Pfizer)
- Pre-term / low birth weight babies (new research showing may be causal rather than casual but research still contradictory).



Number of Dental Service Providers in Canada:

Dentists:	19,655 ¹
Dental Hygienists:	23,902 ¹
Dental Technologists/Technicians:	3,000 ⁴
Dental Therapists:	300 ²
Denturists:	2,073 ³
Dental Assistants:	30,000 ⁴

¹-Canadian Institute for Health Information: <http://secure.cihi.ca/cihiweb/products/ProvProf2009EN.pdf>

²-Health Human Resources in Canada. Locker D, Quinonez C et al. Community Dental Health Services Research Unit, University of Toronto, 2006.

³-Baldota K and Leake JL. A Macroeconomic Review of Dentistry in Canada in the 1990s. JCDA 2004; 70 (9): 604

⁴-Canadian Dental Association

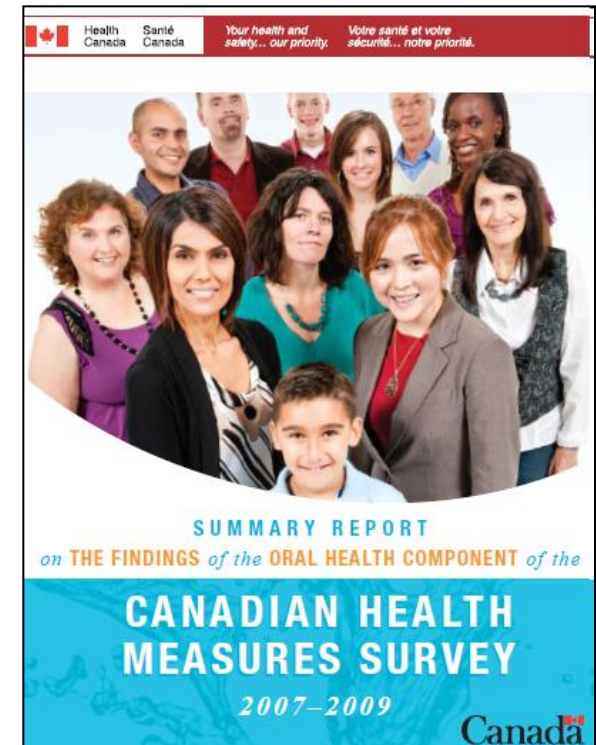
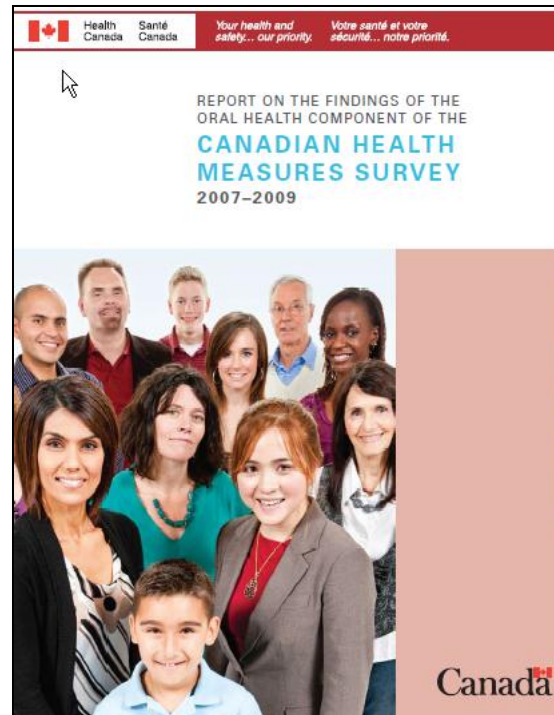


History of the Oral Health Survey Module

The Oral Health Survey Module was developed for Statistics Canada's Canadian Health Measures Survey (CHMS) 2007-2009

The Oral Health Results were released in 2010

- Summary Report
- Technical Report



<http://www.fptdwg.ca/English/e-chms.html>



Dollars Spent, Insurance rates

Dollars spent: 12.8 billion in 2009 (CIHI)

- 62% have private dental insurance
- 6% have public insurance
- 32% have no dental insurance (pay out of pocket)

Income affect

- 78% higher income, privately insured
- 50% lower income, do not have dental insurance



Dental Disease Among Adults - DMFT

	Younger Adults (20-39)	Adults (40-59)	Older Adults (60-79)
Decayed	0.81	0.45	0.37
Missing	0.39	2.42	5.57
Filled	5.65	9.43	9.72
TOTALS	6.85	12.30	15.67

Overall prevalence of coronal caries: 96%

Overall prevalence of root caries: 20%

Note: jump in extractions from adults to older adults.



Periodontal Conditions → 20 - 79 year olds

Debris (score 2&3): 27%

Calculus (score 2&3): 11%

Gingivitis (score 2&3): 32.3%

Pocket Depth (4+mm): 20%

(16% → 4/5 mm)

(4% → 6 mm +)

Loss of Attachment:

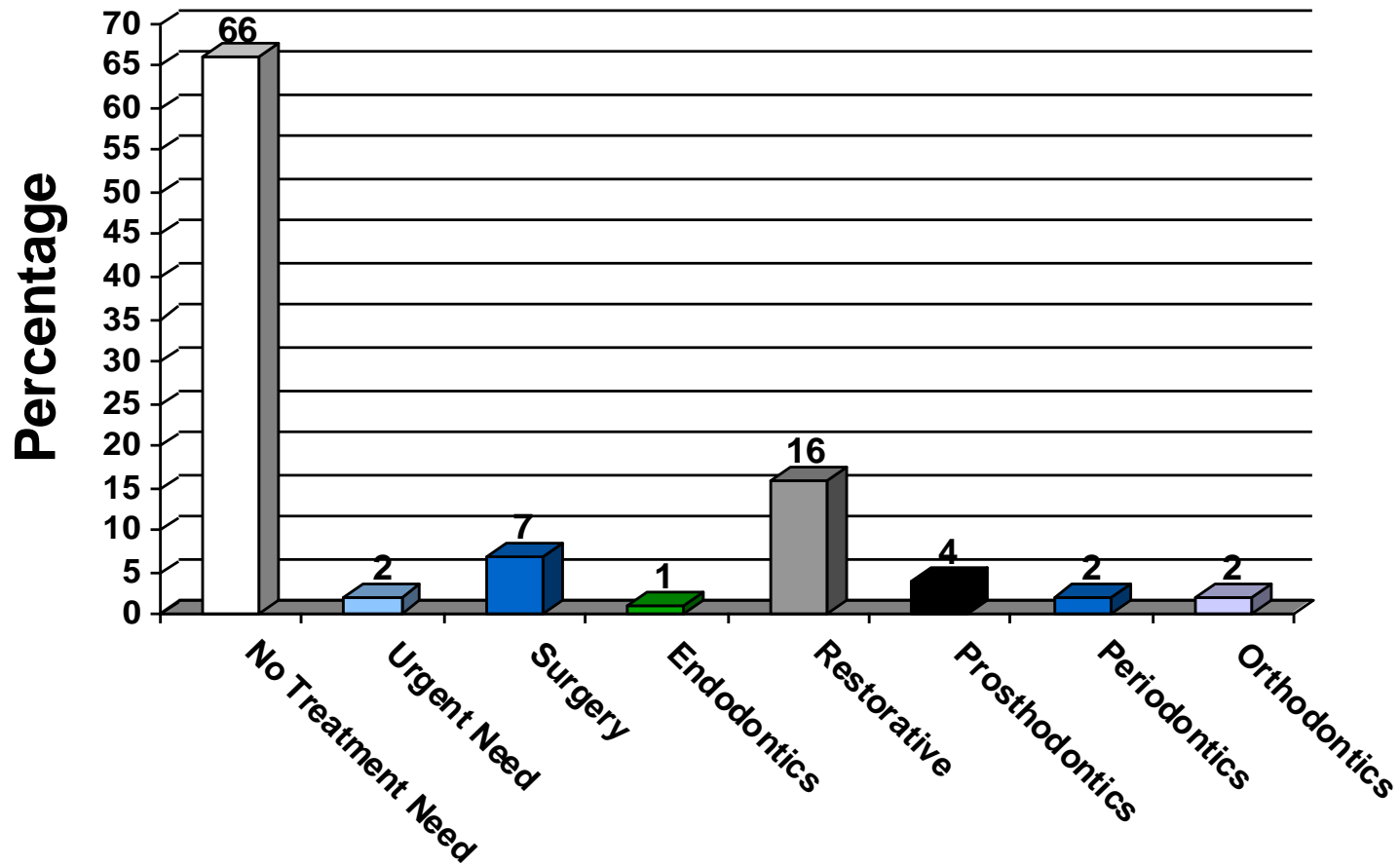
(4 + mm) 21%

(15% → 4/5 mm)

(6% → 6 mm +)



Distribution of Needs



Note: 47% of lower income Canadians need 1+ types of treatment while 26% of higher income Canadians need 1+ types.



National Canadian Comparisons

	1972	2009
Visiting	50%	74.5%
Children (6-11)		
Prevalence – permanent teeth	74% (8-10yrs)	23.6%
DMFT	2.5 (8-10yrs)	0.5
dmft / DMFT	6.0	2.5
Adolescents (12-19)		
Prevalence	96.6%	58.8%
DMFT	9.2	2.5
Adults		
Edentulism	23.6%	6.4%
Coronal Caries	96.1%	95.9%
DMFT	17.5	10.7
Root Caries	n/a	20.3%

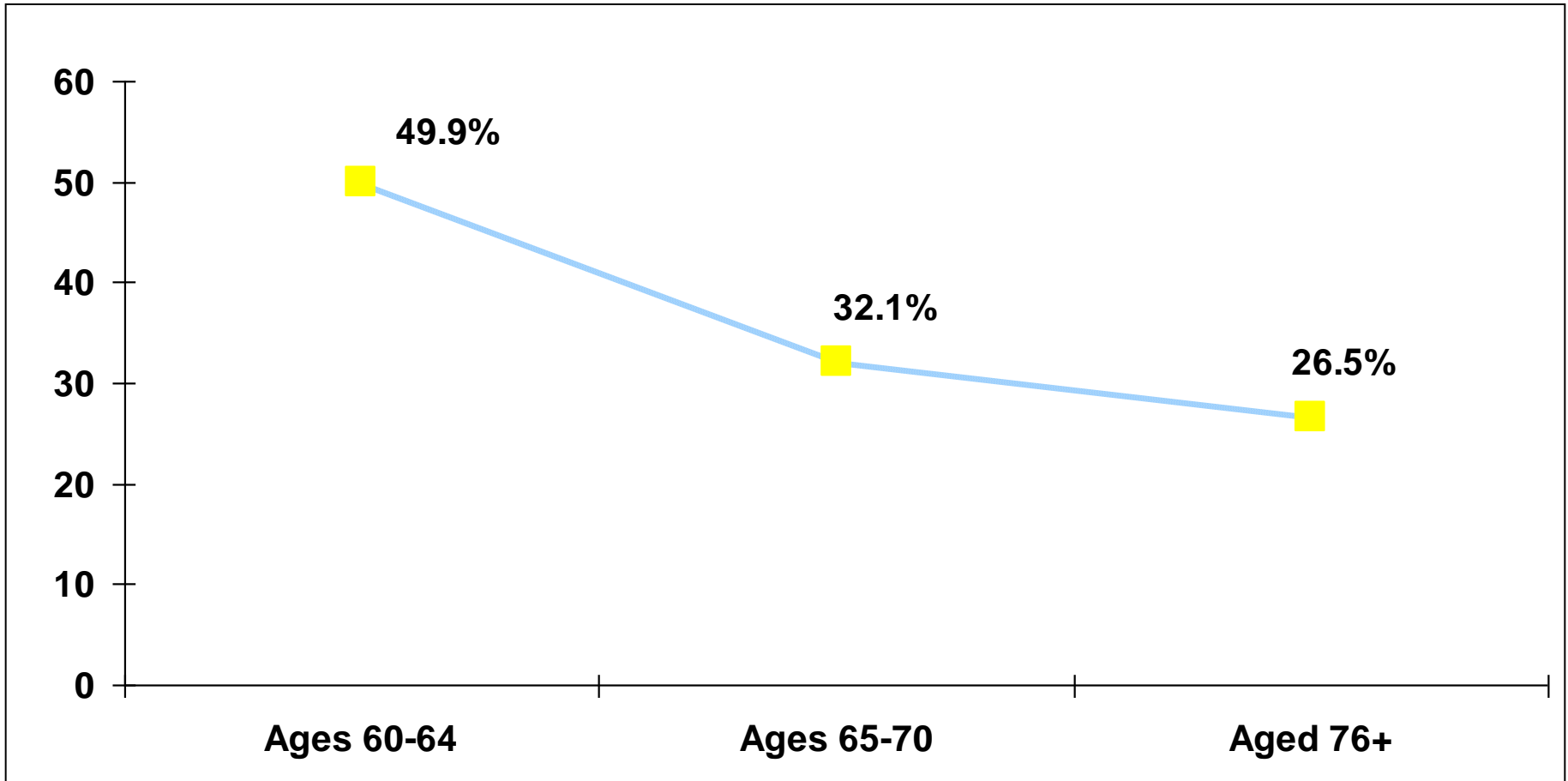


International Comparisons - Caries

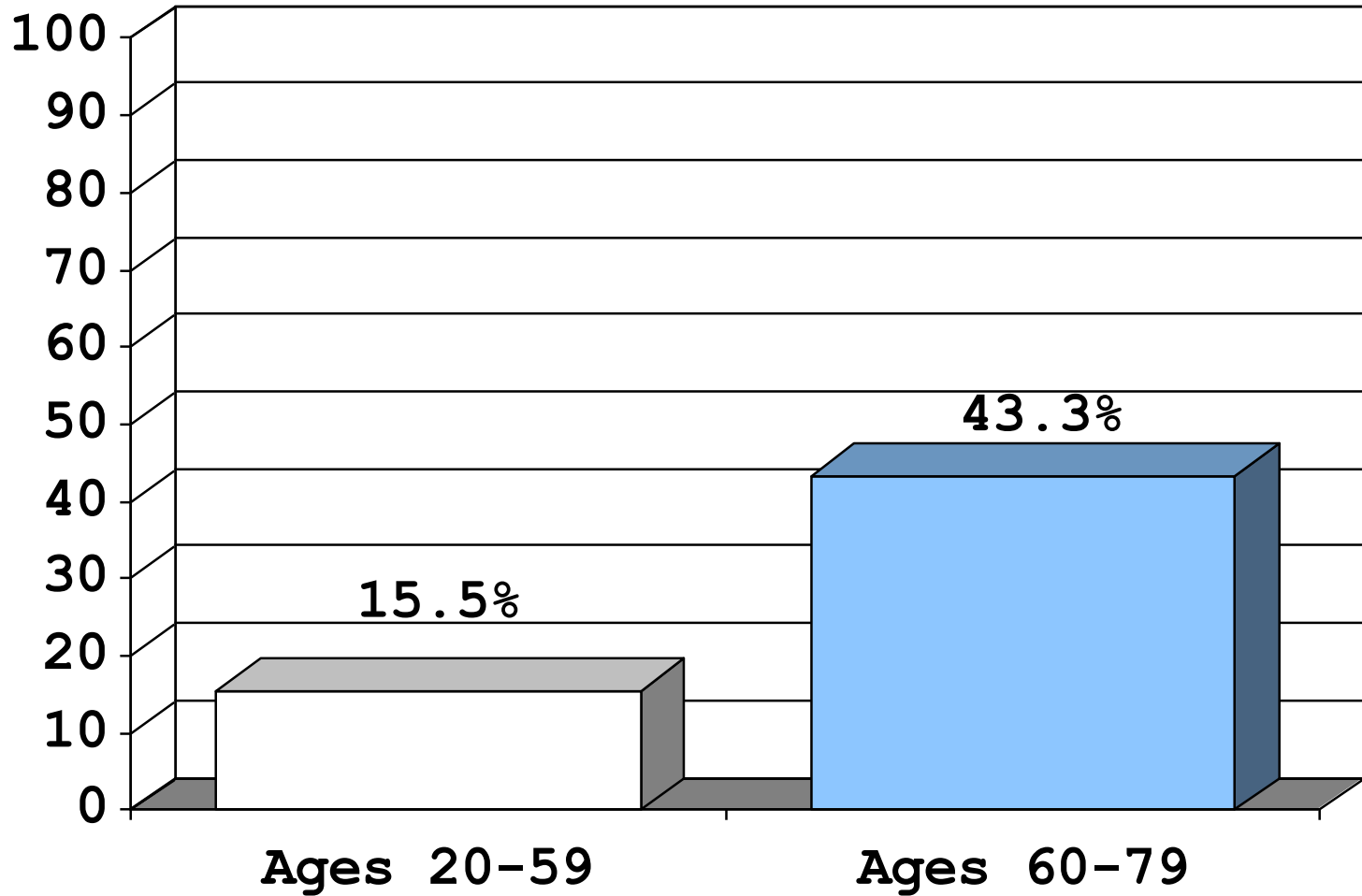
	Canada (2009)	Australia (2007)	United States (2004)
Children			
Prevalence - permanent teeth	23.6%		21.1%
DMFT	0.49		0.45
Adolescents			
Prevalence	58.8%		59.1%
DMFT	2.49		2.55
Adults (Coronal)			
Prevalence	95.9%	90.1%	91.6%
DMFT	10.67 (0.58 untreated)	12.8	10.33 (0.76 untreated)



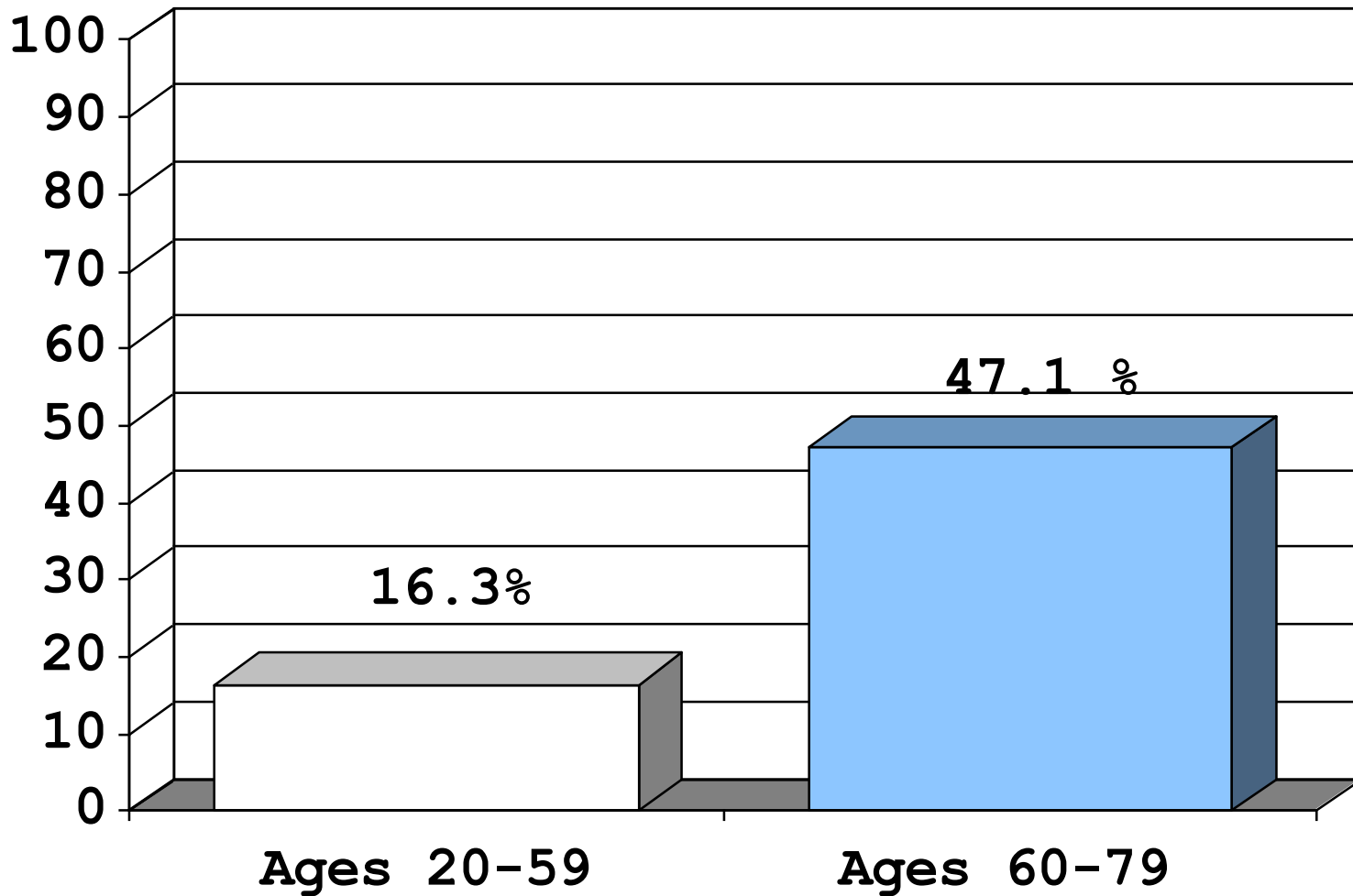
Percentage of people with private dental insurance



Percentage of people with root caries



Percentage of people with loss of attachment (4+mm)



Oral Lesions

- **Soft tissue lesions seen in 12% adults.**

- **Many numbers unstable but we can see:**
 - Denture Stomatitis 4% adult-population (21% of edentulous)
 - Traumatic ulcer 2%
 - Sinus / fistula 1%
 - Glossitis 0.7%
 - Angular Cheilitis 0.5%

- **White mucosal lesions too low to report but of those with white lesions:**
 - Leukoplakia 65%
 - Candidiasis 30%



Fluorosis → 6 - 12 year olds

Normal teeth	Questionable ¹	Very Mild	Mild	Moderate /severe ²
60%	24%	12%	4%	<0.3%

¹ ill defined and could be due to antibiotic usage, infection, severe fever, trauma etc.

Note:

- Initial WHO central calibration
- Recalibration on first day of each new site
- Recalibration at mid point of each site
- Recalibration before end

² Statistics Canada criteria for withholding reporting value:

- Highly unstable numbers (<10)
- Coefficient of variation > 33.3%

For information regarding measures spread in data see the Statistics Canada web site:

<http://www.statcan.gc.ca/edu/power-pouvoir/ch12/5214876-eng.htm>



CANADIAN HEALTH MEASURES SURVEY MERCURY LEVELS

Canadian Mercury Guidance Values	CHMS Identified Value* (geometric mean)
- Blood (total mercury) General Population: 20 µgHg/L -Vulnerable Populations (proposed provisional guidelines): 8 µgHg/L	0.69 µgHg/L
- Urine (inorganic mercury) Total Population: 7 µgHg/L	0.22 µgHg/L

- For inorganic blood mercury, no geometric mean available as 40% of samples below levels of detection.

* Mercury Report: <http://www.fptdwg.ca/English/e-documents.html>

Note: United States 2003/2004 National Health and Nutrition Examination Surveys indicates total blood mercury 0.79 µgHg/L; urinary mercury 0.447 µgHg/L.

<http://www.cdc.gov/nchi/nhanes.htm>



Other Oral Health Surveys

Survey Name	Focus
The Oral Health of Our Aging Population	45 years and older
First Nations Oral Health Survey	3 year olds and older
Inuit Oral Health Survey	3 year olds and older
Ontario First Nations Oral Health Survey	3 year olds and older
Alberta First Nations Oral Health Survey	3 year olds and older
Brant County Health Unit	5 or 6 year olds
British Virgin Islands	6-8, 12 and 15 year olds
Montserrat	6-8, 12 and 15 year olds
Anguilla	6, 12 and 15 year olds
Refugee Study- British Columbia	Adults
Homeless Oral Health Survey- Toronto	Adults
Barbados	children



Caries: Children 3 – 5 years of age

Indicator	Canadian 6+	First Nations	Inuit
Decay Prevalence	n/a	86%	85%
Mean dmft	n/a	7.62	8.22
Untreated caries: Prevalence Severity d/dmft	n/a	35.2% 2.68	49% 4.06



Dental Caries: Children 6 – 11 Years of Age

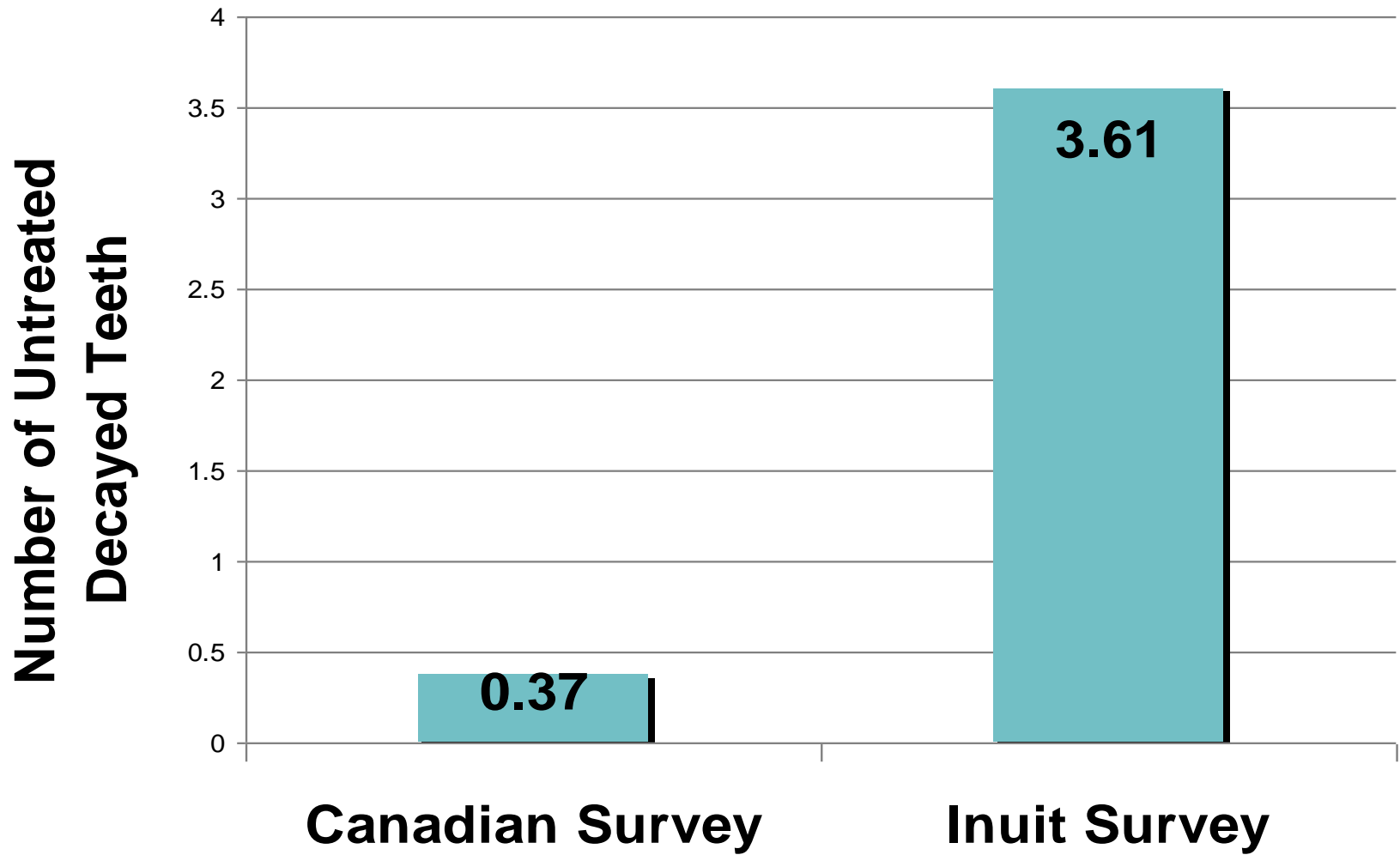
Indicator		Canadian	FN	Inuit
Prevalence	dmft	48%	80%	71%
	DMFT	24%	67%	60%
	dmft + DMFT	57%	94%	93%
Mean	dmft	1.99	5.28	5.08
	DMFT	0.49	1.87	2.01
	dmft + DMFT	2.48	6.58	7.08

<http://www.whocollab.od.mah.se/exp/sic.html>.

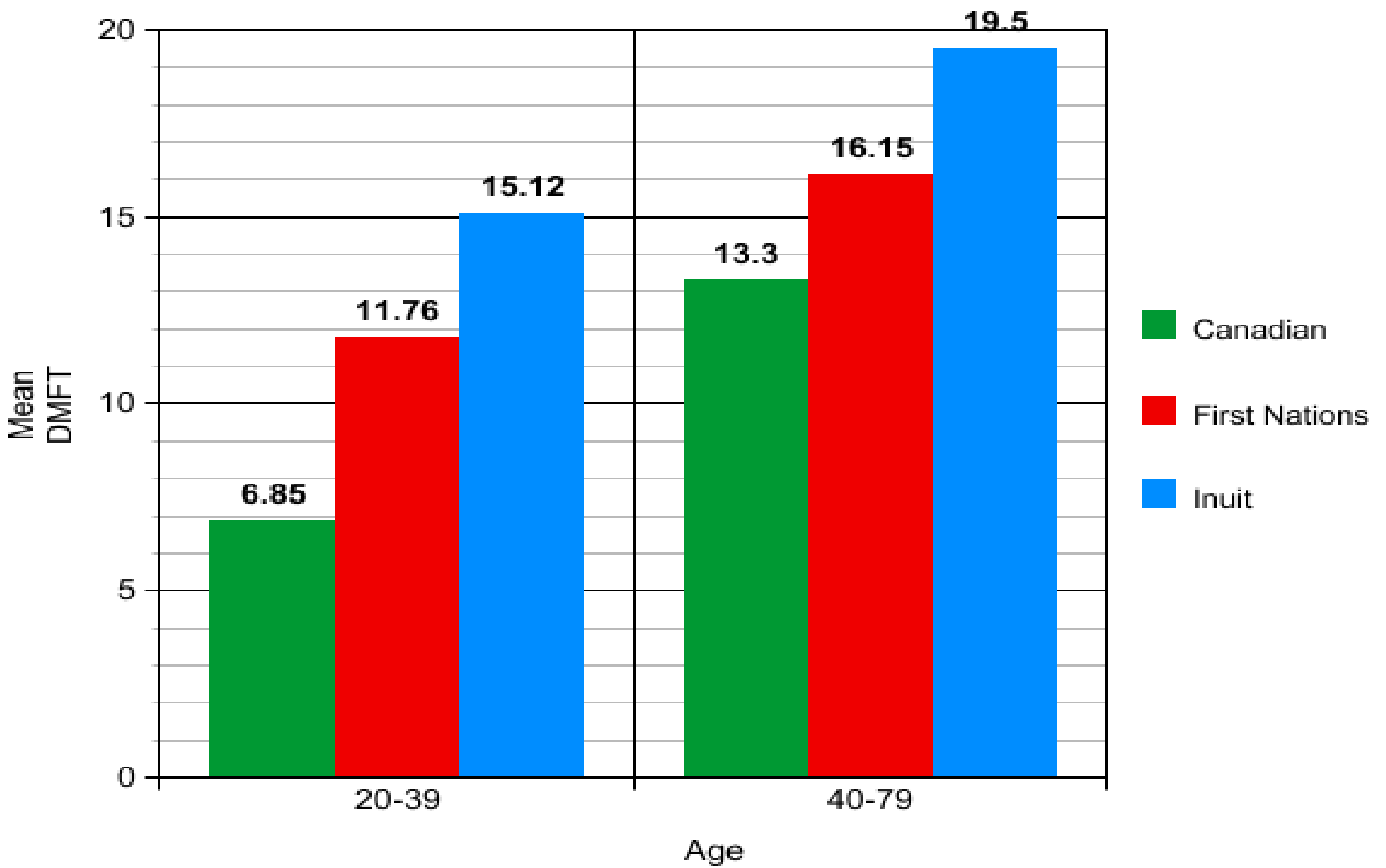
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Untreated Decay on 12-19 years old



DMFT Among Dentate Adults

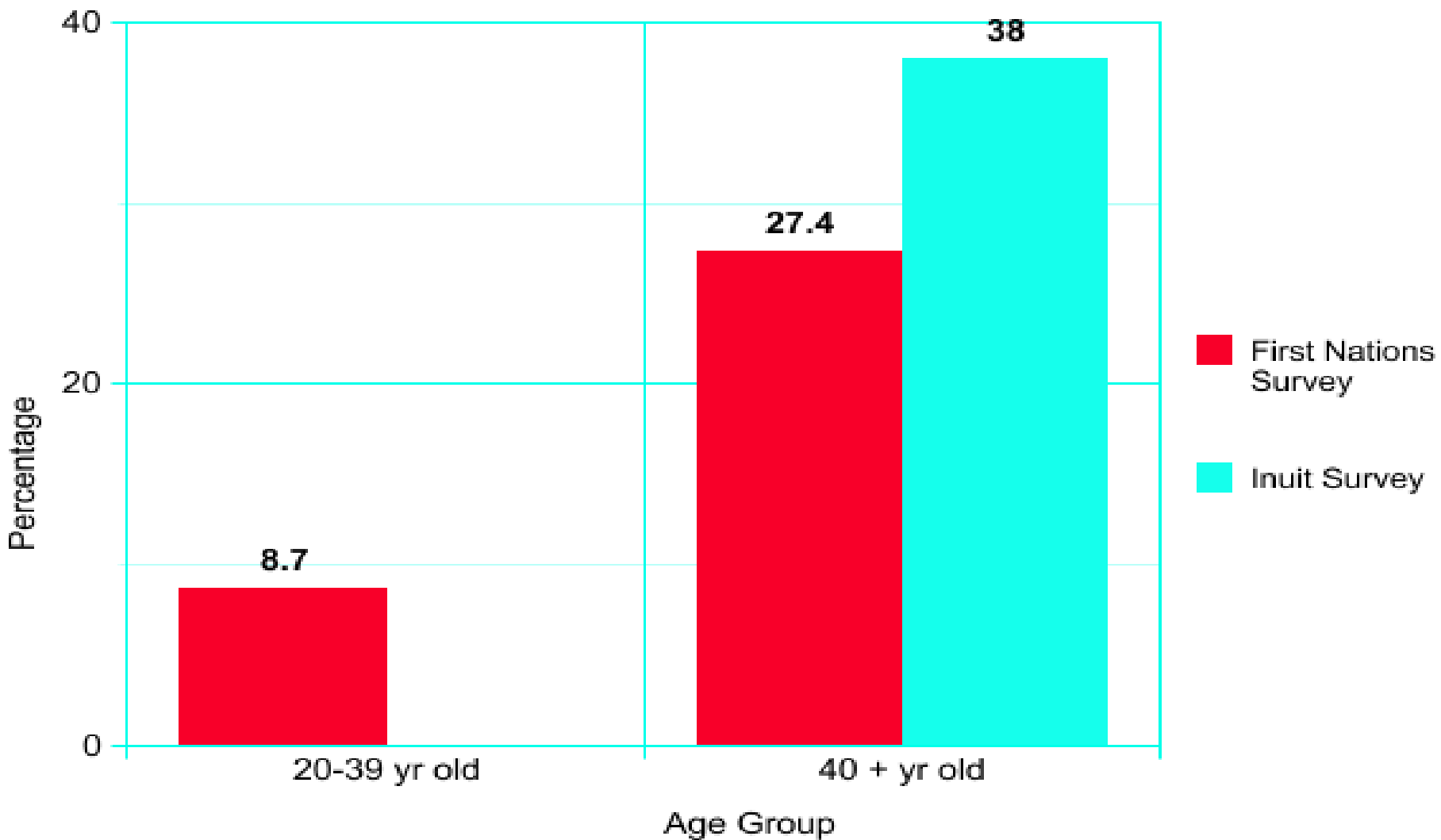


Periodontal Conditions → Adult Population

Condition	Canadian (20+)	FN (18 and up)	Inuit (20+)
Debris (Score 2 & 3)	27.0%	44.1%	21.4%
Calculus (Score 2 & 3)	10.7%	42.8%	19.9%
Gingivitis (Score 2 & 3)	32.3%	44.4%	30.6%
Pocket Depth (4+ mm)	20.1% (16% → 4/5 mm) (4% → 6 mm+)	22.4% (18% → 4/5 mm) (4.4% → 6 mm+)	16.5%
Loss of Attachment (4+mm)	21.1% (15% → 4/5 mm) (6% → 6 mm+)	16.1% (10.8% → 4/5 mm) (5.3% → 6 mm+)	17.0%



Percentage of Aboriginal Population With Loss of Attachment (+4mm)



Note: 20-39 yr old under Inuit Survey is "F" value



Ontario Region Oral Health Programs and Partnerships

- Children's Oral Health Initiative
- Non Insured Health Benefits Dental Hygiene Billing Pilot
- Tele Oral Health Project
- Aboriginal Diabetes Project



Children's Oral Health Initiative (COHI)

COHI target groups:

- Pregnant women
- Children aged 0-7years of age
- Parents and caregivers



COHI Services

- Screening
- Fluoride varnish application
- Sealants
- ART (Atraumatic Restorative Treatment)
- Xylitol products
- Oral health Information sessions



Ontario Region COHI Providers

- Community COHI Aides
- Certified Dental Assistants
- Registered Dental Hygienists
- Nurses



Building Capacity with COHI Service Delivery Models & Partnerships

- Band employed Registered Dental Hygienists
- Partnerships with Provincial Health Units
- Standing Offer Agreements



Aboriginal Oral Health Diabetes Initiative

- RDH's work with diabetes team in Health Centre
- Clinical services
- Monitoring of outcomes
- Evaluation



Tele Oral Health

- Oral health assessments for COHI
- Maximize the COHI budget/reduce service delivery costs
- Visual consultation for dental emergencies
- Provision of pre and post operative assessments/follow-ups
- Increase community capacity
- Enhance oral health promotion and education
- Expand partnerships and increase collaboration



Interim Stabilization Therapy (IST)

- Similar to Atraumatic Restorative Treatment
- IST protocol complies with the provincial regulatory framework for Dental Hygiene in Ontario

Non Insured Health Benefits RDH Billing pilot

- A select number of RDH's in under serviced areas
- Bill NIHB for prevention services
- 1 year pilot to be evaluated in fall 2012



Case Study, Access to Care

- January 2010 onward - In a town in Northwestern Ontario of about 6,000 residents, dentists began to withdraw services for children covered by the Children in Need of Treatment (CINOT) and Ontario Works (OW) programs.
- October 1, 2010 - new program Healthy Smiles Ontario (HSO) initiated throughout Ontario



Case Study, Access to Care

- April 2011 – 33 children on the waiting list for CINOT and HSO services in the area.
- August 2011 - approximately 80 children eligible for CINOT/OW/HSO now on the waiting list for the mobile clinic.
- September 2011 – treatment begins on the Mobile Dental Office.
- August to December 2011 – 54 days and 145 clients seen on the Mobile Dental Office and in two Community Clinics.
- March/April 2012 – Mobile Dental Office to return to this town for further treatment of publicly funded patients.



Conclusions

- Generally, Canadians oral health status is good;
- 3 out of 4 Canadians attend annually for dental care;
- 2 out of 3 Canadians have no dental needs;
- 1 out of 3 Canadians has a need and 1 out of 6 say they cannot address this need because of financial reasons;
- Of those with need, 50% has a restorative need, 25% has a surgical need and the remaining 25% has needs in prosthodontics, periodontics, urgent conditions and orthodontics respectively;
- Canada compares well to other similar Organisation for Economic Co-operation and Development (OECD) countries in terms of caries and periodontal diseases.
- Specific problems exist in particular vulnerable sub groups.
- Research priorities need to focus on access for vulnerable groups and health promotion / disease prevention.



Implications for the Dental Hygiene Profession

- 66% of Canadian population require maintenance;
- 34% of Canadian population require treatment/maintenance;
- The oral health status of certain population segments is not on par with the overall Canadian population;
 - Seniors;
 - Aboriginal populations.

