



Health
Canada

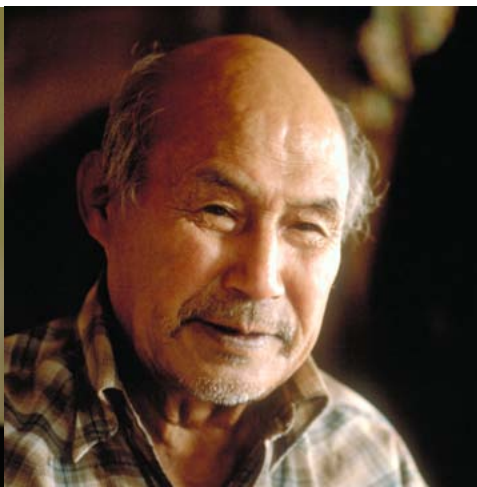
Santé
Canada

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

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

Tuberculosis in Alberta's First Nation Communities

Andrea Warman, TB Program Coordinator
First Nation Inuit Health, Alberta Region



Canada

Outline

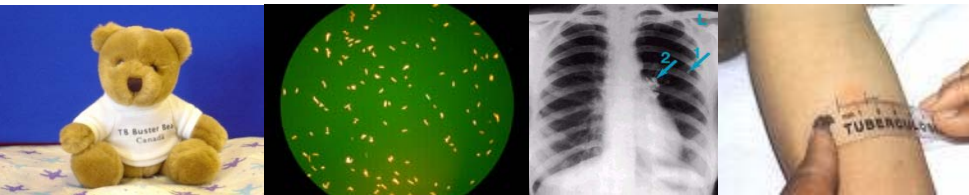
History of TB in First Nations in Alberta

Current Picture of TB in First Nations in Alberta

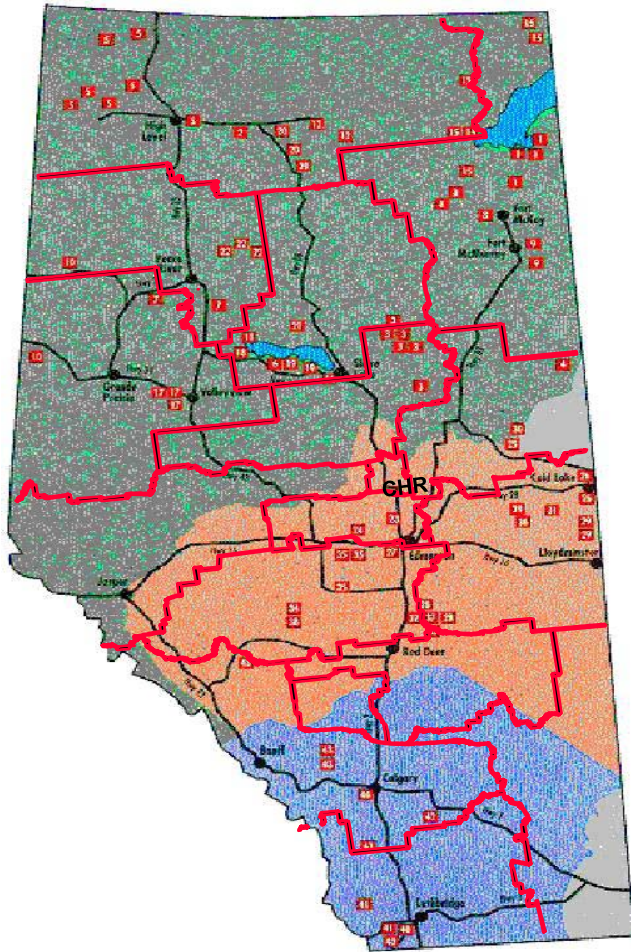
- Successes and Challenges

Alberta TB Program Elements

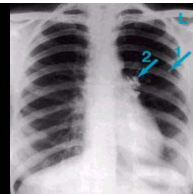
- Surveillance in Action



First Nations in Alberta:

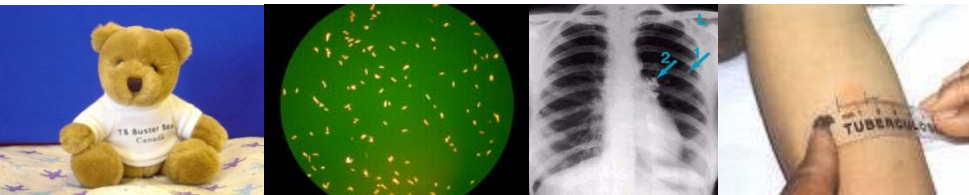


- ❑ Total Population: 102 691
- ❑ Population on Reserve: 63 225
- ❑ 44 communities in 3 zones

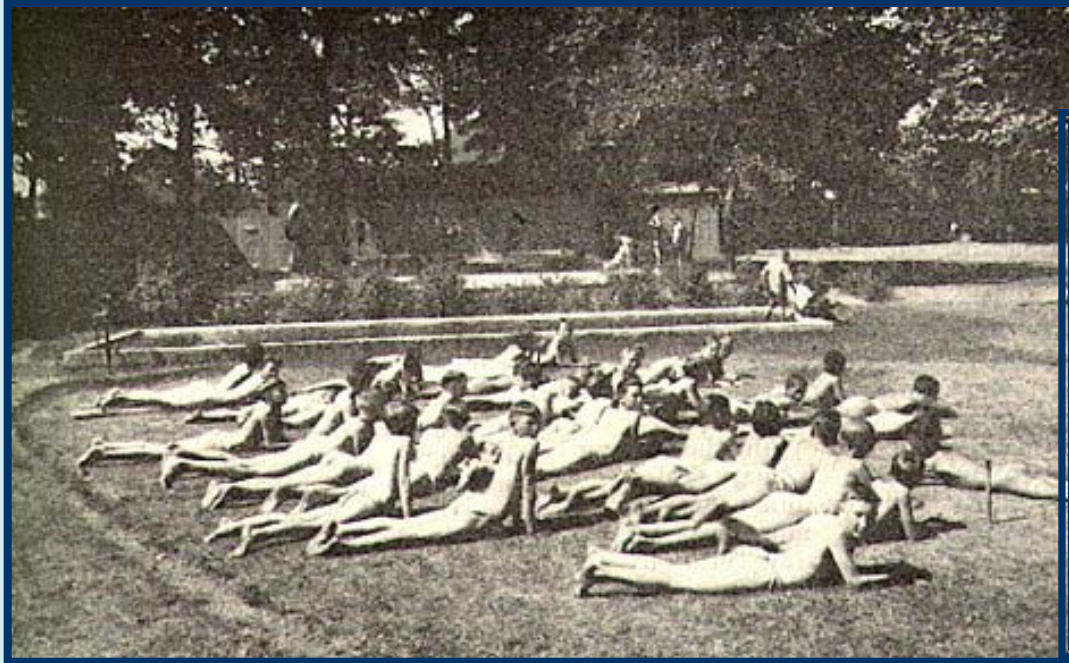
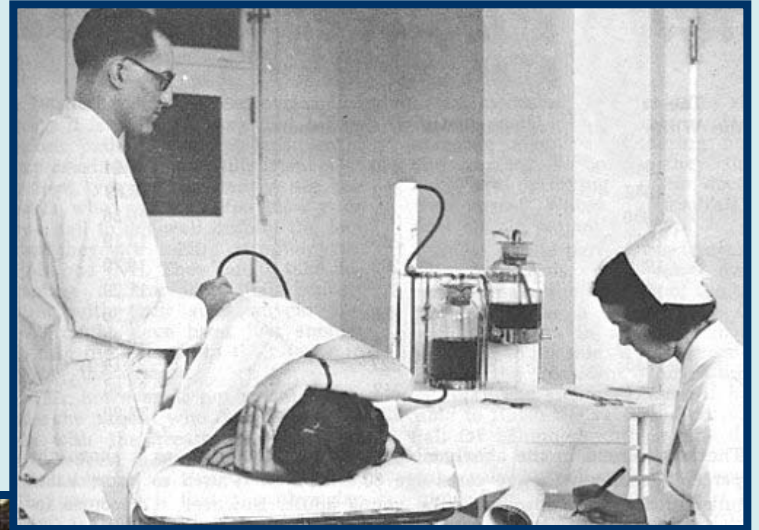


Historical TB

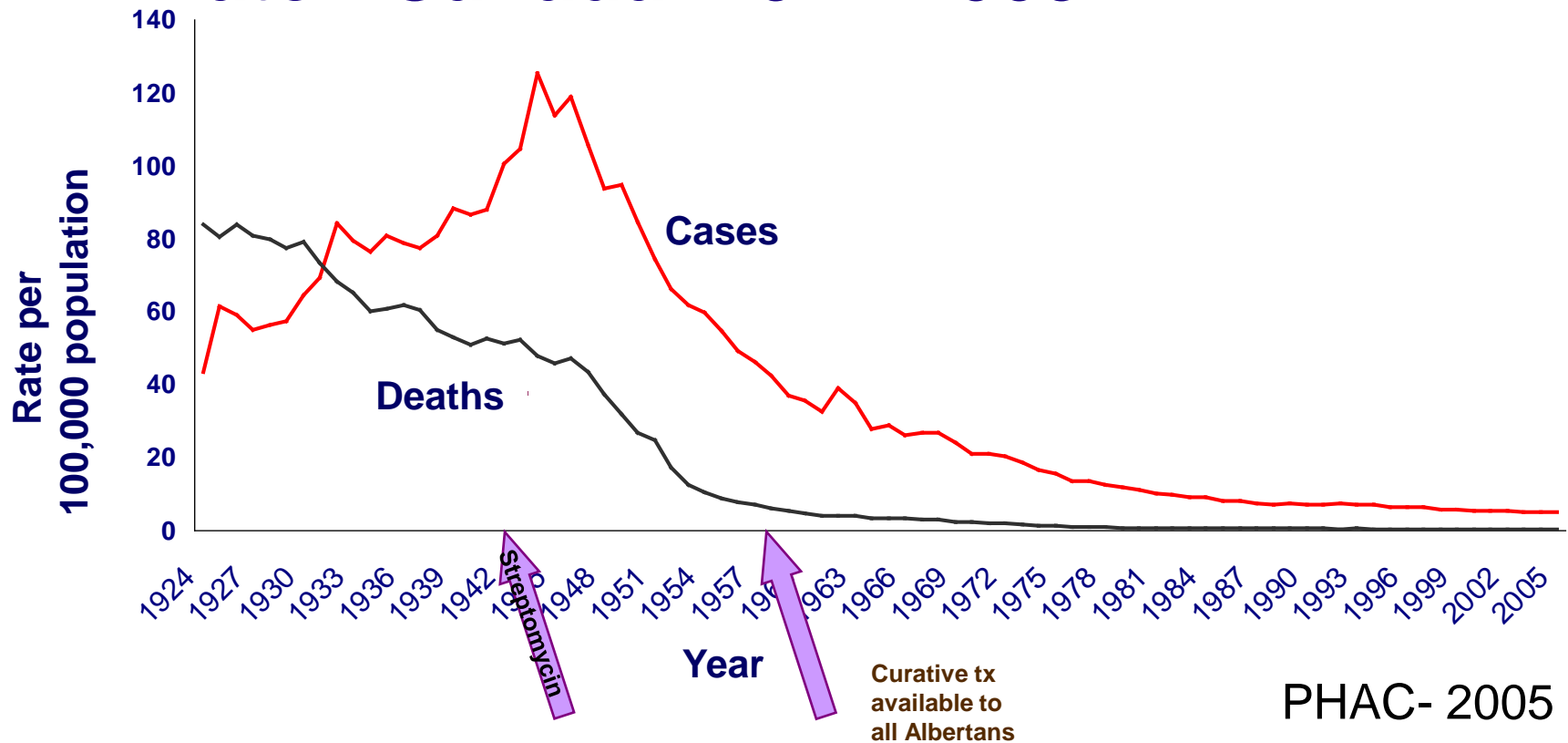
- In 1940 Canadian death rate was about 55/100,000
- In 1940 First Nation death rate was about 600/100,000



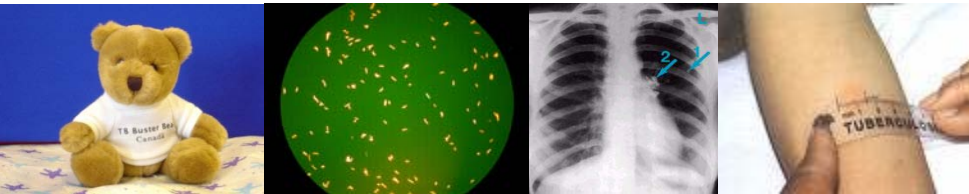




Tuberculosis incidence and mortality rate - Canada: 1924-2005

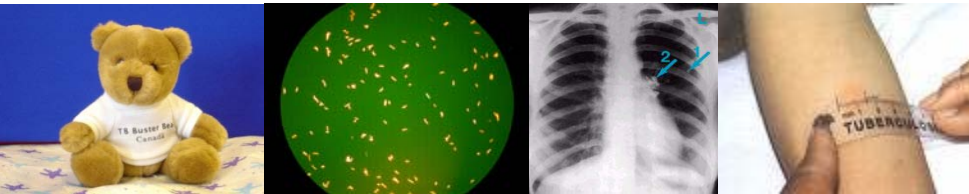


PHAC- 2005



Current state...

- ❑ Pool of infection in older age groups
- ❑ Memories of the epidemic
- ❑ Disproportionate rates of TB morbidity in First Nations



Canadian TB Incidence Rates

Canadian Total: 4.7/100,000

Canadian Born: 1.8/100,000

Canadian Born Aboriginal: 25.7/100,000
(PHAC – 2007)



Tuberculosis in Alberta:

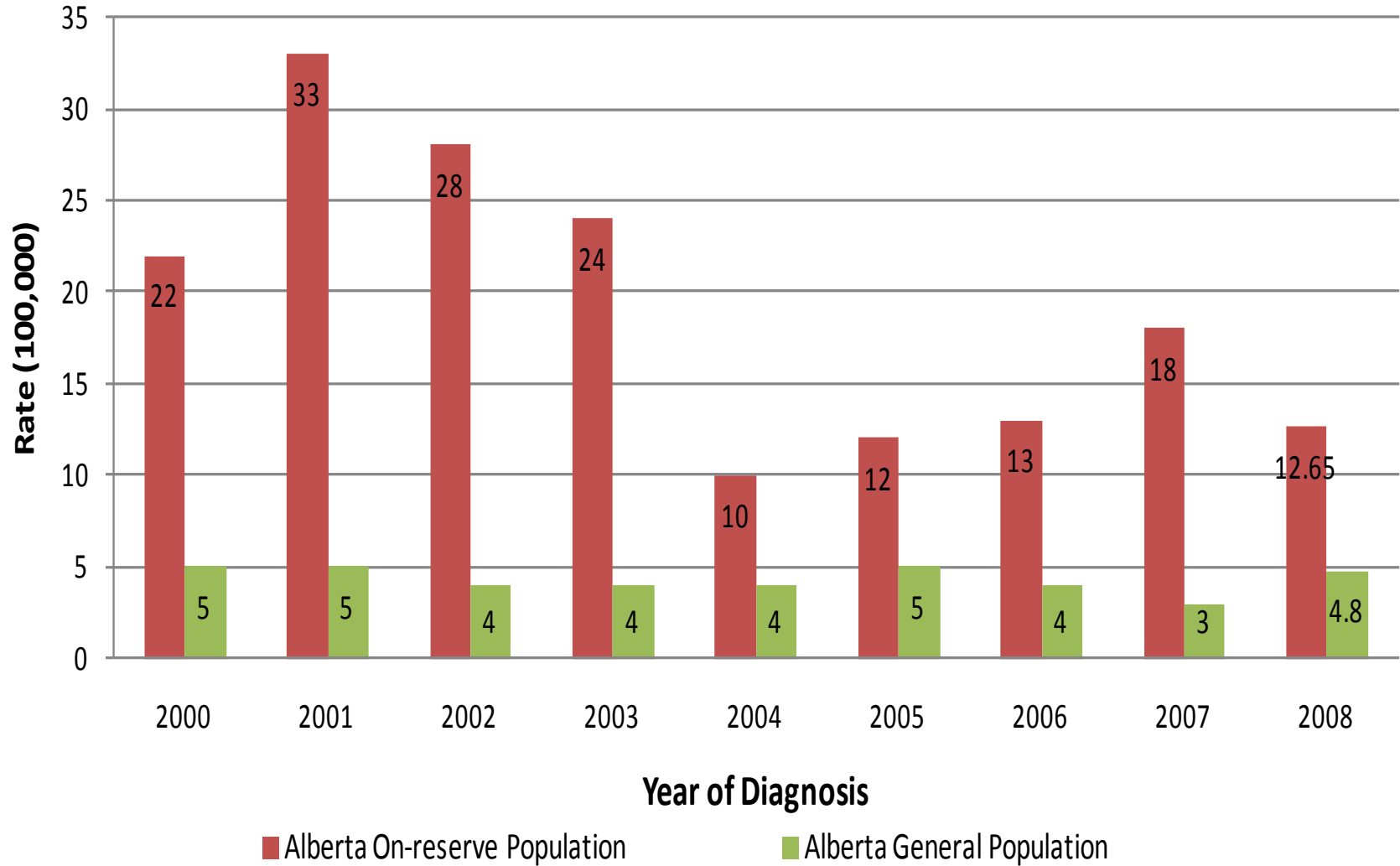
All of Alberta

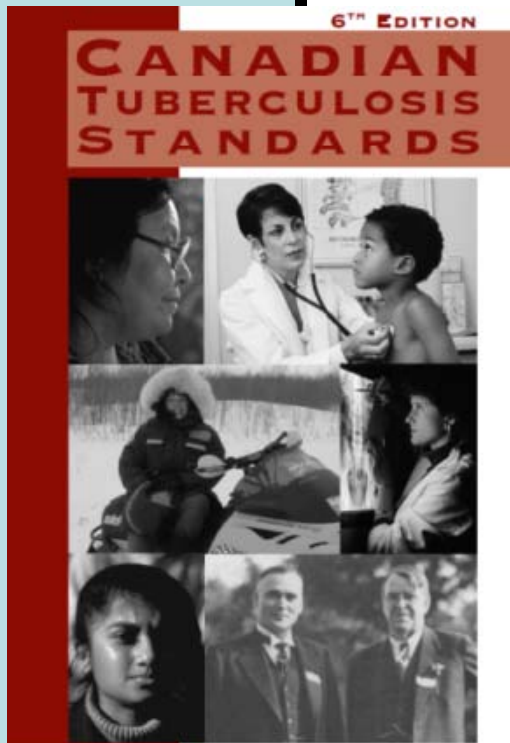
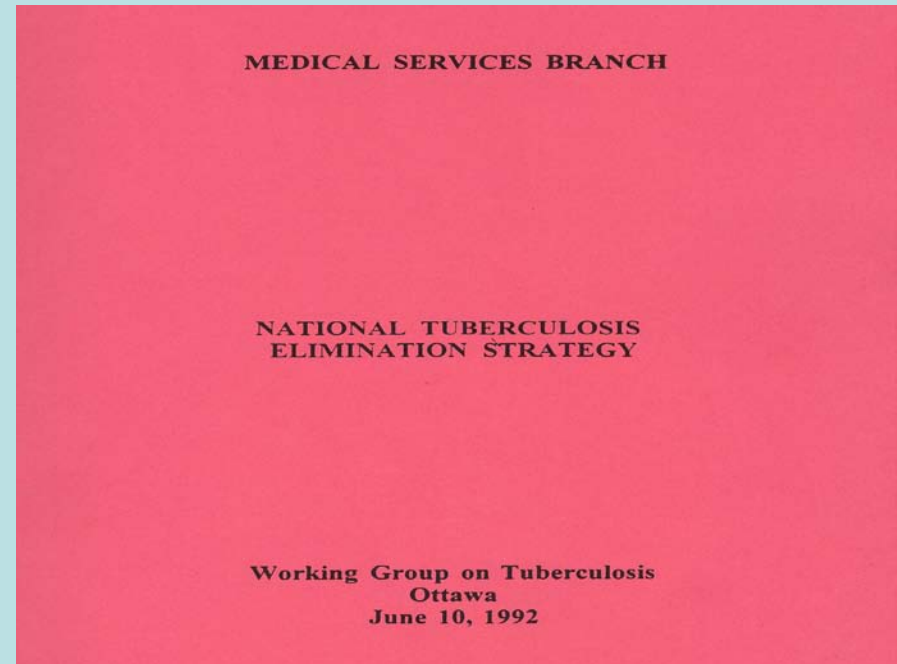
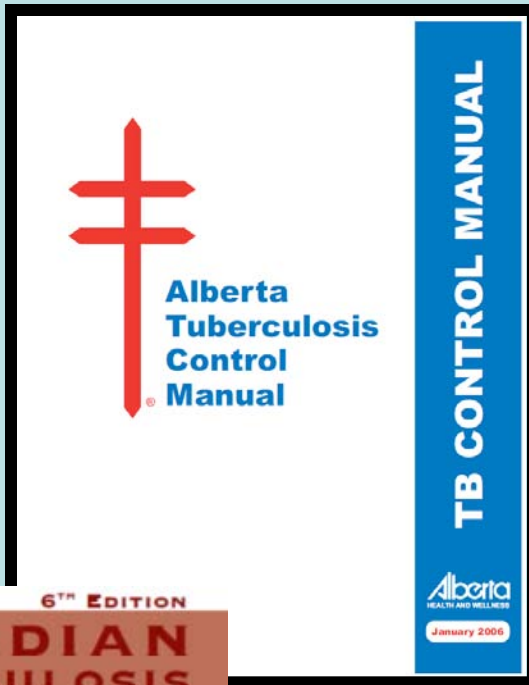
- 2004 109 Cases
- 2005 145 Cases
- 2006 131 Cases
- 2007 112 Cases
- 2008 167 Cases

On-Reserve Cases in Alberta:

- 2004 6 Cases
- 2005 7 Cases
- 2006 8 cases
- 2007 11 cases
- 2008 8 cases
- 2009 14 cases

Active TB Case Rates per 100,000 in Alberta by Residence, 2000-2008



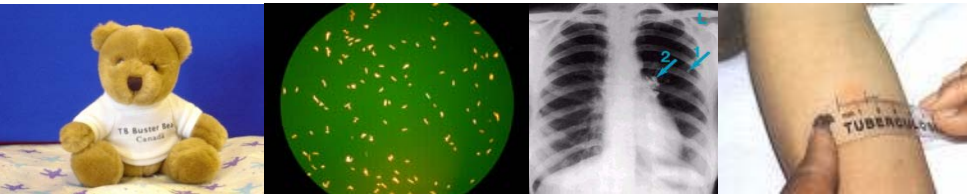
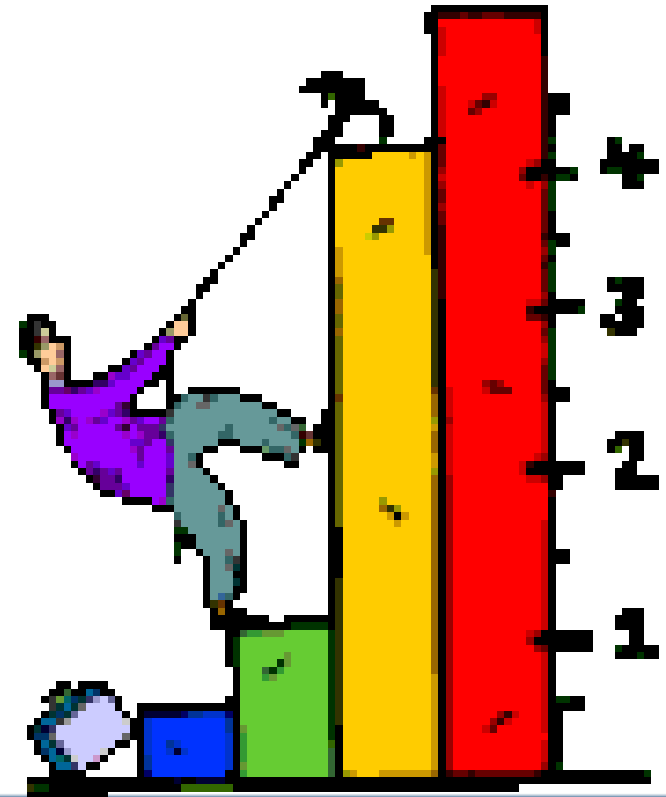


FNIH AB Region
programming based
on three documents

The National FNHI TB program:

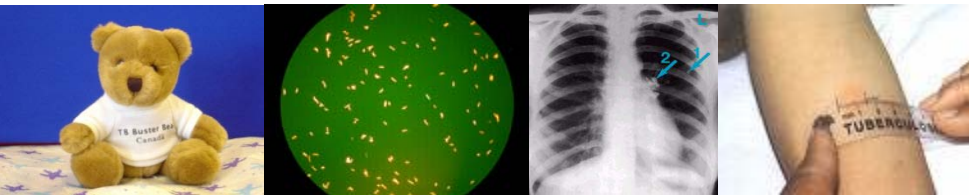
Reduce TB incidence to 3.6 per 100,000 among on-reserve First Nations/Inuit peoples by 2015

Includes strategic elements of TB programming



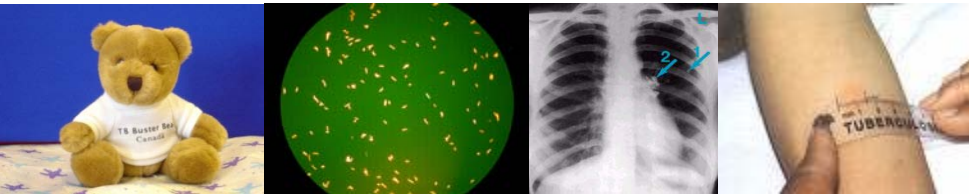
TB Control Elements, FNIH Alberta

- Cases Management
- Contact Tracing
- Screening
- Chemoprophylaxis
- Surveillance
- Health Education and Training
- Research
- Targeted BCG Immunization



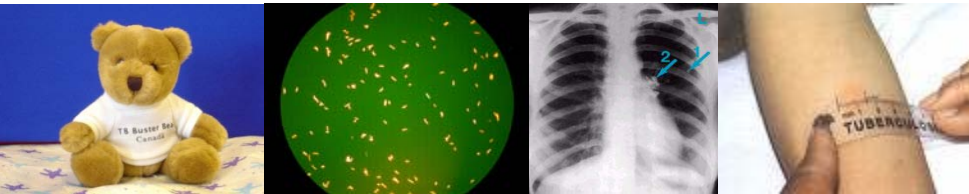
TB Program Elements: Case Management/Contact Tracing

- ❑ Response is rapid and targeted
- ❑ Partnership between:
 - Centralized TB program (TB expertise)
 - FNIH TB program (Support and Resources)
 - Frontline community health staff (Community expertise)
- ❑ Special attention to high risk contacts



TB Program Elements: Screening Programs

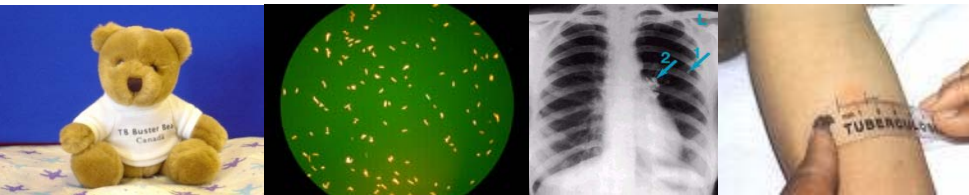
- ❑ Preschool Screening Program
- ❑ School Aged Screening Program
- ❑ High Risk Medical Condition Screening Program



TB Program Elements: Screening Programs

Preschool Screening

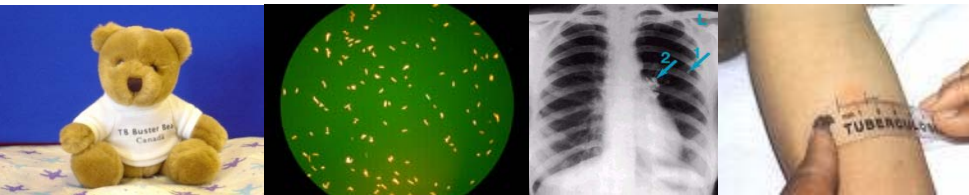
- TST for child/symptom inquiry for child & household
- Non BCG vaccinated
- In communities with TB cases in last 10 yrs
- Goal
 - To identify and tx TB infection early in vulnerable population
 - Children as sentinel event
- To be screened ...
 - Once between 9 months and 24 months of age
 - Once between 42 months and 54 months of age
 - 2 year interval between screens



TB Program Elements: Screening Programs

School Screening: current program

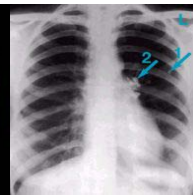
- Based on current literature
 - Children who have a BCG in the first year of life unlikely to have a BCG induced positive skin test by the time they reach school age
- School aged children attending school on reserve at grades 1 & 6 screened
- Screened regardless of BCG Status
- Children with positive skin tests were assumed to be infected with TB and were offered prevention medicine



School screening review

School screening data review

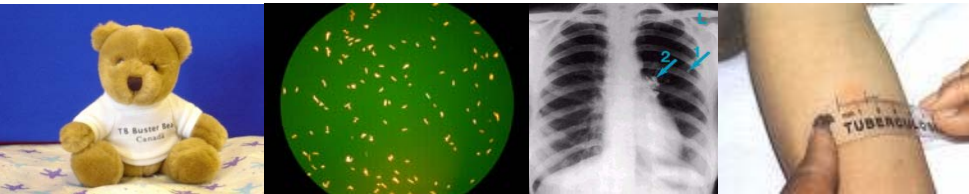
- We thought we noticed a trend
- Reviewed the school screening reports from past 10 years
 - 8678 TSTs were read
 - 241 had significant TST
 - 227 of the 241 had history of BCG vaccination
 - 6 had unknown BCG status
 - 97% of school reactors had BCG vaccine
- IGRA's approved for use in children in Canada



School screening review

Fall 2008 to Spring 2010

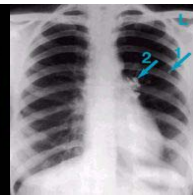
- All children with positive TST on school screening offered the QFT
 - Symptom inquiry and Chest x-ray done
 - Hold other activities – pre proph blood work, household review.
- Only those with a **positive** QFT offered preventive medications



School screening review - results

Reviewed TST results and BCG status for school screening from April 1, 2004 to March 31, 2009

TST	BCG'd	Non BCG'd	Total
Positive	107 (5.3%)	2 (0.1%)	109(2.8%)
Negative	1910 (94.7%)	1910 (99.8%)	3820 (97.2.%)
Total	2017	1912	3929

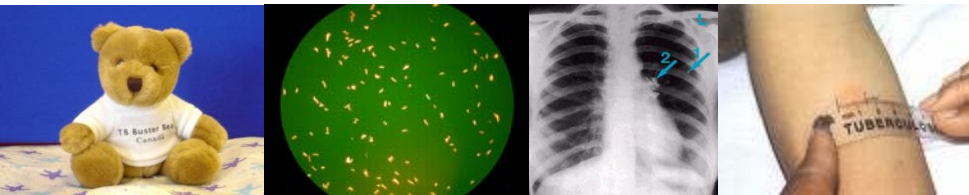


School screening review - results

□ Testing of positive reactors – 70

- positive QFT – 5
- negative QFT – 40
- remainder QFTs pending – 25

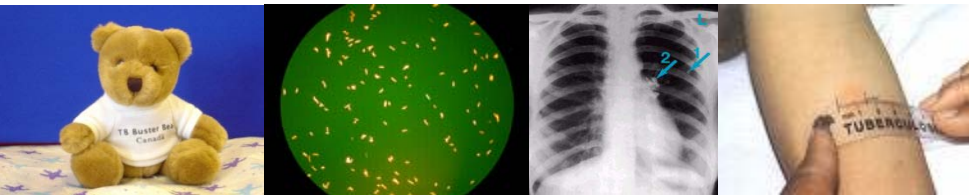
□ Changes to the school programming likely for new school year



TB Program Elements: Screening & Surveillance

Where are cases coming from?

Where are efforts best spent?



Case Risk Factor Review

40 Cases for 2006-2009

Recent Contact **14**

Diabetes **10**

Renal failure **5**

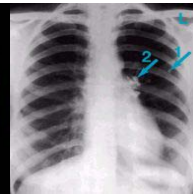
Fibronodular Lung Scar **7**

Substance abuse **10**

Under weight **1**

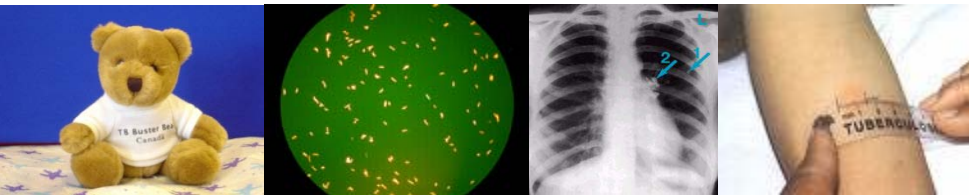
Previous disease **2**

37/40 had risk factors for TB



High/Increased Risk Screening

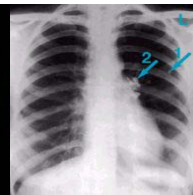
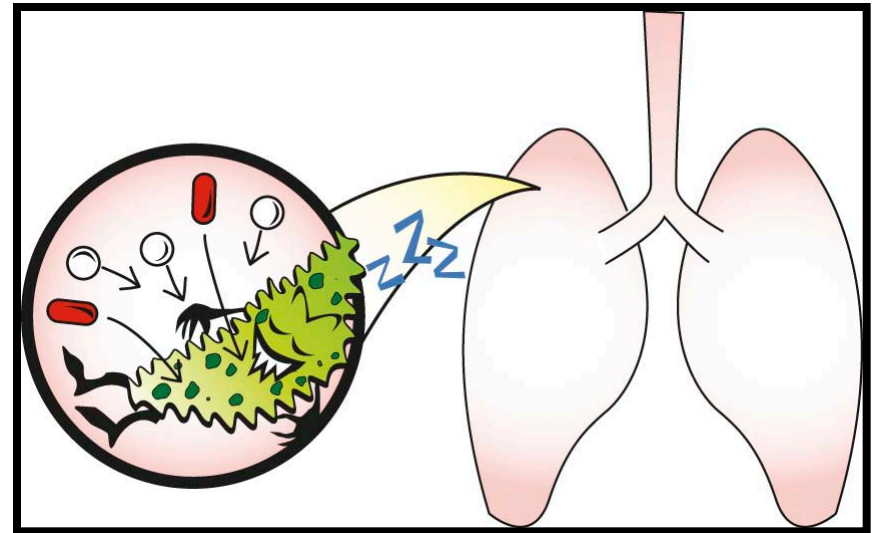
- ❑ Risk categories as per Canadian TB Standards
- ❑ Screened upon dx with secondary medical condition
- ❑ Referred to TB Control for prophylaxis as appropriate
- ❑ Follow up using appropriate screening tool in community q 6-12 months (if no LTBI tx)



TB Program Elements: Prophylaxis

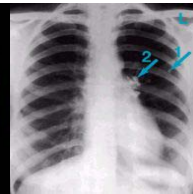
Candidates:

- Contacts
- Converters
- HIV
- Fibronodular Lung Scars
- Residents of communal settings
- Transplant
- Renal Failure
- Some drug therapies
- Silicosis
- Underage Reactors
- Diabetes*



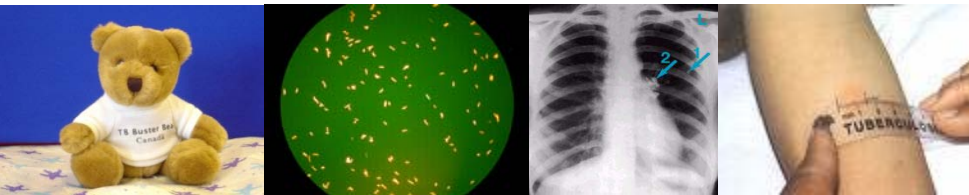
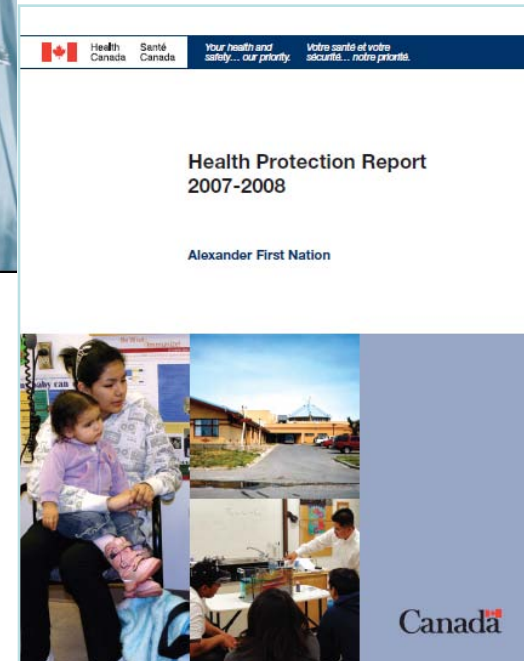
TB Program Elements: Prophylaxis

- All TB tx by DOT
- 70-75% of those recommended start tx
- 80-90% of those who start complete



TB Program Elements: Surveillance

- ❑ Communities provide monthly and annual reporting
- ❑ Reporting compiled and delivered back to communities to aid program planning for next year
- ❑ Information reported used to keep programming current



TB Program Elements: Health Education and Training

Education of:

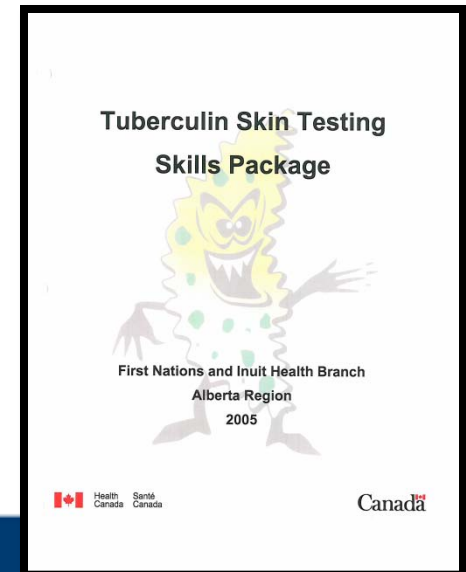
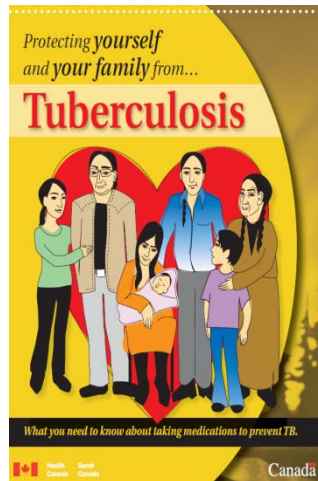
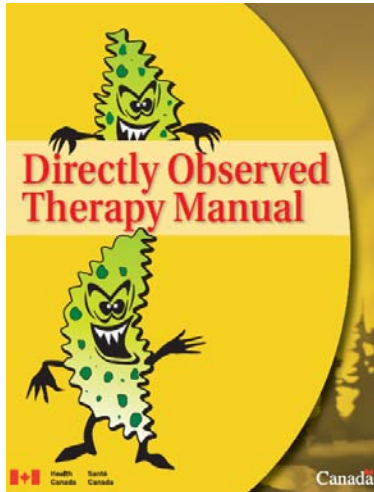
- Communities
- Frontline Staff
- Leadership
- Clients
- Families
- Other TB Partners



TB Program Elements: Health Education and Training

FNIH TB Program Resources

- Tuberculin Skin Testing Skills Package
- DOT Manual
- Prophylaxis Teaching Flip Chart
- TB Education in a box



TB Program Elements: Health Education and Training



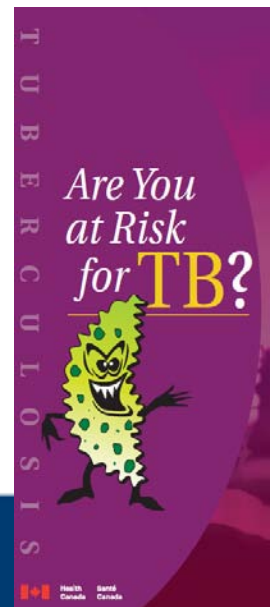
TB Puppets

TB Pamphlet Series

Medication Sheets

TB Videos

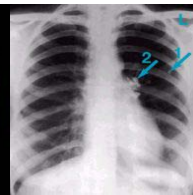
TB Games



TB Program Elements: Research

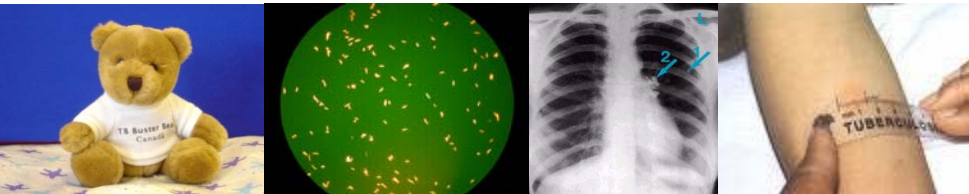
Supporting initiatives looking at ways to improve current TB programming.

- TB Transmission in Prairie Provinces
- Community Based Research
- Funds available for community driven initiatives

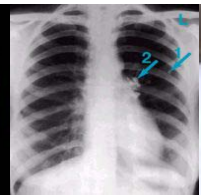


TB Program Elements: Targeted BCG Use

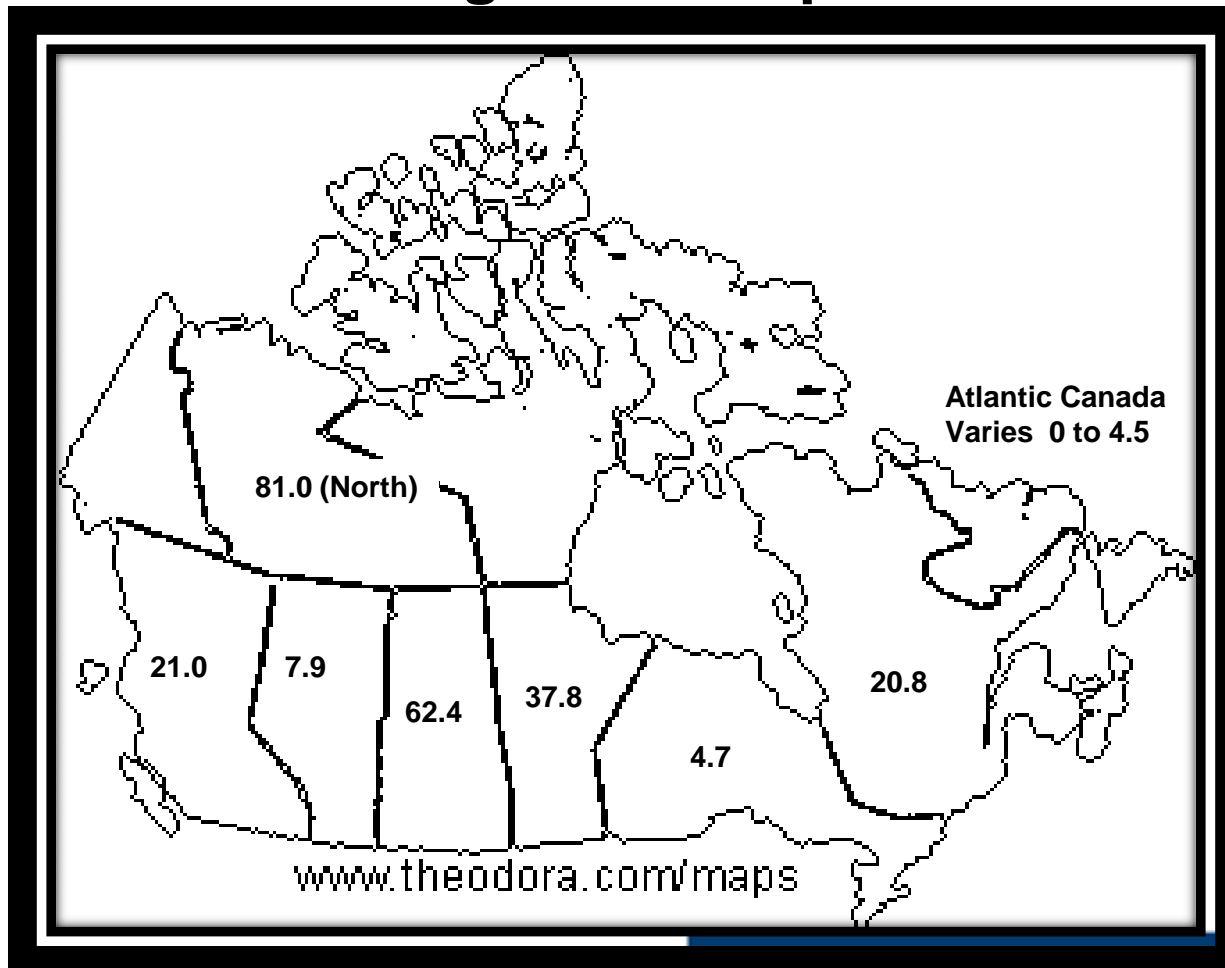
- ❑ Is no longer being offered in most FN communities
 - Communities with high TB case rates and high uptake of BCG continue to offer BCG.
 - 4 communities continue to use BCG
- ❑ Better ways to protect children:
 - High risk medical condition screening
 - Preschool screening
- ❑ Preschool screening and BCG reviewed yearly



Program Success



Rates in Aboriginal Groups 2007



PHAC Data

Incidence of TB Amongst On-Reserve and Off-Reserve First Nations in Alberta over 5-year periods, 1998-2007

	1998 – 2002		2003-2007	
	On-Reserve [*]	Off-Reserve [*]	On-Reserve [*]	Off-Reserve [*]
TB Cases	82 (73.2)	30 (26.8)	49 (75.4)	16 (24.6)
Population[†]	56,360 (66.2)	28,835 (33.8)	62,582 (64.8)	34,055 (35.2)
Incidence[‡]	29.1	20.8	15.7	9.4

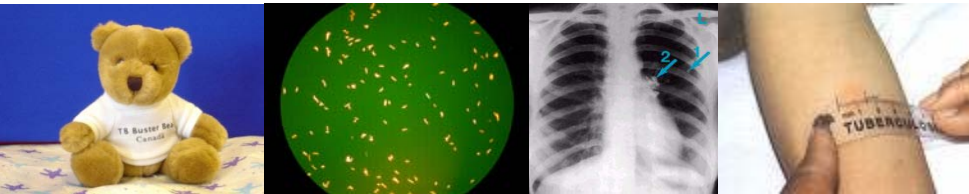
* Numbers in brackets are percentages

† Average population over 5-year periods; Source: Indian and Northern Affairs Canada

‡ TB Cases per 100,00 person-years

Evidence Based Practice

- BCG Discontinuation/Continuation
- Preschool Screening Program
- School Screening Review
- High Risk Medical Condition Screening



Program Success: Acknowledgements

Program Partners:

Centralized TB Control Program

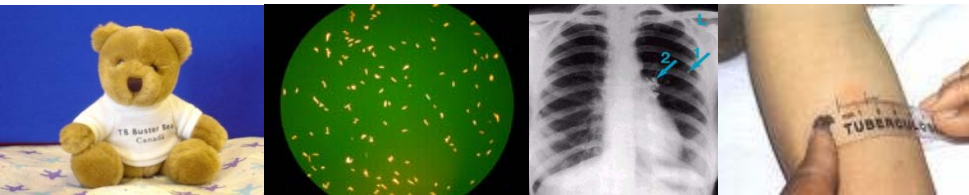
Team of TB Medical Expertise

Network of TB Nurses

Centralized Lab Services

Centralized Pharmacy Services

Local Lab and Xray facilities



Program Success: Acknowledgements

First Nations TB Team

Communities:

Communities

Leadership

Frontline Staff

FNIH:

Health Protection Team

Nursing/CHR Team

Zone Staff

