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Challenges of Tuberculosis Management in Sioux Lookout area First Nations Communities

Sioux Lookout First Nations Health Authority

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Land Acknowledgement

The Sioux Lookout First Nations Health Authority acknowledges that it is situated on the traditional territory of Lac Seul First Nation, signatory to Treaty #3 and Fort William First Nation, signatory to the Robinson-Superior Treaty of 1850.

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Dr. Lloyd Douglas

- I have a relationship with a not-for-profit organization to disclose
  - Thunder Bay District Health Unit seconded to Sioux Lookout First Nations Health Authority (SLFNHA) and Sioux Lookout Regional Physician Services Incorporated (SLRPSI)

Dr. Yoko Schreiber

- I have a relationship with a for-profit and/or a not-for-profit organization to disclose
  - Indigenous Services Canada (ISC), ISC Ontario Region, SLFNHA

Content and Trigger Warning

Content/Trigger Warning: Images and mention of residential schools, assimilation, ongoing harm, colonization, intergenerational trauma

- We acknowledge that it will be difficult for some when discussing these topics
- This presentation is intended for advocacy purposes and to acknowledge the impacts of colonialism that exists within the current health system
- We respect and honour all Indigenous communities
- For anyone experiencing pain or distress as a result, please contact the Indian Residential School Survivors Society's 24-hour crisis line at 1-800-721-0066 for immediate support.

Learning Objectives

1. Gain awareness of how historical and cultural factors, colonial policies and inadequate access to the health care system negatively impact TB management for Sioux Lookout area First Nations

2. Discuss the challenges of coordinating the public health and clinical management of TB care for individuals diagnosed with active TB and LTBI in the Sioux Lookout area

3. Describe how the compounding effects of the COVID-19 pandemic have impacted TB management for Sioux Lookout area First Nations

4. Identify the innovations to TB care that have been implemented in the Sioux Lookout area

1600s: The Historical, Economical and Political Forces of Colonization on TB in First Nations in Western Canada

Source: https://www.thecanadianencyclopedia.ca/en/article/buffalo-hunt, 2006

- The First Nations of the West were self-governing peoples with political and economic autonomy through various ways of life, including the bison hunt
- Tuberculosis (TB) was introduced to Indigenous communities in the 1600s by European explorers and colonizers
- By forced removal of political autonomy and an important food resource, the First Nations of the West were left open to the impacts of TB

(Daschuk et al., 2006)

1800s: Federal Residential Schools and TB

Source: National Centre for Truth and Reconciliation, 2019

As early as 1907, chief medical officer of the Department of Indian Affairs, Peter Henderson Bryce, identified [residential] schools an ideal vector for TB transmission, going as far as to say it was "almost as if the prime conditions for the outbreak of epidemics had been deliberately created." (Canadian Geographic Indigenous peoples Atlas of Canada, n.d.)

1949: Responding to the TB Outbreak - Segregated Hospitals and Inequalities in Care

Source: Sioux Lookout Meno Ya Win Health Centre, n.d.

Built in 1949, the **Sioux Lookout Indian Hospital**, also known as the Sioux Lookout Zone Hospital, was originally **built as a sanatorium for First Nations individuals** with TB (SLMHC, n.d.).

Source: Sioux Lookout Meno Ya Win Health Centre, n.d.

In 1951, a new **Sioux Lookout General Hospital** with 40 beds and vastly improved facilities opened for the **non-Indigenous citizens of Sioux Lookout** (SLMHC, n.d.).

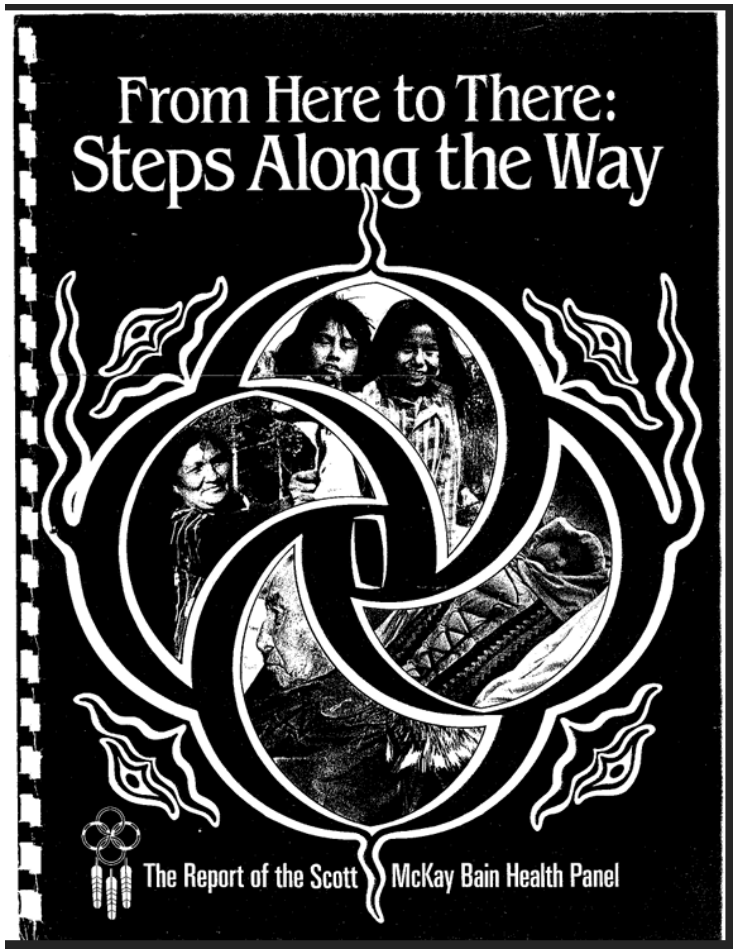
1988: Hunger Strike at the Sioux Lookout Zone Hospital

Source: Sioux Lookout Meno Ya Win Health Centre, n.d.

In 1988, five men from Sandy Lake First Nation – Josias Fiddler, Peter Goodman, Allen Meekis, Peter Fiddler and Luke Mamakeesic – went on a hunger strike to draw attention to years of worsening health care and deteriorating relations between First Nation communities and the federal government (SLMHC, n.d.).

1989: Developing a Process to Improve Health Services
Sioux Lookout First Nations Health Authority

The Scott-McKay-Bain Health Panel –
report was released in May 1989 (SLMHC, n.d.)



Source: Sioux Lookout Meno Ya Win Health Centre, 1989

The Sioux Lookout Zone Chiefs mandated the "development of an aboriginal health authority." This health authority is now known as the **Sioux Lookout First Nations Health Authority** (SLMHC, n.d.).

Sioux Lookout
First Nations
Health Authority

Source: Sioux Lookout First Nations Health Authority, n.d.

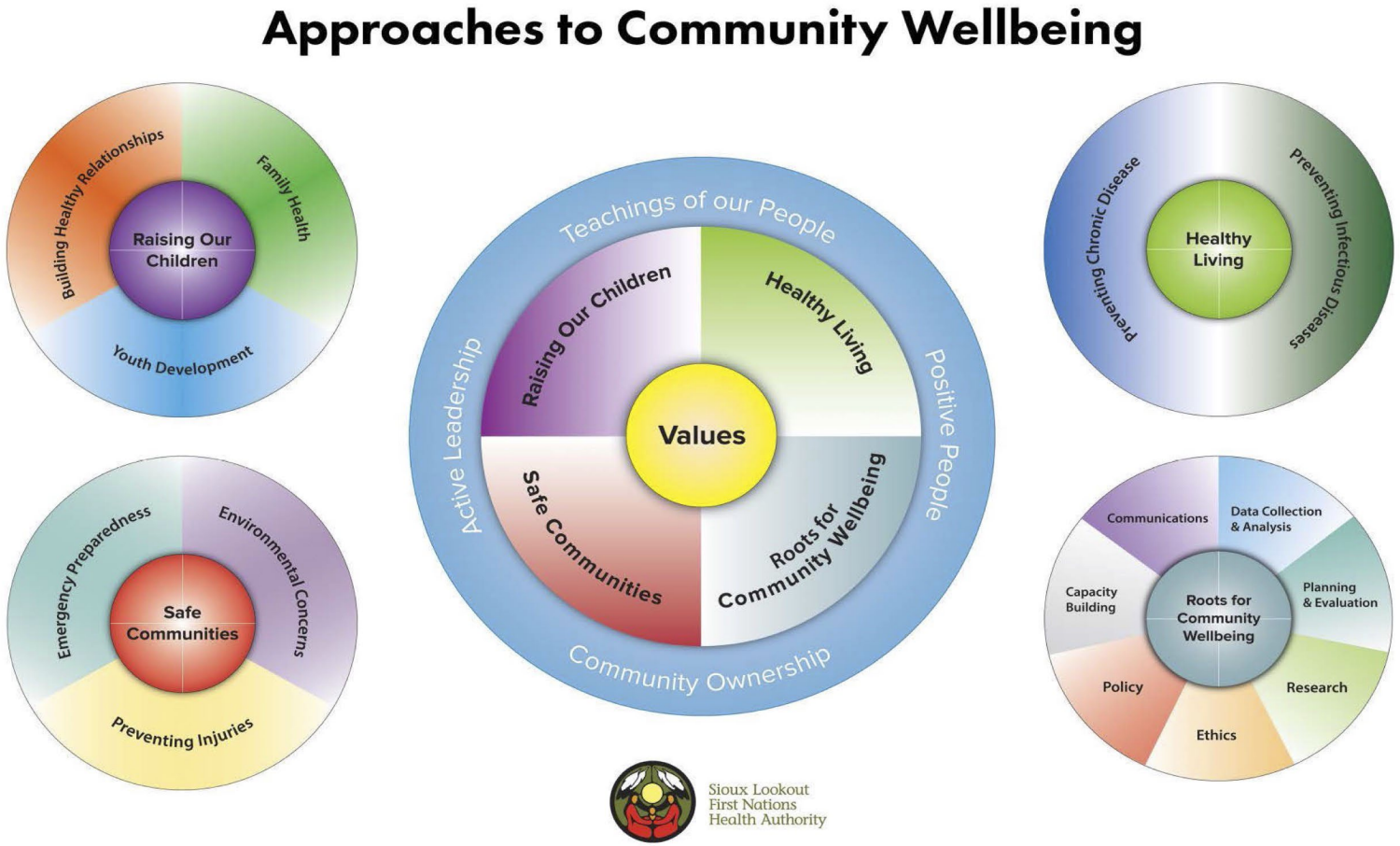
1990-2007: The Sioux Lookout TB Management Program

Health Canada

Sioux Lookout First Nations Health Authority

2016: Community-Owned Approach for Community Wellness

Vision: The Anishinaabe people of this land are on a journey to good health by living healthy lifestyles rooted in our cultural knowledge.



Source: Root et al., 2023

2017: SLFNHA's Preventing Infectious Diseases TB Work

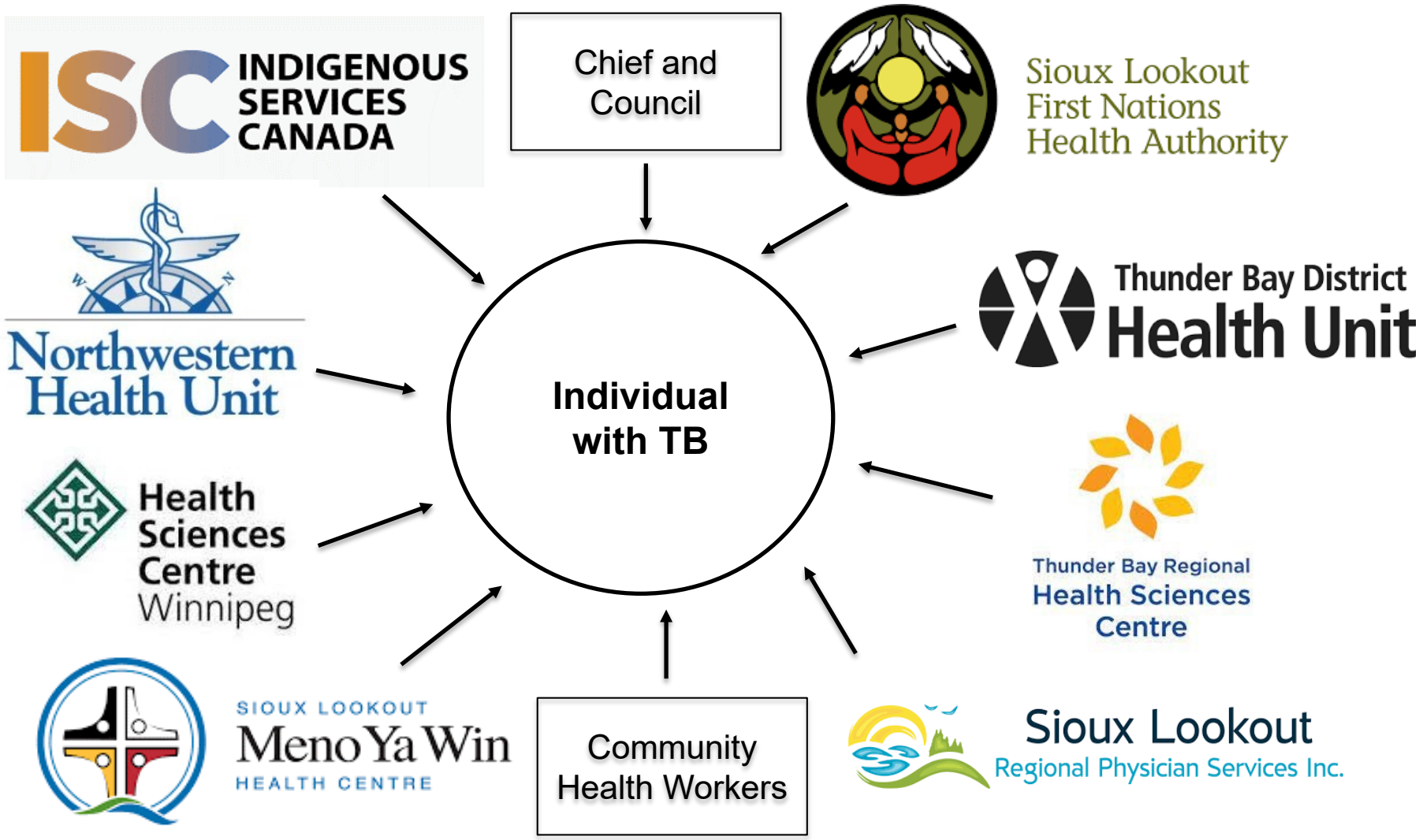
- The Preventing Infectious Diseases team within ACW provides services to reduce, control and manage the incidence of tuberculosis (TB) in First Nations communities. Services include:

    - TB surveillance and maintaining and updating databases
    - Contact tracing and case management
    - Coordinate anti-tuberculosis drugs for treatment and prevention
    - Educate and support individuals hospitalized with TB
    - Provide disease case therapy and follow-up
    - Support and facilitate Directly Observed Therapy (DOT)
    - Health promotion and TB prevention services

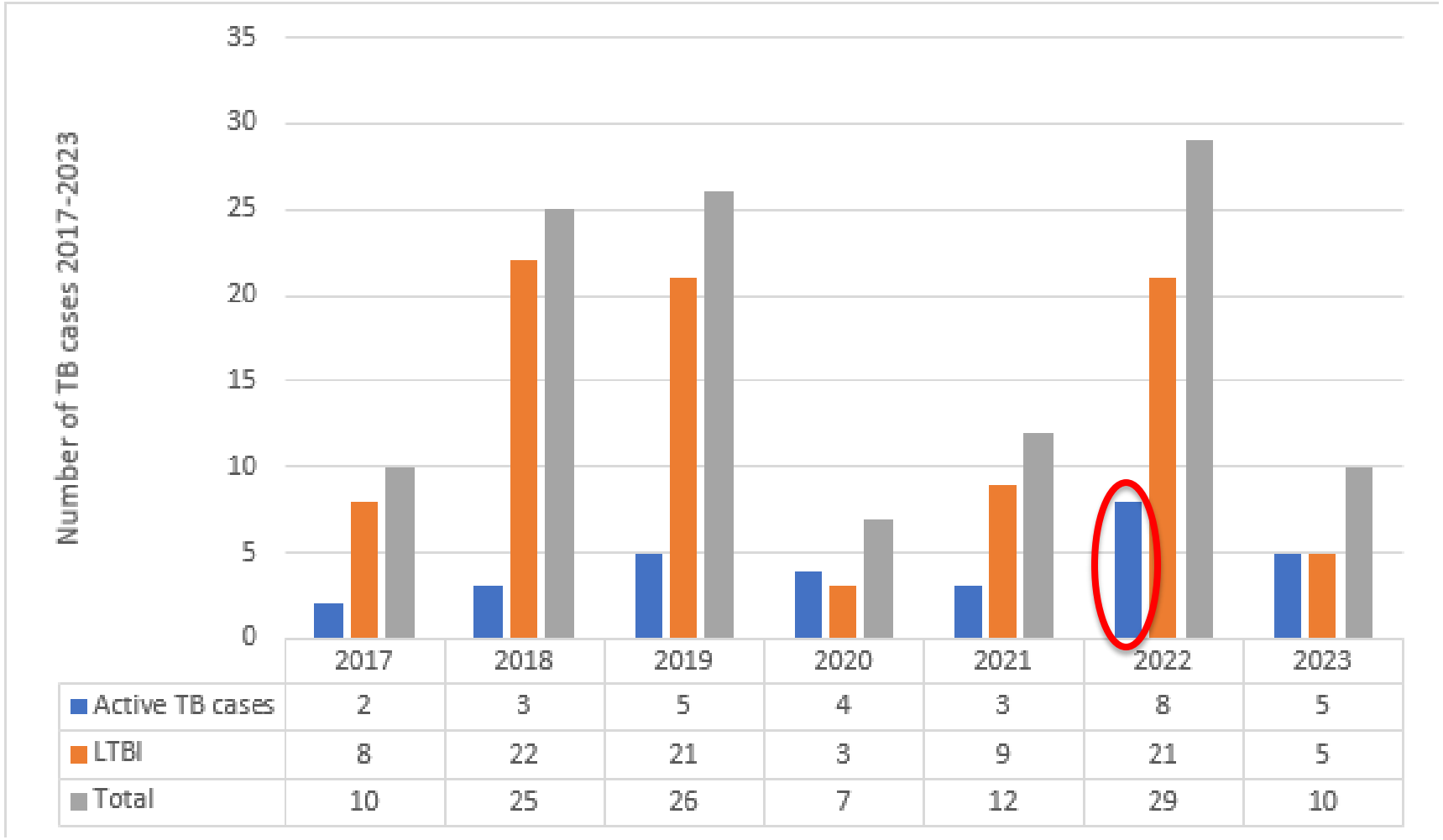
Protocol for the Management of Diseases of Public Health Significance in Sioux Lookout area First Nations

Activity	SLFNHA	FNIHB	Health Unit
Case management	• Provide guidance to community health nurses (CHNs) • Provide and review public health case documentation material completed by CHNs • Connect directly with cases as appropriate to provide education/ management • Collaborate with health units on case management for cases presenting cross-jurisdictional issues	• Provide sufficient qualified nursing staff at community level to undertake case management of Designated Diseases • Direct CHNs to follow SLFNHA protocol for case management • Provide sufficient resources available for back-filling SLFNHA if required • Support SLFNHA staff with technical advice as requested • Ensure sufficient qualified public health inspectors to undertake environmental health inspections as needed	• Collaborate with SLFNHA on case management for hospitalized cases and others presenting cross-jurisdictional issues

A Fragmented Health System



TB Cases in Sioux Lookout area First Nations, 2017-2023



	2017	2018	2019	2020	2021	2022	2023
Active TB cases	2	3	5	4	3	8	5
LTBI	8	22	21	3	9	21	5
Total	10	25	26	7	12	29	10

Figure 2. Number of TB cases in Sioux Lookout area First Nations: 2017-2023
Source: PID/SLFNHA, TB case counts

TB Cases Clinical Perspective

Infectious Diseases Specialist:

Dr. Yoko Schreiber

Cases - Overview

New TB case – isolated case vs. heralding a cluster of cases

- Historical knowledge of TB team invaluable to identify links

First case September 2022

Most recent case identified May 2023

7 adult cases

4 pediatric cases

26+ contacts

Isolated TB cases in the previous years

Cases 1-5

1. Sm+ pan-sensitive cavitary pTB; liver TB (multiple abscesses)
    - DNA fingerprinting related to a previous case in community (not named as a contact) and to two other cases in this cluster
2. Sm+ pansensitive cavitary pTB, presumed spinal TB (subcutaneous abscess)
    - NOT related to other cases by DNA fingerprinting
3. Sm-Cx+ pansensitive pulmonary and pleural TB
    - Diagnosed out of province – no DNA fingerprinting available
4. Sm+ pansensitive cavitary TB; pulmonary empyema
5. Probable spinal TB (no tissue diagnosis)
    - Diagnosed out of province

Cases 6, 7, 8

Case	TST	SI	Imaging	Sputa	Treatment
6	TST conversion 2 exposures	Cough 2/12	N CXR x2	Sm-Cx+	Yes
7	TST conversion 2 exposures	Fatigue, low energy 3/12	N CXR x2	Sm- Cx+	Yes
8	TST conversion 2 exposures	Fatigue, low energy, occasional cough 1x/week	N CXR #1, L hilum enlarged CXR #2 AbN CT with consolidation	Sm-Cx+	Yes

Detailed knowledge of nature of contact and relationships.
LOW threshold for ruling out active TB.

Challenges

- Communication: Multiple agencies and high staff turn-over at community level; lack of designated care pathways (pediatric TB) and dedicated resources, jurisdictional health borders negatively affect transfer of care
- Diagnostic delays:
  - Multiple intermediaries for orders
  - Procedures and imaging necessitate travel out of community to Sioux Lookout or Thunder Bay
  - Public Health Laboratory reports sent by paper copy. Not scanned into hospital EMR and access in community EMR sporadic.
  - Mycobacterial cultures: processed in Thunder Bay or Toronto, TAT AFB ~1 week. SLMHC provides GeneXpert MTB PCR for inpatients.
  - Confusion at frontline on appropriate samples and requisitions (e.g. PCR)

Challenges

- Difficulty in accessing follow-up appointments (lack of phone, travel) and related care (lost faxes for bloodwork, unclear ordering privileges)
- Community DOT human resource intensive due to transient housing status and substance use issues in some patients
- Mental health and competing demands (e.g. law enforcement) affecting health care seeking (anxiety, lack of trust), but also impacted by TB treatment itself (isolation, anger, stigma) - need for multi-disciplinary and holistic care
- Superimposed complications related to SUD (MRSA superinfection, alcoholic hepatitis) - need for multi-disciplinary and holistic care.
- Covid-19 therapy nirmatrelvir/ritonavir drug interactions with rifampin
- Anchoring bias and delays in diagnosis (pregnancy, AUD), delays in accessing specialists (TB empyema) or procedures (MRI)

Contacts

26+ Contacts

- 21 contacts from case 1, 6 contacts from case 2, 23 from case 3 and 44 for case 4

Overlapping contacts with multiple exposures

- Shifting of break in contact time
- Increased clinical suspicion for active TB: very low threshold for investigation (case 5, 6, and 7).

Current Preventative Therapy

- 3 completed TPT (2 adults, 1 child – pending FU for reexposure)
- 7 currently on TPT (6 adults, 1 child)
- 1 adults TPT held (non-adherence to 4R due to acute mental health issues)
- 5 contacts to start TPT (3 pending work-up to rule-out active TB)

TB Preventative Therapy

- Creation of SLFNHA policy (just prior to PHO policy)
- Access to 3HP since 2019
- Designation of one regional pharmacy
- Education of community nurses by TB team

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Use of rifapentine and isoniazid combination therapy for the treatment of latent tuberculosis infection in Ontario

Success of 3HP

- Most prefer 3HP over 4R or 9H
  - Shortest
  - Less onerous for most to take once a week
  - Medications remain at nursing station
    - Fewer pharmacy errors or interruptions due to shipping
  - Ensures regular access to health care facility
    - Monitoring of and rapid response to adverse effects
    - Assessment of treatment completion (DOT)
- High completion rate, rare adverse effects

Drawbacks:

- Nursing education and staff at community nursing station
- Travel to nursing station vs. home visits (if possible)
- Care experiences at nursing stations

Opportunities

- Build relationship of trust and support between patients, communities and health care providers
  - TB is preventable and curable in most cases
  - Successes DESPITE the challenges
- Improve health systems
  - Move away from relying on individual people to "make it work" and create care pathways – let us not burn out resiliency
  - Requires ongoing education, building local capacity, and advocating for equity in health care service delivery (incl. diagnostic supports, comprehensive care, human resources)

TB Experiences in the Community

Sandy Lake First Nation Health Director:

Joan Rae

TB Disparities among First Nations

Tuberculosis is a Social Disease

- Social determinants
  - Crowded and poor-quality housing, food insecurity and barriers to healthcare
- Historical trauma
  - Lengthy forced confinement in TB hospitals and sanatoria far away from community
  - TB in residential schools

OPINION

Residential school deaths from tuberculosis weren't unavoidable – they were caused by deliberate neglect

LENA FAUST AND COURTNEY HEFFERNAN
CONTRIBUTED TO THE GLOBE AND MAIL
PUBLISHED JULY 12, 2021

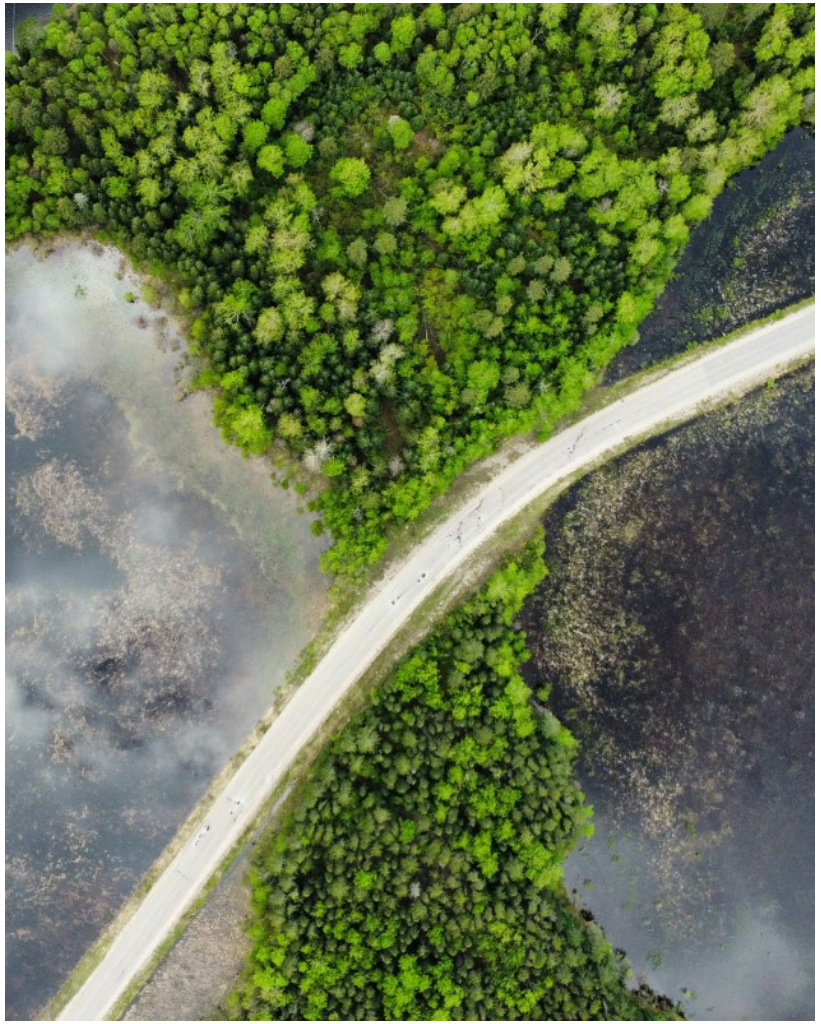
Source:

, 2021

Unidentified Manitoba Sanatorium
Source: University of Winnipeg, 2019

TB Disparities among First Nations

- Stigma, discrimination, and racism
- Geographic isolation
- Poor housing conditions
- Lack of trust in the healthcare system
- Limited healthcare resources
- Cultural barriers
- Limited access to diagnostic tools
- Delays in diagnosis and treatment
- Lower TB treatment successes rate



Source: Sioux Lookout First Nations Health Authority, 2022

Challenges in TB Prevention and Management

For Sioux Lookout area First Nations communities in northern Ontario, there are several factors that contribute to disruptions of tuberculosis management and prevention efforts and the continuity of care.

This includes:

- unclear responsibilities across partners and challenges with coordination,
- extremely limited human health resources,
- high turnover rates,
- lack of accessibility to specialized TB care,
- challenges with access to pediatric medication due to location,
- reporting in multiple databases,
- piecemeal and unsustainable funding,
- challenges with home isolation and de-isolation.

Challenges with SLFNHA's TB Efforts

SLFNHA's TB Program historically had allocated staff including:

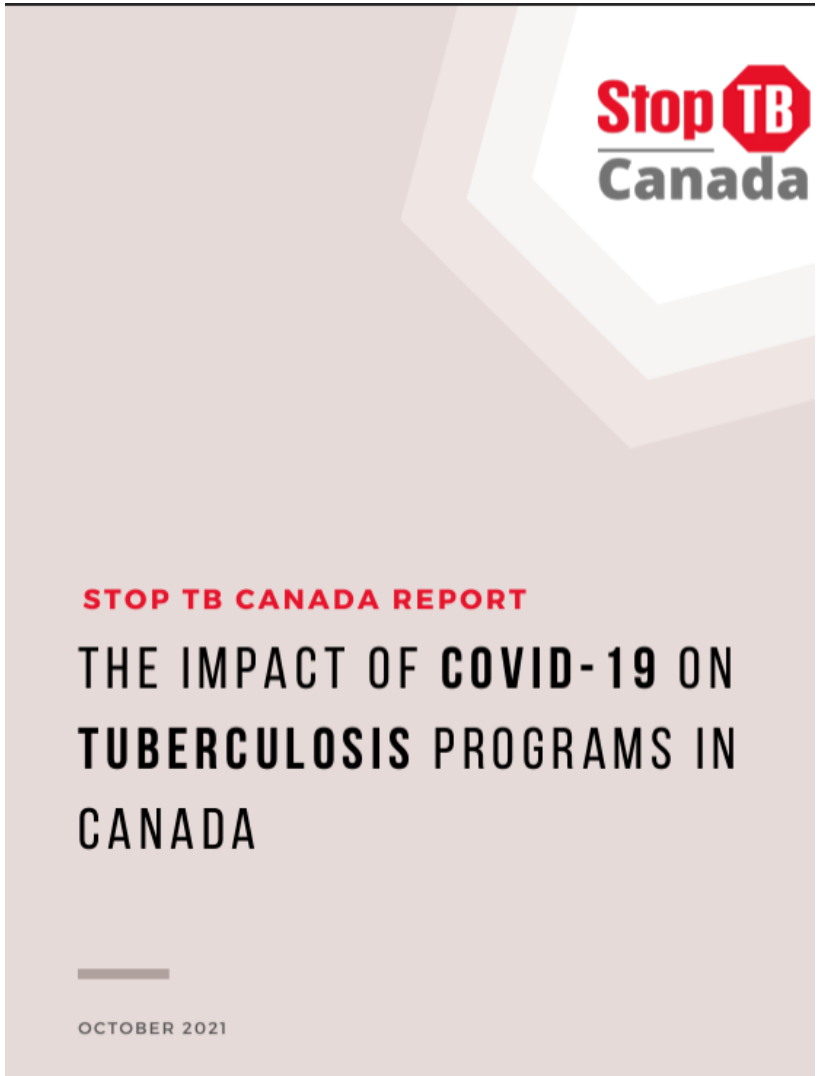
- TB nurses,
- TB educators (direct culturally-informed patient support) and
- Administrative assistance

Now under Preventing Infectious Diseases,

- Public health nurses are responding to not only TB but other IDs
- Only 2 dedicated nurses for TB
- Limited administrative staff
- No linguistically or culturally-informed TB educators
- Limited funding

TB and COVID-19: Further Impacts

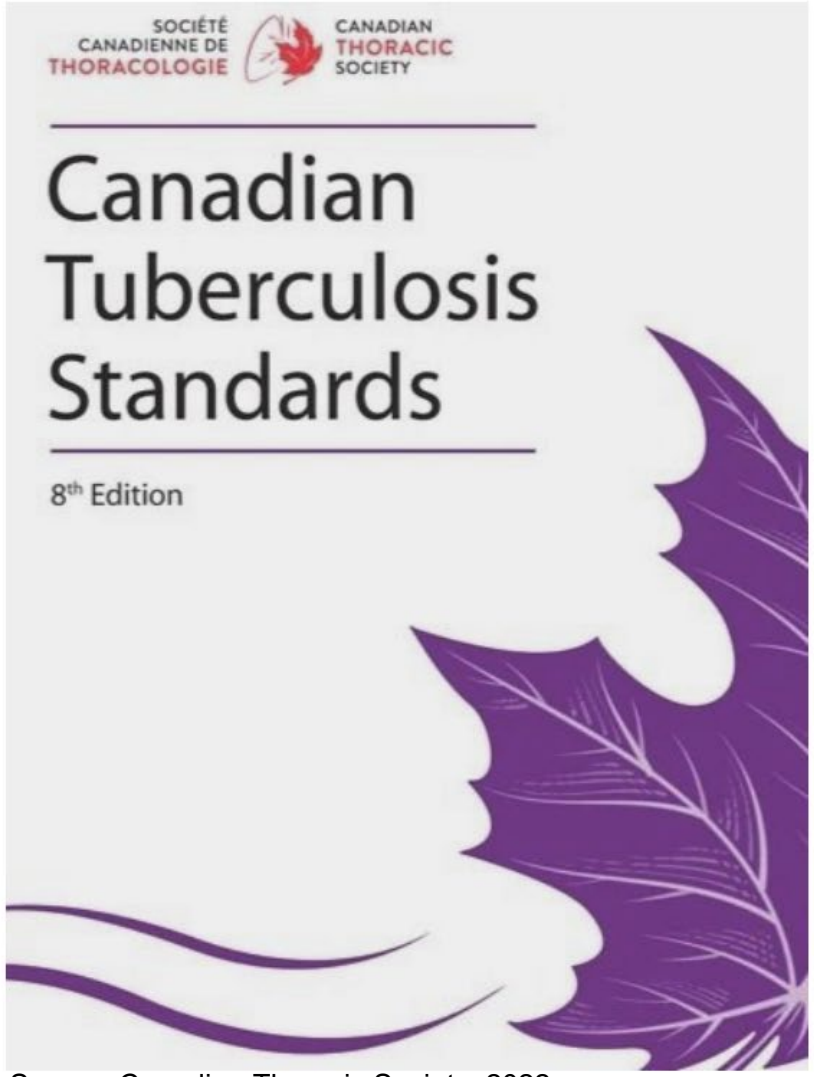
- Diagnostic delays and presentation with more advanced disease
- Diversion of resources and staff
- The shift to virtual care
- Quality of TB care
- Management of latent TB infection (LTBI)
- Active case finding and contact tracing



Source: Stop TB Canada, 2021

Innovations in TB Care in Sioux Lookout area

- Including Chief and Council in the circle of care
- 3HP for LTBI
- Virtual rounds for case management
- Telemedicine
- Multisectoral collaboration



Source: Canadian Thoracic Society, 2022

Innovations in TB Care in Sioux Lookout area

- Providing culturally-safe care from community health workers
- Point of care testing
- ISC epidemiologist in the field to consult with nurses
- Integrating paramedics and community health workers
- High incidence strategy through a universal and targeted approach
- Strengthening TB data management and surveillance

Take Away Points

- Advocate to sustain community-driven TB elimination strategies that incorporate First Nations principles of wellness, healing and self-determination
- Develop a Sioux Lookout area First Nations TB elimination framework
- Address TB as a socio-political issue and advocate for the elimination of health inequities
- Improve housing in communities
- Strengthen community TB services
- Strengthen partnership and collaboration with partners across sectors
- Integrate trauma-informed care
- Consider the importance of social supports
- Use TB treatment as an opportunity to address other health concerns, integrate with other health services

Miigwetch/Thank you. Questions?

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