

# TB Elimination in Saskatchewan

January 31, 2018



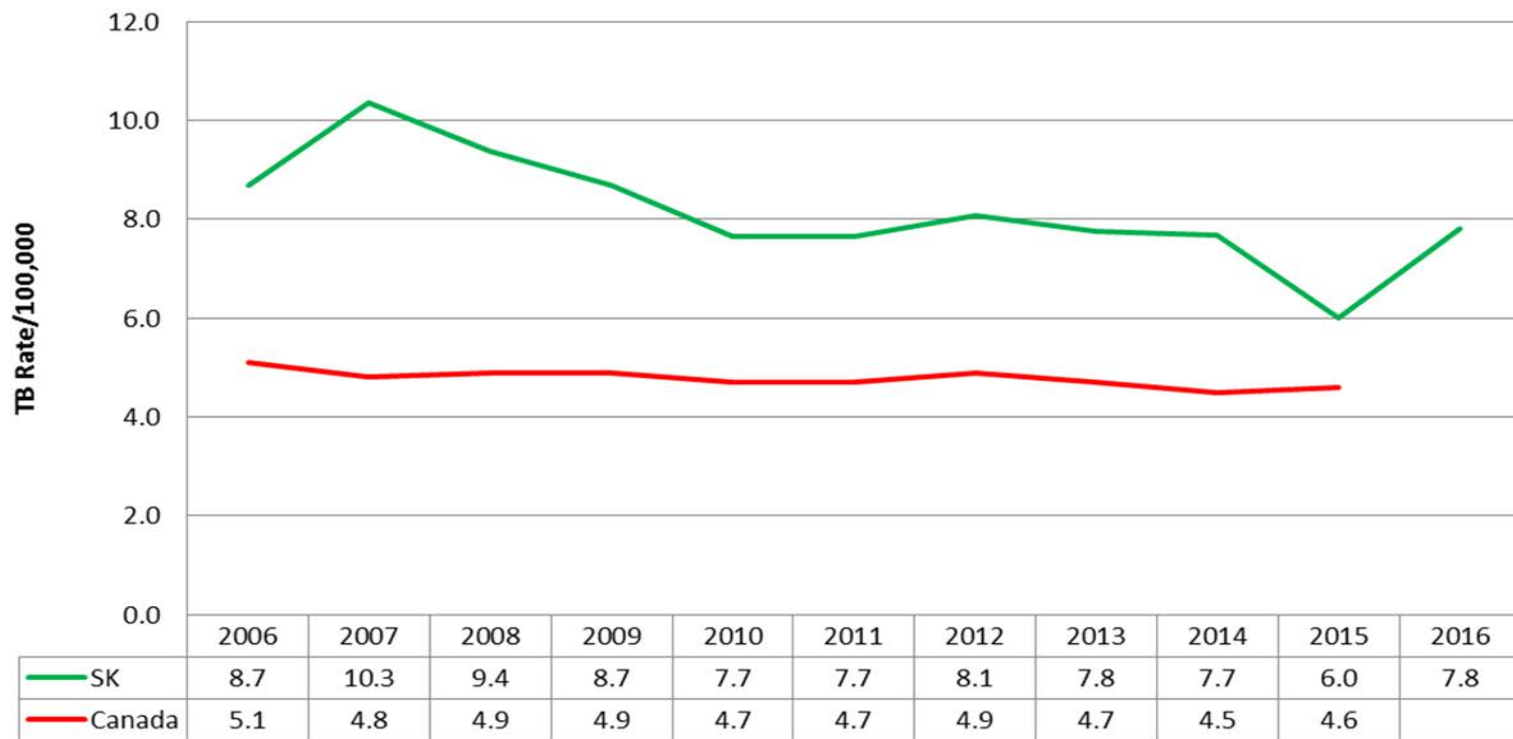
Saskatchewan  
**Health Authority**

# Outline

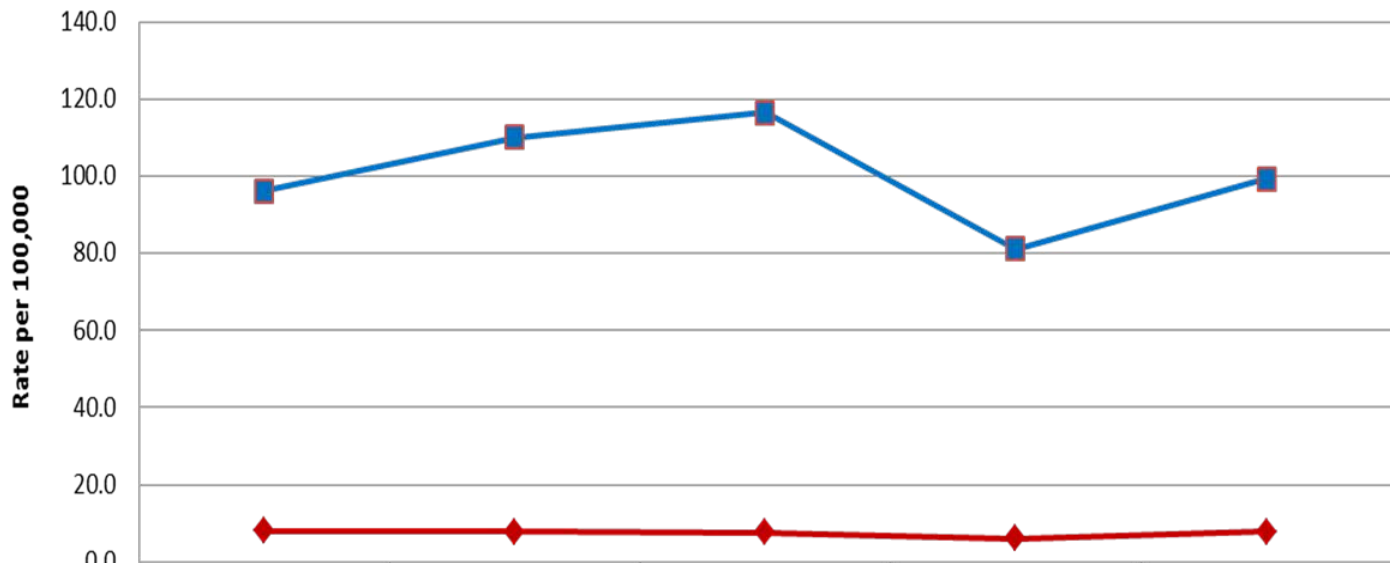
- Epidemiology of TB in Saskatchewan
- Programming
- Provincial TB Strategy
- Successes & Challenges
- Addressing Our Challenges

# Saskatchewan Rates Compared to Canadian Rates

Incidence of TB in Saskatchewan and Canada  
2006-2016

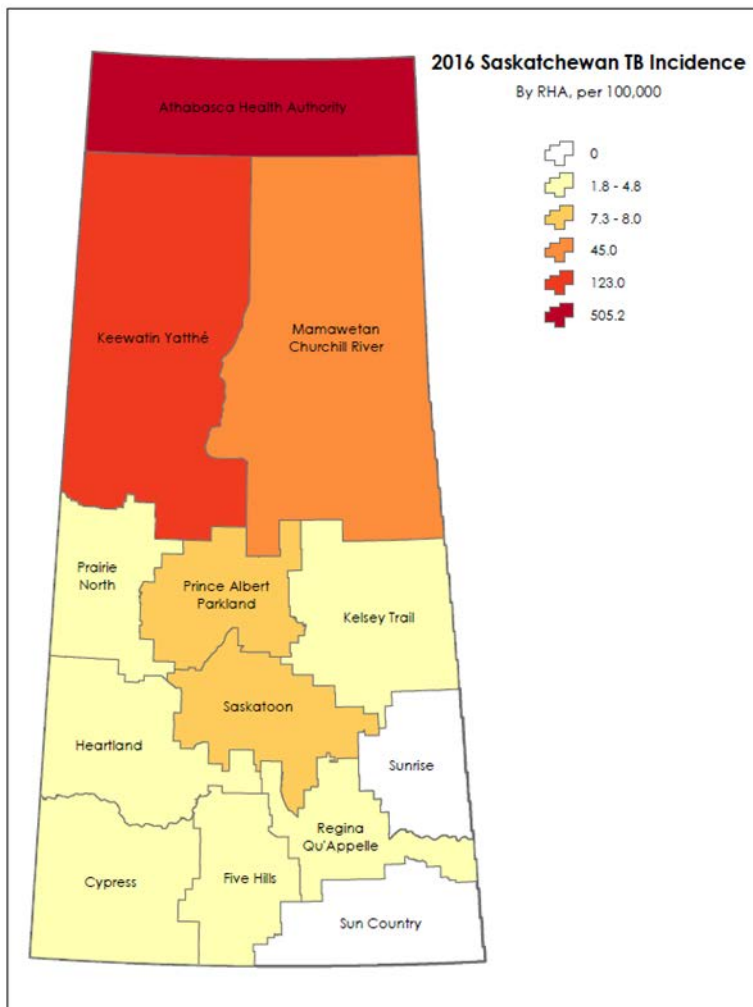


# Saskatchewan Rates Compared to Northern Saskatchewan Rates



	2012	2013	2014	2015	2016
SK	8.1	7.8	7.7	6.0	7.8
Northern RHAs	96.2	110.2	116.7	81.2	99.5
Comparison Northern to SK	11.9	14.2	15.2	13.5	12.7

# Mapping Incidence for 2016



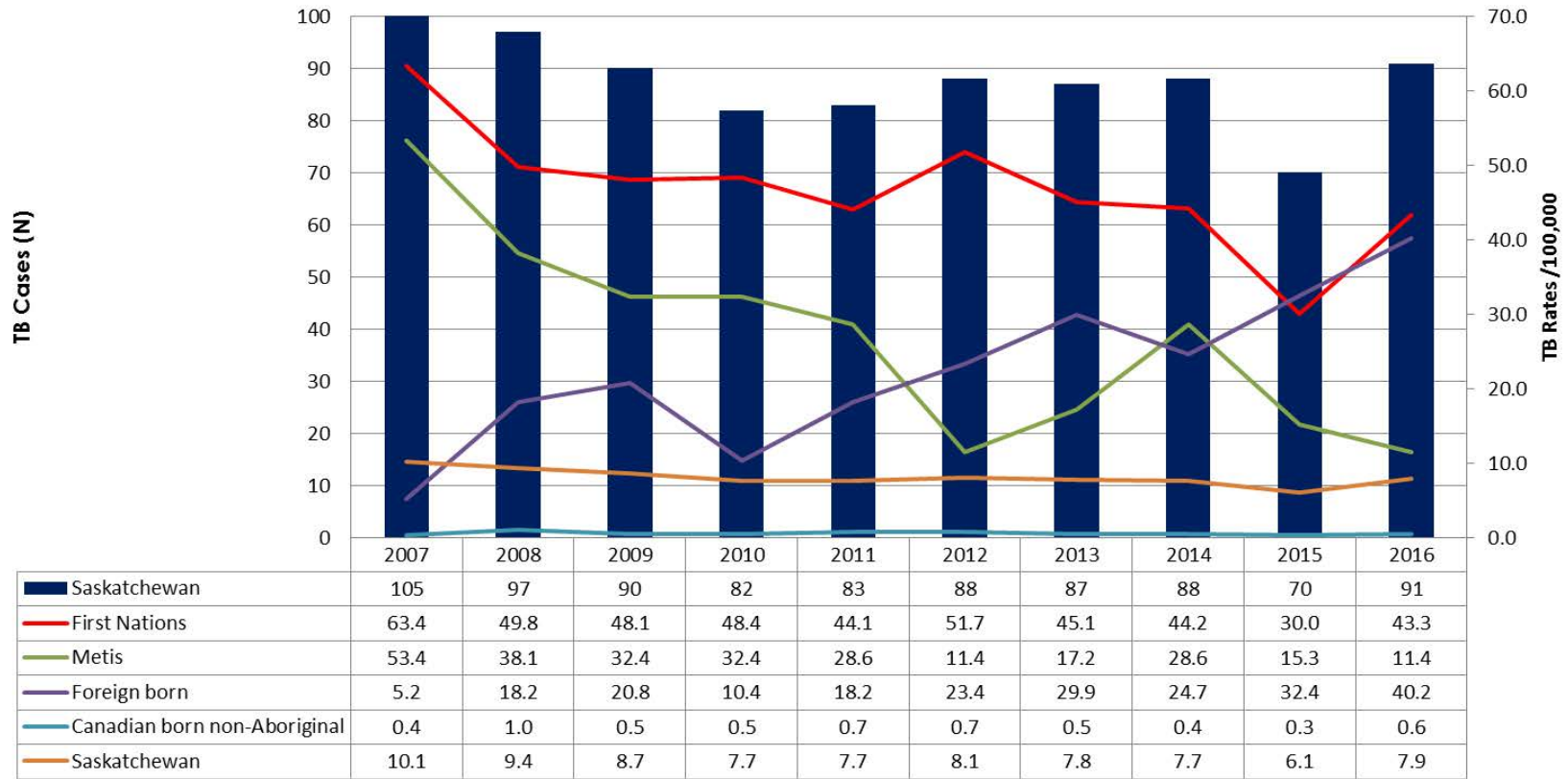
Map produced by the Public Health Observatory, Public Health Services  
October 2017



Saskatchewan  
Health Authority

# TB Rates According to Ethnicity

TB Cases and Rates (New and Relapse) by Ethnicity in Saskatchewan  
2007-2016



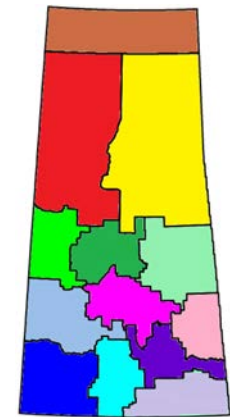
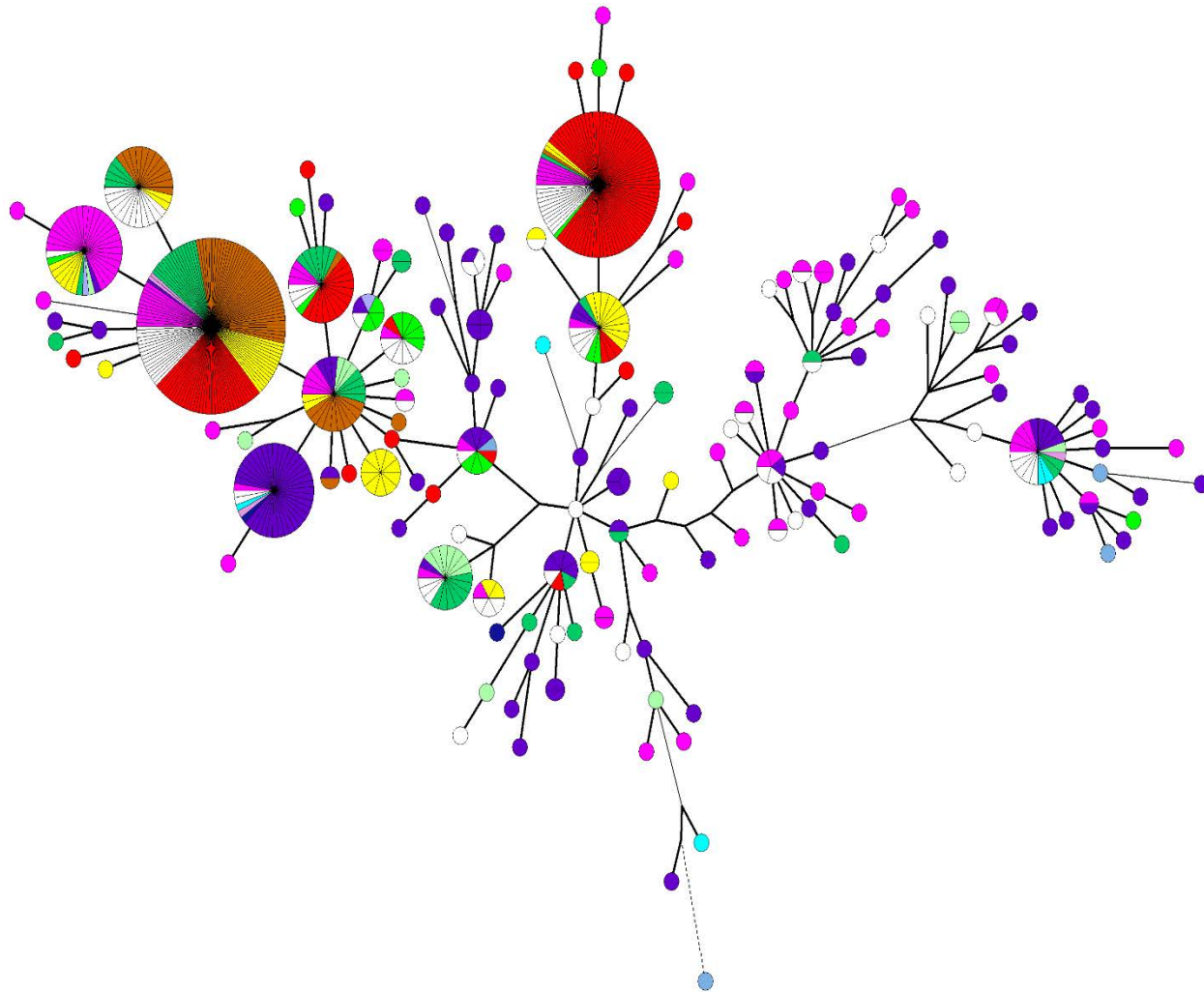
# Pediatric Screening: Epidemiology Informing Policy and Practice

TB cases (age 0 to 15) with Severe TB (CNS TB & miliary TB) and other TB 2006-2017

	CNS		CNS/Miliary <sup>1</sup>	Sub Total (Severe TB)		Other TB		Total
	(N)	(%)		(N)	(%)	(N)	(%)	
2006					0%	31	100%	31
2007					0%	36	100%	36
2008					0%	20	100%	20
2009	1	6%		1	6%	15	94%	16
2010					0%	20	100%	20
2011	1	7%	1	2	14%	12	86%	14
<b>Sub Total Before</b>	<b>2</b>	<b>1%</b>	<b>1</b>	<b>3</b>	<b>2%</b>	<b>134</b>	<b>98%</b>	<b>137</b>
2012				0	0%	13	100%	13
2013				0	0%	12	100%	12
2014				0	0%	8	100%	8
2015				0	0%	4	100%	4
2016	1	11%		1	11%	8	89%	9
2017				0	0%	10	100%	10
<b>Sub Total After</b>	<b>1</b>	<b>2%</b>		<b>1</b>	<b>2%</b>	<b>55</b>	<b>98%</b>	<b>56</b>
<b>Total</b>	<b>3</b>	<b>2%</b>	<b>1</b>	<b>4</b>	<b>2%</b>	<b>189</b>	<b>98%</b>	<b>193</b>

<sup>1</sup>TB cases with both CNS and miliary TB

# Molecular Epidemiology, 2004-2014



674 isolates  
= 661 patients



# Programming: TB Prevention and Control Saskatchewan

- Leadership triad: Deputy Medical Health Officer, Clinical Lead, Manager
  - 6 physicians
  - Medical Epidemiologist & Health Information Management Practitioner
  - Nurse Clinicians
  - Administrative staff
  - TB Workers
  - Pharmacy
- 
- **Collaboration and coordination with partners is crucial**

# TB Care Provision in Saskatchewan

- Collaboration and coordination is required among many partners to achieve TB prevention and control in Saskatchewan, including but not limited to:
  - First Nations and Inuit Health Branch, Indigenous Services
  - Northern Inter-Tribal Health Authority (NITHA)
  - Northern Population Health Unit (NPHU)
  - Saskatoon Tribal Council (STC)
  - Medical Health Officer Council of Saskatchewan (MHOCOS)
  - Ministry of Health
  - Saskatchewan Disease Control Laboratory
  - Northern Medical Services (NMS)
  - Citizenship and Immigration Canada (CIC)
  - Primary care providers, Community Health Nurses (CHNs) on-reserve, Public Health Nurses (PHNs), TB Program Workers (TBPWs)

# A Provincial TB Strategy

- A comprehensive strategy was required to respond to the high number of new cases of TB in Saskatchewan and to prepare for potential drug-resistant strains of bacteria
- Higher rates of TB in Saskatchewan versus the rest of Canada, as well as the unique ethnic and geographic distribution of TB in Saskatchewan
- Disproportionate TB burden in northern Saskatchewan

# Goals of Saskatchewan's TB Strategy...

1. Reduce the number of new and relapsing cases of TB

Targets:

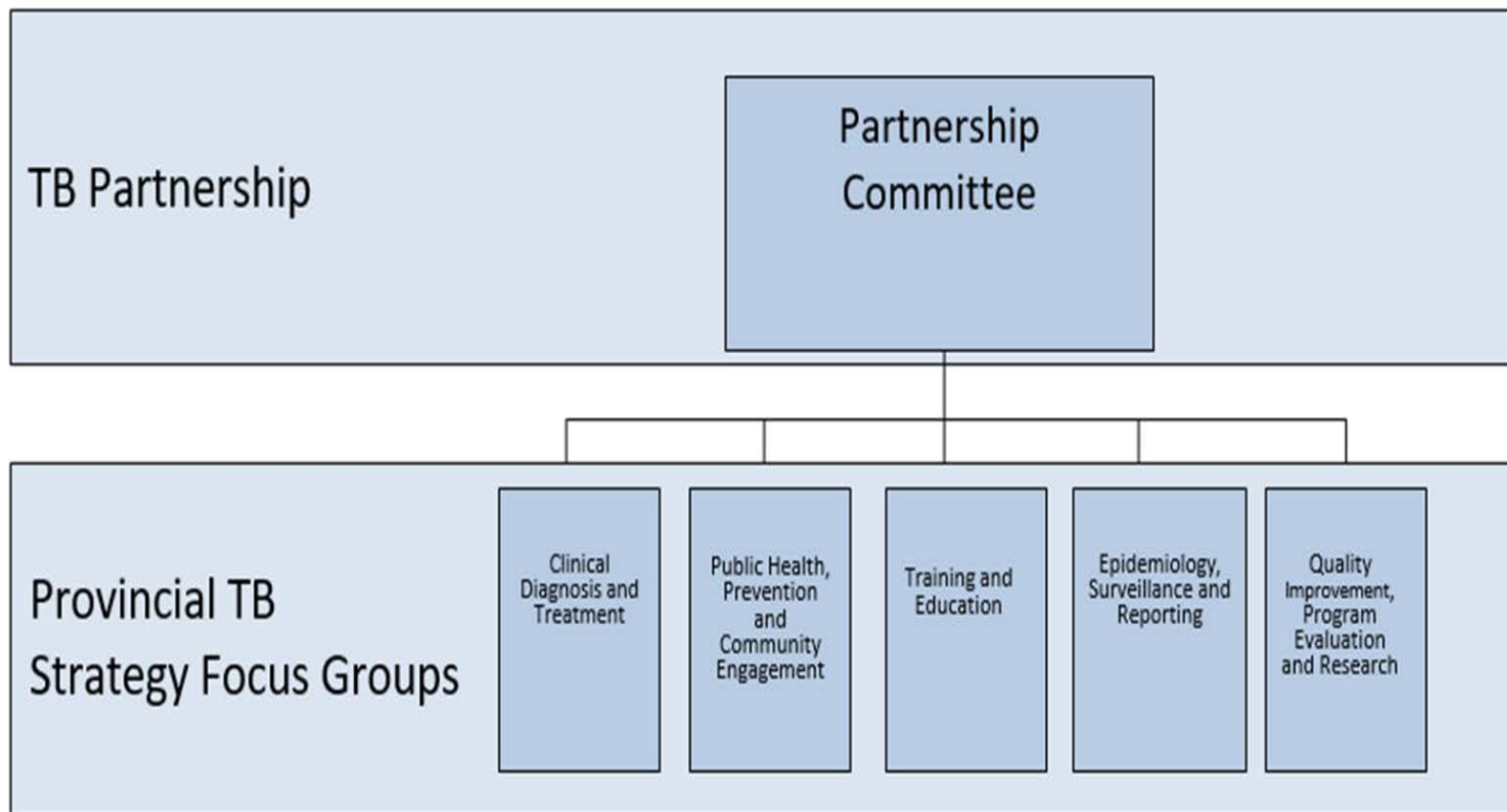
- 25 per cent reduction in the rates of new and relapsing cases of TB in Saskatchewan by 2017/2018
  - Rate of 6.1 / 100,000
- 50 per cent reduction by 2022/2023
  - Rate of 4.1 / 100,000

# ...Goals of Saskatchewan's TB Strategy

2. Facilitate quality patient care through early detection, best management, and timely treatment
3. Support ongoing capacity for health care providers to ensure consistent and collaborative management and treatment of TB
4. Provide TB education and support for the general population, especially for those at highest risk



# Implementing the Strategy: TB Partnership



# Update on TB Strategy Progress

- TB rates have been declining, but we didn't meet the targets for 2017/2018
- Renewed TB Partnership
- Priority Setting for the TB Partnership
- Policy Framework for provincial TB policy
- TB Symposium held in 2017
- Mid-term evaluation of the Strategy to occur in 2018

# Successes: High Incidence Strategy

- Identification of High Incidence Communities
  - $\geq 2$  cases in current year (at least 1 primary or smear + pulmonary)
  - 5-year average incidence rate  $> 100 / 100,000$  active cases with at least one case in previous 3 years
  - 5-year average incidence rate  $< 100 / 100,000$  cases, but  $\geq 2$  cases in at least 2 of the previous 3 years
- Implementation of the High Incidence Strategy
  - Outbreak teams
  - Directing resources to areas of need
  - Expanded screening and prophylaxis in contacts
  - Increased community engagement and awareness campaigns



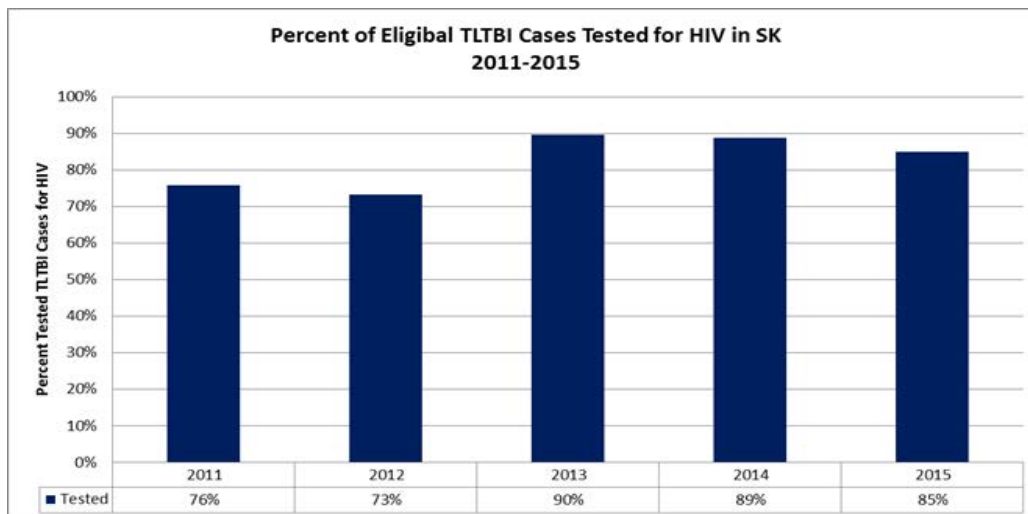
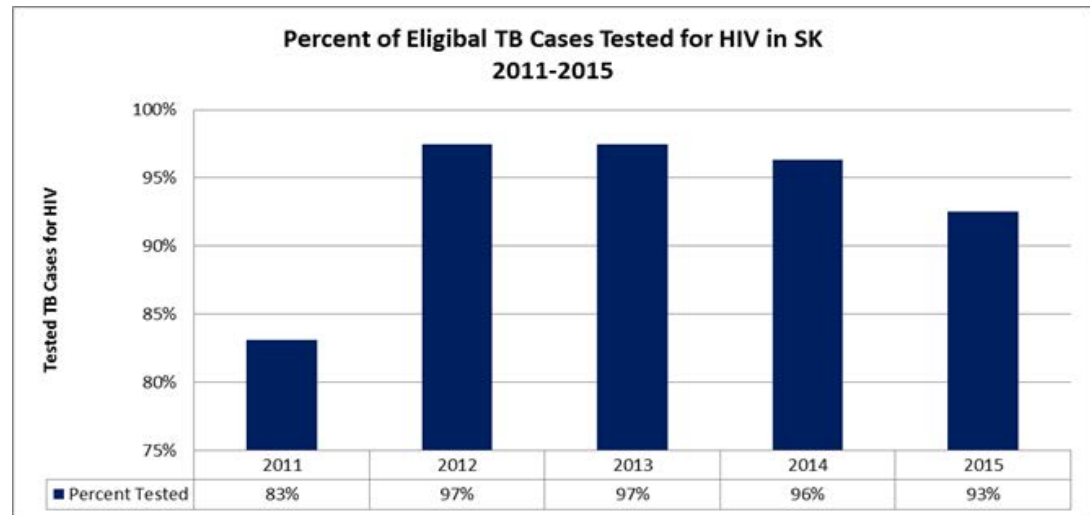
# Northern Inter-Tribal Health Authority High Incidence Strategy Evaluation

- Averages for 3 high incidence communities in Northern Saskatchewan
  - 71% increase in LTBI screening
  - 41% decrease in number of active cases
  - Ratio of smear positive/smear negative status in active cases
    - 2013                      1.17
    - 2016                      0.35

# Successes: Expanding TLTBI

- Employed a more aggressive approach to TLTBI across our program
- Providing prophylaxis according to Canadian TB Standards
- Offered to all contacts and anyone with lifetime risk of active TB greater than 5%, unless contraindicated
- Offering self-administered prophylaxis when feasible to increase our capacity to provide prophylaxis
- Expanding capacity to provide TLTBI to providers outside our program
  - REACH refugee clinic in Saskatoon

# Successes: HIV Screening



# High Incidence Communities

- Despite success in the 3 communities studied in NITHA's high incidence strategy evaluation, there are previously unidentified communities meeting the high incidence definition

# Challenges: Delays in Diagnosis and Contact Investigation Engagement

- Continued delays in diagnosis – high rates of passive case finding
- Low rates of engagement of those identified on contact tracing



# Challenges: HIV Co-Infection

- High rates of HIV occurring in areas with high rates of TB and LTBI
- Rates of HIV in active TB cases range between 3% and 11% over last 10 years
- HIV - TB coinfection poses special challenges and requires more expertise and monitoring



# Addressing Our Challenges...

- To improve delays in diagnosis:
  - Implementation of Gene Xpert in Athabasca Health Authority
- Improved engagement for contact investigations:
  - Development and trialing of a contact investigation database that will allow for real time monitoring and reporting
  - Use of portable Xray unit on site in communities
  - Use of remote communications technologies

# ...Addressing our Challenges...

- To improve community engagement:
  - Pathways Project (SK partners with Alberta TB) - Development of a patient Charter of Rights and Responsibilities in evaluation and management of TB
- To improve community awareness and expand TLtBI access:
  - LTBI Mobilization Project (PHAC funded, NITHA, Northern Population Health, and TBPC of SK)
    - Door-to-door education campaign
    - Expanded screening and prophylaxis in moderate and high risk groups
    - Exploring use of Rifapentine to deliver effective and efficient therapy



# ...Addressing Our Challenges

- Exploration of a New Clinical Model to provide TB care in rural, remote, and reserve communities of Saskatchewan
  - Education and support of local primary care providers to provide initial evaluation of contacts and those with LTBI
  - Treatment selection and monitoring supported through telehealth case management rounds with TB specialists
  - Development and implementation will require extensive community collaboration

# Questions?

For more information, visit  
*[saskhealthauthority.ca](https://saskhealthauthority.ca)*.



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