

# Public Health Update

## *Pertussis (Whooping Cough)*

February 8, 2024

1:30-3:00 PM



# Outline

## 1. MOH Update: Key Messaging

- *Dr. Chris Sarin*

## 2. Provincial Update

- *Dr. Michael Zakhary & Angela Jacobs*

## 3. MOH Update: On-Reserve Case Numbers

- *Dr. Lauren Bilinsky*

## 4. MOH Update: Risk Factors, Interventions & Preventative Measures

- *Dr. Lauren Bilinsky*

## 5. Questions

# MOH Update: Key Messaging

Dr. Chris Sarin

*Senior Medical Officer of Health, FNIHB*



## Key Messages:

- Significant increases in Pertussis cases in Alberta since in December 2022.
- Cases have been identified in all Alberta zones.
- **To date, most cases were not immunized, or were partially immunized.**
- Immunization is an important and effective protective measure against pertussis, and other respiratory illnesses.
- Personal protective measures including hand washing, staying home when you are ill, and appropriate mask wearing are important.
- Employing the above protective measures is key to protect the vulnerable (ie. elders, those who are immunocompromised).
- Communities can reach out to ISC MOHs for assistance.

# What Is Pertussis?

- Pertussis, commonly known as “whooping cough” is a very contagious bacterial infection.
- Symptoms usually start with a week or two of ‘cold-like’ symptoms. Then severe coughing spasms start and usually last for about 4-6 weeks. Coughing gradually wanes over weeks to months.
- Each year in Canada between 1,000 and 3,000 people fall ill from pertussis. Worldwide, there are about 20 to 40 million cases of and 400,000 deaths from pertussis each year.
- Pertussis immunization is very effective at preventing disease. It is part of routine childhood, school-age, and adult immunizations.

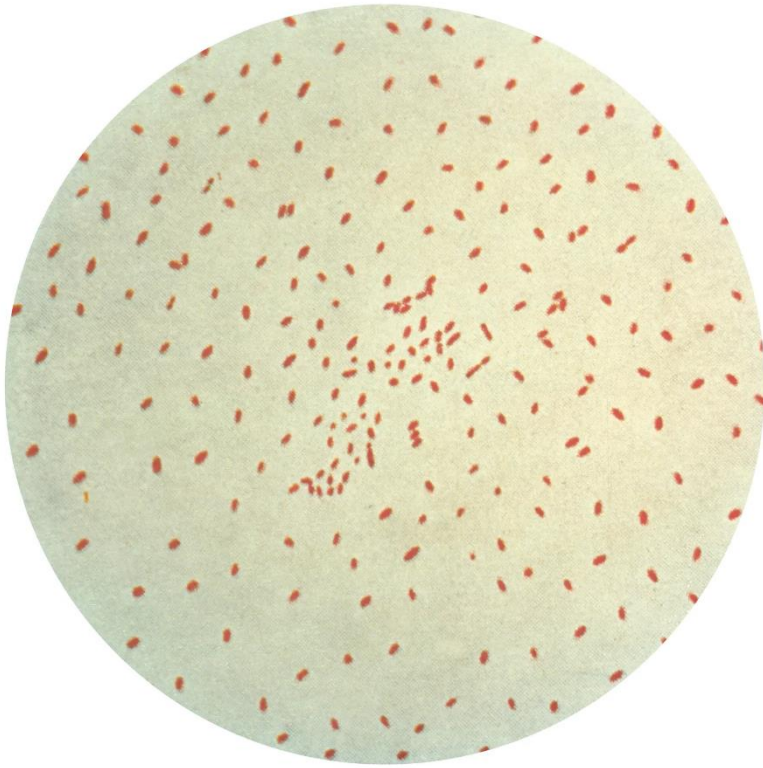
# What Is Pertussis?

- “Whooping cough” is named for a “whoop” sound that can follow a coughing fit.
- Coughing fits can be painful, make it hard to breathe, or lead to vomiting.
- In severe cases infection can lead to pneumonia, seizures, hospitalization, or death.
- People of any age can get whooping cough, but infection is most dangerous to infants under the age of 1 as they are too young to be fully immunized.
- Early treatment can help shorten the duration symptoms and it helps prevent spread.



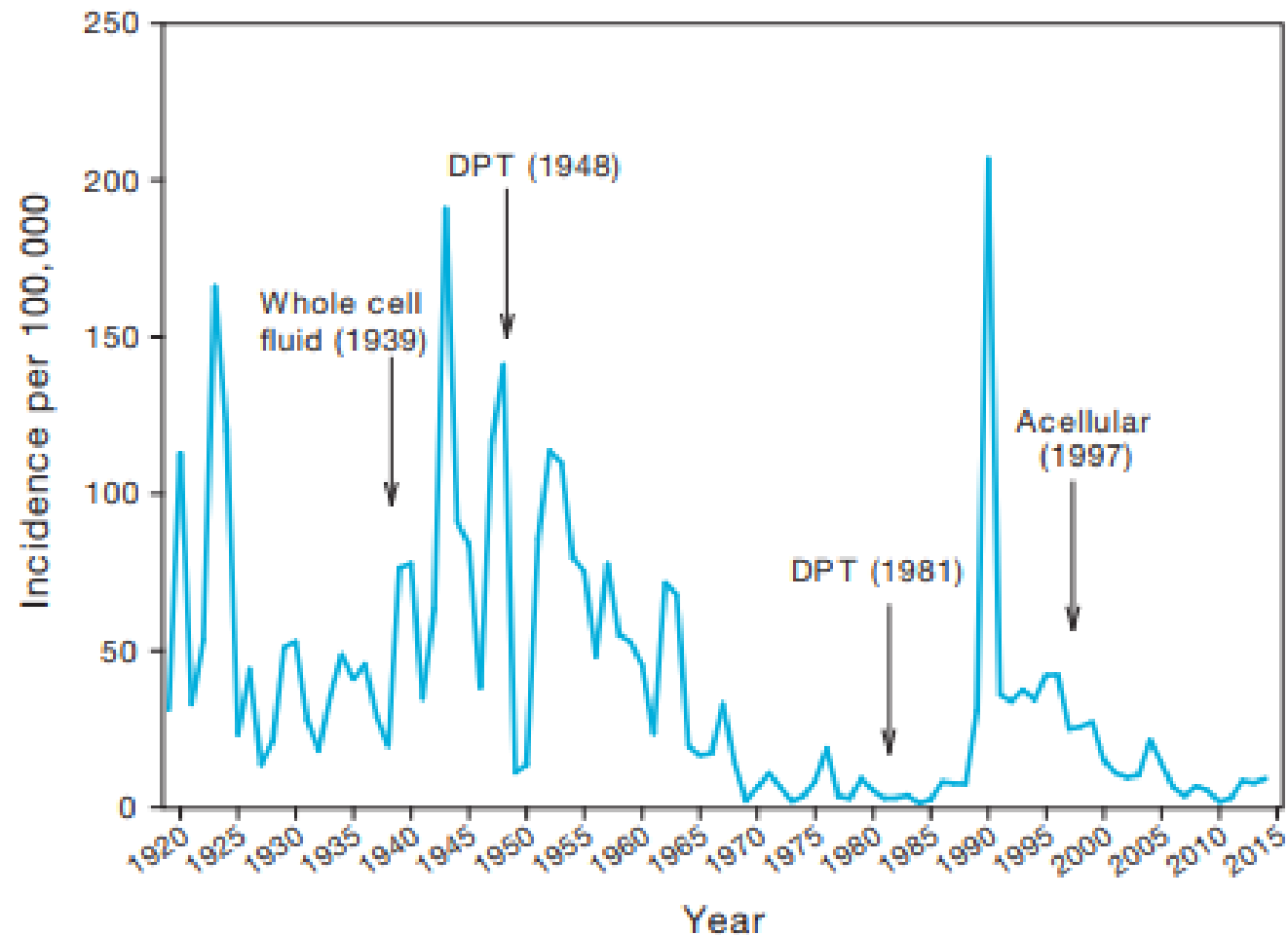
[Link to audio clip of  
“whoop” sound](#)

# What Is Pertussis?



- Whooping cough spreads by inhaling respiratory droplets from coughing/sneezing or by contact with saliva from someone who is infected.
- The usual incubation period (time between being infected and the start of symptoms) is 7-10 days
- A case is most infectious during the initial 'cold-like' symptoms, before the cough starts, and for the first two weeks after onset of cough. Infectiousness decreases after this time.

## Pertussis



Source: Maheden, R. et al., *Alberta notifiable disease incidence*, Canadian Electronic Library. Ottawa, Ontario.  
<https://policycommons.net/artifacts/1186741/alberta-notifiable-disease-incidence/1739869/> on 07 Feb 2024. CID: 20.500.12592/vmsgx2.



# Provincial Pertussis Update

**Dr. Michael Zakhary**

*Medical Officer of Health, Edmonton Zone, Alberta Health Services (AHS)*

*Provincial Medical Officer of Health, Notifiable Diseases, Alberta Health Services (AHS)*

**Angela Jacobs**

*Manager, Provincial Notifiable Disease Operations, Alberta Health Services (AHS)*



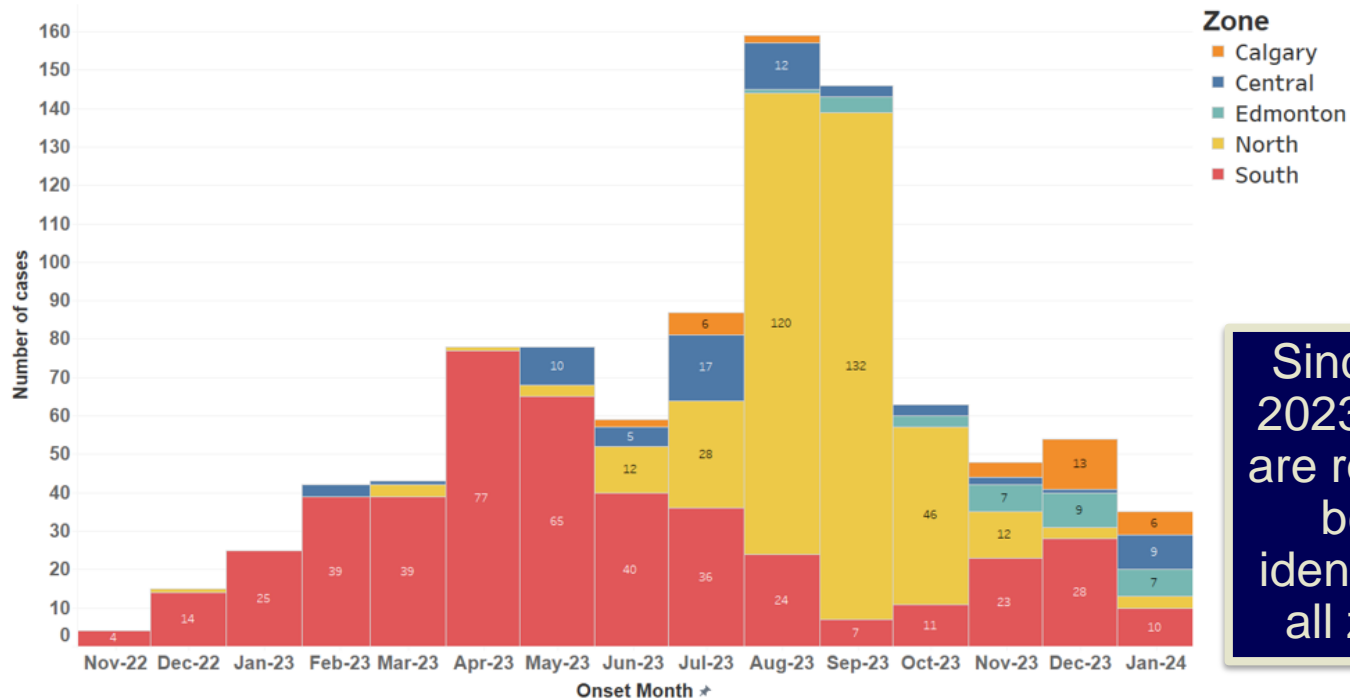
# Pertussis Cases

(current to Jan 31, 2024)

- The annual provincial pertussis incidence rate has increased from 0.29 (13 cases 2022) to 19.2 (885 cases in 2023) per 100,000 population.
- The current number of confirmed and probable cases since November 30, 2022, based on date of diagnosis is 938, with 11 new cases reported in the last 7 days.
- In 2023 there were 885 cases; in 2024 (to date) 50 cases have been detected.
- A South Zone outbreak was declared on January 24, 2023.
  - To date, this outbreak has 443 cumulative overall cases, with 2 new cases reported in the last week.
- The North Zone publicly declared an outbreak on August 18, 2023.
  - To date, this outbreak has 288 cumulative overall cases, with 0 new cases reported in the last week.

# Pertussis Cases (Nov 2022-Jan 2024)

## EPIDEMIOLOGICAL CURVES AND FIGURES



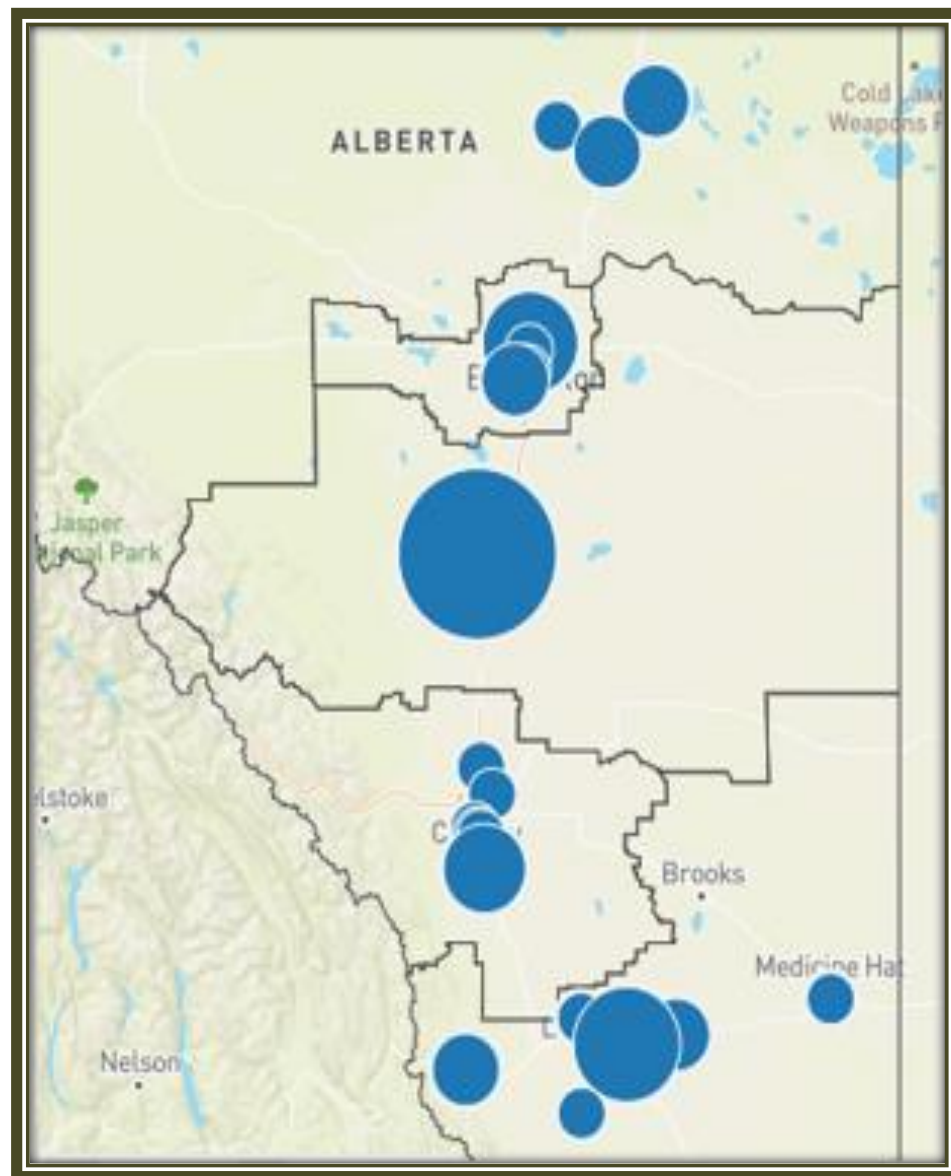
A visual representation to show the progression of Pertussis cases in Alberta.

**Figure 1:** Epi curve of total Pertussis cases by date of onset and zone (November 30, 2022 to 2024 (YTD), n=936 \*.

\*Note: Two cases had date of onset prior to November 30, 2022.

## Pertussis Cases in 2024, to date

Total Pertussis Cases by postal code (2024) n=50



## Pertussis Risk Factors

Factors	Yes	No	Unknown	Total
Unimmunized or partially immunized	822 (87.6%)	94 (10.0%)	22 (2.3%)	938
History of Contact with a Pertussis Case	553 (59.0%)	344 (36.7%)	41 (4.4%)	938
Less than <10 years	654 (69.7%)	284 (30.3%)	0 (0)	938

Note: Results above are based on basic descriptive analysis of CDOM data. Among total cases, 481 (51.3%) are unvaccinated with a history of contact with a case.

# Provincial Pertussis Coordinating Committee (PPCC)

- A significant increase in Pertussis cases has been identified in Alberta dating back to December 2022.
- The increase in Pertussis cases has led to the establishment of Provincial Pertussis Coordinating Committee (PPCC) in August 2023.
- PPCC membership includes individuals from teams within AHS, Alberta Health, ISC.



# PPCC Objectives and Functions



- Supporting coordination of provincial level operational response – disease management, immunization policy, and guidance decisions.
- Providing updates and monitoring the pertussis situation in Alberta.
- Exploring opportunities to support service areas across zones.
- Providing a collaborative space to gather and disseminate best practices, information, and guidance.
- Initiating inquiries to get clarity on issues and processes.
- Ensuring mobilization of resources.
- Supporting internal and external communication.
- Increasing efficiency and effectiveness of the response to the pertussis situation.

## PPCC Activities



**Surveillance:** Regular reporting to update PPCC members on the pertussis situation.



**Notifiable disease guidelines:** Case and outbreak definitions and contact management.



**Communicable Disease Control staffing and investigation:** Support timely case and contact management.



**Immunization:** Support further increases to immunization access and address vaccine hesitancy.



**Communications:** Support zones in meeting communication expectations of external stakeholders, e.g., healthcare providers, communities, media, and the public.



**Lab support:** Enhance testing capacity and Regan Lowe transport media (RLTM) distribution. [Public Health Laboratory \(ProvLab\) | Alberta Health Services - Guide to Services](#)



# MOH Update: On-Reserve Case Numbers

Dr. Lauren Bilinsky

*Deputy Medical Officer of Health, FNIHB*




# On-Reserve Case Numbers, 2019-2023

Year	Pertussis Cases	Number of FN Communities Impacted	Treaty Area
2023	6	1	8
2022	0	0	N/A
2021	0	0	N/A
2020	14	3	6
2019	29	11	6, 7 & 8

# Pertussis Immunization On-Reserve

Routine immunization schedule:

Infancy & Early Childhood: 2mo, 4mo, 6mo, 18mo, & 4 years



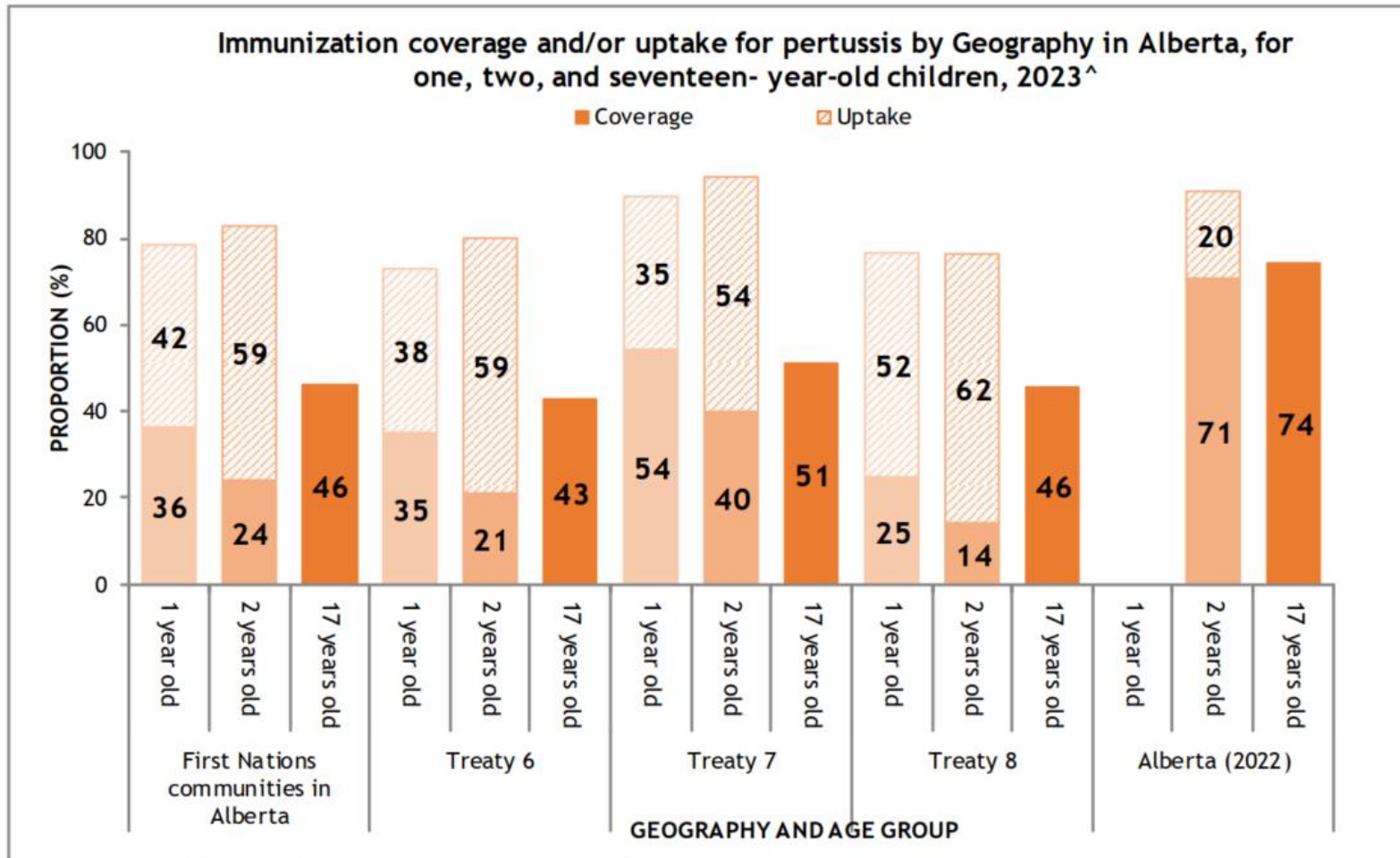
School-aged: Grade 9



Adult: Booster every 10 years & with every pregnancy

- Most infants are partially immunized against pertussis. Fewer have completed the series.
- Coverage rates are lower since 2020
- Local coverage rates for routine preschool immunizations can be viewed in OKAKI SLICE, by staff who have access.

# Vaccination Rate by Treaty Area, 1-, 2- and 17-year-olds



Data sources: FNIHB-AB CDC data, and CHIP SLICE In Stats. Alberta Health IHDA.

Note: <sup>^</sup>Data may be incomplete due to late reporting.

# MOH Update: Risk Factors, Interventions & Preventative Measures

Dr. Lauren Bilinsky

*Deputy Medical Officer of Health, FNIHB*



## Risk Factors

- **Lack of immunization** is the greatest risk factor for pertussis infection
- **Vaccine hesitancy** has been a major contributing factor with pertussis outbreaks.
- Other risk factors include young age and contact with a person infected with pertussis
- Since December 2022 in Alberta, spread of infection was also often associated with cultural gatherings and community groups.

# Responding to Pertussis in AB

- Case and contact investigation
  - ISC, Health Centre staff, and AHS partnerships have helped patients and health staff access necessary resources when responding to a case or outbreak.
- Communications: raising public and health staff awareness of pertussis
- Addressing vaccine hesitancy and vaccine confidence
- Positive interactions with the health care system and addressing barriers to care
  - We recognize the work and dedication of Health Centre staff to create supportive environments and provide culturally safe care.
  - Resource for patients: AHS's Indigenous support line in North, Central, and South Zones
  - Resource for staff: UBC's 2020 Seminar – *Cultural Safety in the Face of a Pandemic: Historic and Contemporary Realities through a Trauma Informed Lens with Harley Eagle*
  - *Additional learning resources at the end of the presentation*



Vaccine hesitancy  
video resource



Indigenous  
Support Line



Seminar recording

# Preventative Measures

## *Pertussis Immunization*

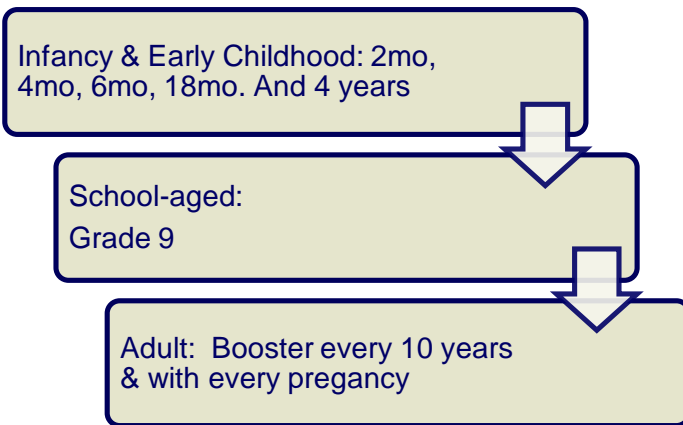
- Pertussis immunizations are safe, effective and offer the best defense against infection..
- Most individuals do not have any side effects from vaccines and severe side effects are rare.
- For assistance determining immunizations for an off-schedule child, CHNs can contact the ISC CDC

## *Basic Infection, Prevention and Control Practices*

- Stay home when sick;
- Practice proper respiratory etiquette
  - (e.g. covering coughs and sneezes);
- Wash hands and sanitize; and,
- Mask up in crowded indoor spaces.

## *Maintain High-Quality Cleaning Practices in Public Spaces*

- Regularly sanitize all high-traffic areas;
- Ensure public surfaces are wiped down between users; and,
- Limit the sharing of items and equipment.





# Resources

## **FNIHB Communicable Disease Inbox:**

- [cdemergenciesab-urgencesmtab@sac-isc.gc.ca](mailto:cdemergenciesab-urgencesmtab@sac-isc.gc.ca)



## **Alberta Health Pertussis Outbreak Information:**

- <https://www.albertahealthservices.ca/topics/Page15430.aspx>



## **Epidemiology of Pertussis (Can. Imm. Guide):**

- <https://www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-4-active-vaccines/page-15-pertussis-vaccine.html#p4c14a2>



## **More About Pertussis (MyHealthAlberta):**

- <https://myhealth.alberta.ca/topic/Immunization/pages/whooping-cough.aspx>



# Additional Resources for staff

## Vaccine Confidence, Vaccine Hesitancy

- **OneHealth > Nursing > Nursing Education Immunization Resources**
- **MyHealthAlberta | Immunization benefits and safety**  
<https://myhealth.alberta.ca/topic/immunization/pages/benefits-safety.aspx>
- **Immunize Canada | Counselling the Public**  
<https://immunize.ca/counselling-public>
- **Vaccine Hesitancy Guide** (has sections for pediatric vaccine hesitancy and for working with patients that have experienced trauma from the health system)  
<https://www.vhguide.ca/>
- **CPHA | Building Vaccine Confidence in a Digital Age (course)**  
<https://learning.cpha.ca/course/index.php?categoryid=16>

## Cultural Safety

- **ISC | Examples of Indigenous Cultural Competency learning activities and resources**  
(From the ICC learning policy) <https://intranet-sac-isc/eng/1615307374593/1615307590224>
- **CRNA: Stronger Together: Learning through Indigenous Perspectives (course)**
- **National Collaborating Centre for Indigenous Health** <https://www.nccih.ca/en/>

## Trauma informed care

- **AHS Trauma Training Initiative** <https://www.albertahealthservices.ca/info/page15526.aspx>

# Questions and Conversation with the Medical Officers of Health

Dr. Chris Sarin (ISC), Dr. Lauren Bilinsky (ISC), Dr. Michael Zachary (AHS), and Angela Jacobs (AHS)



## Questions?

- **[VCHELP@FNTN.CA](mailto:VCHELP@FNTN.CA)**
- **[cdemergenciesab-urgencesmtab@sac-isc.gc.ca](mailto:cdemergenciesab-urgencesmtab@sac-isc.gc.ca)**



# Acknowledgements

Dr. Chris Sarin, Senior Medical Officer of Health – FNIHB

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Dr. Deena Hinshaw, (she/her), Deputy Medical Officer of Health – FNIHB

Dr. Michael Zakhary, Provincial Associate Medical Officer of Health, Notifiable Diseases - Alberta Health Services

Angela Jacobs, Manager, Provincial Notifiable Disease Operations - Alberta Health Services

TSAG Telehealth Team (Alannah Hanson and team)

FNIHB SHIP Policy support

FNIHB Technical Team

FNIHB Epidemiology team

# Appendix A

## Case Definition

### Confirmed Case

Laboratory confirmation of infection:

- Isolation of *Bordetella pertussis* from an appropriate clinical specimen (e.g., nasopharyngeal swab)<sup>(A)</sup>

**OR**

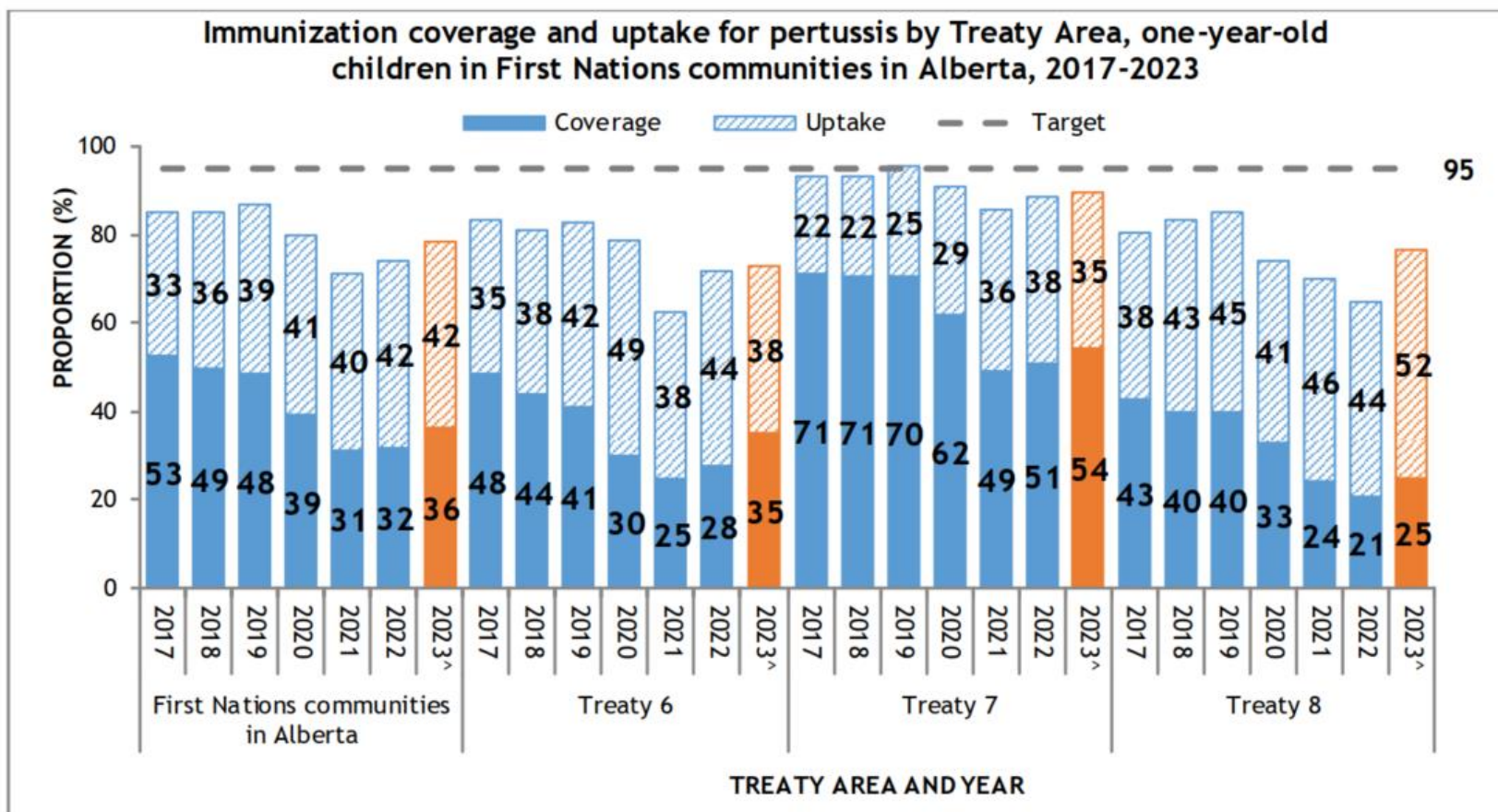
- Detection of *Bordetella pertussis* nucleic acid by nucleic acid testing (e.g. polymerase chain reaction [PCR]) from an appropriate clinical specimen (nasopharyngeal swab) **AND** one or more of the following:
  - cough lasting two weeks or longer,
  - paroxysmal cough of any duration,
  - cough with inspiratory “whoop”, and/or
  - cough ending in vomiting or gagging, or associated with apnea

**OR**

A person who is epidemiologically linked to a laboratory-confirmed case AND has one or more of the following for which there is no other known cause:

- cough lasting two weeks or longer,
- paroxysmal cough of any duration,
- cough ending in vomiting, or associated with apnea, and/or
- cough with inspiratory “whoop”.

# Appendix B. Vaccination Rate by Treaty Area, 1-year-old infants

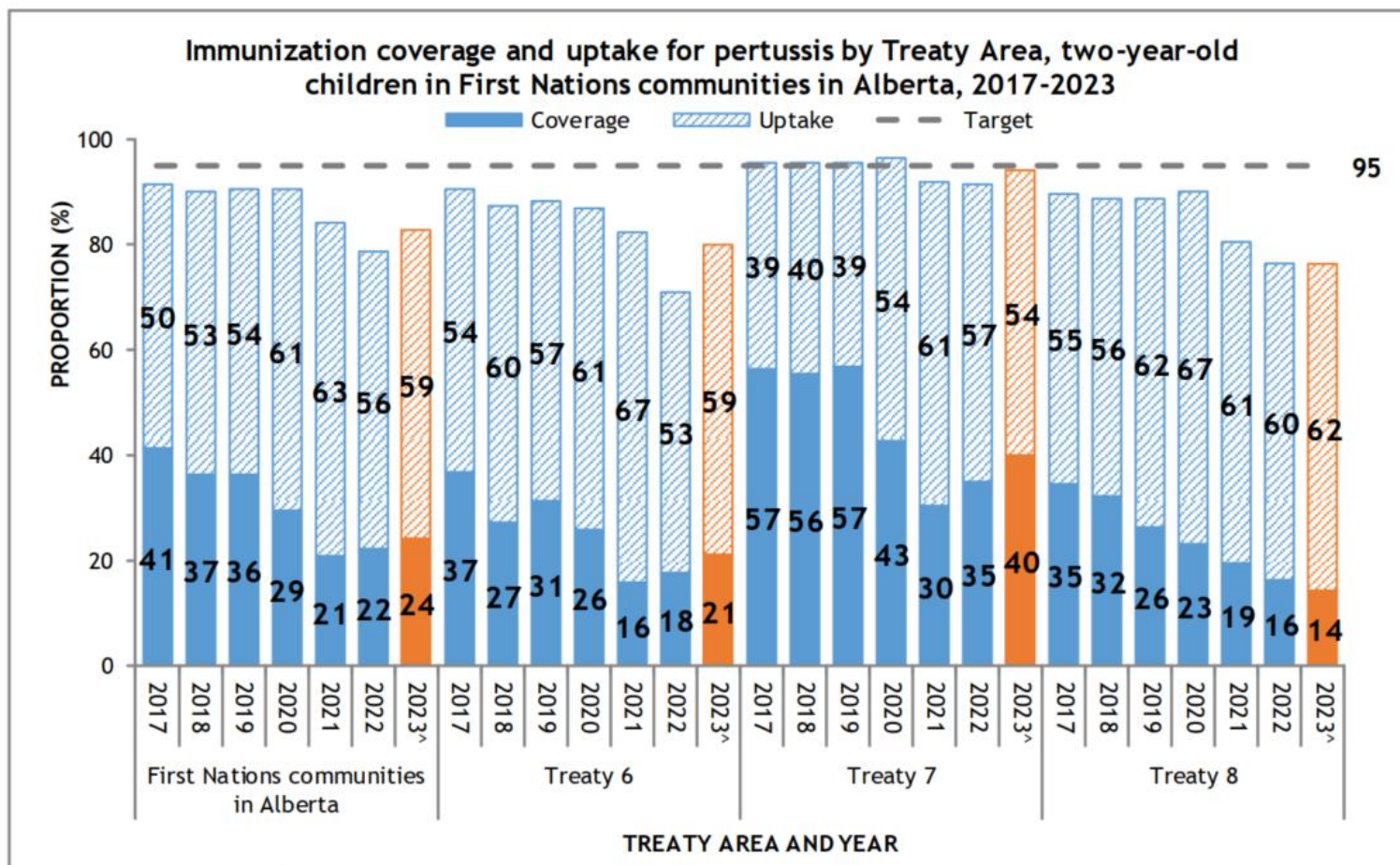


Data sources: FNIHB-AB CDC data, and CHIP SLICE In Stats

Note: ^Data may be incomplete due to late reporting.



# Appendix B. Vaccination Rate by Treaty Area, 2-year-old infants



Data sources: FNIHB-AB CDC data, and CHIP SLICE In Stats

Note: ^Data may be incomplete due to late reporting.