Let’s Talk About Measles!

A Public Health Update

March 20, 2024

1:30-3:00 PM

Outline

1. MOH Update: Measles, Current Status & Key Messaging
- *Dr. Chris Sarin*

2. Immunization Rates
- *Dr. Lauren Bilinsky*

3. More About Immunizations
- *Brent Whittal*

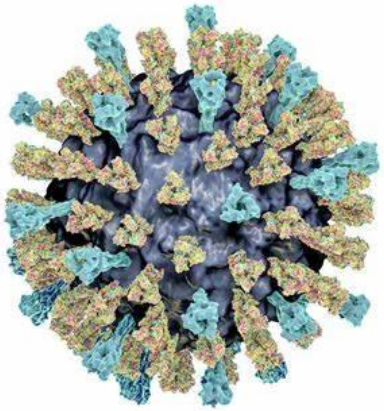
4. Questions & Conversations with the FNIHB-AB MOHs

MOH Update: Measles, Current Status & Key Messaging

Dr. Chris Sarin

Senior Medical Officer of Health, FNIHB

What Is Measles?



- Measles is a viral respiratory tract infection.
- It is vaccine preventable!
- Symptoms can appear 1-3 weeks after being infected with the virus. People infected with measles can spread it to others before they have symptoms.
- Initial symptoms include fever, cough, runny nose, and red, watery eyes.
- Small, blue-white spots may appear inside the mouth and throat 2 to 3 days after symptoms begin.
- About 3 to 7 days after symptoms begin, a rash that looks like small red spots:
  - develops on the face
  - spreads down the body, arms and legs
- The rash can last 4 to 7 days.

ISC INDIGENOUS SERVICES CANADA

What Is Measles?

- Common complications from measles include: ear infection, pneumonia, and diarrhea
- Severe complications, while rare, can result from a measles infection, such as: respiratory failure, inflammation and swelling of the brain (encephalitis), and death

- Long-term complications of encephalitis can include: blindness, deafness, intellectual disability

- It's also possible to develop a neurological condition called subacute sclerosing panencephalitis 7 to 10 years after recovering from measles.
  - It affects the brain and can develop even if it looks like you've fully recovered from the initial infection. The condition is fatal and the risk of developing it may be higher if you have measles before 2 years of age.

- People who get measles while pregnant may: have a miscarriage, go into premature labour, and/or give birth to an infant with low birth weight

Current Status: Measles Risk in Alberta

Top 10 Countries with Measles Outbreaks*

Rank	Country	Number of Cases
1	Yemen	18,464
2	Azerbaijan	13,721
3	Kazakhstan	13,195
4	India**	12,301
5	Ethiopia	10,060
6	Russian Federation	7,720
7	Iraq	7,601
8	Pakistan	7,027
9	Kyrgyzstan	5,777
10	Indonesia	3,205

Driven by 3 factors…

Global surge* in cases related to lower vaccination rates. Including from disrupted vaccine delivery channels during the COVID-19 pandemic.

Includes common travel destinations for Albertans! (e.g. US, UK)

Low vaccine coverage rates in Alberta

Seasonality

ISC INDIGENOUS SERVICES CANADA

Outbreaks and cases in Alberta

Two most recent outbreaks in Alberta

- 2000: 123 cases – Measles imported from Mexico and Bolivia
- 2013: 44 cases – South Zone, imported from the Netherlands

Occasional controlled imported case

- Most recent was November 2023 in Calgary Zone – one case imported from Pakistan
  - > 330 contacts, 90 of which required public health intervention

Key Messaging: Measles is Serious!

Highly transmissible

- Airborne transmission
- 90% secondary attack rate

High rate of complications

- Otitis media
- Pneumonia
- Encephalitis
- Sub-acute sclerosing pan-encephalitis & long-term immune suppression

High rate of hospitalization

- Can expect 10% and up to 20%
- Need for ++ isolation capability

High risk groups

- Young children
- Pregnant women
- Immunocompromised persons

High rate of vaccine coverage needed for herd immunity

- 95%

Following public health guidance/measures is key!

Recommendations

Communication is key!

Health Care Workers should ensure they have two doses of a Measles-containing vaccine or previous Measles infection/immunity

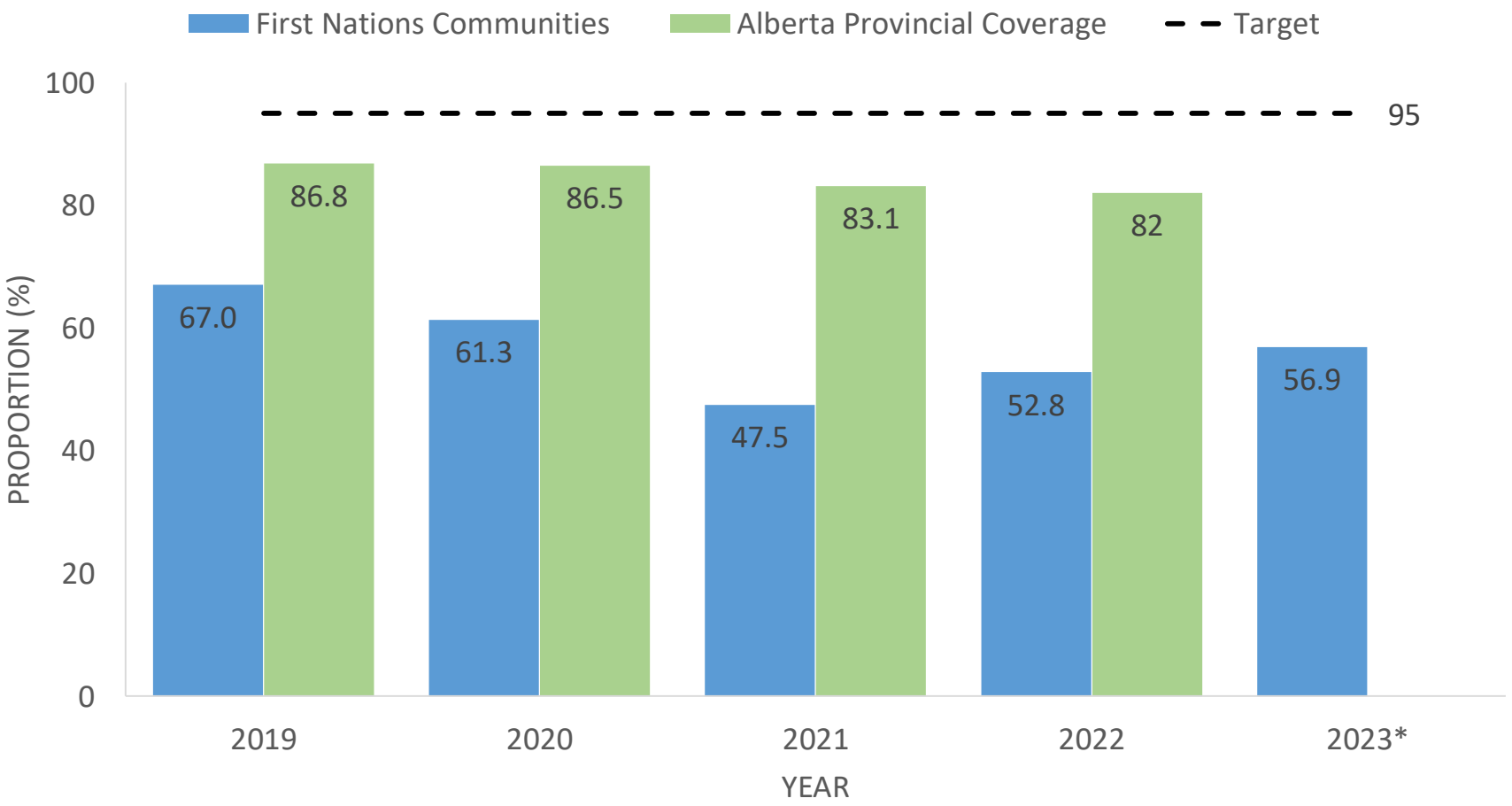
Vaccination is your best preparation!

Immunization Rates

Dr. Lauren Bilinsky

Deputy Medical Officer of Health, FNIHB

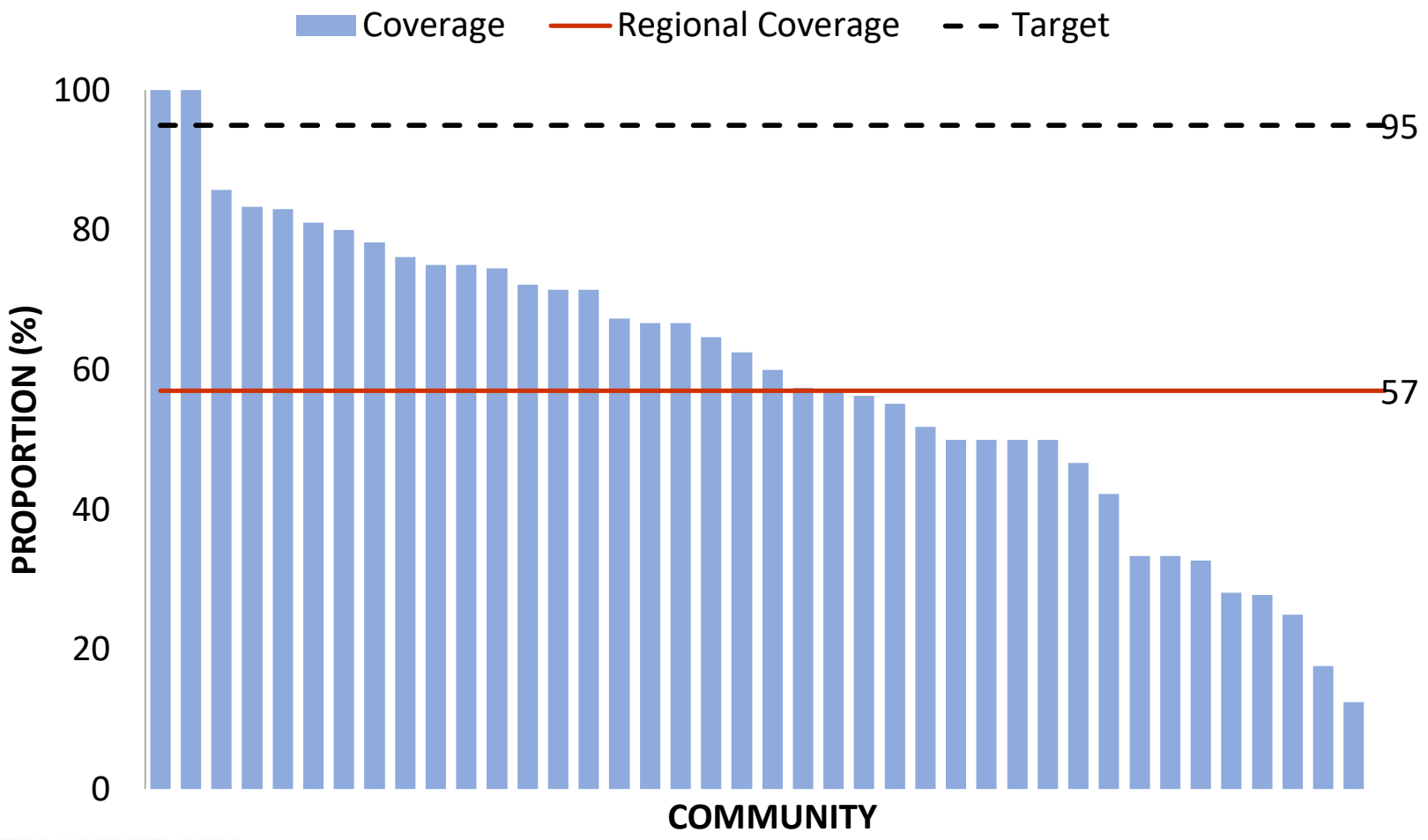
Measles Immunization Rates
Dose 1 by Age 2



ISC INDIGENOUS SERVICES CANADA

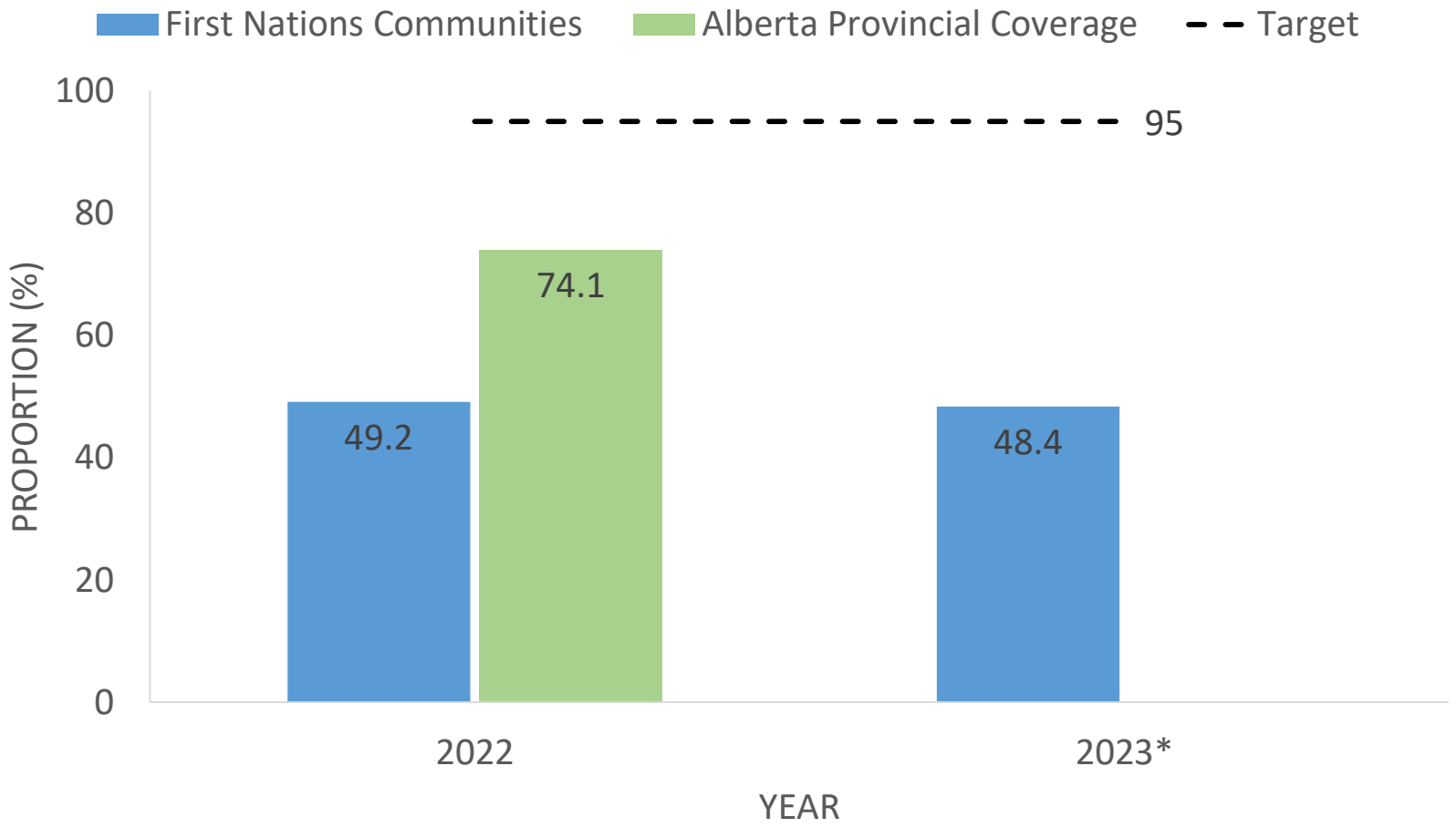
*2023 provincial data was not available at time of reporting

2023 Measles Immunization Rates
Dose 1 by Age 2 by Community



ISC INDIGENOUS SERVICES CANADA

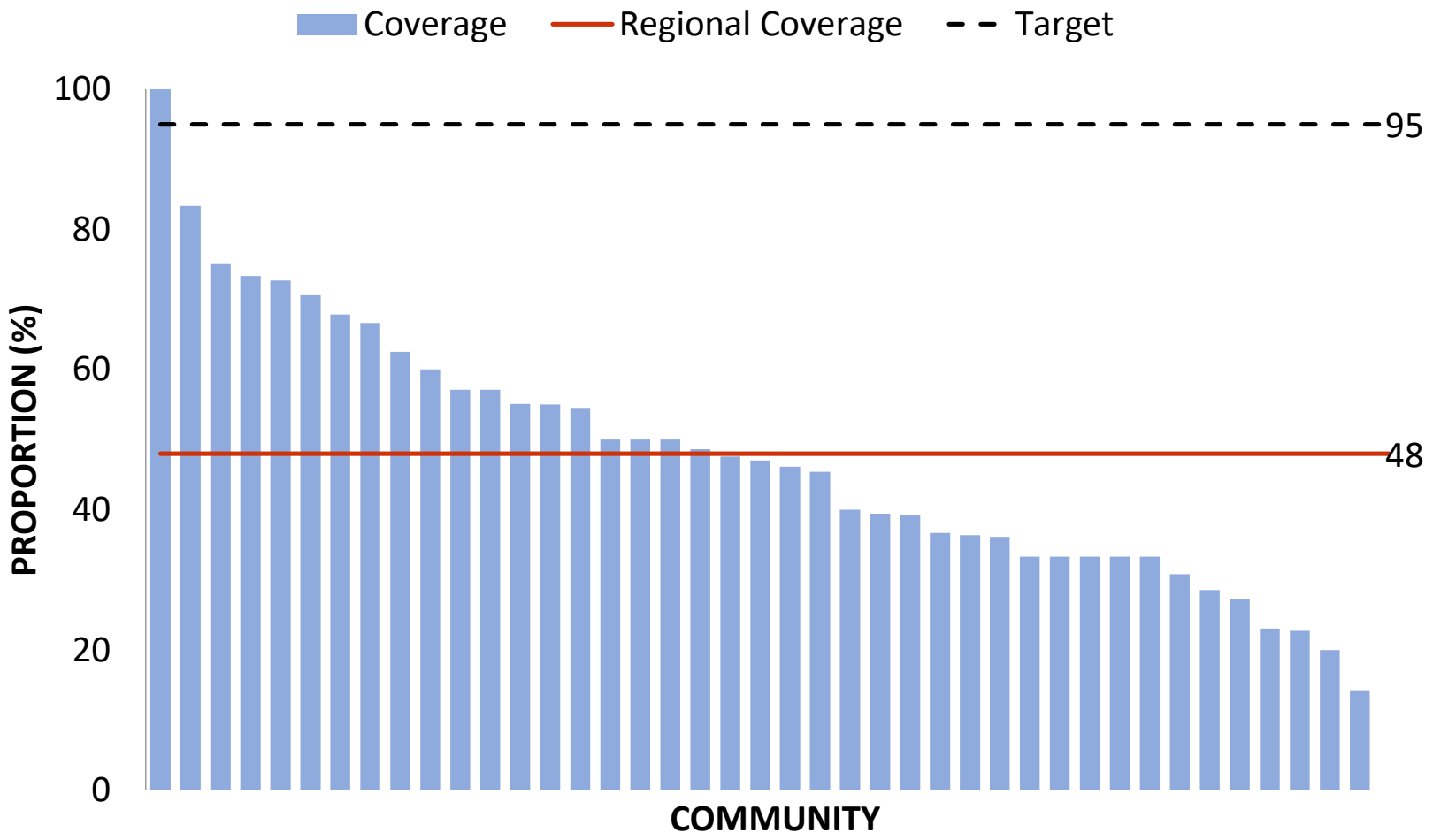
Measles Immunization Rates
Dose 2 by Age 7



ISC INDIGENOUS SERVICES CANADA

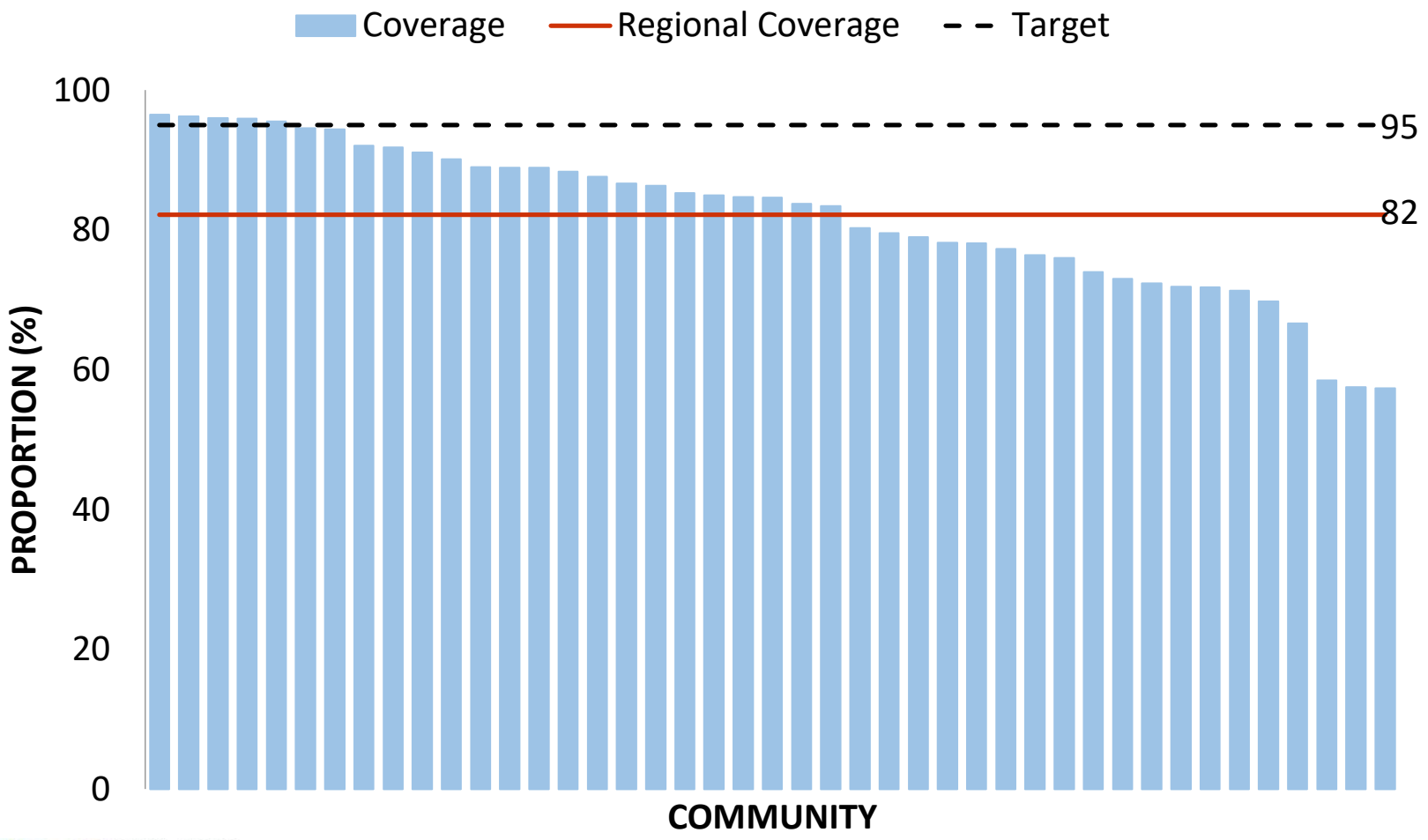
*2023 provincial data was not available at time of reporting

2023 Measles Immunization Rates
Dose 2 by Age 7 by Community



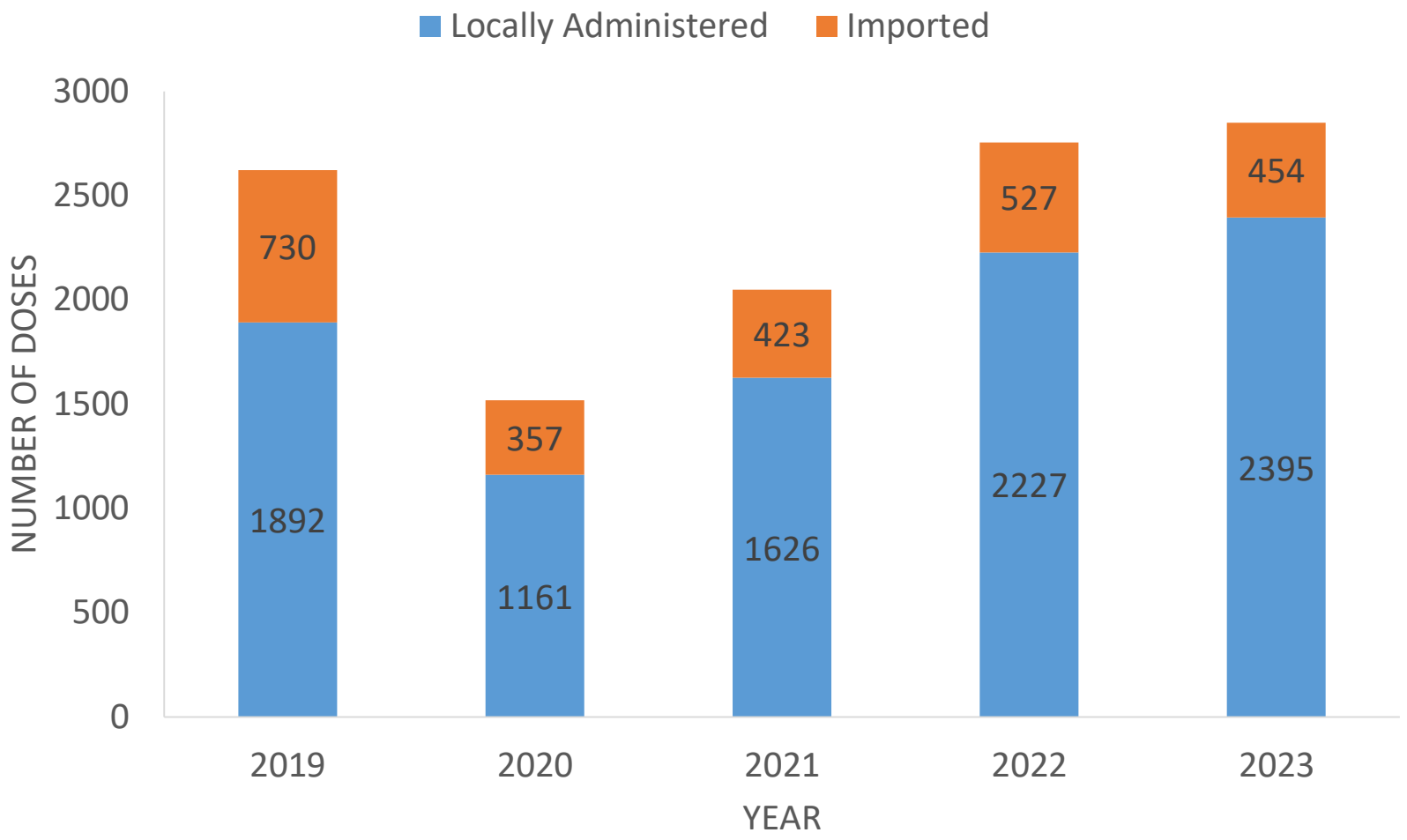
ISC INDIGENOUS SERVICES CANADA

2023 Measles Immunization Rates
Dose 2, Ages 10-17 years by Community



ISC INDIGENOUS SERVICES CANADA

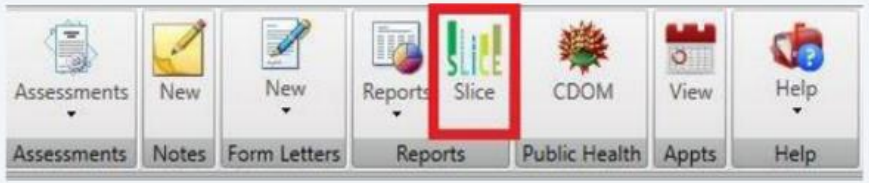
Measles Containing Vaccine Doses by Source, Ages 0-17 years



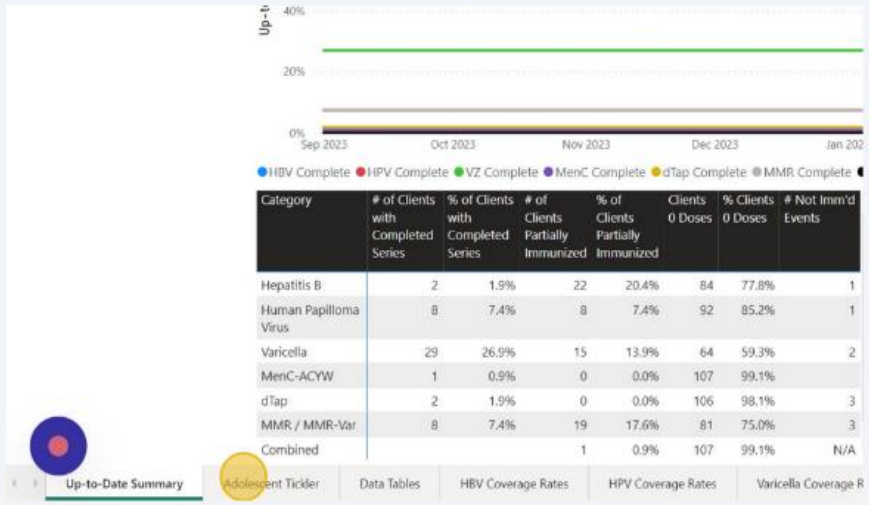
ISC INDIGENOUS SERVICES CANADA

You can access immunization data for your community!

1 In CHIP, click the SLICE button on the ribbon.



2 A new window will launch called SLICE. Select the Adolescent Immunization Report. Once the report has loaded, click on "Adolescent Tickler" on the bottom left side of the screen.



- There are How-To resources available on OneHealth
- For support, contact **helpdesk@okaki.com**

This is an example of the Adolescent Tickler (ages 10-17) within the SLICE Adolescent Report, but you can access other ages using the Search Tool Window in CHIP.

INDIGENOUS SERVICES CANADA

More About Immunizations

Brent Whittal

Assistant CDC Nurse Manager, FNIHB

Measles Vaccination: Key Points

- The Measles vaccine is available as measles-mumps-rubella (MMR) or measles-mumps-rubella-varicella (MMRV) vaccine.
- The efficacy of a single dose of measles vaccine given at 12 or 15 months of age is estimated to be 85% to 95%.
- ***With a second dose, efficacy is almost 100%!***

- Routine Childhood Schedule
  - 12 and 18 months old

- Off Schedule
  - Two lifetime doses, after 1st birthday and >4 weeks apart

Immunize Canada: MMR/MMRV Public Vaccine Info

Measles Vaccines

- **MMR**
  - Priorix (GSK)
  - MMR II (Merck)

- **MMR-Varicella**
  - Priorix-Tetra (GSK)
  - ProQuad (Merck)

- Live attenuated vaccines
- Route: subcutaneous (SC)
- Review biological page for all **contraindications** and precautions
  - Immunocompromised
  - Pregnancy
  - Anaphylaxis or hypersensitivity to vaccine components

Children – protection from measles

	Doses	Notes
Infants 6 months of age up to and including 11 months of age: • **traveling to areas where measles is circulating** • **traveling to any country outside of Canada and the United States** • **candidates for SOT**	1 dose	• **MMR** vaccine is used • Note: Infants who receive MMR vaccine prior to 12 months of age require two additional doses of MMR-containing vaccine on or after 12 months of age respecting recommended intervals.

Healthy children
• **12 months of age up to including 12 years of age when *varicella vaccine is also indicated***
	2 doses	• The combined **MMR-Var** vaccine is routinely used for this age group.
		• The schedule for measles containing vaccine is:
		  ○ Dose 1 @ 12 months of age
		  ○ Dose 2 @ 18 months of age
		  ▪ previously given at 4 – 6 years of age, with preschool boosters
		• If off-schedule, there should be a minimum 3 months between each MMR-Var dose.
		• If shorter spacing is required due to circumstances, (travel or post-exposure), MMR vaccine may used for measles protection (see complete info in MMR biological page for spacing considerations).
		• MMR-Var vaccine cannot be used for individuals 13 years of age and older, MMR vaccine must be used.

Healthy children
• **12 months of age up to and including 12 years of age when *varicella vaccine is not indicated***
• **children 13 years of age up to including 17 years of age**
	2 doses	• The **MMR** vaccine is used for these children (Review varicella biological page to confirm varicella vaccine is not indicated)
		  ○ Dose 1 @ 12 months of age
		  ○ Dose 2 @ 18 months of age
		  ▪ Previously given at 4 – 6 years of age, with preschool boosters
		• If child is off schedule or rapid protection is required (travel or post exposure), minimum spacing between doses is 4 weeks.

Review biological pages for complete information

18 years of age and older – protection from measles

Age Group	Measles Protection
Individuals 18 years of age and older	When required, the **MMR** vaccine is used for these individuals • Note: if serology shows the individual is not protected from varicella, the monovalent varicella vaccine is to be used for protection
Individuals born after 1970	History of: • 2 valid doses of measles-containing vaccine, OR • history of laboratory confirmed measles disease, OR • serological evidence of measles immunity (measles IgG positive).
Individuals born before 1970	From a population perspective, **individuals born before 1970 are generally presumed to have acquired natural immunity to measles and do not require measles vaccine unless listed below.** Serology is not indicated. **Exceptions:** The following may be susceptible, therefore it is recommended to assess and immunize if needed: • **Health care workers:** o documented history of 2 valid doses of measles-containing vaccine, OR o history of laboratory confirmed measles disease, OR o serological evidence of measles immunity (measles IgG positive). • **Post-secondary students:** o documented history of 1 valid dose of measles-containing vaccine, OR o history of laboratory confirmed measles disease, OR o serological evidence of measles immunity (measles IgG positive). • **Individuals travelling in Canada or the US where measles is circulating, or traveling to any country outside of Canada and the United States:** o documented history of 1 valid dose of measles-containing vaccine, OR o history of laboratory confirmed measles disease, OR o serological evidence of measles immunity (measles IgG positive). Note: individuals born in 1957 or later require 1 dose MMR for Rubella if they do not have lab confirmed rubella disease or immunity

Note: all health care workers regardless of year of birth should be assessed for a documented history of 2 valid doses of measles-containing vaccine, history of lab confirmed measles disease or serological evidence of measle immunity (IgG positive).

Review biological pages for complete information

Measles Vaccination: Side Effects

There can be side effects from the MMR vaccine. They tend to be mild and go away in a few days, but side effects can happen up to 6 weeks after having this vaccine. They may include:

- redness
- swelling, or feeling sore where you had the needle
- getting upset easily
- a fever
- body aches or sore joints
- a rash that may be measles-like (a blotchy, red rash).

Immunize Canada: MMR/MMRV Public Vaccine Info

There can be side effects from the MMR-Var vaccine. They tend to be mild and go away in a few days, but side effects can happen up to 6 weeks after getting this vaccine. They may include:

- redness
- swelling, or feeling sore where you had the needle
- bruising
- getting upset easily
- a fever
- vomiting (throwing up) or loose stool (diarrhea)
- a measles-like rash (a blotchy, red rash), rubella-like rash (rash with red, raised bumps), or varicella-like rash (rash with water-filled blisters).

How Can Patients Find Their Immunization History?

- Locating your own paper records, “yellow card”
- Ask the health centre
- MyHealth Records account
- Call 811, Health Link
- Call your local AHS public health office

MyHealth Alberta

Interesting Immunization Fact:

- The vaccine can be given after exposure to measles!
  - Individuals who are exposed to measles may be protected from disease if they are given the MMR/MMRV vaccine within 72 hours of their exposure.

Additional Measles Resources

Indigenous Services Canada:
Don’t Wait, Vaccinate! Measles Fact Sheet

Dr. Chris Sarin’s Video on Measles

Immunize Canada’s Guide for Immunizers

Additional Resources for staff: 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
- **National Collaborating Centres for Indigenous Health (NCCIH) and Infectious Diseases (NCCIH): Video on vaccine confidence**
  Vaccine Confidence on Vimeo

Case and Contact Management Basics

Confirmed Case:

- Obtain disease and immunization history; determine contacts
- Provide education to prevent disease transmission
- Exclusion from public places by MOH until non-infectious

Contacts of Case:

- Provide education to prevent disease transmission
- Determine immunization history, health status, and symptom status
- Identify those at high risk for measles complications
  - Immunocompromised; pregnant women; infants
- Arrange specimen collection for symptomatic contacts (exclusion by MOH)
- Post-Exposure Prophylaxis
  - MMR/MMR-Var immunization; MOH directed immune globulin for certain populations

Questions and Conversations with the Medical Officers of Health

Dr. Chris Sarin (ISC), Dr. Lauren Bilinsky (ISC)

Indigenous Services Canada | Services aux Autochtones Canada

Canada

MOH Questions: Health Centre Guidance

- **What should you do if someone inquires thinking they have Measles?**
  - If a patient calls with fever and rash or fever and exposure to suspect or known measles, advise them to contact Health Link at 8-1-1 for further guidance. Advise them not to present to the Community Health Center, or any public places (e.g. childcare, schools, workplaces) until they receive specific instructions.

- **What are the infection prevention/control precautions for Health Centres?**
  - Immediately have client put on a procedure mask. Do not allow client to stay in waiting room.
  - Quickly place client in private clinic room, close the door, and have the client keep their mask on. Place an airborne precautions sign on door of room ensuring it is visible on entry.
  - If a private room with a door is not available find a non-traditional care space that can be enclosed to care for client (i.e. office with a door)
  - Visitors and staff should not enter unless they are immune.
  - ***Immediately notify (by fastest means possible) the MOH of all suspect cases.***

- **For all assessing a suspect or confirmed measles case, airborne precautions with routine practices must be used**:
  - Fit-tested, seal checked N95 respirator; and
  - Face shield or eye protection; and
  - Gown; and
  - Gloves.
  - Dedicate any medical equipment to the isolated client, clean and disinfect shared equipment after use.

Infection Protocol & Control

- Susceptible healthcare providers should not enter the room if immune staff are available. If they must enter the room, a fit-tested N95 respirator must be worn.

- After client has left, keep the room door closed for a minimum of 2 hours to allow airborne particles to settle.
- The room may be entered after the settling time has lapsed, if entry is required before minimum settle time has been reached, staff must wear fit-tested N95 respirator if non-immune and door must remain closed.
- Measles can remain active on surfaces or objects for up to two hours
  - Room surfaces and equipment cleaning/disinfection is required using indicated PPE (N-95, eye protection, gown, and gloves) approved products and procedures.
  - DIN (drug identification number), virucidal claim and are labelled with the words effective against TB, or Mycobacterium.

What is the most important thing to do right now?

Check your vaccine records!

Ensure you are up to date on your vaccinations; ensure others are too!

Additional Questions?

- ***VCHELP@FNTN.CA***

Acknowledgements

Dr. Chris Sarin (he/him), Senior Medical Officer of Health – FNIHB

Dr. Lauren Bilinsky (she/her), Deputy Medical Officer of Health – FNIHB

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

Brent Whittal (he/him), Assistant CDC Nurse Manager – FNIHB

Callie Bouchard (she/her), Policy support – FNIHB

FNIHB Communications team

FNIHB Epidemiology team

TSAG (Alannah Hanson (she/her) and team)