

COVID-19 MOH Update

December 2th, 2021



Outline

1. MOH Update

- *Dr. Chris Sarin*

2. COVID-19 Vaccine Update

- *Dr. Parminder Thiara*

3. COVID and Kids: The Case for Vaccinating Younger Children in Canada

- *Dr. Stephen Freedman*

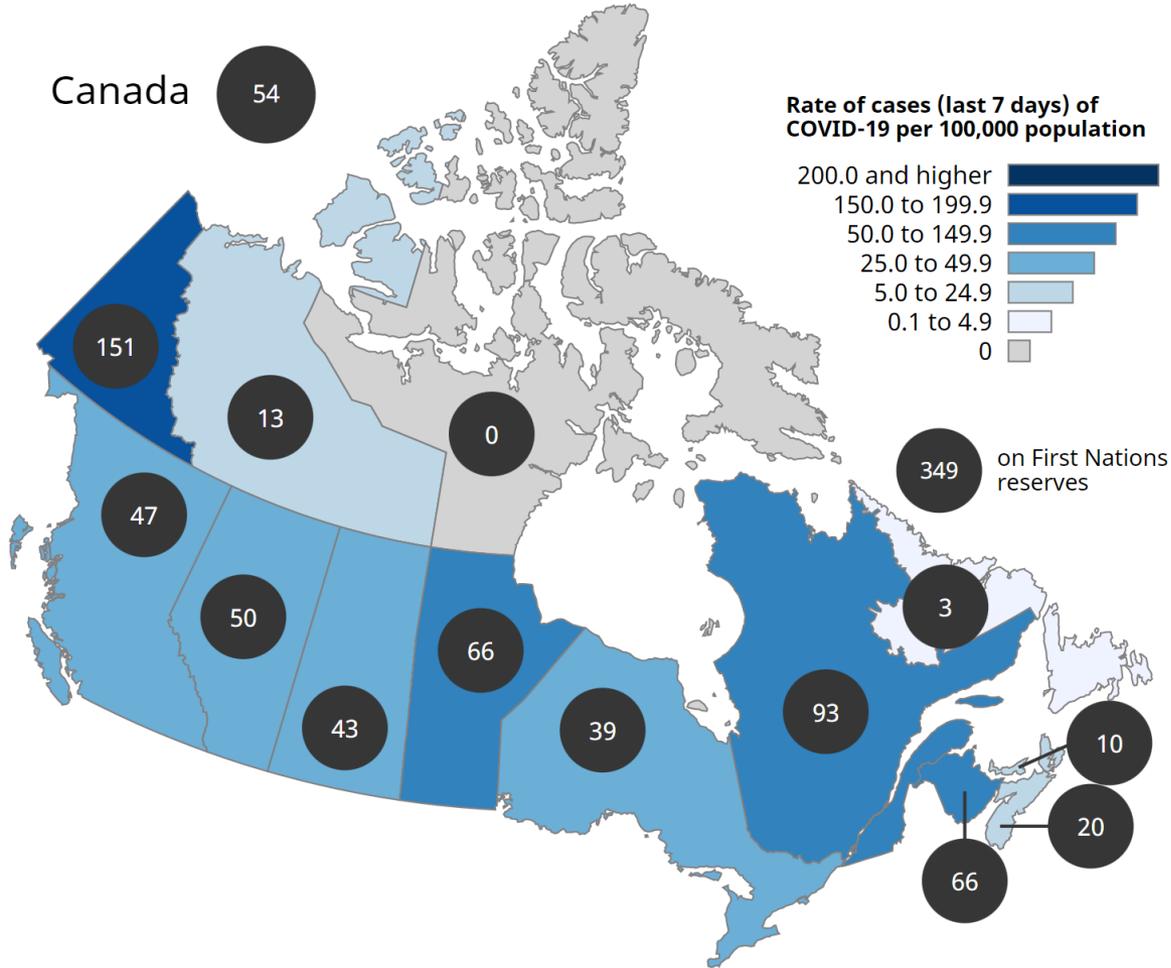
MOH Update

Dr. Chris Sarin

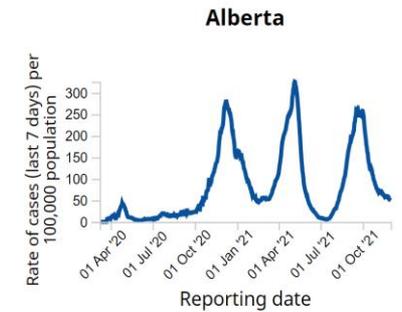
Senior Medical Officer of Health



Current Situation (as of December 1st)



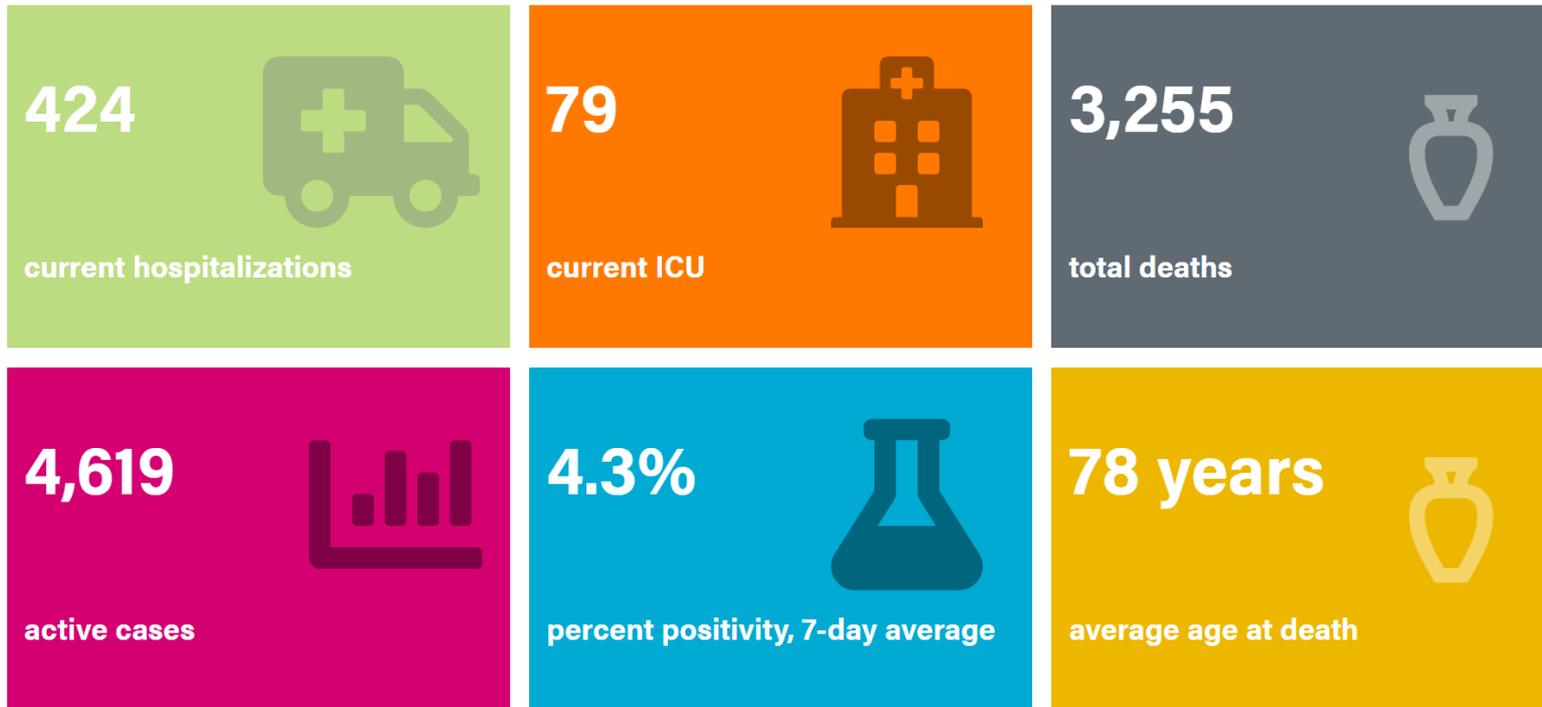
The rate of cases (last 7 days) of COVID-19 in **Alberta** was **50 per 100,000 population** as of December 1, 2021.



Source: <https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html>

Current Situation – Alberta (as of Nov 30th)

Interactive Alberta data can be found at: <https://covid19stats.alberta.ca/>



Overview of COVID-19 Cases in First Nations Communities on Reserve in Alberta

Source: FNIHB COVID-19 ER System via Synergy in Action (December 01, 2021)

14,275

Total COVID-19 cases

6,895
(48.3%)

Males

46

Impacted
communities ever

806

Hospitalized
ever

197

ICU ever

27

Communities with active
cases

29 (11 in
ICU)

Currently in
Hospital

13,964

Recovered

164

Active

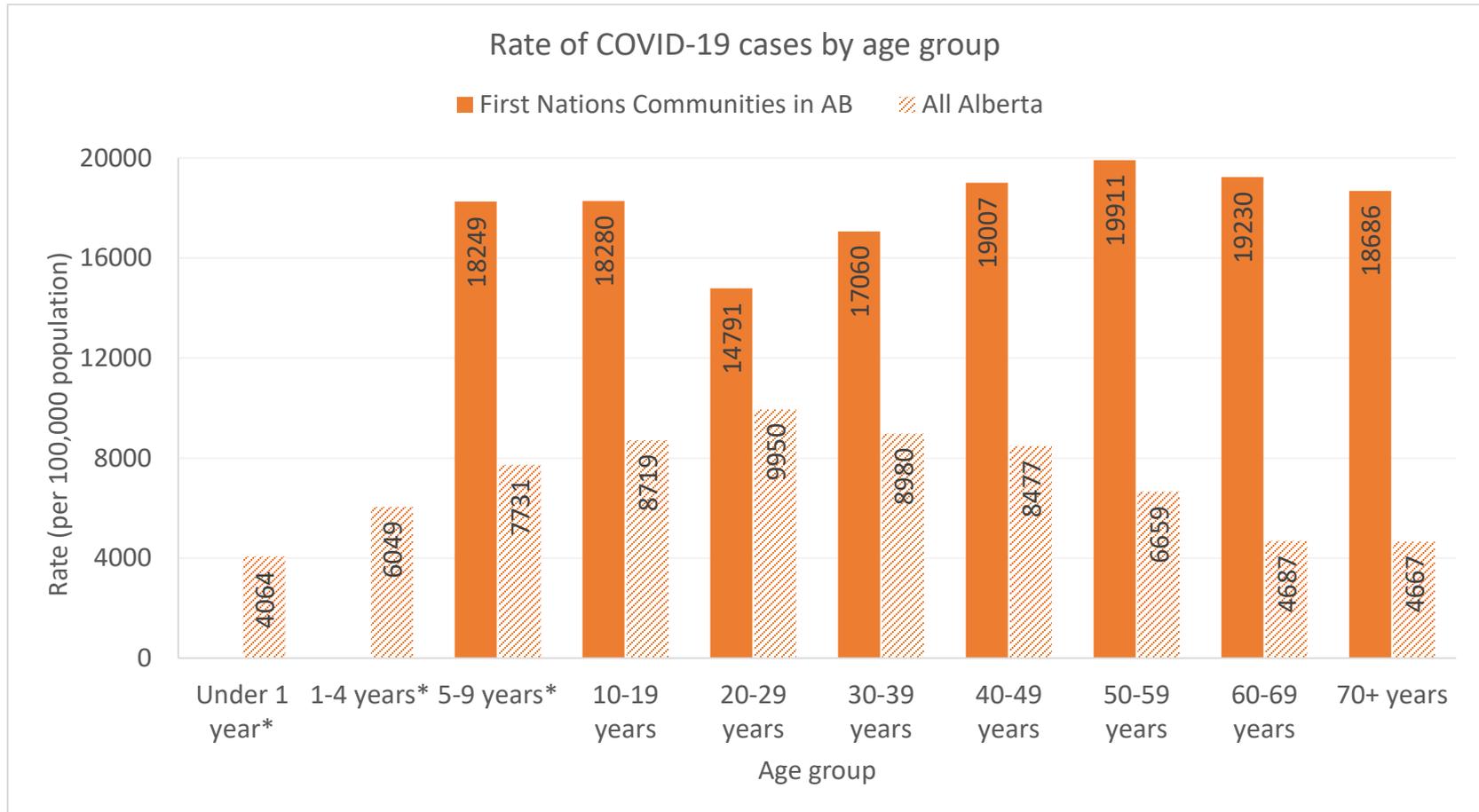
147

Deaths

Overview of COVID-19 Cases in First Nations Communities on Reserve in Alberta

Source: FNIHB COVID-19 ER System via Synergy in Action (December 01, 2021)

& <https://www.alberta.ca/stats/covid-19-alberta-statistics.htm>



Overview of Pediatric COVID-19 Cases in First Nations Communities on Reserve in Alberta

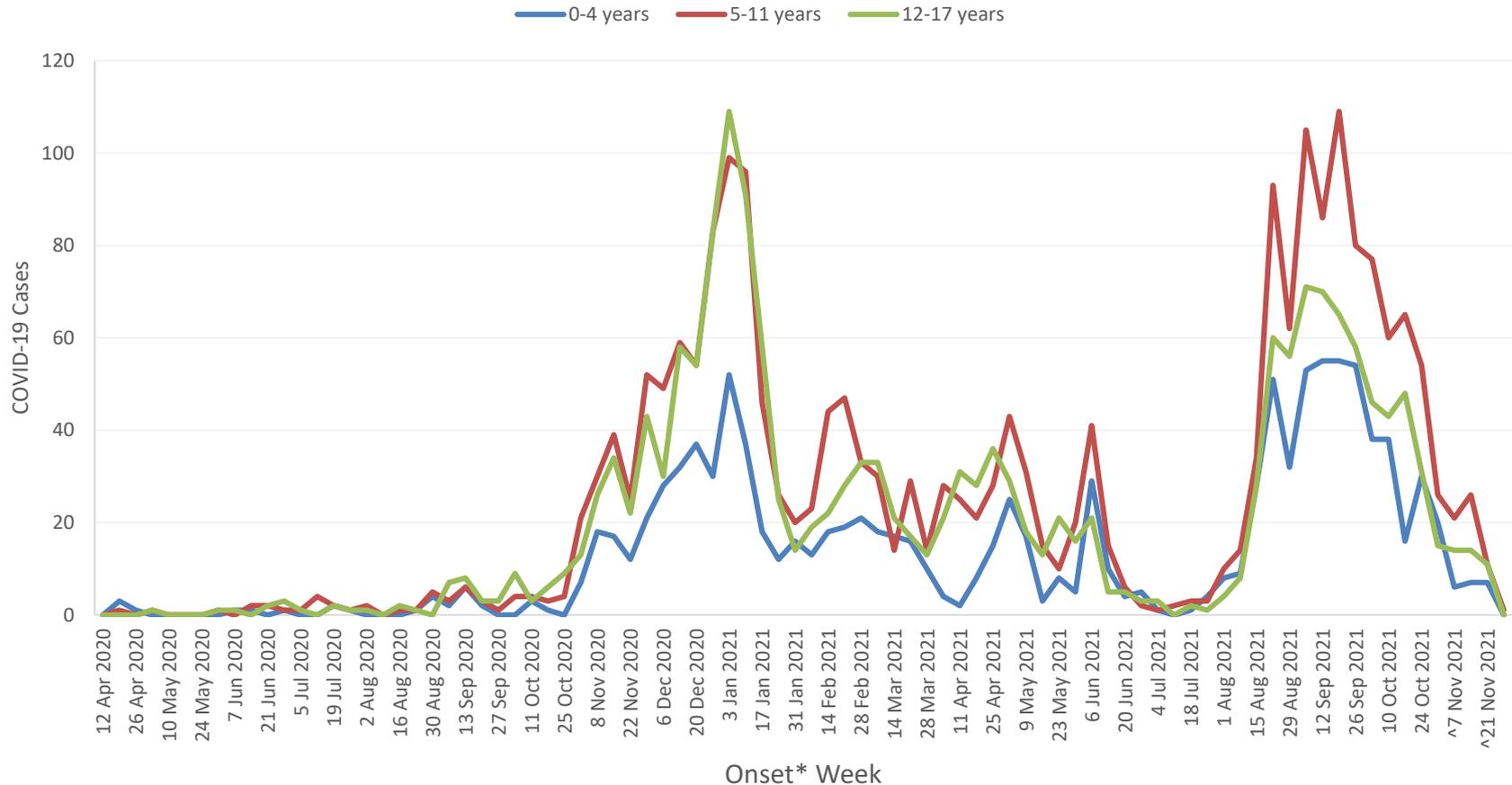
Source: FNIHB COVID-19 ER System via Synergy in Action (December 01, 2021)

Age group	COVID-19 cases	Male cases (%)	Hospitalized ever cases	ICU ever cases	Currently in hospital (ICU)	Recovered cases	Active cases	Deaths
0 - 4 years	1,146	577 (50.3%)	10	0	0	1,135	11	0
5 - 11 years	2,214	1,170 (52.8%)	4	0	0	2,189	25	0
12 - 17 years	1,805	897 (49.7%)	6	1	0	1,790	15	0
0-17 years	5,165	2,644 (51.2%)	20	1	0	5,114	51	0

Weekly Trend of Pediatric COVID-19 Cases in First Nations communities on Reserve in Alberta

Source: FNIHB COVID-19 ER System via Synergy in Action (December 01, 2021)

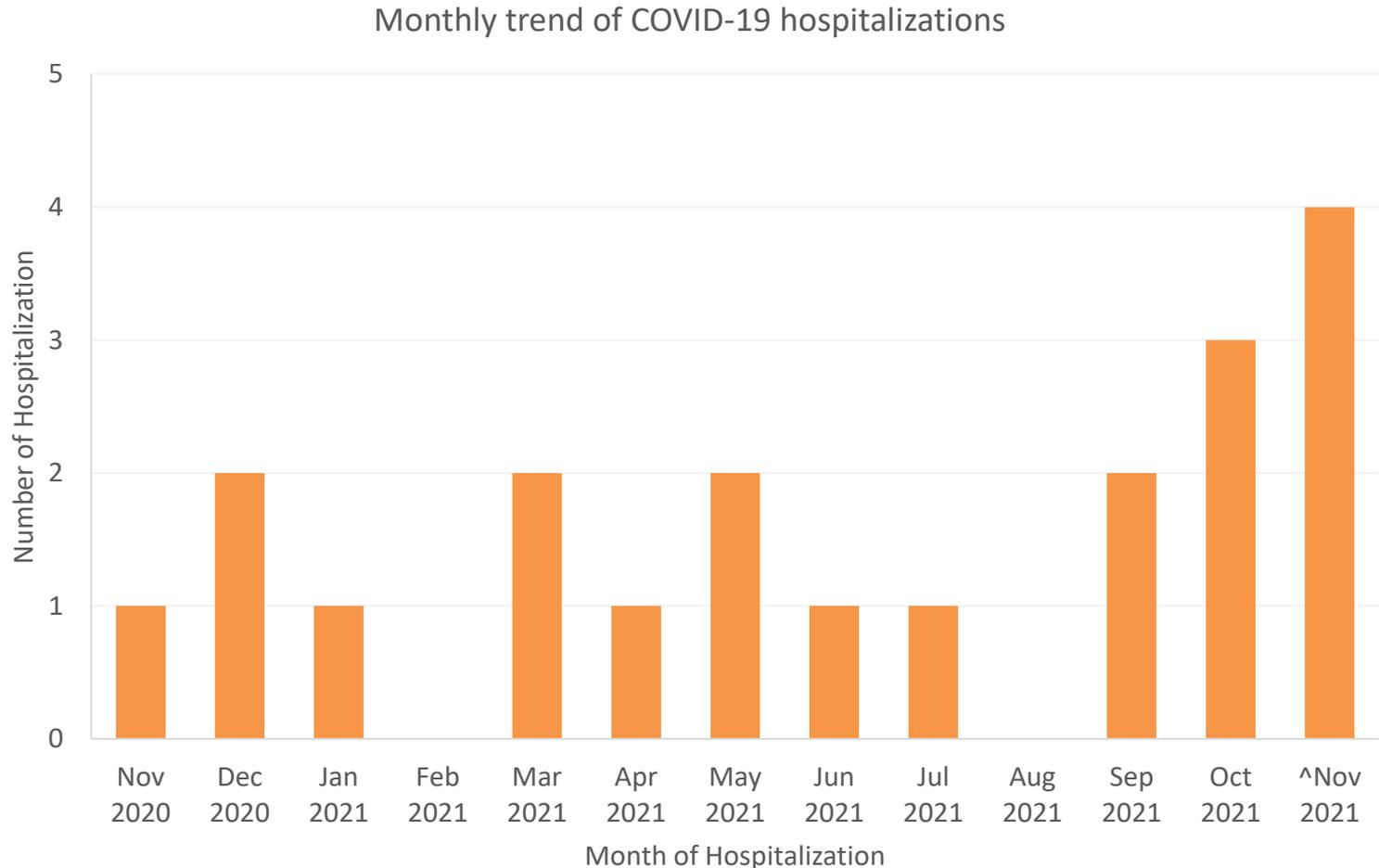
Weekly Pediatric COVID-19 Cases by Onset* Week and Age Group



^Data may be incomplete due to late reporting

Monthly Trend of 0-17 year old COVID-19 Hospitalizations in First Nations Communities on Reserve in Alberta

Source: FNIHB COVID-19 ER System via Synergy in Action (December 01, 2021)

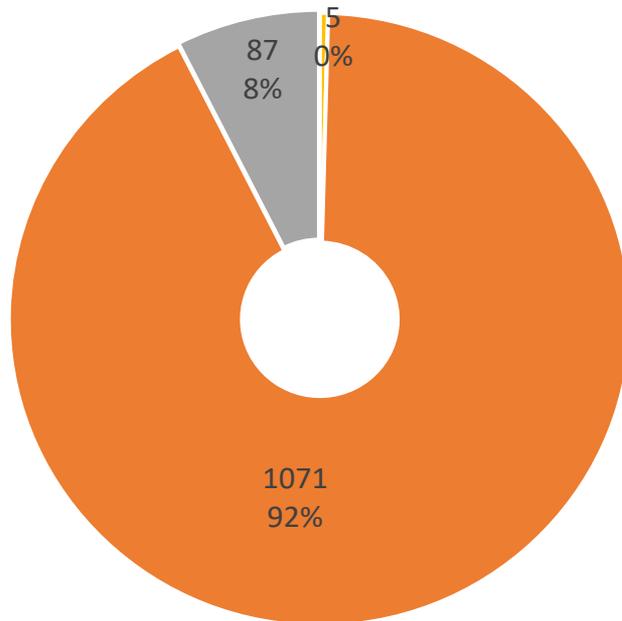


^Data may be incomplete due to late reporting

COVID-19 cases in First Nations communities on reserve by Immunization Status, 12-17 year olds

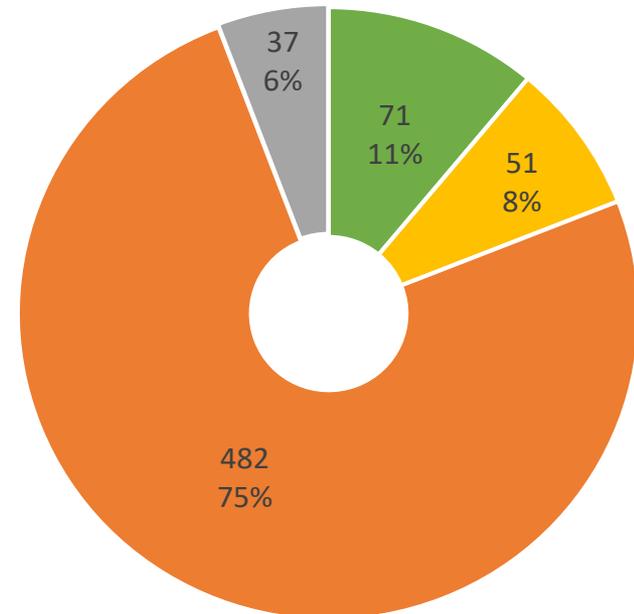
Source: FNIHB COVID-19 ER System via Synergy in Action & OKAKI Slice (December 01, 2021)

12-17 year old COVID-19 cases by immunization status, Apr 01, 2020 – Jul 31, 2021



- Diagnosed 14 or more days after dose 2
- Diagnosed 14 or more days after dose 1
- Diagnosed 13 or less days after dose 1 or unimmunized
- Unknown Status

12-17 year old COVID-19 cases by immunization status, Aug 1 – Dec 01, 2021



- Diagnosed 14 or more days after dose 2
- Diagnosed 14 or more days after dose 1
- Diagnosed 13 or less days after dose 1 or unimmunized
- Unknown Status

Pediatric COVID-19 Cases by Treaty Area

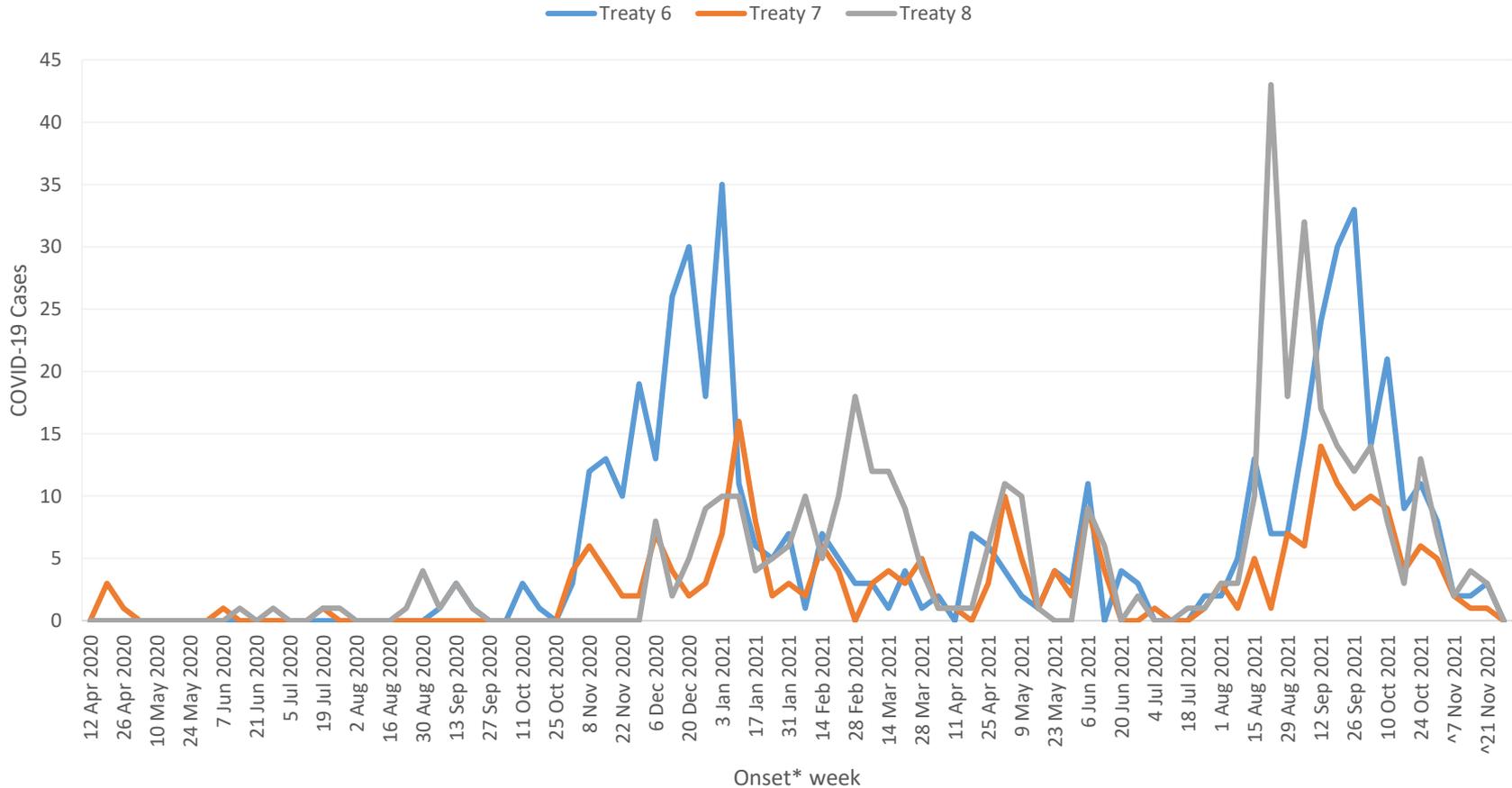
Source: FNIHB COVID-19 ER System via Synergy in Action (December 01,2021)

Age group	COVID-19 cases			Recovered cases			Active case		
	Treaty 6	Treaty 7	Treaty 8	Treaty 6	Treaty 7	Treaty 8	Treaty 6	Treaty 7	Treaty 8
0 - 4 years	497	240	409	492	239	404	5	1	5
5 - 11 years	1005	488	721	990	487	712	15	1	9
12 -17 years	897	372	536	892	371	527	5	1	9
0-17 years	2399	1100	1666	2374	1097	1643	25	3	23

0-4 year old COVID-19 cases by week of onset* by Treaty Area

Source: FNIHB COVID-19 ER System via Synergy in Action (December 01, 2021)

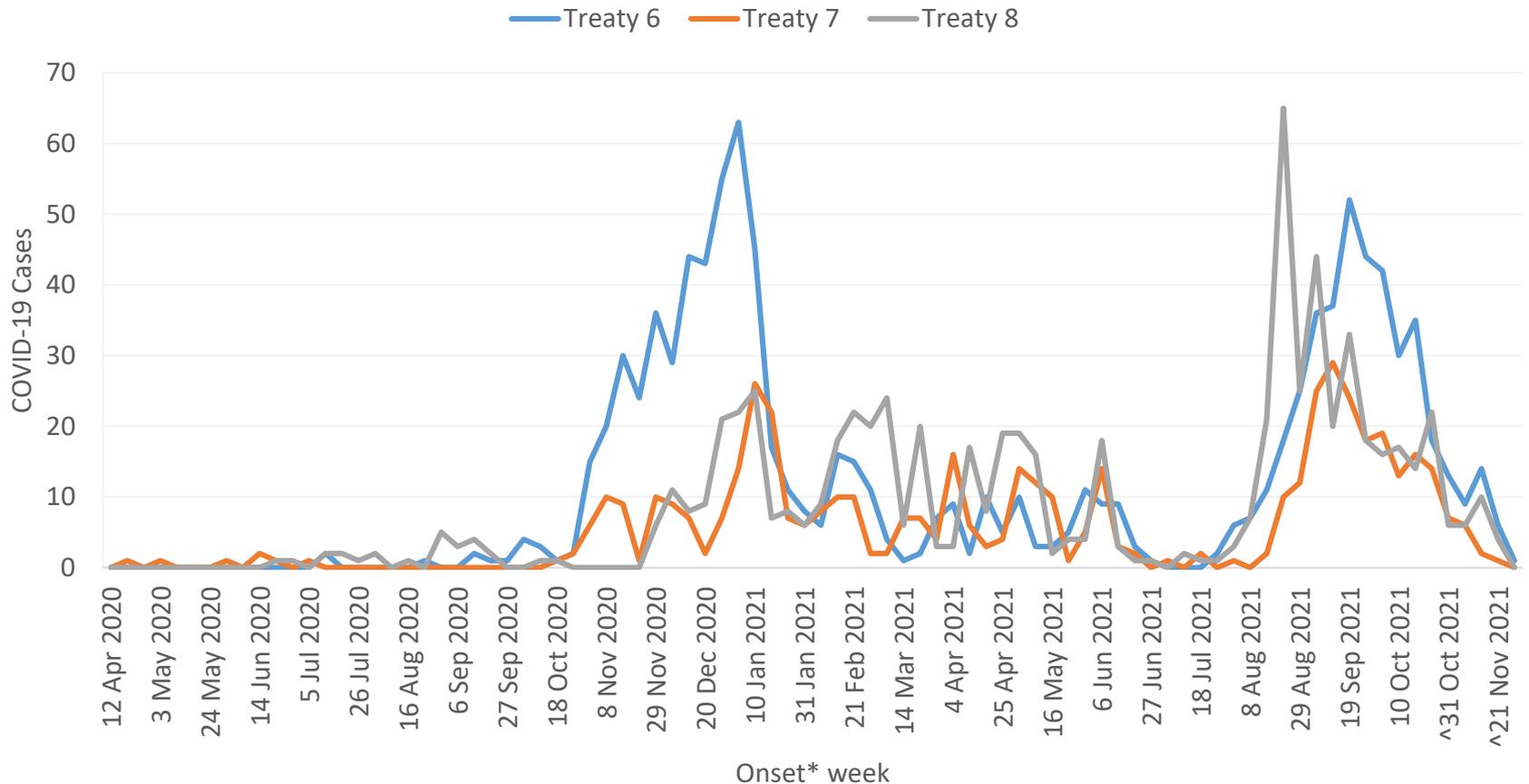
Weekly 0-4 year old COVID-19 Cases by Onset* Week and Treaty Area



5-11 year old COVID-19 cases by week of onset* by Treaty Area

Source: FNIHB COVID-19 ER System via Synergy in Action (November 28, 2021)

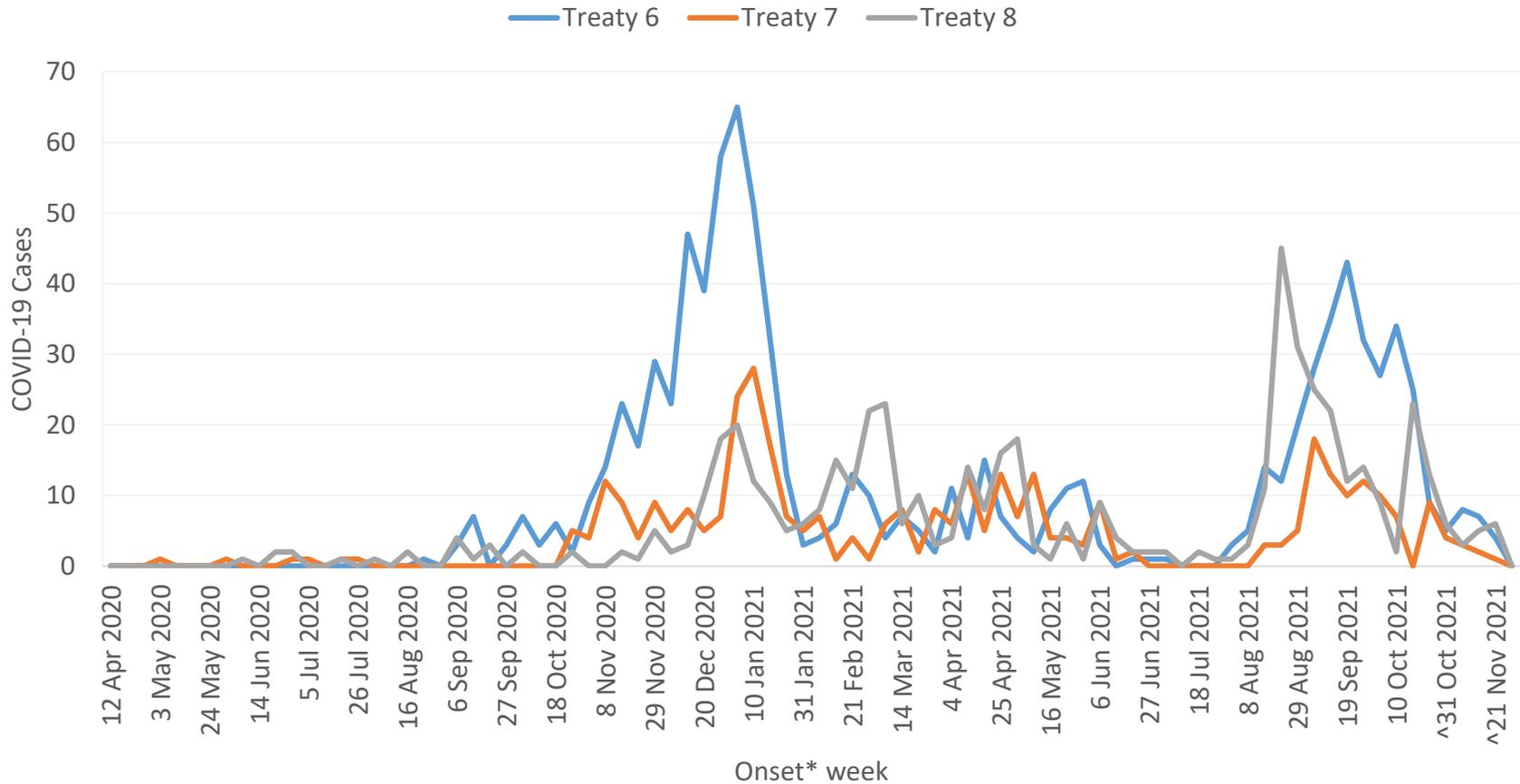
Weekly 5-11 year old COVID-19 Cases by Onset* Week and Treaty Area



12-17 year old COVID-19 cases by week of onset* by Treaty Area

Source: FNIHB COVID-19 ER System via Synergy in Action (December 01, 2021)

Weekly 12-17 year old COVID-19 Cases by Onset* Week and Treaty Area



Monoclonal Antibody Treatment for COVID-19

- Sotrovimab is a new drug that was developed specifically for treating COVID-19 patients with mild to moderate symptoms.
- It is reported to have the potential to prevent one hospital admission for every 20 patients who receive treatment.
- Individuals who are currently eligible for this treatment include:
 - Those who are COVID-19 positive, 55 years of age or older who have not received any doses of a COVID-19 vaccine
 - Those who are COVID-19 positive, who have received an solid organ transplant or stem cell transplant regardless of vaccine status
- Individuals who have tested positive for COVID-19 and whose symptoms began less than four days ago can call 1-844-343-0971 to find out if they qualify to receive Sotrovimab.

For more information, refer to:

<https://www.albertahealthservices.ca/topics/Page17753.aspx>

New COVID-19 Variant of Concern: Omicron

- The World Health Organization named this variant after the 15th letter of the Greek alphabet.
- Also known as B.1.1.529, Omicron was first identified in South Africa and has a large number of mutations.
- Early evidence suggests there may be an increased risk of transmission and reinfection with this variant, so people who have been previously infected with COVID-19 could be re-infected more easily.
- There is no evidence of increased disease severity yet. However, evidence is still emerging.
- To date, three confirmed cases of Omicron have been identified in Alberta.
- Enhanced border surveillance is in place. All fully vaccinated travellers arriving by air from departure points other than the United States **will be subject to arrival testing**. Fully vaccinated travellers will be required to quarantine while they await the results of their arrival test.

Vaccination Requirements to Board a Flight or Train

As of November 30th, proof of vaccination is required for travel within and to depart Canada.

A valid COVID-19 molecular test **will no longer be accepted** as an alternative to vaccination unless you're eligible for one of the limited exemptions.

Individuals 12 years of age plus 4 months, or older, need to be fully vaccinated in order to board:

- **Domestic or international flights departing** from most airports in Canada, including charter and foreign airlines carrying commercial passengers
- **VIA Rail and Rocky Mountaineer trains**

For more information, refer to: <https://travel.gc.ca/travel-covid>



COVID-19 Vaccine Update

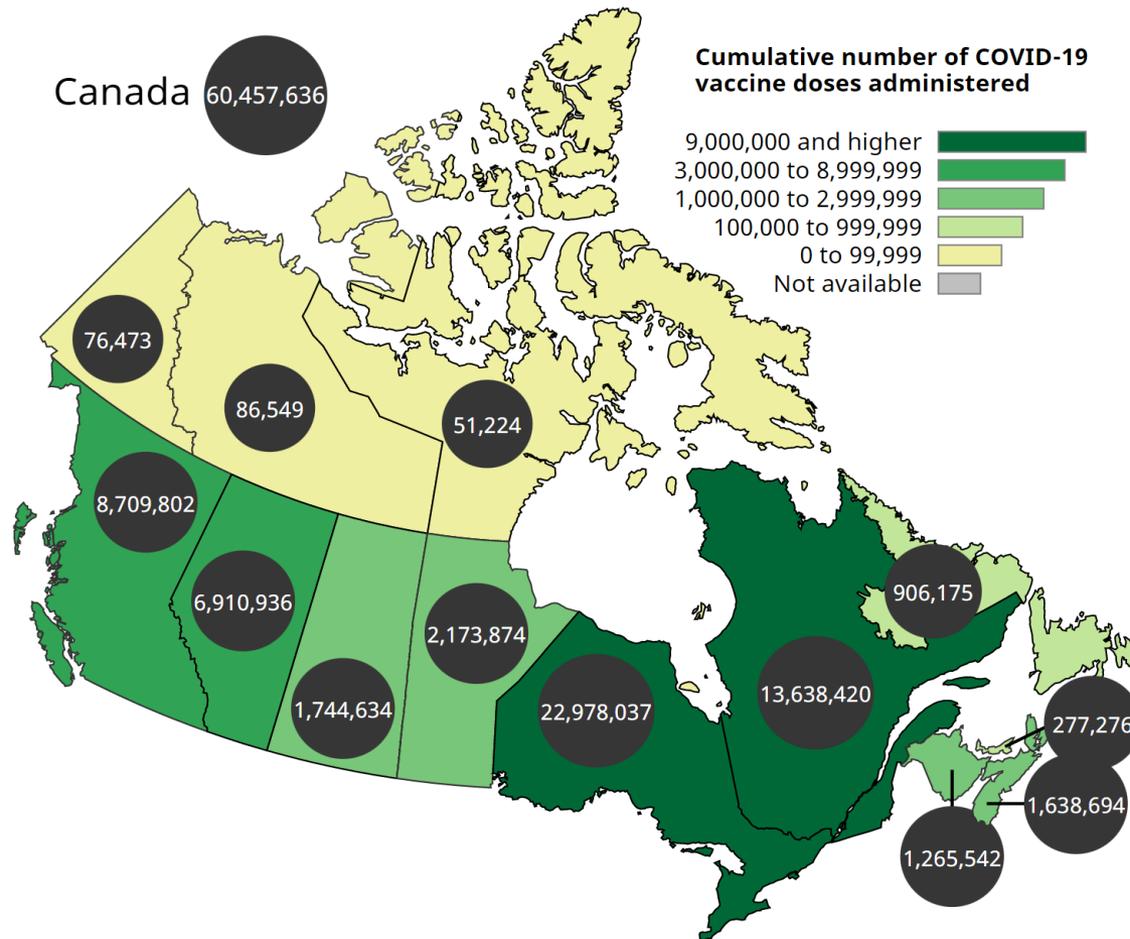
Dr. Parminder Thiara

Deputy Medical Officer of Health

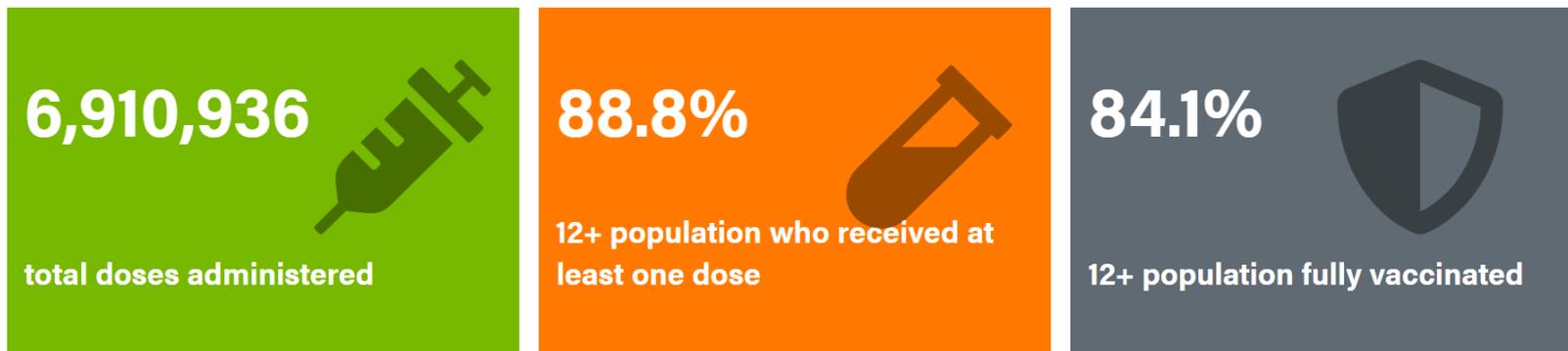
Regional Director of Primary and Population Health



Cumulative number of COVID-19 vaccine doses administered in Canada by jurisdiction, as of December 1, 2021



COVID-19 Vaccine Data – Alberta (as of Nov 30th)

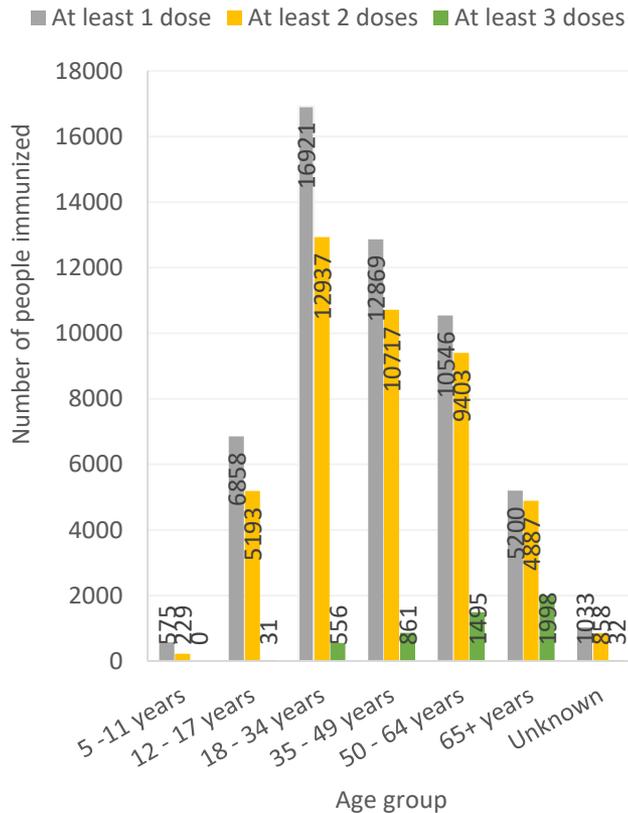


Source: <https://www.alberta.ca/stats/covid-19-alberta-statistics.htm>

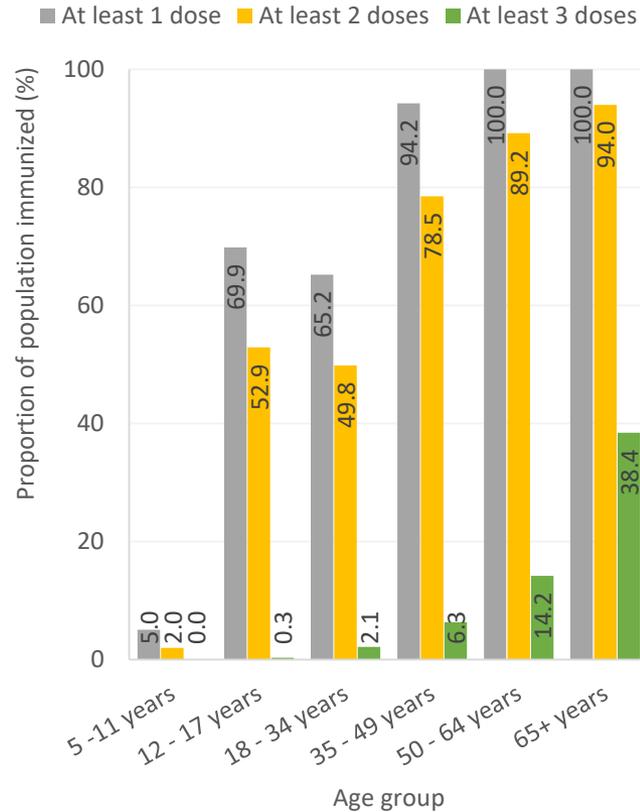
COVID Immunization Activity – On Reserve in Alberta

Source: Okaki Slice Analytics (December 01, 2021)

Number of people immunized by age group and type of dose



Proportion of population immunized by age group and type of dose



Dose administered

103,200

Number of people who have received at least one dose

54,003

Number of people who have received at least two doses

44,224

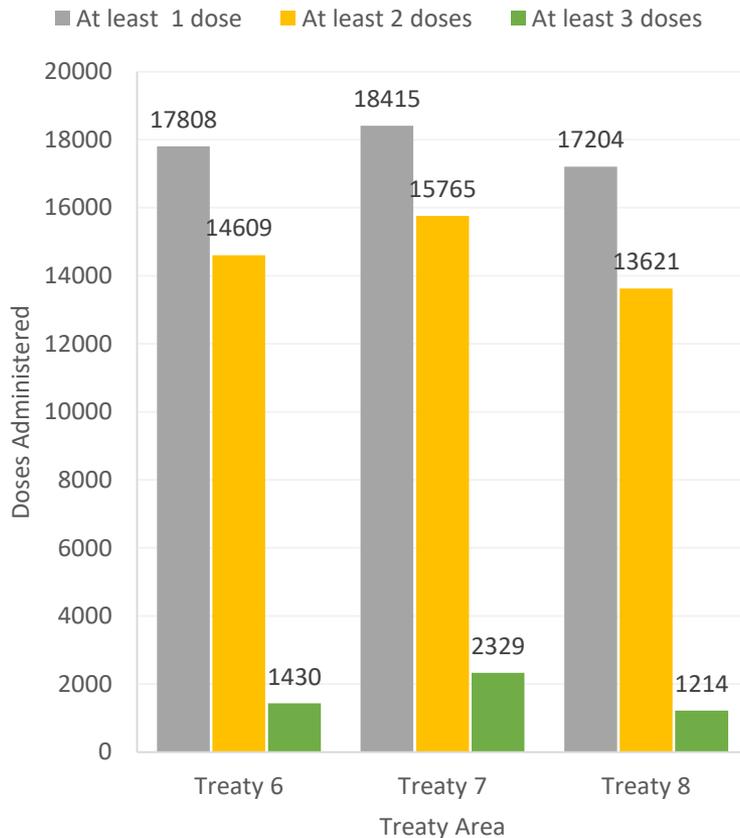
Number of people who have received at least three doses

4,973

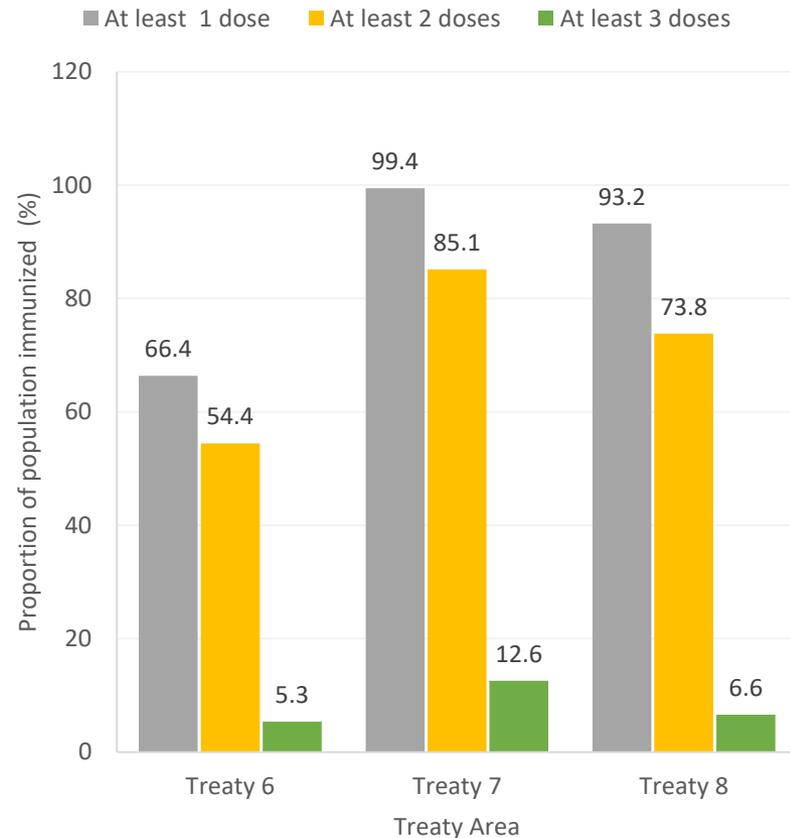
COVID Immunization Activity – On Reserve in Alberta

Source: Okaki Slice Analytics (December 01, 2021)

Number of people immunized by Treaty area and type of dose



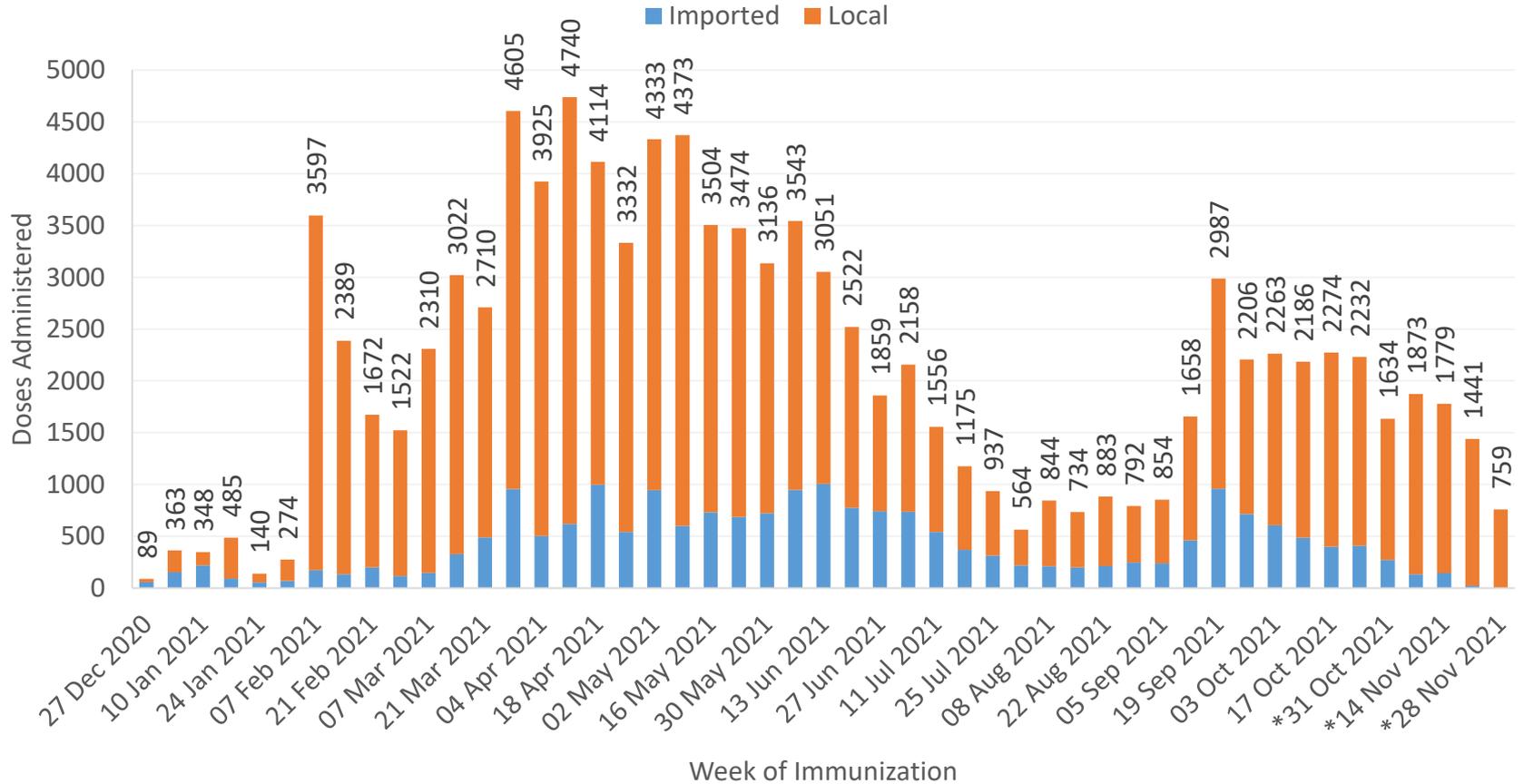
Proportion of population aged 12 years and older immunized by Treaty area and type of dose



COVID Immunization Activity – On Reserve in Alberta

Source: Okaki Slice Analytics (December 01, 2021)

COVID-19 doses administered by week of immunization and source



*May be incomplete due to late reporting

Reported side effects following COVID-19 vaccination in Canada and Alberta

Canada as of November 19, 2021

**No new safety signals
have been identified in
Canada**

(three continue to be monitored)

59,635,768

Total doses administered

26,734

Total adverse event following
immunization reports

(0.045% of all doses administered)

20,466

Total adverse event following
immunization reports that were non-
serious

(0.034% of all doses administered)

6,268

Total adverse event following
immunization reports that were serious

(0.011% of all doses administered)

183

New adverse event following
immunization reports received and
processed between November 13 to
November 19, 2021.

(98 new non-serious and
85 new serious)

Alberta

As of November 30, 2021

6,910,936 Doses Administered
2,055 Adverse Events Reported

Alberta First Nations On Reserve As of December 1, 2021

82,316 Doses Administered
38 Adverse Events Reported

COVID-19 Vaccine for Children

On November 26th, children ages 5 to 11 became eligible to receive the Pfizer-BioNTech Comirnaty vaccine.



- Health Canada approved the vaccine for this age group following a regulatory review to ensure it's safety and effectiveness. The vaccine was also [approved in the U.S.](#)
- The children's dose is 1/3 of the regular vaccine (10mg per dose instead of 30mg).
- It is **90.7% effective** in preventing illness and no serious side effects have been identified.
- Children are recommended to wait at least 14 days between the COVID-19 vaccine and the seasonal flu vaccine. [Routine school immunizations](#) can continue as scheduled.
- Clinical trials are underway for children under 5 years old. Results are expected in 2022.

Third Dose Eligibility

First Nations, Métis and Inuit people ages 18+ and other high risk groups are already eligible to receive third doses.

Starting today:

- Individuals ages 60 - 69 are able to book an appointment for a booster dose. Appointments will begin December 6th.
- Appointments must be booked at least 6 months after the second dose.
- Booster shots will be offered to all Albertans 18+ soon to increase protection against COVID-19.

Preferential Vaccine Recommendation Ages 12–29

- Alberta is recommending that the **Pfizer-BioNTech Comirnaty** vaccine be offered as the preferred choice of mRNA COVID-19 vaccine for Albertans 12 to 29 years of age.
- The recommendation is based on a higher rate of myocarditis and/or pericarditis following immunization with Moderna Spikevax vaccine relative to the Pfizer-BioNTech Comirnaty vaccine in that age group, particularly among males.
- **The risk is still considered rare.** In Alberta, as of November 15, 2021, there were 72 confirmed cases of myocarditis after COVID-19 immunization and over 6 million doses of vaccine administered. The majority of cases had mild illness, responded well to treatment and rest, and their symptoms improved quickly.
- Emerging evidence indicates a potential reduction of myocarditis risk with a longer interval between first and second doses of mRNA vaccine. An interval of 8 weeks between the first and second dose for any mRNA vaccine series for all age groups is recommended.



UNIVERSITY OF
CALGARY

COVID and Kids: The Case for Vaccinating Younger Children in Canada

COVID-19 MOH Update

December 2, 2021

Stephen Freedman MDCM, MSc

Pediatric Emergency Medicine

Alberta Children's Hospital Foundation Professor, Child Health and Wellness

Professor of Pediatrics and Emergency Medicine

Cumming School of Medicine

Objectives

- To review our understanding of adverse disease related outcomes in children
 - Acute illness – Canadian data
 - Multisystem Inflammatory Syndrome in Children (MIS-C)
 - Post-COVID-19 Conditions
 - Mental health

- To discuss why preventing pediatric SARS-CoV-2 infection is important

Audience Polling

4 Questions coming up

What proportion of children hospitalized in Canada with COVID-19 are admitted to the ICU?

- A) 1%
- B) 5%
- C) 10%
- D) 15%
- E) 20%

What proportion of children admitted with COVID-19 to an ICU in Canada has died?

- A) 1%
- B) 3%
- C) 5%
- D) 8%
- E) 10%

Have you had any of the following symptoms in the last week: fatigue, headache, difficulty concentrating, forgetting to do things, abdominal pain, or cough?



Yes

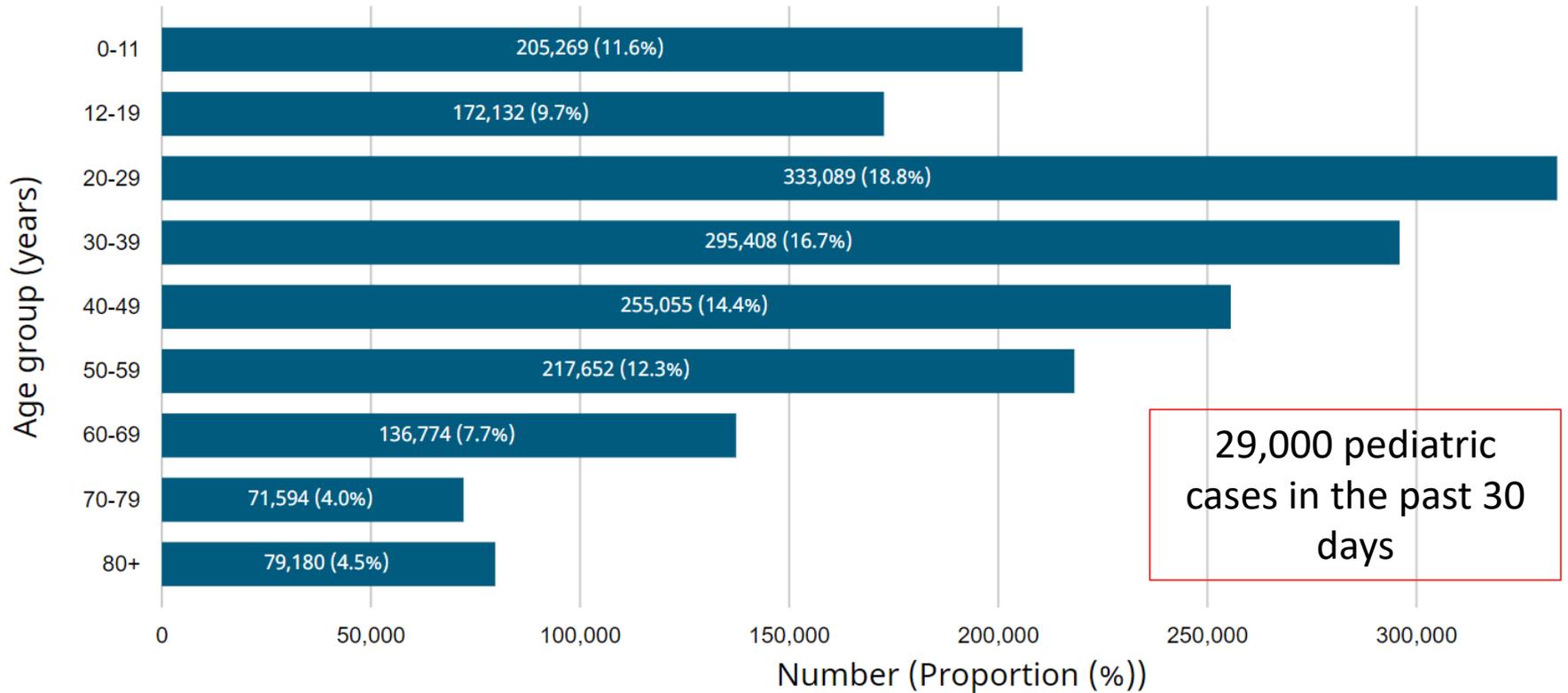
No

Which younger children (aged 5-12 years) do you think should receive COVID-19 vaccines?

- A) Only children 5-12 at high risk for severe infections
- B) Only children 5-12 years of age attending school in person or participating in community activities (sports, music, etc.)
- C) All children 5-12 years of age
- D) Children 5-12 years of age should not receive COVID-19 vaccines
- E) None of the above



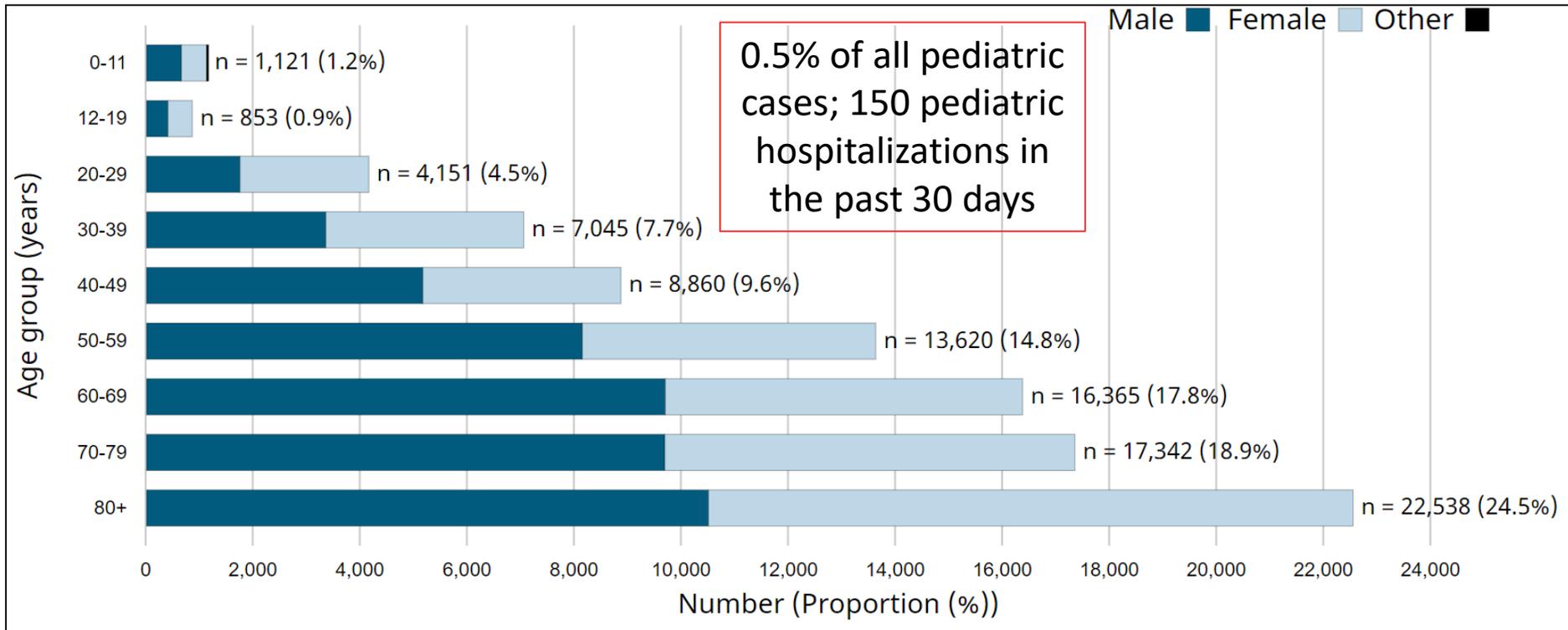
Canada – COVID-19 Cases (Nov 26, 2021)



<https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html#a5>



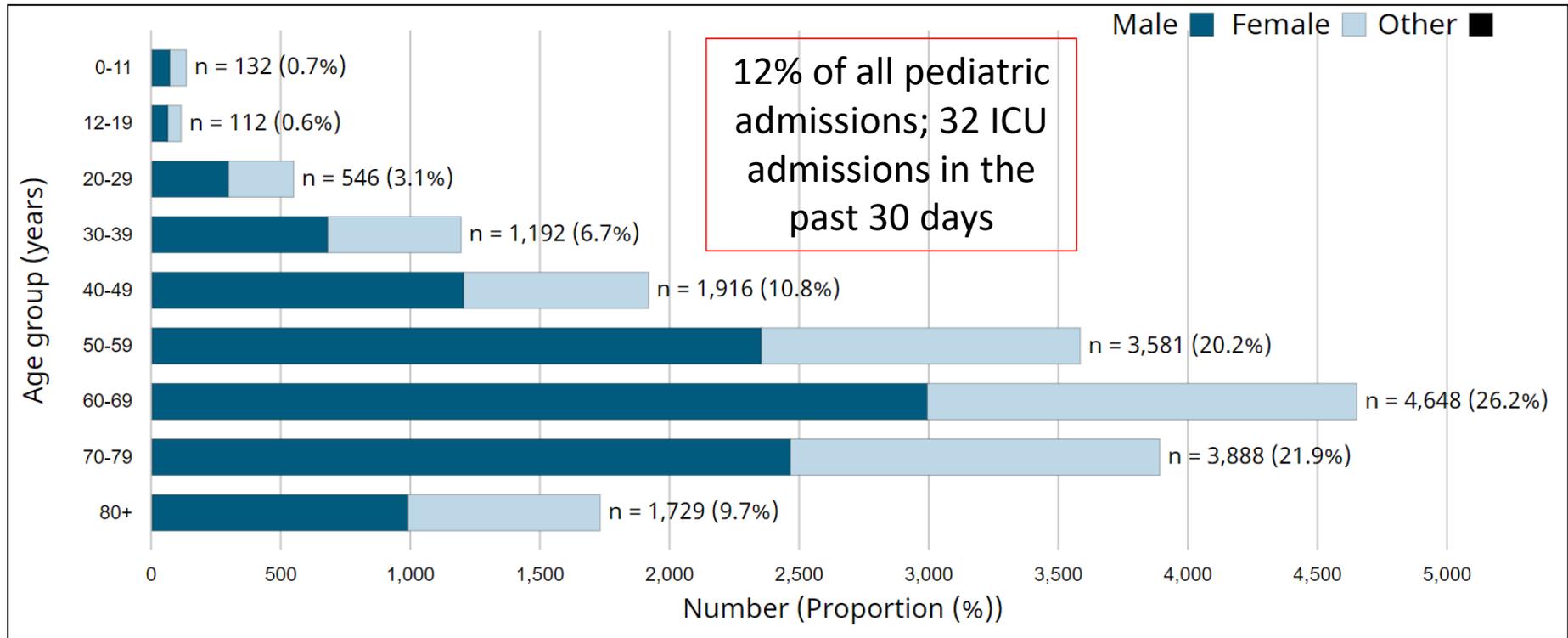
Canada – Hospitalized Cases (Nov 26, 2021)



<https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html#a5>

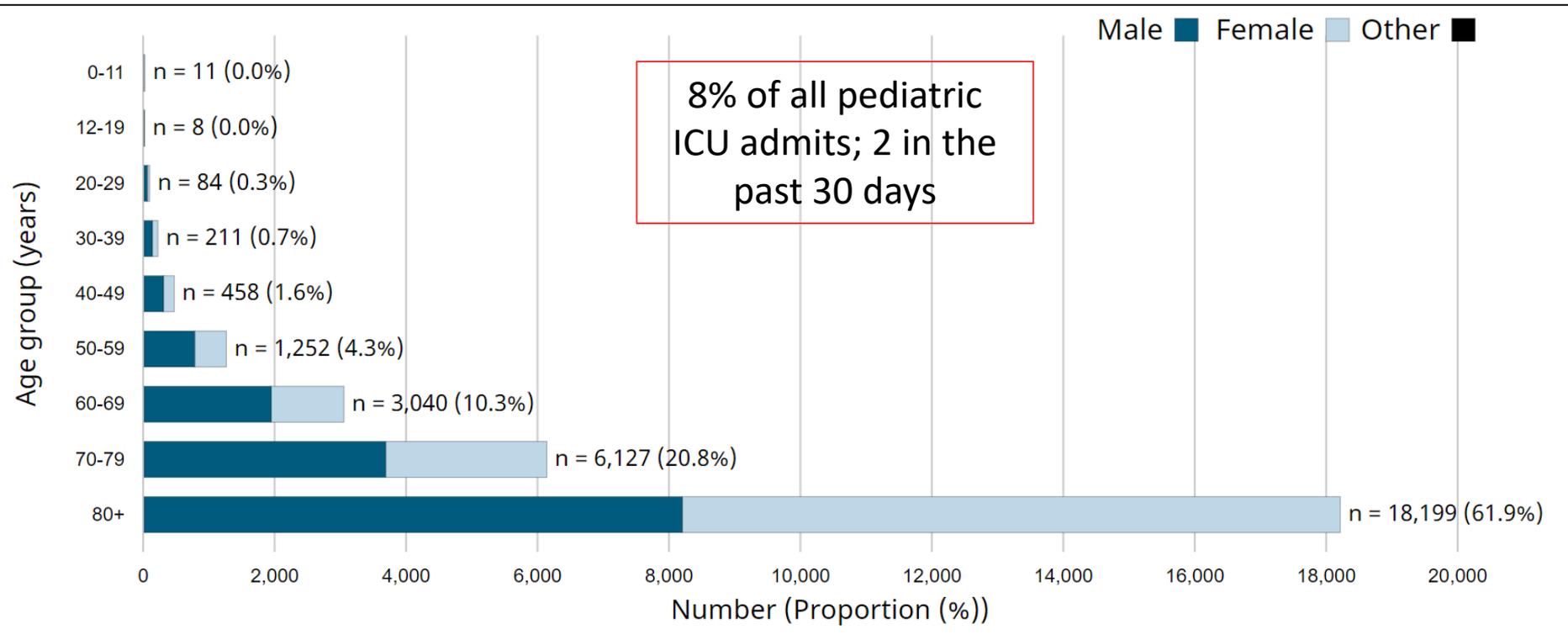


Canada – ICU Admissions (Nov 26, 2021)





Canada – Deaths (Nov 26, 2021)

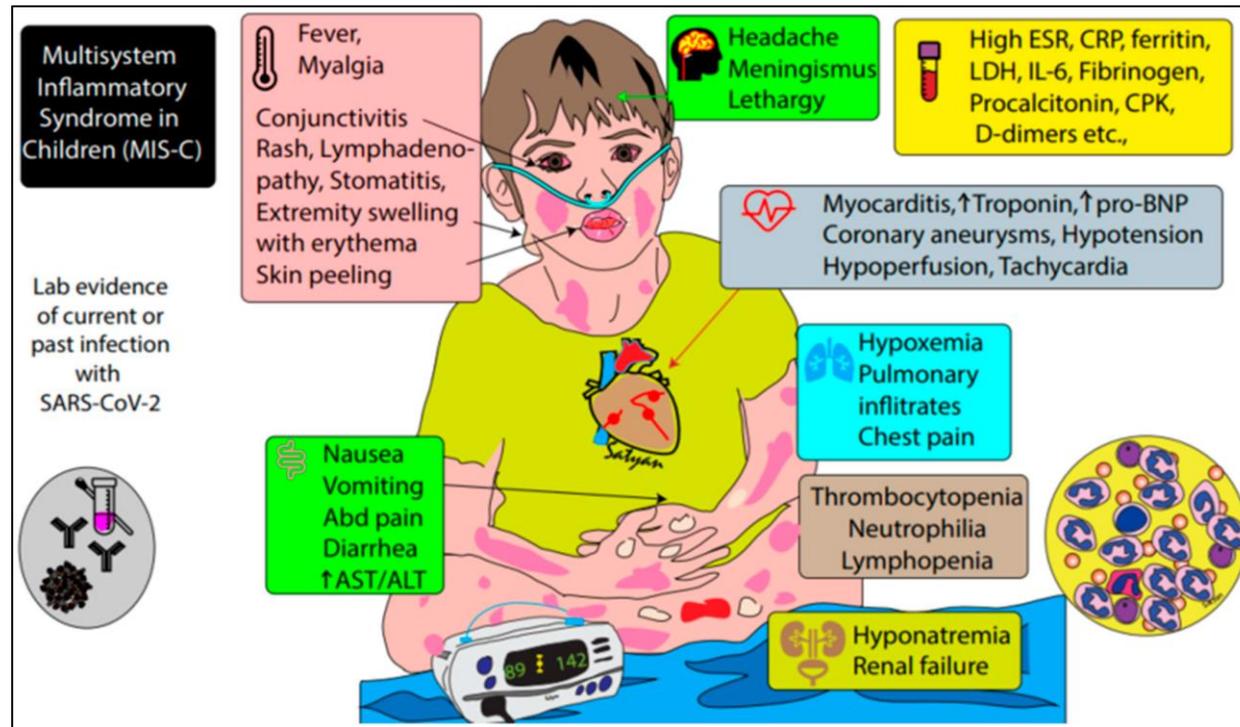


<https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html#a5>

Multisystem Inflammatory Syndrome in Children (MIS-C)

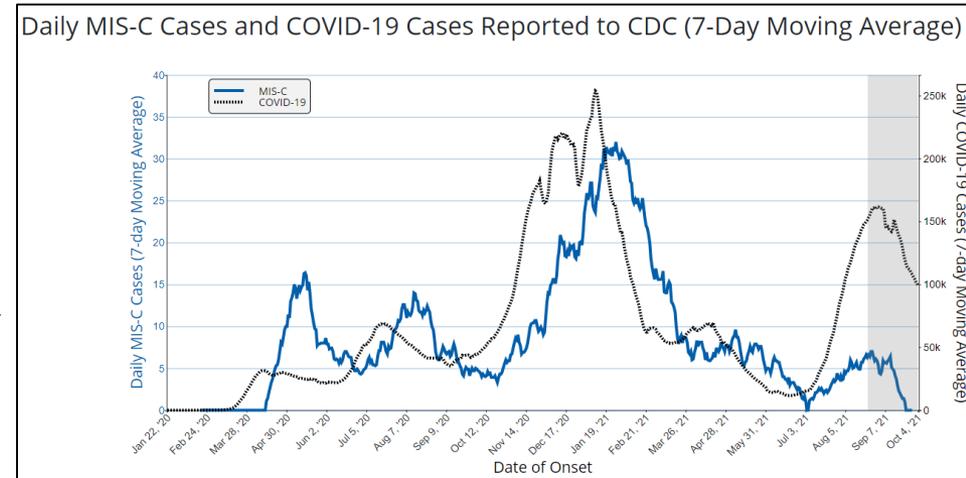
❑ Post-COVID condition characterized by cardiogenic shock

❑ Peaks 4–6 weeks after surges in SARS-CoV-2 infections



Multisystem Inflammatory Syndrome in Children (MIS-C)

- ❑ Up to 75% require ICU admission
 - ❑ 2% mortality rate
- ❑ 30-35% have impaired cardiac Function
- ❑ 10-15% have coronary aneurysms
- ❑ Children 6-12 years at greatest risk
 - ❑ 1 in 1,631 SARS-CoV-2 infections



Feldstein et al. JAMA. 2021
Payne et al. JAMA Network Open. 2021



Post-COVID Condition (PCC)

Long COVID

Long-haul
COVID

Post-acute
COVID
syndrome

Late
sequelae

New, recurring or ongoing symptoms/clinical
findings \geq 4 weeks after infection

Post-acute
COVID-19

Chronic
COVID

Long-term
effects of
COVID



UK Study – Outpatient plus Controls

❑ 6,975 positive children with 1,734 (25%) with 28-day data

❑ 4.4% symptomatic at 28 days

❑ Older children more likely than younger

❑ 56 Day outcome (N=1,379)

❑ 1.8% remained symptomatic

❑ Matched SARS-CoV-2 negative children

❑ 28 Days: 0.9% (lower than positive kids $P < 0.001$)

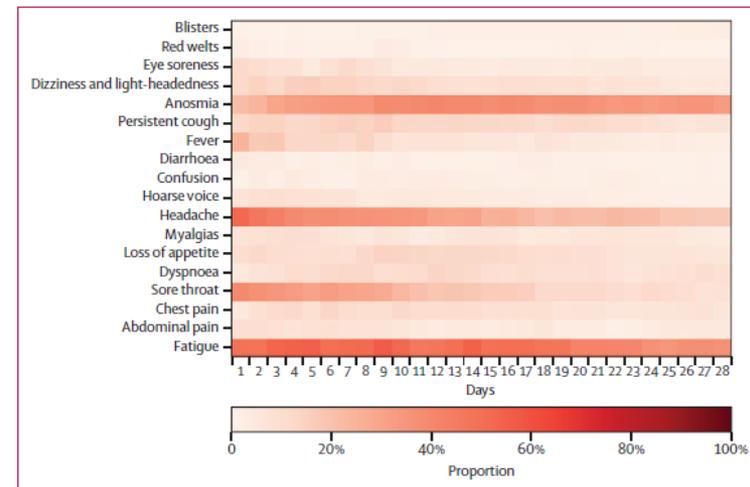
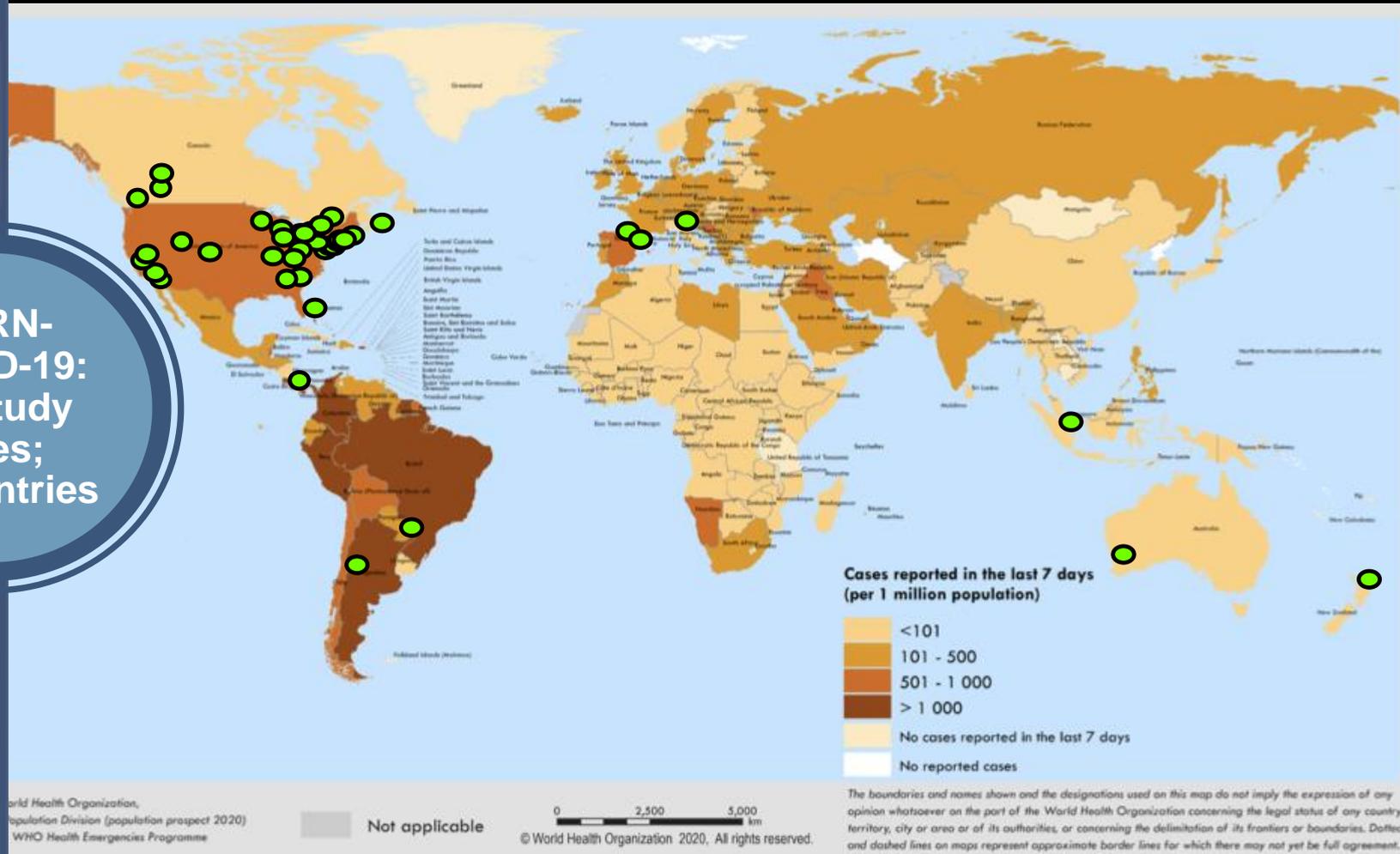


Figure 4: Heat maps showing symptom duration in school-aged children (age 5-17 years) testing positive for SARS-CoV-2 in whom at least one symptom persisted for at least 28 days

**PERN-
COVID-19:
39 Study
Sites;
8 Countries**



World Health Organization,
Population Division (population prospect 2020)
WHO Health Emergencies Programme

Not applicable

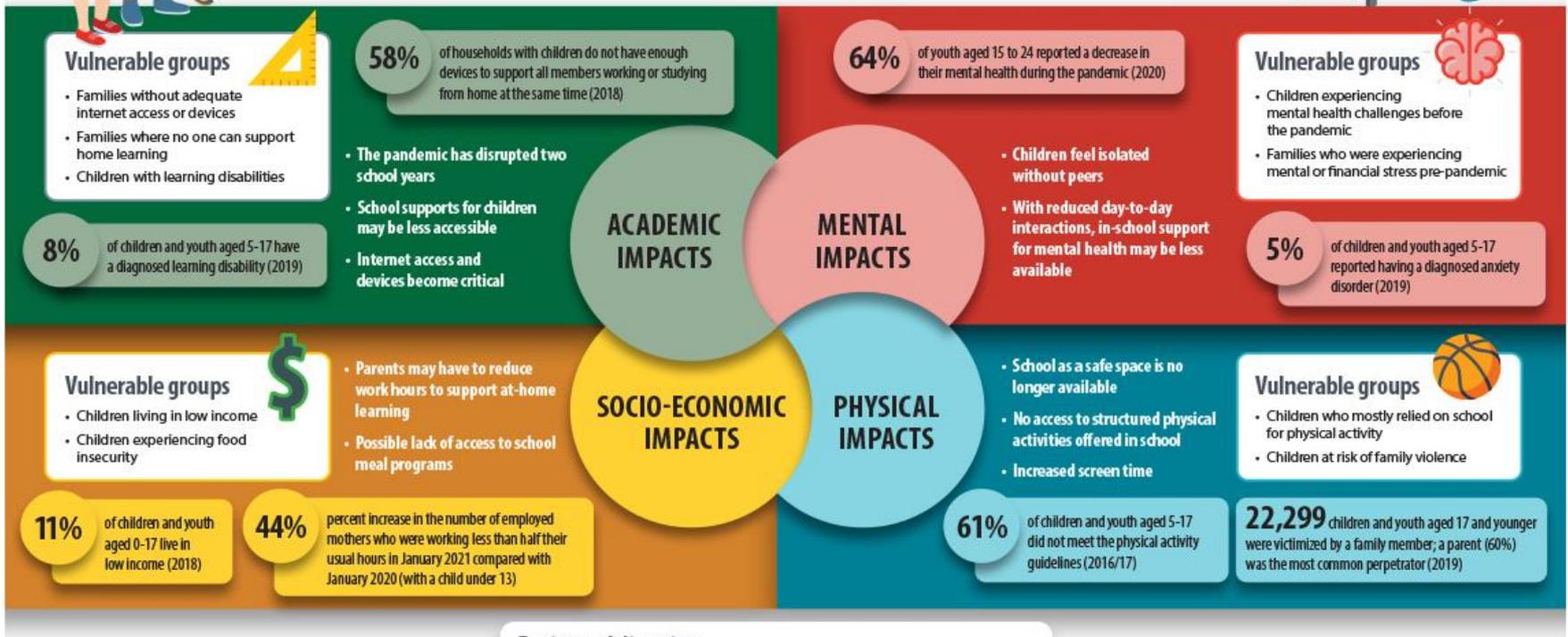
	Not hospitalized (Day 0-14)			Hospitalized (Day 0-14)		
	SARS-CoV-2 Positive	SARS-CoV-2 Negative	P Value	SARS-CoV-2 Positive	SARS-CoV-2 Negative	P Value
All children	55/1295 (4.2)	35/1321 (2.7)	0.03	40/391 (10.2)	19/380 (5.0)	0.006
Age group						
<1.0 yrs	8/338 (2.4)	6/258 (2.3)	>0.99	6/99 (6.1)	4/84 (4.8)	0.76
1 - <2.0 yrs	4/173 (2.3)	8/265 (3.0)	0.77	1/34 (2.9)	0/41 (0)	0.45
2.0 - <5.0 yrs	3/198 (1.5)	6/312 (1.9)	>0.99	4/60 (6.7)	2/73 (2.7)	0.41
5.0 - <10.0 yrs	16/260 (6.2)	6/246 (2.4)	0.05	3/69 (4.4)	4/70 (5.7)	>0.99
10.0 - <18.0 yrs	24/326 (7.4)	9/240 (3.8)	0.10	26/129 (20.2)	9/112 (8.0)	0.01
Chronic condition						
Yes	8/131 (6.1)	8/215 (3.7)	0.31	11/104 (10.6)	9/103 (8.7)	0.82
No	47/1163 (4.0)	27/1106 (2.4)	0.03	29/287 (10.1)	10/277 (3.6)	0.002
# Acute symptoms						
0	1/73 (1.4)	2/97 (2.1)	>0.99	1/24 (4.2)	1/24 (4.2)	>0.99
1-3	7/513 (1.4)	6/472 (1.3)	>0.99	7/149 (4.7)	7/153 (4.6)	>0.99
4-6	20/442 (4.5)	11/475 (2.3)	0.06	11/128 (8.6)	8/139 (5.8)	0.48
7 or more	27/267 (10.1)	16/277 (5.8)	0.06	21/90 (23.3)	3/64 (4.7)	0.001
Severe acute illness						
Yes	-	-	-	12/67 (17.9)	1/50 (2.0)	0.007
No	-	-	-	28/324 (8.6)	18/330 (5.5)	0.11



SCHOOL CLOSURES AND COVID-19: Impacts on children

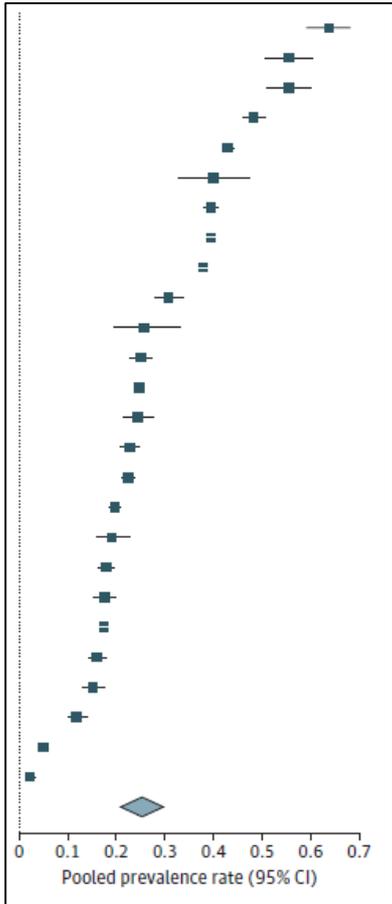


In an effort to curb the spread of COVID-19, policy makers across Canada have employed remote learning approaches and closed schools. There can be unintended consequences associated with these measures, which may particularly affect the **5.7 million** children and youth who attend primary or secondary school in Canada (2018/19).



Equity and diversity:
Some populations or groups may be overrepresented among the most vulnerable

Pooled Prevalence of Clinically Significant
Depressive Symptoms in Youth
During the COVID-19 Pandemic

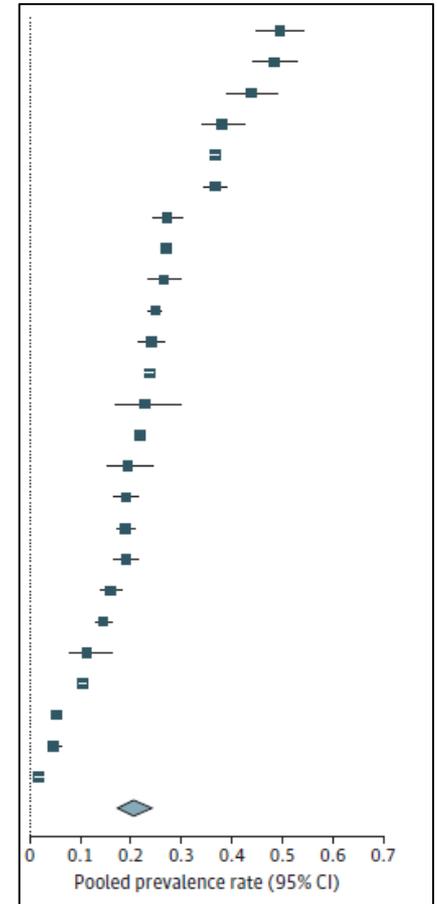


25% of youth globally are experiencing clinically elevated depression symptoms

21% youth are experiencing clinically elevated anxiety symptoms

Pre-pandemic estimates
Depression: 13%
Anxiety: 12%

Pooled Prevalence of Clinically Significant
Anxiety Symptoms in Youth
During the COVID-19 Pandemic



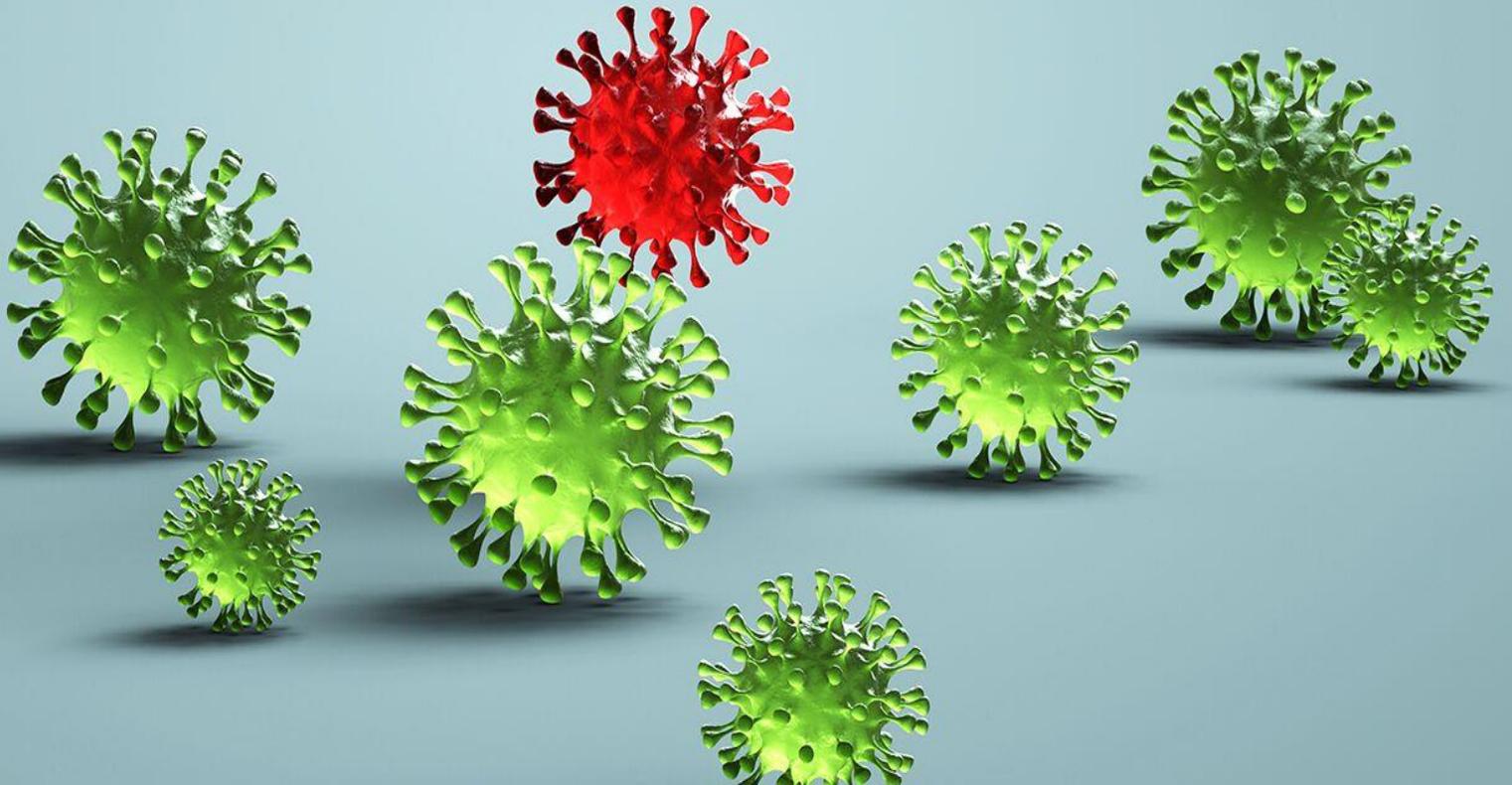
Conclusions

- ❑ Acute illness
 - ❑ Most commonly infected age group
 - ❑ Mild illness
 - ❑ If sick enough to be hospitalized – high risk of severe outcomes

- ❑ MIS-C
 - ❑ Relatively uncommon, but associated with severe illness

- ❑ Post-COVID-19 Conditions
 - ❑ Occurs in children, but severe debilitating illness likely rarely

- ❑ Mental health
 - ❑ This may be a long-term consequence of the pandemic





Questions?

VCHELP@FNTN.CA



Indigenous Services
Canada

Services aux
Autochtones Canada

Canada

Happy Holidays Everyone!!



Acknowledgements

Dr. Stephen Freedman, Pediatric Emergency Medicine Physician and Professor

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

Dr. Parminder Thiara, Deputy Medical Officer of Health - FNIHB

Ibrahim Agyemang, Senior Epidemiologist – FNIHB

TSAG Telehealth Team (Michelle Hoeber, Brooke Hames and team)

FNIHB Technical Team