

COVID-19  
Community of  
Practice for Ontario  
Family Physicians

Aug 19, 2022

Dr. Upton Allen  
Dr. Amanda Adams  
Dr. Daniel Warshafsky



***The COVID-19 vaccine for kids under 5***



Family & Community Medicine  
UNIVERSITY OF TORONTO

Ontario College of  
Family Physicians



# The COVID-19 vaccine for kids under 5

Moderator: Dr. Tara Kiran

Fidani Chair, Improvement and Innovation

Department of Family and Community Medicine, University of Toronto

Panelists:

- Dr. Upton Allen, Toronto, ON
- Dr. Amanda Adams, Markham, ON
- Dr. Daniel Warshafsky, Toronto, ON

The COVID-19 Community of Practice for Ontario Family Physicians is a one-credit-per-hour Group Learning program that has been certified for up to a total of 32 credits.

# Land Acknowledgement

We acknowledge that the lands on which we are hosting this meeting include the traditional territories of many nations.

The OCFP and DFCM recognize that the many injustices experienced by the Indigenous Peoples of what we now call Canada continue to affect their health and well-being. The OCFP and DFCM respect that Indigenous people have rich cultural and traditional practices that have been known to improve health outcomes.

I invite all of us to reflect on the territories you are calling in from as we commit ourselves to gaining knowledge; forging a new, culturally safe relationship; and contributing to reconciliation.

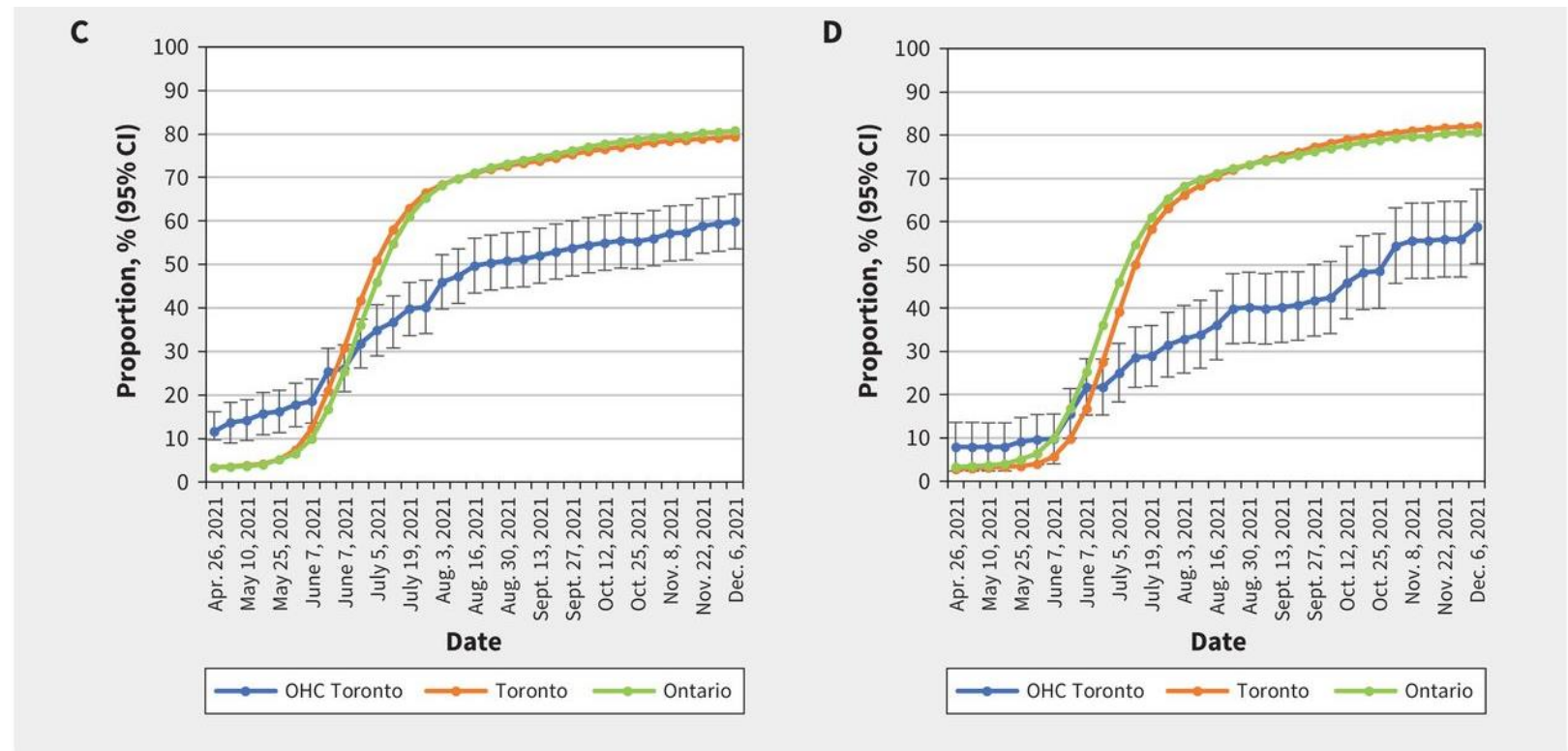
# Uncovering SARS-COV-2 vaccine uptake and COVID-19 impacts among First Nations, Inuit and Métis Peoples living in Toronto and London, Ontario

Janet Smylie, Stephanie McConkey, Beth Rachlis, Lisa Avery, Graham Mecredy, Raman Brar, Cherylee Bourgeois, Brian Dokis, Stephanie Vandevenne and Michael A. Rotondi  
CMAJ August 02, 2022 194 (29) E1018-E1026; DOI: <https://doi.org/10.1503/cmaj.212147>

OHC: First Nations, Inuit and Métis adults (from Our Health Counts [cohorts])

C) Toronto with a second dose of SARS-CoV-2 vaccine

D) London with a second dose of SARS-CoV-2 vaccine



# Changing the way we work

## *A community of practice for family physicians during COVID-19*

At the conclusion of this series participants will be able to:

- Identify the current best practices for delivery of primary care within the context of COVID-19 and how to incorporate into practice.
- Describe point-of-care resources and tools available to guide decision making and plan of care.
- Connect with a community of family physicians to identify practical solutions for their primary care practice under current conditions.

### **Disclosure of Financial Support**

This CPD program has received in-kind support from the Ontario College of Family Physicians and the Department of Family and Community Medicine, University of Toronto in the form of logistical and promotional support.

### **Potential for conflict(s) of interest:**

N/A

### **Mitigating Potential Bias**

- The Scientific Planning Committee has full control over the choice of topics/speakers.
- Content has been developed according to the standards and expectations of the Mainpro+ certification program.
- The program content was reviewed by a three-member national/scientific planning committee.

*Planning Committee:* Dr. Tara Kiran (DFCM), Dr. Elizabeth Muggah (OCFP); Kimberly Moran (OCFP) and Mina Viscardi-Johnson (OCFP)

### **Previous webinars & related resources:**

<https://www.dfcm.utoronto.ca/covid-19-community-practice/past-sessions>



## **Dr. Upton Allen– Panelist**

Division Head, Pediatric Infectious Diseases, The Hospital for Sick Children



## **Dr. Amanda Adams– Panelist**

Family Physician, Oak Valley Health and Founder of the Max the Vax campaign



## **Dr. Dan Warshafsky – Panelist**

Senior Medical Consultant at the Office of the Chief Medical Officer of Health



## **Dr. Liz Muggah – Co-Host**

**Twitter: @OCFP\_President**

OCFP President, Family Physician, Bruyère Family Health Team

# Speaker Disclosure

- Faculty Name: **Dr. Upton Allen**
- Relationships with financial sponsors:
  - Grants/Research Support: CIHR, University of Toronto, COVID-19 Immunity Task Force, Public Health Agency of Canada, NSERC
  - Speakers Bureau/Honoraria: N/A
  - Others: N/A
  
- Faculty Name: **Dr. Amanda Adams**
- Relationships with financial sponsors:
  - Grants/Research Support: N/A
  - Speakers Bureau/Honoraria: N/A
  - Others: Canadian Medical Association Foundation (for Max the Vax campaign)
  
- Faculty Name: **Dr. Daniel Warshafsky**
- Relationships with financial sponsors:
  - Grants/Research Support: N/A
  - Speakers Bureau/Honoraria: N/A
  - Others: N/A

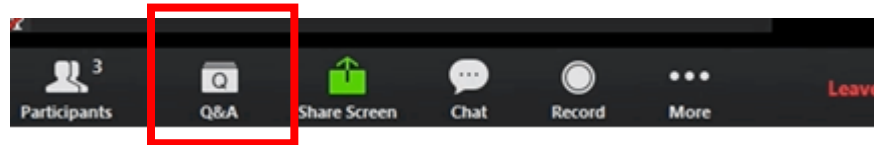


# Speaker Disclosure

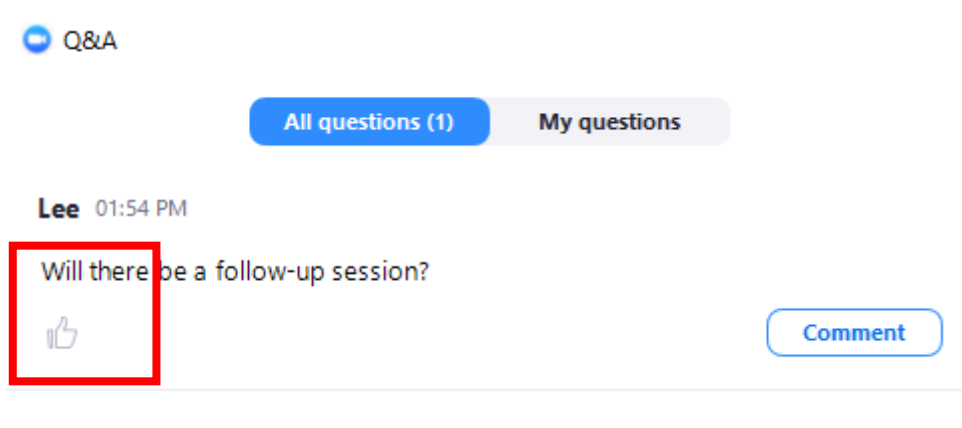
- Faculty Name: **Dr. Liz Muggah**
- Relationships with financial sponsors:
  - Grants/Research Support: N/A
  - Speakers Bureau/Honoraria: Ontario College of Family Physicians
  - Others: N/A
  
- Faculty Name: **Dr. Tara Kiran**
- Relationships with financial sponsors:
  - Grants/Research Support: St. Michael's Hospital, University of Toronto, Health Quality Ontario, Canadian Institute for Health Research, Ontario Ministry of Health, Gilead Sciences Inc (re: Hepatitis C), Staples Canada (re: Patient Engagement)
  - Speakers Bureau/Honoraria: Ontario College of Family Physicians, Ontario Medical Association, Doctors of BC, Nova Scotia Health Authority, Osgoode Hall Law School, Centre for Quality Improvement and Patient Safety, Vancouver Physician Staff Association, University of Ottawa, Ontario Health, Canadian Medical Association

# How to Participate

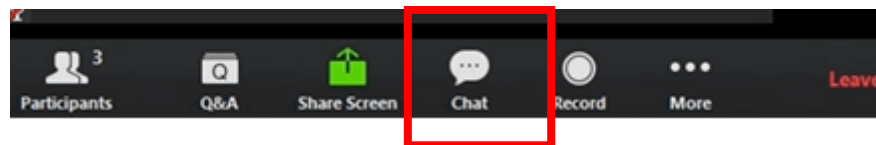
- All questions should be asked using the Q&A function at the bottom of your screen.



- Press the thumbs up button to upvote another guests questions. Upvote a question if you want to ask a similar question or want to see a guest's question go to the top and catch the panels attention.



- Please use the chat box for networking purposes only.





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COVID-19 Burden and Vaccination among  
Infants and Young Children 6 Months to < 5 Years of Age

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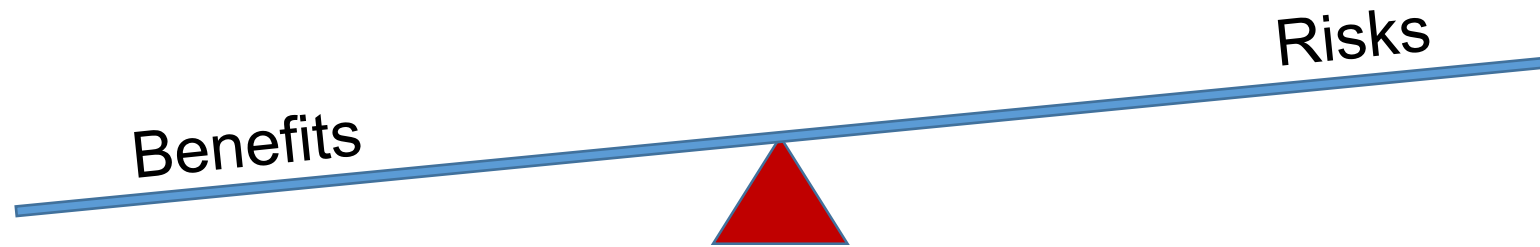


Upton D. Allen



## Outline of Presentation

- Burden COVID-19 among 6- to 4-year-olds.
- Emergency department visits
- Hospitalization rates and disease severity
- COVID-19-associated mortality
- Multisystem Inflammatory Syndrome in Children (MIS-C)
- Post-COVID conditions
- Other impacts of the pandemic on children and families
- Vaccine efficacy and safety



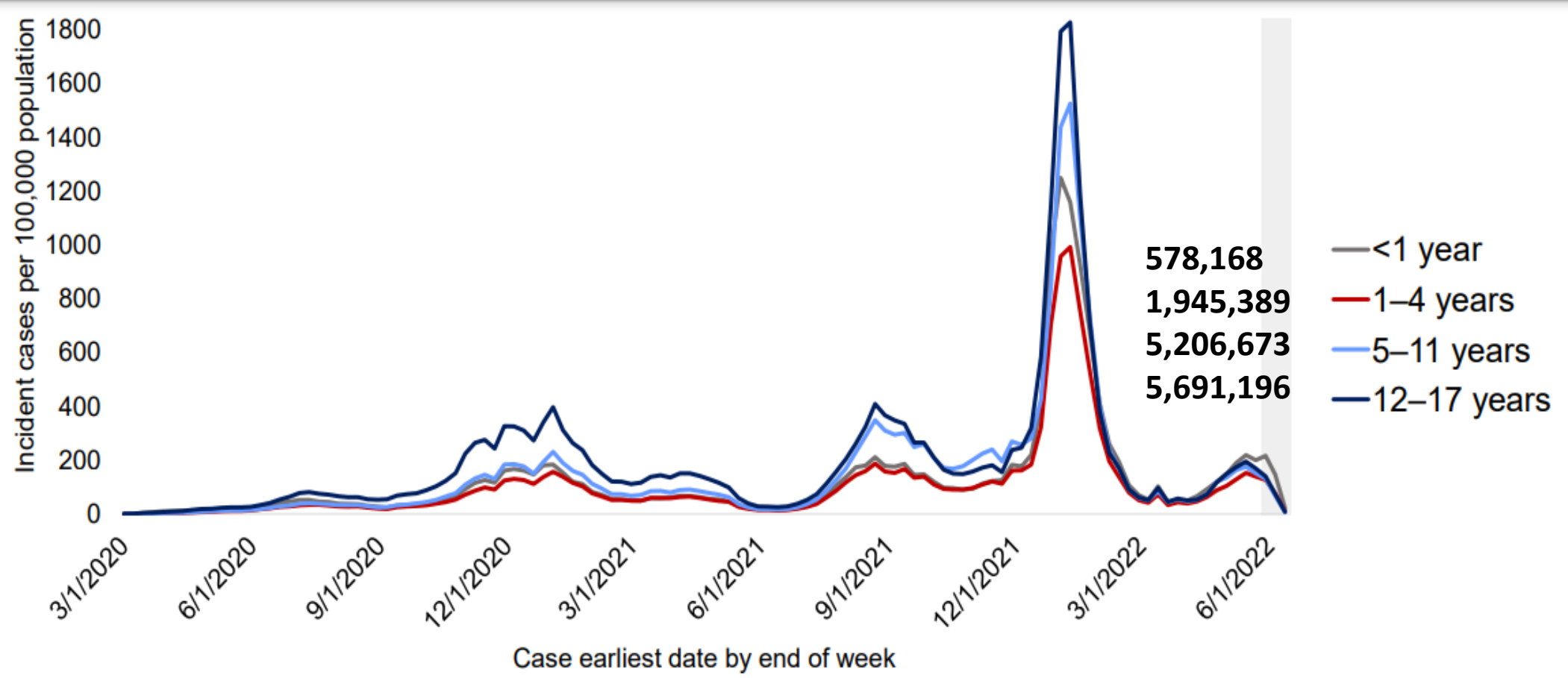
COVID-19 Vaccinations for Children 6 months to < 5 Years of Age

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What outcomes are being targeted with vaccines?

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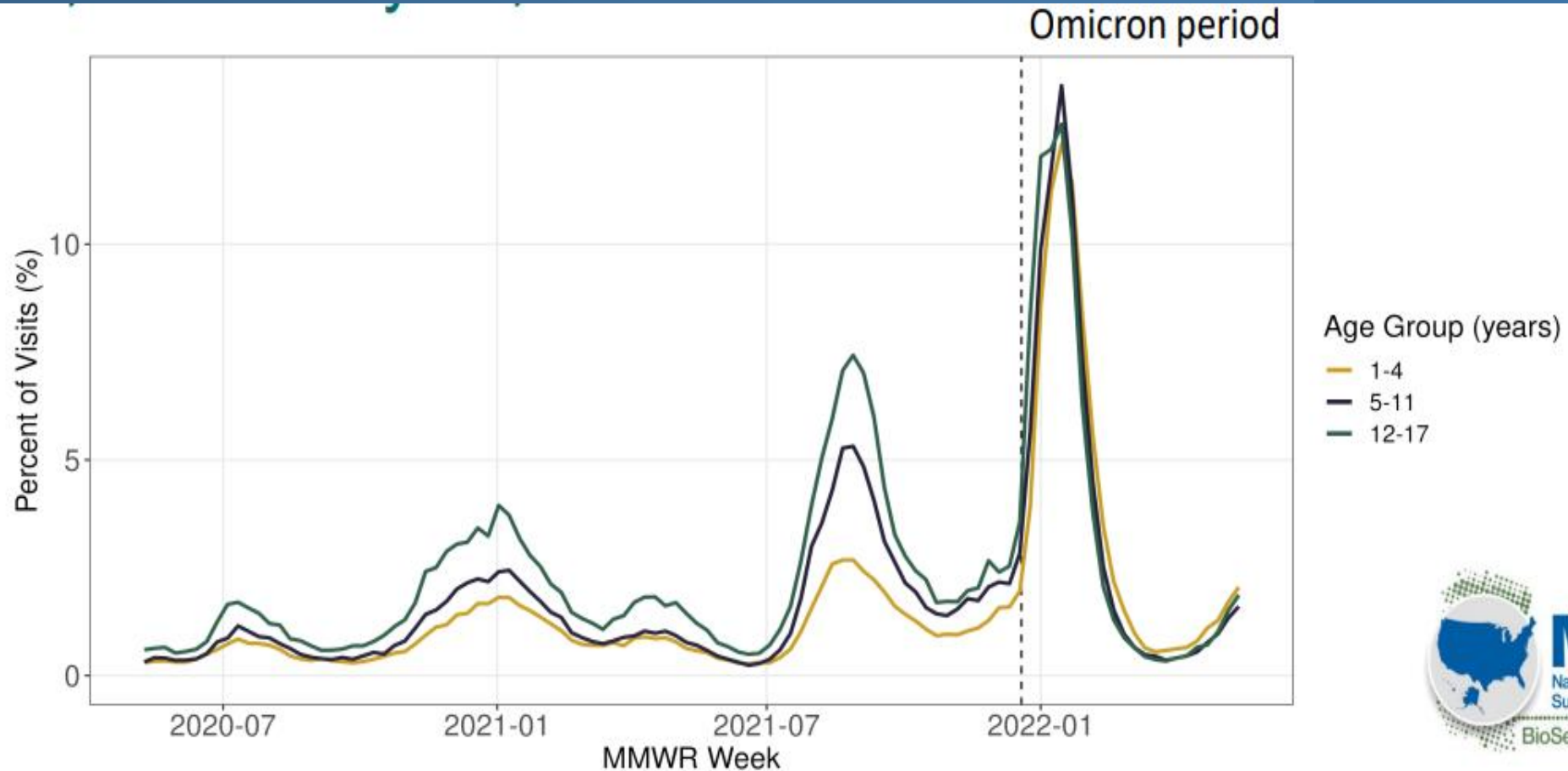
## COVID-19 weekly cases per 100,000 population among children ages 0–17 years by age group — United States March 1, 2020 – June 12, 2022



Reporting may be incomplete for the most recent two weeks of data, denoted by the grey box.  
 Source: COVID Data Tracker, <https://covid.cdc.gov/covid-data-tracker/#demographicsovertime>. Accessed June 16, 2022

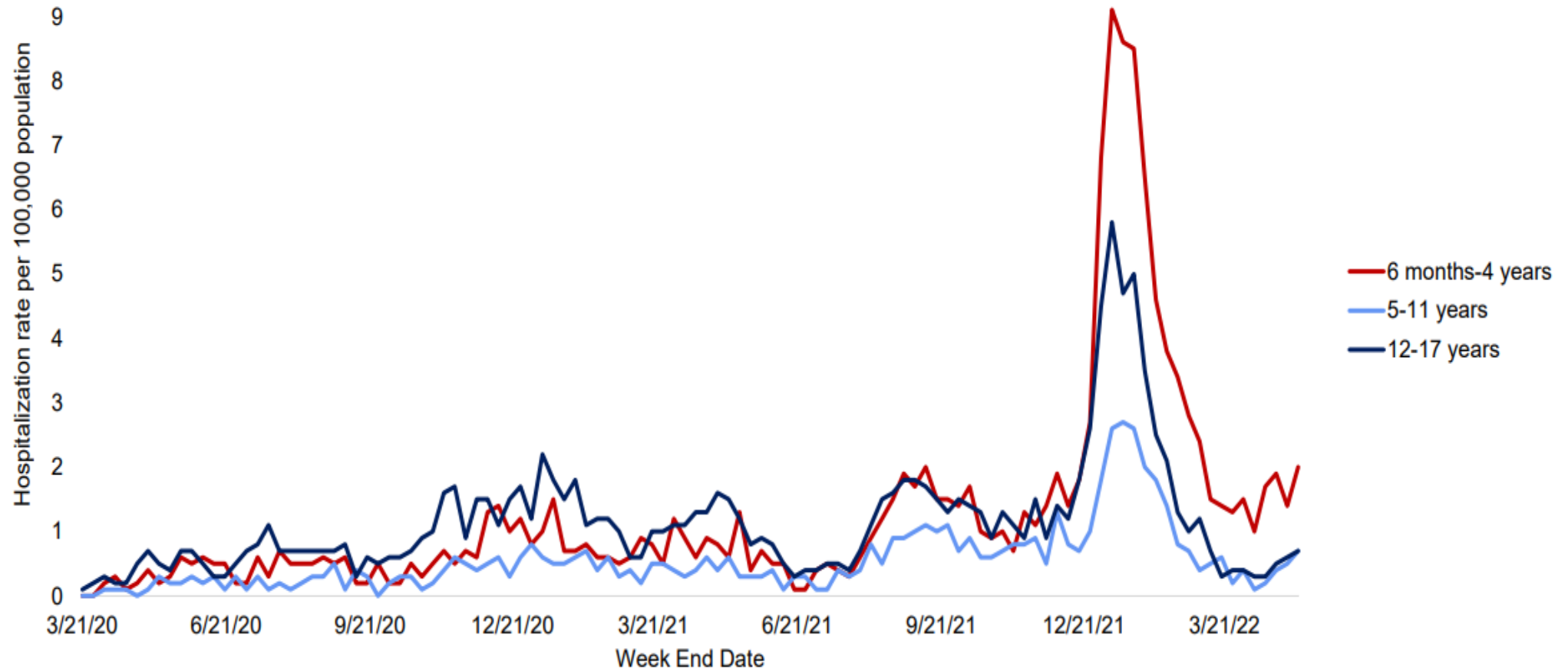


# Weekly percent of emergency department visits diagnosed with COVID-19 among children ages 1–17 years, National Syndromic Surveillance Program May 3, 2020–May 14, 2022



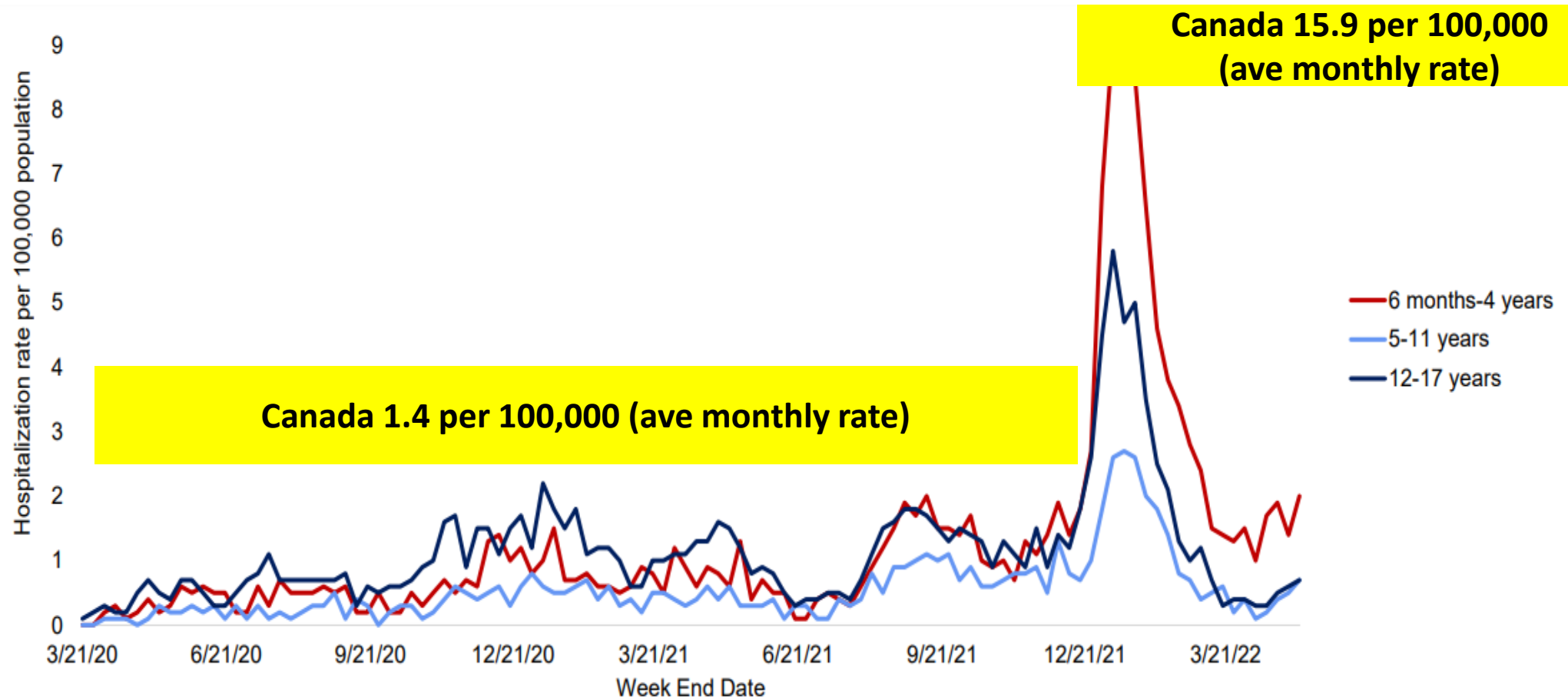
Dashed line, on December 19, 2021, represents the first date when >50% of nationally sequenced SARS-CoV-2 specimens were Omicron variant. Data contains emergency department visits from NSSP ED data feeds consistently reporting data from 2020-2022. The data contains visits with an ICD-10 or SNOMED code for COVID-19.

## COVID-19-associated hospitalizations among children and adolescents 6 months–17 years, COVID-NET March 2020 – March 2022



Source: COVID-NET, [https://gis.cdc.gov/grasp/COVIDNet/COVID19\\_3.html](https://gis.cdc.gov/grasp/COVIDNet/COVID19_3.html). Accessed May 21, 2022.

## COVID-19-associated hospitalizations among children and adolescents 6 months–17 years, COVID-NET March 2020 – March 2022



Source: COVID-NET, [https://gis.cdc.gov/grasp/COVIDNet/COVID19\\_3.html](https://gis.cdc.gov/grasp/COVIDNet/COVID19_3.html). Accessed May 21, 2022.

# Percent of children ages 6 months–4 years with COVID-19 associated hospitalization with underlying health conditions

■ At least 1 underlying medical conditions    ■ No underlying medical conditions

New Vaccine Surveillance Network, March 2020  
– April 2022

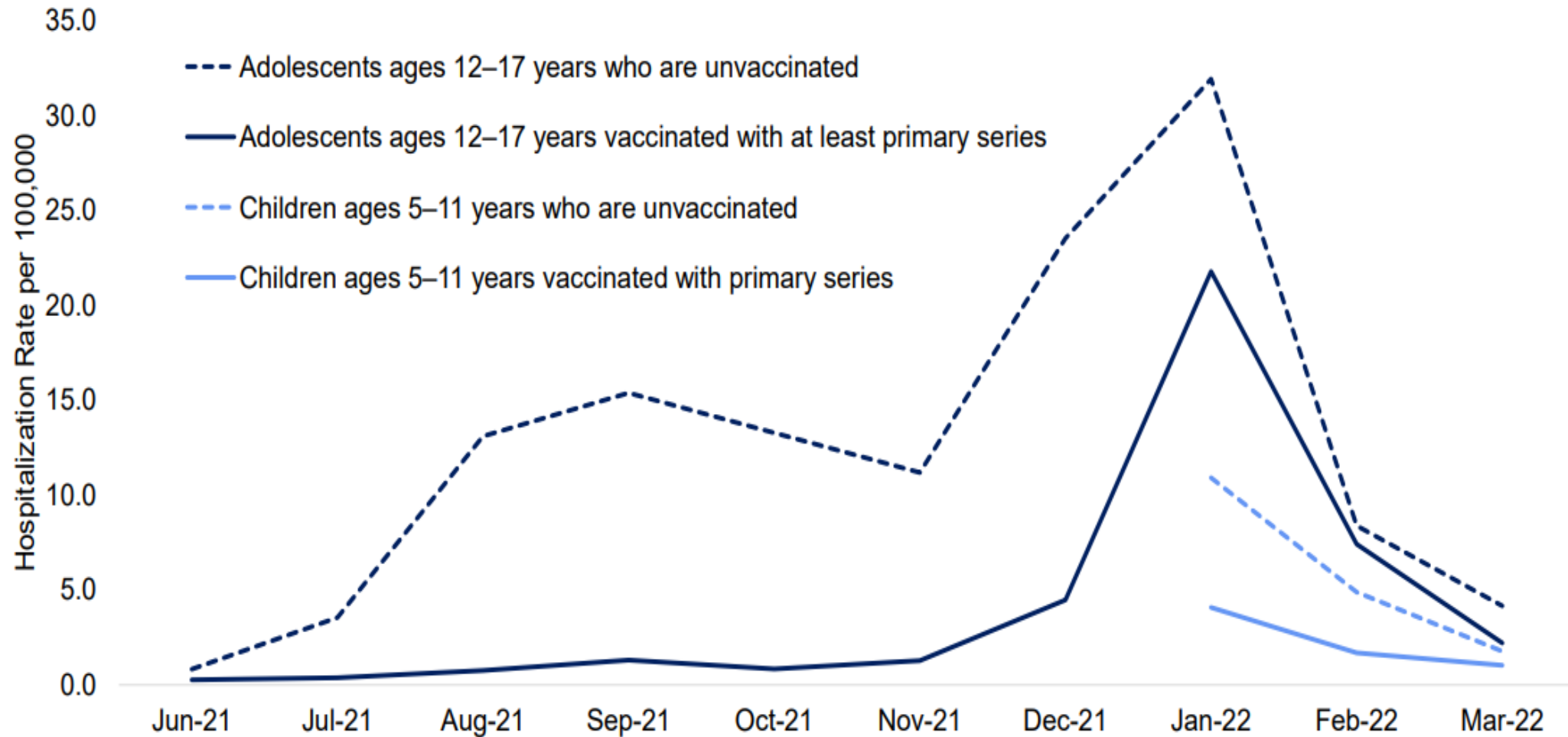


COVID-NET, March 2020 – March 2022



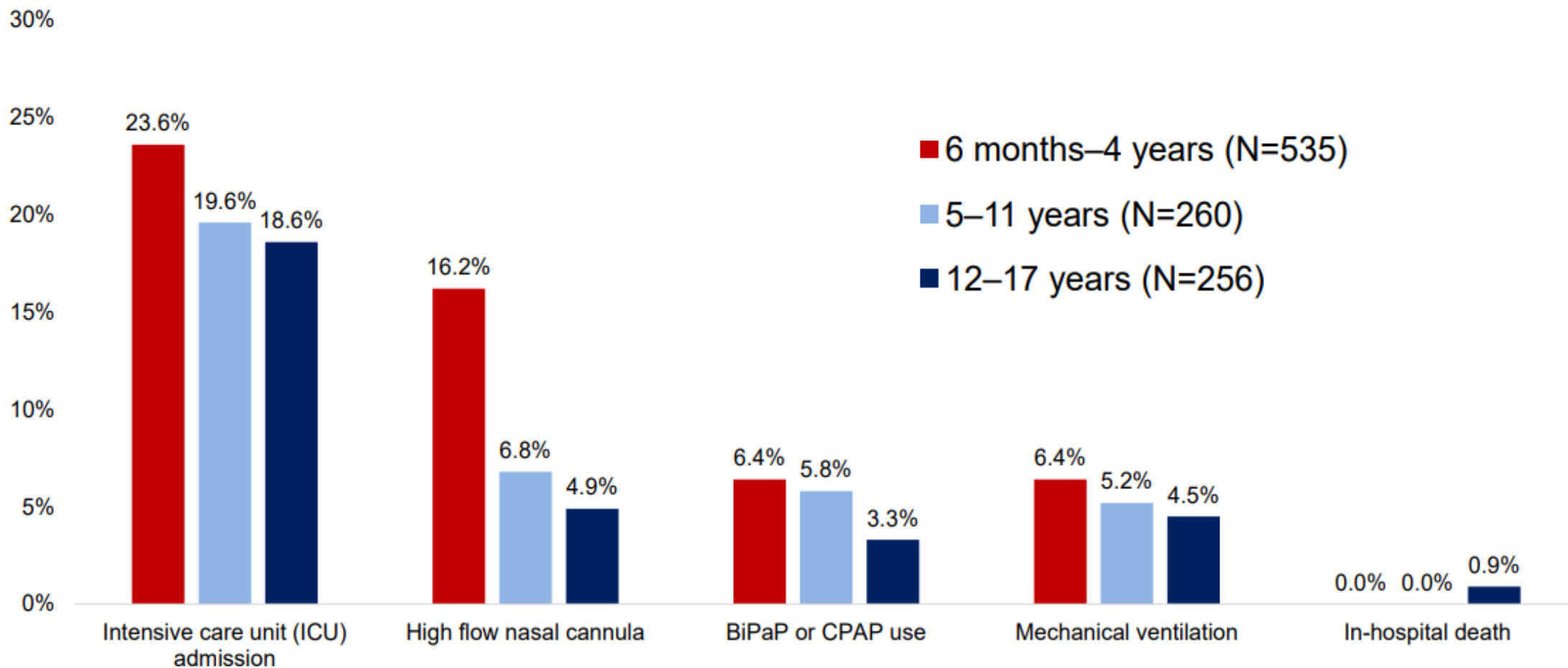
Source: 1. New Vaccine Surveillance Network. Preliminary data as of May 25, 2022, reflecting data from March 2020–April 2022  
2. COVID-NET data. Accessed May 21, 2022, reflecting data from March 2020–March 2022

# Rates of monthly COVID-19-associated hospitalizations by vaccination status among children and adolescents 5–17 years, COVID-NET June 2021 – March 2022



Source: [CDC COVID Data Tracker: COVID-NET Hospitalizations by Vaccination Status](#). Accessed May 12, 2022.

# Severity of COVID-19-associated hospitalizations among children and adolescents 6 months–17 years, COVID-NET, December 19, 2021 – March 31, 2022 (Omicron period)



BiPAP: bilevel positive pressure, CPAP: continuous positive pressure

Source: COVID-NET data. Accessed May 21, 2022.

## Other Pediatric Vaccine Preventable Diseases: Hospitalizations per Year Prior to Recommended Vaccines

	Hepatitis A <sup>1</sup>	Varicella <sup>2</sup> (Chickenpox)	Vaccine-type Invasive Pneumococcal Disease <sup>3</sup>	COVID-19 <sup>4</sup>
Age	5–14 years	0–4 years	0–4 years	6 months–4 years
Time period	2005	1993–1995	1998–1999	Year 1: April 2020–March 2021 Year 2: April 2021–March 2022
Hospitalization Burden (Annual rate per 100,000 population)	<1	29-42	40 <sup>5</sup>	Year 1: <b>29.8</b> Year 2: <b>89.3</b>

<sup>1</sup> <https://www.cdc.gov/mmwr/preview/mmwrhtml/ss5603a1.htm>

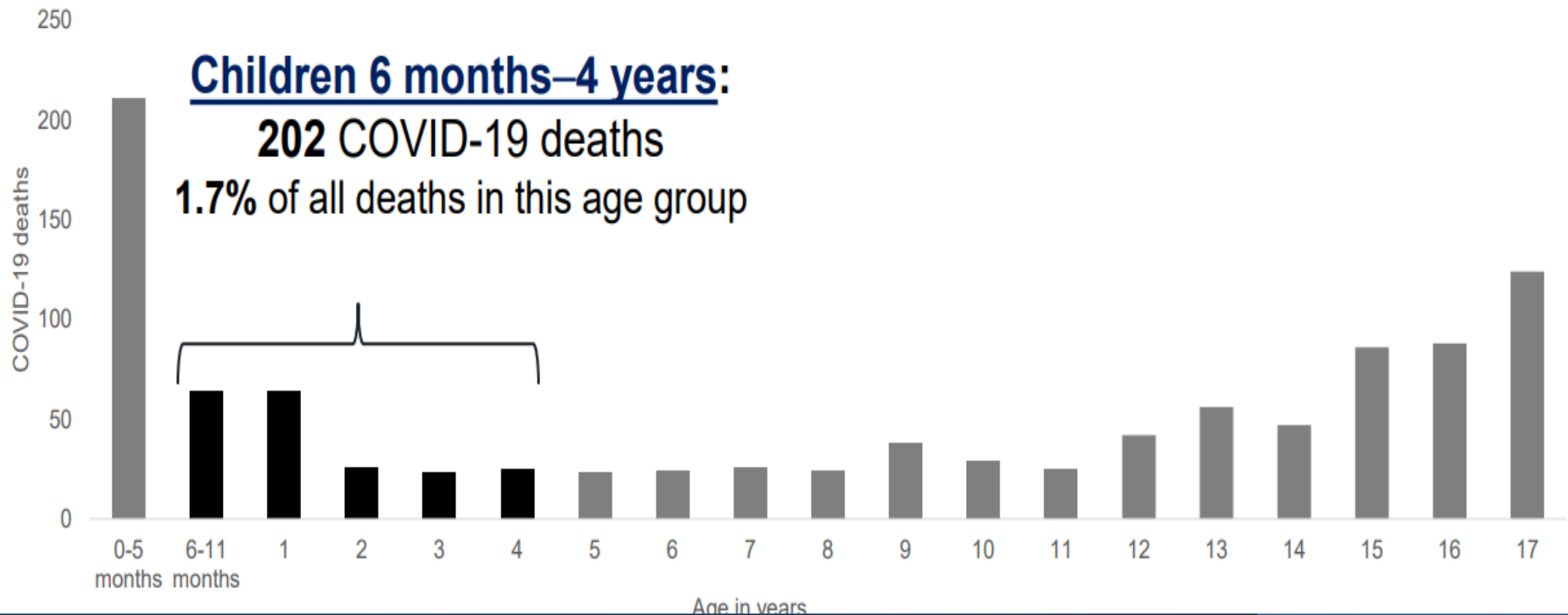
<sup>2</sup> Davis MM, Patel MS, Gebremariam A. Decline in varicella-related hospitalizations and expenditures for children and adults after introduction of varicella vaccine in the United States. *Pediatrics*. 2004;114(3):786-792. doi:10.1542/peds.2004-0012

<sup>3</sup> Centers for Disease Control and Prevention (CDC). Direct and indirect effects of routine vaccination of children with 7-valent pneumococcal conjugate vaccine on incidence of invasive pneumococcal disease--United States, 1998-2003. *MMWR Morb Mortal Wkly Rep*. 2005 Sep 16;54(36):893-7. PMID: 16163262.

<sup>4</sup> COVID-NET data, Accessed May 21, 2022.

<sup>5</sup> Vaccine-type invasive pneumococcal disease annual rate for children <5 years in 1998-1999 was 80 per 100,000, of which about 50% were hospitalized.

# COVID-19 deaths in children and adolescents by age based on death certificate data, National Center for Health Statistics, January 1, 2020–May 11, 2022





# Pediatric vaccine preventable diseases: Deaths per year in the United States prior to recommended vaccines

	Hepatitis A <sup>1</sup>	Meningococcal (ACWY) <sup>2</sup>	Varicella <sup>3</sup>	Rubella <sup>4</sup>	Rotavirus <sup>5</sup>	COVID-19 <sup>6</sup>
Age	<20 years	11–18 years	5–9 years	All ages	<5 years	6 months – 4 years
Time period	1990–1995	2000–2004	1990–1994	1966–1968	1985–1991	Jan 2020–May 2022
Average deaths per year	3	8	16	17	20	86

1Vogt TM , Wise ME, Bell BP, Finelli L. Declining hepatitis A mortality in the United States during the era of hepatitis A vaccination. J Infect Dis 2008; 197:1282–8.

2National Notifiable Diseases Surveillance System with additional serogroup and outcome data from Enhanced Meningococcal Disease Surveillance for 2015–2019.

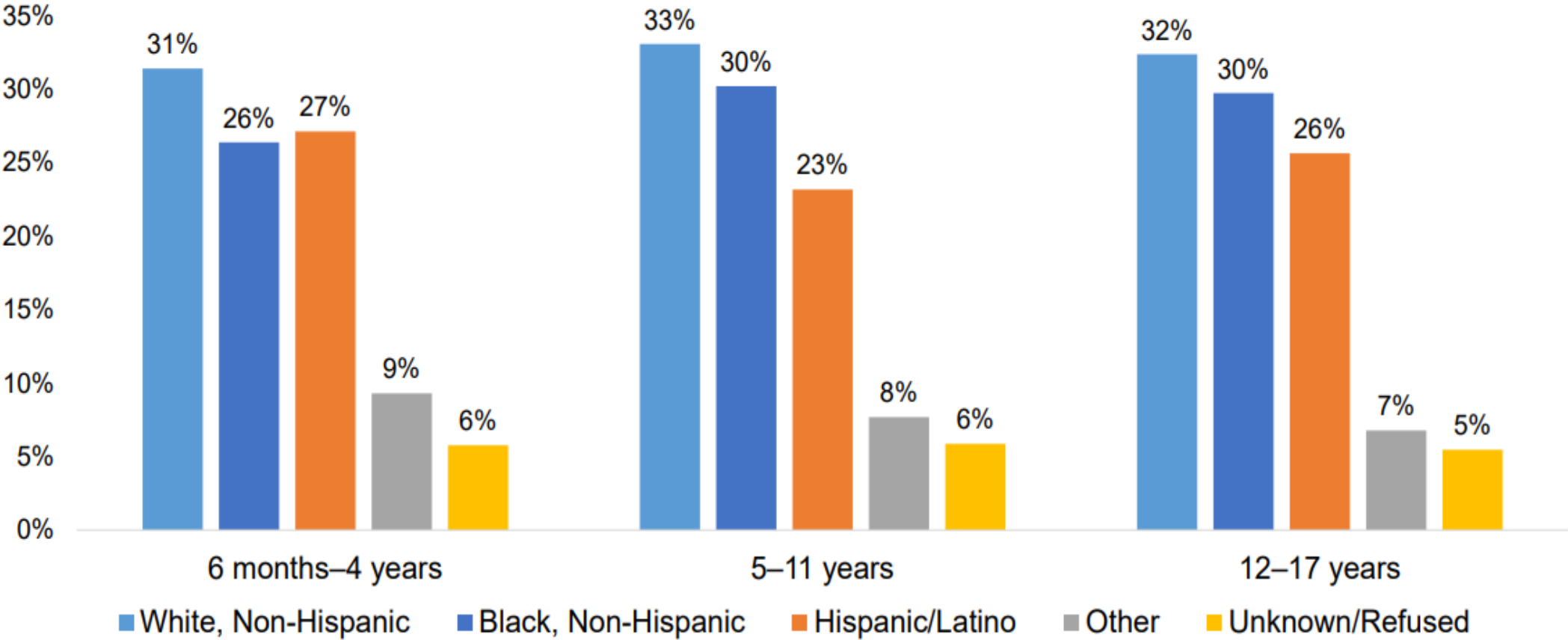
3Meyer PA, Seward JF, Jumaan AO, Wharton M. Varicella mortality: trends before vaccine licensure in the United States, 1970–1994. J Infect Dis. 2000;182(2):383–390. doi:10.1086/315714

4Roush SW , Murphy TV; Historical comparisons of morbidity and mortality for vaccine-preventable diseases in the United States. JAMA 2007; 298:2155–63.

5 Glass RI, Kilgore PE, Holman RC, et al. The epidemiology of rotavirus diarrhea in the United States: surveillance and estimates of disease burden. J Infect Dis. 1996 Sep;174 Suppl 1:S5–11.

6 <https://data.cdc.gov/NCHS/Provisional-COVID-19-Deaths-Counts-by-Age-in-Years/3apk-4u4f/data>

# MIS-C patients by race & ethnicity for children and adolescents ages 6 months–17 years by age group February 1, 2020 – May 31, 2022



Age is missing for 1 case.

Source: CDC data. Accessed June 7, 2022

## Post-COVID Conditions

- Rates of long-term sequelae still being defined in children, including those with mild illness.
  - Younger children might not verbalize symptoms
  - Even low rates of long-COVID might be significant if large numbers of children are infected.
-

## Indirect Impacts of COVID-19 Pandemic on Children

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- Worsening of mental or emotional health
  - Widening of existing education gaps
  - Widening of existing financial gaps
  - Decreased physical activity and increased body mass index (BMI)
  - Decreased healthcare utilization
  - Decreased routine immunizations
  - Increase in Adverse Childhood Experiences (ACEs)
-

# Moderna Efficacy Trial

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- Vaccine efficacy assessed among children aged 6 months to 5 years following one and two doses of Moderna Spikevax (25 mcg) mRNA COVID-19 vaccine during a time when **Omicron was the predominant variant of SARS-CoV-2 in the US and Canada.**
  - The per-protocol population (negative baseline SARS-CoV-2 status and received two doses of either vaccine or placebo) included 5,476 participants who received two doses of either vaccine or placebo.
  - Participants 6 mths through 23 mths, 1,511 participants in the vaccine group, 513 in the placebo group.
  - Participants 2 years through 5 years, 2,594 in the vaccine group, 858 in the placebo group).
-

Efficacy estimates among participants without evidence of prior SARS-CoV-2 infection (per protocol population)

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- Efficacy against confirmed symptomatic SARS-CoV-2 infection starting 14 days after dose 2 estimated at 50.6% (95% confidence interval [CI]: 21.4 to 68.6%) among study participants aged 6 to 23 months
  - Efficacy 36.8% (95% CI: 12.5 to 54.0%) among subjects aged 2 to 5 yrs
-

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Estimates of Moderna Spikevax vaccine efficacy against symptomatic disease during the Omicron wave in children aged 6 months to 5 years are consistent with VE reported for Pfizer-BioNTech Comirnaty (10 mcg) vaccine among children 5 to 11 years of age during the Omicron wave.

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## Efficacy Against Severe Outcomes

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- No deaths or cases of severe COVID-19 or MIS-C among trial participants that received the vaccine.
  - One case of MIS-C was reported after the February 21, 2022 data cut-off in a participant that received the placebo.
  - No pericarditis, no myocarditis
  - Real world evidence suggests mRNA vaccines in older age groups have high vaccine effectiveness (VE) at preventing severe outcomes of COVID-19 including hospitalization and death.
-



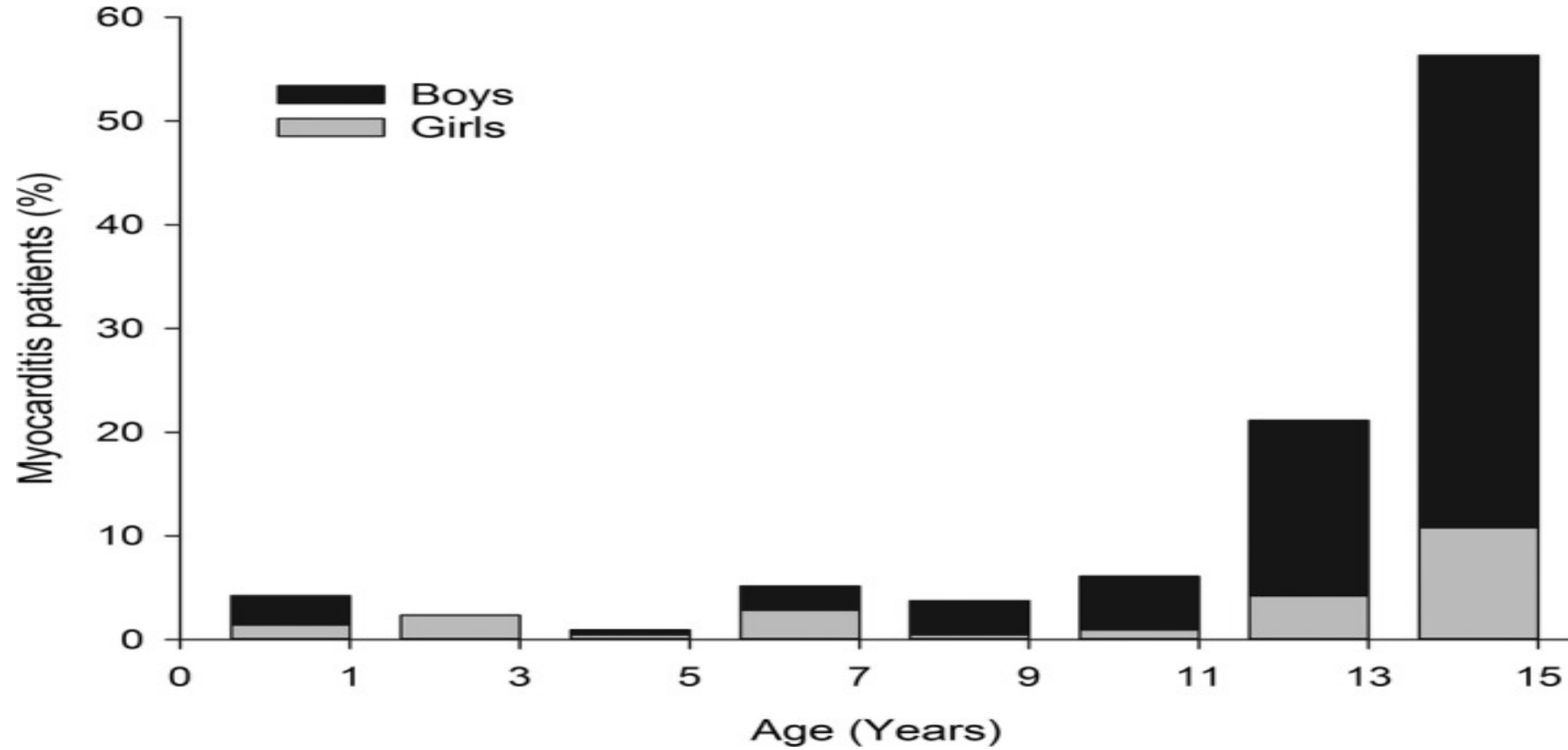
## Local and Systemic Adverse Events

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- Majority of solicited local and systemic adverse reactions were grade 1 or 2 and occurred within the first 2 days after any dose of vaccine and persisted for a median of 2 to 3 days.
  - Incidence of grade 3 solicited adverse reactions was infrequent in both vaccine and placebo groups in both age groups (< 5% after any dose)
-

# Childhood Myocarditis – Pre-COVID-19

Finland 2004-2014



<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5721735/>

	<b>Moderna Spikevax</b>
<b>Age</b>	6 months to 5 years
<b>Dose</b>	25 mcg (0.25 mL)
<b>Presentation</b>	0.10 mg/mL Royal blue vial cap
<b>Diluent</b>	None
<b>Potential allergens</b>	Polyethylene glycol (PEG), Tromethamine (trometamol or Tris) <sup>a</sup>
<b>Storage<sup>b,c</sup></b>	<ul style="list-style-type: none"><li>• Store at temperatures of -50°C to -15°C and protect from light in original packaging</li><li>• Vials can be thawed and stored at +2°C to +8°C for up to 30 days, or at +8°C to +25°C for up to 24 hours if unpunctured</li><li>• Do not refreeze once thawed</li></ul>
<b>Transport<sup>c</sup></b>	If transport at -50° to -15°C is not feasible, thawed vials in a liquid state may be transported at +2°C to +8°C for up to 12 hours.

## Vaccine Ingredients - SPIKEVAX

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- Acetic acid
- Cholesterol
- DSPC (1,2-distearoyl-sn-glycero-3-phosphocholine)
- Lipid SM-102
- PEG2000-DMG (1,2-dimyristoyl-racglycerol, methoxy-polyethyleneglycol)
- Sodium acetate trihydrate
- Sucrose
- Trometamol
- Trometamol hydrochloride
- Water for injection

SPIKEVAX  
does not contain any  
preservatives,  
antibiotics, adjuvants,  
or human- or animal-  
derived materials

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## Interval between doses – non-immunocompromised

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NACI recommends that a complete series with the Moderna Spikevax COVID-19 vaccine (25 mcg) may be offered to children 6 months to 5 years of age who do not have contraindications to the vaccine, with a dosing interval of at least 8 weeks between the first and second dose. (Discretionary NACI Recommendation)

## Interval between doses – immunocompromised

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NACI recommends that children 6 months to 5 years of age who are **moderately to severely immunocompromised** may be immunized with a primary series of three doses of the Moderna Spikevax (25 mcg) vaccine, using an **interval of 4 to 8 weeks between each dose**.  
(Discretionary NACI Recommendation)

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## Interval between COVID-19 and vaccine dose

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NACI suggests an 8-week interval between infection and initiation or completion of a COVID-19 primary series (i.e., 8 weeks after symptom onset or positive test if asymptomatic).

Interval may be shortened for children considered moderately to severely immunocompromised (e.g., 4 to 8 weeks after symptom onset or positive test if asymptomatic).

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## Concurrent use of other vaccines

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NACI **recommends at this time that** the Moderna Spikevax (25 mcg) COVID-19 vaccine primary series for children 6 months to 5 years of age **should not routinely be given concurrently** (i.e., same day) with other vaccines (live or non-live). (Strong NACI recommendation)

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## Exposure to multiple vaccine antigens

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Theoretically, infants have the capacity to respond to about 10,000 vaccines at any one time.<sup>1\*</sup>

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<sup>1</sup>Offit et al, Pediatrics 2002;109

\* *Theoretical only – would not be possible in practice*

*Thank You*

# Counselling Tips and Resources

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Amanda J. Adams MD, MSc, CCFP, FCFP

August 19, 2022

## COVID-19 FACT CHECK

### COVID VACCINE FACTS

“  
**WHY RECOMMEND  
COVID-19 VACCINES  
FOR CHILDREN UNDER**

**5**”



# PrOTCT Framework for the COVID-19 vaccine discussion

Version 5, August 3, 2022

**Pr**: Presume with positive statements

**O**: Offer to share knowledge

**T**: Tailor the recommendation

**C**: Address concerns

**T**: Talk through plan

Presume they will get the vaccine  
with positive statements:

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“My children have already had the COVID-19 vaccine”

“Many of the children in my practice who are under 5  
have already had their first dose”

“My niece who is 3 had the Moderna vaccine last  
week”



# Offer to share knowledge:

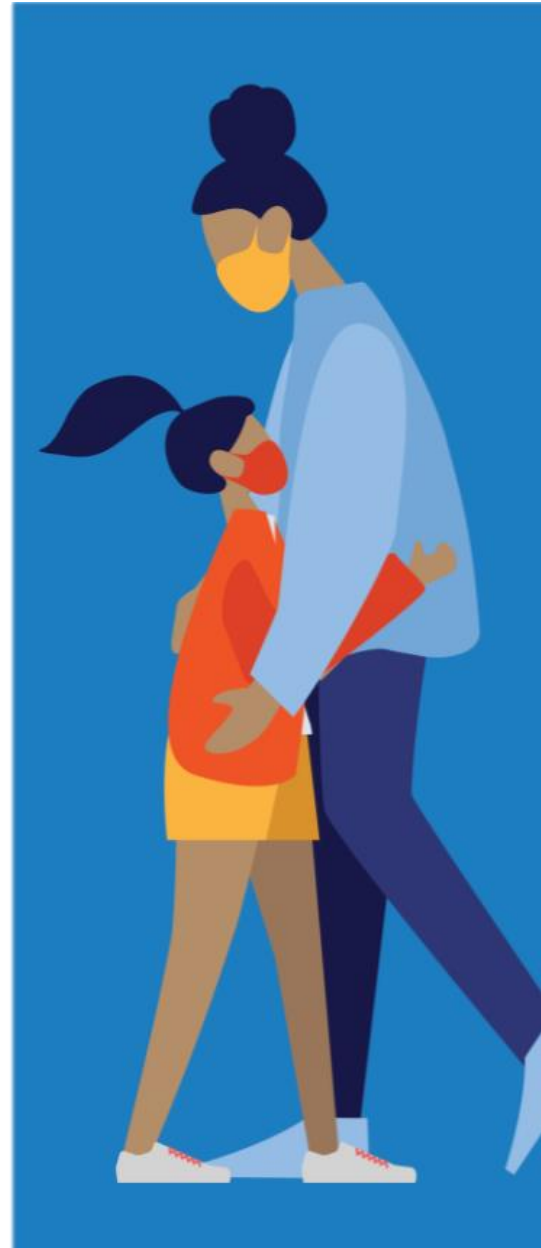
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“Tell me where you are at when it comes to wanting this vaccine for your kids?”

“I have been educating myself on the science around the vaccine – would it be ok if I share what I know?”

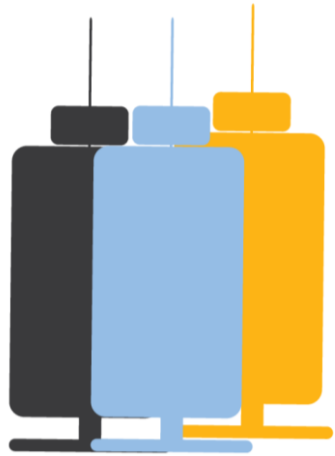


Centre  
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Practice



# Tailor your recommendation:

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## 1) Previous Omicron infection

- Poor immunity after Omicron infection in kids
- Reinfections are common
- Recent study found that 30% of kids didn't build any neutralizing antibodies after infection
- Hybrid immunity provides longer lasting & broader protection

## 2) Haven't been infected

- Omicron has infected many kids and for those who have not had it, vaccination is the best option to protect them from needing hospitalization, which can happen even in healthy children
- Study found 50% of hospitalized kids under 5 had no underlying conditions
- Even mild COVID in kids has been associated with long lasting symptoms like "long COVID" or multisystem inflammation

# Address Concerns:

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- What do we know about side effects - particularly myocarditis?
- How effective is the vaccine?
- Should I wait for the Pfizer vaccine?
- How was the vaccine studied?
- How do we know the vaccine won't cause long term health problems?

## COMMON CONCERNS & QUESTIONS

**ABOUT THE  
COVID-19 VACCINE  
IN CHILDREN UNDER 5**



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Practice

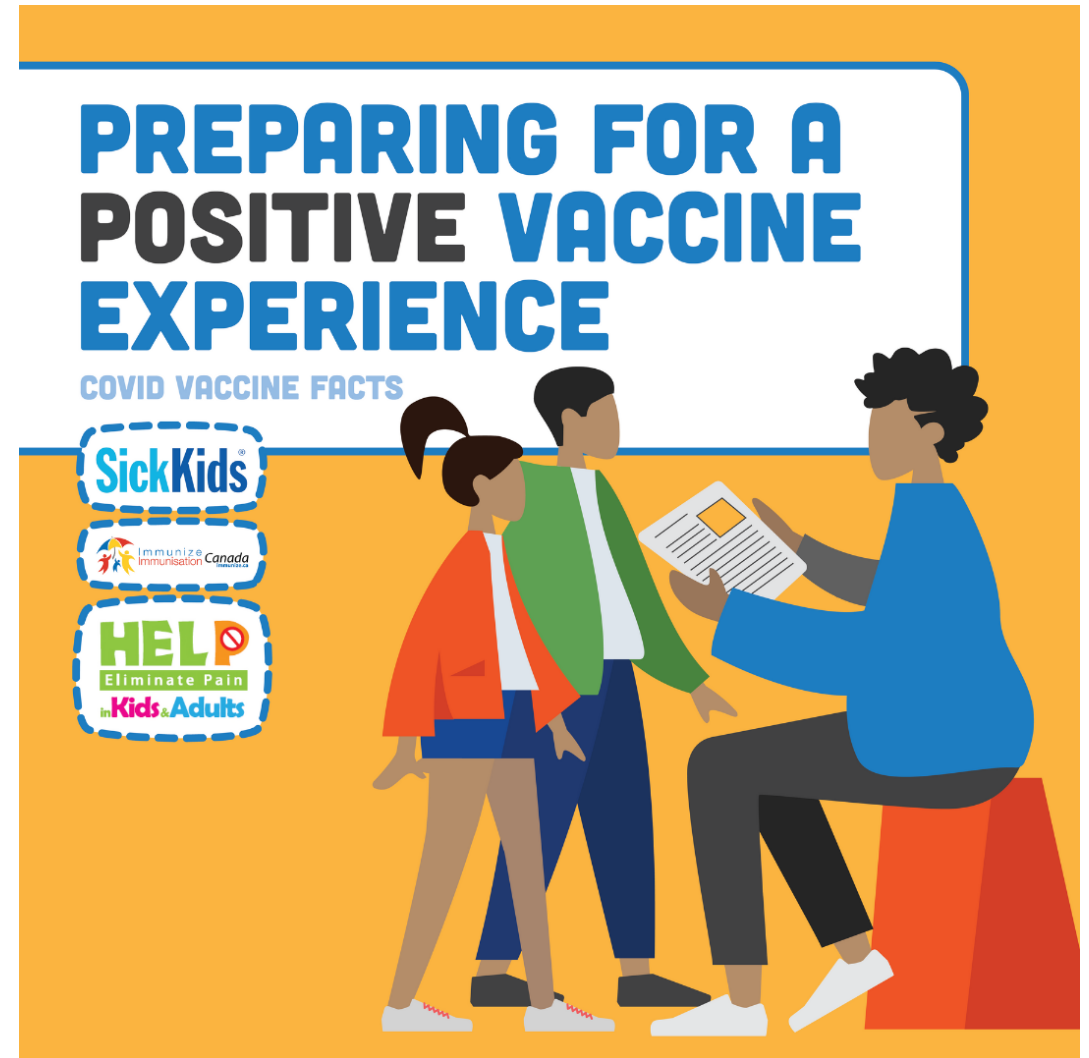


# Talk through the plan

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- Review timing of vaccination
  - 2 weeks between other routine vaccinations
  - 8 weeks post COVID infection
- Discuss booking, what to expect if attending a PH clinic, provide information sheets
- Prepare them for a positive vaccine experience
  - what they can give, what they can do, how they can act

If they don't book a vaccine appointment, keep the conversation going - offer resources!



# Resources

July 27, 2022

**WHAT ARE THE REASONS TO VACCINATE MY YOUNG CHILD AGAINST COVID-19?** (5 months to 5 years old)

The Moderna (Spikevax™) mRNA vaccine is approved by Health Canada for children 6 months and older.

**mRNA COVID-19 vaccines are safe**

Vaccines lower the risk of getting sick from COVID-19. Children can get COVID-19 more than once. We are still learning about the health effects of COVID-19 infections.

Data from older children and teens shows that vaccines lower the risk of complications from COVID-19. COVID-19 is a leading cause of hospitalization and death in young children. Children can get multisystem inflammatory syndrome in children (MIS-C). MIS-C is rare, but very serious. It causes inflammation of the heart, lungs, kidney, brain, skin, eyes, and stomach. COVID-19 can also cause Long COVID in children. Symptoms like cough and tiredness can last for months.

- More than **500,000** children under age 5 and more than **12 million** 5 to 11-year-old children in North America have had at least 1 COVID-19 vaccine. \*Most children have had the Pfizer-BioNTech (Comirnaty™) vaccine.
- Serious vaccine side effects are expected to be rare for young children. There were no safety concerns in the Moderna vaccine trial.
- Serious allergic reactions to COVID-19 vaccines are very rare. Children with allergic conditions can be vaccinated safely.
- Myocarditis (inflammation of the heart) after a COVID-19 vaccine is expected to be very rare in young children.
- Long-term side effects are not expected. Vaccine ingredients are gone from the body in 2 to 3 days.
- Vaccines do not affect fertility, genes (DNA), or hormones.

\*<https://covid-19.gov/child-data-tracker/#vaccinations>, <https://health-infocentre.ca/covid-19/vaccination-coverage/>

Learn more about COVID-19 mRNA vaccines for children here: [https://waterloo.ca/pharmacy/sites/cx-pharmacy/files/uploads/files/faq\\_covid-19\\_vaccines\\_for\\_children.pdf](https://waterloo.ca/pharmacy/sites/cx-pharmacy/files/uploads/files/faq_covid-19_vaccines_for_children.pdf)

You may decide to vaccinate your young child sooner if:

- They (or someone they live with) is at higher risk of severe illness (e.g., low birth weight, asthma, health conditions, or medication that affect the immune system).
- There is a lot of COVID-19 in your community.
- They are in regular contact with a lot of people (e.g., attend daycare).

You may decide to wait to vaccinate your young child if:

- They had COVID-19 recently. Experts recommend waiting 2 months after a COVID-19 infection to get a COVID-19 vaccine. Getting vaccinated after an infection can give longer-lasting protection.
- COVID-19 levels in your community are low. COVID-19 levels can change very quickly.

Vaccines work with other measures to protect young children & those around them. Wear a high-quality mask indoors, avoid crowded spaces & wash your hands often to lower the risk of COVID-19.

Financial contribution from: Public Health Agency of Canada

Ontario College of Family Physicians

Leaders for a healthy Ontario

Use **CARD** to improve your vaccination experience

**C**OMFORT **A**SK **R**ELAX **D**ISTRACT

**Needle Pain & Anxiety Management for Vaccination Under 5**

Resources for Children Under 5 Years Old

- SickKids | About Kids Health**
  - Access here: [Pain Learning Hub](#)
  - Access here: [Comfort Promise Learning Hub](#)
- Les stratégies Tout doux**
  - Access here: [Culté Famille Justice](#)
- Psychology Works Fact Sheet: Acute Pain Management in Children**
  - Access here: [Canadian Psychological Association](#)
- Preparing to Immunize**
  - Access here: [Alberta Health Services](#)
- Pain Narratives and Memory Study**
  - Access here: [Peak Research Lab](#)
- Toddler Support: Pain Champions Guide**
  - Access here: [The May Foundation](#)
- What to Expect: Vaccines for Children**
  - Access here: [Government of Canada](#)
- Immunizing Children with Confidence**
  - Access here: [Children's Healthcare Canada](#)
- HealthyChildren.org | Taking Fear and Pain out of Needles**
  - Access here: [HealthyChildren.org](#)
- Indigenous Community Developed Resources**
  - Access here: [Li Health story](#)
  - Access here: [Li Louis story](#)
  - Access here: [Children's booklet](#)
- 1-Page Resource: Needles Don't Have to Hurt**
  - Access here: [Parents Canada](#)

Specific Strategies for Children Under 3 Years Old

- Immunize Canada Resources**
  - Access here: [A Clinician's Guide: Pain Management During Vaccine Injections](#)
  - Access here: [Pain Management During Immunization for Children](#)
  - Access here: [Reduce Pain of Vaccination in Children under 3 Years: a Guide for Parents](#)
- Needle Pokes: Reducing Pain in Infants up to 18 Months**
  - Access here: [SickKids](#)
- Resources for Babies 0-24 Months**
  - Access here: [The May Foundation](#)
- Video Resource: Be Sweet to Babies**
  - Access here: [CHCO](#)
- SickKids YouTube Playlist**
  - Access here: [Reducing Pain of Vaccination in Babies](#)
- Comfort Positioning**
  - Access here: [Alberta Health Services](#)
- Video Resource: Power of a Parent's Touch**
  - Access here: [Marsha Campbell-Yeo of Dalhousie University and the WK Health Centre on YouTube](#)

Follow this link for additional resources for Children and Youth Over 5 Years old: <https://tinyurl.com/4hxcddqg>

kidspain.co #ItDoesntHaveToHurt @kidspain



Talk to a knowledgeable SickKids clinician to get your questions answered about the COVID-19 vaccine for children and youth.

Visit [www.sickkids.ca/vaccineconsult](http://www.sickkids.ca/vaccineconsult) to book a confidential phone appointment.



# Resources

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## MAX THE VAX POSTER & STICKERS

Partnership with Ontario Association of Children's Aid Societies to host the Max the Vax webpage

Resource webpage with content and links for caregivers and kids - FAQ's in multiple languages  
[www.oacas.org/maxthevax](http://www.oacas.org/maxthevax)

Poster available to download with QR code to link to the resource webpage

Max stickers!  
Link on webpage to order

# Kids Vaccine Clinics

← Tweet



SouthEastTorontoFHT  
@SETorontoFHT

Our first SHOTS ❤️ FOR 🤖 TOTS clinic! Talk about brave! Let's hear it for these wee superheroes 🦸 - We are in this together ❤️ @MGHToronto @afhto @ETHPnews



6:17 PM · Aug 4, 2022 · Twitter for iPhone



← Tweet



SouthEastTorontoFHT  
@SETorontoFHT



A massive thank you to our entire team and the community for coming out to “Vaccine In the Park” - Folks came as far as Thornhill to join us today. ☀️ - Stay safe and have a fantastic weekend ❤️ @afhto @MGHToronto @ETHPnews



6:29 PM · Aug 12, 2022 · Twitter for iPhone

# Kids Vaccine Clinics



← Tweet



Prince Edward FHT  
@PEFHT



Our doctors, nurses and volunteers have created a calm and inviting space for your little one's vaccination visit today from 3pm to 8pm at the Picton Community Centre, 375 Main Street in Picton. Appointments are encouraged, but walk-ins are welcome too!

[hpepublichealth.ca/vaccine-booking/](https://www.hpepublichealth.ca/vaccine-booking/)



9:35 AM · Aug 11, 2022 · Twitter Web App

<https://www.hpepublichealth.ca/vaccine-booking/>

← Tweet



Nili Kaplan-Myrth MD PhD  
@nilikm

Happy parents, heathy children with their first doses of [#CovidVaccine](#). Hooray! An important layer of protection to avoid serious illness, hospitalization. Please get out to a clinic before Sept. Our next outdoor junior [#Jabapalooza](#) (we will offer boosters at 4 wks) is Aug 26th.



5:06 PM · Aug 12, 2022 · Twitter for iPhone

# WHAT ARE THE REASONS TO VACCINATE MY YOUNG CHILD AGAINST COVID-19? (6 months to 5 years old)

 **The Moderna (Spikevax™) mRNA vaccine is approved by Health Canada for children 6 months and older.**

## mRNA COVID-19 vaccines are safe

### Vaccines lower the risk of getting sick from COVID-19.

Children can get COVID-19 more than once. We are still learning about the health effects of COVID-19 infections.

### Data from older children and teens shows that vaccines lower the risk of complications from COVID-19.

COVID-19 is a leading cause of hospitalization and death in young children. Children can get multisystem inflammatory syndrome in children (MIS-C). MIS-C is rare, but very serious. It causes inflammation of the heart, lungs, kidney, brain, skin, eyes, and stomach. COVID-19 can also cause Long COVID in children. Symptoms like cough and tiredness can last for months.

### You may decide to vaccinate your young child sooner if:

- They (or someone they live with) is at higher risk of severe illness (e.g., low birth weight, asthma, health conditions, or medication that affect the immune system).
- There is a lot of COVID-19 in your community.
- They are in regular contact with a lot of people (e.g., attend daycare).

- More than **500,000** children under age 5 and more than **12 million** 5 to 11-year-old children in North America have had at least 1 COVID-19 vaccine.\* Most children have had the Pfizer-BioNTech (Comirnaty™) vaccine.
- Serious vaccine side effects are expected to be rare for young children. There were no safety concerns in the Moderna vaccine trial.
- Serious allergic reactions to COVID-19 vaccines are very rare. Children with allergic conditions can be vaccinated safely.
- Myocarditis (inflammation of the heart) after a COVID-19 vaccine is expected to be very rare in young children.
- Long-term side effects are not expected. Vaccine ingredients are gone from the body in 2 to 3 days.

Vaccines do not affect fertility, genes (DNA), or hormones.

\*[https://covid.cdc.gov/covid-data-tracker/#vaccinations\\_vacc-people-additional-dose-totalpop](https://covid.cdc.gov/covid-data-tracker/#vaccinations_vacc-people-additional-dose-totalpop)  
<https://health-infobase.canada.ca/covid-19/vaccination-coverage/>

Learn more about COVID-19 mRNA vaccines for children here:  
[https://uwaterloo.ca/pharmacy/sites/ca.pharmacy/files/uploads/files/faq\\_covid-19\\_vaccines\\_for\\_children.pdf](https://uwaterloo.ca/pharmacy/sites/ca.pharmacy/files/uploads/files/faq_covid-19_vaccines_for_children.pdf)

### You may decide to wait to vaccinate your young child if:

- They had COVID-19 recently. Experts recommend waiting 2 months after a COVID-19 infection to get a COVID-19 vaccine. **Getting vaccinated after an infection can give longer-lasting protection.**
- COVID-19 levels in your community are low. **COVID-19 levels can change very quickly.**



**Vaccines work with other measures to protect young children & those around them. Wear a high-quality mask indoors, avoid crowded spaces & wash your hands often to lower the risk of COVID-19.**



# Vaccination Supports – Parent Resources

## Children and Youth:

- [“Max the Vax”](#) – kid-friendly information, posters, stickers videos and FAQ
- [About Kids Health](#) (*SickKids COVID-19 Learning hub*)
- [Parents, have you done your homework?](#) (FAQ, *SickKids*)
- [What are the reason to vaccinate my young child against COVID-19?](#) (*U of Waterloo*)
- [FAQs about COVID-19 mRNA Vaccines for Children](#) (*U of Waterloo*)
- [Why does my child need the vaccine](#) (FAQ, *Canadian Pediatric Society*)
- [COVID-19 Vaccine Consult Service](#) (*SickKids*)
- [VaxFacts for Parents: Q&A](#)
- [Reduce the Pain of Vaccination in Kids and Teens](#)
- [CARD system for managing pain and anxiety about vaccination](#)

# Vaccination Supports - Physician Resource

## Children and Youth:

- [COVID-19 vaccine for children aged 6 months to 5 years](#) – July 21, 2022 (OCFP)
- [Needle Pain and Anxiety Management for Vaccinations under 5](#)
- [PrOTCT Framework](#) for COVID-19 discussions with parents and caregivers
- [US Advisory Committee on Immunization Practices' recommendations](#) (CDC)
- [Myocarditis and pericarditis after mRNA vaccination in children: Interim Guidance](#) (PDF) | Decision aid/Algorithm (SickKids Hospital)
- [Center for Effective Practice](#) – COVID resources ([sample patient letter on kids' vaccine](#))



# Vaccination Supports

**Inform and educate** your patients about vaccination.

As applicable, raise the COVID-19 vaccine opportunity at every patient interaction. These resources can help answer questions.



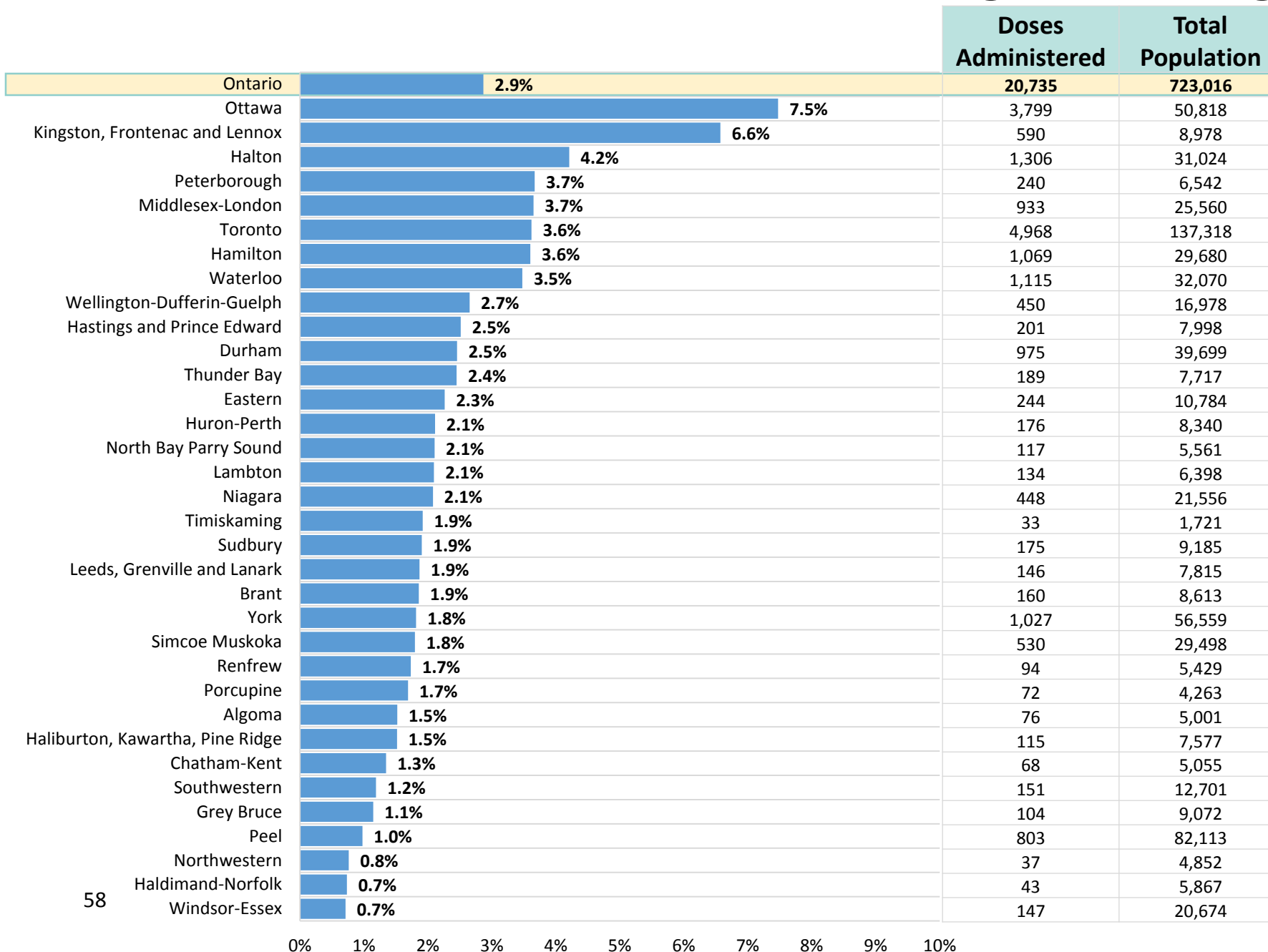
## ***For family doctors:***

- [Learn the basics of how to address vaccine hesitancy](#) (gated) from the OMA.
- [Get the evidence to respond to common patient concerns about the vaccine](#) from the CEP.
- [Access an in-depth learning module about the COVID-19 vaccines and vaccine hesitancy](#) from the U of T DFCM.

## ***For patients and family doctors:***

- Self-referral, by-appointment services to answer patient questions/concerns about the vaccines:
  - [VaxFacts Clinic](#) from Scarborough Health Network (connects to a team of doctors)

# Children 0-4 Years: First Dose Coverage as of August 16, 2022



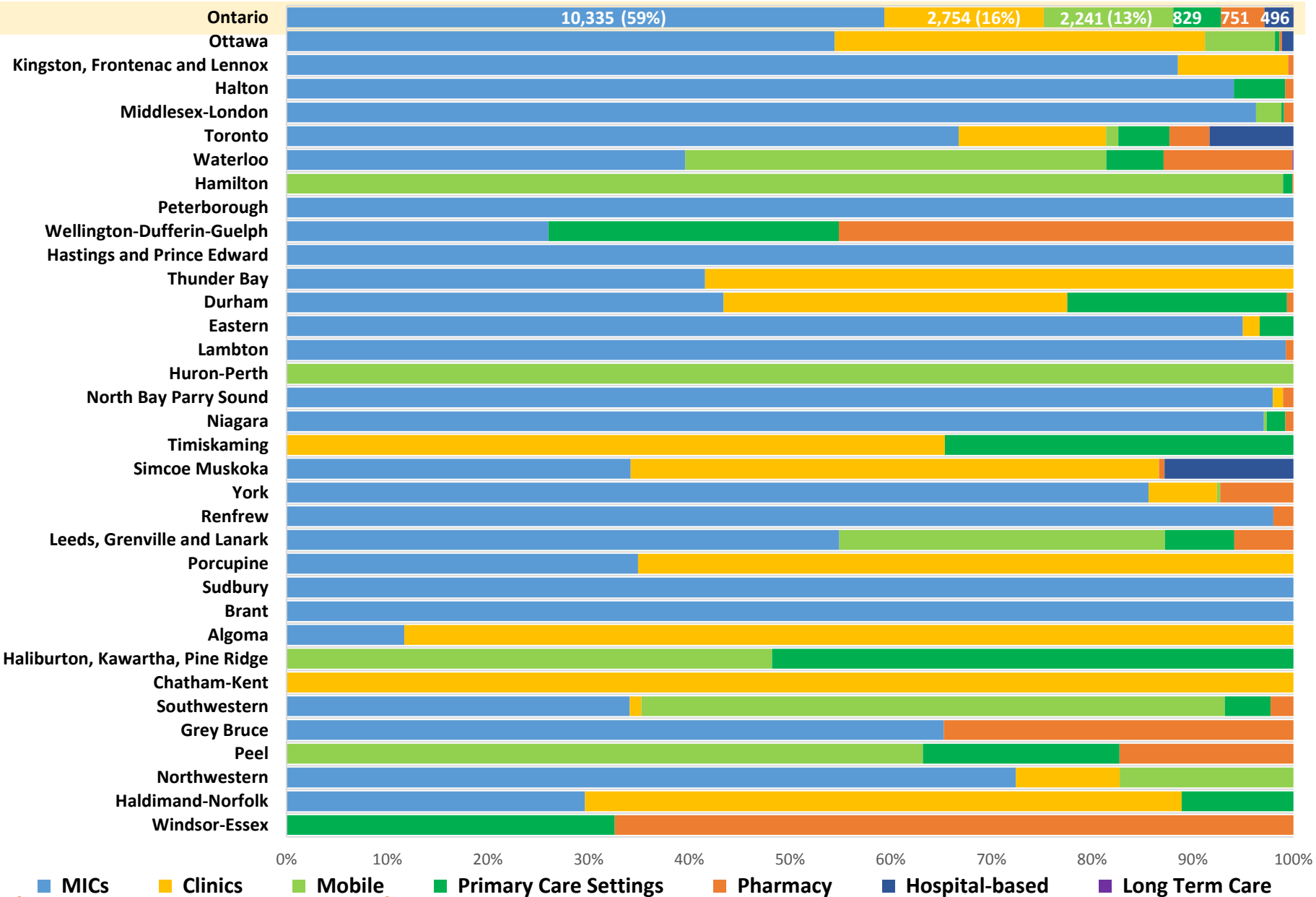
## Key Insights

- **2.9%** of children 0-4 years old in Ontario have had a first dose
- Highest coverage seen in Ottawa at **7.5%**

**Note:** The denominator includes all individuals in the 0-4 age group although only those 6 months and above are currently eligible for vaccination

**Data Source(s):** SAS VA Tool, COVax analytical file, extracted daily at 8:00 pm, CPAD, MOH. Note: analytical file has been processed for data quality checks and results may differ from the COVax live data system. Population Estimates 2020, Statistics Canada, CCM Cases Data, OLIS Testing File, CCSO ICU File

# Children 0-4 Years: Delivery Channels for August 1-16, 2022



## Key Insights

- **88%** of doses were administered in **PHU led clinics** (MIC + Clinics + Mobile)
- **59% (10,335)** of doses were administered in **MICs**.
- Breakdown for other channels:
  - Primary Care: **5%**
  - Pharmacy: **4%**
  - Hospital-Based: **3%**
- Top 5 PHUs using **Primary Care**:
  - **HKPR (52%)**
  - **Timiskaming (35%)**
  - **Windsor-Essex (33%)**
  - **WDG (29%)**
  - **Durham (22%)**
- Note: PHUs are ordered by 0-4 first dose coverage from highest to lowest

**Data Source(s):** SAS VA Tool, COVax analytical file, extracted daily at 8:00 pm, CPAD, MOH. Note: analytical file has been processed for data quality checks and results may differ from the COVax live data system. Population Estimates 2020, Statistics Canada, CCM Cases Data, OLIS Testing File, CCSO ICU File



PHU-led Sites

# Fall 2022 Implementation Planning | COVID-19 Context

The Province has developed planning scenarios for Fall 2022 vaccination roll-out to more closely align with recent NACI guidance on fall boosters for adult populations, and in response to expanded eligibility for all populations through the summer.

## SCENARIO 1: BASELINE CASE (5.7M doses)

- Additional COVID-19 **boosters targeted at high-risk populations** over 2 months
- Additional COVID-19 **boosters offered to the general population** over the next 2 months
- Moderate immunization volumes and effort (**absorbed within existing channels**)

## SCENARIO 2: SURGE CASE (7.9M doses)

- **Severe decrease in immunity and/or more transmissible/virulent new variant requiring mass immunization** of population prioritizing high-risk populations over the first 2 months and the remaining populations beginning after the first month
- Higher immunization volumes and effort; **may require mass clinics to be established**

## ADDITIONAL POPULATIONS ACROSS ALL SCENARIOS

- Children (6 Months - Under 5 Years) Primary Series (2 Doses) over 4 months
  - Children 5-11 Boosters over 4 months

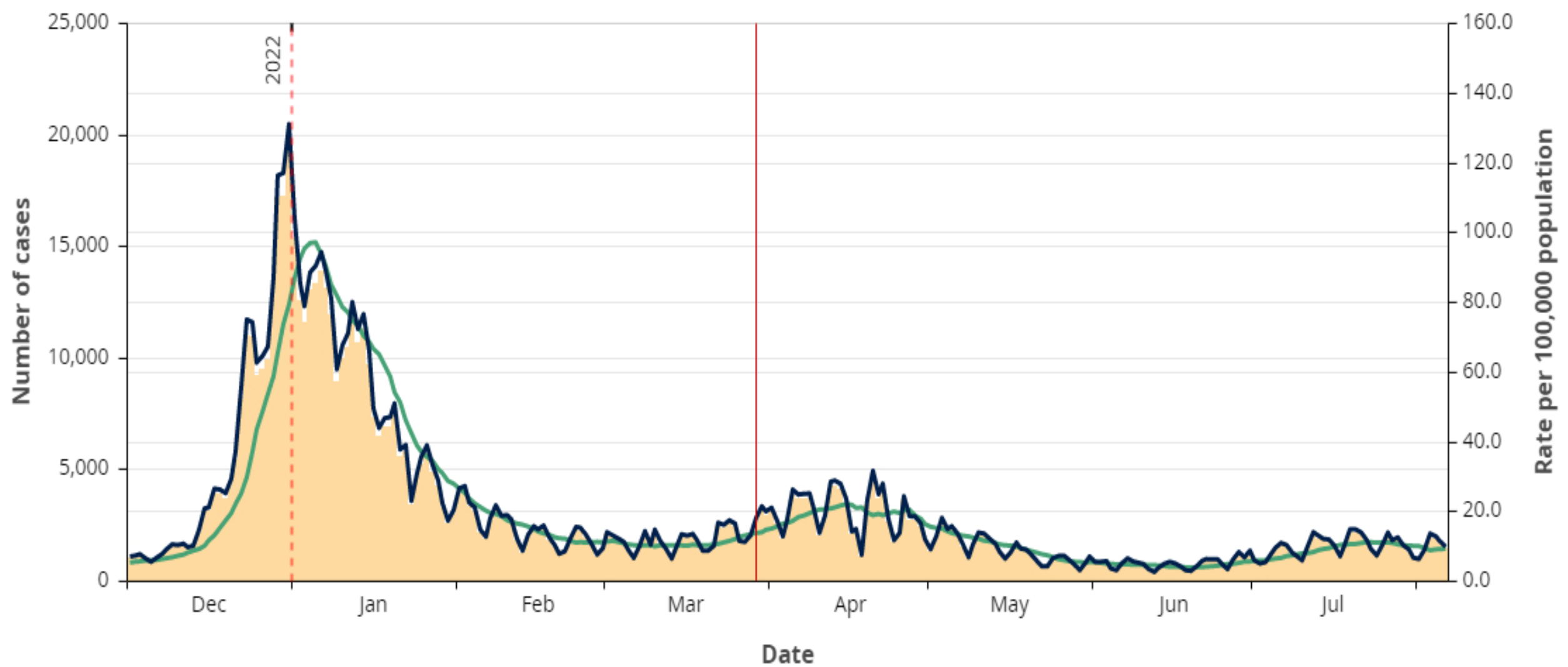
# Fall 2022 Implementation Planning | COVID-19 Provincial Coverage Rates Based on Uptake Assumptions

Population Group	Estimated population coverage <i>(based on uptake/demand curve and immunization horizon assumptions)</i>	
	Baseline Scenario	Surge Scenario
	90+	68%
80-89	68%	88%
70-79	67%	87%
60-69	49%	77%
50-59	41%	61%
40-49	35%	53%
30-39	30%	45%
18-29	24%	36%
12-17	14%	15%
5-11	22%	22%
6month – Under 5 Dose 1	22%	22%
6month – Under 5 Dose 2	15%	15%
<b>Total Provincial Coverage</b>	<b>39%</b>	<b>54%</b>

**Notes:**

- 6month – 4 Dose 1 coverage includes estimated uptake through the summer
- Denominators across age cohorts have removed at-risk population groups to reduce double counting

# COVID-19 daily case counts and rates by reported date in Ontario - December 1, 2021 to August 6, 2022

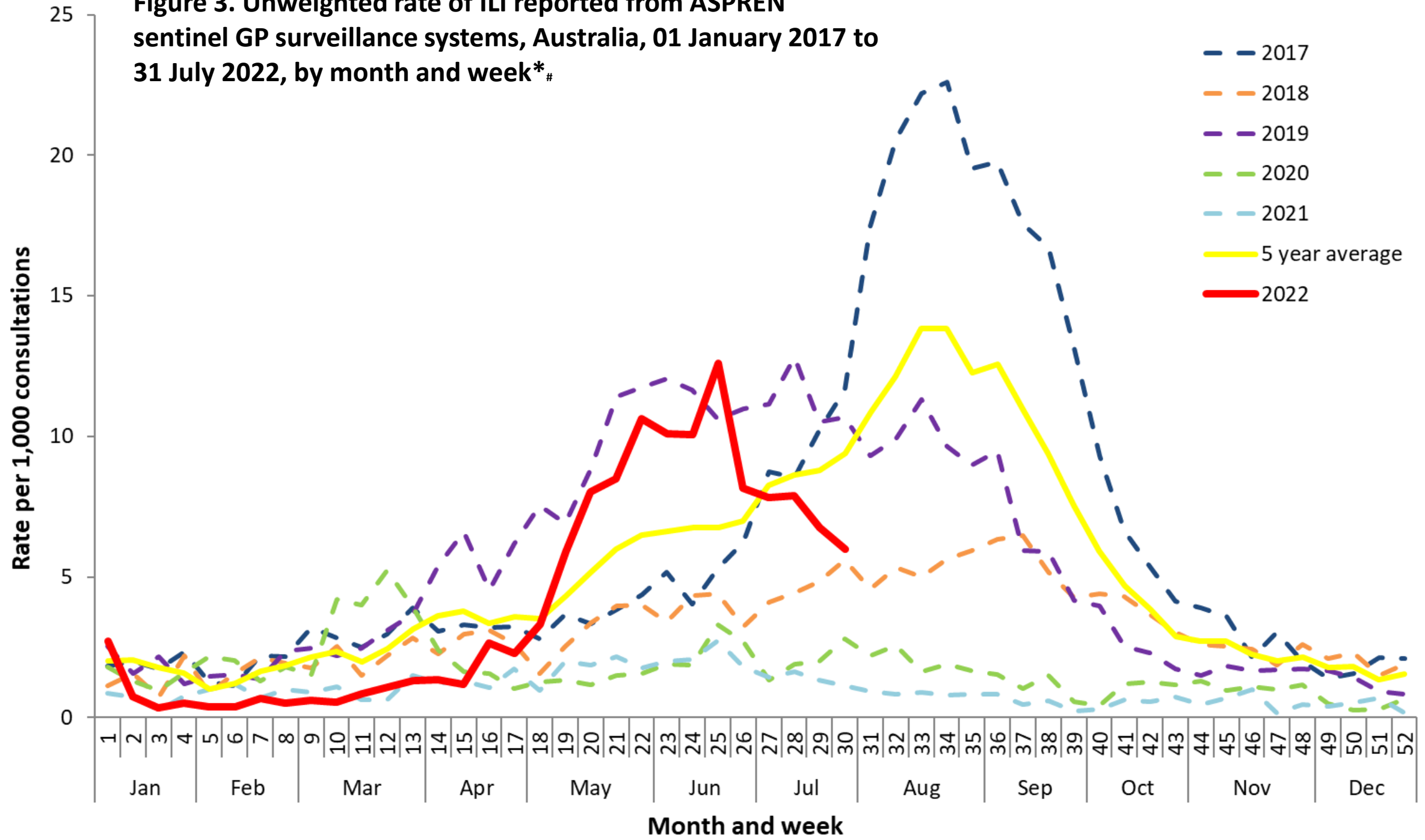


✓ Cases count 2,681

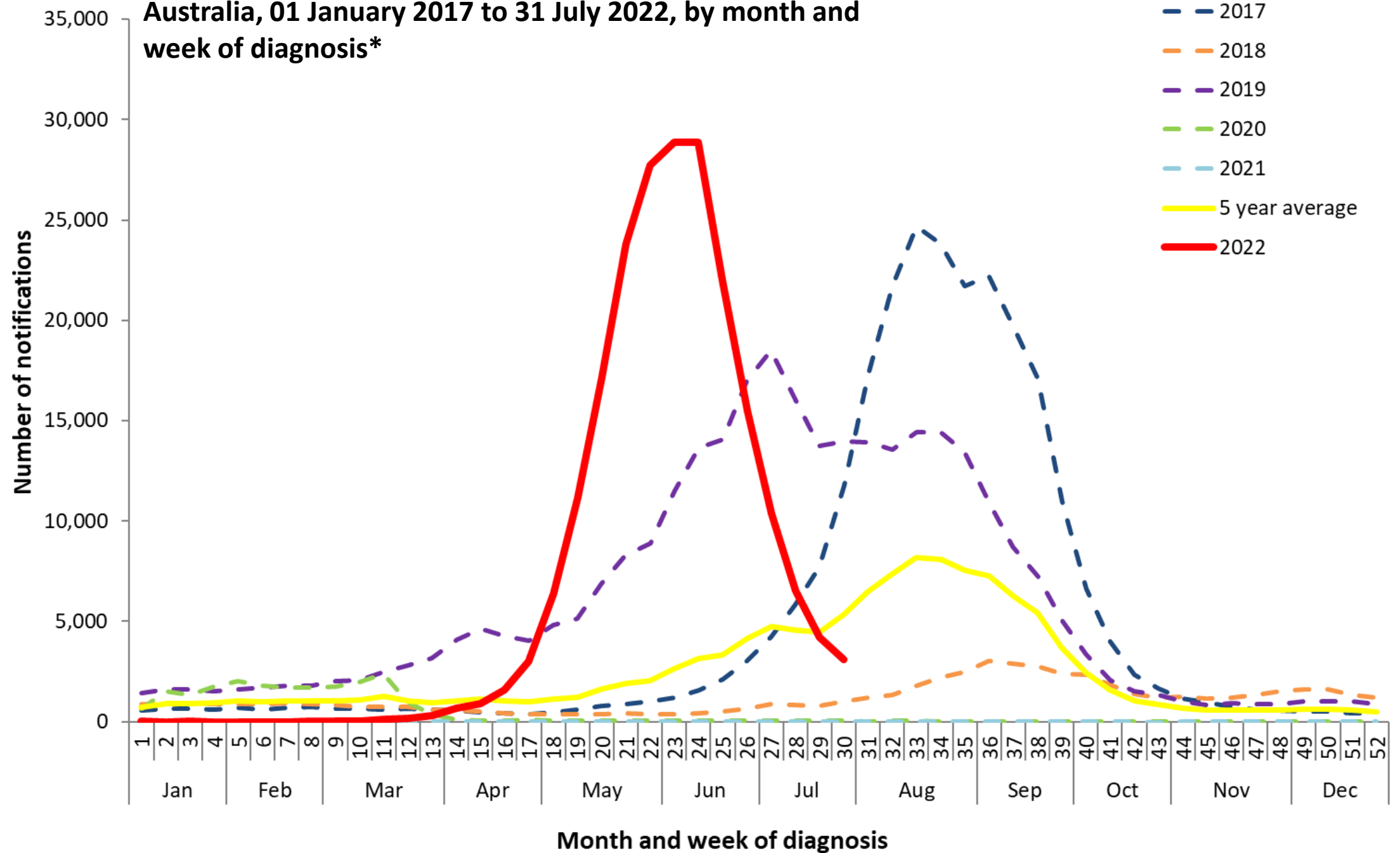
✓ 7 day rolling average cases count 2,168

✓ Cases rate 18.2

**Figure 3. Unweighted rate of ILI reported from ASPREN sentinel GP surveillance systems, Australia, 01 January 2017 to 31 July 2022, by month and week\*<sub>#</sub>**

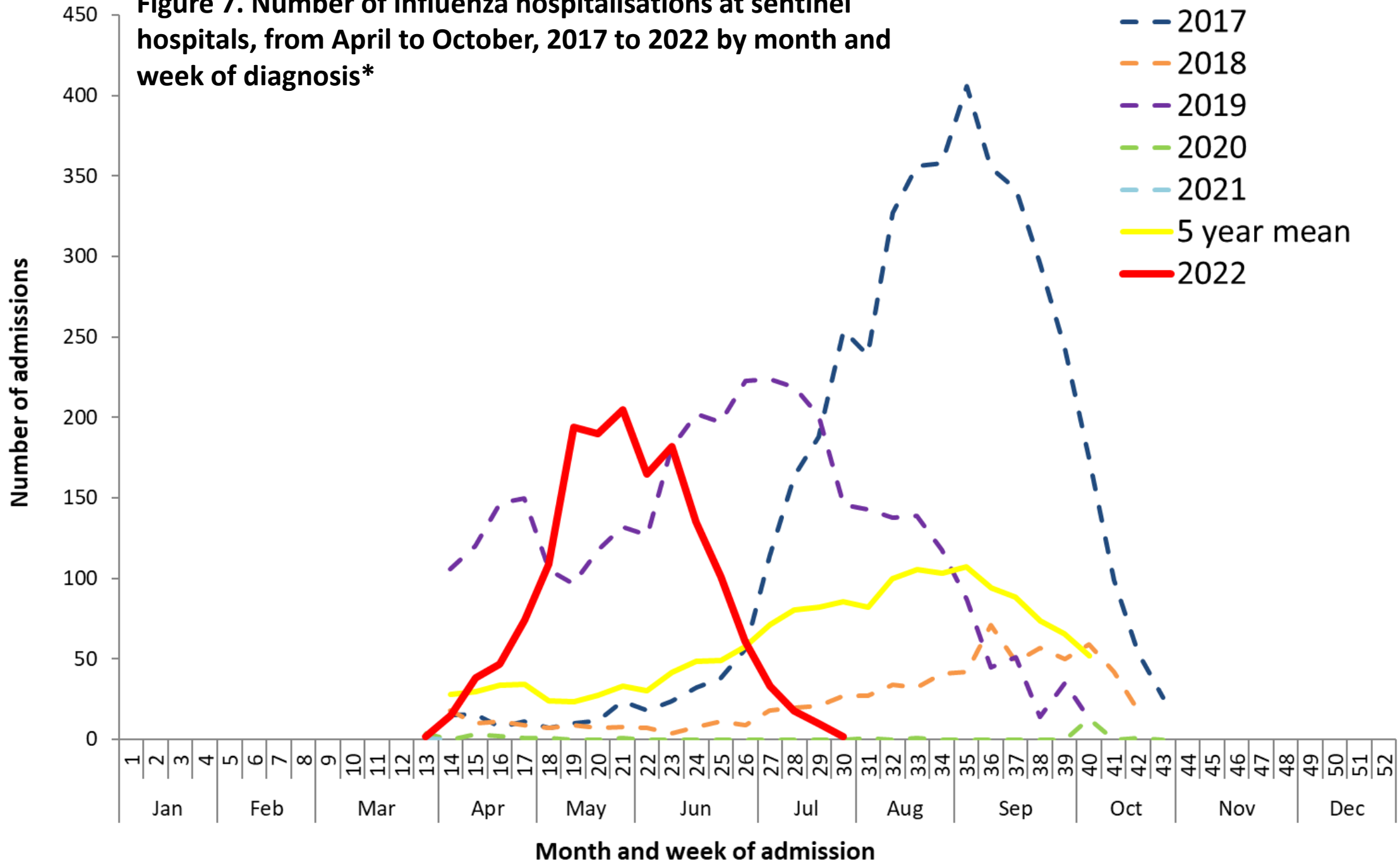


**Figure 4. Notifications of laboratory-confirmed influenza, Australia, 01 January 2017 to 31 July 2022, by month and week of diagnosis\***





**Figure 7. Number of influenza hospitalisations at sentinel hospitals, from April to October, 2017 to 2022 by month and week of diagnosis\***

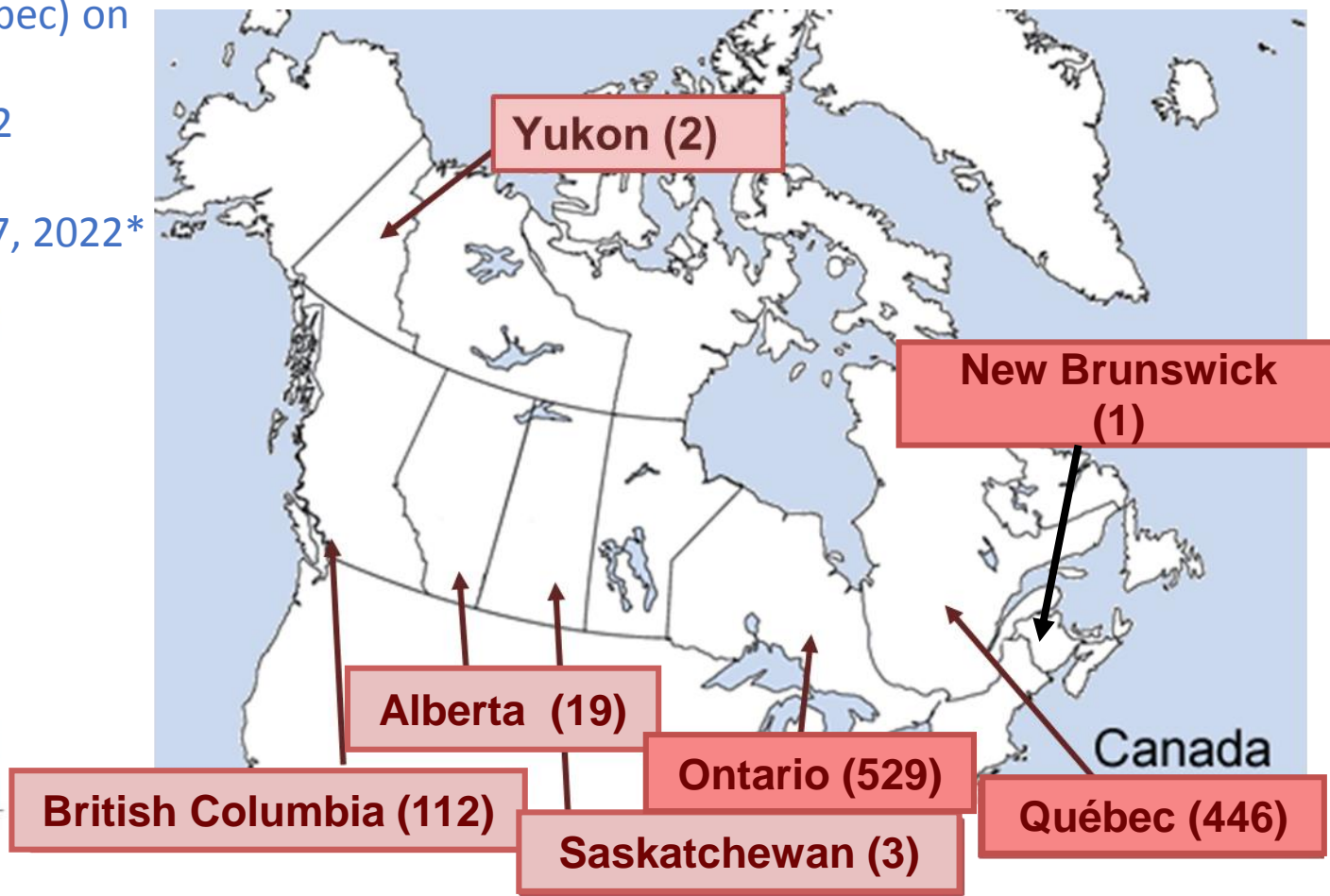
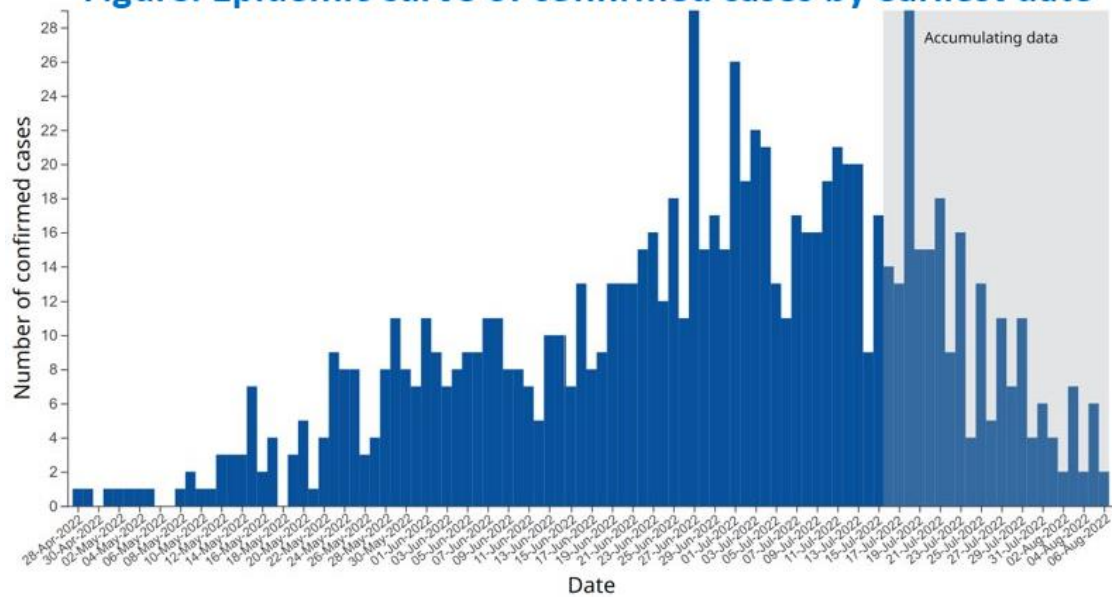


# Canadian Epidemiological Situation

## Cases reported on Canada.ca as of August 17, 2022

- First monkeypox cases identified in Montréal (Quebec) on May 19, 2022
  - Symptom onset dates were as early as April 28, 2022
- 1112 cases publicly reported by PTs as of August 17, 2022\*

Figure. Epidemic curve of confirmed cases by earliest date



	Number of people vaccinated			Reported adverse events following immunization
	At least one dose	One dose	Two doses	
British Columbia	11,768	11,759	9	0
Alberta	1,279	1,279	0	0
Saskatchewan	4	4	0	0
Manitoba	NA	NA	NA	0
Ontario <sup>a</sup>	16,664	16,596	68	9
Quebec	20,390	20,235	155	7
New Brunswick	0	-	-	0
Nova Scotia	0	-	-	0
Prince Edward Island	0	-	-	0
Newfoundland and Labrador	0	-	-	0
Yukon <sup>b</sup>	0	-	-	0
Northwest Territories	NA	NA	NA	0
Nunavut	0	-	-	0
Correctional Services Canada	0	-	-	0
<b>TOTAL</b>	<b>50,105</b>	<b>49,873</b>	<b>232</b>	<b>16</b>

# Infection Prevention and Control

- Place the individual in a **single-patient room**, with the door closed
  - Inpatients should be placed in a single-person room with a dedicated bathroom
- **Use recommended personal protective equipment (PPE):** gloves, gown, eye protection, and a fit-tested and seal-checked N-95 respirator
- Ensure patients wear a well-fitting medical mask
- Don't forget about hand hygiene!
- **Perform routine environmental cleaning and disinfection**
  - Ensure all horizontal surfaces that may be touched by the patient and equipment that may have been used by or shared between patients are cleaned and disinfected after every use
  - No need for terminal cleaning or fallow time!

# Testing for Monkeypox in the Clinic

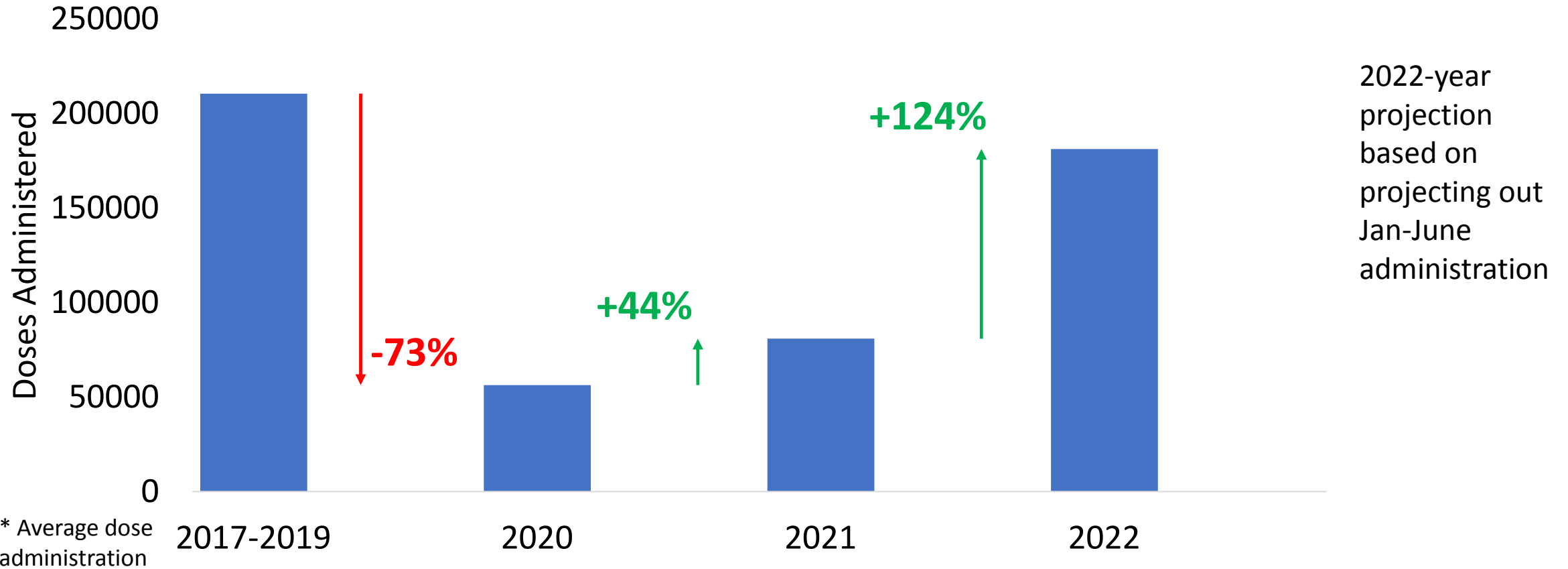
- **All patients presenting with a compatible clinical illness where monkeypox is suspected should undergo laboratory testing**
  - Test is a PCR test and is performed at Public Health Ontario Laboratories only at this time
- Also consider offering **opportunistic STI testing** when you are considering monkeypox testing - i.e., chlamydia, gonorrhea, syphilis, and HIV testing
  - Many monkeypox cases in Ontario have had a recent history of an STI infection or have been found to have monkeypox as well as an STI concurrently, including new diagnoses of HIV
  - Also consider starting eligible patients on HIV PrEP!!!
- Note: To date, no cases have been identified in children in Ontario or Canada. PHOL is conducting enterovirus testing on all pediatric monkeypox specimen. 70-80% of these specimens are testing positive for enterovirus. As such, pre-test probability is low in a child with a viral exanthem and without epidemiological risk factors (e.g., close contact of a confirmed case) and is thus NOT recommended in these situations.

# Key Messages

1. Consider **monkeypox on your differential diagnosis** when seeing patients
2. Make sure you take a **good history** – has your patient had exposure to a known or suspected case of monkeypox? What was the nature and duration of their interaction?
3. If your clinical suspicion is high enough to consider monkeypox testing, **please offer opportunistic STI testing** +/- start your patient on HIV PrEP if eligible
4. Recommend your patients to get **vaccinated** if they are eligible
5. **Isolation** sucks – so try to identify supports where you can and work with public health to make it as least difficult as possible
6. If your patients are severely disabled from monkeypox symptom please consult with infectious disease to consider **antiviral treatment**
7. If you do everything I tell you and you still run into issues, email [EOCoperations.MOH@ontario.ca](mailto:EOCoperations.MOH@ontario.ca)

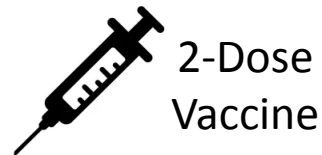
# Hep B - Recombivax

## Hep B Year Over Year Administration



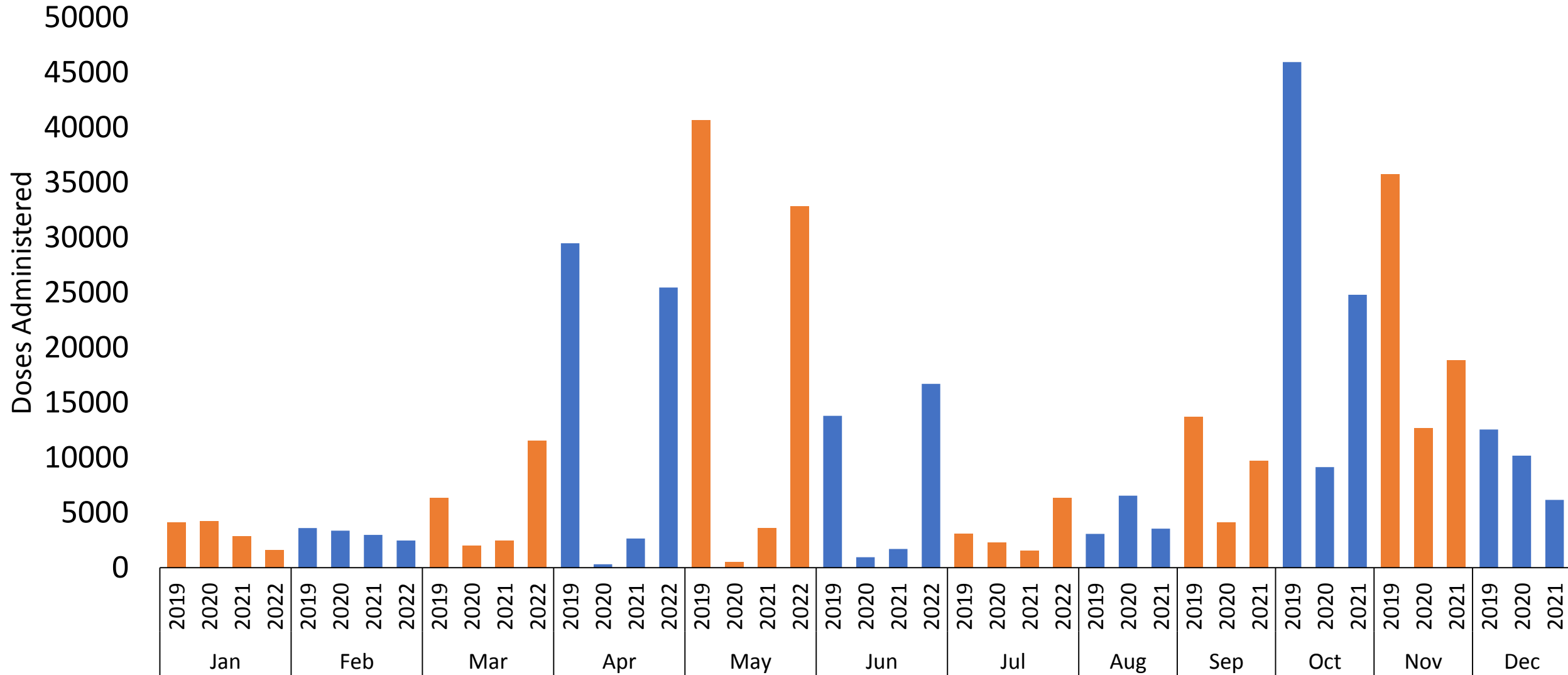
\* Average dose administration

<b>Administration deficit due to COVID-19</b>
312,926



# Hep B - Recombivax

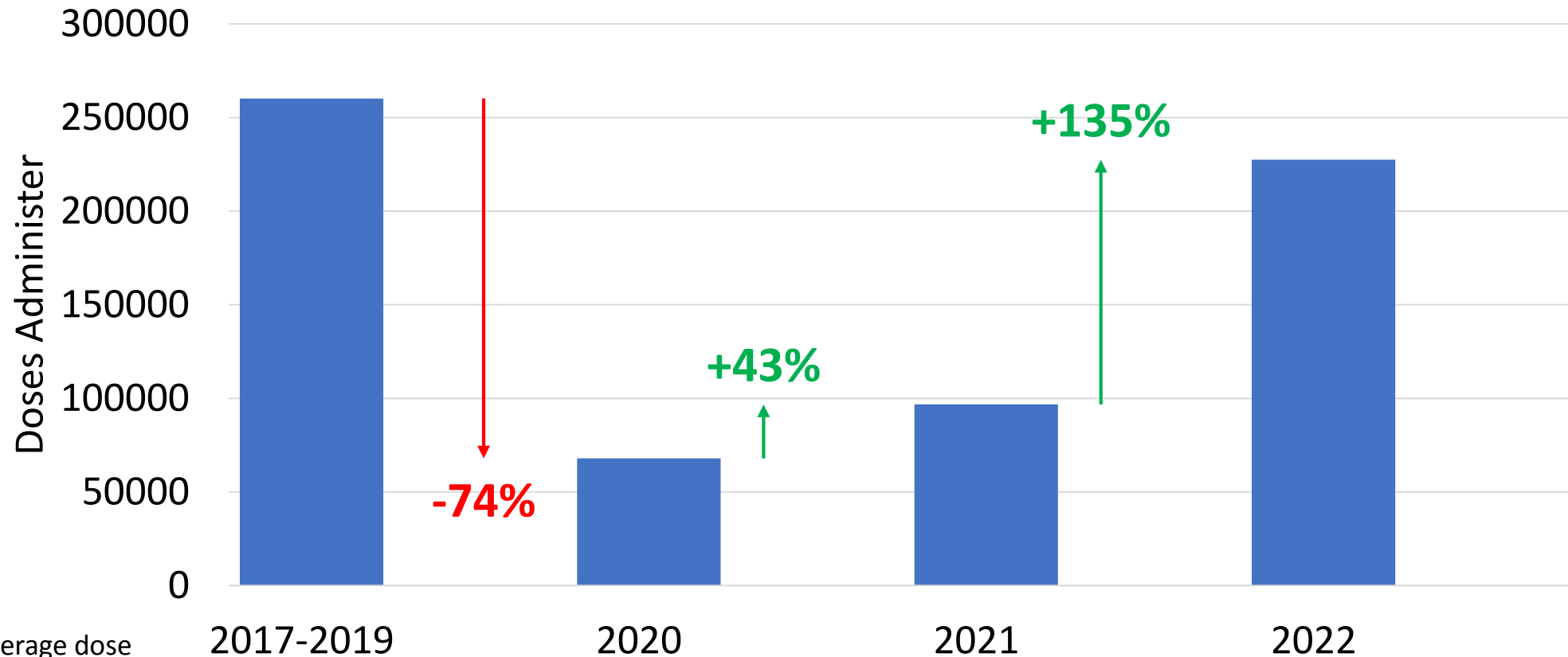
## Hep B Vaccine Administration 2019-2022





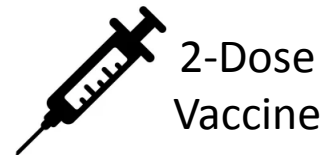
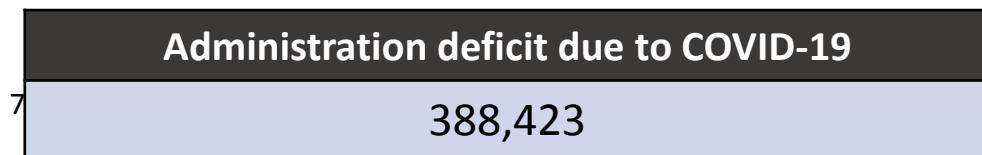
# HPV- Gardasil

## HPV Year Over Year Administration



\* Average dose administration

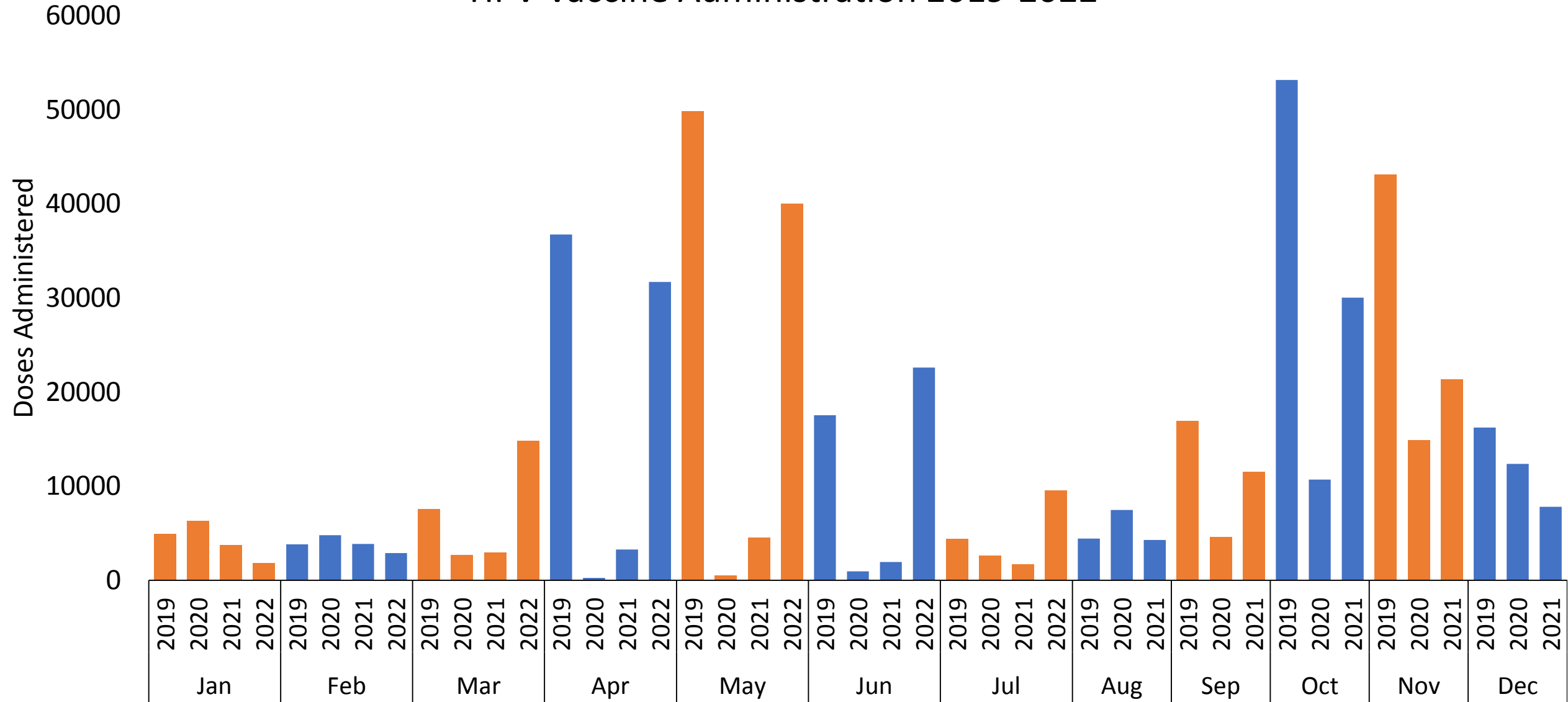
2022-year projection based on projecting out Jan-June administration



2-Dose Vaccine

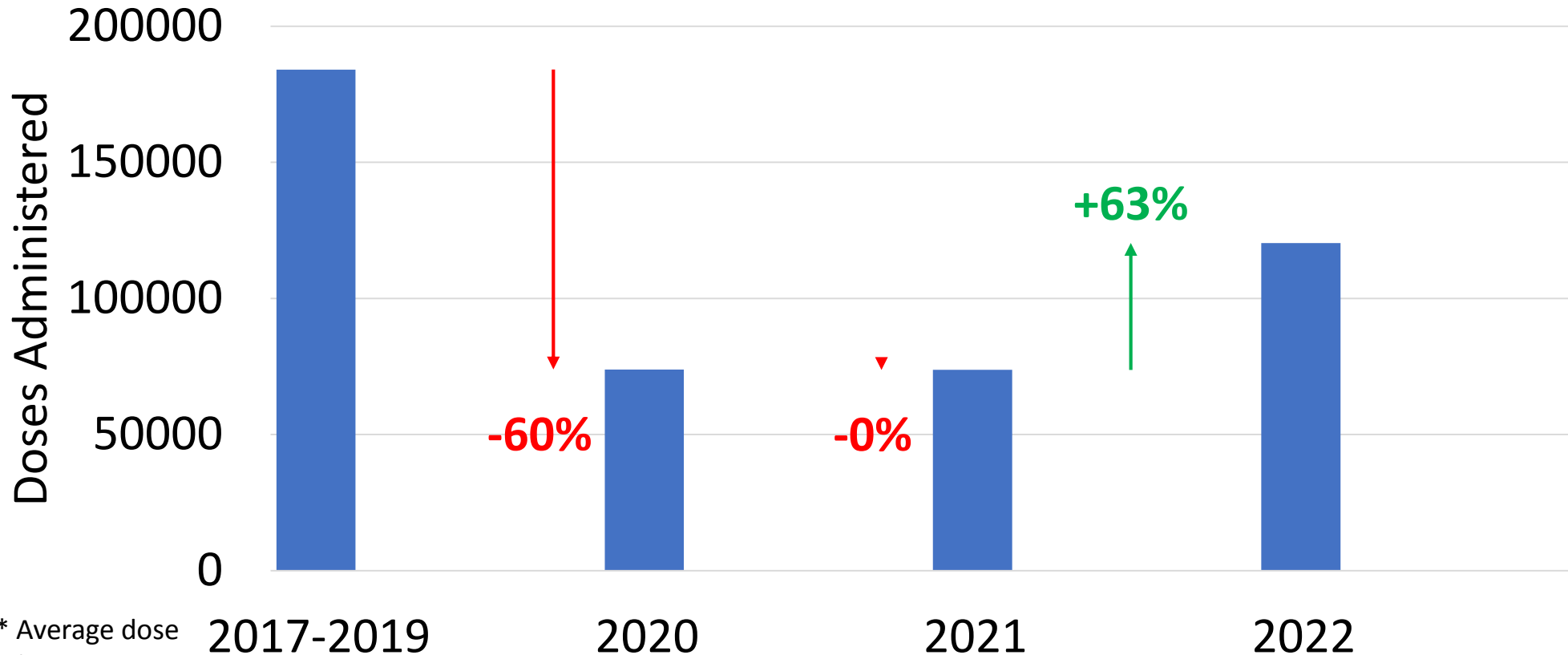
# HPV- Gardasil

## HPV Vaccine Administration 2019-2022



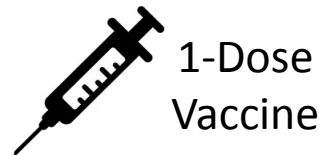
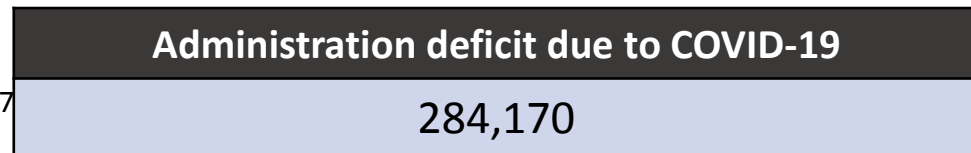
# Men-C-ACYW - Nimenrix

## Men-C-ACYW Year Over Year Administration



\* 2022-year projection based on projecting out Jan-June administration

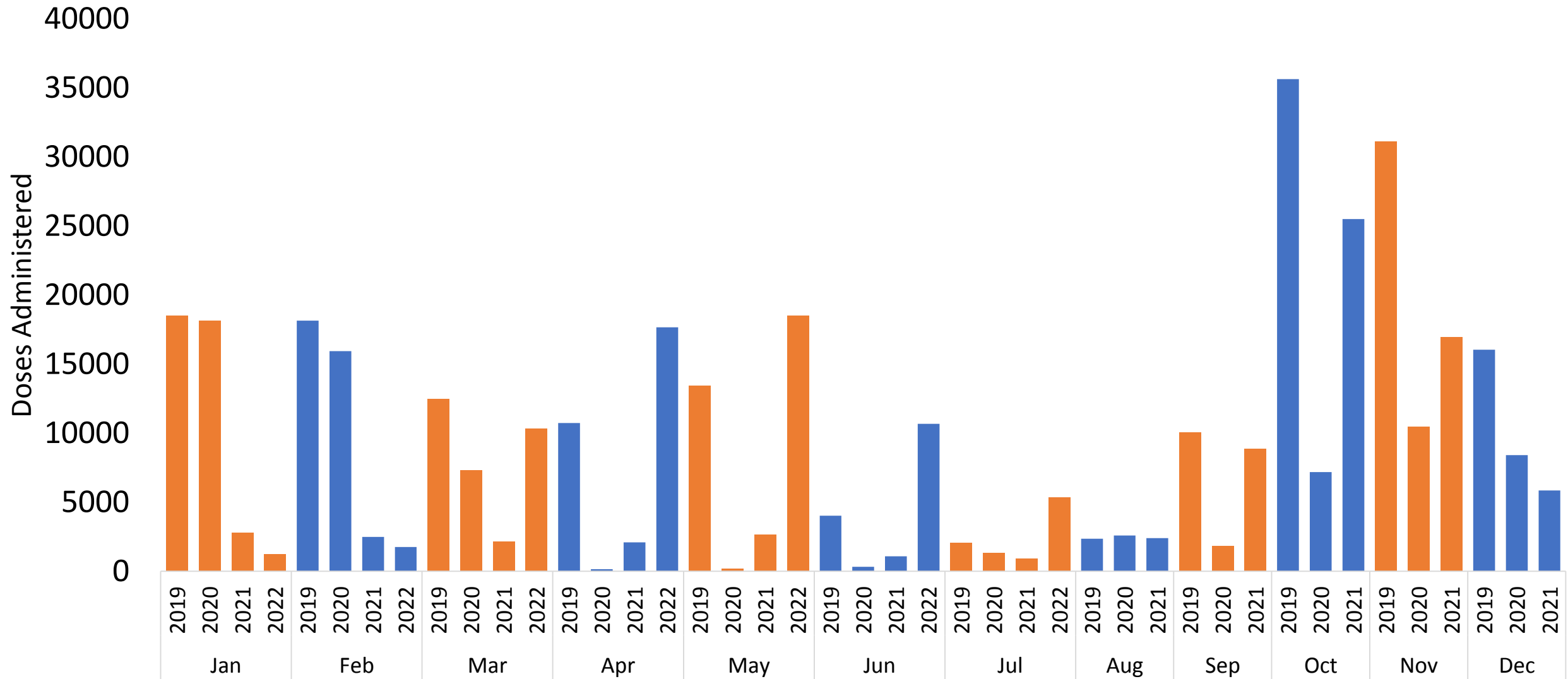
\* Average dose administration



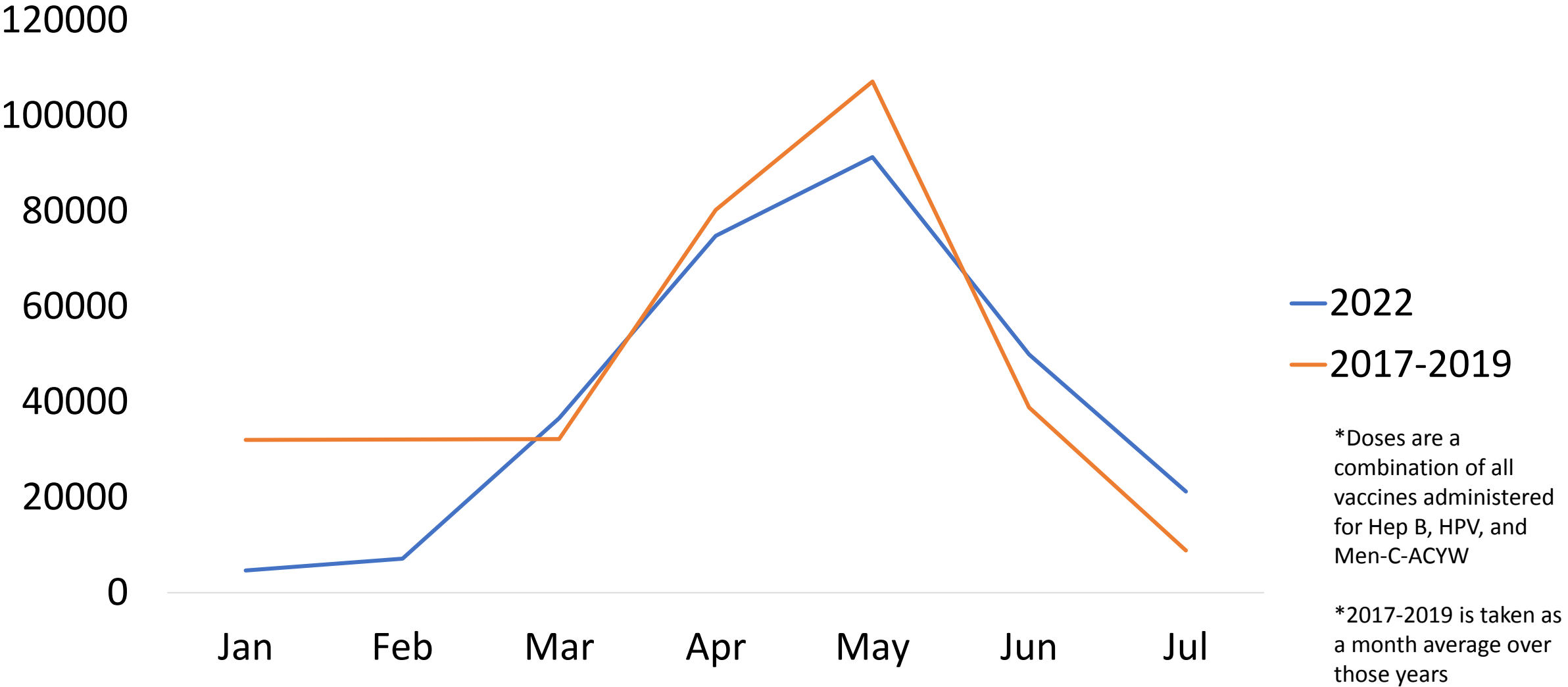
1-Dose Vaccine

# Men-C-ACYW - Nimenrix

## Men-C-ACWY Vaccine Administration 2019-2022



# Historical Vaccination of Hep B, HPV, and Men, from Jan – July



# ConfusedAboutCOVID.ca

CONFUSED ABOUT COVID? FAMILY DOCTORS ANSWER YOUR QUESTIONS.

## COVID-19 vaccine doses for people who have a weakened immune system\*\*

Age	Initial doses			First booster	Second booster
	1st dose	2nd dose	3rd dose	4th dose	5th dose
6 months - 11	✓	✓	✓		
12 - 17	✓	✓	✓	✓	✓
18+ and First Nations, Inuit or Métis or live with someone who is First Nations, Inuit, or Metis	✓	✓	✓	✓	✓
18 - 59	✓	✓	✓	✓	✓
60+	✓	✓	✓	✓	✓

CONFUSED ABOUT COVID? FAMILY DOCTORS ANSWER YOUR QUESTIONS.

## COVID-19 vaccine doses for people who do not have a weakened immune system\*\*

Age	Initial doses		First booster	Second booster
	1st dose	2nd dose	3rd dose	4th dose
6 months - 11	✓	✓		
12 - 17	✓	✓	✓	
18+ and First Nations, Inuit or Métis or live with someone who is First Nations, Inuit, or Métis	✓	✓	✓	✓
18 - 59	✓	✓	✓	✓
60+	✓	✓	✓	✓

# Questions?

Webinar recording and curated Q&A will be posted soon

<https://www.dfcu.utoronto.ca/covid-19-community-practice/past-sessions>

Our next Community of Practice: September 16, 2022 (**Long COVID**)

Contact us: [ocfpcme@ocfp.on.ca](mailto:ocfpcme@ocfp.on.ca)

Visit: <https://www.ontariofamilyphysicians.ca/tools-resources/covid-19-resources>

The COVID-19 Community of Practice for Ontario Family Physicians is a one-credit-per-hour Group Learning program that has been certified for up to a total of 32 credits..

**Post session survey will be emailed to you. Mainpro+ credits will be entered for you with the information you provided during registration.**