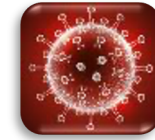


SPEAKER: DISCLOSURES



Calgary Zone
webinar series
Mental health
& COVID-19



Dr. Jim Kellner

Pediatric Infectious Diseases, ACH
Professor, University of Calgary
U of C Class of 1984 (Emus)

Disclosures

- Honoraria, other rewards, speakers' bureaux, advisory boards, patents, royalties, investments in health organizations – all N/A
- **Grants, clinical trials:** Moderna (COVID-19 vaccine clinical trial), Pfizer (pneumococcal surveillance grant), Merck (pneumococcal vaccine trial), GSK (rotavirus & meningococcal vaccine trials)
- **Other influential affiliations:** Leadership Group, www.COVID19ImmunityTaskForce.ca, Alberta Advisory Committee on Immunizations, University of Calgary COVID-19 Analytic and Strategy Group, Data Safety Monitoring Board VIDO-InterVac COVID-19 vaccine trials, Principal Investigator Alberta Childhood COVID-19 Cohort (AB3C) Study www.ucalgary.ca/covidinkids



COVID-19 Quick Hits Update: Vaccines and MIS-C

Dr. Jim Kellner

Pediatric Infectious Diseases specialist, Professor of Pediatrics
Calgary Zone, AHS & University of Calgary

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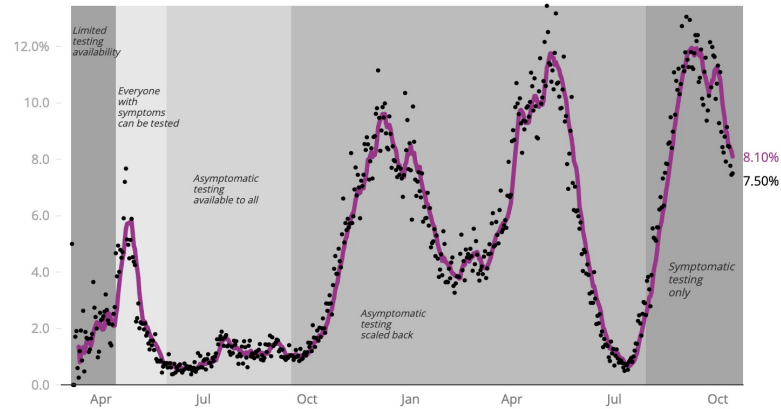
Questions

- Fully vaccinated 75 year-old develops COVID-19 1 mos after 2nd dose.
 - Should they get a booster dose of vaccine?
 - If so, how long after having had COVID-19?
 - Should they get influenza vaccine?
- An un-vaccinated adult develops COVID-19 and has “residual symptoms” with cough & fatigue, 30 days post-diagnosis.
 - Is it reasonable to defer COVID vaccine until they are feeling better (issue temporary exemption letter) or just get vaccinated?
- What are the symptoms of Multisystem Inflammatory Syndrome in Children (MIS-C) that could present to a family physician’s office?

The situation in Alberta

COVID-19 test positivity rate in Alberta

Each black dot represents percentage of tests on a given day that were positive for COVID-19. The purple line is the average over the past 7 days. Most recent daily rate & weekly average labelled at right

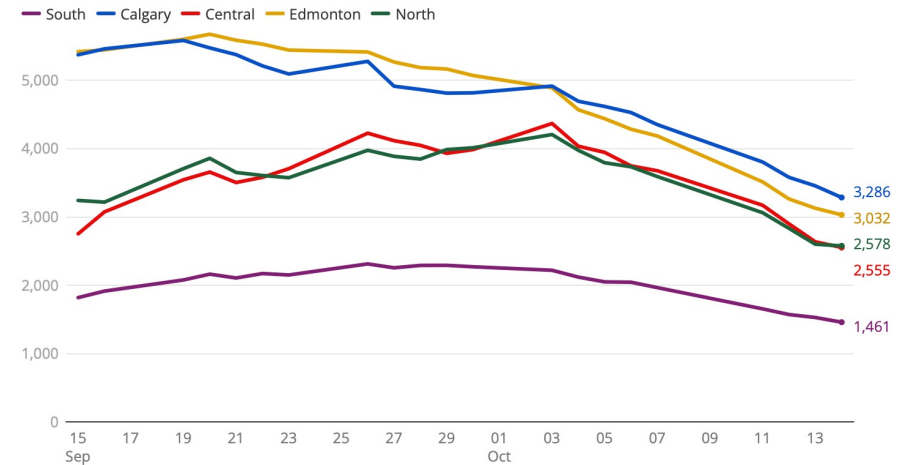


CBC NEWS

Chart: Robson Fletcher / CBC • Source: Alberta Health

Active COVID-19 cases by health zone, over the past 3 weeks

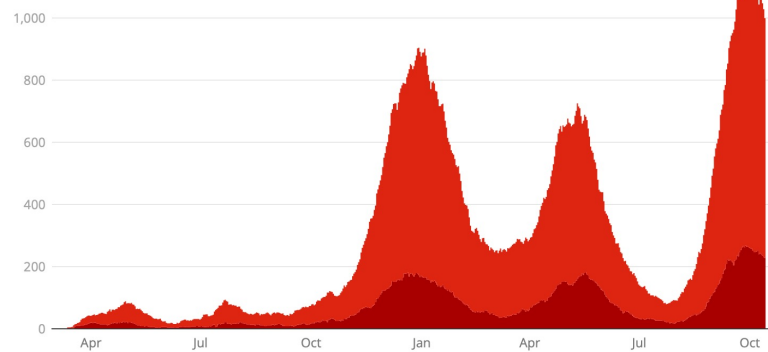
Active cases for the most recent day indicated at right. (Cases with unknown zone excluded.)



COVID-19 patients in Alberta hospitals

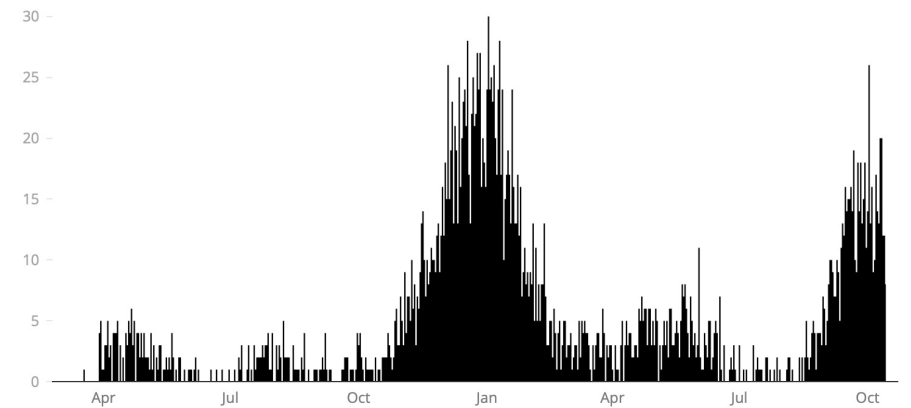
The number of people in hospital and in intensive-care units, by day.

■ ICU ■ Hospitalized (non-ICU)



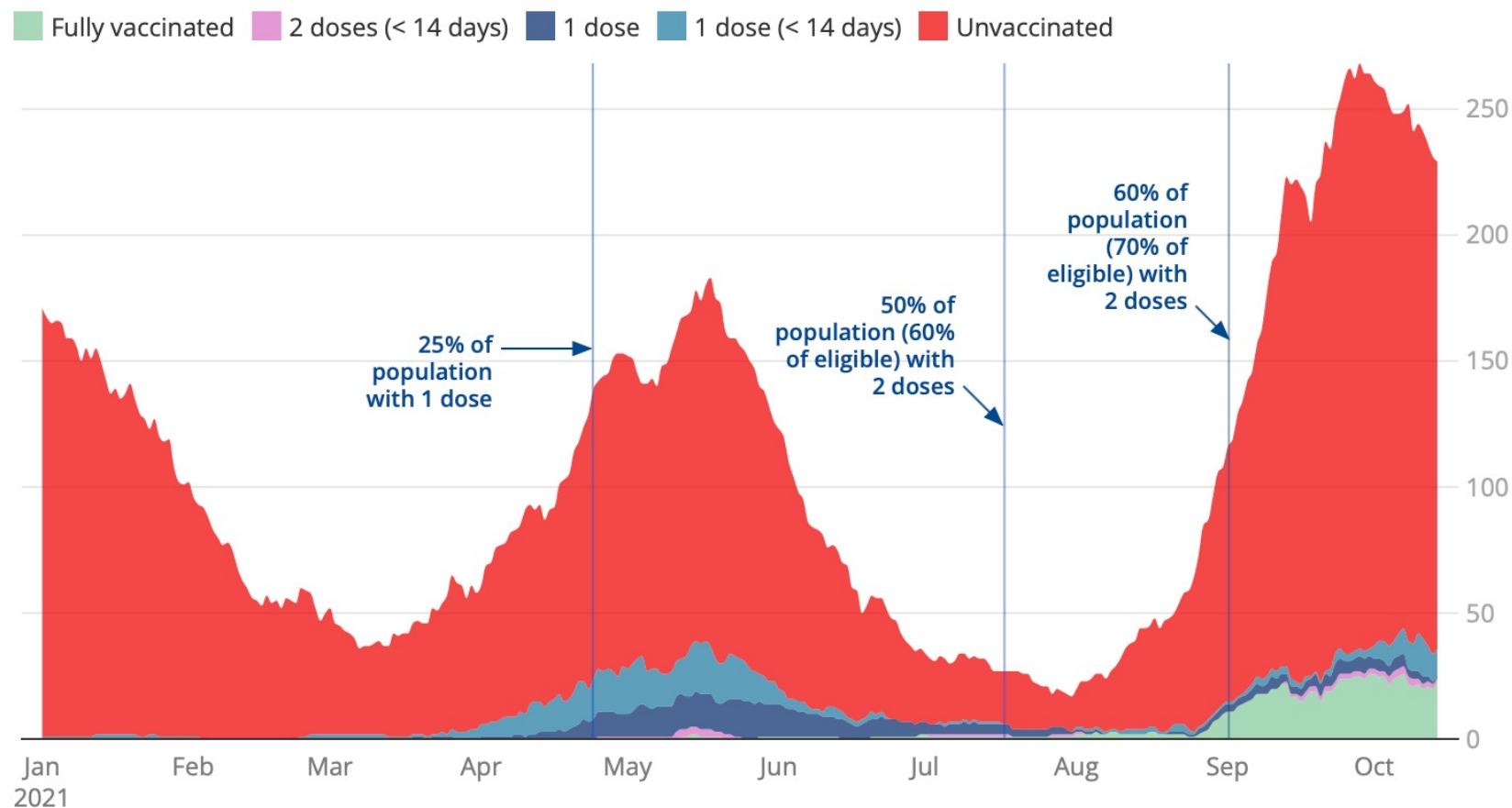
COVID-19 deaths in Alberta by date of death (where known)

Each column depicts the number of people who died on a given day. Data are subject to change; when the date of death is unavailable, the date reported to Alberta Health is used until a death date is known.



Derived from COVID-19 Alberta Statistics by @CBCFletch Oct 15, 2021

Number of Alberta COVID-19 patients in ICU by vaccination status



Derived from [COVID-19 Alberta Statistics by @CBCFletcher](#) Oct 15, 2021

Total population 4,421,887; 65.3% of total population fully vaccinated

Questions

- Fully vaccinated 75 year-old develops COVID-19 1 mos after 2nd dose.
 - Should they get a booster dose of vaccine?
 - If so, how long after having had COVID-19?
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Emerging Evidence on Immune Response & Clinical Benefit

- After COVID-19 infection AND vaccination (≥ 1 dose vs no dose)
 - **Improved Ab response and cellular immunity vs original strain AND variants**
 - Two kinds of memory B-cells \rightarrow durable highly specific Ab vs original strain; and broader array of Ab vs variants – takes time to develop
 - **Reduced recurrent infections** (? Most relevant after Pfizer)
- After extended intervals between vaccine doses (12-16 wks vs 3-4 wks)
 - **Improved Ab response and cellular immunity vs original strain AND variants**
 - Not known yet whether and when waning against mild infections (but not necessarily severe infections) occurs after extended dose intervals as has been observed with short intervals

Questions

- An un-vaccinated adult develops COVID-19 and has “residual symptoms” with cough & fatigue, 30 days post-diagnosis.
 - Is it reasonable to defer COVID vaccine until they are feeling better (issue temporary exemption letter) or just get vaccinated?

Should Vaccination be Delayed after PCR-confirmed COVID-19 Infection?

- National Advisory Committee on Immunization
 - Initially recommended 3-month delay (during vaccine shortage), now *“should no longer be infectious... and acute symptoms should be resolved...”*
- Alberta
 - AB Health – no deferral for previous infection
 - AHS Scientific Advisory Group – *“Defer vaccination until person has recovered from the acute illness and more than 10 days have elapsed since symptom onset. (Some guidance suggests vaccination 3 months after acute illness.)”*
- EU/UK/Israel Immunity passports
 - Includes <6 month deferral after COVID-19 infection

Questions

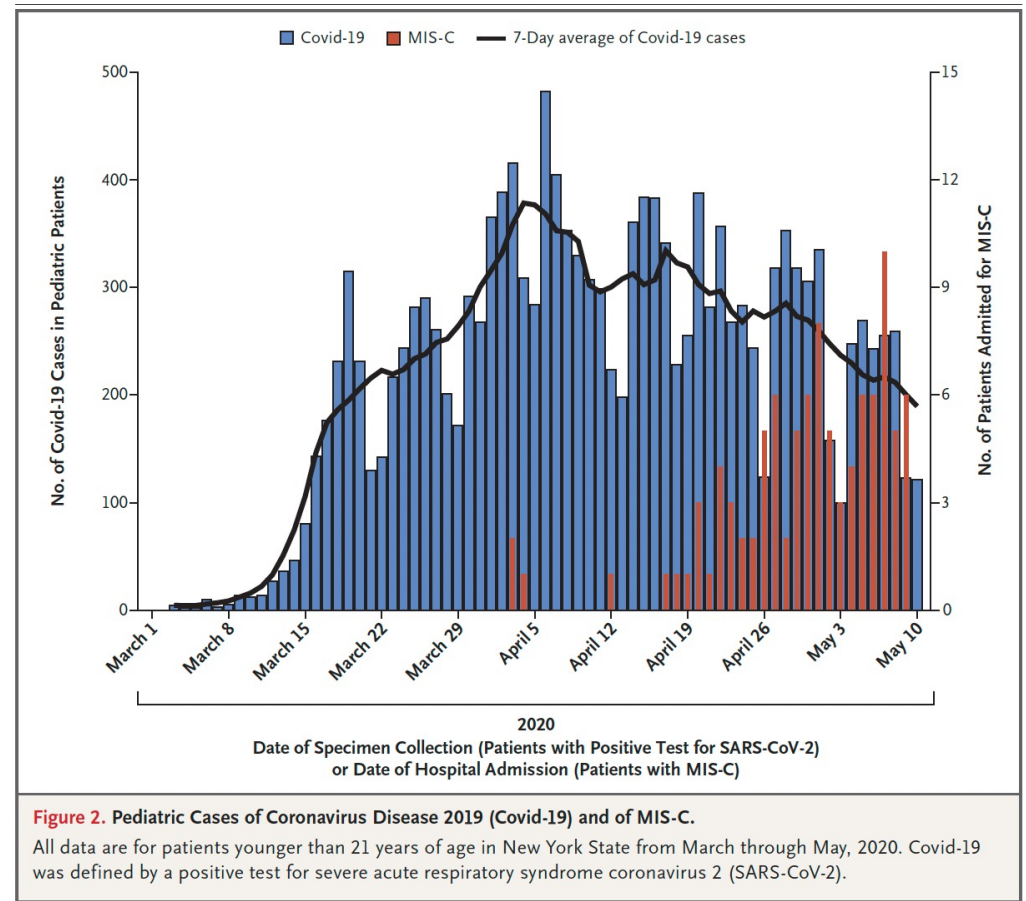
- What are the symptoms of Multisystem Inflammatory Syndrome in Children (MIS-C) that could present to a family physician's office?

Complications in Children

- **Multisystem Inflammatory Syndrome in Children** (MIS-C, also MIS-N MIS-A)
 - Incidence estimated to be 3/10,000 SARS-CoV-2 infections, peaks 4–6 weeks after surges in SARS-CoV-2 infections
 - ~75% require ICU admission, ≥2% mortality
- WHO Definition
 - Children and adolescents 0–19 years of age with **fever ≥3 days**
 - and 2 of the following:
 - **Rash** or bilateral non-purulent conjunctivitis or muco-cutaneous inflammation signs (oral, hands or feet).
 - Hypotension or shock.
 - Features of myocardial dysfunction
 - Evidence of coagulopathy
 - **Acute gastrointestinal problems** (diarrhoea, vomiting, or abdominal pain)
 - and Elevated markers of inflammation such as ESR, CRP, or procalcitonin.
 - and No other obvious microbial cause of inflammation
 - and Evidence of COVID-19 (RT-PCR Ag+ or serology+) or likely contact with COVID-19

MIS-C Timeline

- Cases present after the peak of acute COVID-19 wave by 2-4 weeks
- In Delta variant wave, some evidence of more acute severe COVID-19 cases and fewer MIS-C cases (some biologic plausibility)





*“Honey, come look! I’ve found some information all
the world’s top scientists and doctors missed.”*

Jon Adams™ on Twitter @citycyclops