COURT FILE NO.	2203-04046
COURT	COURT OF QUEEN'S BENCH OF ALBERTA
JUDICIAL CENTRE	EDMONTON

Clerk's Stamp

APPLICANTS	**C.M, LITIGATION GUARDIAN FOR A.B., S.A., LITIGATION GUARDIAN FOR F.S. C.H., LITIGATION GUARDIAN FOR G.H., A.B. LITIGATION GUARDIAN FOR J.K., R.L., LITIGATION GUARDIAN FOR L.M., and ALBERTA FEDERATION OF LABOUR**
RESPONDENT	**HER MAJESTY THE QUEEN IN RIGHT OF ALBERTA**
DOCUMENT	**AMENDED CERTIFIED RECORD OF PROCEEDINGS**

ADDRESS FOR SERVICE AND CONTACT INFORMATION OF PARTY FILING THIS DOCUMENT	McLENNAN ROSS LLP #600 McLennan Ross Building 12220 Stony Plain Road Edmonton, AB T5N 3Y4	Lawyer: Gary Zimmermann Telephone: 780.482.9208 Fax: 780.733.9709 Email: gary.zimmermann@mross.com File No.: 20220908

1. Please find attached:

   (a) The decision or written record of the act that is the subject of the originating application for judicial review;

      i. The Record of Decision – CMOH Order 08-2022 ("**Decision**").

   (b) The reasons given for the decision or act;

      i. Unable to provide for reasons given in paragraph 2 below.

   (c) The document starting the proceeding;

      i. Unable to provide for reasons given in paragraph 2 below.

   (d) The evidence and exhibits filed with us; and

      i. Unable to provide for reasons given in paragraph 2 below.

   (e) Anything else in our possession relevant to the decision or act, namely

      i. See attached Schedule "A".

2. The following are parts of the notice to obtain record of proceedings that cannot be fully complied with and the reasons why:

Paragraph 1(b): The reasons given for the decision or act.	No reasons were given because the exercise of the authority to make a CMOH Order is a delegated legislative function given to medical officers of health, which includes the CMOH, under the Public Health Act.
Paragraph 1(c): The document starting the proceeding.	There is no such document. There is no commencement document that initiates a proceeding that results in the issuance of a CMOH Order. There is in fact no proceeding. Rather, section 29(2.1) of the *Public Health Act* sets out the conditions that must exist in order for the medical officer of health (which includes the CMOH) to take further action.
Paragraph 1(d): The evidence and exhibits filed.	None exist because the process does not allow for it. Although Dr. Hinshaw and her staff, along with staff from Health's Emergency Operations Centre, continually monitor and evaluate emerging scientific data regarding COVID-19 in Alberta, across Canada as well as around the globe to help inform policy options for CMOH Orders, evidence and exhibits are not filed with the CMOH as part of the decision-making process.
Paragraph 1(e): Power-Point presentation to Executive Council with information regarding the ongoing COVID-19 Pandemic.	Document subject to public interest immunity. See certificate filed previously in this Action, pursuant to 34(4) of the *Alberta Evidence Act*, RSA 2000, c A-18. **Attached as Appendix 2 hereto**.
Paragraph 1(e): The Official Record of Decision consisting of Cabinet meeting minutes arising from the February 8, 2022 meeting where ongoing public health orders were discussed and considered.	Document subject to public interest immunity. See attached certificate filed concurrently pursuant to 34(4) of the *Alberta Evidence Act*, RSA 2000, c A-18.
Paragraph 1(e)	As noted, Dr. Hinshaw and her staff, along with staff from Health's Emergency Operations Centre, continually monitor and evaluate emerging scientific data regarding COVID-19 in Alberta, across Canada as well as around the globe to help inform policy options for CMOH Orders. It is not possible to reconstruct every record that may have been reviewed prior to the Decision being made. However, Dr. Hinshaw and her staff have made best efforts to identify and provide the documents and information that were most critical and directly relevant to the Decision.

3. I certify that I have attached all records as required by Rule 3.19(1).

Name of person who certifies this record: Dr. Deena Hinshaw

Position: Alberta's Chief Medical Officer of Health

Signature: 

Schedule "A"

Tab	Date	Description
1	As of January 31, 2022	Jurisdictional scan of masking requirements in other Canadian provinces and territories as well as other countries
2	February 2022	Guidance for Schools (K-12) and School Buses
3	January 10, 2022	CMOH Order 02-2022
4	February 2, 2022	CMOH Order 04-2022
5	February 7, 2022	Alberta COVID-19 Immunization Program Report (Information as of February 7, 2022)
6	February 7, 2022	Memo from Premier's Office Staff to Premier Kenney Re: Student Masking in School. Copy provided to Dr. Hinshaw.
7	February 7, 2022	COVID-19 – COVID and Schools.
8	February 7, 2022	Email from Scott Fullmer to Dr. Hinshaw and others Re: School Masking Evidence Summary.
9	February 8, 2022	COVID-19 Situation Update – Epidemiology and Surveillance.
10	February 8, 2022	Documents from Alberta Health Internal Dashboard – COVID-19 in Alberta, Analytics and Performance Reporting Branch, Epidemiology and Surveillance Unit. Analytics and Performance Reporting Branch, Epidemiology and Surveillance Unit, 2022-February-08 12:01
11	March 2, 2022	Briefing Note – Advice to Honourable Jason Copping, Minister of Health – COVID-19 Measures in Schools – for information (plus attachments – COVID-19 Measures in Schools Alberta Data and COVID-19 Measures in Schools Literature).
12	May 31, 2022	Appendix 1 - summarizing context of COVID-19 and evidence relevant to masking in schools at the time of the decision.

Appendix 1

Context of COVID-19 in Alberta at time of decision

It is important to remember that masks were never provincially required in children in school in kindergarten to grade 3, so the change to the requirements was for those in grades 4 and above.

Immunization (see TAB 5)

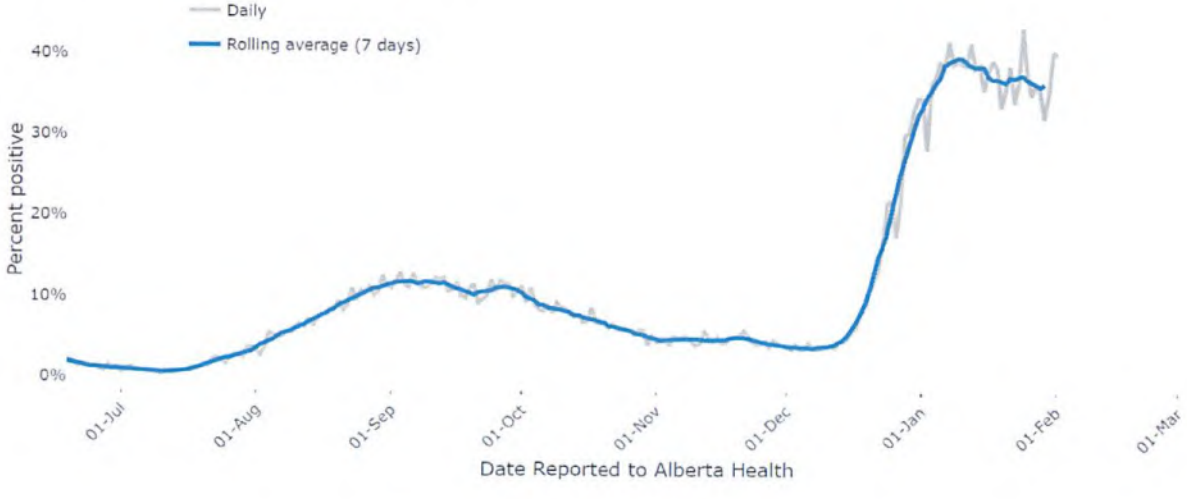
- By February 8, 2022, 46% of children 5-11 years old had received one dose of vaccine while 18% had received two doses. All children in this age group were eligible to receive vaccine, and sufficient time had elapsed for two doses to have been received for those families who chose this layer of protection.
- For 12-19 year olds, 87% had received one dose and 82% had received two doses.

Treatment and testing available

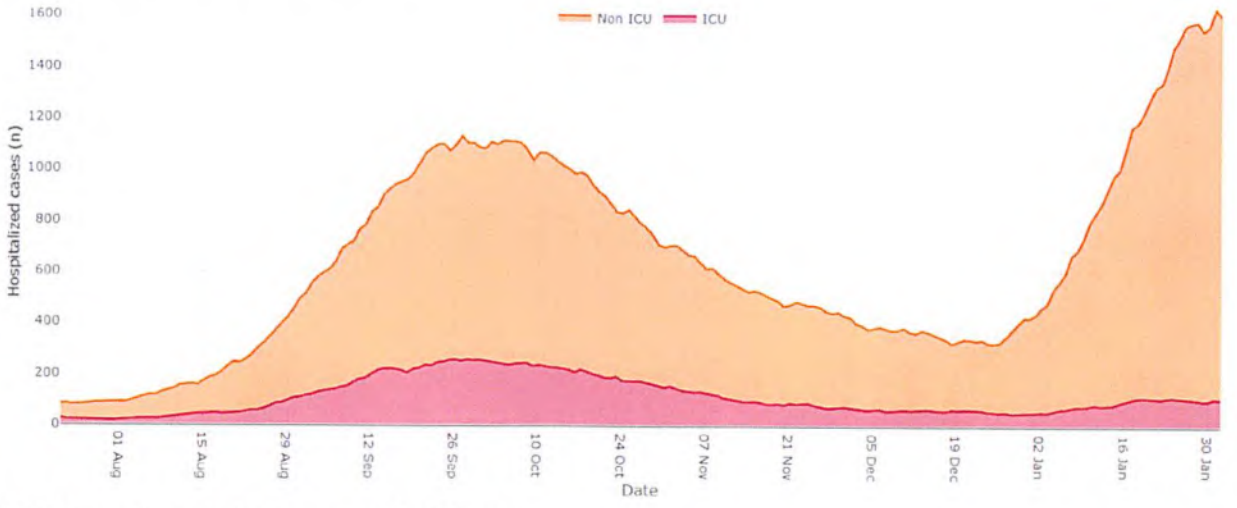
- Rapid Antigen test kits had been made available to families of school-aged children and were being made available to the public for at-home use at participating pharmacies.
- Outpatient treatments were available to prevent the highest risk patients with mild to moderate COVID-19 symptoms from progressing to severe disease.

Cases and hospitalization (see TAB 10)

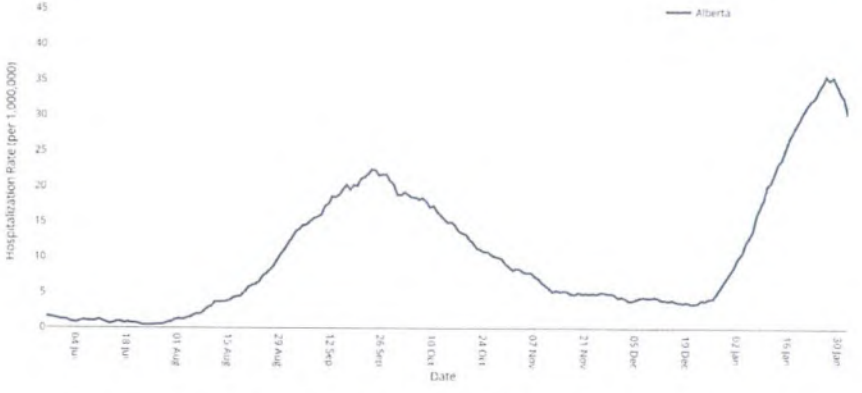
- Daily new case counts were declining from the peak of the Omicron wave.
  Test positivity rate had begun to decline



Hospitalizations were at a plateau



Rate of new hospitalizations was declining



Rate of new hospitalizations (7-day rolling average, average of current day and previous 6 days) by admission date in Alberta and by zone

Evidence of effectiveness of masks in education settings (see TAB 6 and TAB 8)

- Analysis of research literature indicated wearing masks can be effective in contributing to reducing the transmission of COVID-19 in public and community settings; however, the impact of masking in schools was less clear, with mixed results from different studies.
- The range of policies in place across different jurisdictions limited the ability to evaluate the impact of single specific measures for daycare or school settings due to variability in the combination of measures implemented.
- It was difficult to determine the effect of removing or changing one measure (e.g. masking), as many of the studies examining COVID-19 incidence in schools had layered infection prevention and control measures in place.

- Studies found that transmission in schools has remained limited under a wide range of prevention measures, such as masking, cohorting, cancelling higher-risk activities, distancing, hygiene protocols, reduced class size, and enhanced ventilation.
- Alberta data looking at schools that did or didn't have requirements for masks in the fall of 2021, before provincial masking requirements were reinstated, showed more outbreaks in schools without masking requirements than in those with masking requirements. It cannot be definitively concluded that the lack of masking caused more outbreaks, however, as there could be systematic differences in communities that influenced school boards' masking policy decisions that could have also influenced community transmission risk and impacted these results.
- Different groups of clinical experts had come to different conclusions about the importance of school mask mandates as a single intervention, and the balance of benefits and potential risks. For example, see:

    - https://static1.squarespace.com/static/61e5afd7a33d334ec9f84595/t/62115f823054865c6d5497a3/1645305731693/Urgency+of+Normal+Toolkit.pdf

    - https://covid19-sciencetable.ca/wp-content/uploads/2022/01/Ontario-Returns-to-School-An-Overview-of-the-Science_20220112-1.pdf

Negative effects of mask-wearing for children (see TAB 6)

- Masks can disrupt learning and interfere with children's social, emotional, and speech development by impairing verbal and non-verbal communication, emotional signaling, and facial recognition.

Lower risk of severe outcomes for children

- Children are less likely to have a severe outcome if infected with COVID-19. This information can be seen in Table 7 of the Severe Outcomes tab of TAB 10 showing that the rate of COVID-19 hospitalizations in school-aged children is 0.3 per 100 cases in those age 5-9 and 0.5 per 100 cases in those age 10-19. Rates of ICU admissions and deaths are even lower. The severe outcome risks for those in these two age groups is the lowest of all age groups.

Other measures in place to mitigate transmission risk

- While the masking requirement was removed for youth under thirteen years of age in all settings and for students enrolled in kindergarten through grade 12 while attending at a school and participating in curriculum related or extracurricular activities, other measures remained in effect in schools, including:
    - Mandatory symptom screening prior to school attendance, and mandatory isolation for all those with COVID-19 symptoms
    - Cohorting for kindergarten to grade six
    - Physical distancing from those not in their cohort
    - Mandatory masking for adults

- Guidance for schools and school buses supported schools to reduce opportunities for transmission, including:
  - Practices to minimize the risk of transmission of infection among attendees
  - Procedures for rapid response if an attendee developed symptoms of illness
  - Maintenance of high levels of sanitation and personal hygiene.
- Guidance for Schools (K-12) and School Buses https://open.alberta.ca/dataset/eca63dc4-1fd4-4eb4-9e3d-572d6004c0f8/resource/9b2ca09f-5265-48a9-8921-3b03be59d7a9/download/health-covid-19-information-guidance-schools-k12-school-buses-2022-03.pdf
- CMOH Order 02-2022 and CMOH Order 04-2022 (see TABS 3 and 4) required isolation for persons who were symptomatic, asymptomatic but with a positive rapid test result, and confirmed cases of COVID-19. Therefore, children and others in these cases were not permitted to attend school.

Public Context

- Mask requirements for schools was a divisive issue in some communities as increasing numbers of parents and students were protesting mask mandates, including protests staged at schools.

Jurisdictional comparison

- The World Health Organization did not recommend masks for children under age 6.
- The European Centre for Disease Prevention and Control recommended against the use of masks for any children in primary school.
- Some jurisdictions began easing public health measures after reaching their Omicron peak, including Denmark, England, Scotland, Ireland, Norway, South Africa, Finland and Sweden.
- The United Kingdom, Denmark, Sweden, Finland, Norway, and the Netherlands did not require children under the age of 12 to wear masks at any time.
- Mask mandates had been lifted in California, Connecticut Delaware, New Jersey just prior to the change in Alberta.

Decision making process

In the response to the COVID-19 pandemic, the *Public Health Act* was used in ways and on a scale that did not have a precedent. Given the wide-sweeping implications of CMOH orders that set new legal requirements for the province of Alberta in order to minimize the impacts of the novel virus, processes were put in place to ensure that policy of this nature was substantively informed by decisions made by elected officials in committees of cabinet tasked with directing Alberta's COVID-19 response.

This process involved the CMOH providing advice and recommendations to elected officials on how to protect the health of Albertans. Those elected officials took that advice as one part of the considerations in the difficult decisions that they had to make in response to COVID-19. The final policy decision-making authority rested with the elected officials, and those policy decisions were then implemented through the legal instrument of CMOH Orders. In making the CMOH Orders, the CMOH determined how to operationalize each policy decision.

Given this process described above, in the first submission for this judicial review, the documentation informing CMOH Order 08-2022 was understood to be the information before the Priorities Implementation Committee of Cabinet (PICC) when they determined the next steps in managing COVID-19 in Alberta, and the minutes of the decisions from that committee, which informed the content of CMOH Order 08-2022. Neither of these documents could be released, due to Cabinet confidence.

APPENDIX 2

Alberta Rules of Court
Rule 9.1

COURT FILE NO.	2203 04046
COURT	Court of Queen's Bench of Alberta
JUDICIAL CENTRE	EDMONTON

Clerk's Stamp
JUDICIAL CENTRE OF EDMONTON
FILED
Apr 14, 2022
by Email
CLERK OF THE COURT
CS

APPLICANTS	**C.M, LITIGATION GUARDIAN FOR A.B., S.A., LITIGATION GUARDIAN FOR F.S., C.H., LITIGATION GUARDIAN FOR G.H., A.B. LITIGATION GUARDIAN FOR J.K., R.L., LITIGATION GUARDIAN FOR L.M., and ALBERTA FEDERATION OF LABOUR**
RESPONDENTS	**HER MAJESTY THE QUEEN IN RIGHT OF ALBERTA**
DOCUMENT	**CERTIFICATE**

ADDRESS FOR SERVICE AND CONTACT INFORMATION OF PARTY FILING THIS DOCUMENT	McLENNAN ROSS LLP #600 McLennan Ross Building 12220 Stony Plain Road Edmonton, AB T5N 3Y4	Lawyer: Gary Zimmermann/Steven Dollansky Telephone: 780.482.9208 Fax: 780.733.9709 Email: gary.zimmermann@mross.com File No.: 20220908

CERTIFICATE OF MEMBER OF THE EXECUTIVE COUNCIL

CERTIFICATE OF TYLER SHANDRO, QC
Dated April 12th, 2022

Pursuant to section 34 of the *Alberta Evidence Act*, RSA 2000, c A-18, I certify the following:

1. In the course of her employment as Chief Medical Officer of Health ("CMOH") for Alberta, Dr. Deena Hinshaw has engaged in confidential high-level discussions and prepared documents and records for members of the Executive Council, also known as Cabinet, regarding the COVID-19 pandemic.

2. Prior to the implementation of CMOH Order 08-2022 (the "Decision"), Dr. Hinshaw prepared a power-point presentation (the "Power-Point") with information regarding the ongoing COVID-19 Pandemic to facilitate discussions as to what course of action to carry out. This Power-Point was prepared and presented on February 8, 2022, with the sole intended recipient as being Cabinet, given the sensitive nature of deliberations and considerations that go into the production of public health orders.

3. Furthermore, Cabinet prepared an Official Record of Decision ("ORD") consisting of meeting minutes arising from the February 8, 2022 meeting. The ORD arises from confidential discussions and deliberations which occurred within Cabinet, including Dr. Hinshaw.

4. As the Supreme Court of Canada has repeatedly confirmed, it is of the utmost importance that Cabinet members be free to discuss all aspects of the issues that come before them and express all manner of views, without fear that what they read, say or act on will be subject to public scrutiny. If Cabinet members' statements were subject to disclosure, this could impede the free flow of discussion and injure the process of democratic governance.[1]

5. These concerns are particularly present in the politically sensitive context of the ongoing and rapidly-changing COVID-19 pandemic.

6. The Power-Point was prepared for Cabinet's considerations in making decisions in conjunction with Dr. Hinshaw on how to respond to the COVID-19 pandemic, which involve ongoing important and significant public policy issues.

7. Accordingly, I certify that the Power-Point and the ORD must be kept confidential and not disclosed.

8. Disclosure of the Power-Point and the ORD would be both (a) not in the public interest, and (b) prejudicial to those not involved in this litigation, as the precedential impact of being compelled to disclose confidential Cabinet discussions, or materials prepared for Cabinet's consideration, could impede the free flow of future Cabinet discussions, or the preparation of materials for Cabinet consideration, thereby negatively impacting the democratic governance of the Province of Alberta.

The Honourable Tyler Shandro, QC
Minister of Justice and Solicitor General for Alberta,
Deputy House Leader
Member of the Executive Council

[1] *Babcock v Canada (Attorney General)*, 2002 SCC 57 at para 18; See also *British Columbia (Attorney General) v Provincial Court Judges Association of British Columbia*, 2020 SCC 20 at paras 95-98

TAB 1

Jurisdictional Scan – School Masking Requirements as of January 31

Jurisdiction	School masking requirements
World Health Organization	Did not recommend masks for children under age 6
European Centre for Disease Prevention and Control	The use of masks was not recommended for children in primary school
United Kingdom	January 20: secondary and college students are no longer required to wear a mask in classrooms January 27: mask mandate for events and venues lifted
Ireland	Mask mandate and school measures to be removed February 28
United Kingdom, Denmark, Sweden, Finland, Norway, Netherlands	Did not require children under the age of 12 to wear masks at any time
British Columbia, Manitoba	Masking is required in public spaces for everyone over 5
Saskatchewan, Ontario	Masking is required in public spaces for everyone over 2
Quebec	Masking is required in all indoor public spaces for everyone over 10. QC recommends people from 2 to 9 wear masks.

TAB 2

COVID-19 INFORMATION

GUIDANCE FOR SCHOOLS (K-12) AND SCHOOL BUSES

Overview

Routine public health practices can minimize transmission of respiratory infections, including COVID-19, influenza and common colds. These practices include: getting vaccinated, staying home when sick, proper hand hygiene and respiratory etiquette, enhanced cleaning and disinfecting, and maintaining ventilation systems.

The guidance provided in this document is intended to support school and school authority leaders in reducing opportunities for transmission of COVID-19, including the more transmissible Omicron variant, in schools under the 2021-22 School Year Plan. This includes:

a) practices to minimize the risk of transmission of infection among attendees;
b) procedures for rapid response if an attendee develops symptoms of illness, and
c) maintenance of high levels of sanitation and personal hygiene.

All schools are required to follow this guidance to the extent possible. Schools/school authorities should establish their own COVID-19 plans based on this guidance. Where any part of this guidance is inconsistent or in conflict with enhanced or stronger public health restrictions set out in a CMOH Order, the enhanced or stronger public health measures would prevail.

Schools refers to public, separate, francophone, charter schools, independent (private) school authorities, independent (private) Early Childhood Services (ECS), online/distance education programs, home education programs and First Nations education authorities, from kindergarten through grade twelve. School-based and curriculum-based activities that may be impacted by this guidance include sports, music and field trips into the community or to other schools, and professional development/activity days.

This information is relevant to all schools in Alberta including those on reserve, recognizing that First Nation schools on reserve are a federal responsibility. For public health information, COVID-19 questions or for reporting purposes, First Nation schools should contact their local Health Centre or Indigenous Services Canada-First Nations and Inuit Health Branch Environmental Public Health Services (ISC-FNIHB) office (see Appendix A), in accordance with normal practice.

It is important that measures be implemented in all settings to reduce the risk of transmission of COVID-19. This includes, but is not limited to ensuring: physical distancing, barrier use (where appropriate), proper hand hygiene and respiratory etiquette, enhanced cleaning and disinfecting, records management and building maintenance. Schools and school authorities must also follow the requirements set out in the General Operational Guidance and CMOH orders in effect.

Zone Medical Officers of Health (MOHs) and their designates are available to provide guidance on communicable disease risk and risk management. If you have concerns, need specific guidance, or have questions about how to apply the measures in this document, please contact Environmental Public Health in your Zone for assistance (see Appendix A).

GUIDANCE FOR SCHOOLS (K-12) AND SCHOOL BUSES

COVID-19 Risk Mitigation

Vaccination	• All Albertans aged 5 and older are eligible for a COVID-19 vaccine. • Vaccines provide a significant level of protection against severe outcomes from COVID-19. Two doses of the COVID-19 vaccine plus a booster, when appropriate, have been shown to be highly protective against infection, and most importantly against severe disease. • While vaccine uptake in children aged 5 to 11 years old continues to grow, the subsequent protective effects of the vaccine may take time for this age group. It is important that those around them, including parents/guardians, older students and school staff, receive the vaccine in order to reduce community transmission and protect this age group. • For more information, please visit alberta.ca/covid19-vaccine.

General Building Safety	• HVAC systems should be maintained in accordance with manufacturer operational guidelines. For more information on building ventilation, please refer to the General Operational Guidance and School Indoor Air Quality (IAQ) - Mechanical Ventilation in Schools (albertahealthservices.ca).
	  ○ If the use of portable air purifiers with HEPA filters is being considered, they should be used in combination with established public health measures, considering the impact they may have on overall indoor air quality and ventilation, and only in situations where enhancing natural or mechanical ventilation is not possible. If used, air purifiers should be large enough for the size of the room or area where they are being used.
	• Schools should have procedures that outline hand hygiene requirements:
	  ○ Hand hygiene frequency should be based on activity (e.g., entering/leaving school or classroom, boarding/exiting the bus, changing activities, before and after using shared equipment, before and after eating, putting on/removing a mask, after using washrooms, etc.)
	  ○ Handwashing with soap and water where possible is very effective.
	  ○ Hand sanitizer containing at least 60% alcohol should be placed in convenient locations throughout the school where soap and water may not be available, such as in entrances, exits and near high touch surfaces. If parents have questions about their child using alcohol-based hand sanitizer they should contact their school administration to discuss potential alternatives.

GUIDANCE FOR SCHOOLS (K-12) AND SCHOOL BUSES

- Hand sanitizer can cause serious harm if ingested. Keep out of reach of younger children/students, supervise them during use and place hand sanitizer in monitored areas.

- Schools should have procedures that outline cleaning requirements:
  - Increase frequency of cleaning (removing visible dirt) and disinfection (killing germs) of high-touch areas and equipment (e.g., desks, doorknobs, handrails, microwave ovens, vending machines, etc.) inside and outside classrooms.
  - Common area surfaces should be cleaned and disinfected frequently throughout the day.
  - Student contact surfaces (e.g., desks and equipment) should be cleaned and disinfected between each student/user. Restrict sharing of supplies as much as possible.
  - Students should be provided with separated areas to store personal items. Individual assigned lockers may be used. Scheduling or planning times for locker use to minimize congregating at lockers may also be considered. Follow general guidance for cleaning and minimize crowding around lockers.
  - Disinfectants used must have a Drug Information Number (DIN) and a broad-spectrum virucidal claim OR a virucidal claim against non-enveloped viruses or coronaviruses. Alternatively, 1000 ppm bleach solution can be used.
  - Follow the instructions on the product label to disinfect effectively.
  - More information on cleaning and disinfection can be accessed in the General Operational Guidance. Further recommendations are available in the AHS COVID-19 public health recommendations for environmental cleaning of public facilities.
- Water fountains can remain open. Mouthpieces of drinking fountains are not a major source of virus transmission and require regular cleaning according to manufacturer recommendations.
- Use hand hygiene before and after handling items, including paper tests and assignments.
- Items that cannot be cleaned or disinfected between routine use (e.g., paper books, shared electronics, blocks, crayons, etc.) should be stored for 24 hours between uses.
- Additional Alberta Health Services resources:
  - AHS Infection Prevention & Control posters
  - Hand Washing Posters (AHS)
    - Poster 1
    - Poster 2

GUIDANCE FOR SCHOOLS (K-12) AND SCHOOL BUSES

	○ How to Hand Wash (AHS) poster ○ How to use alcohol-based hand rub/sanitizer (AHS) poster
Screening	• Before leaving home, staff (including substitute teachers), children/students, visitors, and volunteers who will access the school for work or education, are expected to self-screen for symptoms each day that they enter the school using the applicable checklist for their age group (Child Alberta Health Daily Checklist or Adult Alberta Health Daily Checklist). • Parents and children/students should be provided a copy of the screening checklist. This can be a hard copy or a link to the digital copy of the screening checklist. • Schools should have copies of the daily checklists available for visitors to the school. • Although health screening of staff, students and visitors is required, there is no requirement for verification or the collection and retention of formal records. • Schools should keep records of children's known pre-existing medical conditions. If a child develops symptoms that could be caused by either COVID-19 or by a known pre-existing condition (e.g., allergies), the child should be tested at least once for COVID-19 to confirm that it is not the source of their symptoms before entering or returning to school. • Written confirmation by a physician that a student or staff member's symptoms are due to a chronic illness is not necessary. • Anyone who reports symptoms should be directed to stay home and use an at-home rapid antigen test if available. For more information refer to the rapid testing at home website. • If anyone requires urgent medical attention, they should call 911 for emergency response. • Signs must be posted reminding persons not to enter if they have COVID-19 symptoms, even if symptoms resemble a mild cold.
Cohorting in Kindergarten Through Grade 6	• A cohort is defined as a group of students and/or staff who remain together. • Students in kindergarten through grade 6 are to remain in cohorts wherever possible. Typically a cohort in a school will be a class. • Limit the number of cohorts that students in kindergarten through grade 6 are involved in.

GUIDANCE FOR SCHOOLS (K-12) AND SCHOOL BUSES

	• The size of the cohort will depend on the physical space of the classroom or learning setting. In very small schools (e.g., equivalent to a single class size), the school may be considered one cohort. • For the purposes of minimizing exposure, consider limiting the number of individuals in a room that allows for physical distancing (i.e., fewer students in a smaller room and more students in a larger room). • Cohorting should be maintained during activities outside the classroom, such as recess and lunch breaks. If students from two different cohorts wish to socialize, they should remain 2 metres apart. • If two or more people from different cohorts are required to come within 2 metres of one another for the purposes of instruction, practice or undertaking examinations, additional protections should be instituted. Consider using engineering controls such as plexiglass barriers or partitions that extend across breathing zones and are made of materials that can be cleaned and disinfected between users, or administrative controls such as adapting the activity to minimize or eliminate close contacts. • Teachers who regularly interact within 2 metres of students in their class are considered part of the cohort. If teachers interact with more than one group of students without distancing, they are part of multiple cohorts. • As much as operationally possible, limit the number of classroom cohorts that teachers belong to. • If a teacher or staff member does not interact within 2 metres of students in their classes, they would not be considered part of the cohort. • Teachers/staff should not be in a cohort with each other, unless it is required for operational purposes. (i.e., a teacher and a teacher's assistant who work with the same classroom cohort).

Physical Distancing	• Schools should institute controls to promote physical distancing as much as possible between all students/staff in areas inside and outside of the classroom, including hallways, washrooms and common areas. This may include:
	  ○ Staggering start and end times for classes to avoid crowded entrances or exits and hallways.
	  ○ Posting signs and marking floors with arrows to control the flow of traffic.
	  ○ Removing and restaging seating in public areas to prevent gathering.

GUIDANCE FOR SCHOOLS (K-12) AND SCHOOL BUSES

	○ Considering limiting bathroom occupancy to support physical distancing. • It is still recommended to maintain physical distancing within a cohort whenever possible to minimize the risk for disease transmission (i.e., spacing between desks). Students are not expected to sit at their desks for the duration of the day. ○ If 2 metres spacing cannot be arranged between desks/tables, the greatest possible spacing is recommended. Students should be arranged so they are not facing each other (e.g., arranged in rows rather than in small groups of 4 or a semi-circle). This way, if a student coughs or sneezes, they are not likely to cough or sneeze directly on the face of another student. ○ Consider removing additional items or pieces of equipment that are not in use from classrooms to allow more space to spread out. • In situations where physical distancing is not possible (e.g., on the bus, in classrooms and while participating in some sporting activities), or for younger grades with play-based curricula, there should be extra emphasis on hand hygiene, respiratory etiquette, not attending school when ill and cleaning and disinfecting on a regular basis before and after activities. • Schools should develop procedures for drop-off that support physical distancing where possible between all persons (except household members). Consider strategies to support physical distancing or utilize other protocols to limit contact between staff/parents/guardians/children/students as much as possible: ○ Designate entrances for classes/groups of students. ○ Physical distancing markers in crowded areas. ○ Stagger drop off/bus arrival times, coordinated with entry/exit. ○ Encourage parents/guardians to remain outside during drop-off and pick-up. • Where possible, avoid large gatherings of students and staff (e.g., assemblies, in-person group professional development day activities). ○ Virtual options are recommended instead of in person gatherings whenever possible. ○ If virtual assemblies are not possible, minimize the number of people in attendance as much as possible and keep cohorts (K-6) 2 metres apart.
Masks	• Masking is no longer required for students in K-12 during curriculum-related activities or when participating in extracurricular school activities. Masking during the school day remains a personal health choice for students and their parents/guardians.

GUIDANCE FOR SCHOOLS (K-12) AND SCHOOL BUSES

- Masking is required for anyone 13 years and older while attending spectator events.

- Students at higher risk of severe outcomes from COVID-19 are recommended to continue wearing a well-fitting three layer cloth mask or medical mask to reduce their risk of infection.
- Students who become ill while at school should be provided with a medical mask that can be worn while waiting to go home (See Section on Responding to Illness).
- Fully vaccinated students or staff recovering from COVID-19 who are completing their day 6-10 mandatory masking period at school must wear a mask at all times and must not share breaks where masks must be removed to consume food or beverages with non-COVID-19 infected individuals. If more than one individual is isolating, it is possible to cohort people with COVID-19 for breaks and lunch.
- Teachers, staff and adult visitors must follow provincial requirements for masks.
  - Masks should be well-constructed, well-fitted and properly worn.
  - If non-medical masks are worn, they should be constructed of at least three layers: two of breathable tightly woven fabric, such as cotton, and an additional effective middle filter layer, such as non-woven polypropylene.
  - Medical masks can also be worn to provide additional protection.
- All staff members, volunteers, and adult visitors are required to wear a mask while in indoor shared areas of school, outside the classroom, and on a school bus. Please see current CMOH orders for additional information.
  - A teacher/staff may remove a mask when alone at a workstation and separated by at least two metres from all other persons.
- Face shields are not equivalent to non-medical face masks and offer insufficient protection on their own. Other alternatives (e.g., neck gaiters, buffs or bandanas) offer less protection than masks and are therefore not recommended.
- Face shields may be worn in addition to a mask, at the discretion of the individual. Staff may elect to wear a face shield or eye protection in addition to a mask when completing personal care of students or when staff are in close contact with students (i.e., symptomatic students awaiting pick up by parents/guardians).

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	• Schools should consult their designated Occupational Health and Safety department for mask-wearing policies and other personal protective equipment policies for their staff.
	• Very few individuals may not be able to wear masks due to sensory or health issues. It is important to comply with other personal preventative practices such as frequent hand hygiene, physical distancing and strict cohorting as much as possible.
	• Persons seeking a mask exception at a school should discuss their request with the school administration.
	• Exceptions to the mask requirement for staff, volunteers and all adult visitors include:
	  ○ Persons who are unable to place, use or remove a non-medical face mask without assistance;
	  ○ Persons unable to wear a non-medical face mask due to a mental or physical concern or limitation;
	  ○ Persons consuming food or drink in designated areas;
	  ○ Persons engaged in physical exercise;
	  ○ Persons seated at a desk or table within a classroom or place where instruction is taking place and where the desks, tables and chairs are arranged in a manner to prevent persons who are seated from facing each other, and to allow the greatest possible distance between seated persons;
	  ○ Persons providing or receiving care or assistance where a non-medical face mask would hinder that caregiving or assistance, and
	  ○ Persons separated from every other person by a physical barrier.
	• School administrators/authorities should develop a plan to ensure that students who are hearing impaired or who rely on facial cues are able to communicate with others in areas where masks are being worn, or have their educational needs met when teachers are wearing masks in the classroom. This may include the use of transparent masks. As with other masks, it is important that transparent masks cover the nose and mouth, as well as fit securely against the face.
	• School staff should monitor for and address any discrimination or bullying associated with a student either wearing or not wearing a mask.
	• Students who prefer to wear a mask while attending school should be supported to do so.

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	• Masks should not be worn by anyone who is unable to remove the mask without assistance (e.g., due to age, ability or developmental status).
Field Trips	• If schools wish to continue with off-site activities including field trips, they should follow the school guidance, as well as any sector-specific restrictions or recommendations relevant to the location of the field trip. This includes physical distancing, cohorting for students in kindergarten through grade 6, hand hygiene, respiratory etiquette and enhanced cleaning and disinfection. Considerations would include: ○ Avoiding off-site activities or locations with higher risks including those that might involve crowded public venues, hands-on activities with shared items, shared transport or situations where vulnerable populations are involved (e.g. congregate care, hospital). ○ Individual classroom cohorts for students in kindergarten through grade 6 should be maintained during transportation to and from any external field trip site, as well as at the location of the field trip site. If two cohorts share a bus, separate the cohorts by 2 metres. ○ Organizations providing off-site activities should comply with sector-specific restrictions and recommendations. ○ An organization or facility should only host one classroom cohort at a time, or should take clear steps to separate multiple groups to ensure they do not use shared areas (e.g., lunch rooms). ○ Organization or facility staff at the off-site activity should maintain physical distancing of at least 2 metres from the visiting students and staff. ○ Hold activities outdoors as much as possible. ○ Schools should develop procedures to address students or staff developing symptoms during the field trip; plans should include a designated area to isolate the ill individual, what extra supplies may be needed (e.g., mask for the child, mask/face shield for the individual attending to the child, etc.), how to notify a parent/guardian and how the ill child will be transported home from the off-site activity. • Schools must follow the CMOH orders as they relate to curriculum-based educational activities and extra-curricular activities. For more information about current restrictions, see the webpage for public health actions.

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	• In-school field trips may also occur. All visitors to the school are expected to follow the public health measures that are in place for the school.

Performance Activity	• Students are able to participate in a group performance activity (i.e., singing, dancing, playing instruments, theatre) as part of their education program curriculum.
	  ○ Maintain 2 metres physical distancing between participating students, where possible.
	  ○ Singers and wind instrument musicians should keep 2 metres away from other performers and individuals at all times.
	  ○ Wind instruments should be equipped with a cover intended to prevent droplet transmission.
	  ○ In indoor settings, groups should not sing or play wind instruments for more than 30 minutes at a time, with a 10-minute break afterwards to allow for air exchange in the room.
	• Students are able to participate in an extracurricular performance activity following the CMOH orders for general youth performance activities. For more information about current restrictions, see the webpage for public health actions.
	• All spectators and attendees 13 years or older must be masked.
	• It is recommended that at this time, school authorities limit opportunities for spectating at school performance and sporting events to reduce potential exposures to COVID-19.
	• If spectating opportunities are offered, spectators at school-related indoor performance activities held at the school (e.g., Christmas/Holiday concerts, recitals, etc.) are subject to the following restrictions:
	• Spectator attendance limits at indoor performance activities are removed except for:
	  ○ Facilities with capacity of 500 to 999, which will be limited to 500.
	  ○ Facilities with capacity of 1,000-plus, which will be limited to 50 per cent.
	• It is recommended that spectators maintain 2 metres physical distance between households. Individuals who live alone may sit with their two designated close contacts.

Physical Activity	• Students are permitted to participate in group physical activity as part of an education program curriculum (i.e., physical education class and

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	sports academy classes may occur). Participants must continue to follow the school guidance regarding cohorting (kindergarten through grade 6), physical distancing, hand hygiene and respiratory etiquette. ○ When possible, physical education should be done outside instead of inside as the risk of transmission is higher in indoor settings. ○ For physical education classes, administrators and teachers should, where possible, choose activities or sports that support physical distancing and limit face-to-face activities (e.g., badminton over wrestling). • Students are able to participate in an extracurricular physical activity following the current CMOH orders for youth physical activity. For more information about current restrictions, see the webpage for public health actions. • It is recommended that school authorities limit extracurricular sport tournaments and inter-school games at this time, to reduce potential exposures to COVID-19. • Spectators and attendees 13 years or older must be masked (unless participating in the physical activity). • It is recommended that at this time, school authorities limit opportunities for spectating at school performance and sporting events to reduce potential exposures to COVID-19. • If spectating opportunities are offered, spectators at school-related group physical activities held at the school (e.g., sports games, tournaments) are subject to the following restrictions. • Spectator attendance limits at indoor performance activities are removed except for: ○ Facilities with capacity of 500 to 999, which will be limited to 500. ○ Facilities with capacity of 1,000-plus, which will be limited to 50 per cent • It is recommended that spectators maintain 2 metres physical distance between households. Individuals who live alone may sit with their two designated close contacts.
Expectations for Visitors and Other Service Providers Entering the School	• Adult visitors and volunteers are required to follow the school policies such as physical distancing, hand hygiene, staying home when ill and wearing a mask. • Parents/guardians can attend the school if they are required (e.g., parents/guardians may drop off student lunches or other necessary items as required).

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	• When a visitor, volunteer or service provider (including delivery drivers and independent contractors) enters the school they should be asked to use the applicable checklist for their age group (Child Alberta Health Daily Checklist or Adult Alberta Health Daily Checklist) before they enter the school.
	  ○ If a visitor, volunteer or service provider answers YES to any of the questions, the individual must not be admitted into the school.
	  ○ In the case of a delivery driver answering YES, the driver/school will make alternate delivery arrangements.

Food Services	• Classes that teach food preparation may occur as long as students follow general precautions, such as ensuring hand hygiene, respiratory etiquette, maintaining 2 metres physical distancing (where possible) and avoiding handling common or shared serving utensils or cookware.
	  ○ Any food prepared during a class that teaches food preparation should be served by a designated person. Students should follow physical distancing measures while eating and during food preparation where possible.
	• Activities that involve the sharing of food items between students or staff should not occur (e.g., pot luck, buffet-style service).
	• Parents/teachers can provide food/treats for a classroom if there is a designated person serving the food and appropriate hand hygiene is followed before and after eating. Please follow the school's policy for parent-provided food.
	• For classroom meals and snacks:
	  ○ Pre-packaged meals or meals served by designated staff should be the norm. No self-serve or family-style meal service should occur.
	  ○ There should be no common food items (e.g., salt and pepper shakers, ketchup bottle).
	  ○ Designated staff should serve food items using utensils (not fingers).
	• For food service program (e.g., cafeteria) establishments:
	  ○ Group students in kindergarten through grade 6 in their cohorts for meal breaks. Use alternate processes to reduce the numbers of people dining together at one time.
	  ○ If a school is using a common lunchroom and staggering lunch times, ensure that all surfaces of the tables and chairs (including the underneath edge of the chair seat) are cleaned and disinfected after each use.

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	○ Adapt other areas to serve as additional dining space to increase spacing among persons in the same room. ○ Do not use buffet-style self-serve. Instead, switch to pre-packaged meals or meals served by staff. ○ Dispense cutlery, napkins and other items to students/children, rather than allowing them to pick up their own items.
Responding to Illness	• Schools should have detailed plans for a rapid response if a student, teacher, staff member or visitor becomes symptomatic while at school. This includes: ○ Sending home students or staff who are sick, where possible. ○ Having a separate area for students and staff who are sick and waiting to go home. ○ Ensuring that students and staff with respiratory illness symptoms wear a medical mask continuously while in school setting. ○ Disinfecting areas and items touched by the sick student or staff member. ○ Staff members caring for an ill student should wear a medical mask and may use a face shield or other eye protections, if available. • Anyone with symptoms should isolate immediately, following AH isolation guidance and orders, use an at-home rapid antigen test if available. Refer to rapid testing at home for more information. • Fully vaccinated students experiencing fever, cough, shortness of breath or loss of sense of taste/smell **must** continue to isolate for 5 days from when their symptoms started or until they resolve, whichever is longer. For more information on isolation please visit alberta.ca/isolation. • For up to five days following their isolation, all fully vaccinated individuals must wear masks at all times when around others outside of home for up to 5 more days (10 days total). This means they must eat or drink alone, away from others. ○ If it's not possible to give each student in their day 6-10 mandatory masking period a private space to eat in, they can cohort together for meals in the same well-ventilated room. Distancing is recommended and individuals should remain masked at all times when not actively consuming food and drink. • If schools find this operationally challenging to accommodate, the consistent use of a 10 day absence prior to return, for both immunized and non-immunized cases, is an acceptable approach. • Students who are not fully vaccinated who are a case of COVID 19 or who have a fever, cough, shortness of breath or loss of sense of

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	taste/smell must continue to isolate for 10 days from when their symptoms started or until they are fever free for 24 hours without the use of fever reducing medication and other symptoms are improving, whichever is longer. If they receive a negative test result, they must continue to isolate until their symptoms resolve. For more information on isolation please visit alberta.ca/isolation.
	• Please see Appendix B for management of adults and children who are symptomatic and/or tested for COVID-19.
	• Proof of a negative COVID-19 test result is not necessary for a student, teacher or staff member to return to school.
	• It is strongly recommended that household contacts who are NOT fully vaccinated, stay home for 10 days from the date of last household exposure to the COVID-19 case
	  ○ In addition, they should monitor for symptoms for 10 days from the last day of household exposure, and if they develop any symptoms, they should isolate and complete the AHS Self-Assessment tool.
	  ○ If rapid antigen testing kits are available, they can be used on individuals to test for COVID-19. Refer to rapid testing at home for more information.
	  ○ For more information on isolation requirements for people with symptoms, please visit alberta.ca/isolation.

Student Transportation (Including School Buses)	• Parents and children/students should not be in the pick-up area or enter the bus if they have symptoms of COVID-19.
	• Bus drivers should be provided with a protective zone, which may include:
	  ○ 2 metre physical distance;
	  ○ Physical barrier; or
	  ○ Mask.
	• Students should be assigned seats. Students who live in the same household should be seated together.
	• Masks remain mandatory for all teachers, staff members and adult visitors on school buses and publicly accessible transit, such as municipal buses, taxis and ride-shares. School administrators/authorities must comply with current CMOH orders regarding masking requirements on school buses.
	• Schools/bus companies should develop procedures for student loading, unloading and transfers that support physical distancing of 2 metres between all persons (except household members), when possible and may include:

GUIDANCE FOR SCHOOLS (K-12) AND SCHOOL BUSES

	○ Children/students start loading from the back seats to the front of bus. ○ Where feasible, limit the number of students per bench unless from the same household. ○ Students from the same household may share seats. ○ Students start unloading from the front seats to the back of bus. ○ If there are students from two schools on the same bus, it is recommended to keep students from each school separated by 2 metres (3 rows) if possible. • A child who becomes symptomatic during the bus trip should be provided a mask if they are not already wearing one. The driver should contact the school to make the appropriate arrangements to pick up the child/student (see Responding to Illness above). • School bus cleaning and records: ○ Choose a disinfectant that has a Drug Identification Number (DIN) and a broad-spectrum virucidal claim OR a virucidal claim against non-enveloped viruses or coronaviruses and use it according to the manufacturer's instructions. More information is available in the AHS COVID-19 public health recommendations for environmental cleaning of public facilities. ○ Increase frequency of cleaning and disinfection of high-touch surfaces, such as door handles, window areas, rails, steering wheel, mobile devices and GPS prior to each run. ○ It is recommended that vehicle cleaning logs be kept. • Students and staff should be discouraged from carpooling unless they are from the same household. If carpooling is necessary, limit the number of people in the vehicle to maintain as much physical distance as possible and ensure all adult occupants wear masks and practice hand hygiene.
Work Experience	• Work experience is permitted as long as the risk of infection is mitigated for all participants. • If the work experience placement is in a workplace, the child/student is expected to follow health rules set out by the workplace which should comply with the General Operational Guidance and any applicable sector-specific guidance.
International Students/Programs	• International travel programs and international education programs in Alberta must follow current public health orders and local restrictions. • Individuals who have traveled from outside of Canada are provided with specific instructions and requirements at the border. They are to follow the Government of Canada Travel, Testing, Quarantine and

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	Borders instructions, including any requirements for exempt travelers related to attending high-risk environments. • School administrators/authorities are not expected to be assessing students for following requirements set out by the Federal *Quarantine Act*. • Students/families are not required to provide proof of vaccination status for school administrators/authorities. • Providing school administrators with proof of a negative test result after arrival in Canada is not required to attend school.
Compliance	• Concerns with individuals not complying with school protocols should be directed to the school principal, the school authority central office or Alberta Education. • School administrators and school authorities who have concerns, need specific guidance or have questions about how to apply the measures outlined in the guidance document may contact AHS Environmental Public Health in their zone for assistance. • Concerns identified by AHS should be discussed with the school administration. Concerns that cannot be resolved through this process should be directed to Alberta Health, who may bring forward to Alberta Education as appropriate.

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Appendix A: Environmental Public Health Contacts

Alberta Health Services

Portal link: https://ephisahs.albertahealthservices.ca/create-case/

ZONE	CONTACT EMAIL ADDRESS	PHONE NUMBERS FOR MAIN OFFICE
Calgary Zone	calgaryzone.environmentalhealth@ahs.ca	Calgary 403-943-2288
Central Zone	centralzone.environmentalhealth@ahs.ca	Red Deer 403-356-6366
Edmonton Zone	edmontonzone.environmentalhealth@ahs.ca	Edmonton 780-735-1800
North Zone	northzone.environmentalhealth@ahs.ca	Grande Prairie 780-513-7517
South Zone	she.southzoneeph@ahs.ca	Lethbridge 403-388-6689

Indigenous Services Canada – First Nations and Inuit Health Branch

OFFICE	REGULAR BUSINESS HOURS 8:00 AM – 4:00 PM	
Edmonton	Environmental Public Health	780-495-4409
Tsuut'ina	Environmental Public Health	403-299-3939

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Appendix B: Management of Individuals who are Symptomatic and/or Tested for COVID-19

Symptoms	COVID-19 Test Result:	Management of Individual:
Symptomatic	Positive molecular (e.g. PCR) test or rapid antigen take-home test	• **Fully vaccinated staff (i.e. staff who have received the complete vaccine series for COVID-19 and it has been 14 days after the second dose in a two dose series or one dose in a one dose series [i.e. Janssen vaccine]) or student (2 doses of mRNA vaccine)**: Isolate for 5 days from the start of symptoms or until they are fever free for 24 hours without the use of fever reducing medication and other symptoms are improving, whichever is longer, if symptoms are not related to a pre-existing condition • Following their home isolation period, all fully vaccinated individuals must wear masks at all times when in a public place or otherwise in the company of other persons for up to 5 more days (10 days total). This means they must eat or drink alone, away from others. • If it's not possible to give each student on day 6-10 isolation a private space to eat in, they can cohort together with other COVID-19-infected individuals for meals in the same well-ventilated room. Distancing is recommended and individuals should remain masked at all times when not actively consuming food and drink. • If schools find this operationally challenging to accommodate, the consistent use of a 10 day absence prior to return, for both immunized and non-immunized cases, is an acceptable approach. **Not fully vaccinated:** Isolate at home for 10 days from the start of symptoms or until they are fever free for 24 hours without the use of fever reducing medication and other symptoms are improving, whichever is longer, if symptoms are not related to a pre-existing condition.
	Negative molecular (e.g. PCR) test	**Fully vaccinated staff (i.e. staff who have received the complete vaccine series for COVID-19 and it has been 14 days after the second dose in a two dose series or one dose in a one dose series [i.e. Janssen vaccine]) or student (2 doses mRNA**

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Symptoms	COVID-19 Test Result:	Management of Individual:
		vaccine): Stay home until they are fever free for 24 hours without the use of fever reducing medication and other symptoms are improving, before cautiously resuming normal activities. **Not fully vaccinated:** Stay home until they are fever free for 24 hours without the use of fever reducing medication and other symptoms are improving if symptoms are not related to a pre-existing condition, before cautiously resuming normal activities.
	Negative rapid antigen take-home test	**NOTE**: A negative test result does not rule out infection. Rapid tests can be falsely negative, early in COVID infections. Continue monitoring your symptoms and following public health guidelines. Isolate immediately for 24 hours. Take second rapid antigen test not less than 24 hours from initial test: • If negative, continue isolating until they are fever free for 24 hours without the use of fever reducing medication and other symptoms are improving before cautiously resuming normal activities. • If positive, continue isolation: **Fully vaccinated**: Isolate at home for 5 days or until they are fever free for 24 hours without the use of fever reducing medication and other symptoms are improving, whichever is longer. For up to five days following their home-isolation period, they must wear masks at all times when in a public place or otherwise in the company of other persons for up to 5 more days (10 days total). This means they must eat or drink alone, away from others. • If it's not possible to give each student on day 6-10 isolation a private space to eat in, they can cohort together with other COVID-19-infected individuals for meals in the same well-ventilated room. Distancing is recommended and individuals should remain masked at all times when not actively consuming food and drink. • If schools find this operationally challenging to accommodate, the consistent use of a 10 day absence prior to return, for both immunized and non-immunized cases, is an acceptable approach.

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Symptoms	COVID-19 Test Result:	Management of Individual:
		Not fully vaccinated: 10 days or until symptoms resolve, whichever is longer
	Not tested	**Student:** If symptoms include fever, cough, shortness of breath or loss of sense of taste/smell, follow instructions for symptomatic positive above. **Adult:** If symptoms include fever, cough, shortness of breath, sore throat, loss of taste/smell or runny nose, follow instructions for symptomatic positive above.
		Student: If other symptoms (chills, sore throat/painful swallowing, runny nose/congestion, feeling unwell/fatigued, nausea/vomiting/diarrhea, unexplained loss of appetite, muscle/joint aches, headache or conjunctivitis): • ONE symptom: stay home, monitor for 24hours. If improves, return when well enough to go (testing not necessary). • TWO symptoms OR ONE symptom that persists or worsens: Stay home until they are fever free for 24 hours without the use of fever reducing medication, and other symptoms are improving. **Adult:** If other symptoms, stay home until they are fever free for 24 hours without the use of fever reducing medication, and other symptoms are improving.
Asymptomatic	Positive molecular (e.g. PCR) test	**Fully vaccinated staff (i.e. staff who have received the complete vaccine series for COVID-19 and it has been 14 days after the second dose in a two dose series or one dose in a one dose series [i.e. Janssen vaccine]) or student (2 doses of mRNA vaccine)**: Isolate for 5 days from the collection date of the swab or from the date when the molecular test was completed. • Following their home isolation period, all fully vaccinated individuals must wear masks at all times when in a public place or otherwise in the company of other persons for up to 5 more days (10 days total). This means they must eat or drink alone, away from others. • If it's not possible to give each staff on day 6-10 isolation a private space to eat in, they can cohort together with other COVID-19-infected individuals for meals in the same well-ventilated room. Distancing is recommended and individuals

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Symptoms	COVID-19 Test Result:	Management of Individual:
		should remain masked at all times when not actively consuming food and drink. • If schools find this operationally challenging to accommodate, the consistent use of a 10 day absence prior to return, for both immunized and non-immunized cases, is an acceptable approach. **Not fully vaccinated:** Isolate at home for 10 days from the collection date of the swab or from the date when the molecular test was completed.
	Positive Rapid antigen take-home test	**Fully vaccinated staff (i.e. staff who have received the complete vaccine series for COVID-19 and it has been 14 days after the second dose in a two dose series or one dose in a one dose series [i.e. Janssen vaccine]) or student (2 doses of mRNA vaccine)**: Isolate at home for 5 days from the collection date of the swab or from the date when the rapid take-home test was completed. • Following their home isolation period, all fully vaccinated individuals must wear masks at all times when in a public place or otherwise in the company of other persons for up to 5 more days (10 days total). This means they must eat or drink alone, away from others. • If it's not possible to give each staff on day 6-10 isolation a private space to eat in, they can cohort together with other COVID-infected individuals for meals in the same well-ventilated room. Distancing is recommended and individuals should remain masked at all times when not actively consuming food and drink. • If schools find this operationally challenging to accommodate, the consistent use of a 10 day absence prior to return, for both immunized and non-immunized cases, is an acceptable approach. **Not fully vaccinated:** Isolate at home for 10 days from the collection date of the swab or from the date when the rapid take-home test was completed. Individuals can conduct a second test not less than 24 hours after the initial test, and if negative, and still no symptoms, they do not

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Symptoms	COVID-19 Test Result:	Management of Individual:
		need to continue to isolate. If the result is positive on the repeat test, they should continue to isolate. If at any time, symptoms develop, they must follow isolation instructions for symptomatic individuals.
	Negative	No isolation required.

TAB 3

Office of the Chief Medical Officer of Health
10025 Jasper Avenue NW
PO Box 1360, Stn. Main
Edmonton, Alberta T5J 2N3

RECORD OF DECISION – CMOH Order 02-2022

Re: 2022 COVID-19 Response

Whereas I, Dr. Deena Hinshaw, Chief Medical Officer of Health (CMOH) have initiated an investigation into the existence of COVID-19 within the Province of Alberta.

Whereas under section 29(2.1) of the *Public Health Act*, I have the authority to take whatever steps that are, in my opinion, necessary in order to lessen the impact of the public health emergency.

Whereas having determined that it is possible to modify certain restrictions while still protecting Albertans from exposure to COVID-19 and preventing the spread of COVID-19, I hereby make the following order (the Order):

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Part 1 – Application

1.1 This Order applies throughout the Province of Alberta and is effective January 10, 2022.

1.2 This Order rescinds Record of Decision CMOH Order 01-2022 and CMOH Order 48-2021.

Part 2 – Definitions

2.1 In this Order and the Schedule to this Order, the following terms have the following meanings:

(a) “asymptomatic” means a person who is not exhibiting COVID-19 symptoms.

(b) “confirmed case of COVID-19” means a COVID-19 infection where a person is:

i. asymptomatic and has taken two rapid tests, not less than 24 hours of each other, and both rapid tests indicate the person is positive for COVID-19;
ii. symptomatic and has taken one or more rapid tests indicating the person is positive for COVID-19; OR
iii. asymptomatic or symptomatic and has taken a PCR test which indicates the person is positive for COVID-19.

(c) "COVID-19 symptoms" means the following symptoms of COVID-19 that are not related to a pre-existing illness or health condition:

i. cough;
ii. fever;
iii. sore throat;
iv. shortness of breath;
v. runny nose; or
vi. loss of taste or smell.

(d) "COVID-19 test" means a Health Canada approved rapid test or a lab based PCR test approved by Health Canada or the lab accreditation body of the jurisdiction in which the test is performed.

(e) "critical worker" means a person identified by the owner or operator of a business or entity who is essential to continued safe operations and who provides or is responsible for services that are essential to the safe operation of the business or entity.

(f) "fully vaccinated" means a person eligible for vaccination who has:

i. proof of receiving no less than two doses of a World Health Organization approved COVID-19 vaccine in a two dose vaccine series and has had fourteen or more days elapse since the date on which the person received the last dose of vaccine; or
ii. proof of receiving at least one dose in a World Health Organization approved COVID-19 vaccine in a one dose series and has had fourteen days or more elapse since the date on which the person received the last dose of vaccine.

(g) "health care facility" means

i. an auxiliary hospital under the *Hospitals Act*;
ii. a nursing home under the *Nursing Homes Act*;
iii. a designated supportive living accommodation under the *Supportive Living Accommodation Licensing Act*;
iv. any facility in which residential hospice services are offered or provided by Alberta Health Services or by a service provider under contract with Alberta Health Services.

(h) "isolation" means the separation of a person from any other person for the purpose of preventing the spread of COVID-19.

(i) “isolation period” means the period of time that a person is required to be in isolation pursuant to this Order.

(j) “PCR test” means the polymerase chain reaction test for COVID-19.

(k) “rapid test” means a COVID-19 testing device that is listed in authorized medical devices for uses related to COVID-19: List of authorized testing devices by Health Canada published on the Government of Canada website and is approved for point-of-care molecular or antigen COVID-19 testing, including but not limited to, symptomatic, asymptomatic, tests performed by a health care professional, tests performed by a lay-person, or self-testing.

(l) “symptomatic” means a person who is exhibiting COVID-19 symptoms which are not related to a pre-existing illness or health condition.

(m) “symptoms resolve” means the state when a person’s COVID-19 symptoms improve and the person remains afebrile for a period of twenty four hours without using fever reducing medications.

Part 3 – Isolation requirements

General Requirement

3.1 A person is required to be in isolation if the person is:

(a) symptomatic; or

(b) asymptomatic and has taken one rapid test with a positive result; or

(c) a confirmed case of COVID-19.

For symptomatic persons

3.2 A symptomatic person who is fully vaccinated is required to isolate in accordance with Part 3 and must:

(a) immediately start isolation and isolate for a minimum period of five days from the first day on which the person is symptomatic, or until the person’s COVID-19 symptoms resolve, whichever is longer;

(b) remain at home, and two metres distant from any other person at all times;

(c) not attend work, school, social events or any other public gatherings; and

(d) not take public transportation.

3.3 A symptomatic person who is not fully vaccinated is required to isolate in accordance with Part 3 and must:

(a) immediately start isolation and isolate for a minimum period of ten days from the first day on which the person is symptomatic, or until the person's COVID-19 symptoms resolve, whichever is longer;

(b) remain at home, and two metres distant from any other person at all times;

(c) not attend work, school, social events or any other public gatherings; and

(d) not take public transportation.

3.4 Despite section 3.2 and section 3.3, a symptomatic person is not required to isolate in accordance with Part 3 if:

(a) a PCR test indicates the person is negative for COVID-19 and the COVID-19 symptoms have resolved; or

(b) two rapid tests, taken not less than 24 hours of each other, both indicate the person is negative for COVID-19 and the COVID-19 symptoms have resolved.

For asymptomatic persons

3.5 An asymptomatic person who is fully vaccinated and has taken one rapid test indicating the person is positive for COVID-19 or is a confirmed case of COVID-19, is required to isolate in accordance with Part 3 and must:

(a) immediately start isolation and isolate for a minimum period of five days from the day on which the asymptomatic person takes a COVID-19 test that indicates the person is positive for COVID-19;

(b) remain at home, and two metres distant from any other person at all times;

(c) not attend work, school, social events or any other public gatherings; and

(d) not take public transportation.

3.6 An asymptomatic person who is not fully vaccinated and has taken one rapid test indicating the person is positive for COVID-19 or is a confirmed case of COVID-19, is required to isolate in accordance with Part 3 and must:

(a) immediately start isolation and isolate for a minimum period of ten days from the day on which the asymptomatic person takes a COVID-19 test that indicates the person is positive for COVID-19;

(b) remain at home, and two metres distant from any other person at all times;

(c) not attend work, school, social events or any other public gatherings; and

(d) not take public transportation.

3.7 Despite section 3.5, if an asymptomatic person who is fully vaccinated develops COVID-19 symptoms during the isolation period, the person must continue to isolate for five

days from the first day on which the person is symptomatic or until the COVID-19 symptoms resolve, whichever is later.

3.8 Despite section 3.6, if an asymptomatic person who is not fully vaccinated develops COVID-19 symptoms during the isolation period, the person must continue to isolate for 10 days from the first day on which the person is symptomatic or until the COVID-19 symptoms resolve, whichever is later.

3.9 Despite section 3.5 and section 3.6, an asymptomatic person is not required to isolate in accordance with Part 3 if:

(a) a PCR test indicates the person is negative for COVID-19; or

(a) the result of a second rapid test, taken not less than 24 hours from the initial rapid test, is negative for COVID-19.

Residents of Designated Supportive Living, Auxiliary Hospital, Nursing Home and Hospice facilities

3.10 A person who is a resident of a health care facility, whether fully vaccinated or not, is required to isolate in accordance with Part 3 if the resident is:

(a) symptomatic, and is not a confirmed case of COVID-19, then the resident must immediately start isolation and isolate from the first day on which the resident is symptomatic, for a minimum period of ten days, or until the resident's COVID-19 symptoms resolve, whichever is longer;

(b) asymptomatic and has taken one rapid test with a positive result, then the resident must immediately start isolation and isolate for a minimum period of ten days from the day on which the asymptomatic resident takes a COVID-19 test that indicates the resident is positive for COVID-19;

(c) confirmed case of COVID-19, then the resident must immediately start isolation and isolate for a minimum period of ten days from the day on which the resident takes a COVID-19 test that indicates the resident is positive for COVID-19.

3.11 A person who is a resident of a health care facility who is required to isolate in accordance with section 3.10 must:

(a) remain at the health care facility, and two metres distant from any other person at all times;

(b) not attend social events or any other public gatherings; and

(c) not take public transportation.

3.12 Despite sections 3.10 and 3.11, a resident of a health care facility is not required to isolate in accordance with Part 3 if the:

(a) symptomatic resident has taken a PCR test which indicates the resident is negative for COVID-19 and COVID-19 symptoms resolve;

(b) symptomatic resident has taken two rapid tests, not less than 24 hours of each other, both indicating the resident is negative for COVID-19 and COVID-19 symptoms resolve; or

(c) asymptomatic resident has taken a second rapid test, not less than 24 hours from the initial rapid test, and the results indicate the resident is negative for COVID-19.

Requirement to wear a mask

3.13 Despite any other CMOH Order in effect that pertains to masking, every person required to isolate for the isolation periods set out in Part 3 must wear a mask at all times when in a public place or otherwise in the company of other persons for a period of up to five days following the expiry of the applicable isolation period. The period during which a person is required to mask expires ten days from the first day on which the person is:

(a) symptomatic; or

(b) asymptomatic and has taken one rapid test with a positive result; or

(c) a confirmed case of COVID-19.

For greater certainty, none of the masking exceptions set out in any CMOH Order in effect applies to a person required to mask in accordance with this section.

Part 4 – Critical worker exception

4.1 Despite Part 3 of this Order, and in accordance with Schedule A, a person or class of persons is excepted from the application of this Order where the owner or operator of a business, sector or service determines that a certain person or class of persons:

(a) is a critical worker; and

(b) the critical worker's absence would cause a substantive disruption of services that would be harmful to the public.

4.2 The owner or operator seeking an exception must have a plan to accommodate the presence of the critical worker, identified in section 4.1 that, at minimum, meets the criteria in Schedule A to mitigate the risk of the spread of infection by the critical worker who would otherwise be required to isolate pursuant to this Order.

4.3 To mitigate the risk of the spread of infection by the critical worker, the owner or operator must ensure that a critical worker identified in section 4.1 follows the:

(a) plan developed by the owner or operator pursuant to section 4.2, and

(b) criteria in Schedule A.

4.4 To mitigate the risk of the spread of infection by a critical worker, a critical worker who is excepted from isolation must follow the:

(a) plan developed by the owner or operator pursuant to section 4.2; and

(b) criteria in Schedule A.

For greater certainty, a critical worker is subject to the requirements in Part 3, when not under this exception to complete critical work duties.

Part 5 - General

5.1 Notwithstanding anything in this Order, the Chief Medical Officer of Health may exempt a person or classes of persons from the application of this Order.

5.2 This Order remains in effect until rescinded by the Chief Medical Officer of Health.

Signed on this 10 day of January, 2022.

Deena Hinshaw, MD
Chief Medical Officer of Health

Schedule A: Critical Worker Isolation Exceptions

1. This exception is only permitted when:

   (a) services provided by the business or entity are critical for the ongoing operation of services that impact the public interest;
   (b) any substantive service disruption will be detrimental to the public interest;
   (c) the person otherwise required to be in isolation are asymptomatic or mildly symptomatic; and
   (d) all other means of staffing critical worker positions have been exhausted.

Critical Worker Eligibility:

2. The only workers eligible for the isolation exception are those critical workers who are required to be on-site, in-person for critical work duties.

Risk Hierarchy for Isolation Exception:

3. Wherever possible, the owner or operator should implement the isolation exception for critical workers following a least risk to most manner. This prioritizes that the persons who temporarily leave isolation for critical, in-person work duties are the least likely to transmit infection, in conjunction with the public health criteria and controls below. It is strongly recommended that the hierarchy of risk follows:

   (a) A critical worker under this Order will be in one of the following categories, with preference in each category to be given first to a person who has received a booster dose; then a person who is fully immunized; then a person who is partially immunized; and finally a person who is unimmunized:
      i. a symptomatic person who tests negative for COVID-19 but exhibits mild COVID-19 symptoms;
      ii. an asymptomatic person who has taken one rapid test with a positive result;
      iii. an asymptomatic person who is a confirmed case of COVID-19;
      iv. a symptomatic person who is a confirmed case of COVID-19 but exhibits mild COVID-19 symptoms.

Public health criteria and controls:

4. Attending the business or entity location:
   (a) Access to the work location is limited to only critical workers whose presence is critical to the provision of service, to the extent possible.
   (b) Critical workers are only permitted to attend the work location for the purposes of completing their job duties that require them to be on-site, in-person, to ensure the ongoing functioning of the service.
   (c) All critical workers must travel directly to the work location, and immediately return to their place of residence until the applicable isolation period is complete.

5. Masking Requirements:
   (a) Medical masks are worn to enter and exit the building.
   (b) If there is any possibility of a critical worker under this exception being in the same room as another person, even temporarily, the critical worker under this exception must wear a medical mask at all times during this period of time.

i. The other persons that may be in the same area as the critical worker should also wear medical face masks, whenever possible

(c) Critical workers must have access to medical masks in the event that they need to replace their mask on shift.

6. Work spaces:
   (a) Whenever possible, critical workers will be alone in their workspace for the duration of their shift.
   (b) Work spaces for critical workers should include, whenever possible:
      i. a single office that have been established with doors that can close;
      ii. located on a separate floor from the general areas and other work spaces in the location;
      iii. have their own washroom and kitchen facilities which can only be accessed by the critical worker;
      iv. if work spaces are shared by critical workers on different shifts, the critical worker from the first shift must leave the work space before the critical worker from the second shift arrive;
      v. in between shifts, rooms are thoroughly sanitized with 70% alcohol.
   (c) The HVAC system must be functioning properly.

7. Additional Requirements:
   (a) The business or entity must develop and implement protocols for COVID-19 that align with this exception and address appropriate hygiene to protect critical workers and other persons from further transmission of COVID-19.
   (b) The business or entity must train staff on the protocols implemented pursuant to section 7(a) above.
   (c) The business or entity, critical workers and any other staff must follow any further public health conditions or requirements that relate to public health and safety that may be provided by Alberta Health or Alberta Health Services.

TAB 4

Alberta Health

Office of the Chief Medical Officer of Health
10025 Jasper Avenue NW
PO Box 1360, Stn. Main
Edmonton, Alberta T5J 2N3
Canada

RECORD OF DECISION – CMOH Order 04-2022

Re: 2022 COVID-19 Response – Modification of Record of Decision CMOH Order 02-2022, Record of Decision CMOH Order 54-2021, and Record of Decision CMOH Order 57-2021

Whereas I, Dr. Deena Hinshaw, Chief Medical Officer of Health (CMOH) have initiated an investigation into the existence of COVID-19 within the Province of Alberta.

Whereas the investigation has confirmed that COVID-19 is present in Alberta and constitutes a public health emergency as a novel or highly infectious agent that poses a significant risk to public health.

Whereas under section 29(2.1) of the *Public Health Act* (the Act), I have the authority by order to prohibit a person from attending a location for any period and subject to any conditions that I consider appropriate, where I have determined that the person engaging in that activity could transmit an infectious agent. I also have the authority to take whatever other steps that are, in my opinion, necessary in order to lessen the impact of the public health emergency.

Whereas I have determined that it is necessary to revise Record of Decision - CMOH Order 02-2022 to recognize the change of use of Health Canada approved rapid antigen tests and molecular tests.

Whereas I have also determined that is necessary to revise Record of Decision – CMOH Order 02-2022, Record of Decision – CMOH Order 54-2021, and Record of Decision – CMOH Order 57-2021 to amend the definitions of COVID-19 test and PCR test, and to make consequential amendments.

I hereby make the following Order modifying Record of Decision - CMOH Order 02-2022, Record of Decision - CMOH Order 54-2021, and Record of Decision - CMOH Order 57-2021:

1. Record of Decision - CMOH Order 02-2022 is amended as follows:

    (a) Section 2.1(b) is deleted and substituted with the following:

    "confirmed case of COVID-19" means a COVID-19 infection where a person is:

    i. asymptomatic and has taken two rapid antigen tests, not less than 24 hours of each other, and both rapid antigen tests indicate the person is positive for COVID-19;

    ii. symptomatic and has taken one or more rapid antigen tests indicating the person is positive for COVID-19; OR

iii. asymptomatic or symptomatic and has taken a molecular test which indicates the person is positive for COVID-19.

(b) Section 2.1(d) is deleted and substituted with the following:

"COVID-19 test" means a Health Canada approved rapid antigen test or a molecular test approved by Health Canada or the lab accreditation body of the jurisdiction in which the test is performed.

(c) Section 2.1(j) is deleted and substituted with the following:

"molecular test" means a nucleic acid amplification test to detect RNA of SARS-CoV-2 [e.g. Polymerase Chain Reaction (PCR), loop-mediated isothermal amplification (LAMP), rapid molecular test, etc.]. The test may be performed within an approved laboratory or at the point of care using a Health Canada approved test/instrument.

(d) Section 2.1(k) is deleted and substituted with the following:

"rapid antigen test" means a COVID-19 testing device that is listed in authorized medical devices for uses related to COVID-19: *List of authorized testing devices* by Health Canada published on the Government of Canada website and is approved for COVID-19 antigen testing, including but not limited to, symptomatic, asymptomatic, tests performed by a health care professional, tests performed by a lay-person, or self-testing.

(e) In Part 3, all references to "rapid test" or "rapid tests" are deleted and substituted with "rapid antigen test" or "rapid antigen tests" as the context requires.

(f) In Part 3, all references to "PCR test" or "PCR tests" are deleted and substituted with "molecular test" or "molecular tests" as the context requires.

(g) The numbering in section 3.9 is amended by deleting the second reference to subsection (a) and substituting it with subsection (b).

2. Record of Decision - CMOH Order 54-2021 is amended as follows:

(a) Section 2.1(c) is deleted and substituted with the following:

"COVID-19 test" means a Health Canada approved rapid screening test or a molecular test approved by Health Canada or the lab accreditation body of the jurisdiction in which the test is performed which:

i. a person has taken within the last 72 hours;

ii. clearly outlines the laboratory that completed the test, if applicable, the type of test, time of sample collection, and clear indication of negative result; and

iii. is not sourced from Alberta Health Services public COVID-19 testing system.

(b) Section 2.1(r) is deleted and substituted with the following:

"molecular test" means a nucleic acid amplification test to detect RNA of SARS-CoV-2 [e.g. Polymerase Chain Reaction (PCR), loop-mediated isothermal amplification (LAMP), etc.]. The test may be performed within an approved laboratory or at the point of care using a Health Canada approved test/instrument.

(c) By deleting all instances of "Record of Decision – CMOH Order 06-2021" and replacing them with "Record of Decision – CMOH Order 02-2022".

4. Record of Decision – CMOH Order 57-2021 is amended as follows:

(a) Section 2.1(c) is deleted and substituted with the following:

"confirmed case of COVID-19" means a COVID-19 infection where a person is:

i. asymptomatic and has taken two rapid antigen tests, not less than 24 hours of each other, and both rapid antigen tests indicate the person is positive for COVID-19;

ii. symptomatic and has taken one or more rapid antigen tests indicating the person is positive for COVID-19; OR

iii. asymptomatic or symptomatic and has taken a molecular test which indicates the person is positive for COVID-19.

(b) Section 2.1(i) is deleted and substituted with the following:

"molecular test" means a nucleic acid amplification test to detect RNA of SARS-CoV-2 [e.g. Polymerase Chain Reaction (PCR), loop-mediated isothermal amplification (LAMP), rapid molecular test, etc.]. The test may be performed within an approved laboratory or at point-of-care using a Health Canada approved test/instrument.

(c) Section 2.1(j) is deleted and substituted with the following:

"rapid antigen test" means a COVID-19 testing device that is listed in authorized medical devices for uses related to COVID-19: *List of authorized testing devices* by Health Canada published on the Government of Canada website and is approved for COVID-19 antigen testing, including but not limited to, symptomatic, asymptomatic, tests performed by a health care professional, tests performed by a lay-person, or self-testing.

(d) In Part 3, all references to "rapid screening test" or "rapid screening tests" are deleted and substituted with "rapid antigen test" or "rapid antigen tests" as the context requires.

(e) By deleting all instances of "Record of Decision – CMOH Order 06-2021" and replacing them with "Record of Decision – CMOH Order 02-2022".

This Order remains in effect until rescinded by the Chief Medical Officer of Health.

Signed on this 2nd day of February 2022.

Deena Hinshaw, MD
Chief Medical Officer of Health

TAB 5

February 8, 2022

Alberta COVID-19 Immunization Program Report

(Information as of February 7, 2022)

Executive Summary

- **8,384,070** doses have been administered to Albertans as of February 7 with **3,562,573** first doses, **3,308,279** second doses, **1,503,982** third doses, and **9,236** fourth doses.
- There were **6,474** doses administered yesterday. However, reporting has been adjusted to be **38,627** over the past 4 days due to retrospective changes.
- **85.80%** of Albertans 5 years of age and up have received one dose, **79.83%** have received two doses, **36.22%** have received three doses, and **0.22%** have received four doses.
- **89.92%** of Albertans 12 years of age and up have received one dose, **86.26%** have received two doses, **39.99%** have received three doses, and **0.25%** have received four doses.
- **90.25%** of Albertans 18 years of age and up have received one dose, **86.65%** have received two doses, **43.52%** have received three doses, and **0.27%** have received four doses.
- **80.60%** of all Albertans have received one dose, **75.00%** have received two doses, **34.03%** have received three doses, and **0.21%** have received four doses.
- There are **640,929** doses of Pfizer and **404,514** doses of Moderna in current inventory and we have an estimated **15,004** mRNA doses for ages 12+ booked to be administered in the next 7 days.
- There are **3,065** doses of Janssen in current inventory and we have an estimated **133** Janssen doses booked to be administered in the next 7 days.
- There are **1,096** doses of AstraZeneca in current inventory and we have an estimated **37** AstraZeneca doses booked to be administered in the next 7 days.
- There are **164,740** doses of Pfizer Pediatric 5 to 11 years in current inventory and we have an estimated **11,037** doses booked to be administered in the next 7 days.
- Alberta Health Services has the capacity to administer **70,000** doses a week and has the ability to scale up to **140,000** doses per week if demand dictates.
- There are **1,413** pharmacies offering vaccines.
- Alberta is expecting to receive **0** doses of vaccine the week starting February 7th.
- **78.71%** of doses Alberta has received have been administered compared to **93.03%** for Ontario, **92.21%** for Quebec, and **90.69%** for BC as of February 8 at 12:45 pm according to the COVID-19 Tracker Canada Data by Province.

February 8, 2022

Summary

- **8,384,070** doses of COVID-19 vaccine have been administered in Alberta (**189,683** doses per 100,000 population).

	Doses Received to Date	Administered in the Past Day	Administered to Date***	Wastage	Expired	Current Inventory*	Remaining Doses to be Received the Week of February 7th	% of Doses Received that have been Administered
AstraZeneca	319,700	1	310,197	21,413	23,446	1,096	-	97.03%
Janssen	10,000	10	6,607	651	-	3,065	-	66.07%
Moderna	2,814,240	875	1,706,861	647,985	5,641	404,514	-	60.65%
Pfizer Pediatric 5 to 11	394,000	1,305	219,905	20,299	-	164,740	-	55.81%
Pfizer/BioNTech	7,056,075	4,283	6,095,009	440,778	2,299	640,929	-	86.38%
Total	**10,594,015**	**6,474**	**8,338,579**	**1,131,126**	**31,386**	**1,214,344**	**-**	**78.71%**
Federal / OOP			45,491					
Total Administered			**8,384,070**					

**126,866 Moderna doses have been returned to Federal inventory.*
**Inventory, wastage and expired data sourced from AVI.*
***Doses Received to Date is reflective of doses per vial as described in the product monograph. A higher number of doses per vial are regularly able to be administered.*
****As of January 19, 2022, all doses administered in First Nations are submitted directly into Imm/ARI and the data reconciliation resulted in the removal of approximately 20,000 doses.*

Dose Breakdown

	Administered to Date*	Dose 1	Dose 2	Dose 3	Dose 4**
AstraZeneca	310,197	267,208	42,505	484	-
Janssen	6,607	6,561	31	15	-
Moderna	1,706,861	633,418	681,374	390,465	1,604
Pfizer Pediatric 5 to 11	219,905	162,179	57,710	15	1
Pfizer/BioNTech	6,095,009	2,461,493	2,512,891	1,112,994	7,631
Total	**8,338,579**	**3,530,859**	**3,294,511**	**1,503,973**	**9,236**
Federal / OOP	45,491	31,714	13,768	9	-
Total Administered	**8,384,070**	**3,562,573**	**3,308,279**	**1,503,982**	**9,236**

**As of January 19, 2022, all doses administered in First Nations are submitted directly into Imm/ARI and the data reconciliation resulted in the removal of approximately 20,000 doses.*
***As of January 20, 2022, immunocompromised Albertans are eligible to receive a 4th dose at least 5 months following their 3rd dose.*

February 8, 2022

Upcoming Bookings by Dose

All Doses	Bookings in Next 7 Days	Bookings 8 to 14 Days	Bookings 15 to 28 Days	Total Bookings Next 28 Days
1st Dose Bookings	1,692	632	254	2,578
2nd Dose Bookings	10,706	5,330	2,386	18,422
3rd & 4th Dose Bookings	13,813	5,673	5,260	24,746
Total Bookings	**26,211**	**11,635**	**7,900**	**45,746**
Projected Total Immunizations	**8,410,281**	**8,421,916**	**8,429,816**	**8,429,816**

Upcoming Bookings by Vaccine Type

All Doses	Bookings in Next 7 Days	Bookings 8 to 14 Days	Bookings 15 to 28 Days	Total Bookings Next 28 Days
AstraZeneca Bookings	37	6	1	44
Janssen Bookings	133	16	22	171
Moderna Bookings	1,236	480	290	2,006
Pfizer Pediatric 5 to 11	11,037	5,520	2,276	18,833
Pfizer/BioNTech	13,768	5,613	5,311	24,692
Total Bookings	**26,211**	**11,635**	**7,900**	**45,746**

February 8, 2022

Reason for Additional Doses Administered

	Age Group	Zone	Dose 3	% with 3 Doses	Dose 4	% with 4 Doses***	Population
Travel	NA	NA	69,289	30.93%	2,211	0.99%	224,000
Congregate Living Settings (e.g.LTC/DSL residents)	NA	NA	45,158	77.86%	46	0.08%	58,000
Health Care Workers (excluding LTC/DSL)	NA	NA	52,382	NA	45	NA	NA
Other risks*	NA	NA	1,337,160	NA	6,934	NA	NA
Albertans (18+)	18+	Alberta	1,499,063	43.52%	-	-	3,444,862
Albertans (18+)	18+	South Zone	95,702	40.07%	-	-	238,814
Albertans (18+)	18+	Calgary Zone	628,074	46.80%	-	-	1,342,134
Albertans (18+)	18+	Central Zone	134,132	36.11%	-	-	371,429
Albertans (18+)	18+	Edmonton Zone	530,296	46.88%	-	-	1,131,071
Albertans (18+)	18+	North Zone	109,835	30.40%	-	-	361,331
Albertans (18+)	18+	Unknown	1,024	NA	-	-	-
First Nations (18+)**	18+	Alberta	25,859	22.60%	-	-	114,408

The population of 224,000 is the approximate number of Albertans that received a mixed vaccine series. It is unknown how many will want a third dose for travel purposes.

** Includes Albertans who are immunocompromised and those who received a third dose but their eligibility cannot be determined therefore there is no known population. The population of immunocompromised is approximately 80,000.*

***First Nations population in this chart does not include Métis or Inuit people.*

****As of January 20, 2022, immunocompromised Albertans are eligible to receive a 4th dose at least 5 months following their 3rd dose.*

February 8, 2022

Immunization by Age Group

Age Group	Population	One Dose	% of Population with 1 dose	Two Doses***	% of Population with 2 Doses	Three Doses	% of Population with 3 Doses	Four Doses	% of Population with 4 Doses	Total Administered**
00-04	267,791	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
05-11	391,430	180,764	46.18%	70,718	18.07%	25	0.01%	1	0.00%	251,508
12-14	162,518	141,094	86.82%	133,257	82.00%	1,580	0.97%	4	0.00%	275,935
15-19	256,700	222,721	86.76%	211,744	82.49%	26,976	10.51%	14	0.01%	461,284
20-24	276,916	238,383	86.08%	223,598	80.75%	59,170	21.37%	44	0.02%	520,754
25-29	314,340	260,375	82.83%	245,002	77.94%	70,717	22.50%	63	0.02%	575,566
30-34	356,224	299,032	83.94%	284,402	79.84%	94,305	26.47%	107	0.03%	676,977
35-39	359,135	312,102	86.90%	299,862	83.50%	110,982	30.90%	121	0.03%	722,126
40-44	319,735	283,634	88.71%	275,677	86.22%	115,808	36.22%	637	0.20%	674,887
45-49	288,613	257,042	89.06%	249,777	86.54%	116,488	40.36%	735	0.25%	623,307
50-54	266,607	242,367	90.91%	235,867	88.47%	125,248	46.98%	716	0.27%	603,594
55-59	284,313	254,861	89.64%	246,476	86.69%	145,027	51.01%	1,259	0.44%	647,122
60-64	264,324	248,877	94.16%	242,026	91.56%	162,721	61.56%	4,477	1.69%	657,733
65-69	209,995	204,175	97.23%	200,536	95.50%	152,158	72.46%	424	0.20%	557,063
70-74	157,696	154,397	97.91%	154,010	97.66%	122,351	77.59%	283	0.18%	430,910
75-79	103,045	98,597	95.68%	97,507	94.63%	86,282	83.73%	189	0.18%	282,495
80-84	68,661	64,771	94.33%	64,045	93.28%	55,849	81.34%	92	0.13%	184,745
85-89	44,188	41,183	93.20%	40,660	92.02%	35,351	80.00%	44	0.10%	117,225
90+	27,809	26,051	93.68%	25,695	92.40%	22,949	82.52%	26	0.09%	74,717
Unknown*	0	32,147	NA	13,974	NA	2	NA	0	NA	46,122
18+	3,444,862	3,108,843	90.25%	2,985,017	86.65%	1,499,063	43.52%	9,229	0.27%	7,595,592
12+	3,760,818	3,381,809	89.92%	3,244,115	86.26%	1,503,964	39.99%	9,235	0.25%	8,132,562
5+	4,152,248	3,562,573	85.80%	3,314,833	79.83%	1,503,989	36.22%	9,236	0.22%	8,384,070
ALL	4,420,039	3,562,573	80.60%	3,314,833	75.00%	1,503,989	34.03%	9,236	0.21%	8,384,070

Note: Due to retrospective changes in the live database, total administered may not reconcile with breakdown of first, second, third and fourth doses.

**Includes doses notified as administered by FNIHB, but not yet entered onto Imm/ARI system.*

***Total Administered = At Least 1 Dose + Second Doses + Third Doses + Fourth Doses. A small number of records exist in ImmARI where only a second dose has been recorded (with no corresponding first dose record). For the purpose of this report, first doses for these records are assumed.*

***As of January 19, 2022, all doses administered in First Nations are submitted directly into Imm/ARI and the data reconciliation resulted in the removal of approximately 20,000 doses.*

**** Individuals who received a first dose in one age category may cross into another age category for a second or additional dose.*

Albertans who have received one dose of Janssen are also included in the number of Albertans with two doses.

Third dose coverage (this table) differs from third doses administered (table 2) because some individuals received Janssen and then Moderna.

Percentage of Albertans by Vaccination Status

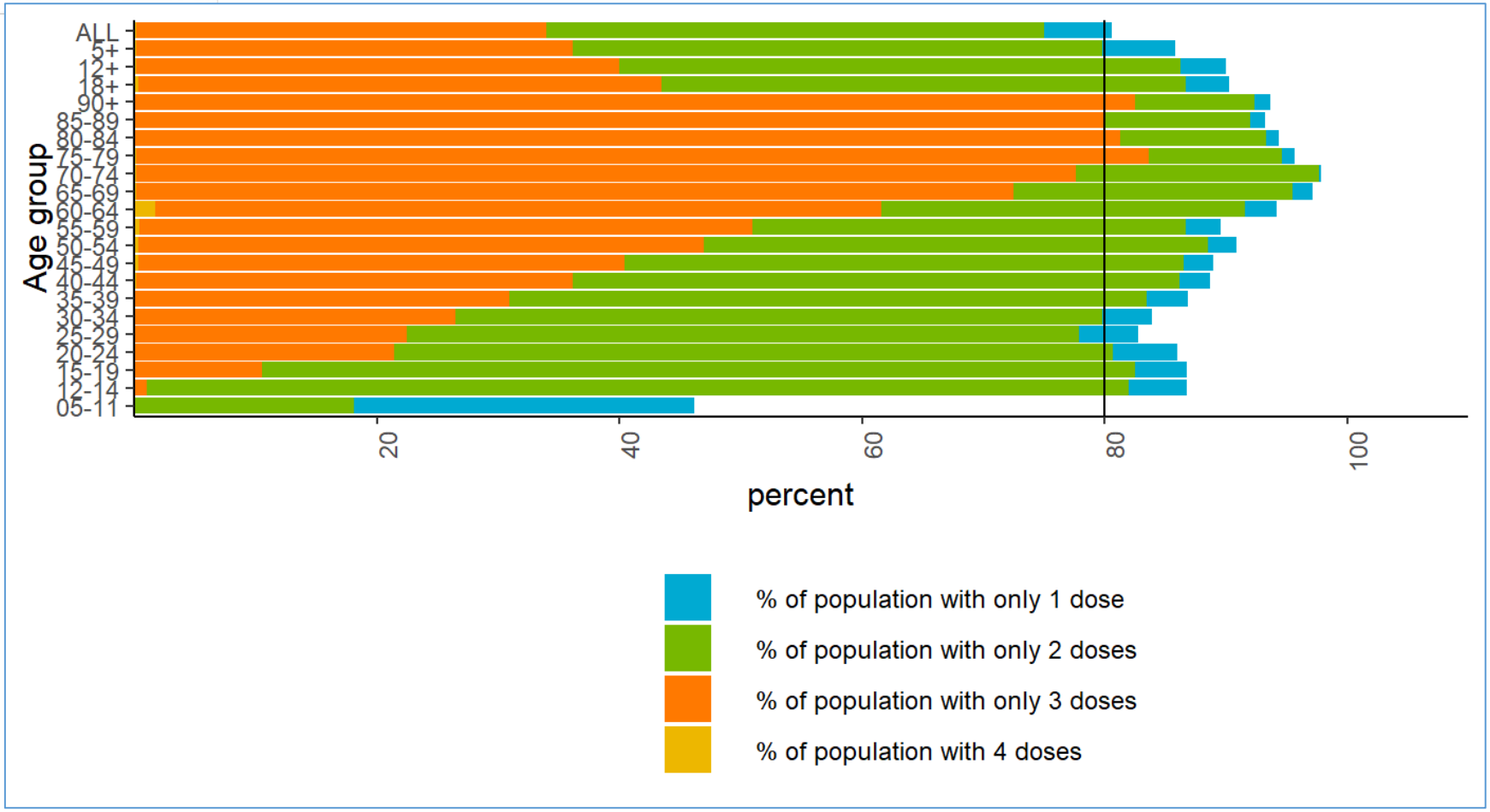


Figure 1: Percent of Albertans who received one, two, three or four doses of COVID-19 vaccine by age group.

TAB 6

Premier's Office Staff
February 7, 2022

TO: Premier Kenney

SUBJECT: Student Masking in Schools

CONTENTS & HIGHLIGHTS:

1. **Background on COVID-19 & School-Aged Children**
2. **Evidence Summary**
    - There is insufficient direct evidence of the effectiveness of face masks in reducing COVID-19 transmission in education settings.
    - Existing research supporting mask use in schools has limitations that make the pool of evidence weak and the benefits of masking children unclear.
3. **Harmful Effects of Mask Wearing on Children**
    - Masks can disrupt learning and interfere with children's social, emotional, and speech development by impairing verbal and non-verbal communication, emotional signaling, and facial recognition.
4. **Jurisdictional Scan**
    - The United Kingdom, Denmark, Sweden, Finland, Norway, and the Netherlands do not require children under the age of 12 to wear masks.
    - Florida, Oklahoma, Texas, and Utah in the United States have banned mask mandates in schools.

BACKGROUND ON COVID-19 & SCHOOL-AGED CHILDREN:

- Children and young people are at very low risk of severe outcomes from COVID infection.
    - In Alberta, case hospitalization, ICU, and death rates per 100 cases for school-aged children (ages 5 to 19[1]) are 0.47, 0.07, and 0.004, respectively.
    - An Albertan aged 5 to 19 infected with COVID is about 223 times less likely to die from COVID than an Albertan aged 20+.
- There is a lower risk of hospitalization among Omicron cases in school-aged children compared to Delta, according to preliminary analysis by the UK Health Security Agency.
- In Alberta:
    - 46.1% of 5- to 11-year-olds received one dose of COVID vaccine.
    - 86.8% of 12- to 19-year-olds received one dose, 82.2% received two doses.

EVIDENCE SUMMARY:

- A 2022 evidence summary by the UK Department for Education (DfE) found that the evidence for masking students in schools to reduce the spread of COVID is "not conclusive".
    - Existing studies are largely observational therefore prone to bias, and results from studies are "mixed".
    - The DfE also reported results from its own study on masks in schools showing no statistically significant impact on student absences.
    - The DfE ultimately concluded that the evidence taken together is in favour of masking in schools, though it should be noted that this summary was published to support the UK government's mask mandate in secondary schools, a policy that has since been reversed.
- A 2022 article by the Brownstone Institute (a US think tank opposed to COVID measures) found that the daily new cases and hospitalization rates among children in states with and without school mask mandates are nearly identical.
- A 2021 study from Spain showed that the use of masks in schools for students was not associated with a large effect in slowing COVID transmission.
    - Transmission rate did not drop sharply among children subject to the masking requirement (ages 6+).
- A 2021 CDC study of elementary schools in Georgia found that masking *teachers* was associated with a statistically significant decrease in COVID transmission, but masking *students* was not.
- Non-peer-reviewed/non-academic evidence:
    - A 2021 study from Brown University found no correlation between student cases and mask mandates in schools in New York, Massachusetts, and Florida.
    - Davidson and Williamson, two neighbouring counties in Tennessee with similar vaccination rates, had similar fall 2021 case-rate trends in their school-age

[1] Including 19-year-olds as data for ages 5 to 18 is not yet available.

populations despite one county having a mask mandate and the other a mask opt-out option.
    - Mask-optional school districts in Cass County, North Dakota had *lower* prevalence of COVID-19 cases among students last fall than districts with mask mandates.

Research supporting the use of masks in schools has limitations that make the pool of evidence weak and the benefits of masking children unclear.

- ***Lack of study controls*** – A 2021 Arizona study oft-cited by the CDC to support its recommendation of masking all kids aged 2 and older has been disputed by experts. The study failed to control for exposure times across schools and most importantly the vaccination status of staff or students.
- ***Failure to isolate the impact of masks*** – Studies in North Carolina, Utah, Wisconsin, and Missouri cited by the CDC failed to isolate the impact of masks and did not make comparisons with schools that did not require masks.
    - Schools often "layer" masking with other measures to reduce the spread of COVID, making it challenging to measure the independent impact of mask-wearing.
- ***Not statistically significant*** – Studies that do show a reduction in COVID transmission with masks in school produced results that were not statistically significant.
- ***Lack of randomized controlled trials*** ("RCTs") – Studies have been largely observational and "provide less direct evidence of the effectiveness of face coverings than RCTs."
- ***Not specific to students or schools*** – A 2021 randomized controlled trial conducted in Bangladesh reported that surgical masks were effective at reducing rates of symptomatic COVID infection, but it did not include children in the study, leading to some experts questioning the applicability of this research in education settings.
    - The same criticism applies for studies that showed universal masking (not masking in schools) reduces COVID transmission.

HARMFUL EFFECTS OF MASK WEARING ON CHILDREN:

- Masks impair verbal and non-verbal communication between teachers and students.
    - It can be harder to hear and understand speech with masks.
    - In a survey conducted by the UK DfE, 80% of students reported that wearing a mask made it difficult to communicate, and 55% felt it made learning more difficult. 94% of school leaders and teachers reported that masking made communication more difficult.
    - Young children need to see full faces to learn language and identify emotions.
    - Masks impair face recognition and identification.
    - Masks can be especially detrimental to students with hearing impairments.
- Masks block emotional signaling between teachers and students.
    - Emotions are a major driver of group cohesion.

    - Masks hinder social perception and interfere with social interaction, emotional bonding, and emotional development.
- Physical side effects of mask use include headaches, dermatitis with rashes and redness, and discomfort.
    - N95 or KN95 masks can be uncomfortable for children to wear (N95s are not sized for children) and "hinder communication more than other types of masks."

JURISDICTIONAL SCAN:

- World Health Organization
    - Advises against masks for kids under the age of 6
    - Advises only selectively for kids between the ages of 6 and 11
- United Kingdom & Europe
    - The European Centre for Disease Prevention and Control
        - Advises against masks for any children in primary school
    - United Kingdom:
        - No face coverings needed in classrooms and school communal areas
        - Masks have never been advised for children under the age of 11
    - Denmark:
        - Masking rules generally do not apply to children under the age of 12
    - Sweden:
        - The use of face masks is not required for students while at school
    - Finland
        - Masking rules do not apply to children under the age of 12
    - Norway:
        - Masking rules do not apply to children under the age of 12
        - The use of face masks is not required for students while at school
    - Netherlands:
        - Masking rules do not apply to children under the age of 12
- United States:
    - The American Federation of Teachers "supports a path away from school mask mandates."
    - Four states banned mask mandates in schools: Florida, Oklahoma, Texas and Utah.
        - Six additional states have bans that are either blocked, suspended, or not being enforced: Arizona, Arkansas, Iowa, South Carolina, Tennessee, and Virginia.
    - 14 states plus the District of Columbia require masks in schools.

TAB 7

COVID-19 – COVID and Schools

Questions

- **Outbreaks in schools with and without mask mandates**
- **Provide Alberta school data comparing last year and this year**

Overall Themes

- School boards without mask mandates have 3 times more outbreaks in their schools, on average
  - Case and hospitalization rates per 100,000 population lower in areas where mask mandates are required in both children (5-11 year old) and adults (30-59 years old)
  - Hospitalization rates per 100,000 population are lower in adults (30-59 years old) in areas with mask mandates
- The outbreak in Westglen school in Edmonton (Fall 2021) is an example that illustrate that a school outbreak can lead to increased spread within the local community
- Hospitalization rate per 100,000 population are higher (<10 years old) and comparable (10-19 years old) in the fifth wave compared to other waves

Analysis: Masks Mandates

School boards without mask mandates had 3 times more outbreaks in their schools, on average

Table 1. Top 10 school Boards with the highest proportion of outbreaks in their schools as of Sept 27, 2021

School Board	Municipality	N Schools	N Outbreaks	Percent of schools with outbreaks (%)*	Mask mandate at start of school?
The Lakeland Roman Catholic Separate School Division	Bonnyville	8	6	75%	N
The Wild Rose School Division	Rocky Mountain House	17	11	65%	N
The Grande Prairie School Division	Grande Prairie	20	11	55%	N

Alberta

The Grande Prairie Roman Catholic Separate School Division	Grande Prairie	13	7	54%	N
The High Prairie School Division	High Prairie	13	6	46%	N
The Parkland School Division	Stony Plain	25	11	44%	N
The Holy Family Catholic Separate School Division	Peace River	9	4	44%	N
The Black Gold School Division	Nisku	31	11	35%	N
The Sturgeon School Division	Morinville	17	6	35%	N
The St. Thomas Aquinas Roman Catholic Separate School Division	Leduc	12	4	33%	N

* This is the same as the rate of outbreaks per 100 schools

Table 2. Schools with the 10 lowest proportions of outbreaks in their schools as of Sept 27, 2021

School Board	Municipality & Area	N Schools	N Outbreaks	Percent of schools with outbreaks (%)*	Mask mandate at start of school?
The Greater St. Albert Roman Catholic Separate School Division	St. Albert	18	1	6%	Yes
The Northland School Division	Peace River	21	1	5%	Yes
The Edmonton School Division	Edmonton	232	12	5%	Yes
The Calgary School Division	Calgary	256	11	4%	Yes
The Edmonton Catholic Separate School Division	Edmonton	103	3	3%	Yes
The Rocky View School Division	Airdrie	52	1	2%	N
The Calgary Roman Catholic Separate School Division	Calgary	120	1	1%	Yes
The Wetaskiwin School Division	Wetaskiwin	22	0	0	N
The Aspen View School Division	Athabasca	18	0	0	N
The Canadian Rockies School Division	Canmore	8	0	0	Yes

* This is the same as the rate of outbreaks per 100 schools

Table 3. Average percent of outbreaks per school board, by mask mandate status

Mask mandate at start of school?	Average percent of outbreaks per school board
Implemented after 1st week	19.7
N	23.4
Y	7.3

A comparison of geographies with and without mask mandates

Method:

- "Masks Required" is defined as communities where 75% of schools required masks from the start of the school year (excludes fancophone and private schools).
- "Other" is defined as communities that did not meet the 75% cut-off and/or do not require mask mandates. Note: small towns that had 1 of each public school, separate school, and private school would not meet the 75% cut-off
- Limitations
    - Did not account for community vaccine coverage. This may impact hospitalization rate by communities in schools that have and do not have mask mandates.
    - Mask mandates were not available for all boards.

Results:

- Case and hospitalization rates per 100,000 population lower in areas where mask mandates are required in both children (5-11 year old) and adults (30-59 years old) (See Figure 1)
- Hospitalization rates per 100,000 population are lower in adults (30-59 years old) in areas with mask mandates (See Figure 1)

COVID-19 – COVID and Schools

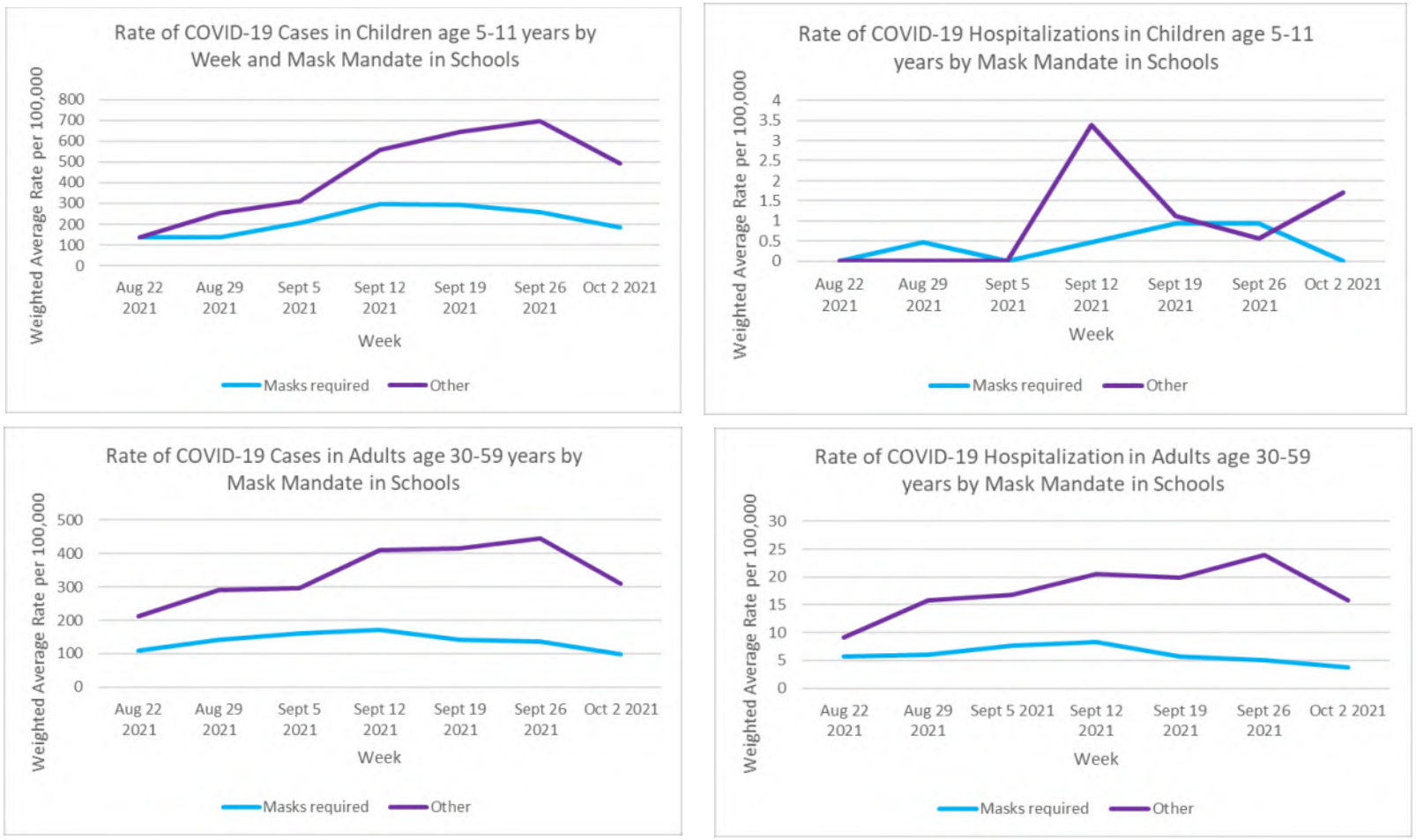


Figure 1. Rate of COVID-19 cases (Left) and hospitalization rates (right) per 100,000 population in children, 5-11 years old (top) and adults, 30-59 years old (bottom) by mask mandates in school.

NOTE: this work was done October 2021, prior to vaccine availability for 5-11 year olds. The 30-59 year olds were selected based on potential impacts on households.

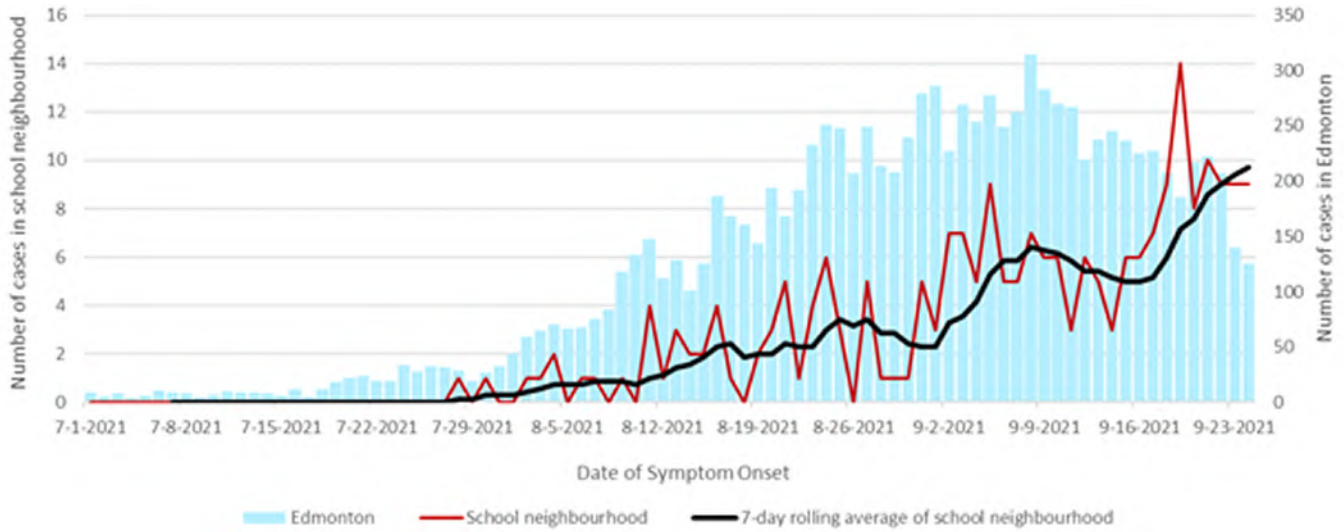
Alberta

Analysis: Westglen School

September 28, 2021

- 71 cases
  - 1 staff member, 70 students
    - Staff member (music teacher) was not immunized
    - Students spread roughly evenly across grades 1-6
  - The outbreak opened Sept 23rd – they had reported 10% absenteeism and a positive case on Mon Sept 20th
    - Symptomatic children continued to attend school until they moved to online learning Sept 24th.
  - Even young children likely transmitted to their families
    - As of Sept 26th, 14 families had additional cases in their families, the index case (ie earliest onset date) was an adult only once (7%).
      - 7 (50%) - index case was a child age 5-9
      - 6 (43%) – index was a child age 10-12
  - This outbreak has had a significant effect on case counts in the neighbourhood; while cases in Edmonton were stabilizing and decreasing, cases in the T5M postal code reversed trend, increasing significantly after the Westglen outbreak (See Figure 2)
    - **66/94 (70%) of all cases with the T5M postal code** reported between Sept 17-26 are linked to the outbreak or are family members of outbreak cases.

Figure 2. Number of cases in the neighbourhood surrounding the school and the City of Edmonton



Analysis: Hospitalizations

Definition of waves:

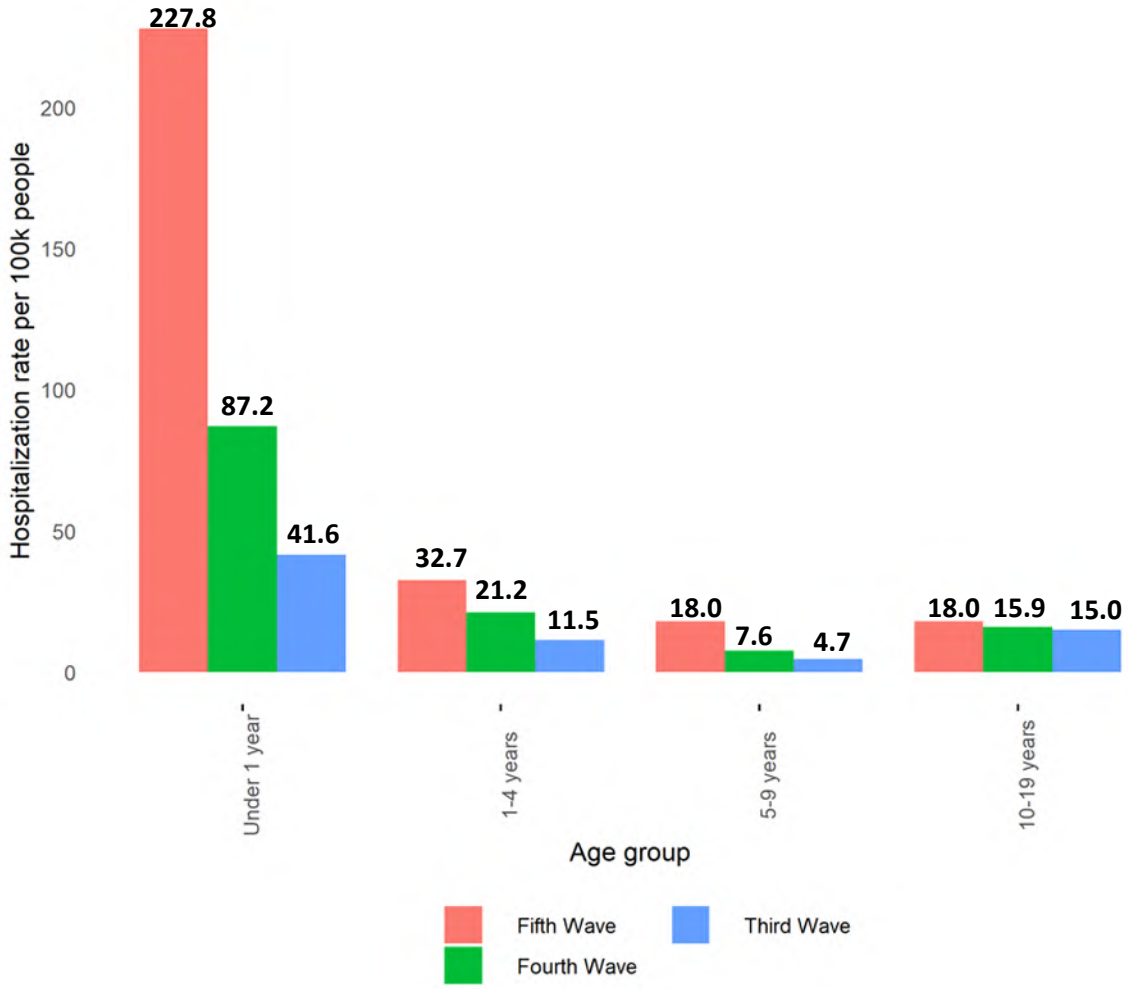
Third Wave: Feb 6, 2021 to July 9, 2021
Fourth Wave: July 10, 2021 to December 15, 2021
Fifth Wave: December 16, 2021 - Current

Summary:

- Hospitalization rate per 100,000 population are higher (<10 years old) and comparable (10-19 years old) in the fifth wave compared to other waves

COVID-19 – COVID and Schools

Figure 3. Hospitalization Rate per 100,000 population comparison across wave three to five among people under 20 years old



Alberta

TAB 8

From: Scott Fullmer <Scott.Fullmer@gov.ab.ca>
Sent: Monday, February 07, 2022 2:13 PM
To: Mark Hicks; Kait Wolfert; Mugove Manjengwa; Deena Hinshaw; Fiona Cavanagh; Elena Kubatka-Willms; Alex Alexander
Subject: FW: School Masking Evidence Summary

Hello everyone, we went back through the evidence on school transmission and found the new material on how effective in schools some of the mitigation measures have been in the literature. Let me know if this is what your looking for.

Summary

1. According to the research literature, wearing masks can be effective in contributing to reducing transmission of COVID-19 **in public and community settings**. This is informed by a range of research, including randomised control trials, contact tracing studies, and observational studies.
2. **The evidence for protection from masks, in schools is less direct**—and it might be small but taken together support the conclusion that face coverings in schools can contribute as part of a host of measures to reduce transmission. **What data do exist have been interpreted into guidance in many different ways**. The World Health Organization, for example, does not recommend masks for children under age 6. The European Centre for Disease Prevention and Control recommends against the use of masks for any children in primary school. In North America masking in schools was part of public health guidelines as schools returned after the first and second waves.
3. **Studies find that transmission in schools has remained limited and comparable to the wider community** under a wide range of prevention measures such as masking, cohorting, cancelling higher-risk activities, distancing, hygiene protocols, reduced class size and enhanced ventilation.
4. The studies available were performed prior to the emergence of the Omicron VOC.

Systematic Reviews of Multiple Measures

1. The evergreen MacMaster University literature review (49 studies) (August 2021) reports wide variability in policies in place across different jurisdictions limiting the ability to evaluate the impact of specific measures or make best practice recommendations for daycare or school settings due to variability in the combination of measures implemented. However, implementation of infection control measures is critically important to reducing transmission, especially when community transmission rates are high.
    - There is evidence that wearing masks, maintaining at least 3ft of distance (especially amongst staff), restricting entry to the school to others, cancelling extracurriculars, introducing outdoor instruction, and daily symptom screening reduce the number of cases within schools;
    - There are inconsistent findings for associations between ventilation, and class size.
    - Hybrid or part-time in-person learning appears to be associated with higher incidence compared to full-time in-person.
2. In July 2021, European Centre for Disease Control and Prevention published its second update to its review of COVID-19 in children and the role of school settings in transmission. The review examined case-based epidemiological surveillance analysis from The European Surveillance System, grey, pre-print and peer reviewed scientific literature, focusing on studies published in 2021; and modelling of the effects of closing schools on community transmission based on data from the ECDC-Joint Research Centre (JRC) Response Measures Database.
    - Similar to the literature review produced by Macmaster University, this report that implementing multiple physical distancing and hygiene measures can significantly reduce the possibility of transmission within schools (high confidence), including

- De-densification (classroom distancing, staggered arrival times, cancellation of certain indoor activities, especially among other students)
- Hygiene measures (handwashing, respiratory etiquette, cleaning, ventilation, and face masks for certain age groups).
- Timely testing and isolation or quarantine of symptomatic cases is important. Rapid antigen tests should be considered

3. The latest Cochrane literature review examined evidence is up to December 2020 on which measures implemented in the school setting allow schools to safely reopen, stay open, or both, during the COVID-19 pandemic. The review suggests that *many measures implemented in the school setting* can have positive impacts on the transmission of SARS-CoV-2, and on healthcare utilisation outcomes related to COVID-19.
    - ***Measures reducing the opportunity for contacts***: by reducing the number of students in a class or a school, opening certain school types only (for example primary schools) or by creating a schedule by which students attend school on different days or in different weeks, the face-to-face contact between students can be reduced.
        - All 23 studies showed reductions in the spread of the virus that causes COVID-19 and the use of the healthcare system. Some studies also showed a reduction in the number of days spent in school due to the intervention.
    - ***Measures making contacts safer***: by putting measures in place such as face masks, improving ventilation by opening windows or using air purifiers, cleaning, handwashing, or modifying activities like sports or music, contacts can be made safer.
        - Five (of 11) of these studies combined multiple measures, which means we cannot see which specific measures worked and which did not. Most studies showed reductions in the spread of the virus that causes COVID-19; some studies, however, showed mixed or no effects.
    - ***Surveillance and response measures***: screening for symptoms or testing sick or potentially sick students, or teachers, or both, and putting them into isolation (for sick people) or quarantine (for potentially sick people).
        - Twelve (of 13) studies focused on mass testing and isolation measures, while two looked specifically at symptom-based screening and isolation. Most studies showed results in favour of the intervention, however some showed mixed or no effects.
    - ***Multicomponent measures***: measures from categories 1, 2 and 3 are combined.
        - Three studies assessed physical distancing, modification of activities, cancellation of sports or music classes, testing, exemption of high-risk students, handwashing, and face masks. Most studies showed reduced transmission of the virus that causes COVID-19, however some showed mixed or no effects.

Transmission Compared to the Community

- These 4 studies in Vancouver, Georgia, and Italy were some of the earlier studies in the first/second wave that found that students were less of a risk for secondary infections compared to teachers however, teachers rates of infection were no higher than other members of the community in occupations outside the home.
    - **Vancouver (Oct 2020-May 2021)** Goldfarb et al. seroprevelance study showed **no detectable increase in SARS-CoV-2 infections in school staff** working in Vancouver public schools following a period of widespread community transmission **compared to the community**. These findings corroborate claims that, with *appropriate mitigation strategies in place*, in-person schooling is not associated with significantly higher risk for school staff.
        - Of the 1,556 school staff who had their blood sample tested, 2.3% tested positive for antibodies. This percentage was similar to the number of infections in a reference group of blood donors matched by age, sex and area of residence.
        - NPIs: (Physical distancing, Enhanced cleaning, Enhanced ventilation, Cohorts, Screening (staff and students), Regular surface cleaning, Unidirectional flow of students, Masks (not mandatory until Feb 2021 for grades 6-12 and for grades 4-12 in Apr 2021), Hand hygiene

(hand sanitizer in classrooms and common areas), Quarantine policies, Staggered recess and lunch breaks)

- **Georgia CDC Study –USA (Dec 2020-Jan 2021)** Gettings, J.R., et al. found that masking teachers was associated with a statistically significant decrease in COVID transmission, **but masking students was not**.
    - NPI's: (enhanced cleaning, enhanced ventilation, hand hygiene, masks – except during sports, and physical distancing)
    - Highest Secondary Attack Rates were:
        - Indoor High-contact sports settings - 23.8%
        - staff meetings/lunches - 18.2%
        - Elementary school classrooms 9.5%
    - Lowest Secondary Attack Rates:
        - Asymptomatic Students – 2.3%
        - Elementary Students – 2.7%
    - The SAR was higher for staff 13.1% vs student index cases 5.8% and for symptomatic 10.9% vs asymptomatic index cases 3.0
    - In school settings, J. Gettings et al. point out that in addition to masking, **schools that improved ventilation through dilution methods alone, COVID-19 incidence was 35% lower, whereas in schools that combined dilution methods with filtration, incidence was 48% lower**.
- **Italy (Sept 30 2020-Feb 2021)** Gandini et al. performed a cross-sectional and prospective cohort study in Italy during the second COVID-19 wave (from September 30, 2020 until at least February 28, 2021. Incidence and positivity were lower amongst elementary and middle school students compared to general population; incidence was higher in high school students in 3 of 19 regions. Incidence in teachers was no different from other occupations after adjusting for age.
    - NPI's: (Ban on sports and music, Frequent ventilation, Hand hygiene, Masks (staff, high school students), Negative test following exposure (some schools), Physical distancing (1m between seats), Reduced school hours, Temperature check, Unidirectional flow of students)
- **Georgia – USA (Dec 2020-Jan 2021)** J. A. W. Gold et al. examined incidence in a Georgia school district during December 1, 2020–January 22, 2021 identified nine clusters of COVID-19 cases involving 13 educators and 32 students at six elementary schools. Two clusters involved probable educator-to-educator transmission that was followed by educator-to-student transmission in classrooms and resulted in approximately one half (15 of 31) of school-associated cases. Preventing SARS-CoV-2 infections through multifaceted school mitigation measures and COVID-19 vaccination of educators is a critical component of preventing in-school transmission.
    - NPI's: (Masks - except while eating, Plastic dividers on desks but students sat less than 3 feet apart)

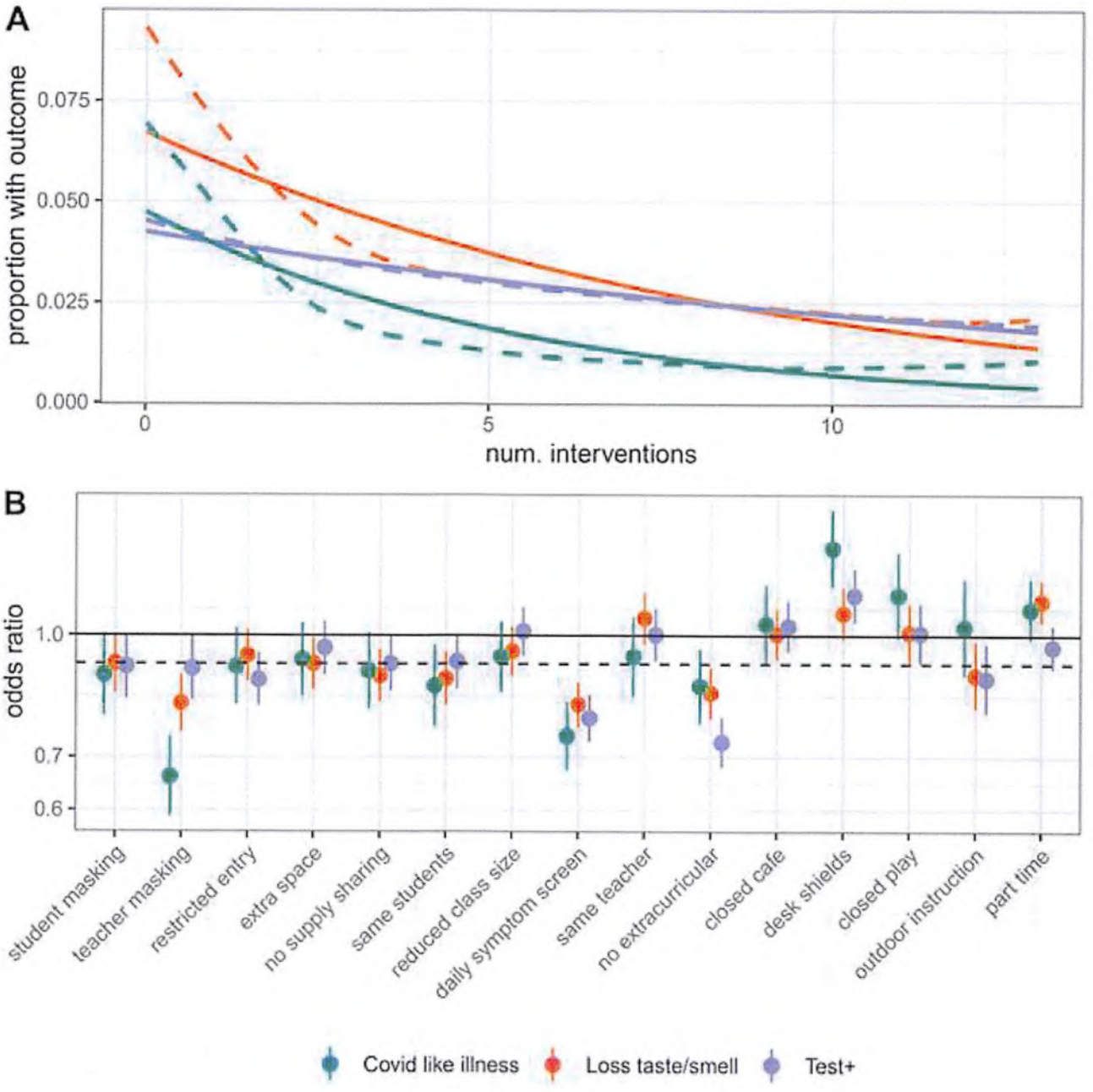
Impact of Multiple Mitigation Measures

4. These observational studies that assess the use of multiple interventions in schools and are a good example of the kinds of studies that show mixed results (as was noted in the systematic reviews)
    - **Utah – USA (Dec 2020-Jan 2021)** R. B. Hershow et al. reviewed K-6 schools opening in Salt Lake County, Utah, from Dec 3 – Jan 21, 2021. Despite high community incidence and an inability to space students' classroom seats ≥6 ft apart, this investigation found low SARS-CoV-2 transmission and no school-related outbreaks in 20 Salt Lake County elementary schools with *high student mask use and implementation of multiple strategies* to limit transmission.
        - NPIs: (6ft distance, High mask use (86%), 81% in-person learning, Plexiglass barriers for teachers, Staggered mealtimes)
        - Other studies, similar to the Utah in North Carolina, Wisconsin, and Missouri, isolated the impact of masks specifically, but showed that taken together mitigation strategies reduced transmission.
    - **Florida, New York, Mass – USA (2020-21)** E. Oster et al reported on the correlation of mitigation practices with staff and student COVID-19 case rates in Florida, New York, and Massachusetts during the 2020-2021

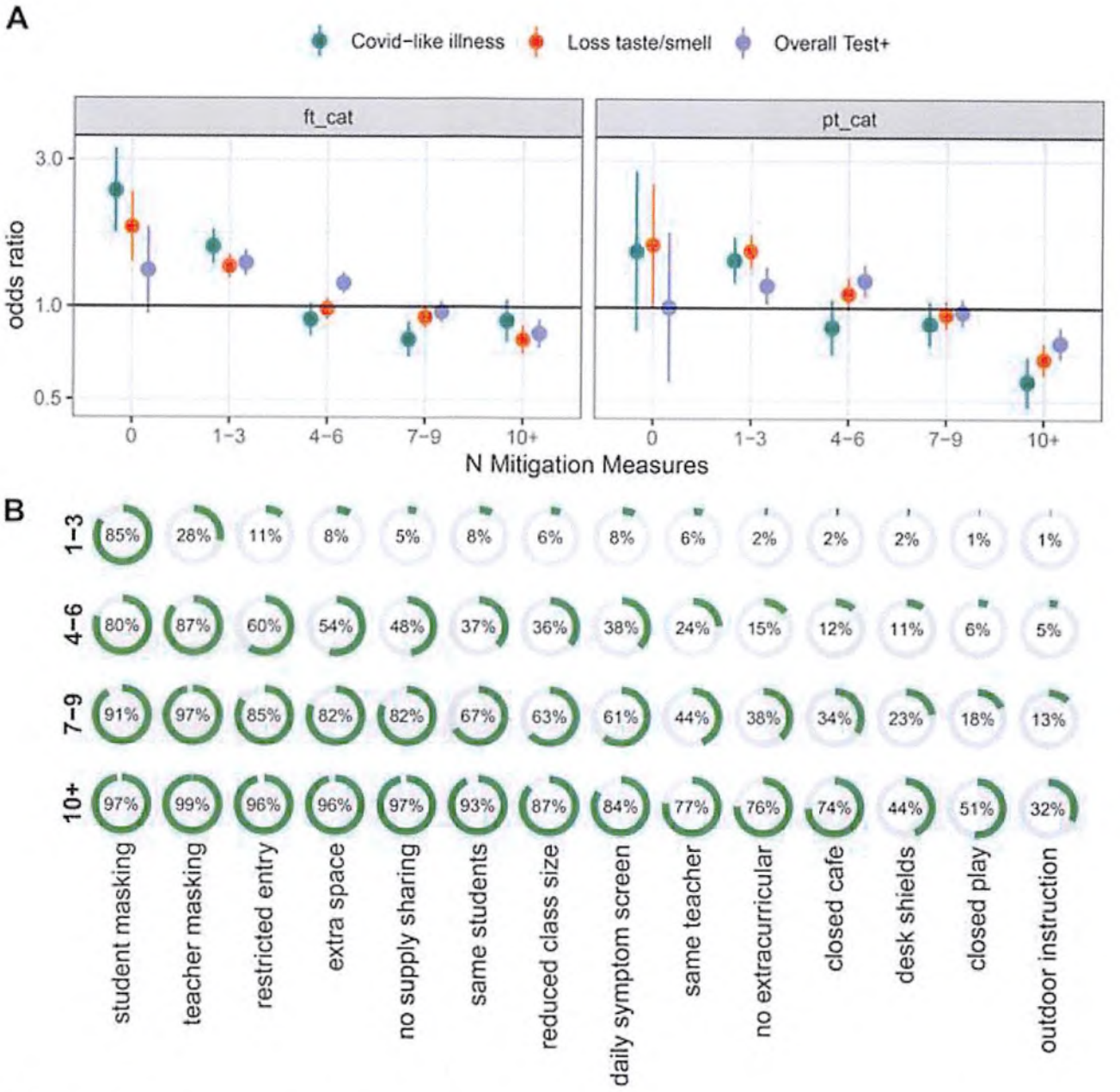
school year focusing on *student density, ventilation upgrades, and masking*. Ventilation upgrades are correlated with lower rates in Florida but not in New York. **Did not find any correlations with mask mandates.** All rates are lower in the spring, after teacher vaccination is underway.

- NPI's Varied by state: (Cohorts, Enhanced ventilation, Masks, Reduced student density, Physical distancing (6 ft.), Symptom screening, Temperature checks)

- **USA All States (Dec 2020-Feb 2021)** J. Lessler et al. For every additional measure implemented there was a decrease in odds of a positive test (adjusted OR: 0.93, 95% CI=0.92,0.94); *symptoms screening* was associated with the greatest risk reduction. When *7 or more IPAC measures were implemented, risk largely disappeared (with a complete absence of risk with 10 or more IPAC measures*). Among those reporting 7 or more mitigation measures, *80% reported student/teacher mask mandates, restricted entry, desk spacing and no supply sharing*. Outdoor instruction, restricted entry, no extracurriculars, and daily symptom screening were associated with significant risk reductions.
  - NPI's : (Cancelled extracurriculars, Closed common spaces (playgrounds, cafeterias), Cohorting, Masks, Physical distancing (extra space, separators between desks), Reduced class size, Restricted entry, Symptom screening)
- **A Science Magazine Summary on in-person schooling concludes that in-person schooling carries with it increased COVID-19 risk to household members; but also evidence that common, low cost, mitigation measures can reduce this risk**
  - School-based mitigation measures are associated with significant reductions in risk, particularly daily symptoms screens, teacher masking, and closure of extra-curricular activities.
  - A positive association between in-person schooling and COVID-19 outcomes persists at low levels of mitigation, but **when seven or more mitigation measures are reported, a significant relationship is no longer observed.**
    - Regression treating each individual mitigation measure as having an independent effect shows that **daily symptom screening is clearly associated with greater risk reductions than the average measure with some evidence that teacher mask mandates and cancelling extra-curricular activities are also associated with larger reductions than average**.
    - **In contrast, closing cafeterias, playgrounds and use of desk shields are associated with lower risk reductions (or even risk increases);** however this may reflect saturation effects as these are typically reported along with a high number of other measures. Notably, part-time in-person schooling is not associated with a decrease in the risk of COVID-19-related outcomes compared to full-time in-person schooling after accounting for other mitigation measures.


A
proportion with outcome
0.075
0.050
0.025
0.000
0
5
10
num. interventions

B
odds ratio
1.0
0.7
0.6
student masking
teacher masking
restricted entry
extra space
no supply sharing
same students
reduced class size
daily symptom screen
same teacher
no extracurricular
closed cafe
desk shields
closed play
outdoor instruction
part time
Covid like illness
Loss taste/smell
Test+



Evidence on Masking Alone

- In community settings the conclusion on the effectiveness of face coverings to reduce transmission of COVID-19 in community settings is informed by a range of research, including transferable insight from other contagious diseases, modelling studies, laboratory experiments, contact tracing studies, and observational studies. The addition of randomised control trials and substantially more individual-level observational studies has increased the strength of the conclusions and strengthens the evidence for the effectiveness of face coverings in reducing the spread of COVID-19 in the community, through source control, wearer protection, and universal masking.
- There are only 2 RCTs that have been done during the pandemic on masking (1 non-peer-reviewed report, both rated as medium quality) provided evidence on the effectiveness of face coverings to reduce transmission of COVID-19, for universal masking (Bangladesh) and 1 for wearer protection (Denmark).[1]
    - Denmark RCT in Spring 2020 (H. Bundgaard et al.) The first was conducted in Denmark in the spring of 2020 and found no significant effect of masks on reducing COVID-19 transmission
        - Adults who spent 3 hours or more a day outside the home and did not wear a face covering while at work were randomised either to wearing study-provided surgical masks outside the home or no intervention.

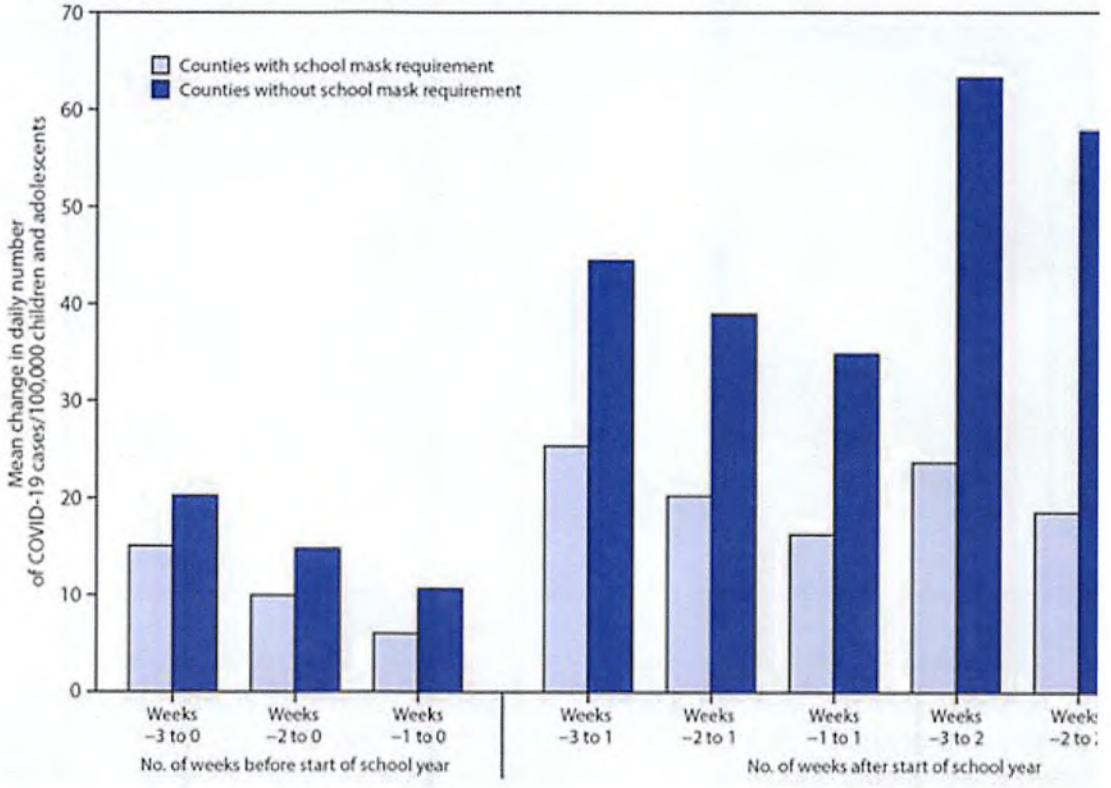
        - There was a small, non-significant reduction in COVID-19 infections reported in the group that wore surgical masks: 42 of 2,392 participants (1.8%) developed COVID-19 in the intervention group compared with 53 of 2,470 participants (2.1%) in the control group.
        - The study was inconclusive, reporting a non-significant reduction in COVID-19 infections from wearer protection using surgical masks, but the results lacked precision due to an insufficiently large sample size and low prevalence in the study population, so few participants developed COVID-19.
    - Bangladesh RCT in 2021 (J. Abaluck et al.) - reported that surgical masks (but not cloth) were modestly effective at reducing rates of symptomatic infection. However, neither of these studies included children, let alone vaccinated children.
        - Randomized trial involving nearly 350,000 people across rural Bangladesh. The study's authors found that surgical masks — but not cloth masks — reduced transmission of SARS-CoV-2 in villages where the research team distributed face masks and promoted their use.
        - **The study linked surgical masks with an 11% drop in risk, compared with a 5% drop for cloth**. That finding was reinforced by laboratory experiments whose results are summarized in the same preprint. The data show that even after 10 washes, surgical masks filter out 76% of small particles capable of airborne transmission of SARS-CoV-2, says Mushfiq Mobarak, an economist at Yale University in New Haven, Connecticut, and a co-author of the study. By contrast, the team found that 3-layered cloth masks had a filtration efficiency of only 37% before washing or use.
- **The UK PHE has produced two literature reviews on masking**
    - **In community** they assembled a committee to evaluate this evidence from their most recent literature review on face coverings in community included 25 studies (including 9 preprints and 2 non-peer reviewed reports): 2 randomised controlled trials (RCTs) and 23 observational studies. The evidence predominantly suggests that face coverings reduce the spread of COVID-19 in the community.
        - Respiratory Evidence Panel: **evidence suggests that all types of face coverings are, to some extent, effective in reducing transmission of SARS-CoV-2 in both healthcare and public, community settings** – this is through a combination of source control and protection to the wearer (high confidence).
            - 8 contact tracing studies suggested that contacts of primary cases were less likely to develop COVID-19 if either the primary case or the close contact, or both, wore a face covering.
            - 11 observational association studies had mixed results, with 6 studies suggesting face coverings were associated with reduced COVID-19 transmission and 5 suggesting no statistically significant association.
    - **In the school setting (Jan 2022)** they conducted a literature review as well as publishing the results of their own study that looked at schools with mask mandates in secondary schools. The literature review on the Evidence of associations between COVID-19 and the use of masks in educational settings was inconclusive, but some studies showed higher rates of COVID-19 in schools without mask requirements for students.
        - "The new study presented in this report is a comparison of covid absence rates 2-3 weeks later in 123 schools which introduced masks on the 1st October 2020 with covid absence rates in 1192 schools which did not have a policy of mask wearing in school.
        - There were several differences between the two sets of schools included in this study including the covid absence rates at the start of the study (the schools which introduced masks had much higher rates). The researchers tried to adjust for these factors in their analysis.
            - **No Reduction in the UK with Masks in Schools: Schools where face coverings were used in October 2021 saw a reduction two to three weeks later in Covid absences from 5.3% to 3% - a drop of 2.3 percentage points.**

        - **In schools which did not use face coverings absences fell from 5.3% to 3.6% - a fall of 1.7 percentage points (not statistically significant)**
- Public Health Ontario has also assessed most of this evidence as well and summarized that several studies found that mask mandates in schools have been associated with lower incidence of SARS-CoV-2 infection. Many of the studies examining COVID-19 incidence in schools had layered Infection prevention and control measures in place, so it was challenging to measure the independent Impact of mask-wearing.
- There are 3 commonly cited studies (all rated as low quality) assessing whether wearing a face covering was effective in schools in the UK, US and Germany in autumn and winter 2020, and in a summer camp in the US in summer 2020. These results provide less direct evidence of the effectiveness of face coverings than either the RCTs or contact tracing, but still provide evidence on the difference in COVID-19 transmission between people who did and did not wear face coverings in school and summer camp settings.
    - **California Study**: D. Cooper et al. in a prospective cohort study in the US assessed whether face coverings were effective as universal masking in four schools in Autumn to Winter 2020 found SARS-CoV-2 infections in 17 learners (N=320) only during the surge. School A (97% remote learners) had the highest infection (10/70, 14.3%, p<0.01) and IgG positivity rates (13/66, 19.7%). School D (93% on-site learners) had the lowest infection and IgG positivity rates (1/63, 1.6%). Mitigation compliance [physical distancing (mean 87.4%) and face covering (91.3%)] was remarkably high at all schools.
    - **Germany Study:** Theuring et al. in a cross-sectional study in Germany (n=177 primary school students, n=175 secondary school students and n=142 staff members) assessed whether face coverings were effective as wearer protection in 12 primary and 12 secondary schools in Germany in November 2020. It concluded that prevalence increased with inconsistent facemask-use in school, walking to school, and case-contacts outside school.
    - **US Summer Camp Study**: S. Suh et al. conducted a cross-sectional study (n=486 US summer camps comprising 89,635 campers) assessed whether face coverings were effective as universal masking in 486 summer camps in the US in summer 2020. It found in both single and multi-NPI analyses, the risk of COVID-19 cases was lowest when campers always wore facial coverings.

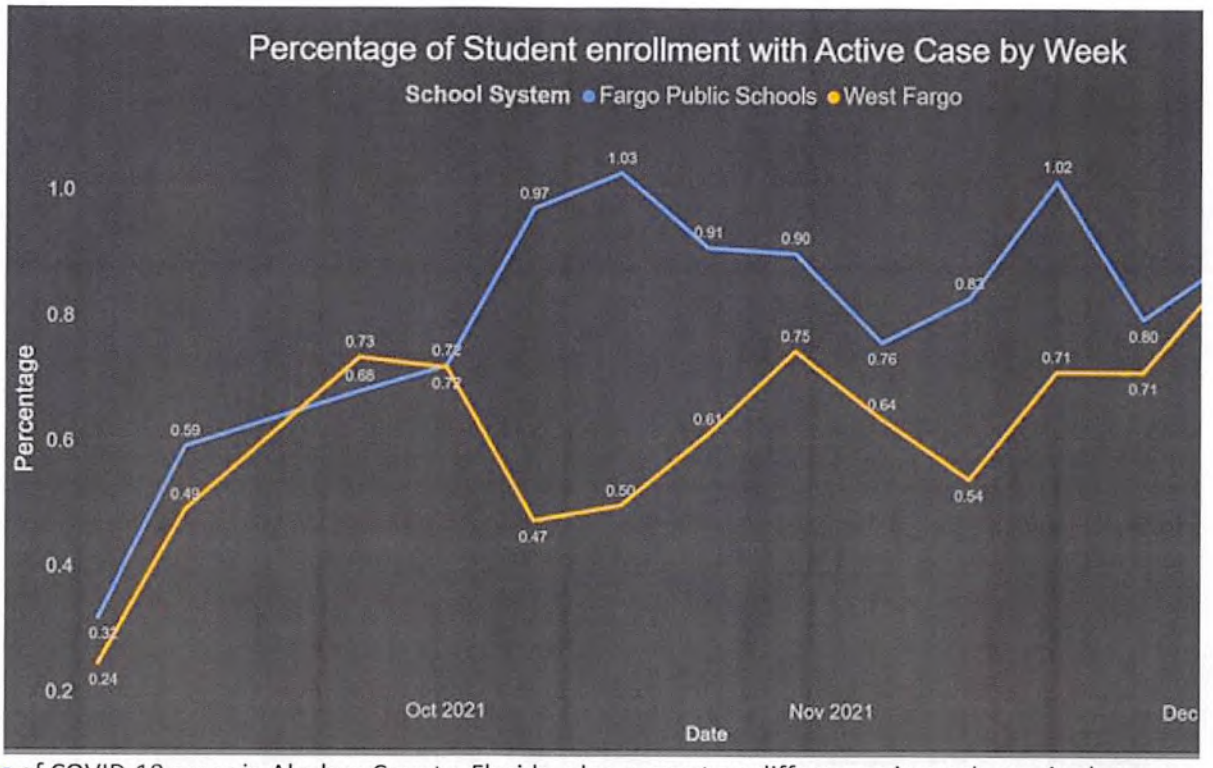
More recent evidence from Delta Wave and CDC Commissioned Studies

- To demonstrate any independent effect of masks on COVID-19 transmission requires comparing communities with similar vaccination rates or statistically controlling for differences in vaccination rates or other covariates. Without making these adjustments, it is difficult to attribute differences in case rates, or differences in in-school transmission, to mask wearing in school.
- When CDC examined the evidence on school transmission, it concluded that the preponderance of the available evidence from United States schools indicates that even when students were placed less than 6 feet apart in classrooms, **there was limited SARS-CoV-2 transmission *when other layered prevention strategies were consistently maintained; notably, masking and student cohorts.***
    - The Oct 2021 Arizona CDC Study (M. Jehn et al.) in the Maricopa and Pima Counties concluded that **schools without mask mandates were more 3.5 times likely to have COVID-19 outbreaks than schools with mask mandates**. The study noted that given the high transmissibility of the SARS-CoV-2 B.1.617.2 (Delta) variant, universal masking, in addition to vaccination of all eligible students, staff members, and faculty and implementation of other prevention measures, remains essential to COVID-19 prevention in K–12 settings.
        - However, the study has been found to have numerous flaws as pointed out in this Atlantic Article – including a failure to quantify the size of outbreaks and failure to report testing protocols for the students. They also do not control for different vaccination rates in the counties, meaning that vaccination could have played a bigger role than masking.
    - Another Oct 2021 CDC study by S. E. Budzyn et al. **found that U.S. counties without mask mandates saw larger increases in pediatric COVID-19 cases after schools opened**, but again did not control for important differences in vaccination rates, stating it will be done at a later date.
        - The study examined 520 counties from July to September, 62% of which didn't have a school mask requirement.
            - Over the two-week period before and after school started, **counties with school mask requirements saw their COVID-19 rates rise by 16 daily cases per 100,000 children, on average**.

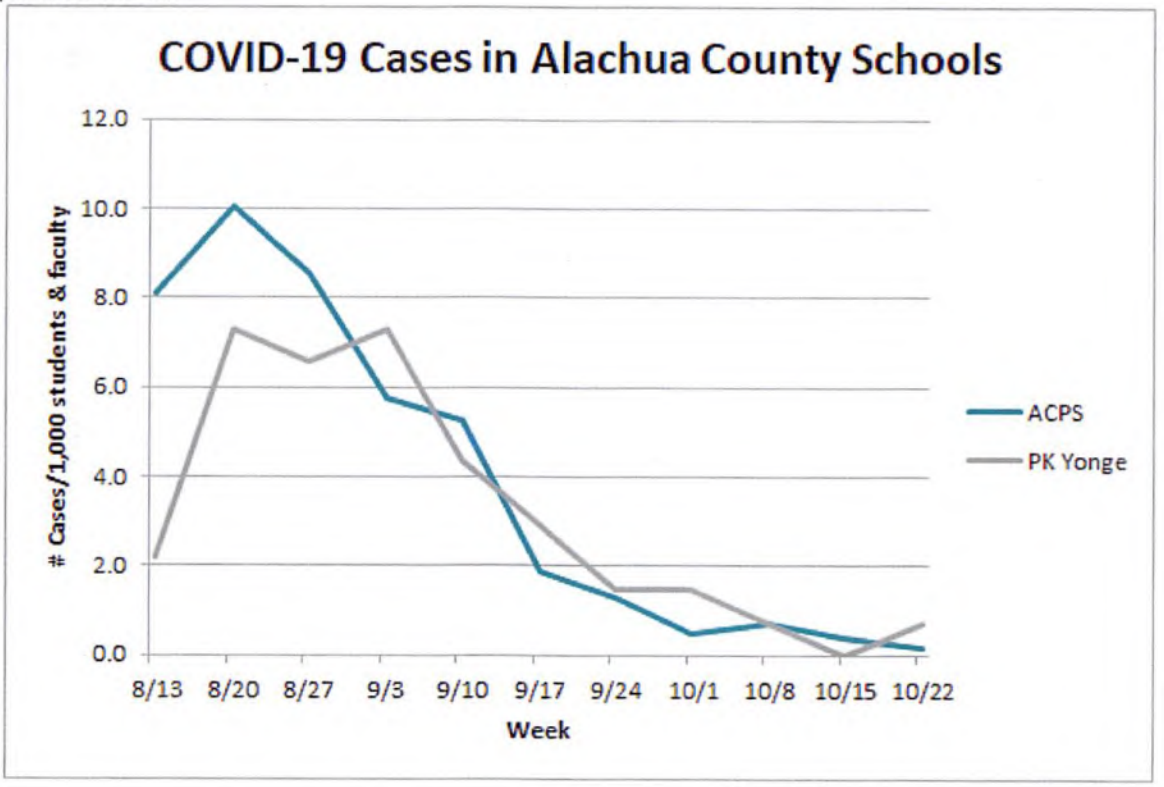
- **Meanwhile, counties without school mask requirements saw their COVID-19 rates rise by 35 daily cases per 100,000 children**, as shown in the chart below.



- These smaller studies are often shared online to show that there isn't a difference between schools that mask during the Delta variant's spread in the US:
  - In Tennessee, two neighboring counties with similar vaccination rates, Davidson and Williamson, have virtually overlapping case-rate trends in their school-age populations, despite one having a mask mandate and one having a mask opt-out rate of about 23 percent.
  - Another recent analysis of data from Cass County, North Dakota by Tracy Hoeg, comparing school districts with and without mask mandates, concluded that mask-optional districts had lower prevalence of COVID-19 cases among students this fall.



- [Analyses](#) of COVID-19 cases in Alachua County, Florida, also suggest no differences in mask-required versus mask-optional schools.



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Alberta Government

[1] Both studies were used to guide previous advice on masking in Alberta, both excluded children

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TAB 9

COVID-19 Situation Update

Epidemiology and Surveillance

08 February, 2022

Note: This report was generated on 08 February, 2022 for data reported up to end-of-day 07 February, 2022.

Summary

- **28,265** active cases in Alberta
- There has been a weekly average of **1.7**% of COVID cases screened for variants (excluding the last two days due to reporting delays).

- On **07 February, 2022**, there was:

  - an increase of **1,733** cases (+**1,537** confirmed cases and +**196** probable cases)
  - a **net** change of **1,667** cases (net change includes adjustments such as removing out of province cases and confirming or removing probable cases)
  - an additional **253** variant of concern cases (142,420 total)
  - an increase of **4,269** tests (6,793,485 total) and **819** people tested for the first time (2,717,900 total)

- 14 new deaths reported in the last 24 hours. One (**1**) previously reported death was determined to be non-COVID; as a result, the total death count will increase by 13.
- The testing positivity rate is **36.4%**
- There are **1,911** active and **19,418** recovered cases at long term care facilities and supportive/home living sites. **1,599** residents at these facilities have died. To date, **1,599/3,686** (**43%**) of deaths have been in long term care facilities or supportive/home living sites.
- **477,767** people recovered from COVID-19 (an additional **3483** people)

ALBERTA CASES

Table 1: Case information by Zone

Zone*	Case numbers	Active cases in community	Current hospitalizations	Current ICU admissions**	Deaths	Recovered
Calgary	206,337	10,549	597	44	998	194,193
Central	50,671	3,084	168	6	456	46,963
Edmonton	163,289	7,657	641	61	1,468	153,523
North	56,246	2,670	127	6	438	53,011
South	32,119	2,403	90	12	326	29,300
Unknown	1,056	279	0	0	0	777
Total	509,718	26,642	1,623	129	3,686	477,767

*Zone of current hospitalization and current ICU admission based on location of hospitalization not zone of patient residence.
**ICU cases are a subset of those in hospital.

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Table 2: Case difference by Zone

Zone	Cases on February 07, 2022	Difference (February 06-February 07)
Calgary Zone	206,337	801
Central Zone	50,671	139
Edmonton Zone	163,289	471
North Zone	56,246	160
South Zone	32,119	137
Unknown	1,056	25
Total	509,718	1733

Table 3: Variants of Concern by Zone

Zone	Alpha	Beta	Delta	Gamma	Kappa	Omicron	Total
Calgary Zone	20045	79	16381	804	6	12528	49843
Central Zone	5458	2	8565	192	0	1604	15821
Edmonton Zone	11429	65	22948	1063	13	8692	44210
North Zone	6253	34	14173	768	0	1387	22615
South Zone	2686	0	6137	97	0	971	9891
Unknown	0	0	4	0	0	36	40
Alberta	45871	180	68208	2924	19	25218	142420

Table 4: Variants of Concern (active cases only) by Zone

Zone	Delta	Omicron	Total
Calgary Zone	10	432	442
Central Zone	4	158	162
Edmonton Zone	0	517	517
North Zone	3	126	129
South Zone	2	99	101
Unknown	0	0	0
Alberta	19	1332	1351

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Figure 1: COVID-19 cases in Alberta by day and case status

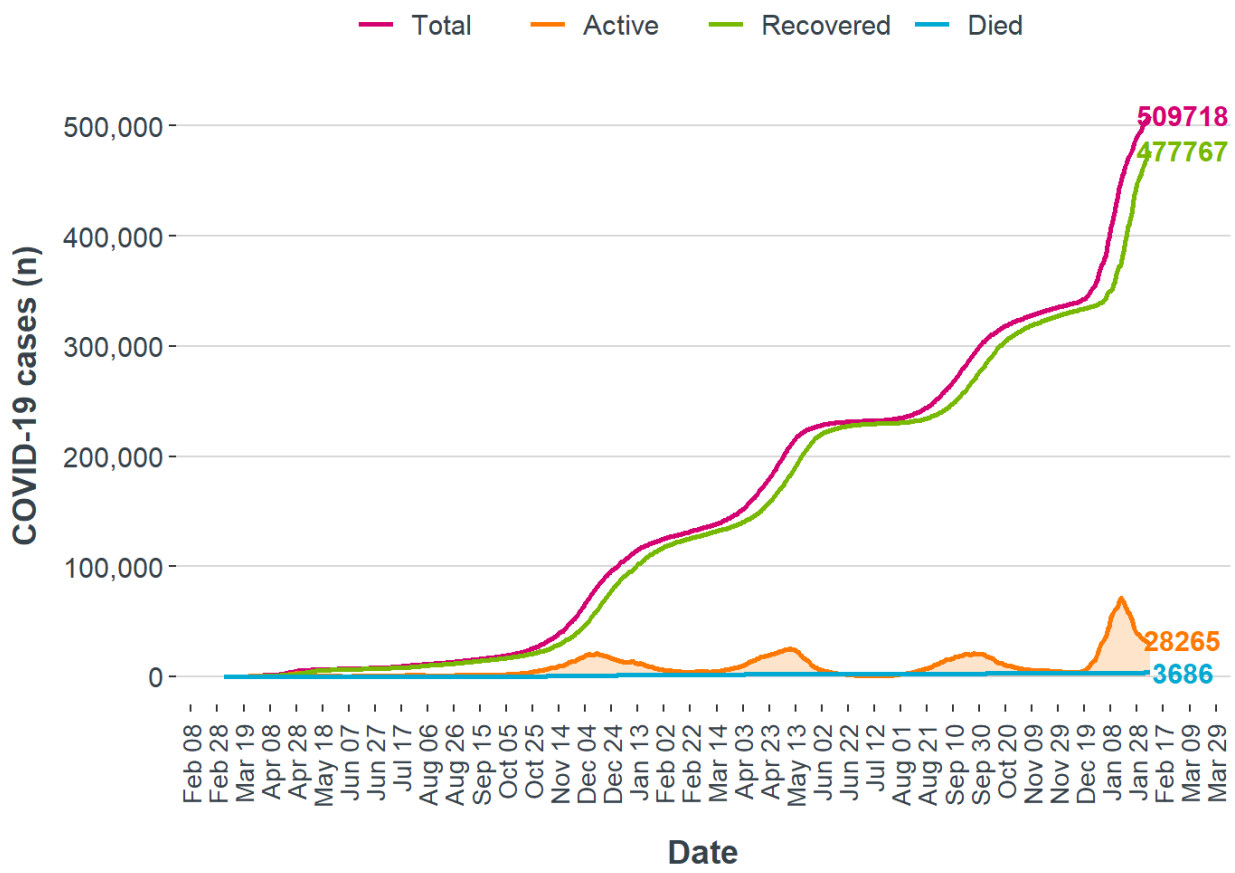

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Figure 2: Current COVID-19 hospitalizations in Alberta per day

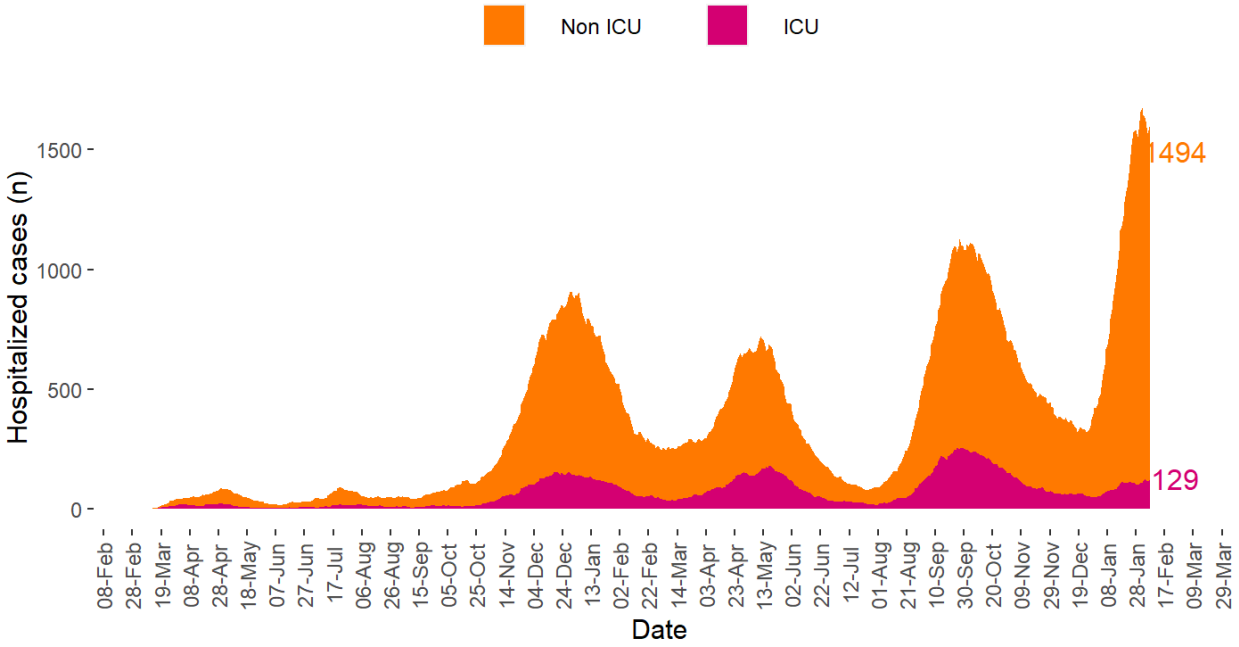
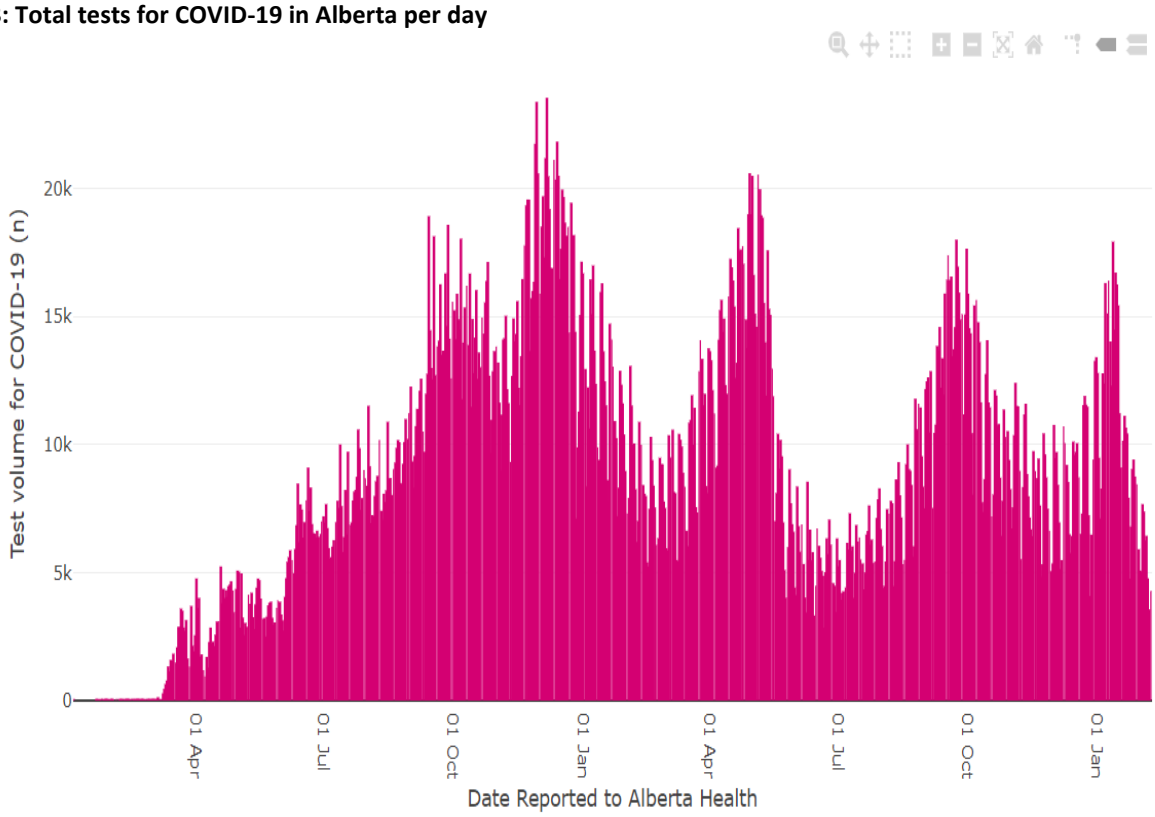


Figure 3: Total tests for COVID-19 in Alberta per day



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CANADIAN CASES (UPDATED TUESDAYS AND FRIDAYS)

Table 3: Cases and testing within past seven days, current hospitalization and ICU, and deaths within past 7 days for Canada's 6 largest provinces as of February 07, 2022

	Cases in past 7 days		PCR tests in past 7 days		Current hospitalizations		Current ICU		Deaths in past 7 days	
Province	# Cases	Per 10,000	# Tests	Per 10,000	# Cases	Per 10,000	# Cases	Per 10,000	# Cases	Per 10,000
Alberta	14,073	31.89	40,362	91.46	1,623	3.68	129	0.2923	107	0.242
British Columbia	9,310	18.22	43,167	84.46	987	1.93	141	0.2759	91	0.178
Saskatchewan	4,652	39.37	14,901	126.10	332	2.81	31	0.2623	20	0.169
Manitoba	3,095	22.47	12,010	87.19	529	3.84	35	0.2541	38	0.276
Ontario	22,855	15.54	150,620	102.38	2,155	1.46	486	0.3303	392	0.266
Quebec	21,075	24.68	150,463	176.23	2,380	2.79	178	0.2085	265	0.310
		23.576		96.919		2.799		0.2691		0.254

Notes: Green circles indicate rates that sit under the median of the six provinces (for testing, green indicates over the median). For consistency, numbers are extracted at the same time; as a result, data for Alberta may not reflect the current numbers reported elsewhere in this document. Hospitalization and ICU counts reflect current numbers (not cumulative). Hospitalization counts includes ICU.

Figure 4: Confirmed COVID-19 cases (per 10,000) over time in Alberta vs. Canada and select provinces as of February 07, 2022

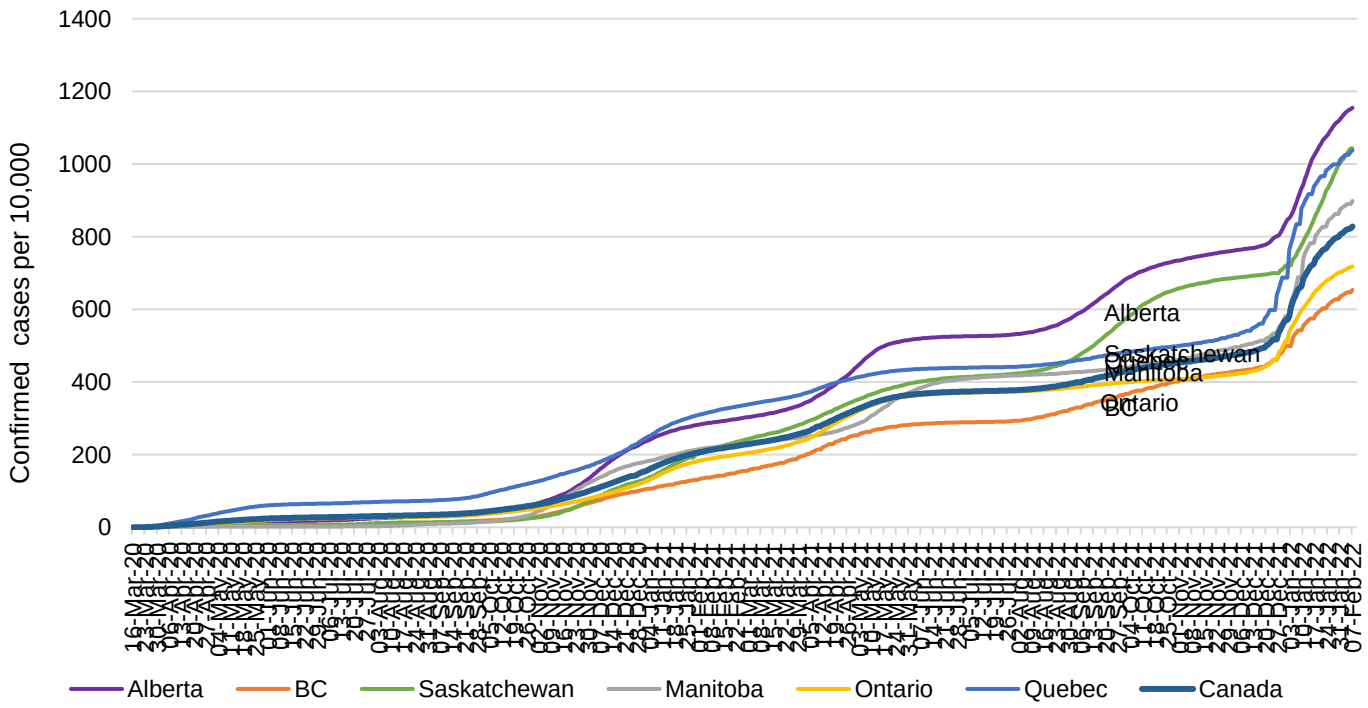

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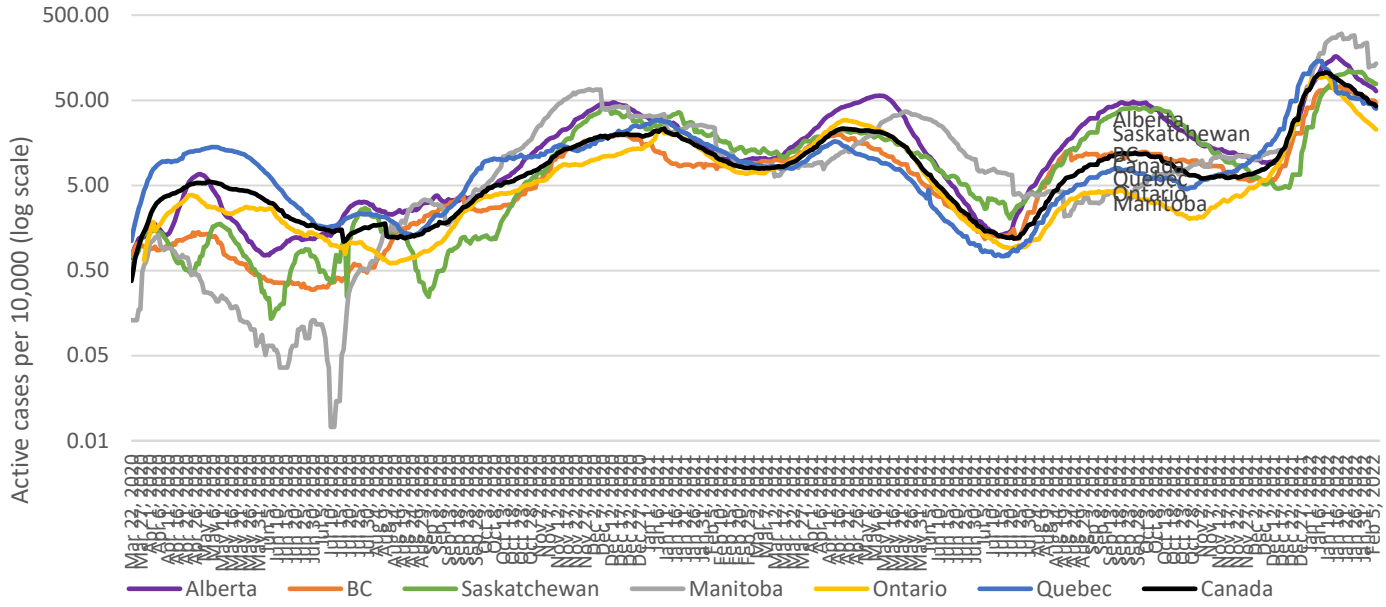
Figure 5: Active COVID-19 cases (per 10,000) over time in Alberta vs. Canada and select provinces as of February 07, 2022



Note: March 30, 2020 is the most historic date data are available for all provinces. As of July 17, 2020, Quebec implemented a new definition for estimating the number of people recovered. This results in a significant increase in the number of recovered individuals in Quebec and Canada and, therefore, a significant decrease in the number of active cases in both Quebec and across Canada. This definition has been applied to historic data. August 10, 2020 Quebec changed their methods and applied them retrospectively so number may vary from previous reports.

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OUTBREAK TRACKING

Table 5: Open outbreaks by municipality and location type

Municipality	Location Type	Outbreak Facility	Cases	Active	Recovered	Deaths
Edmonton	Acute Care	University of Alberta - Division of Infectious Diseases	43	15	28	0
Edmonton	Acute Care	Royal Alexandra Hospital	32	14	16	2
Red Deer	Acute Care	Red Deer Regional Hospital Centre	30	16	14	0
Edmonton	Acute Care	Misericordia Community Hospital [EDM]	29	2	22	5
Westlock	Acute Care	Westlock Healthcare Centre [NOR]	27	4	23	0
High River	Acute Care	High River General Hospital	26	4	22	0
Calgary	Acute Care	Rockyview General Hospital [CAL]	23	6	17	0
Calgary	Acute Care	Foothills Medical Centre	22	6	16	0
Fort Mcmurray	Acute Care	Northern Lights Regional Health Centre	19	6	13	0
Calgary	Acute Care	Peter Lougheed Centre [CAL]	18	15	3	0
Edmonton	Acute Care	Grey Nuns Community Hospital - In-Patient	17	5	12	0
Calgary	Acute Care	Foothills Medical Centre	15	13	1	1
Lethbridge	Acute Care	Chinook Regional Hospital [SOU]	15	5	9	1
Calgary	Acute Care	Rockyview General Hospital [CAL]	15	3	12	0
Red Deer	Acute Care	Red Deer Regional Hospital Centre	14	13	1	0
Edmonton	Acute Care	Royal Alexandra Hospital	14	10	4	0
Ponoka	Acute Care	Ponoka Hospital And Care Centre	14	2	12	0
Edmonton	Acute Care	University of Alberta Hospital	14	3	10	1
Calgary	Acute Care	Foothills Medical Centre	13	6	6	1
Edmonton	Acute Care	Royal Alexandra Hospital	12	11	1	0
Edmonton	Acute Care	Royal Alexandra Hospital	12	5	6	1
Leduc	Acute Care	Leduc Community Hospital	11	3	8	0
Calgary	Acute Care	Foothills Medical Centre - Inpatient	11	4	7	0
Edmonton	Acute Care	Royal Alexandra Hospital - Unit G21	11	6	4	1
Innisfail	Acute Care	Innisfail Health Centre	10	9	1	0
Lacombe	Acute Care	Lacombe Hospital and Care Centre	10	7	1	2
Edmonton	Acute Care	Royal Alexandra Hospital	10	9	1	0
Lac La Biche	Acute Care	William J. Cadzow - Lac La Biche Healthcare Centre, Acute Care [NOR]	9	7	2	0
Edmonton	Acute Care	Misericordia Community Hospital [EDM]	9	5	3	1
Edmonton	Acute Care	Grey Nuns Community Hospital - In-Patient	9	2	7	0
Calgary	Acute Care	Peter Lougheed Centre [CAL]	8	7	1	0
Edmonton	Acute Care	Misericordia Community Hospital [EDM]	8	4	3	1
Redwater	Acute Care	Redwater Health Centre	8	2	6	0

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Calgary	Acute Care	Southern Alberta Forensic Psychiatry Services	7	3	4	0
Edmonton	Acute Care	Grey Nuns Community Hospital - In-Patient	7	4	3	0
Edmonton	Acute Care	Royal Alexandra Hospital	7	5	2	0
Edmonton	Acute Care	Misericordia Community Hospital [EDM]	7	4	3	0
Red Deer	Acute Care	Red Deer Regional Hospital Centre	6	5	0	1
Medicine Hat	Acute Care	Medicine Hat Regional Hospital [SOU]	6	6	0	0
Edmonton	Acute Care	University of Alberta - Unit 5E3	6	6	0	0
High River	Acute Care	High River General Hospital	6	4	2	0
Edmonton	Acute Care	University of Alberta - Inpatient	6	4	2	0
Edmonton	Acute Care	Grey Nuns Community Hospital - In-Patient	6	3	2	1
Medicine Hat	Acute Care	Medicine Hat Regional Hospital [SOU]	5	5	0	0
Edmonton	Acute Care	University of Alberta - Unit 4A7	5	4	0	1
Medicine Hat	Acute Care	Medicine Hat Regional Hospital [SOU]	5	0	5	0
Edmonton	Acute Care	West Edmonton Kidney Care Dialysis Unit	5	2	3	0
Edmonton	Acute Care	Royal Alexandra Hospital - Unit G24	4	4	0	0
Lethbridge	Acute Care	Chinook Regional Hospital [SOU]	4	4	0	0
Calgary	Acute Care	Peter Lougheed Centre [CAL]	4	4	0	0
Edmonton	Acute Care	Glenrose Rehabilitation Hospital	4	4	0	0
Rocky Mountain House	Acute Care	Rocky Mountain House Health Centre - Emergency	4	4	0	0
Red Deer	Acute Care	Red Deer Regional Hospital Centre	4	4	0	0
Drumheller	Acute Care	Drumheller Health Centre	4	0	4	0
Edmonton	Acute Care	University of Alberta Hospital	4	4	0	0
Calgary	Acute Care	Foothills Medical Centre	4	3	1	0
Calgary	Acute Care	South Health Campus [CAL]	3	3	0	0
Stettler	Acute Care	Stettler Hospital and Care Centre [CEN]	3	3	0	0
Calgary	Acute Care	Rockyview General Hospital - Inpatient	3	3	0	0
Ponoka	Acute Care	Centennial Centre - Mental Health and Brain Injury	3	2	0	1
Barrhead	Acute Care	Barrhead Healthcare Centre	3	3	0	0
Edmonton	Acute Care	Grey Nuns Community Hospital - In-Patient	3	3	0	0
Leduc	Acute Care	Leduc Community Hospital	3	2	0	1
Edmonton	Acute Care	Royal Alexandra Hospital - Unit G34	3	2	1	0
Edmonton	Acute Care	Alberta Hospital [EDM]	3	3	0	0
Edmonton	Acute Care	University of Alberta - Inpatient	3	1	2	0
Edmonton	Acute Care	Glenrose Rehabilitation Hospital	3	1	2	0

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Blairmore	Acute Care	Crowsnest Pass Health Centre	3	0	3	0
Ponoka	Acute Care	Centennial Centre - Mental Health and Brain Injury	2	2	0	0
St Paul	Acute Care	St. Therese - St. Paul Healthcare Centre	2	2	0	0
St. Albert	Acute Care	Sturgeon Community Hospital	2	2	0	0
Lethbridge	Acute Care	Chinook Regional Hospital	2	2	0	0
Calgary	Acute Care	Foothills Medical Centre	2	2	0	0
Calgary	Acute Care	Foothills Medical Centre	2	2	0	0
Grande Prairie	Acute Care	Grande Prairie Regional Hospital	2	2	0	0
Edmonton	Acute Care	Misericordia Community Hospital [EDM]	2	2	0	0
St. Albert	Acute Care	Sturgeon Community Hospital	2	1	1	0
Edmonton	Acute Care	Royal Alexandra Hospital	1	1	0	0
Edmonton	Acute Care	Alberta Hospital Edmonton	1	1	0	0
Elk Point	Acute Care	Elk Point Healthcare Centre, Acute Care	1	1	0	0
Edmonton	Acute Care	University of Alberta Hospital	1	0	1	0
Calgary	Continuing Care	AgeCare Seton	163	26	136	1
Calgary	Continuing Care	AgeCare Glenmore	159	15	138	6
Calgary	Continuing Care	Agecare Skypointe	133	19	113	1
Calgary	Continuing Care	Mayfair Care Centre, Travois Holdings [CAL]	128	0	123	5
Calgary	Continuing Care	Dr. Vernon Fanning Centre, Carewest [CAL]	128	25	103	0
Calgary	Continuing Care	Bethany, Calgary [CAL]	122	16	102	4
Edmonton	Continuing Care	Chartwell - Griesbach	120	20	99	1
Calgary	Continuing Care	Mckenzie Towne Continuing Care	119	11	106	2
Calgary	Continuing Care	CareWest George Boyak	115	24	89	2
Calgary	Continuing Care	Bow View Manor	104	8	95	1
Calgary	Continuing Care	Cedars Villa, Extendicare [CAL]	91	13	72	6
Calgary	Continuing Care	Carewest Sarcee	90	14	76	0
Calgary	Continuing Care	Carewest, Glenmore Park	84	17	67	0
Brooks	Continuing Care	AgeCare Sunrise Gardens	83	9	70	4
Calgary	Continuing Care	Trinity Lodge	83	1	81	1
Edmonton	Continuing Care	Allen Gray Continuing Care Centre [EDM]	79	10	63	6

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Calgary	Continuing Care	Garrison Green, Carewest [CAL]	77	20	57	0
Calgary	Continuing Care	Cambridge Manor	77	2	73	2
Edmonton	Continuing Care	Lewis Estates Retirement Residence [EDM]	76	4	72	0
Calgary	Continuing Care	Sage Hill Retirement Residence	75	14	61	0
Calgary	Continuing Care	Intercare Chinook Care Centre	74	15	59	0
Sherwood Park	Continuing Care	Capital Care Strathcona Campus	74	14	60	0
Edmonton	Continuing Care	Lynnwood - Capital Care [EDM]	73	13	59	1
Calgary	Continuing Care	Colonel Belcher LTC, Carewest [CAL]	72	5	67	0
High River	Continuing Care	Seasons Retirement Home High River	71	18	52	1
St. Albert	Continuing Care	Youville Home [EDM]	70	12	54	4
Calgary	Continuing Care	Covenant Care St. Teresa	65	18	46	1
Calgary	Continuing Care	The Manor Village Fish Creek Park	65	1	64	0
Calgary	Continuing Care	Bethany Riverview	62	3	56	3
St. Albert	Continuing Care	Chartwell St Albert Retirement Residence	61	10	50	1
Calgary	Continuing Care	Beverly, Lake Midnapore (Agecare) [CAL]	60	12	47	1
Edmonton	Continuing Care	Miller Crossing Care Centre [EDM]	59	8	51	0
Edmonton	Continuing Care	Shepherd’s Care Kensington Village LTC	56	3	51	2
Westlock	Continuing Care	Smithfield Lodge [NOR]	55	3	49	3
Lethbridge	Continuing Care	Edith Cavell Care Centre [SOU]	54	5	42	7
Edmonton	Continuing Care	Jasper Place Continuing Care Centre [EDM]	54	8	45	1
Wainwright	Continuing Care	Wainwright Health Centre	51	2	47	2
Edmonton	Continuing Care	Capital Care Grandview	51	8	43	0
Viking	Continuing Care	Extendicare Viking	50	10	40	0
Edmonton	Continuing Care	Hardisty Care Centre [EDM]	50	7	42	1
Strathmore	Continuing Care	AgeCare Sagewood	50	3	45	2
Edmonton	Continuing Care	Edmonton People In Need Society	49	4	44	1

Classification: Protected A

Edmonton	Continuing Care	Chartwell Heritage Valley Retirement Residence	49	19	30	0
Leduc	Continuing Care	Lifestyle Options - Leduc [EDM]	48	7	41	0
Edmonton	Continuing Care	Shepherd Care Kensington	48	7	41	0
Edmonton	Continuing Care	Norwood - Capital Care [EDM]	48	10	38	0
Medicine Hat	Continuing Care	Masterpiece River Ridge [SOU]	47	14	33	0
Red Deer	Continuing Care	Extendicare Michener Hill [CEN]	47	12	34	1
Parkland County	Continuing Care	Everglades Special Care Lodge	46	46	0	0
Camrose	Continuing Care	Seasons Camrose	46	10	34	2
St. Albert	Continuing Care	Chateau Mission Court [EDM]	46	0	45	1
Spruce Grove	Continuing Care	Copper Sky Lodge	46	15	31	0
Innisfail	Continuing Care	Autumn Grove Lodge	45	4	41	0
Edmonton	Continuing Care	Grand Manor [EDM]	45	13	32	0
Edmonton	Continuing Care	Good Samaritan Society Southgate Care Centre	44	8	35	1
Brooks	Continuing Care	Orchard Manor [SOU]	43	4	39	0
Red Deer	Continuing Care	Bethany Collegeside Care Centre [CEN]	43	5	38	0
Grande Prairie	Continuing Care	Grande Prairie Care Centre, Supportive Living [NOR]	42	15	27	0
Calgary	Continuing Care	Holy Cross Manor	42	2	39	1
Edmonton	Continuing Care	Riverbend Retirement Residence [EDM]	42	7	35	0
Pincher Creek	Continuing Care	GSS - Vista Village [SOU]	42	3	37	2
Edmonton	Continuing Care	Greater Edmonton Foundation (GEF) Seniors Housing Sakaw Terrace	41	4	36	1
Edmonton	Continuing Care	Rutherford Heights [EDM]	41	2	39	0
Edmonton	Continuing Care	Millwoods Shepherds Care Centre [EDM]	40	7	33	0
Calgary	Continuing Care	Rocky Ridge Retirement Community by Signature	40	14	26	0
Calgary	Continuing Care	Evanston Grand Village	40	5	34	1
Calgary	Continuing Care	United Active Living-Garrison Green	40	3	37	0
Grande Prairie	Continuing Care	Prairie Lake Seniors Community	39	12	26	1

Classification: Protected A

Calgary	Continuing Care	Monterey Seniors Village	39	10	29	0
Medicine Hat	Continuing Care	South Country Village - LTC [SOU]	39	4	34	1
Red Deer County	Continuing Care	The Hamlets at Red Deer	39	16	23	0
Edmonton	Continuing Care	Villa Marguerite [EDM]	39	6	33	0
Edmonton	Continuing Care	Villa Caritas Hospital	38	1	35	2
Calgary	Continuing Care	Prince Of Peace Manor [CAL]	38	1	37	0
Red Deer	Continuing Care	Timberstone Mews	37	13	23	1
Calgary	Continuing Care	Auburn Heights Retirement Residence	37	4	31	2
Edmonton	Continuing Care	Villa Caritas Hospital	37	1	33	3
Calgary	Continuing Care	McKenzie Towne, Revera Retirement Residence	37	8	29	0
Elk Point	Continuing Care	Elk Point Heritage Lodge [NOR]	36	6	30	0
Edmonton	Continuing Care	Balwin Villas	36	3	32	1
Cochrane	Continuing Care	Points West Living Cochrane	36	10	25	1
Linden	Continuing Care	Westview Care Community	35	25	10	0
Cold Lake	Continuing Care	Cold Lake Healthcare Centre, Auxiliary [NOR]	35	8	26	1
Panoka	Continuing Care	Northcortt Care Centre	35	15	20	0
Edmonton	Continuing Care	Wedman Facilities - Good Samaritan [EDM]	35	2	33	0
Calgary	Continuing Care	The Manor Village Varsity	35	10	25	0
Sherwood Park	Continuing Care	Silver Birch Place	35	13	21	1
Red Deer	Continuing Care	Points West Living Red Deer Phase 2	34	9	25	0
Edmonton	Continuing Care	Villa Caritas Hospital	34	0	34	0
Edmonton	Continuing Care	Villa Caritas Hospital	34	3	31	0
Calgary	Continuing Care	Grand Seton Village	33	0	33	0
Edmonton	Continuing Care	Villa Caritas Hospital	33	1	32	0
Medicine Hat	Continuing Care	Masterpiece Southland Meadows	32	21	11	0
Innisfail	Continuing Care	Rosefield Care Centre	32	2	30	0

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Edmonton	Continuing Care	Greater Edmonton Foundation (GEF) Seniors Housing Rosslyn Place Lodge	32	2	29	1
Ponoka	Continuing Care	Centennial Centre - Mental Health and Brain Injury	32	0	32	0
Calgary	Continuing Care	Beaver Dam Lodge, MCF Housing [CAL]	32	0	32	0
Medicine Hat	Continuing Care	The Wellington [SOU]	32	16	15	1
Calgary	Continuing Care	St. Marguerite Manor & Dulcina Hospice Covenant Care	31	0	31	0
Ponoka	Continuing Care	Centennial Centre - Mental Health and Brain Injury	30	9	20	1
Ponoka	Continuing Care	Ponoka Hospital And Care Centre - Facility Living	30	1	29	0
Calgary	Continuing Care	Brenda Strafford Foundation Wentworth Manor Court	30	10	20	0
Calgary	Continuing Care	Eau Claire Retirement Residence, Chartwell [CAL]	30	7	23	0
Drayton Valley	Continuing Care	Drayton Valley Hospital & Care Centre [CEN]	29	18	11	0
Sherwood Park	Continuing Care	Sherwood Care	29	3	26	0
Westlock	Continuing Care	Westlock Continuing Care Centre [NOR]	29	7	22	0
Edmonton	Continuing Care	St Thomas Supportive Living	28	5	23	0
Edmonton	Continuing Care	McConachie Gardens	28	2	26	0
Edmonton	Continuing Care	MacTaggart Place Retirement Residence	28	0	26	2
Edmonton	Continuing Care	Churchill Manor [EDM]	28	0	28	0
Edmonton	Continuing Care	Shepherd’s Care Kensington Village	27	5	22	0
Medicine Hat	Continuing Care	Meadowlands [SOU]	27	6	21	0
Fort Saskatchewan	Continuing Care	Dr. Turner Lodge [EDM]	27	3	24	0
Edmonton	Continuing Care	Rosedale Estates [EDM]	27	3	24	0
Calgary	Continuing Care	Clifton Manor	26	5	21	0
Athabasca	Continuing Care	Athabasca Extendicare [NOR]	26	3	23	0
Calgary	Continuing Care	Bethany, Harvest Hills [CAL]	26	5	21	0
Edmonton	Continuing Care	St. Michael’s Long Term Care Centre [EDM]	26	5	21	0
Calgary	Continuing Care	Father Lacombe Nursing Home [CAL]	26	5	21	0
Calgary	Continuing Care	Aspen Lodge, MCF Housing [CAL]	26	20	6	0

Classification: Protected A

Calgary	Continuing Care	Age care walden heights	25	25	0	0
Wetaskiwin	Continuing Care	Good Samaritan Society Good Shepherd Home.	25	4	21	0
Edmonton	Continuing Care	McQueen lodge	25	8	16	1
Edmonton	Continuing Care	Benevolence Care Centre	25	1	21	3
Calgary	Continuing Care	Southwood, Intercare [CAL]	25	8	16	1
Clairmont	Continuing Care	Lakeview Seniors Housing	25	2	23	0
Fort Mcmurray	Continuing Care	Willow Square Continuing Care Centre	25	7	18	0
Lacombe	Continuing Care	Royal Oak Dev. Lacombe LTD [CEN]	24	6	18	0
Edmonton	Continuing Care	Shepherd'S Care Greenfield [EDM]	23	9	14	0
Sherwood Park	Continuing Care	Robin Hood Association Aspen Village	23	11	12	0
Calgary	Continuing Care	Wing Kei Greenview	23	2	20	1
Edmonton	Continuing Care	Devonshire Care Centre [EDM]	23	2	21	0
Stony Plain	Continuing Care	Stony Plain Care Centre - Good Samaritan [EDM]	23	5	18	0
Edmonton	Continuing Care	Shepherd's Care Eden House	23	4	19	0
Medicine Hat	Continuing Care	South Ridge Village [SOU]	22	17	5	0
Edmonton	Continuing Care	Devonshire Village [EDM]	22	6	16	0
Edmonton	Continuing Care	Covenant Health St. Joseph's Edmonton [EDM]	22	3	18	1
Falher	Continuing Care	Villa Beausejour Seniors Lodge, Fahler	21	21	0	0
Stettler	Continuing Care	Paragon Place [CEN]	21	18	3	0
Edmonton	Continuing Care	Holyrood - Extendicare [EDM]	21	19	2	0
Okotoks	Continuing Care	Strafford Foundation Tudor Manor	21	6	15	0
Olds	Continuing Care	Seasons Encore Retirement Community	21	1	20	0
Edmonton	Continuing Care	CapitalCare McConnell Place North	21	0	20	1
Edmonton	Continuing Care	Touchmark at Wedgewood	21	1	20	0
Lamont	Continuing Care	Lamont Health Care Centre	20	15	2	3
Wetaskiwin	Continuing Care	Madyson Manor [CEN]	20	17	3	0

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Red Deer	Continuing Care	Points West Living Red Deer Phase I	20	6	14	0
Barrhead	Continuing Care	Shepherd's Care Barrhead [NOR]	20	14	6	0
Myrnam	Continuing Care	Eagle View Lodge	20	0	20	0
Wabasca	Continuing Care	Keekenow Senior Facility	20	3	17	0
Sylvan Lake	Continuing Care	Bethany Sylvan Lake [CEN]	20	15	5	0
Calgary	Continuing Care	Scenic Acres, Revera Retirement Residence [CAL]	20	1	19	0
Edson	Continuing Care	Edson Continuing Care Center	19	8	11	0
Edmonton	Continuing Care	Extendicare Eaux Claires [EDM]	19	2	17	0
Edmonton	Continuing Care	Grace Manor Salvation Army [EDM]	19	2	17	0
Edmonton	Continuing Care	Kipnes Centre For Veterans [EDM]	19	4	15	0
Calgary	Continuing Care	Mount Royal, Revera [CAL]	19	9	10	0
Medicine Hat	Continuing Care	Meadow Ridge Seniors Village	18	18	0	0
Edmonton	Continuing Care	Venta Care Centre [EDM]	18	8	10	0
Hinton	Continuing Care	Hinton Continuing Care Center	18	6	12	0
Edmonton	Continuing Care	Village at Westmount	18	3	15	0
Slave Lake	Continuing Care	Vanderwell Heritage Place [NOR]	18	1	17	0
Lethbridge	Continuing Care	Adaptacare (9 Ave S) [SOU]	18	1	17	0
Edmonton	Continuing Care	CapitalCare Laurier House Lynnwood	18	2	16	0
Calgary	Continuing Care	Inclusio	18	4	14	0
Legal	Continuing Care	Chateau Sturgeon Lodge [EDM]	17	15	1	1
Lethbridge	Continuing Care	St. Therese Villa [SOU]	17	4	13	0
Edmonton	Continuing Care	Capital Care Dickensfield	17	7	10	0
Ponoka	Continuing Care	Centennial Centre - Mental Health and Brain Injury	17	13	4	0
Edmonton	Continuing Care	LifeStyle Options Schonsee Retirement Community	17	7	10	0
Villeneuve	Continuing Care	West Country Hearth [EDM]	17	1	16	0
Grande Prairie	Continuing Care	Mackenzie Place Continuing Care Centre [NOR]	17	7	10	0

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Edmonton	Continuing Care	South Terrace Continuing Care [EDM]	16	2	14	0
Red Deer	Continuing Care	Covenant Care Villa Marie	16	4	12	0
Sherwood Park	Continuing Care	Bedford Village	15	15	0	0
Brooks	Continuing Care	Newbrook Lodge [SOU]	15	10	4	1
Edmonton	Continuing Care	Whitemud - Lifestyle Options [EDM]	15	4	11	0
Calgary	Continuing Care	Agape Hospice [CAL]	15	4	9	2
Edmonton	Continuing Care	Park Place Seniors Living Sprucewood Place	15	2	13	0
Whitecourt	Continuing Care	Spruce View Lodge [NOR]	14	14	0	0
Cardston	Continuing Care	GSS Lee Crest	14	1	12	1
Medicine Hat	Continuing Care	AgeCare Valleyview	14	2	12	0
Edmonton	Continuing Care	Our Parents' Home	14	3	11	0
Edmonton	Continuing Care	Stepping Stone Salvation Army [EDM]	14	3	11	0
Sherwood Park	Continuing Care	Summerwood Village Retirement Residence [EDM]	14	3	11	0
Red Deer	Continuing Care	Revera Inglewood	14	2	12	0
Wainwright	Continuing Care	Points West Living [CEN]	14	5	9	0
Barrhead	Continuing Care	Dr.W.R.Keir Barrhead Continuing Care Centre	14	5	9	0
Edmonton	Continuing Care	Urban Manor Housing Society	13	1	12	0
Edmonton	Continuing Care	Edmonton People In Need Society	13	1	12	0
Innisfail	Continuing Care	Sunset Manor [CEN]	13	2	11	0
St. Paul	Continuing Care	Sunnyside Manor [NOR]	13	4	8	1
Camrose	Continuing Care	Louise Jensen Care Centre	12	11	1	0
Fort Macleod	Continuing Care	Extendicare Fort Macleod [SOU]	12	10	2	0
Edmonton	Continuing Care	Canterbury Foundation	12	4	8	0
Central	Continuing Care	Red Deer Hospice Society	12	1	11	0
St Albert	Continuing Care	Ironwood Estates	12	1	11	0
Spruce Grove	Continuing Care	St. Michael's Grove Manor [EDM]	12	6	6	0

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Slave Lake	Continuing Care	Slave Lake Health Care Centre Continuing Care	12	3	8	1
Edmonton	Continuing Care	LifeStyle Options Terra Losa Retirement Community	12	1	11	0
Leduc	Continuing Care	Planeview Place [EDM]	12	5	7	0
Edmonton	Continuing Care	Wild Rose Cottage [EDM]	12	4	7	1
Edmonton	Continuing Care	Kiwanis Place Lodge [EDM]	12	3	9	0
Central	Continuing Care	The West Park Lodge	11	7	4	0
Drumheller	Continuing Care	Drumheller Health Centre - Acute Care [CEN]	11	2	8	1
Mundare	Continuing Care	Father Filas Manor [CEN]	11	4	7	0
Oyen	Continuing Care	Big Country Hospital - LTC [SOU]	11	1	10	0
Edmonton	Continuing Care	Golden Age Manor [EDM]	11	2	9	0
Drayton Valley	Continuing Care	Points West Living - Drayton Valley	11	1	10	0
Drumheller	Continuing Care	Drumheller Health Centre	11	0	11	0
Lloydminster	Continuing Care	Lloydminter Continuing Care Centre	11	3	8	0
Fort Saskatchewan	Continuing Care	Rivercrest Care Centre [EDM]	11	2	9	0
Edmonton	Continuing Care	Revera River Ridge	11	7	4	0
Airdrie	Continuing Care	Luxstone Manor	11	2	9	0
Edson	Continuing Care	Parkland Lodge [NOR]	11	5	6	0
Calgary	Continuing Care	Prince Of Peace, The Harbour [CAL]	11	7	4	0
Edmonton	Continuing Care	Emmanuel Home [EDM]	10	7	3	0
Athabasca	Continuing Care	Athabasca Healthcare Centre (Long Term Care Auxiliary)	10	3	7	0
St. Albert	Continuing Care	Foyer Lacombe [EDM]	10	9	0	1
High Prairie	Continuing Care	J.B. Wood Continuing Care [NOR]	10	3	7	0
Edmonton	Continuing Care	Bissell Centre - Hope Terrace	10	5	5	0
Lethbridge	Continuing Care	St. Michael’s Health Centre [SOU]	10	3	7	0
Grande Prairie	Continuing Care	Signature Support Services 83 Ave	10	0	10	0
Lethbridge	Continuing Care	St. Michael’s Health Centre [SOU]	10	0	10	0

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Westlock	Continuing Care	Pembina Lodge [NOR]	10	2	8	0
Blairmore	Continuing Care	Crowsnest Pass Health Centre - LTC [SOU]	10	3	7	0
Edmonton	Continuing Care	Edmonton Chinatown Care Centre - Ccc [EDM]	10	1	9	0
Stettler	Continuing Care	Points West Living [CEN]	10	4	6	0
Edmonton	Continuing Care	Churchill Retirement Community [EDM]	10	3	7	0
Calgary	Continuing Care	St. Marguerite Manor & Dulcina Hospice Covenant Care	10	2	8	0
Stony Plain	Continuing Care	Westview Continuing Care Centre [EDM]	10	3	7	0
Airdrie	Continuing Care	Bethany, Airdrie [CAL]	10	3	7	0
Bonnyville	Continuing Care	Bonnylodge	9	8	1	0
Edmonton	Continuing Care	Operation Friendship Senior Society - Sparling Lodge	9	9	0	0
Canmore	Continuing Care	Origin at Spring Creek	9	8	1	0
Wetaskiwin	Continuing Care	Wetaskiwin Hospital and Care Centre	9	6	3	0
Taber	Continuing Care	GSS Linden View	9	4	5	0
Lethbridge	Continuing Care	Pemmican Lodge [SOU]	9	7	2	0
Fort Mcmurray	Continuing Care	Rotary House Seniors Lodge [NOR]	9	3	6	0
Edmonton	Continuing Care	Ambrose Place	9	4	5	0
Edmonton	Continuing Care	Laurel Heights Retirement Living	9	0	9	0
Redwater	Continuing Care	Diamond Spring Lodge [NOR]	9	1	8	0
Edmonton	Continuing Care	Mill Woods Centre - Good Samaritan [EDM]	9	4	5	0
Edmonton	Continuing Care	Chartwell Wescott Retirment Residence	9	2	7	0
Grande Prairie	Continuing Care	Emerald Gardens Retirement Residence	8	6	2	0
Edmonton	Continuing Care	Rose Crest Home	8	4	4	0
Calgary	Continuing Care	Discovery House	8	7	1	0
Black Diamond	Continuing Care	Rising Sun Long Term Care	8	6	2	0
Edmonton	Continuing Care	Touchmark At Wedgewood - Ccc [EDM]	8	6	2	0
Edmonton	Continuing Care	Queen Alexandra Lodge [EDM]	8	4	4	0

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Ponoka	Continuing Care	Centennial Centre - Mental Health and Brain Injury	8	3	5	0
Bonnyville	Continuing Care	Bonnyville Extendicare [NOR]	8	4	4	0
Sherwood Park	Continuing Care	Clover Bar Lodge	8	2	6	0
Calgary	Continuing Care	Evanston Summit Covenant Living	8	2	6	0
Bassano	Continuing Care	Playfair Lodge [SOU]	7	7	0	0
Edmonton	Continuing Care	Vanguard Shepherd's Care	7	3	4	0
Calgary	Continuing Care	Silvera for Seniors Shouldice	7	6	1	0
Stony Plain	Continuing Care	Unlimited Potential Community Services Bright Bank	7	0	7	0
Sturgeon County	Continuing Care	St. Albert Retirement Residence	7	3	4	0
Barrhead	Continuing Care	Hillcrest Lodge	7	3	4	0
Olds	Continuing Care	Olds Hospital & Olds Continuing Care Centre [CEN]	6	4	2	0
Didsury	Continuing Care	Bethany Aspen Ridge Lodge	6	6	0	0
Gibbons	Continuing Care	Spruce View Manor [EDM]	6	5	1	0
Evansburg	Continuing Care	Sunshine Place [EDM]	6	0	6	0
Edmonton	Continuing Care	The Ashbourne Assisted Living	6	1	5	0
St. Albert	Continuing Care	Citadel Care Centre [EDM]	6	0	6	0
Sherwood Park	Continuing Care	Chartwell Emerald Hills Retirement Residence Unit 1	6	2	4	0
Lethbridge	Continuing Care	Black Rock Terrace [SOU]	6	0	6	0
Peace River	Continuing Care	Heritage Towers	5	4	1	0
Edmonton	Continuing Care	Whispering Waters Manor	5	5	0	0
Calgary	Continuing Care	High Country Lodge	5	5	0	0
Lethbridge	Continuing Care	Garden View Lodge [SOU]	5	0	4	1
Grande Prairie	Continuing Care	Prairie Lake Seniors Community	5	1	4	0
Grande Cache	Continuing Care	Whispering Pines Lodge [NOR]	5	1	3	1
Sherwood Park	Continuing Care	Robin Hood Association Residence 24	5	0	5	0
Edmonton	Continuing Care	Winnifred Stewart Group Home Residence 13	5	1	4	0

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Lethbridge	Continuing Care	St. Therese Villa [SOU]	5	0	4	1
Calgary	Continuing Care	High Banks Independent Living for Parenting Youth Society	5	2	3	0
Manning	Continuing Care	Del-Air Lodge [NOR]	4	4	0	0
Olds	Continuing Care	Seasons Olds	4	4	0	0
Edmonton	Continuing Care	Edmonton General Care Centre [EDM]	4	3	1	0
Valleyview	Continuing Care	Red Willow Lodge [NOR]	4	4	0	0
Lethbridge	Continuing Care	Seasons Lethbridge Gardens	4	4	0	0
Medicine Hat	Continuing Care	Leisure Way Community Group Home [SOU]	4	4	0	0
Morinville	Continuing Care	Aspen House [EDM]	4	4	0	0
Lethbridge	Continuing Care	St. Therese Villa [SOU]	4	3	1	0
Edmonton	Continuing Care	Kids Kottage Foundation	4	0	4	0
Coronation	Continuing Care	Coronation Long Term Care [CEN]	4	0	4	0
Edmonton	Continuing Care	Optima Living Aster Gardens	4	0	4	0
Mayerthorpe	Continuing Care	Mayerthorpe Extendicare [NOR]	4	1	3	0
Devon	Continuing Care	Discovery Place Senior Independent Living Facility-Devon	4	0	4	0
Radway	Continuing Care	Radway Continuing Care Centre [NOR]	4	0	4	0
Camrose	Continuing Care	Rosehaven LTC Centre	4	2	2	0
Sundre	Continuing Care	Sundre Senior Supporting Living	3	3	0	0
Bow Island	Continuing Care	Bow Island Health Centre - LTC [SOU]	3	3	0	0
Fort Macleod	Continuing Care	Extendicare Fort Macleod [SOU]	3	3	0	0
Calgary	Continuing Care	Millrise Place	3	3	0	0
Edmonton	Continuing Care	Chinese Seniors Lodge [EDM]	3	3	0	0
Calgary	Continuing Care	Revera Scenic Grande	3	3	0	0
Three Hills	Continuing Care	Three Hills Health Centre	3	1	2	0
Mayerthorpe	Continuing Care	Pleasant View Lodge - Mayerthorpe	3	1	2	0
Gibbons	Continuing Care	Renaissance Homes- Riverside	3	0	3	0

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Fairview	Continuing Care	Harvest Lodge [NOR]	3	1	2	0
Edmonton	Continuing Care	Virginia Park - Lodge [EDM]	3	1	2	0
Edmonton	Continuing Care	Glastonbury Village	2	2	0	0
Devon	Continuing Care	Devon General Hospital	2	2	0	0
Edmonton	Continuing Care	Chimo Youth Retreat Centre Home 10	2	1	1	0
Edmonton	Continuing Care	Millenium Pavillion Seniors Lodge	2	1	1	0
Edmonton	Continuing Care	Edmonton General Care Centre [EDM]	2	1	1	0
Calgary	Continuing Care	Brentwood Care Centre	2	2	0	0
Central	Continuing Care	Chateau Three Hills	2	2	0	0
Vermilion	Continuing Care	Vermilion Valley Lodge	2	2	0	0
Red Deer	Continuing Care	Aspen Ridge by Revera	1	1	0	0
Calgary	Continuing Care	Manor Village at Rocky Ridge	1	1	0	0
St. Paul	Continuing Care	Aspen House Care Residence	1	1	0	0
Blairmore	Continuing Care	York Creek Lodge [SOU]	1	1	0	0
Lloydminster	Continuing Care	Dr.Cooke Extended Continuing Care	1	1	0	0
Rimbey	Continuing Care	Rimbey Hospital & Care Centre - Facility Living [CEN]	1	1	0	0
Edmonton	Continuing Care	In & Out Home Rehabilitation Ltd. House 5	1	0	1	0
Edmonton	Continuing Care	Edmonton General Care Centre [EDM]	1	0	1	0
Leduc	Continuing Care	Salem Manor [EDM]	1	1	0	0
Trochu	Continuing Care	St. Mary’s Health Care Centre - Supportive Living [CEN]	1	1	0	0
Red Deer	Continuing Care	Catholic Social St. Neri	1	1	0	0
Calgary	Other	The Drop In Centre	171	8	163	0
Calgary	Other	Calgary Remand Centre	154	0	154	0
Drumheller	Other	Drumheller Institution [CEN]	135	20	115	0
Edmonton	Other	City of Edmonton Fire Department	108	3	105	0
Innisfail	Other	Bowden Institution	81	28	53	0
Edmonton	Other	Herb Jamieson Centre- Hope Mission	61	7	54	0
Grande Cache	Other	Grande Cache Institute	49	27	22	0
Edmonton	Other	Edmonton Remand Centre	44	2	42	0

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Edmonton	Other	Edmonton Remand Centre	43	4	39	0
Edmonton	Other	Hope Mission Downtown	42	0	42	0
Edmonton	Other	Edmonton Remand Centre	41	2	39	0
Medicine Hat	Other	Medicine Hat Remand [SOU]	37	33	4	0
Calgary	Other	Mustard Seed - Foothills	37	3	34	0
Edmonton	Other	Edmonton Institution for Women	36	17	19	0
Edmonton	Other	Edmonton Remand Centre	33	6	27	0
Lethbridge	Other	Alpha House Shelter and Stabilization Centre	33	6	27	0
Fort Saskatchewan	Other	Fort Saskatchewan Correctional Centre	32	11	21	0
Edmonton	Other	Edmonton Remand Centre	31	1	30	0
Edmonton	Other	Edmonton Remand Centre	31	1	30	0
Edmonton	Other	Edmonton Remand Centre	29	4	25	0
Calgary	Other	Calgary Alpha House	29	4	25	0
Red Deer	Other	Safe Harbour Society - Shelter (Cannery Row) & Diversion/Outreach Program	28	13	15	0
Fort Saskatchewan	Other	Fort Saskatchewan Correctional Centre	27	9	18	0
Fort Saskatchewan	Other	Fort Saskatchewan Correctional Centre	27	8	19	0
Edmonton	Other	Edmonton Remand Centre	27	3	24	0
Edmonton	Other	Bissell Centre	26	2	24	0
Edmonton	Other	The Mustard Seed - Commonwealth Site	26	5	21	0
Bon Accord	Other	Oak Hill Ranch	26	3	23	0
Edmonton	Other	Edmonton Remand Centre	25	0	25	0
Edmonton	Other	Edmonton Remand Centre	25	2	23	0
Edmonton	Other	Hope Mission Spectrum	25	4	21	0
Lethbridge	Other	Lethbridge Correctional Services [SOU]	24	15	9	0
Edmonton	Other	Travel Lodge West ~ Bridge Housing	24	3	21	0
Edmonton	Other	Mustard Seed - Knox Evangelical Church	23	1	22	0
Red Deer	Other	Red Deer Remand Centre [CEN]	21	21	0	0
Edmonton	Other	Stan Daniels Healing Centre	20	0	20	0
Edmonton	Other	Mustard Seed Strathcona Baptist Church Shelter	20	3	17	0
Mclennan	Other	Manoir du Lac	19	15	4	0
Edmonton	Other	Edmonton Institution	18	18	0	0
Grande Prairie	Other	Odyssey House Women's Shelter	18	1	17	0
Calgary	Other	Calgary Young Offender Centre - Female Annex	14	4	10	0
Edmonton	Other	Transitional Housing Program - Edmonton Center for Hope	13	2	11	0
Wetaskiwin	Other	Salvation Army Catholic Social Services St. Gabriel	13	0	13	0

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Red Deer	Other	Turning Point Supervised Consumption Site	13	0	13	0
Calgary	Other	142 Scenic Bow Place	12	5	7	0
Calgary	Other	Avenue 15 Youth Distress Shelter	12	0	12	0
Calgary	Other	Children's Cottage Brenda's House	12	1	11	0
Peace River	Other	Peace RIver Regional Women's Shelter	11	11	0	0
Calgary	Other	Calgary Correctional Centre	11	5	6	0
Ponoka	Other	The Centennial Centre [CEN]	11	8	3	0
Edmonton	Other	Edmonton Remand Centre	11	0	11	0
Grande Prairie	Other	Wapiti House	11	5	6	0
Red Deer	Other	Michener Services- 119 Michener Crescent [CEN]	11	0	11	0
Wetaskiwin	Other	Catholic Social Services St Raphael	10	0	10	0
Red Deer	Other	Michener Services - 11 A4 Michener Way [CEN]	10	0	10	0
Edmonton	Other	WIN House #2	10	1	9	0
Calgary	Other	Salvation Army - Centre of Hope	9	0	9	0
Red Deer	Other	Michener Services - 11 A2 Michener Way [CEN]	9	1	8	0
Red Deer	Other	CENTRAL ALBERTA WOMEN'S EMERGENCY SHELTER	9	1	8	0
Edmonton	Other	Wings of Providence Society	8	4	4	0
Edmonton	Other	La Salle Second Stage Shelter	8	2	6	0
Edmonton	Other	Catholic Social Services St. Cecilia	8	2	6	0
Edmonton	Other	Edmonton Remand Centre	8	0	8	0
St. Paul	Other	St. Paul Abilities Network Home 10	8	0	8	0
Fort Saskatchewan	Other	Fort Saskatchewan Correctional Centre	8	0	8	0
Calgary	Other	Enviros Wilderness Schools Association Connects	7	7	0	0
Fort Saskatchewan	Other	Fort Saskatchewan Correctional Centre	7	2	5	0
Strathmore	Other	Woods Homes Willow House	7	7	0	0
Edmonton	Other	Excel Society - Group Home 18	7	5	2	0
Edmonton	Other	Edmonton Remand Centre	7	4	3	0
Calgary	Other	Close to Home Achievement Place 1	7	0	7	0
Edmonton	Other	Residential and Support Services King Edward Park	7	0	7	0
Calgary	Other	Trellis Banff Trail Group Home	7	1	6	0
Calgary	Other	Mustard Seed - First Alliance Church	7	3	4	0
Edmonton	Other	McMan Youth Family Community Services- Belmont	7	0	7	0
Edmonton	Other	Edmonton Remand Centre	7	0	7	0
Wetaskiwin	Other	Mustard Seed Wetaskiwin Warming Shelter	7	2	5	0

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Calgary	Other	Edmonton Isolation Facility (STAFF) - Travelodge South, operated by Boyle Street Community Services	7	2	5	0
Edmonton	Other	Catholic Social Services - St. Rita	7	0	7	0
Calgary	Other	Inn From The Cold - Main Site	7	1	6	0
Medicine Hat	Other	Core Licensed Group Home	6	6	0	0
Central	Other	Michener Services	6	0	6	0
Lac La Biche	Other	Hope Haven Women's Shelter	6	2	4	0
Edmonton	Other	Coliseum Inn	6	3	3	0
Red Deer	Other	Michener Services - 87 Michener Green [CEN]	6	0	6	0
Olds	Other	Accredited Supports to the Community Residence 2	6	0	6	0
Red Deer	Other	Central Alberta's Safe Harbour Society [CEN]	6	0	6	0
Calgary	Other	Children's Cottage - Crisis Nursery	6	2	4	0
Calgary	Other	Inn From the Cold Satellite Location	6	1	5	0
Edmonton	Other	Excel Society Group Home 19	5	5	0	0
Grande Prairie	Other	Signature Support Services 62nd East	5	4	1	0
Fort Saskatchewan	Other	Fort Saskatchewan Correctional Centre	5	0	5	0
Calgary	Other	Golden Key Supportive Living	5	4	1	0
Grande Prairie	Other	Signature Support Services 62 West	5	0	5	0
Edmonton	Other	Excel Society Group Home 44	5	4	1	0
Hinton	Other	Pine Valley Lodge [NOR]	5	0	5	0
Edmonton	Other	Glenwood Group Home	4	4	0	0
Calgary	Other	Sister's Care Group Home	4	4	0	0
Peace River	Other	Peace River Correctional Centre	4	4	0	0
Innisfail	Other	Advance Society Innisfail: Support for Developmentally Disabled [CEN]	4	3	1	0
Slave Lake	Other	Community Friendship Temporary Mat Program	4	4	0	0
Calgary	Other	Alberta Home Care-Site 1-Tarawood	4	3	1	0
Edmonton	Other	Family Connections Comfort House	4	1	3	0
Lethbridge	Other	Bridges Day Program	4	2	2	0
Edmonton	Other	Lacreche Home	4	2	2	0
Calgary	Other	Waverley House Personal Care Home #259	4	0	4	0
Calgary	Other	Excel Discovery	4	0	4	0
Calgary	Other	YWCA Mary Dover House	4	0	4	0
Ab	Other	Action Group Enhanced Housing	4	1	3	0
Edmonton	Other	Excel Society Group Home 35	4	0	4	0
Calgary	Other	CSPD 72 St	3	0	3	0
Medicine Hat	Other	Women's Shelter Society	3	2	1	0
Grande Prairie	Other	Signature Support Services 107	3	2	1	0

Classification: Protected A

Sturgeon County	Other	Kihew House	3	1	2	0
Edmonton	Other	Excel Society Group Home 46	3	0	3	0
Edmonton	Other	Residential and Support Services	3	0	3	0
Calgary	Other	Millhurst Community Home Calgary Women's Emergency Shelter	2	2	0	0
High Prairie	Other	High Prairie Youth Assessment Centre	2	2	0	0
Edmonton	Other	Chimo 2	2	0	2	0
Edmonton	Other	Unlimited Potential Community Services Alder House	2	0	2	0
Fort Saskatchewan	Other	Fort Saskatchewan Correctional Centre	2	0	2	0
Edmonton	Other	Winnifred Stewart Adult Group Home Residence 7	2	1	1	0
Calgary	Other	Atria Canyon Meadows Retirement	2	1	1	0
Red Deer	Other	St. Neri Timberlands - Banff Unit	2	0	2	0
Calgary	Other	L'Arche Calgary Group Home-Annapurna	1	1	0	0
Edmonton	Other	Hope Cottage Inc- Residence #1	1	1	0	0
Calgary	Other	Proverbium Homes 5	1	1	0	0
Wetaskiwin	Other	Wetaskiwin and District Association for Community Services Residence 1	1	1	0	0
Wetaskiwin	Other	Wetaskiwin and District Association for Community Services Residence 2	1	1	0	0
Calgary	Other	Vecova Bell Street	1	1	0	0
Edmonton	Other	John Howard Society - Journey Home	1	1	0	0
Edmonton	Other	Medihome House #7	1	1	0	0
Sherwood Park	Other	Robinhood Association Residence #18	1	1	0	0
Calgary	Other	Brenda Strafford Centre Shelter	1	1	0	0
14315 Evergreen Street Sw, Calgary Ab	Other	A Omega 6	1	0	1	0
Morinville	Other	Jessie's House	1	1	0	0
Edmonton	Other	HF Resources Kilkenny House	1	0	1	0
Edmonton	Other	Mustard Seed Trinity Lutheran Church Shelter	1	1	0	0
Central	Other	up community services doreen johnson	1	0	1	0
Wainwright	Other	Catholic Social Services- St. Louise House	1	0	1	0
Wainwright	Other	Catholic Social Services- St. Patrick House	1	0	1	0
Red Deer	Other	Michener Services - 91 Michener Green [CEN]	1	1	0	0
Alberta	All	All	11316	2678	8490	148

Classification: Protected A

Table 6: Summary of the closed outbreaks

Location Type	Alberta	Calgary	Central	Edmonton	North	South	Unknown
Acute Care	406	103	62	180	38	23	0
Continuing Care	1291	531	184	324	111	140	1
Other	2795	1116	227	943	350	158	1
School (K-12)	2458	860	306	731	383	178	0
Total	6950	2610	779	2178	882	499	2

COMMUNICATIONS UPDATE

Classification: Protected A

TAB 10

Analytics and Performance Reporting Branch
Epidemiology and Surveillance Unit
2022-February-08 12:01

COVID-19 in Alberta

Highlights | New Cases | Total Cases | Characteristics | Vaccine Outcomes | Severe outcomes | Comorbidities | Healthcare capacity | Geospatial | Travel history | Laboratory testing | Variants of Concern | Data export | Data notes

1623
current hospitalizations

129
current ICU

3,686
total deaths

28,265
active cases

34.11%
percent positivity, 7-day average

78 years
average age at death

Analytics and Performance Reporting Branch
Epidemiology and Surveillance Unit
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COVID-19 in Alberta

Highlights | New Cases | Total Cases | Characteristics | Vaccine Outcomes | Severe outcomes | Comorbidities | Healthcare capacity | Geospatial | Travel history | Laboratory testing | Variants of Concern | Data export | Data notes

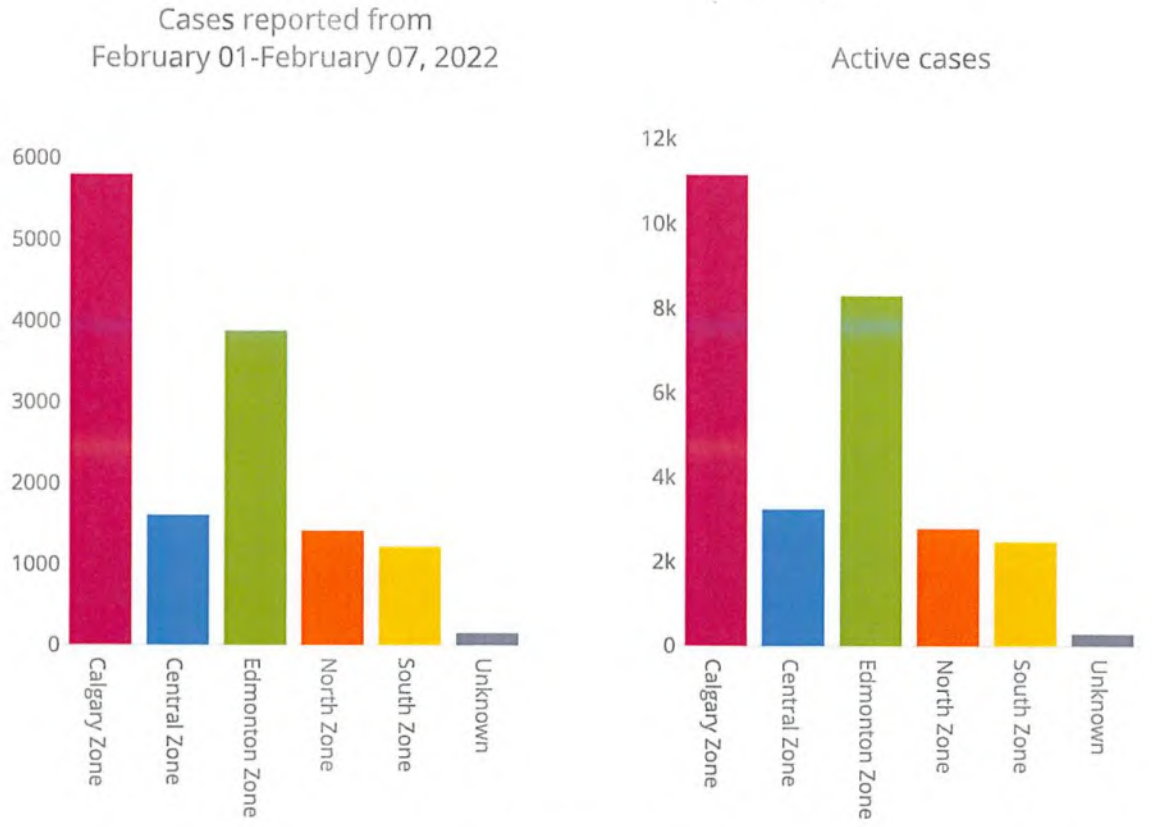

Figure 1: COVID-19 cases in Alberta by zone. First and second panels display new (from February 01-February 07, 2022) and active cases, respectively. Cases without a postal code or incorrect postal codes are labelled as unknown. Cases are under investigation and numbers may fluctuate as cases are resolved.

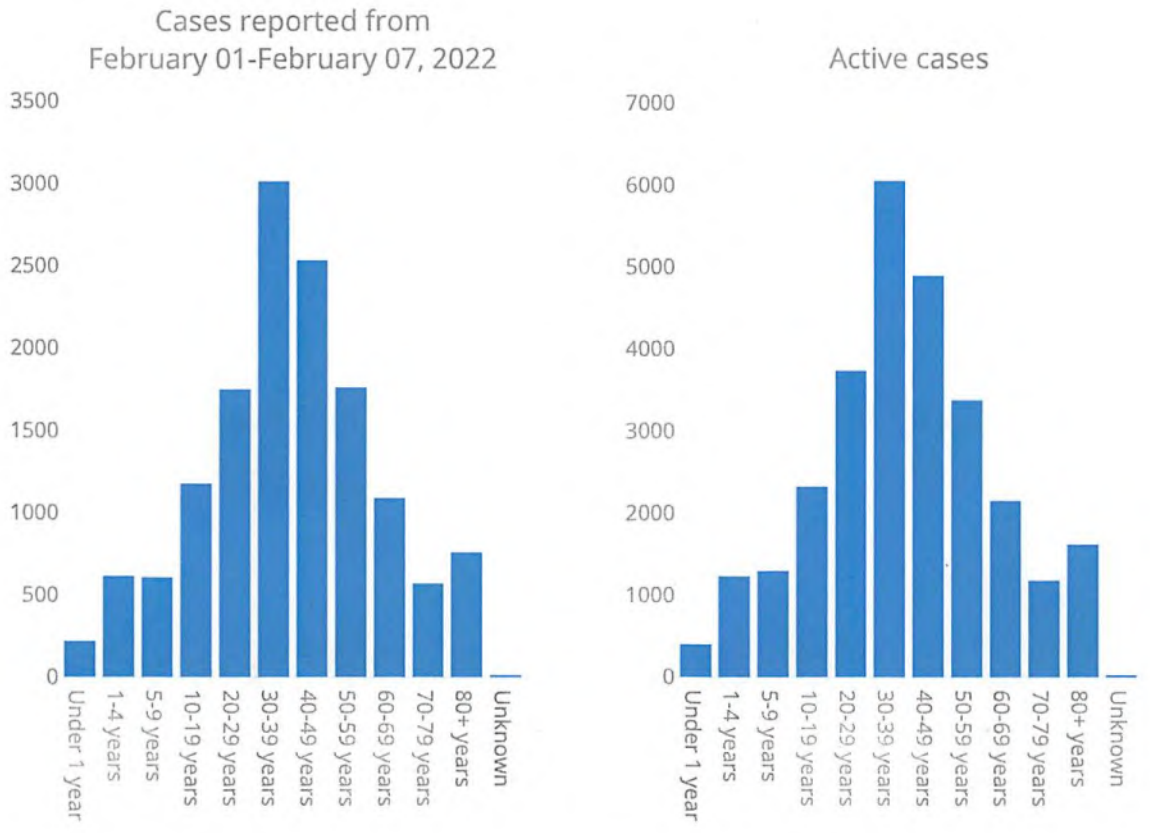

Figure 2: COVID-19 cases in Alberta by age group. First and second panels display new (from February 01-February 07, 2022) and active cases, respectively. Cases are under investigation and numbers may fluctuate as cases are resolved.

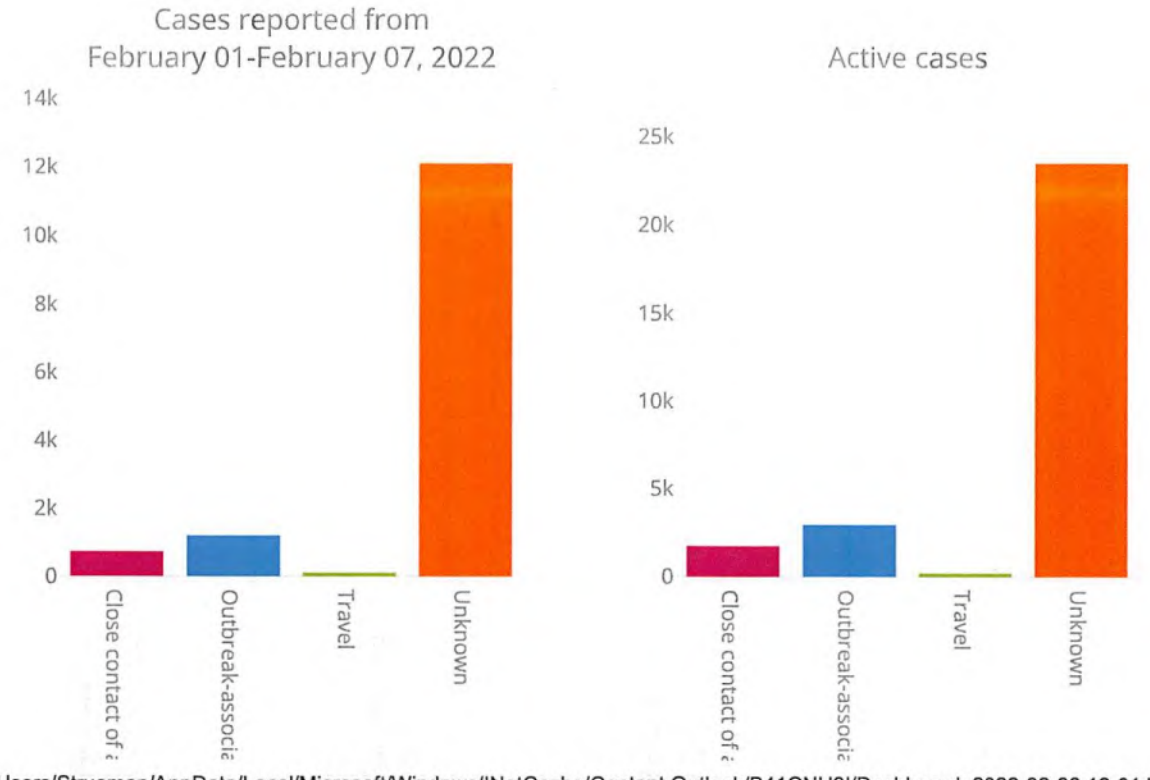

Figure 3: COVID-19 cases in Alberta by route of suspected acquisition. First and second panels display new (from February 01-February 07, 2022) and active cases, respectively. Cases are under investigation and numbers may fluctuate as cases are resolved.

Analytics and Performance Reporting Branch
Epidemiology and Surveillance Unit
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COVID-19 in Alberta

Highlights | New Cases | Total Cases | Characteristics | Vaccine Outcomes | Severe outcomes | Comorbidities | Healthcare capacity | Geospatial | Travel history | Laboratory testing | Variants of Concern | Data export | Data notes

Summary

- There are 503790 laboratory-confirmed, and 5928 probable cases in Alberta.
- There have been 465850/509718 cases report forms received.

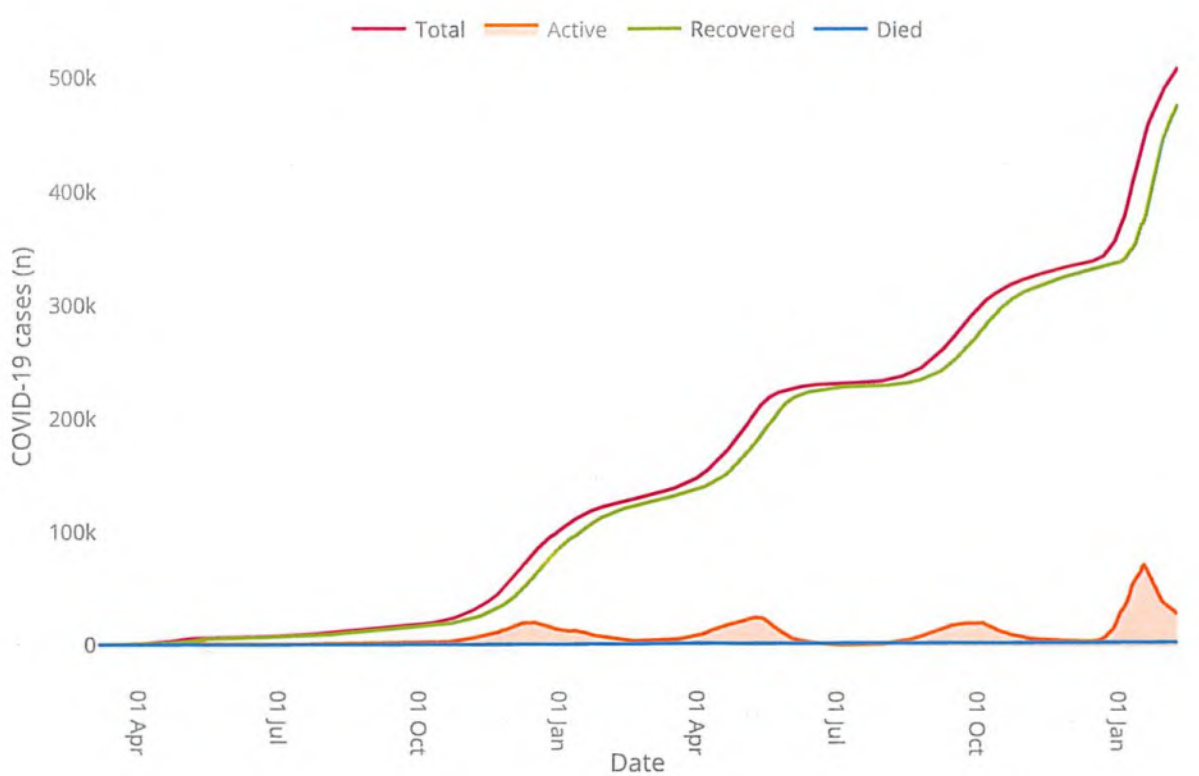

Figure 4: COVID-19 cases in Alberta by day and case status. Recovered is based on the assumption that a person is recovered 14 days after a particular date (see data notes tab), if they did not experience severe outcomes (hospitalized or deceased). Cases are under investigation and numbers may fluctuate as cases are resolved. Data included up to end of day February 07, 2022.

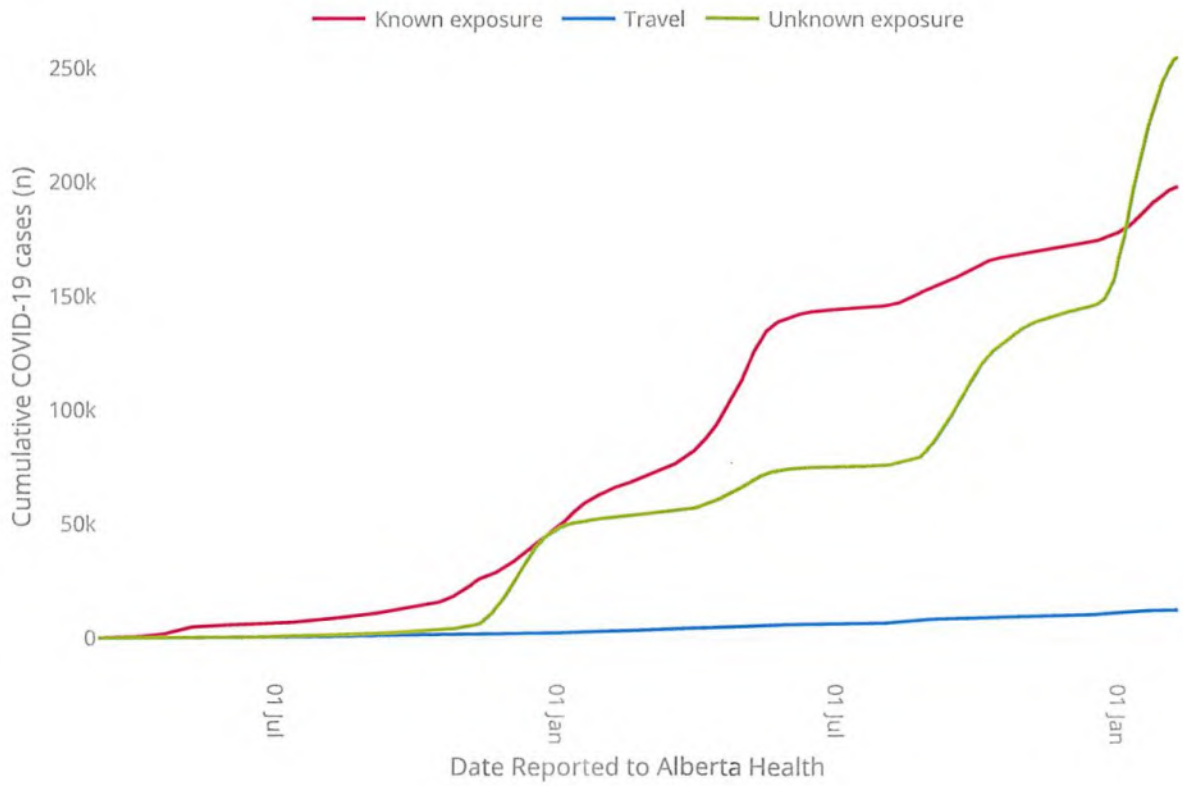

Figure 5: Cumulative COVID-19 cases in Alberta by route of suspected acquisition. Only includes COVID-19 cases where case report forms have been received. Suspected community refers to cases where there is no known epi-link, setting or travel where the person may have acquired infection. This includes cases where the investigation is still ongoing. Data included up to end of day February 07, 2022.

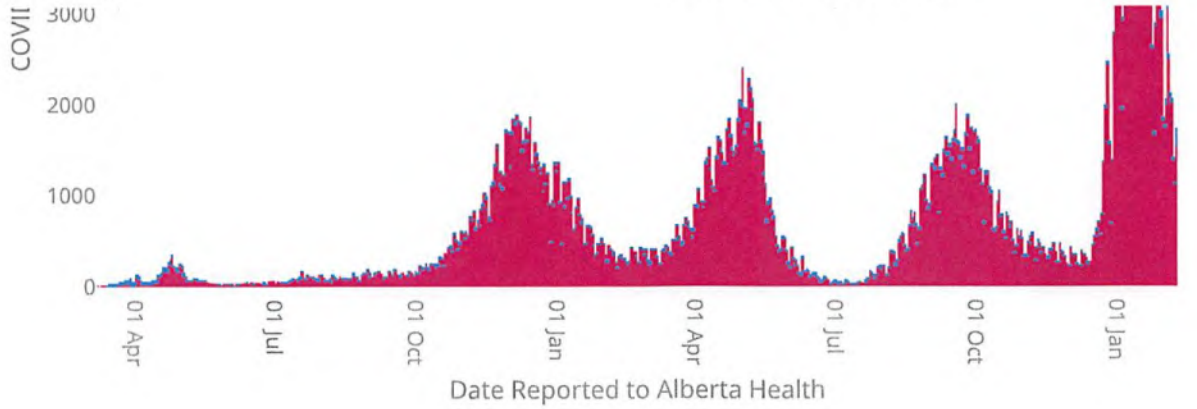

Figure 6: COVID-19 cases in Alberta by day and case status. Probable cases include cases where the lab confirmation is pending. Data included up to end of day February 07, 2022.

Analytics and Performance Reporting Branch
Epidemiology and Surveillance Unit
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COVID-19 in Alberta

Highlights | New Cases | Total Cases | Characteristics | Vaccine Outcomes | Severe outcomes | Comorbidities | Healthcare capacity | Geospatial | Travel history | Laboratory testing | Variants of Concern | Data export | Data notes

Summary

- The median age range is 34 years (0-121)

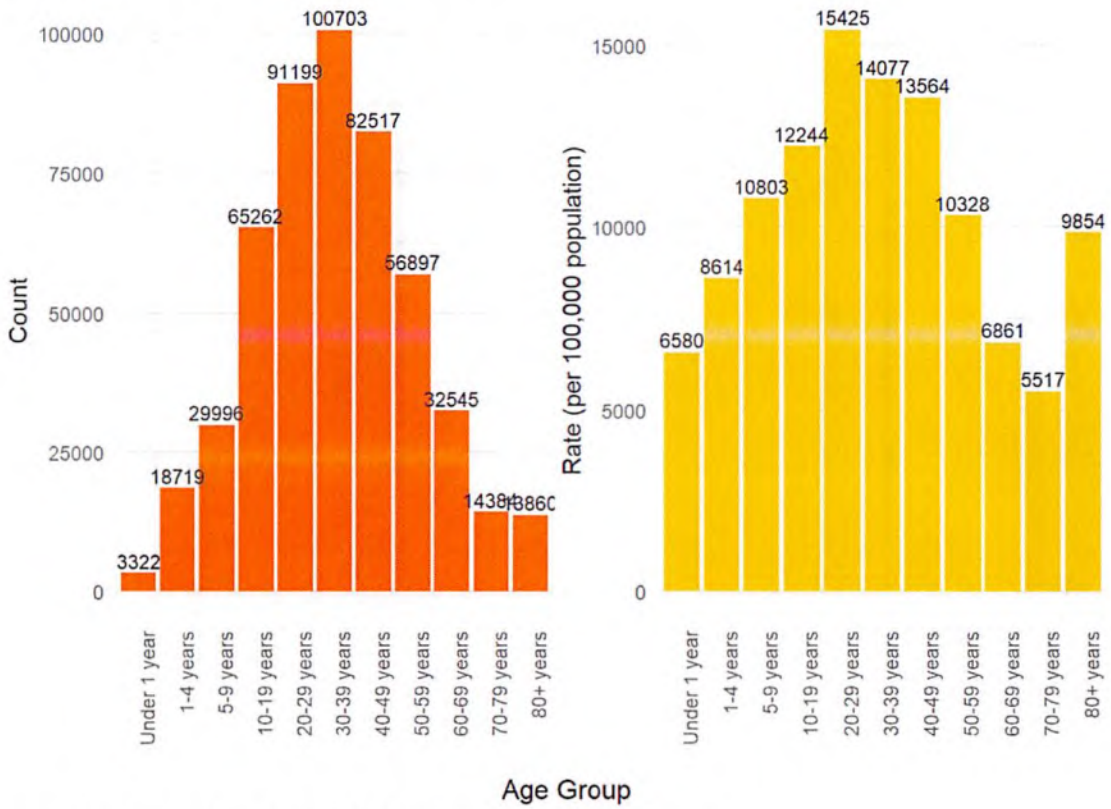

Figure 7: Number and rate of COVID-19 cases in Alberta by age group

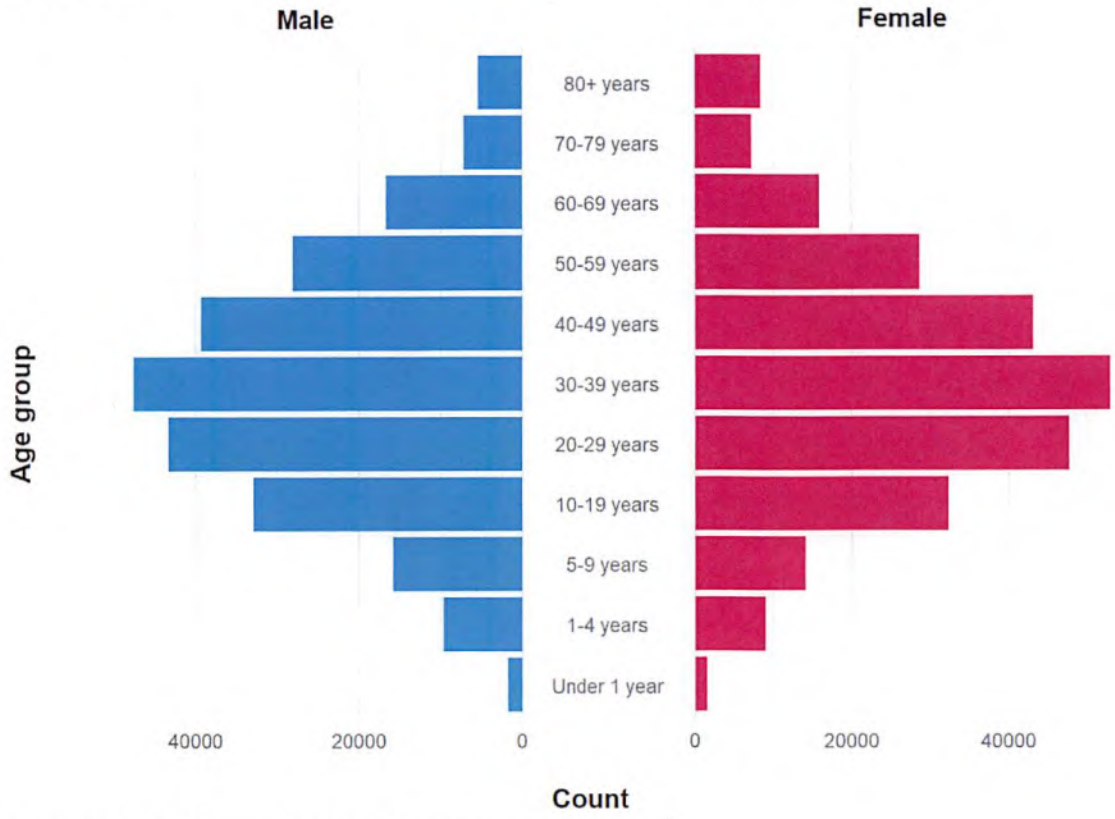

Figure 8: COVID-19 cases in Alberta by age group and gender

Table 1. COVID-19 cases in Alberta by age group and gender

	Gender							
	Female		Male		Unknown		All	
Age	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Under 1 year	1,510	0	1,807	0	5	0	3,322	1
1-4 years	8,964	2	9,744	2	11	0	18,719	4
5-9 years	14,163	3	15,823	3	10	0	29,996	6
10-19 years	32,328	6	32,873	6	61	0	65,262	13
20-29 years	47,778	9	43,304	8	117	0	91,199	18
30-39 years	53,024	10	47,606	9	73	0	100,703	20
40-49 years	43,128	8	39,349	8	40	0	82,517	16
50-59 years	28,694	6	28,175	6	28	0	56,897	11
60-69 years	15,823	3	16,701	3	21	0	32,545	6
70-79 years	7,129	1	7,247	1	8	0	14,384	3
80+ years	8,375	2	5,475	1	10	0	13,860	3
Unknown	160	0	142	0	12	0	314	0

	Gender							
	Female		Male		Unknown		All	
Age	Count	Percent	Count	Percent	Count	Percent	Count	Percent
All	261,076	51	248,246	49	396	0	509,718	100

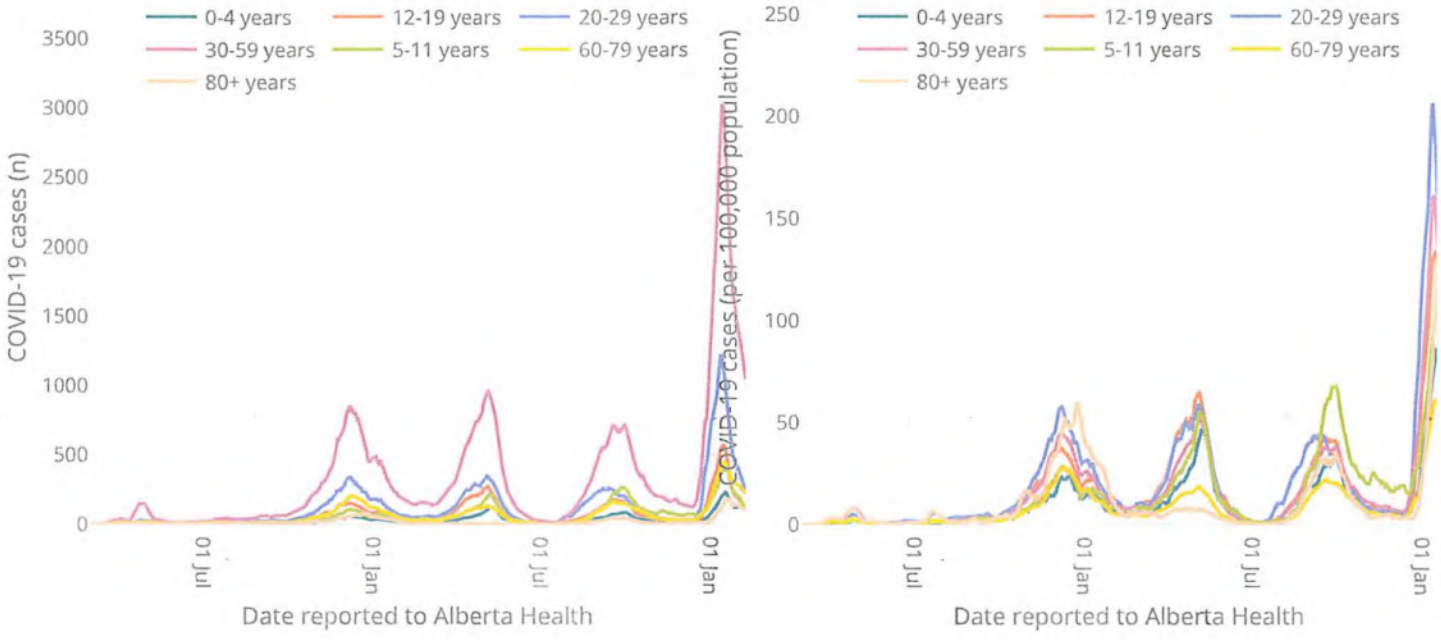

Figure 9: COVID-19 cases in Alberta by age group. First and second panels display counts (7-day rolling average) and rate per 100,000 (7-day rolling average), respectively.

Healthcare Workers

Table 2. Healthcare workers among COVID-19 cases

	Total	Active	Recovered	Died
Calgary Zone	13981	1471	12506	4
Central Zone	3676	467	3209	0
Edmonton Zone	12174	1131	11040	3
North Zone	2599	331	2267	1
South Zone	2520	420	2098	2
Unknown	2	0	2	0

Note:
Status of Healthcare workers is self-reported and might be different from other sources. Please note these are not necessarily healthcare workers who were infected at work.

	Total	Active	Recovered	Died
Alberta	34952	3820	31122	10

Note:
Status of Healthcare workers is self-reported and might be different from other sources. Please note these are not necessarily healthcare workers who were infected at work.

Symptoms

Table 3. Symptoms reported among COVID-19 cases

Symptom	Count	Percent
Cough	117547	25.2
Headache	87913	18.9
Sore Throat	78306	16.8
Nasal Congestion	70351	15.1
Malaise	58022	12.5
Chills	57320	12.3
Runny Nose	55468	11.9
Fever	51590	11.1
Asymptomatic	46821	10.1
Pain	42062	9
Loss Of Taste/Smell	37842	8.1
Other	31662	6.8
Myalgia	26741	5.7
Difficulty Breathing	22908	4.9
Decreased Appetite	21661	4.6
Diarrhea	17511	3.8
Nausea	15803	3.4
Sneezing	11940	2.6
Dizziness	9836	2.1
Chest Pain	8745	1.9
Vomiting	7252	1.6

Note:
Symptom prevalence based on enhanced case report forms.

Symptom	Count	Percent
Arthralgia	4617	1
Prostration	3735	0.8
Irritability/Confusion/Altered Mental State	3441	0.7
Pharyngeal Exudate	3058	0.7
Conjunctivitis	2195	0.5
Anorexia	1561	0.3
Tachypnea	797	0.2
Abnormal Lung Asculation	703	0.2
Nose Bleed	518	0.1
Hypotension	324	0.1
Seizures	92	0
Encephalitis	24	0
Total Cases With Symptom Data Available	465850	

Note:
Symptom prevalence based on enhanced case report forms.

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COVID-19 in Alberta

- Since Jan 1, 2021, **0.6**% of people with one dose (20,733/3,546,680) were diagnosed with COVID-19 14 days after the first immunization date
- Since Jan 1, 2021, **4.1**% of people with two doses (136,426/3,306,246) were diagnosed with COVID-19 14 days after the second immunization date
- Since Jan 1, 2021, **1.8**% of people with three doses (27,153/1,499,676) were diagnosed with COVID-19 14 days after the third immunization date
- **54.7**% of cases (222,147/406,459) since Jan 1, 2021 were unvaccinated or diagnosed within two weeks from the first dose immunization date
- **67.8**% of hospitalized cases (11,379/16,781) since Jan 1, 2021 were unvaccinated or diagnosed within two weeks from the first dose immunization date
- **67.3**% of COVID-19 deaths (1,451/2,155) since Jan 1, 2021 were unvaccinated or diagnosed within two weeks from the first dose immunization date

Table 4. COVID-19 vaccine effectiveness in Alberta by vaccine manufacturer

Vaccine	Vaccine Effectiveness: Partial (95% CI)	Vaccine Effectiveness: Complete (95% CI)
AstraZeneca	61% (58 to 63%)	89% (89 to 90%)
Moderna	81% (80 to 82%)	91% (90 to 91%)
Pfizer	75% (74 to 76%)	90% (90 to 90%)

Table 5. COVID-19 vaccine effectiveness against variants of concern in Alberta

Variant of Concern	Vaccine Effectiveness: Partial (95% CI)	Vaccine Effectiveness: Complete (95% CI)
B.1.1.7 UK Variant	76% (75 to 77%)	90% (88 to 91%)
B.1.617 Variant	57% (51 to 63%)	89% (89 to 90%)
P1 Brazilian Variant	72% (67 to 76%)	88% (80 to 93%)

Note:
(a) Vaccine effectiveness estimates include 95% confidence intervals (CI) and describes the protection against symptomatic infection. Vaccine effectiveness for hospitalization and death could have different estimates.
(b) Vaccine effectiveness estimates for some variants are not provided due to limited sample sizes, which make estimates unstable and difficult to interpret. Information on other variants will be provided when estimates become stable.

(c) Partial vaccination: people are considered partially vaccinated 14 days after their first dose of a two dose series (for vaccines that require two doses)

(d) Effectiveness: how well a vaccine prevents the outcome of interest in the real world

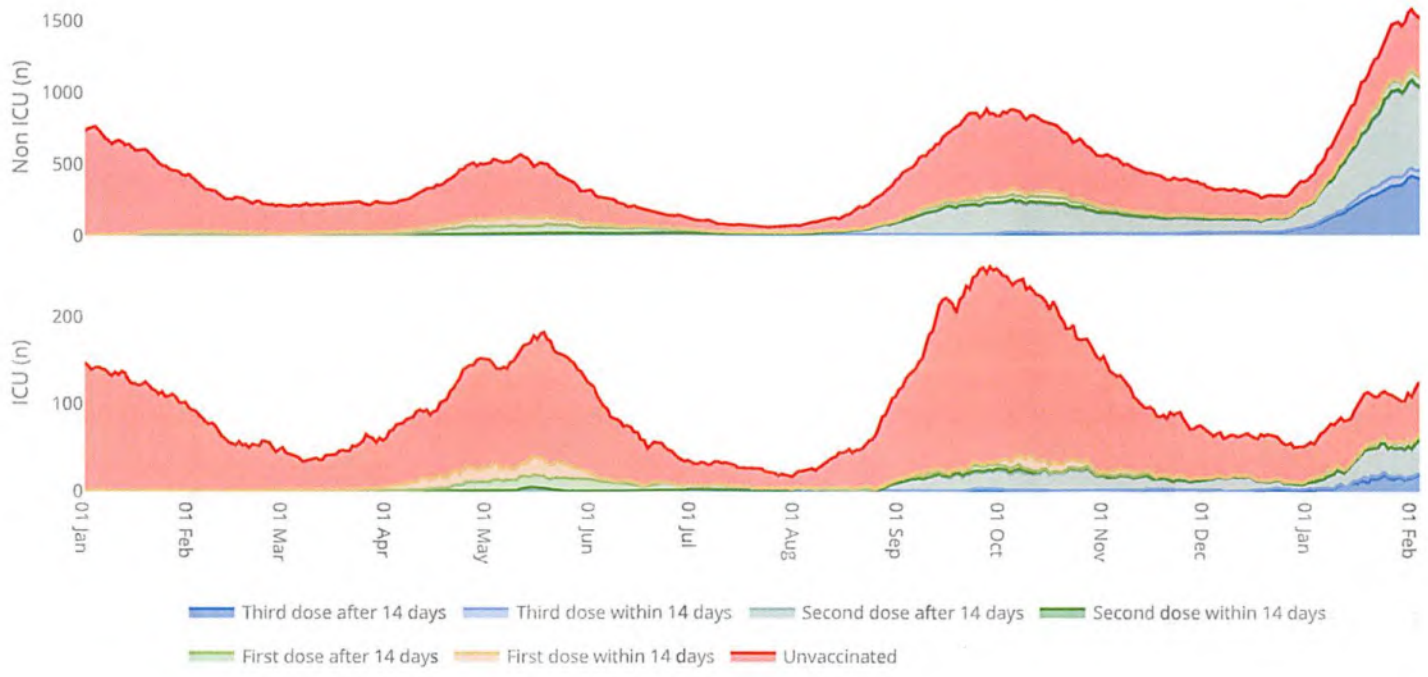
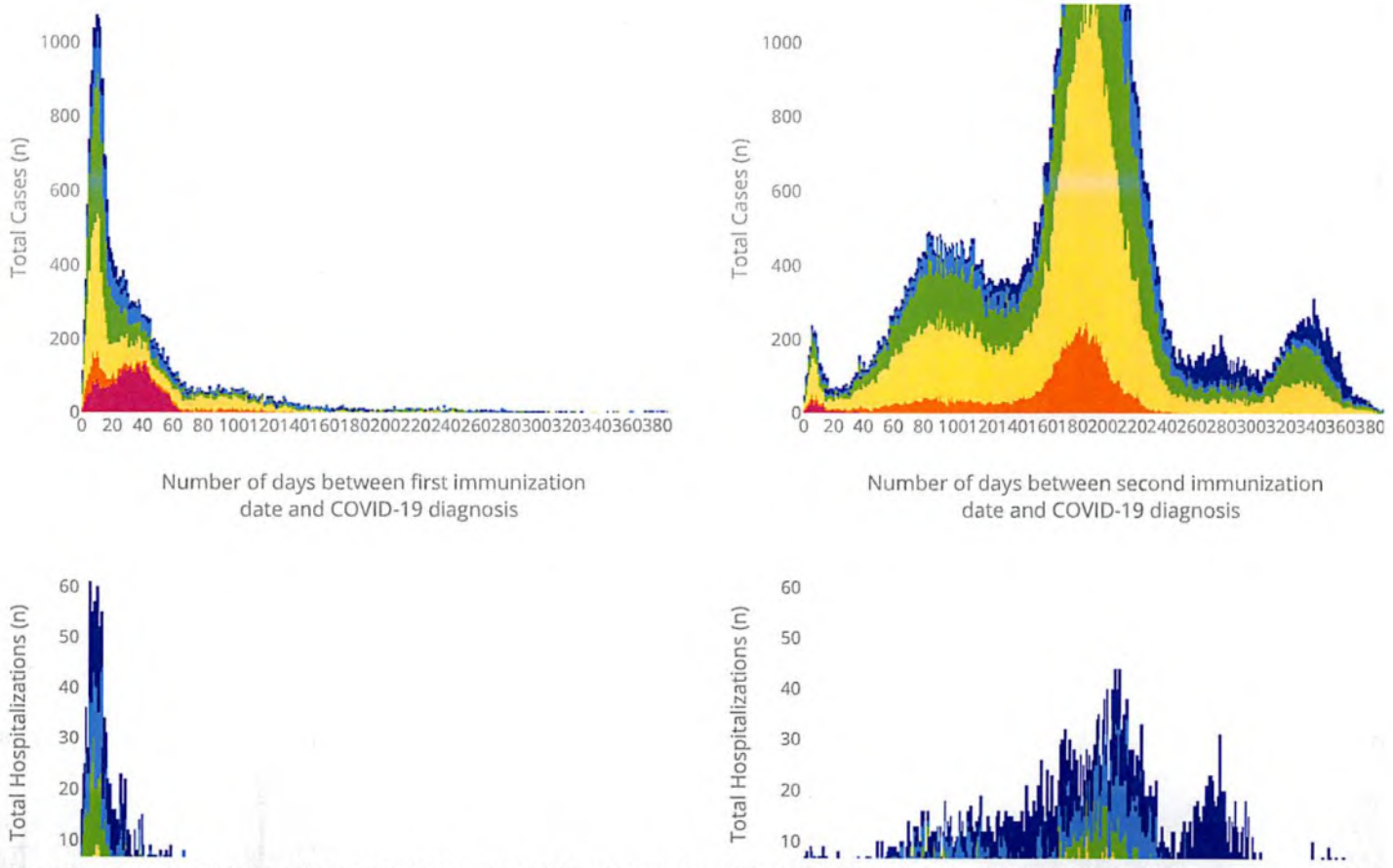


Figure 10: Current non-ICU (top) and ICU(bottom) by vaccine status.

Note:

Time from immunization date to COVID diagnosis date (or Date reported to Alberta Health). COVID-19 hospitalizations reported are not due to immunization events.



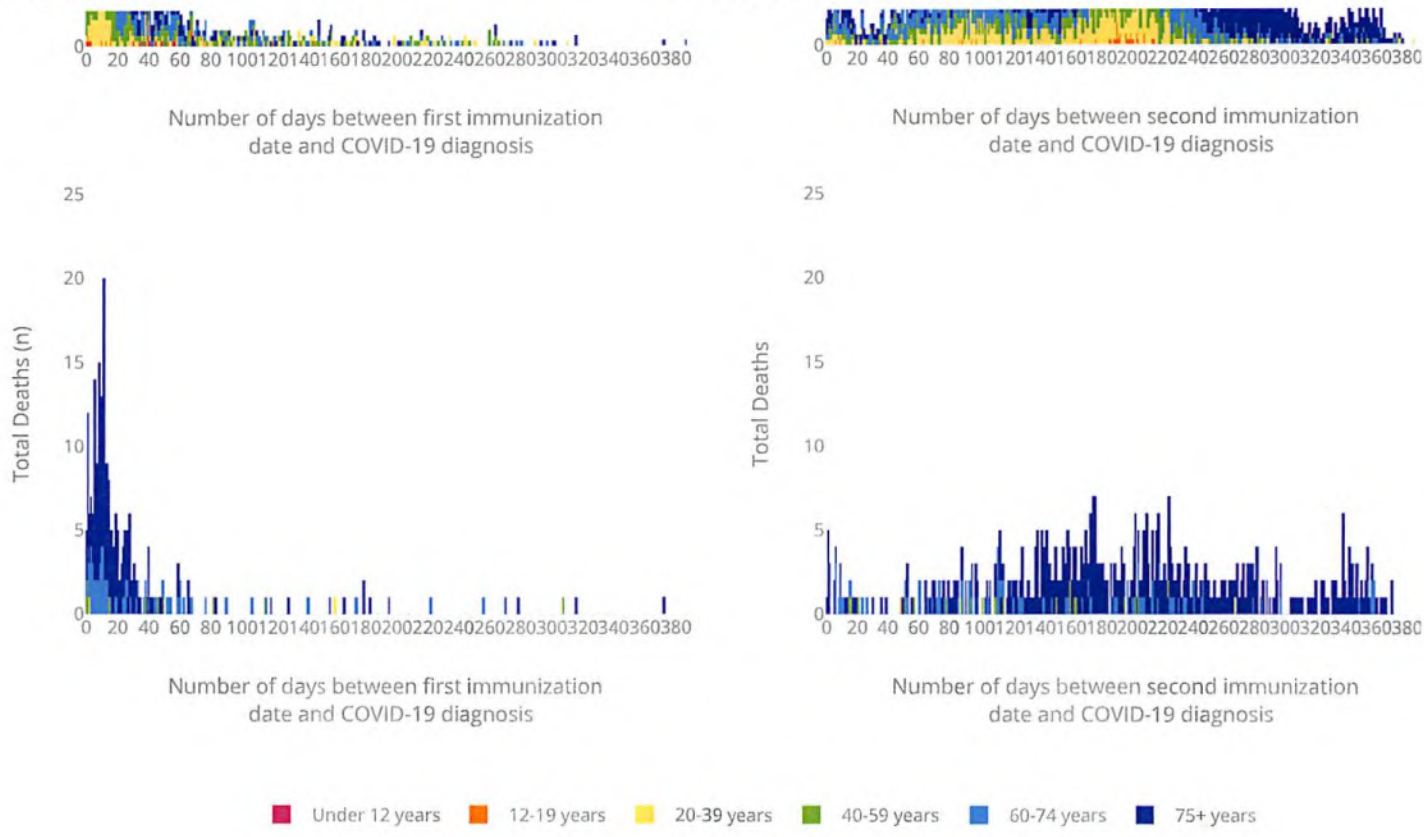


Figure 11: Time from first dose (left) and second dose immunization (right) to COVID-19 diagnosis by age group:
TOP: cases
MIDDLE: of those who became hospitalized
BOTTOM: of those who died from COVID-19
Note: First dose immunization also includes people who became a case prior to their second dose immunization date. COVID-19 hospitalizations reported are not due to immunization events.

Analytics and Performance Reporting Branch
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COVID-19 in Alberta

Summary

- Average age for COVID cases that died is 78 years (range: 1-107)
- Average age for COVID cases hospitalized with an ICU stay is 56 years (range: 0-99)
- Average age for COVID cases hospitalized is 59 years (range: 0-104)
- Average age for COVID cases not hospitalized is 34 years (range: 0-121)

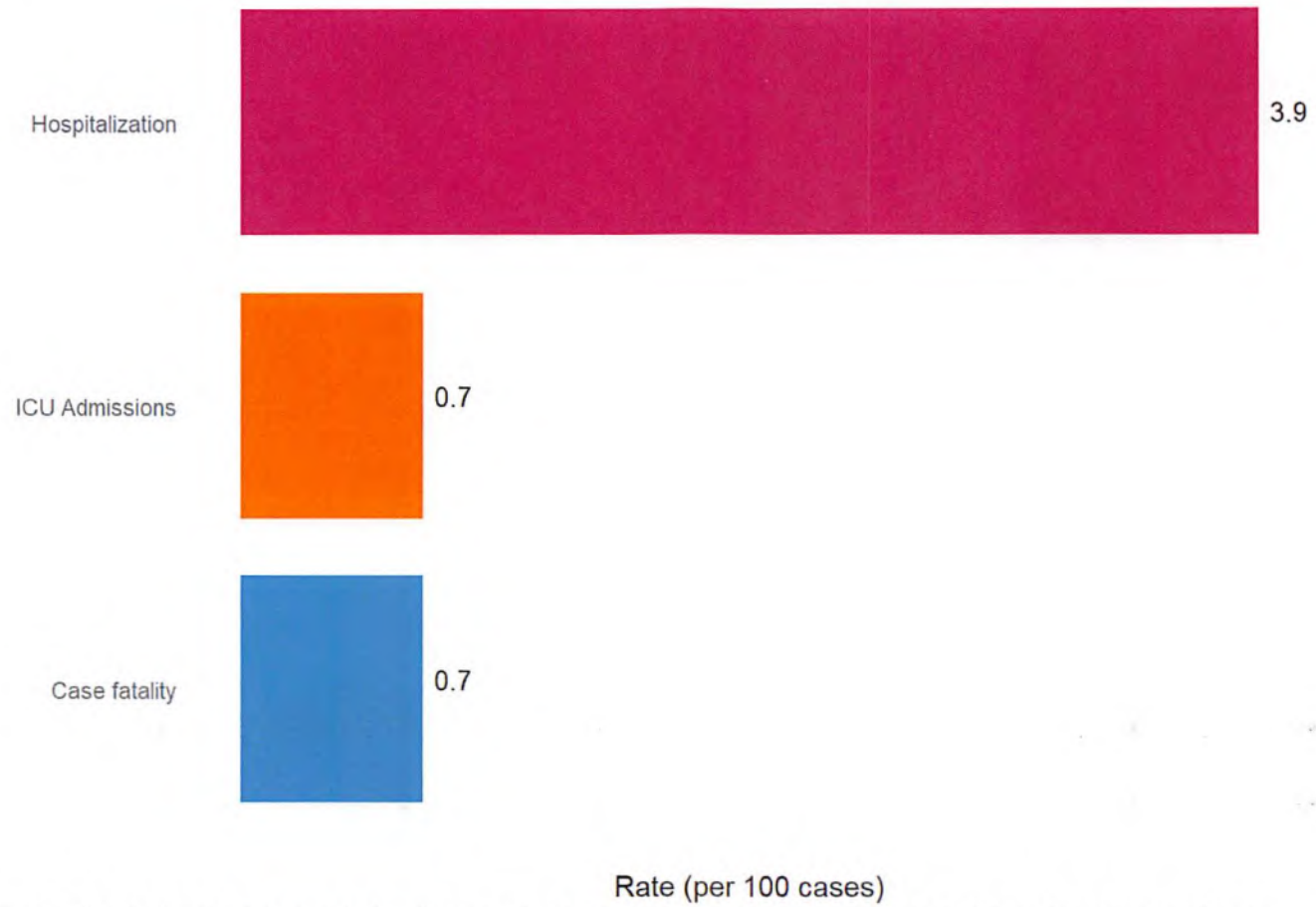


Figure 12: Rate of total hospitalizations, ICU admissions, and deaths among COVID-19 cases in Alberta

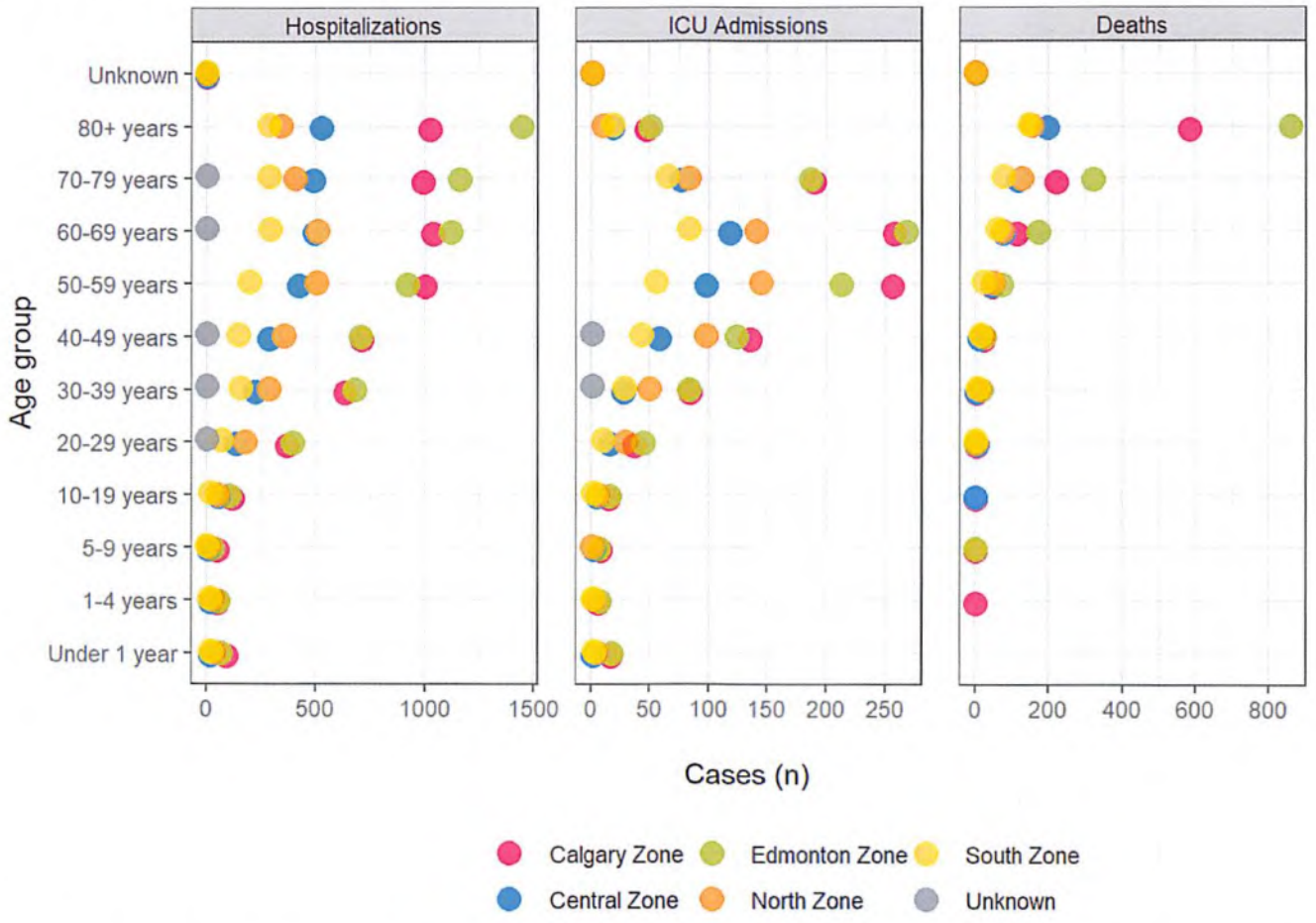


Figure 13: Total hospitalizations, ICU admissions and deaths among COVID-19 cases in Alberta by age group and zone. Each ICU admission is also included in the total number of hospitalizations.

Table 6. Total hospitalizations, ICU admissions and deaths (ever) among COVID-19 cases in Alberta by Zone

Zone	Cases	Hospitalized		ICU		Deaths	
	Count	Count	Case rate	Count	Case rate	Count	Case rate
Alberta	509718	19640	3.9	3383	0.7	3686	0.7
Calgary Zone	206337	6083	2.9	1054	0.5	998	0.5
Central Zone	50671	2692	5.3	424	0.8	456	0.9
Edmonton Zone	163289	6681	4.1	1021	0.6	1468	0.9
North Zone	56246	2697	4.8	570	1.0	438	0.8

Note:
Based on total hospitalizations and ICU admissions ever.
Each ICU admission is also included in the total number of hospitalization
Zone is based on patient postal code of residence.
Case rate (per 100 cases)

Zone	Cases	Hospitalized		ICU		Deaths	
	Count	Count	Case rate	Count	Case rate	Count	Case rate
South Zone	32119	1481	4.6	312	1.0	326	1.0
Unknown	1056	6	0.6	2	0.2	0	0.0

Note:
Based on total hospitalizations and ICU admissions ever.
Each ICU admission is also included in the total number of hospitalization
Zone is based on patient postal code of residence.
Case rate (per 100 cases)

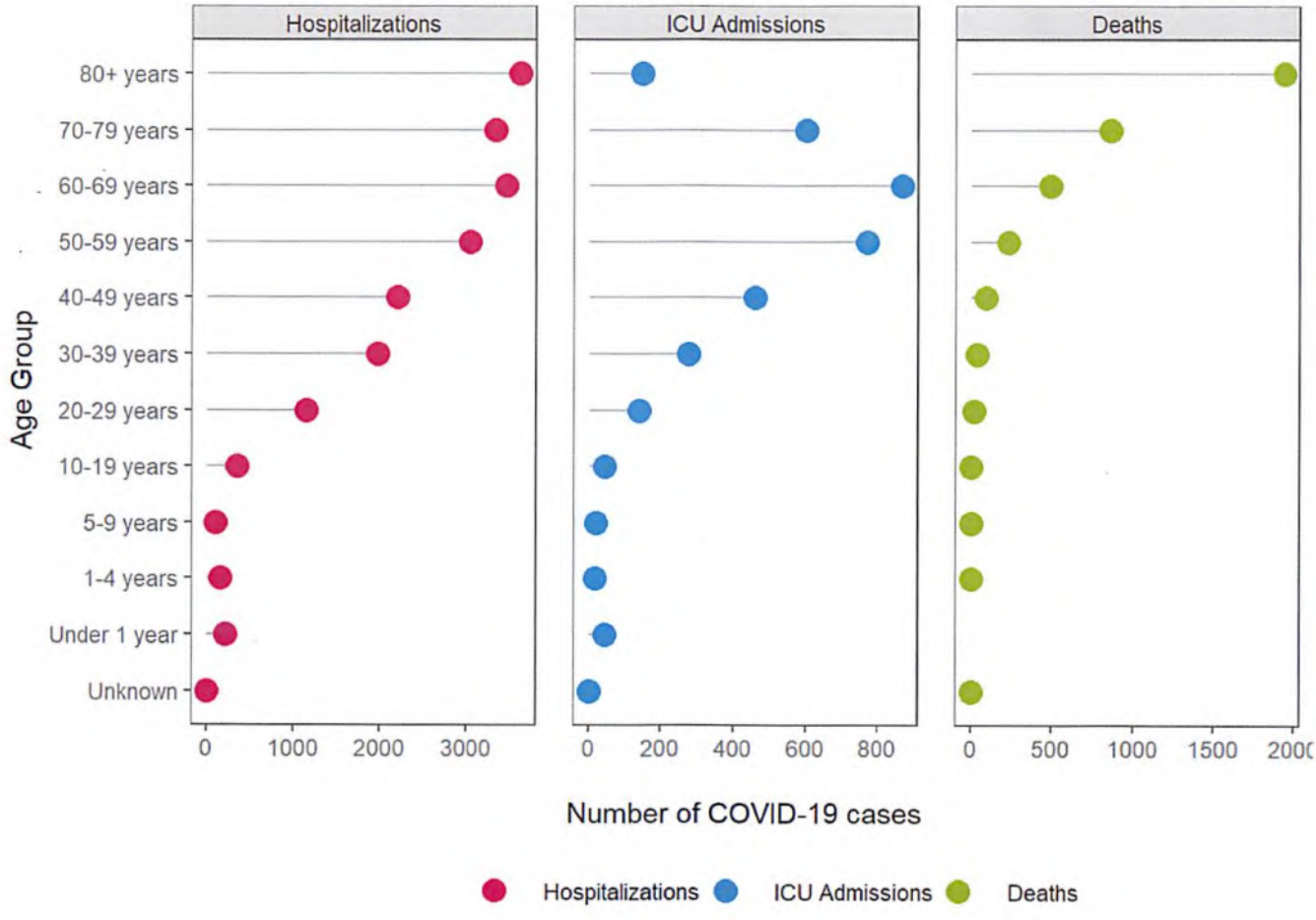


Figure 14: Total hospitalizations, ICU admissions and deaths (ever) among COVID-19 cases in Alberta by age group. Each ICU admission is also included in the total number of hospitalizations.This is based on totals rather than current hospitalizations and ICU admissions.

Table 7. Total Hospitalizations, ICU admissions and deaths (ever) among COVID-19 cases in Alberta by age group

Age Group	Cases	Hospitalized	ICU	Deaths

Age Group	Cases	Hospitalized			ICU			Deaths		
	Count	Count	Case rate	Pop. rate	Count	Case rate	Pop. rate	Count	Case rate	Pop. rate
Total	509718	19640	3.9	444.3	3383	0.7	76.5	3686	0.7	83.4
Under 1 year	3322	223	6.7	441.7	44	1.3	87.2	0	0.0	0.0
1-4 years	18719	165	0.9	75.9	18	0.1	8.3	1	0.0	0.5
5-9 years	29996	103	0.3	37.1	20	0.1	7.2	2	0.0	0.7
10-19 years	65262	350	0.5	65.7	44	0.1	8.3	2	0.0	0.4
20-29 years	91199	1146	1.3	193.8	138	0.2	23.3	18	0.0	3.0
30-39 years	100703	1981	2.0	276.9	275	0.3	38.4	40	0.0	5.6
40-49 years	82517	2207	2.7	362.8	459	0.6	75.5	93	0.1	15.3
50-59 years	56897	3040	5.3	551.8	768	1.3	139.4	234	0.4	42.5
60-69 years	32545	3459	10.6	729.3	867	2.7	182.8	496	1.5	104.6
70-79 years	14384	3338	23.2	1280.2	602	4.2	230.9	861	6.0	330.2
80+ years	13860	3621	26.1	2574.3	146	1.1	103.8	1937	14.0	1377.1
Unknown	314	7	2.2	NA	2	0.6	NA	2	0.6	NA

Note:

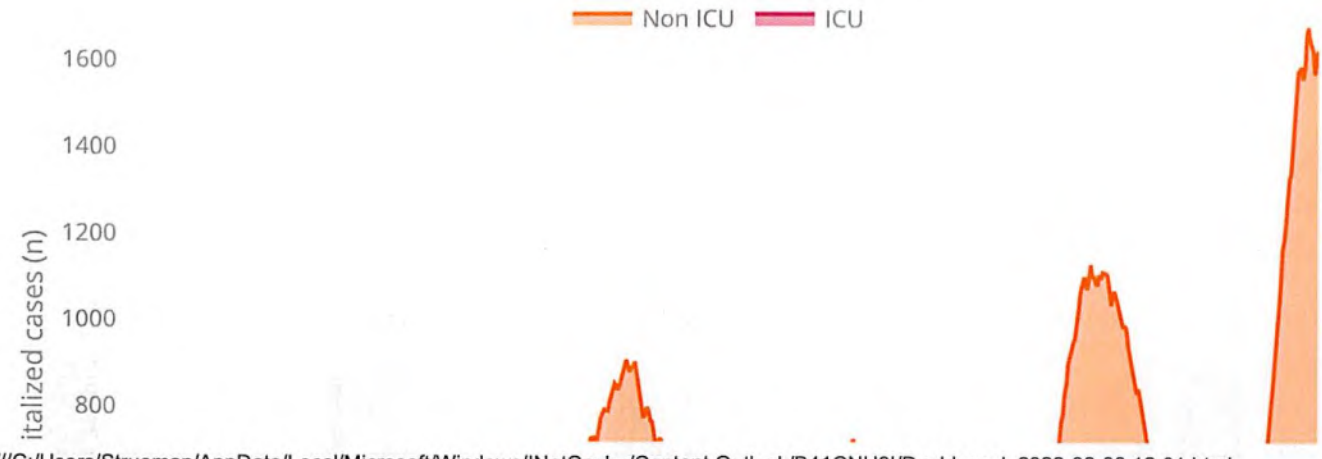
Based on total hospitalizations and ICU admissions ever.

Row percent is out of the number of cases in each age group.

Each ICU admission is also included in the total number of hospitalization

Case rate (per 100 cases)

Population rate (per 100,000 population)



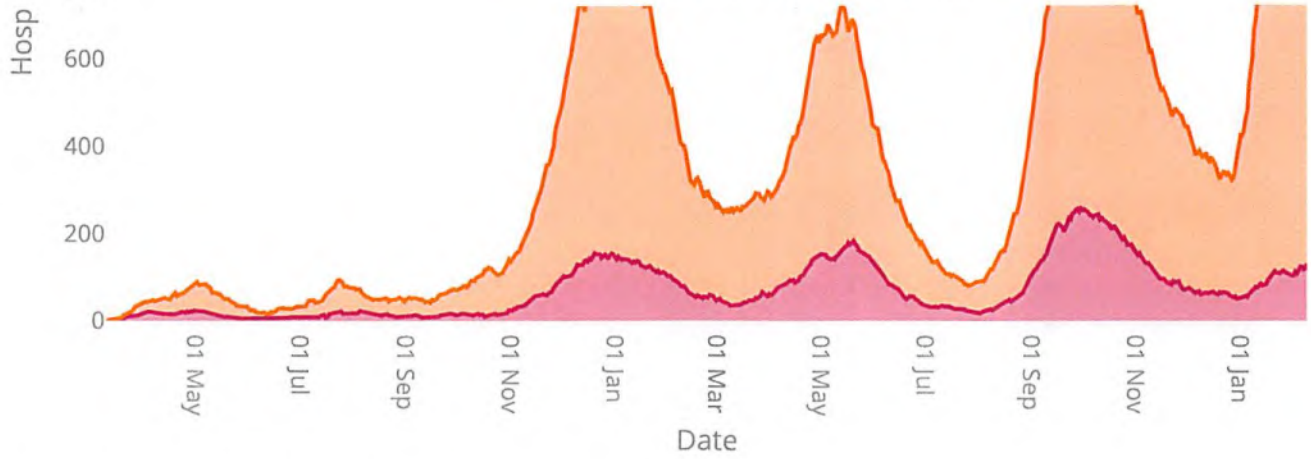


Figure 15: Number of current COVID-19 patients in hospital, ICU and non-ICU

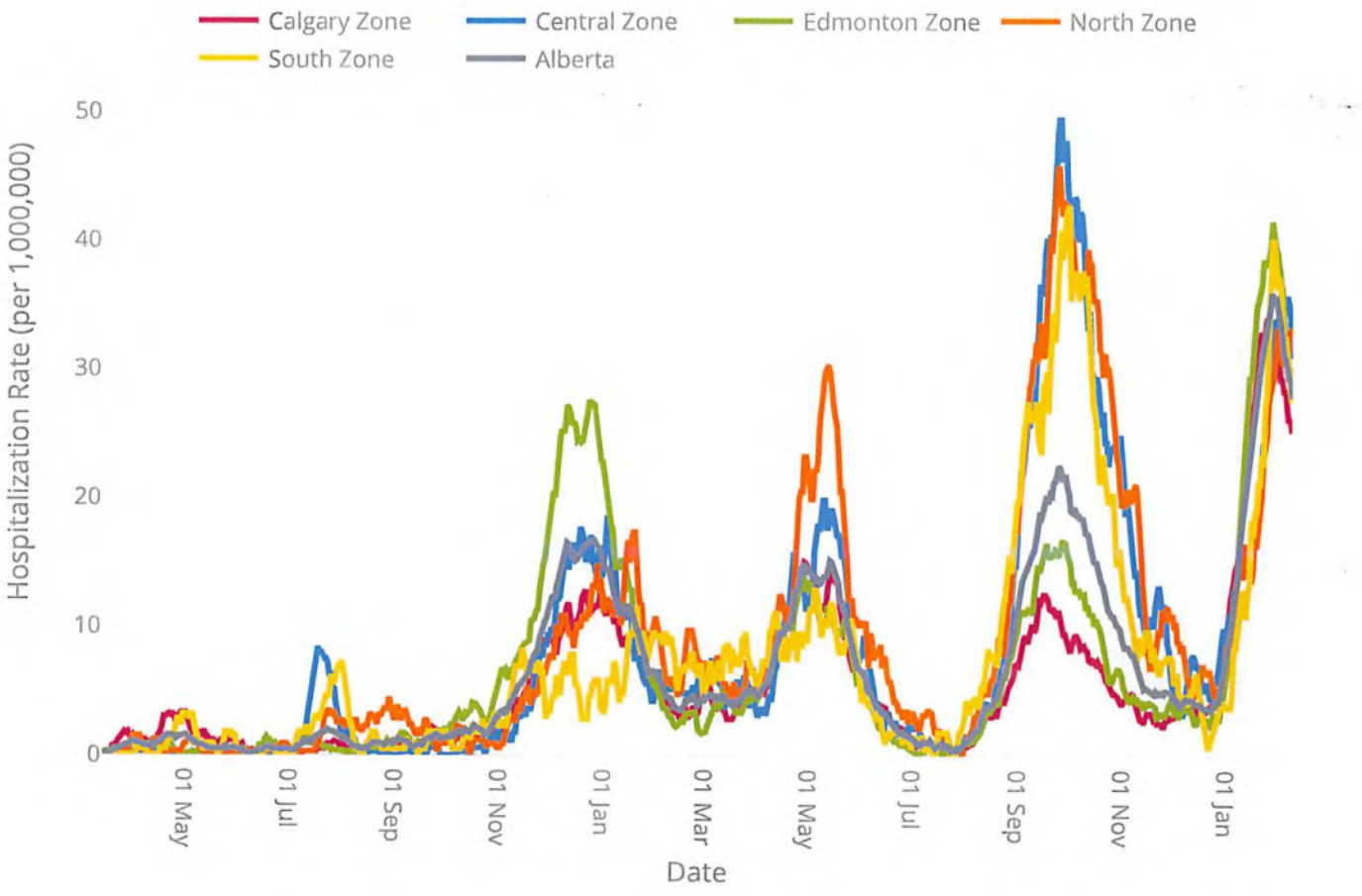


Figure 16: Rate of new hospitalizations (7-day rolling average, average of current day and previous six days) by admission date in Alberta and by zone

30

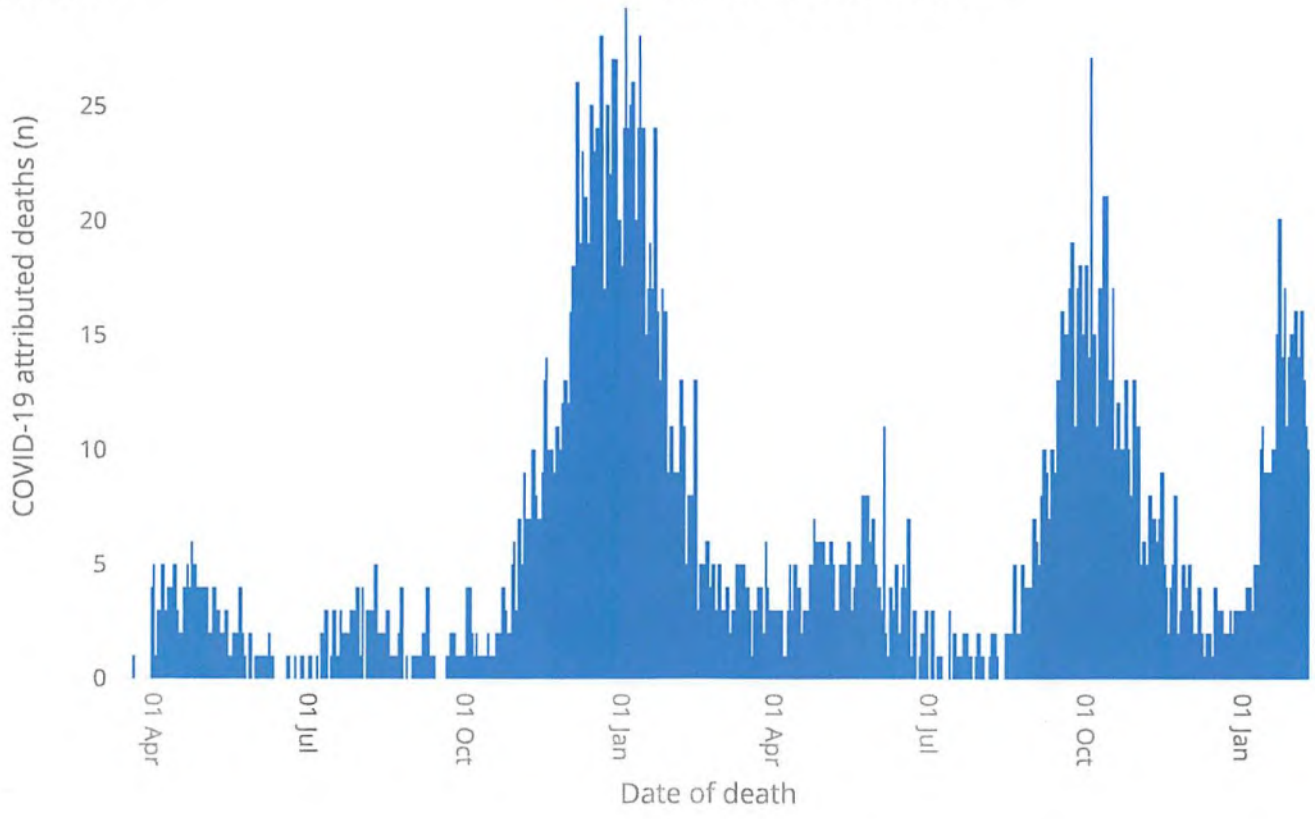


Figure 17: Daily COVID-19 attributed deaths. Data are subject to change; when death date is unavailable the date reported to Alberta Health is used until a death date is known.

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Table 8. Number and percent of health conditions among COVID-19 deaths. Data updated on 2022-02-07.

Condition	Count	Percent
Hypertension	3024	82.0%
Cardio-Vascular Diseases	1951	52.9%
Renal Diseases	1924	52.2%
Diabetes	1663	45.1%
Respiratory Diseases	1459	39.6%
Dementia	1383	37.5%
Cancer	862	23.4%
Stroke	676	18.3%
Liver Diseases	164	4.4%
Immuno-Deficiency Diseases	142	3.9%

Note:
One individual can have multiple conditions.

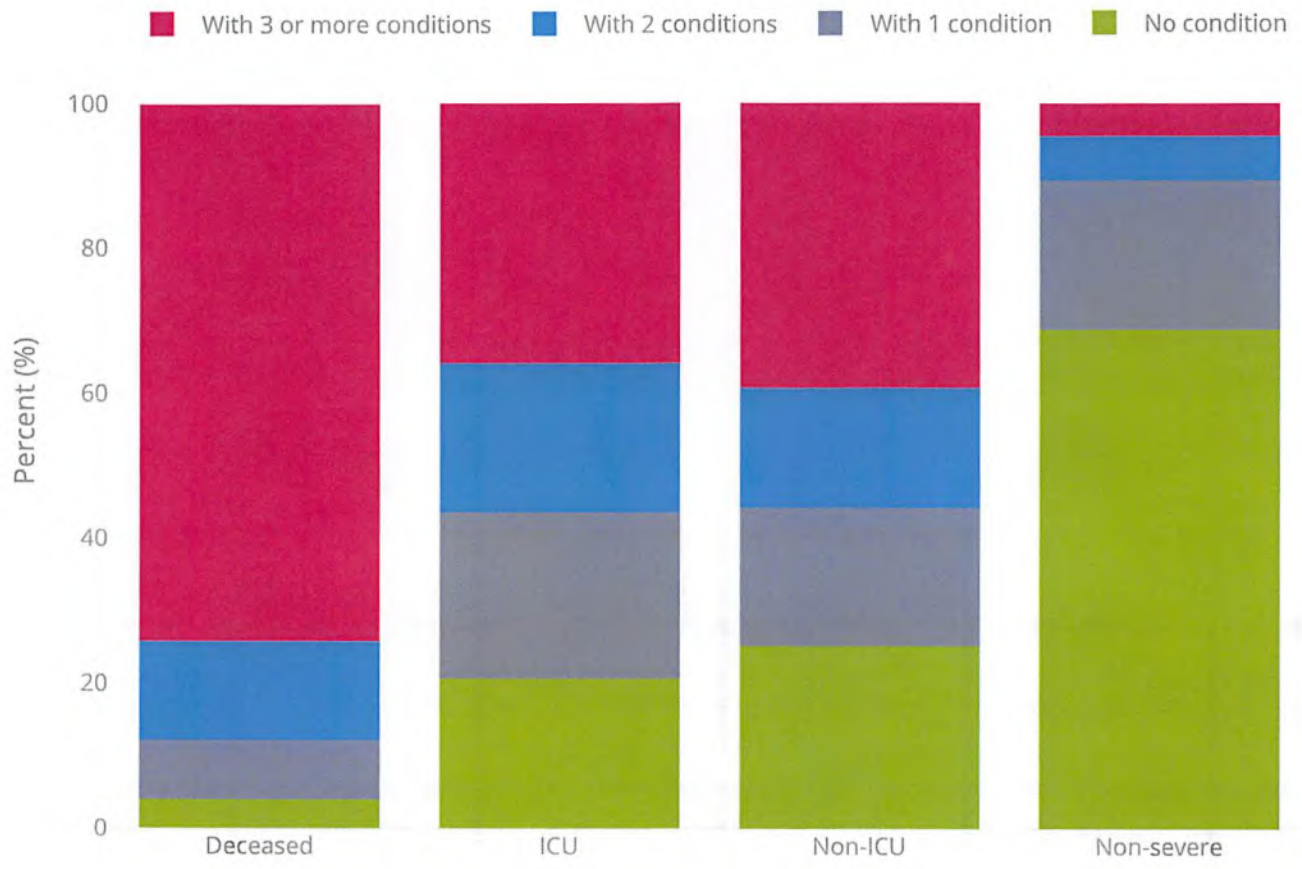

Figure 18: Percent of COVID-19 cases with no comorbidities, one comorbidity, two comorbidities, or three or more comorbidities by case severity (non-severe, hospitalized but non-ICU, ICU but not deceased, and deceased), all age groups and both sexes combined, all Alberta. Comorbitities included are: Diabetes, Hypertension, COPD, Cancer, Dementia, Stroke, Liver cirrhosis, Cardiovascular diseases (including IHD and Congestive heart failure), Chronic kidney disease, and Immuno-deficiency. Data updated on 2022-02-07.

Table 9. Number and percent of COVID-19 cases with no comorbidities, one comorbidity, two comorbidities, or three or more comorbidities by case severity (non-severe, hospitalized but non-ICU, ICU but not deceased, and deceased), all age groups and both sexes combined, Alberta. Comorbitities included are: Diabetes, Hypertension, COPD, Cancer, Dementia, Stroke, Liver cirrhosis, Cardiovascular diseases (including IHD and Congestive heart failure), Chronic kidney disease, and Immuno-deficiency. Data updated on 2022-02-07.

	Non-Severe		Non-ICU		ICU		Deaths	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
No condition	336545	68.8%	3687	25.2%	523	20.7%	148	4.0%
With 1 condition	100184	20.5%	2791	19.1%	579	22.9%	304	8.2%

	Non-Severe		Non-ICU		ICU		Deaths	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
With 2 conditions	30015	6.1%	2410	16.5%	520	20.6%	503	13.6%
With 3 or more conditions	22150	4.5%	5722	39.2%	906	35.8%	2731	74.1%

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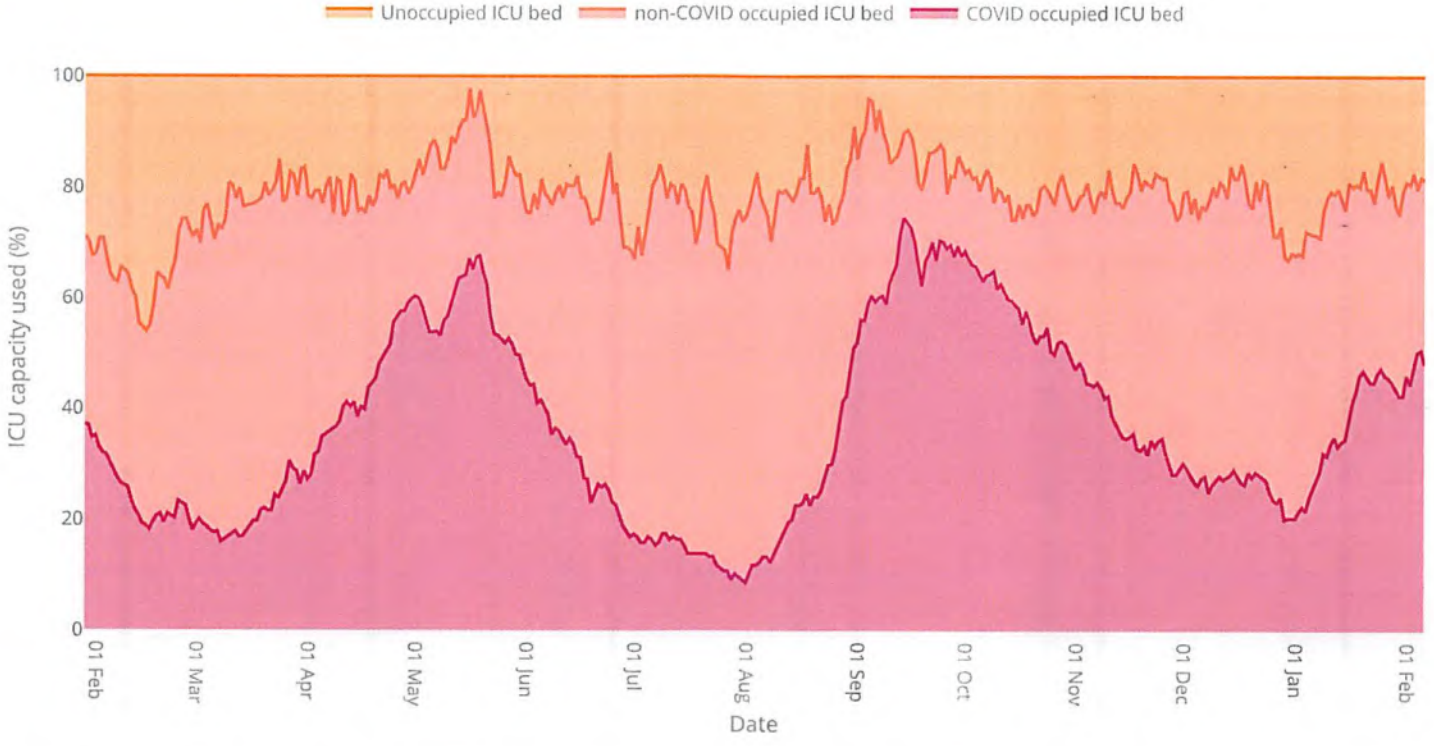
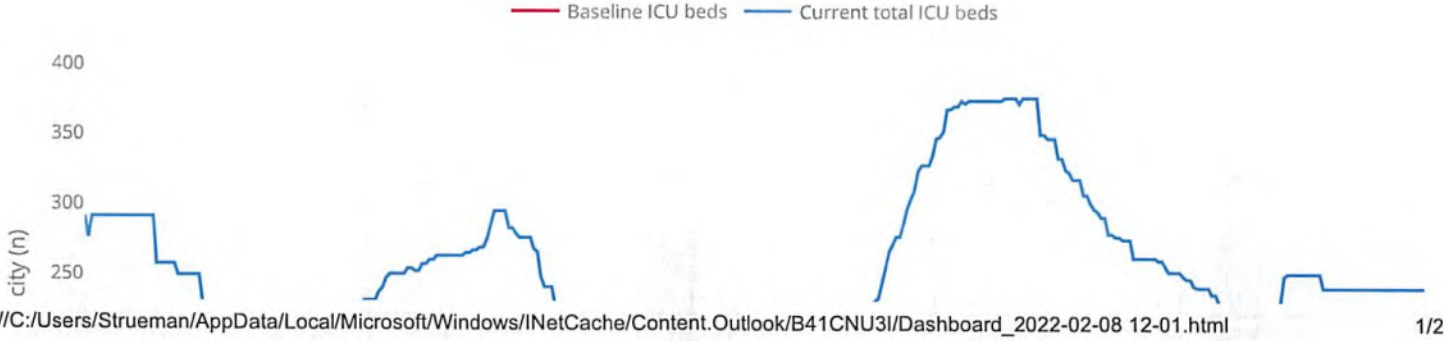


Figure 19: Intensive Care Unit (ICU) bed capacity. Data included may only be available at a lagged interval. As a result, the number of COVID occupied ICU beds on a particular day may not match the number reported elsewhere on the dashboard.



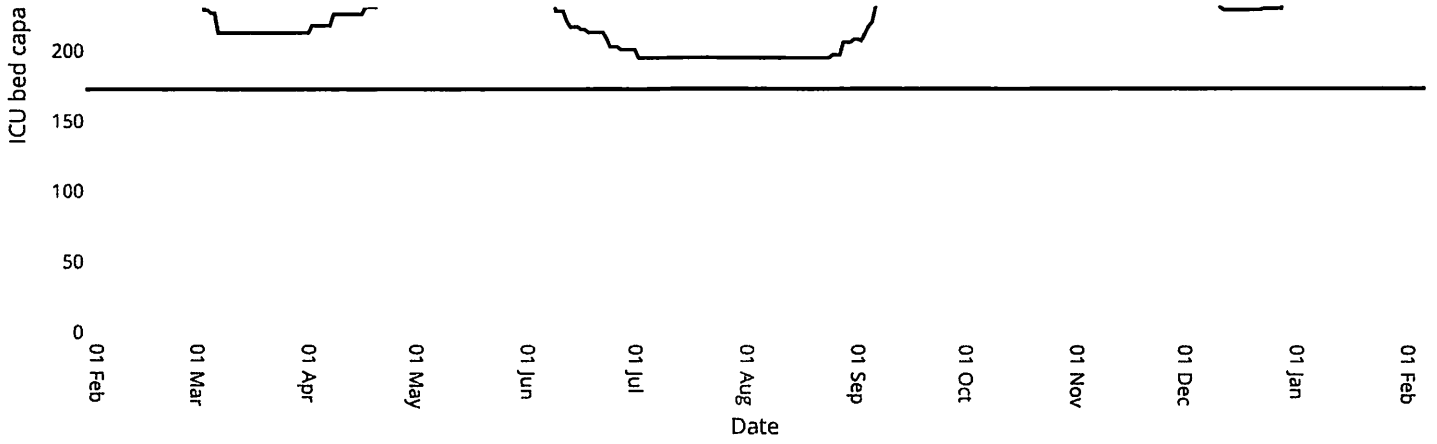


Figure 20: Total ICU bed capacity over time. Data included may only be available at a lagged interval. As a result, the number of COVID occupied ICU beds on a particular day may not match the number reported elsewhere on the dashboard.

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COVID-19 in Alberta

Summary

- The percent of cases from the Calgary Zone is 40%

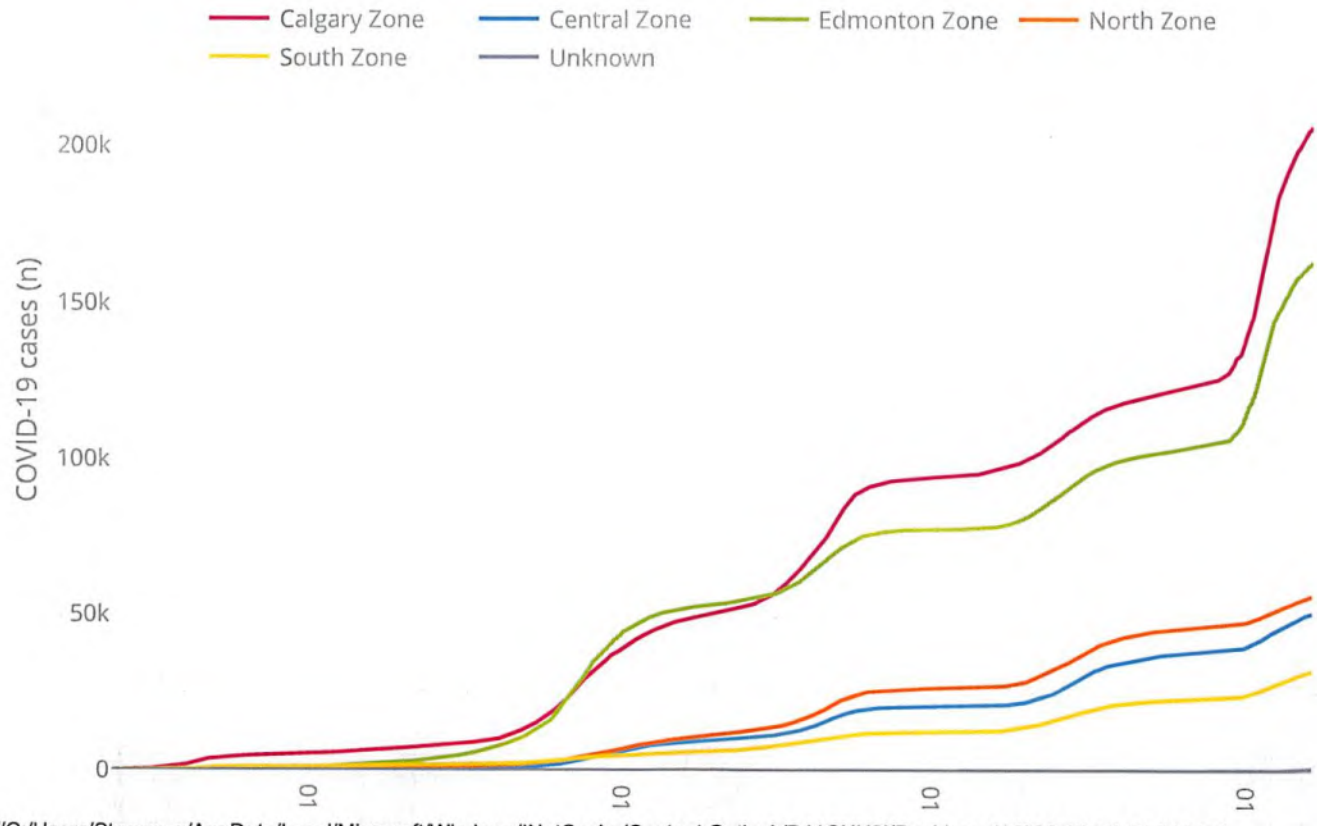


Figure 21: Cumulative COVID-19 cases in Alberta by zone and date reported to Alberta Health. Cases without a postal code or incorrect postal codes are labelled as unknown.

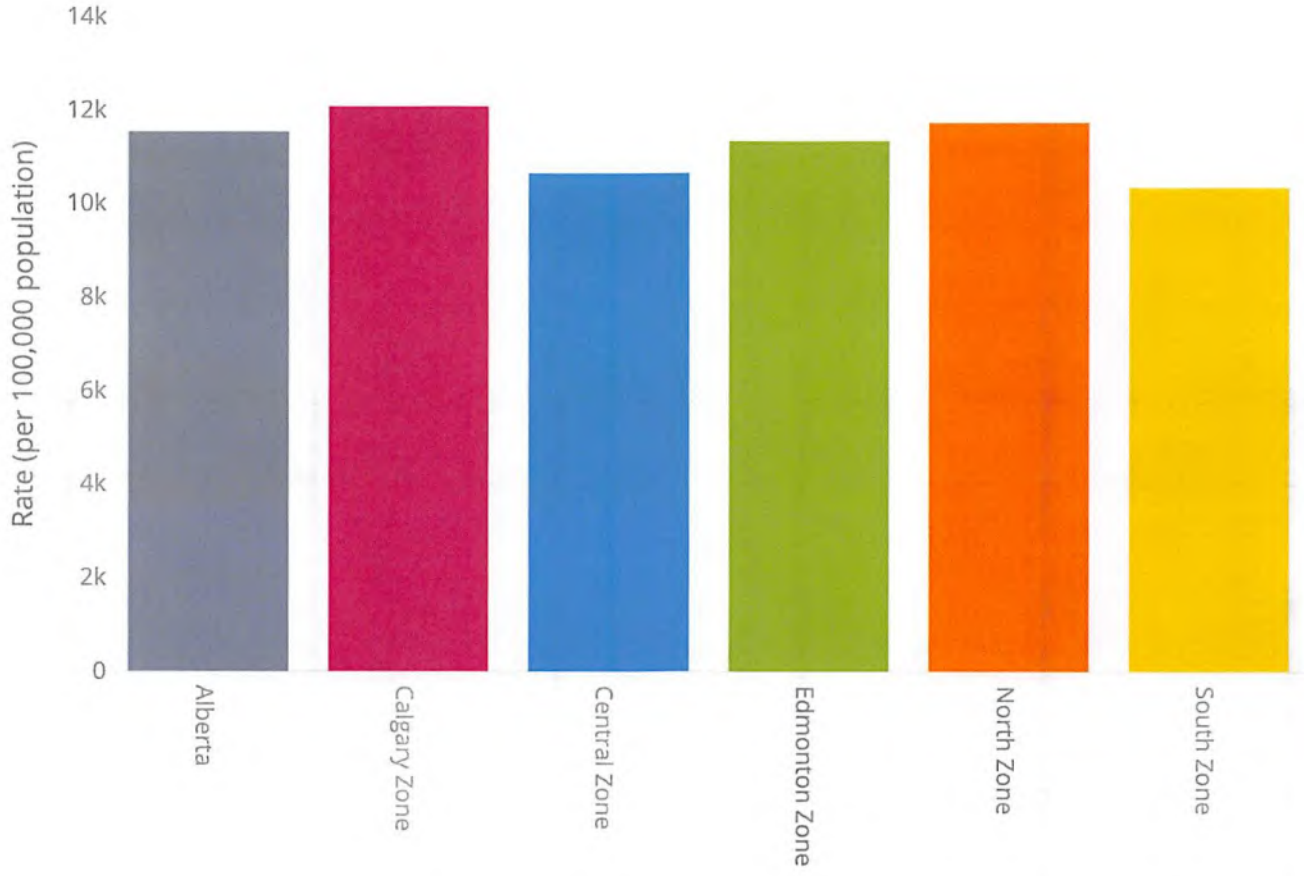


Figure 22: Rate of COVID-19 cases (per 100,000 population) in Alberta and by zone

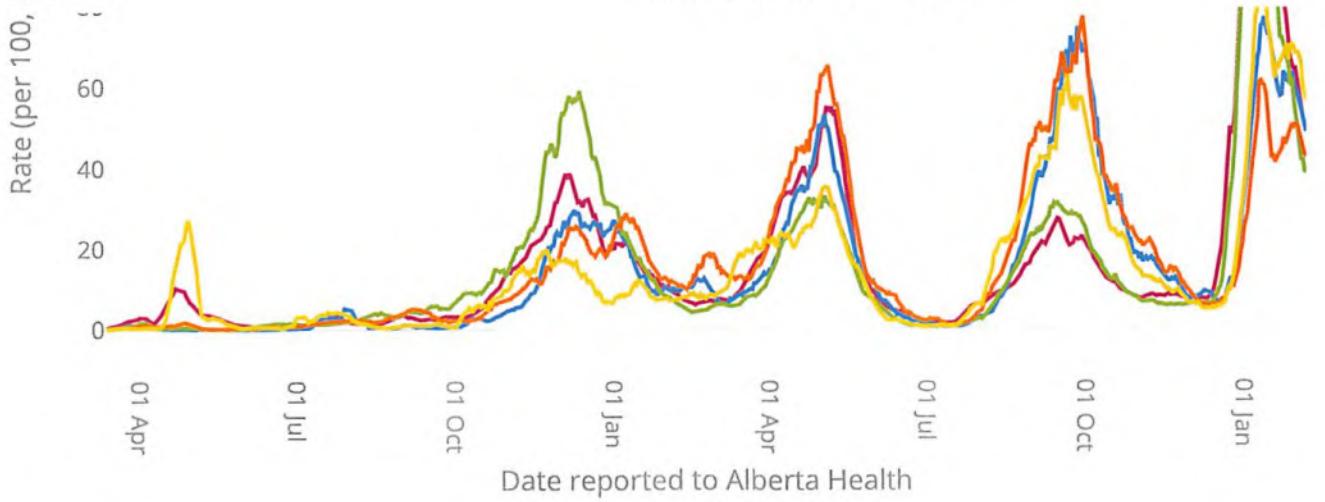
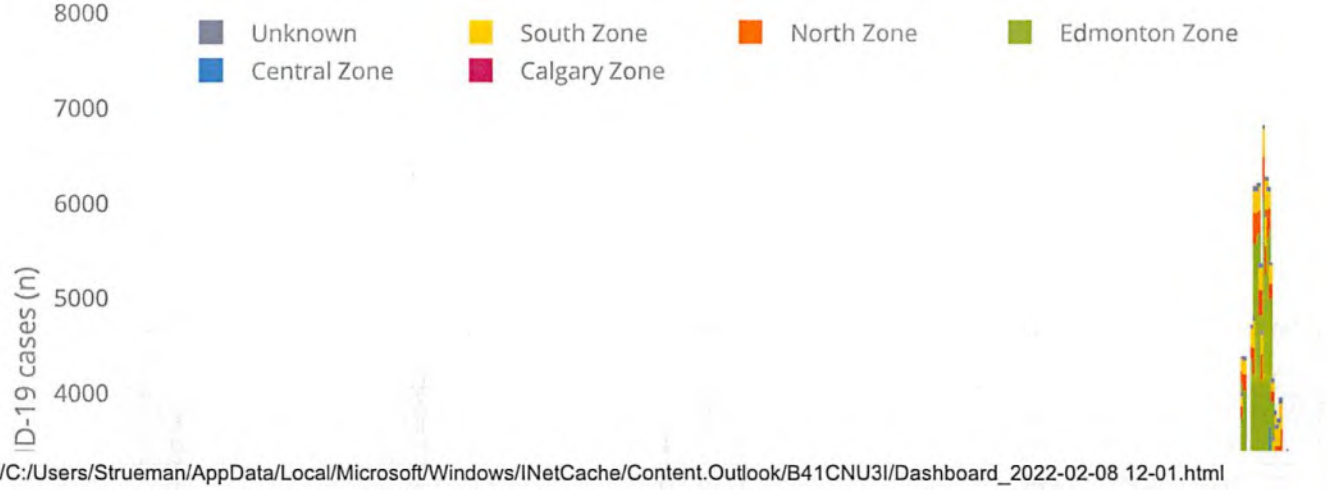


Figure 23: Seven day rolling-average for rates of COVID-19 (per 100,000 population) in Alberta by zone

Table 10. COVID-19 cases in Alberta by zone

Zone	Count	Percent
Calgary Zone	206,337	40
Central Zone	50,671	10
Edmonton Zone	163,289	32
North Zone	56,246	11
South Zone	32,119	6
Unknown	1,056	0
All	509,718	100



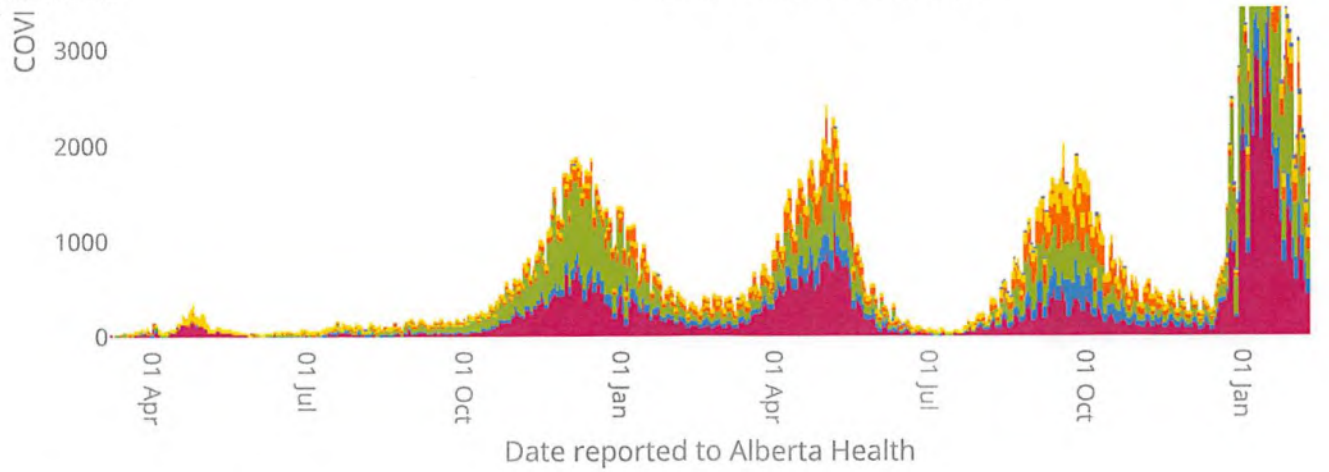
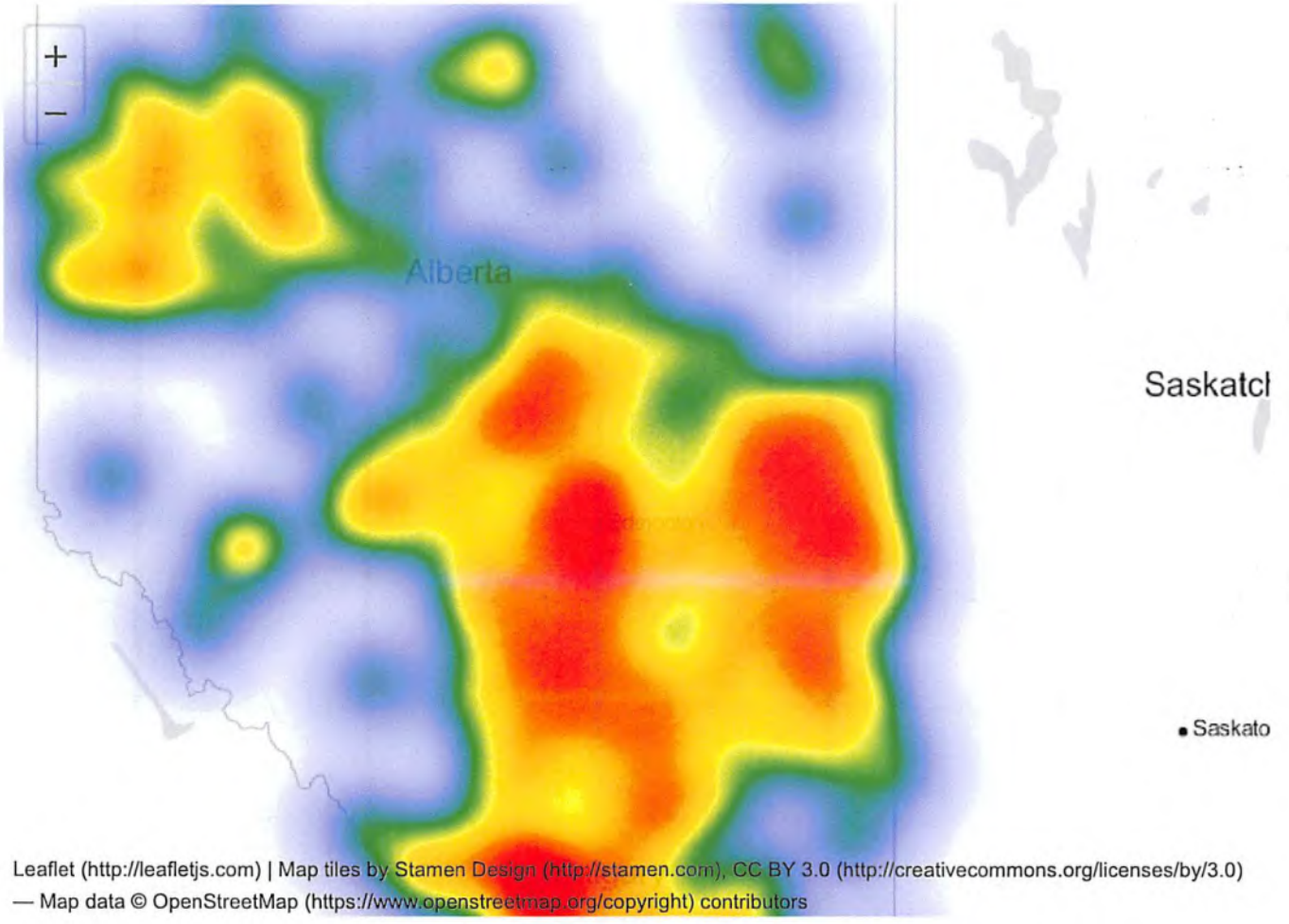
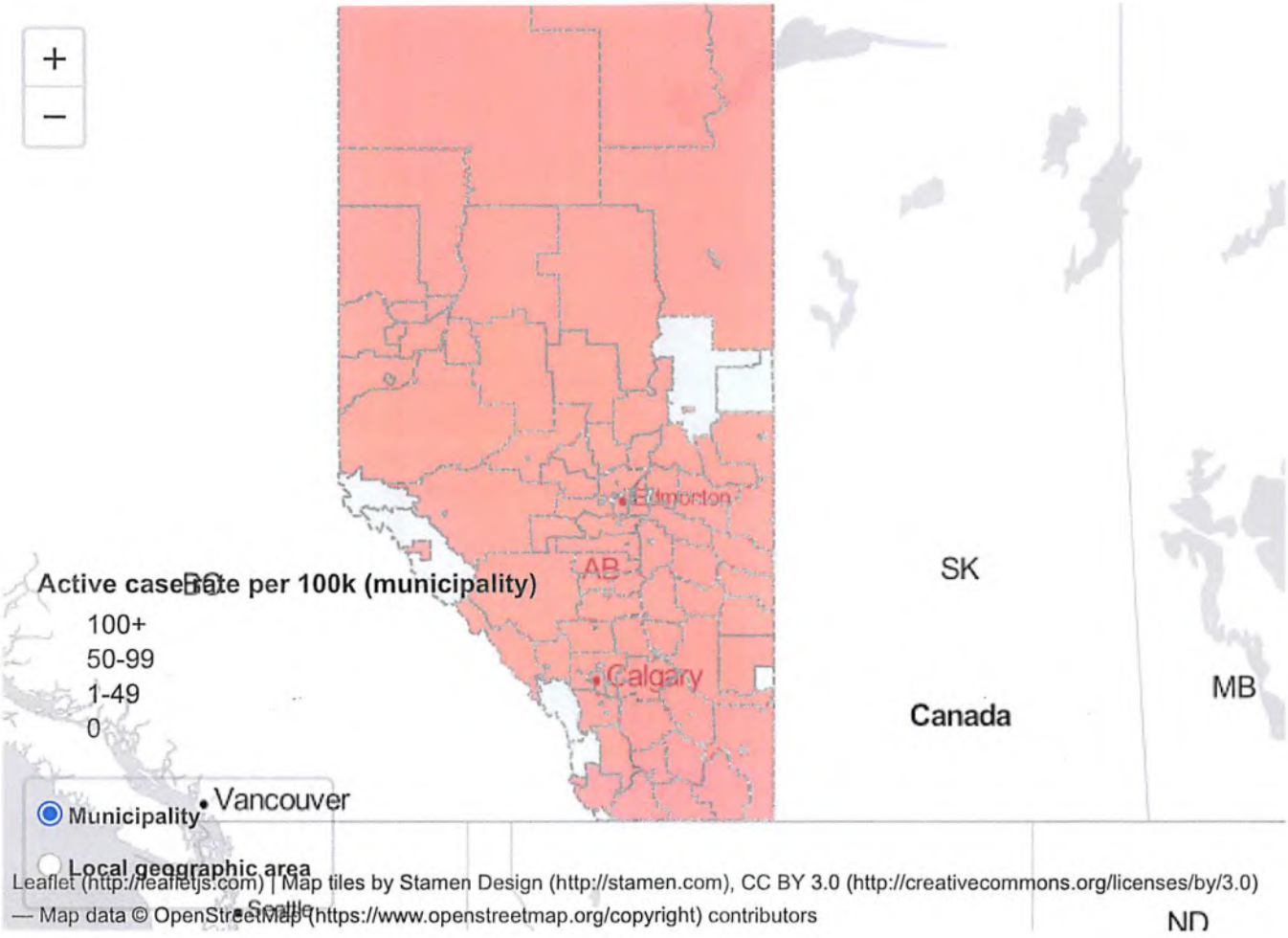


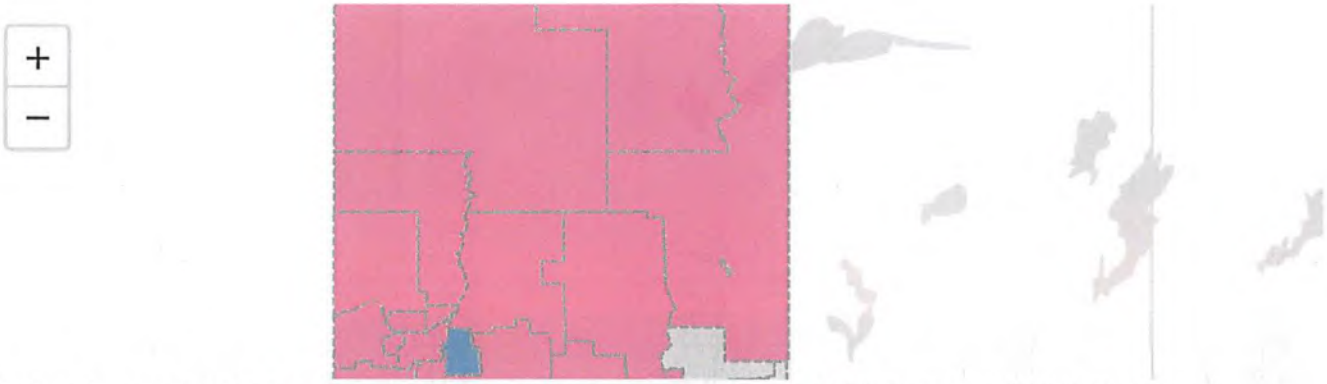
Figure 24: COVID-19 cases in Alberta by zone date reported to Alberta Health

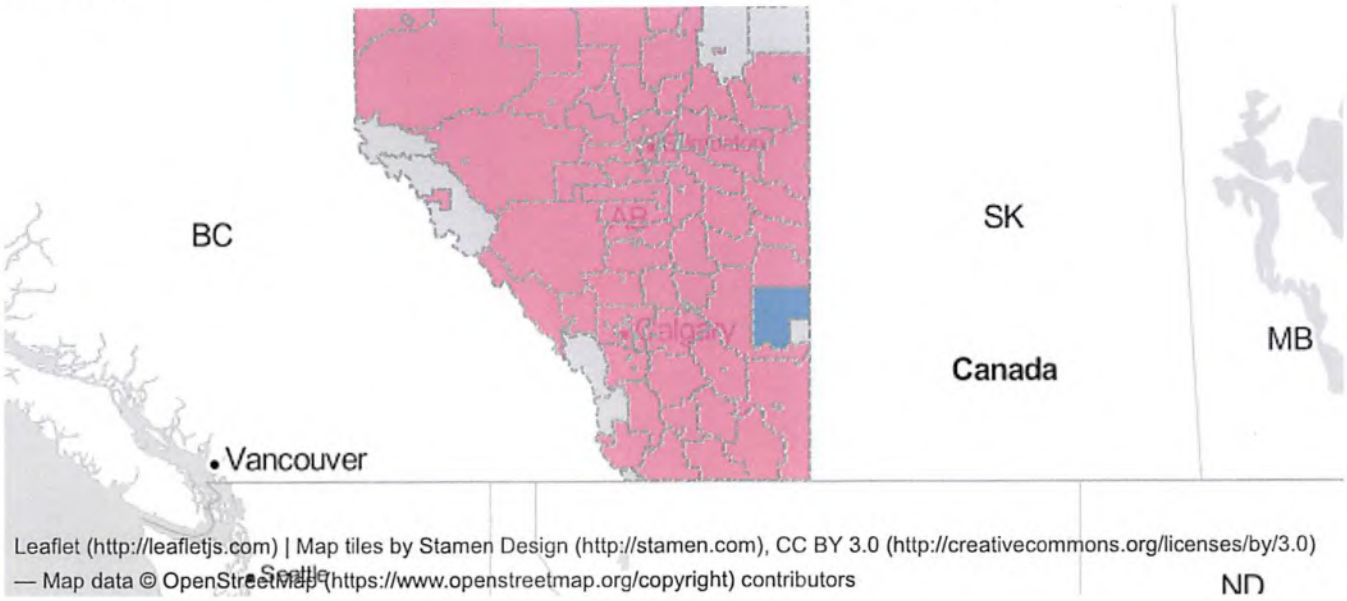


Only active cases are included. Postal codes are not exact locations of cases and are based on patient residence; random noise is applied for privacy. Cases without a postal code or incorrect postal codes are not included. Postal code information missing/invalid for: 379 case(s).



Geographies can be displayed by municipality or local geographic area (LGA). When viewing by municipality, regions are defined by metropolitan areas, cities, urban service areas, rural areas, and towns with approximately 10,000 or more people; smaller regions (i.e. villages, and reserves) are incorporated into the corresponding rural area. Cases without a postal code or incorrect postal codes are not included. Location information missing/invalid for: 2443 case(s).





Comparison restricted to active cases. Unknown exposure defined as cases that are not linked to travel or a known contact/setting of exposure to COVID-19.

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Summary

- 1.135610^{4} (2%) were acquired through travel outside of Alberta
- United States was reported the most frequently (n = 2048; 18%).

Table 11. Country of travel among travel-acquired cases

Country	Number (n)	Percent (%)
Domestic only	6,113	54
International	2,900	26
International - USA only	1,926	17
Missing	417	4

Note:
Cases may have travelled to multiple countries

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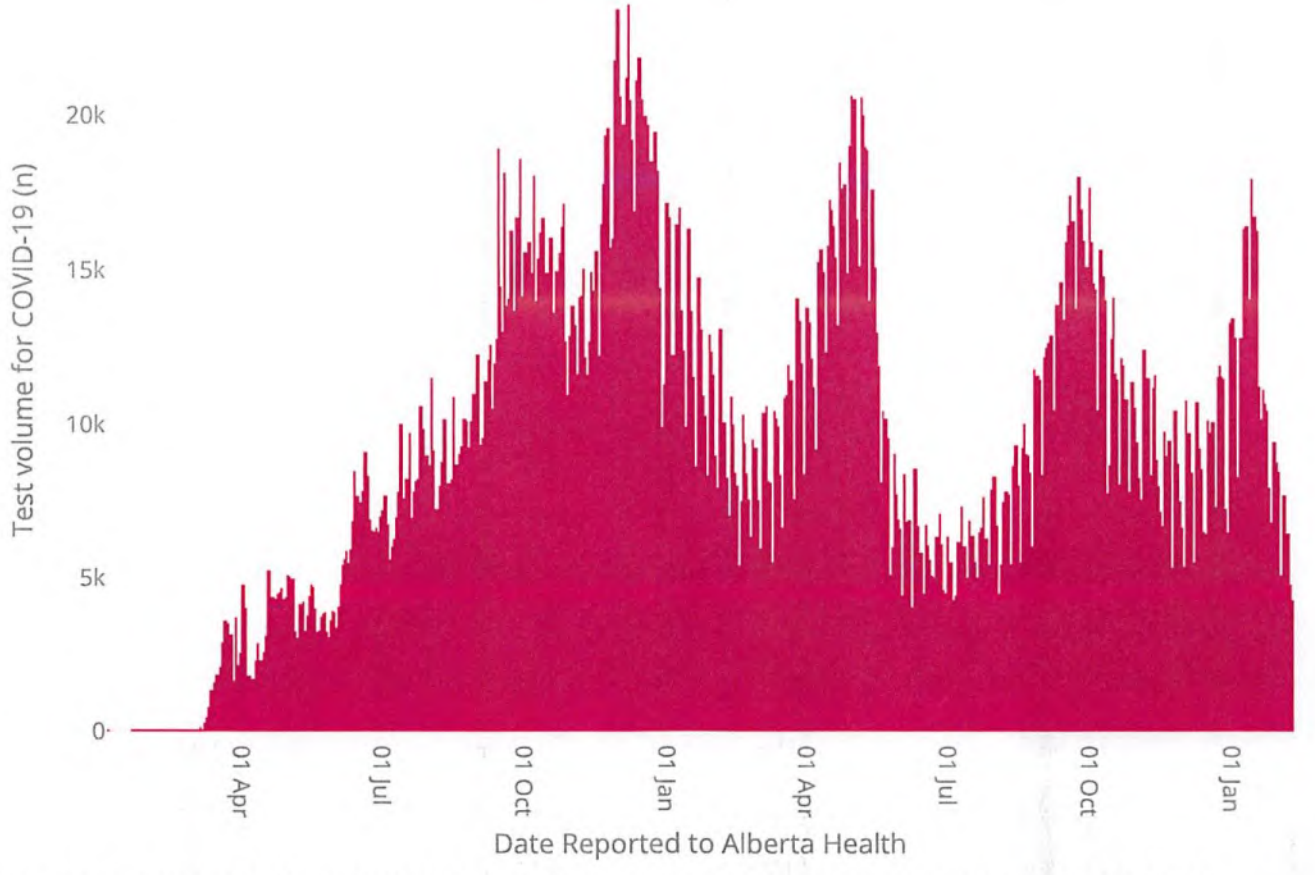


Figure 25: Tests performed for COVID-19 in Alberta by day. Tests can be performed for the same person multiple times.

Table 12. COVID-19 testing in Alberta

	Number (n)
Test volume	6,793,485
People tested	2,717,900

Table 13. People tested for COVID-19 in Alberta by zone

Zone	Count	Percent
Calgary Zone	1,075,920	40
Central Zone	245,643	9
Edmonton Zone	859,300	32
North Zone	260,016	10
South Zone	172,089	6
Unknown	104,932	4
All	2,717,900	100

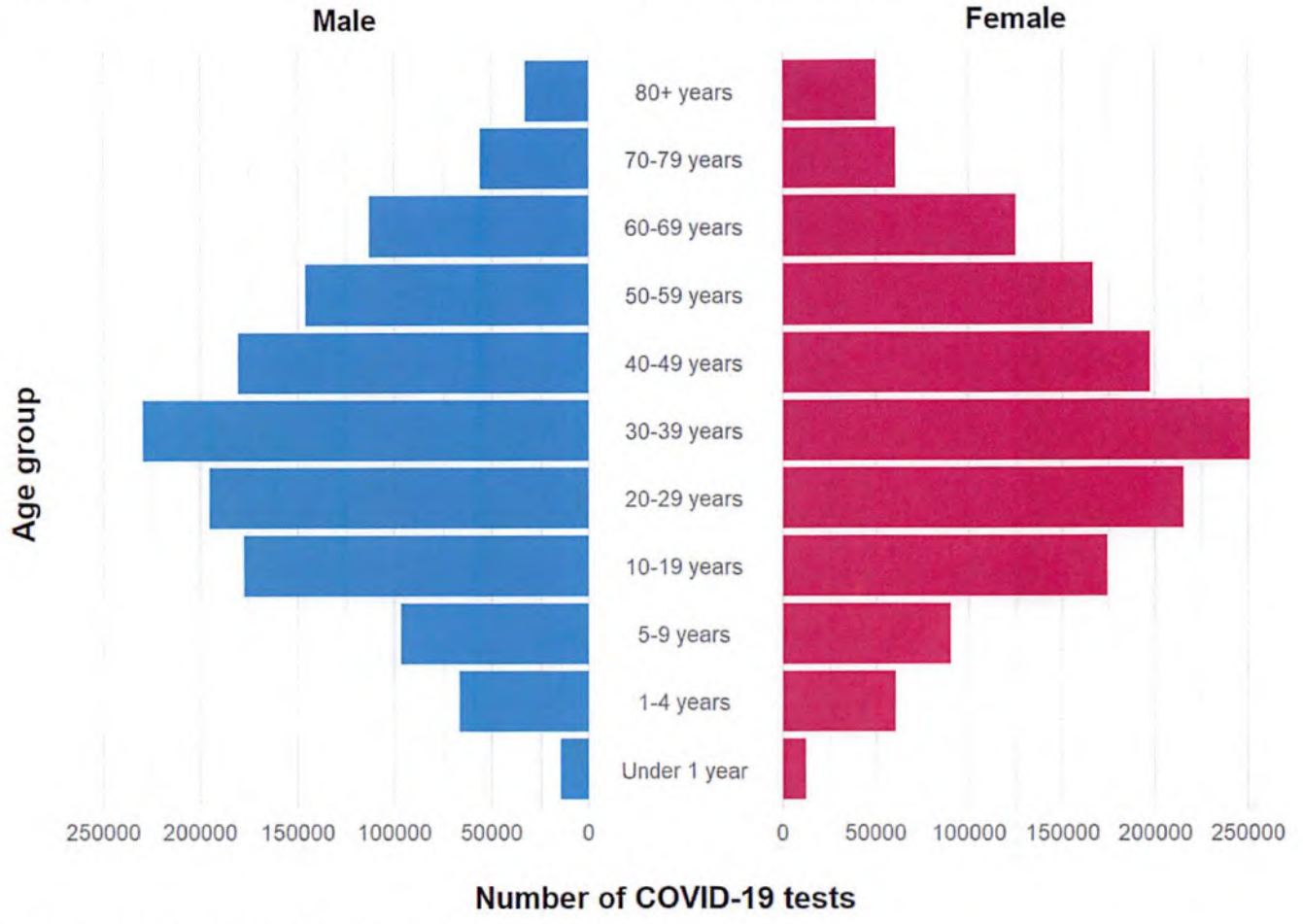


Figure 26: People tested for COVID-19 in Alberta by age group and gender

Table 14. People tested for COVID-19 in Alberta by age group and gender

	Gender							
	Female		Male		Unknown		All	
Age	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Under 1 year	12,447	0	14,436	1	35	0	26,918	1
1-4 years	60,549	2	66,687	2	89	0	127,325	5
5-9 years	89,757	3	96,849	4	135	0	186,741	7
10-19 years	174,373	6	177,583	7	484	0	352,440	13
20-29 years	215,316	8	195,348	7	778	0	411,442	15
30-39 years	251,049	9	229,657	8	768	0	481,474	18

Note:

Count represents the number of people tested

	Gender							
	Female		Male		Unknown		All	
Age	Count	Percent	Count	Percent	Count	Percent	Count	Percent
40-49 years	197,584	7	180,697	7	567	0	378,848	14
50-59 years	166,889	6	145,901	5	474	0	313,265	12
60-69 years	125,151	5	112,963	4	285	0	238,399	9
70-79 years	60,779	2	56,040	2	100	0	116,919	4
80+ years	49,753	2	32,606	1	142	0	82,501	3
Unknown	574	0	617	0	436	0	1,628	0
All	1,404,221	52	1,309,384	48	4,293	0	2,717,900	100

Note:
Count represents the number of people tested

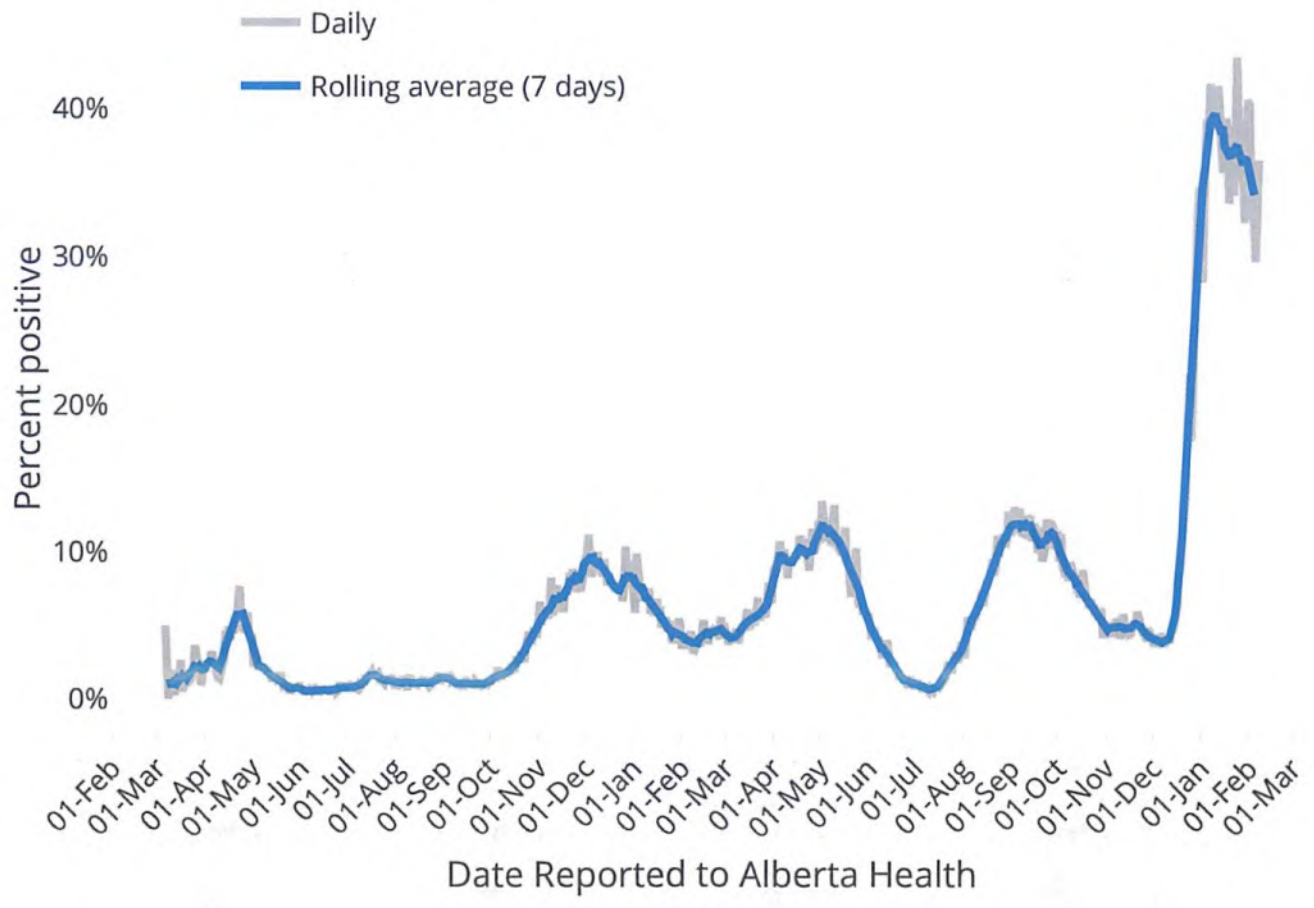
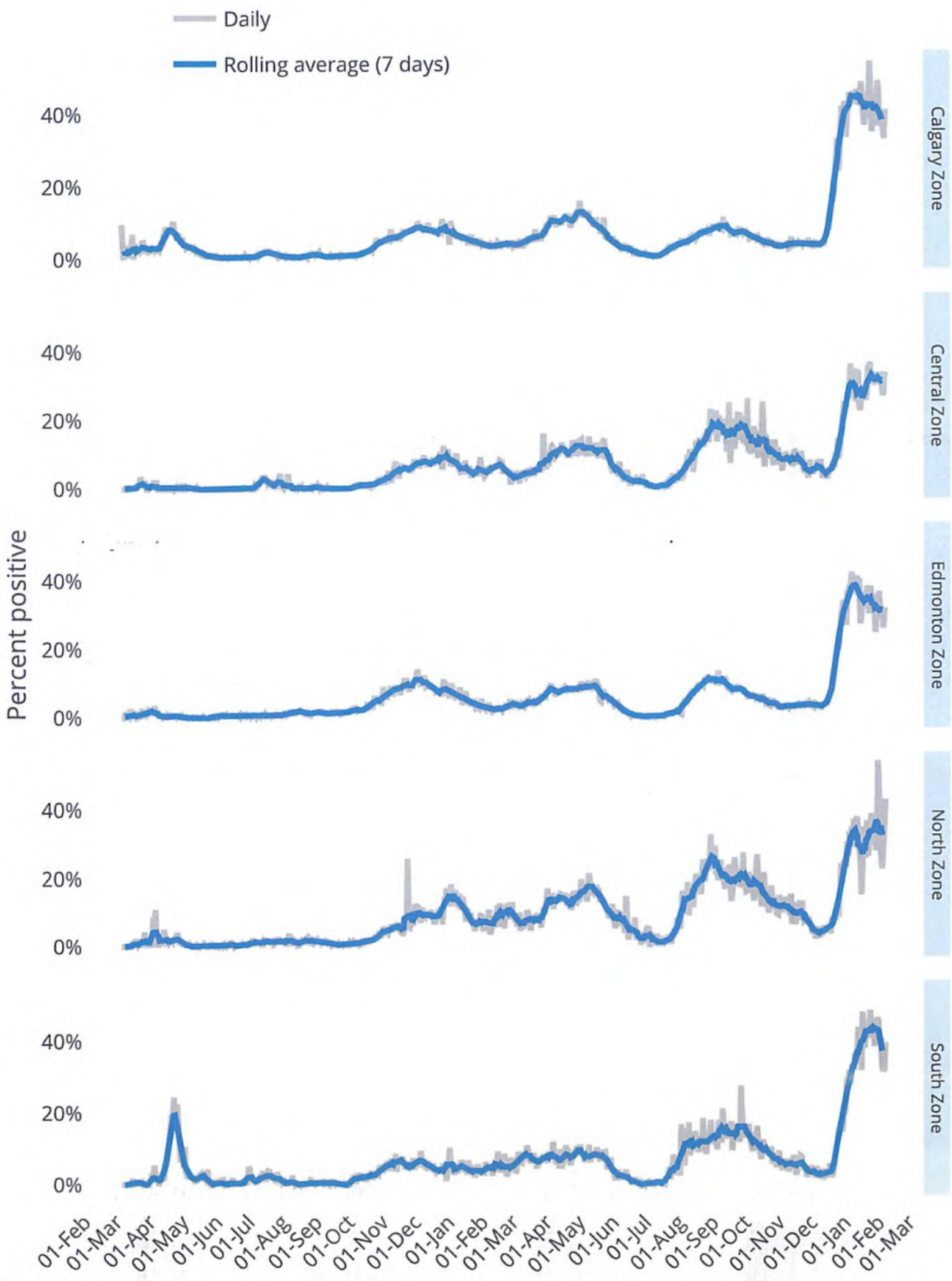


Figure 27: Cumulative and daily test positivity rate for COVID-19 in Alberta.



Date Reported to Alberta Health

Figure 28: Positivity rate for COVID-19 in Alberta by zone.

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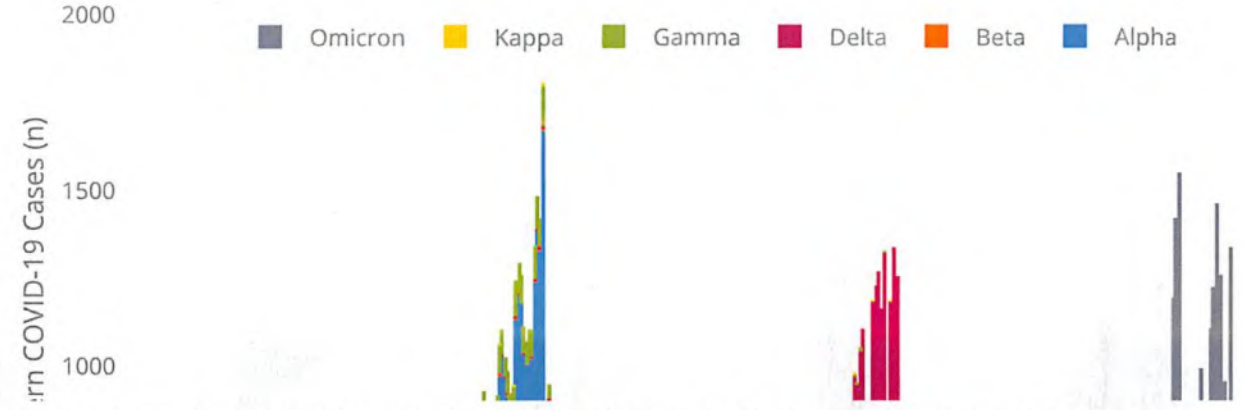
COVID-19 in Alberta

Summary

NOTE: People are identified as COVID-19 cases prior to variant of concern identification. As such, variant of concern reporting is delayed compared to date the case was reported to Alberta Health.

Due to the large number of positive COVID-19 cases, the lab screened a sample of positive cases between May 1, 2021 and May 31, 2021, September 9, 2021 and November 23, 2021, and after December 23rd, 2021.

- **142,420** variants of concern identified
  - **1351** active cases
  - **1,470** died



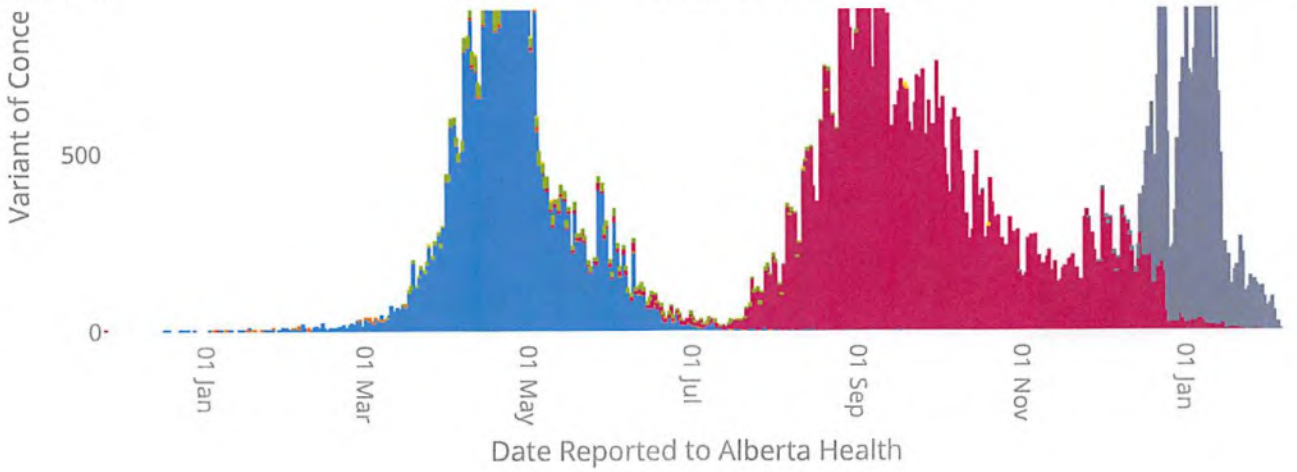


Figure 29: Variant of concern COVID-19 cases in Alberta by day. Note: cases are identified as COVID-19 positive prior to being identified as a variant of concern. Data included up to end of day February 07, 2022.

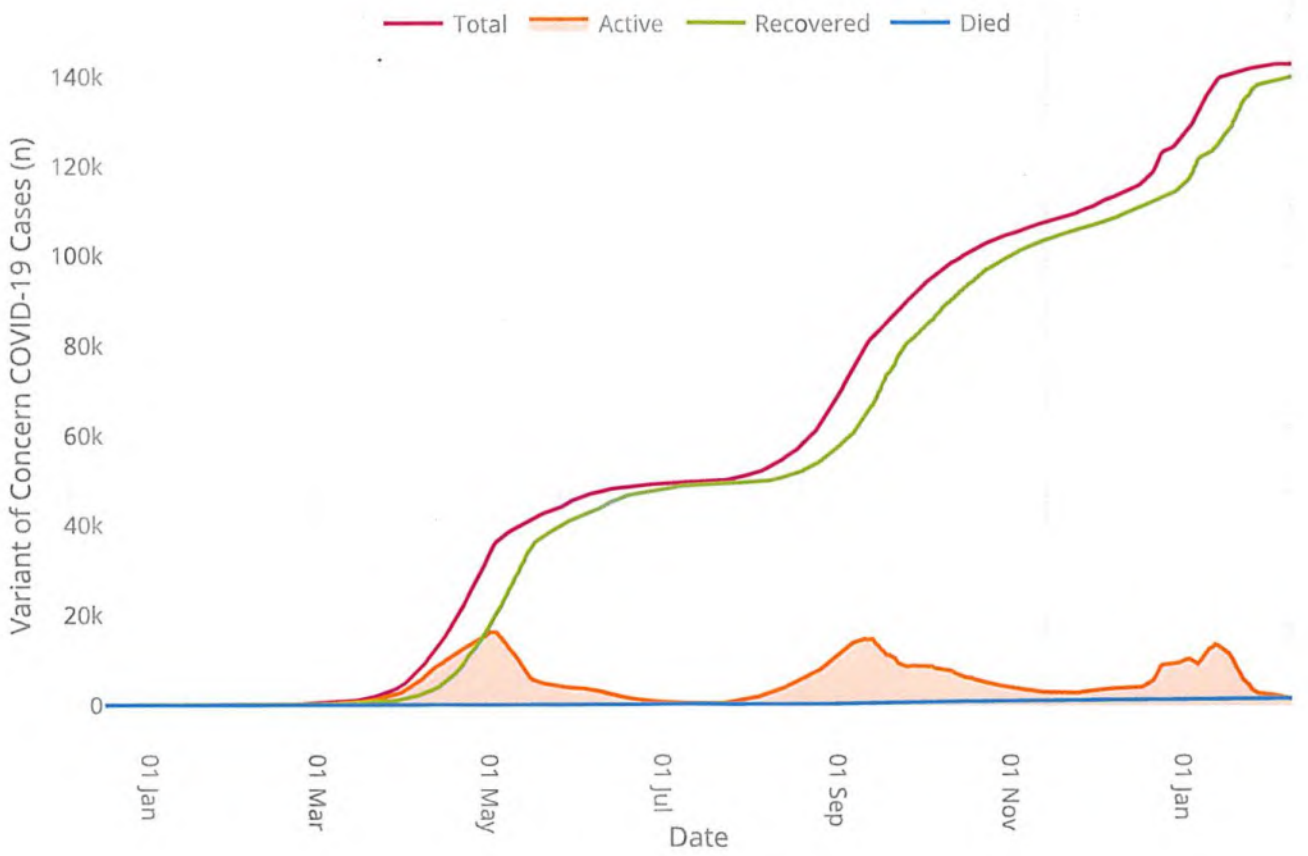


Figure 30: Variant of concern COVID-19 cases in Alberta by day and case status. Recovered is based on the assumption that a person is recovered 14 days after a particular date (see data notes tab), if they did not experience severe outcomes (hospitalized or deceased). Cases are under investigation and numbers may fluctuate as cases are resolved. Data included up to end of day February 07, 2022.

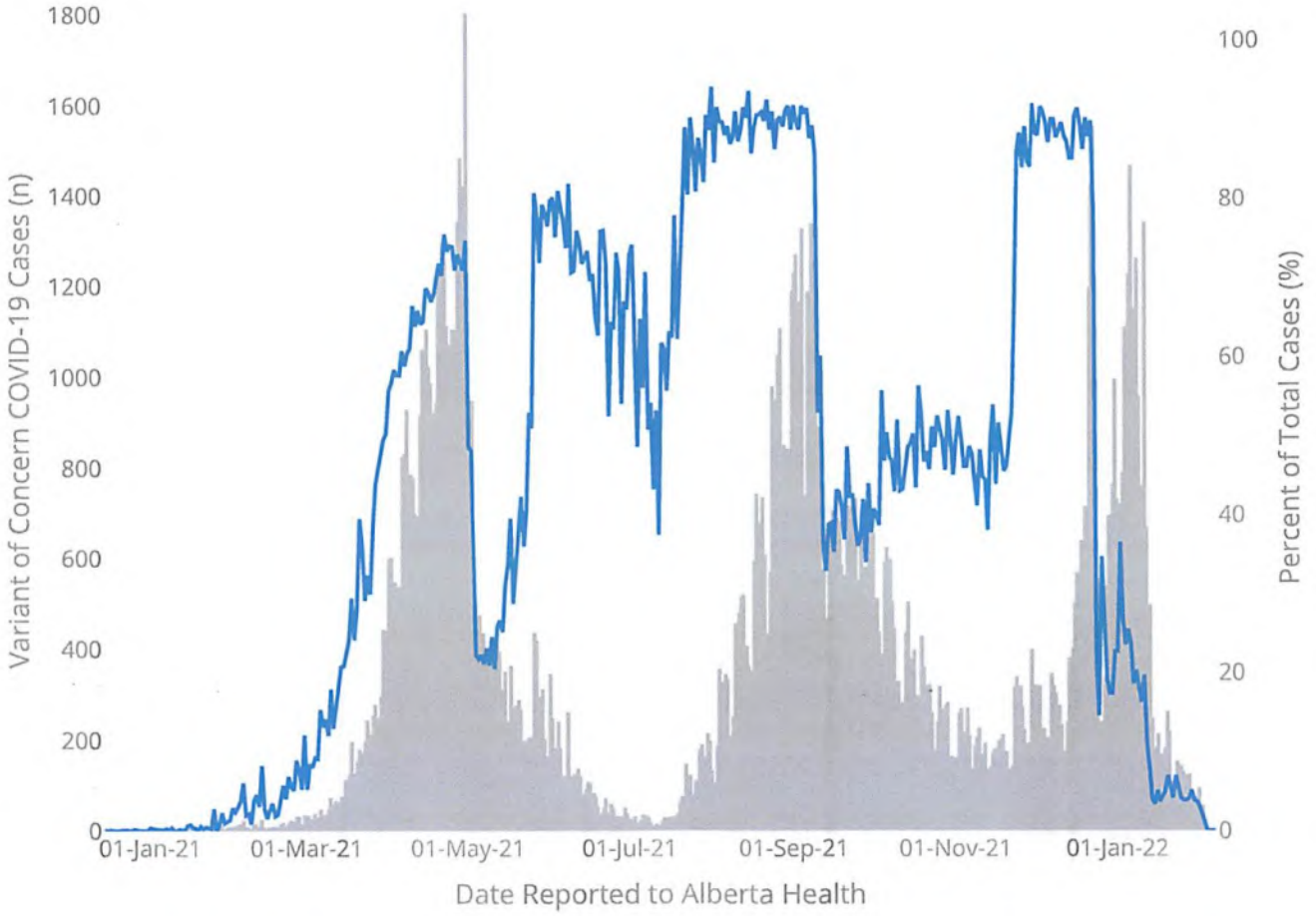
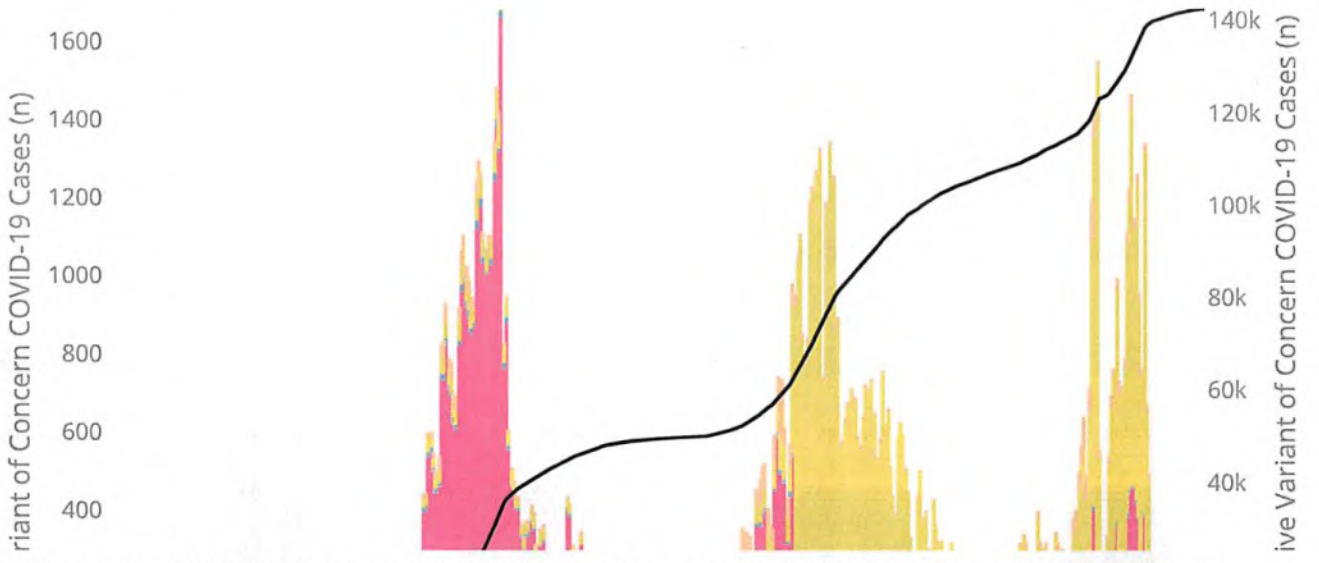


Figure 31: Variant of concern COVID-19 cases in Alberta by day. The bars represent new variant of concern (VOC) cases by day, while the line indicates the proportion of variant of concern cases identified compared to other cases of COVID-19. Note: cases are identified as COVID-19 positive prior to being identified as a variant of concern strain. Data included up to end of day February 07, 2022.



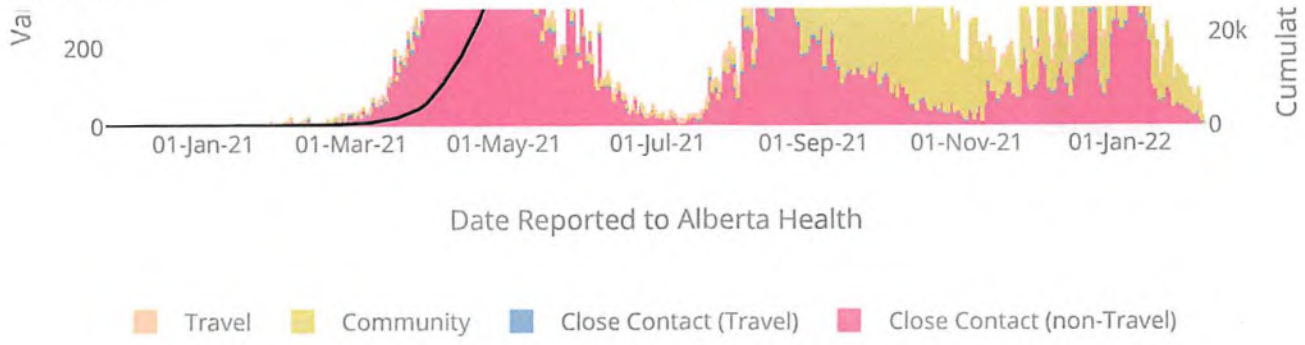


Figure 32: Variant of concern COVID-19 cases in Alberta by day, by exposure type. Data included up to end of day February 07, 2022.

Geospatial

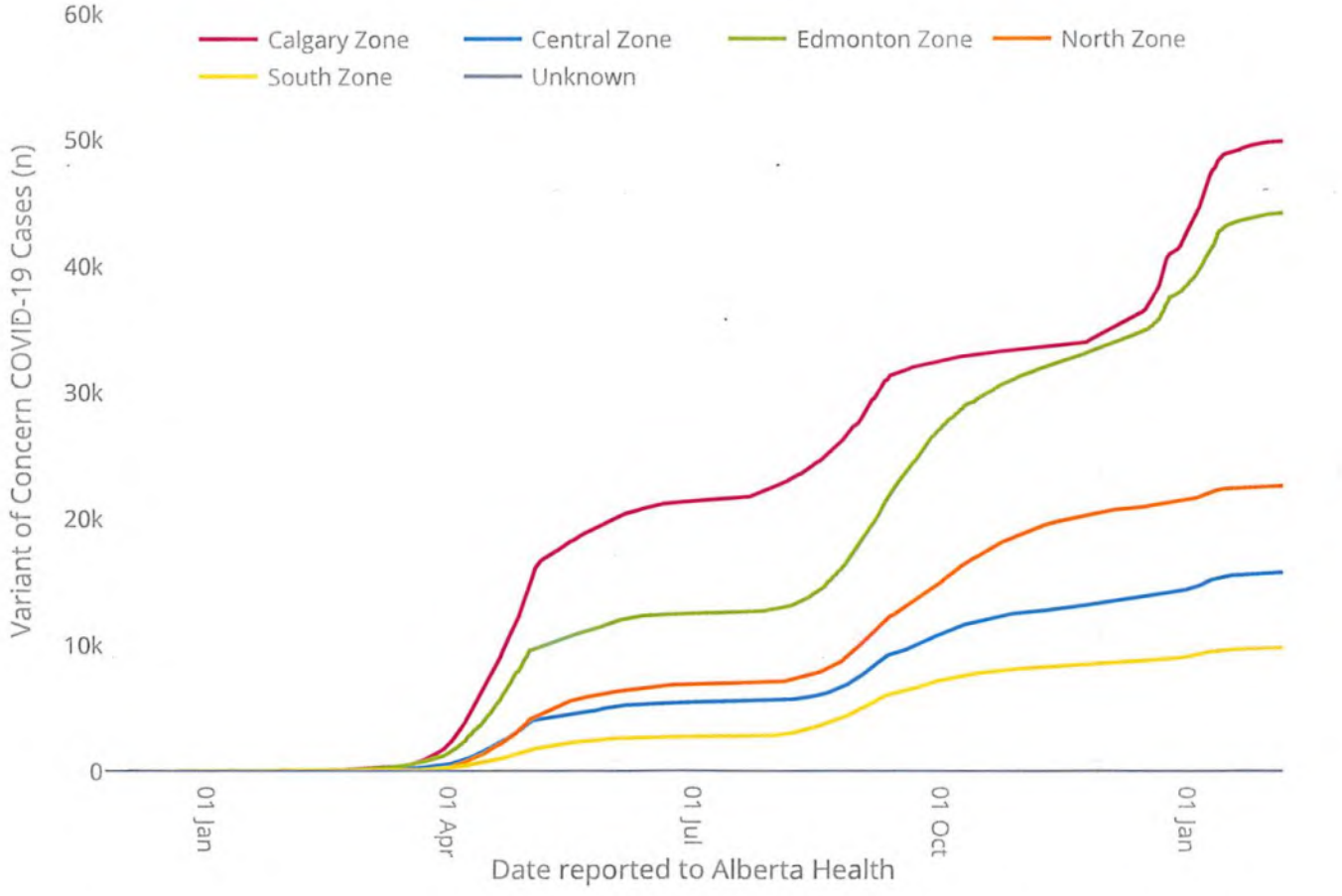


Figure 33: Cumulative variant of concern COVID-19 cases in Alberta by zone and date reported to Alberta Health. Cases without a postal code or incorrect postal codes are labelled as unknown. Data included up to end of day February 07, 2022.

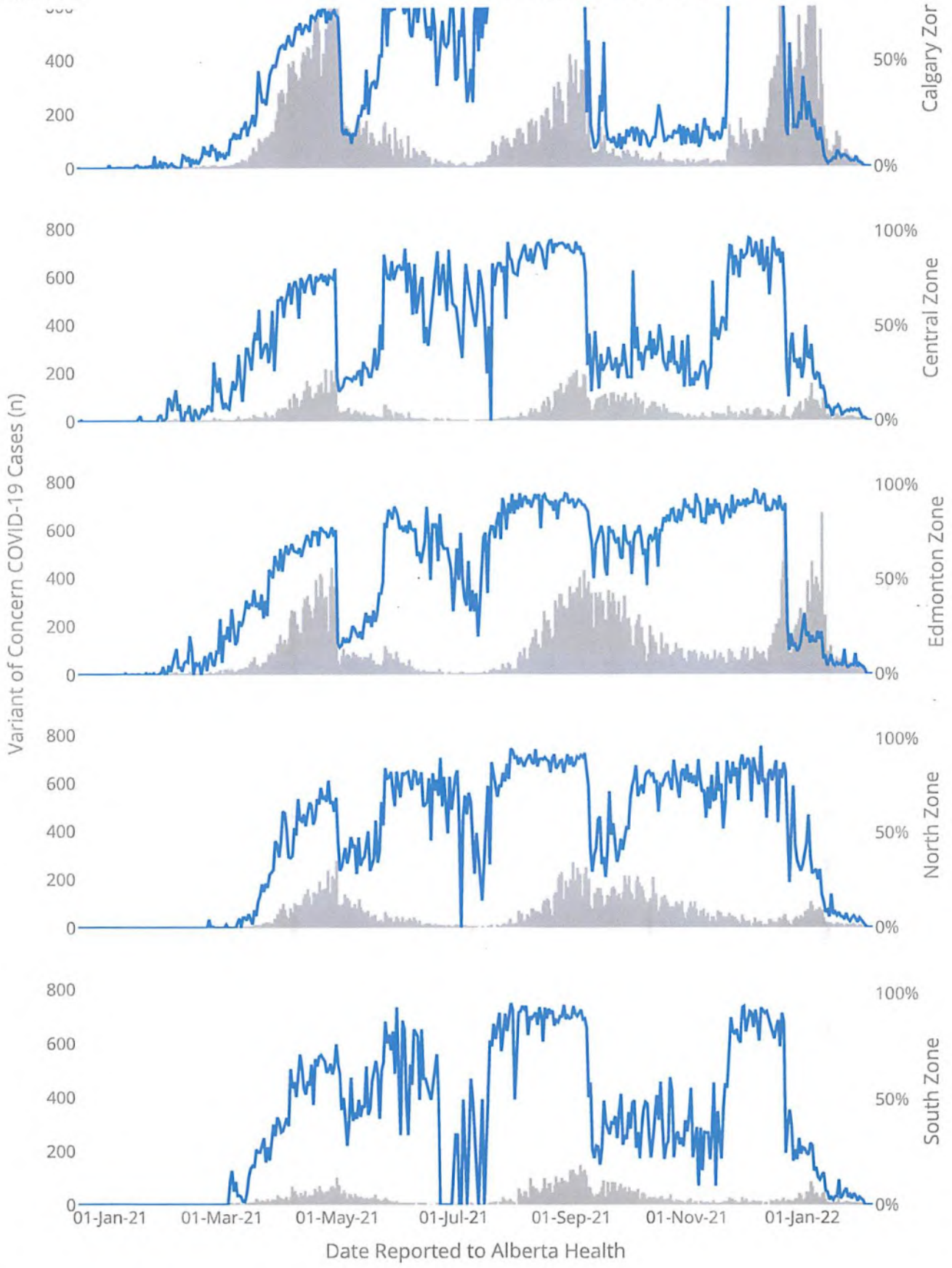


Figure 34: Variant of concern COVID-19 cases in Alberta by day and by zone. The bars represent new variant of concern (VOC) cases by day, while the line indicates the proportion of variant of concern cases identified compared to other cases of COVID-19. Note: cases are identified as COVID-19 positive prior to being identified as a variant of concern strain. Data included up to end of day February 07, 2022.

Table 15. Variants of concern COVID-19 cases identified in Alberta and by Zone

Zone	Alpha	Beta	Delta	Gamma	Kappa	Omicron	Total
Calgary Zone	20,045	79	16,381	804	6	12,528	49,843
Central Zone	5,458	2	8,565	192	0	1,604	15,821
Edmonton Zone	11,429	65	22,948	1,063	13	8,692	44,210
North Zone	6,253	34	14,173	768	0	1,387	22,615
South Zone	2,686	0	6,137	97	0	971	9,891
Unknown	0	0	4	0	0	36	40
Alberta	45,871	180	68,208	2,924	19	25,218	142,420

Table 16. Variants of concern COVID-19 cases identified among active cases in Alberta and by Zone

Zone	Delta	Omicron	Total
Calgary Zone	10	432	442
Central Zone	4	158	162
Edmonton Zone	0	517	517
North Zone	3	126	129
South Zone	2	99	101
Unknown	0	0	0
Alberta	19	1,332	1,351

Note: Active cases are now based on information on a sample of positive cases only and should be interpreted with caution.

Table 17. Variants of concern COVID-19 cases identified who are active, recovered, or died in Alberta and by Zone

Zone	Active	Died	Recovered	Total
Calgary Zone	442	317	49,084	49,843
Central Zone	162	280	15,379	15,821

Zone	Active	Died	Recovered	Total
Edmonton Zone	517	425	43,268	44,210
North Zone	129	255	22,231	22,615
South Zone	101	193	9,597	9,891
Unknown	0	0	40	40
Alberta	1,351	1,470	139,599	142,420

Where Disease Was Likely Acquired

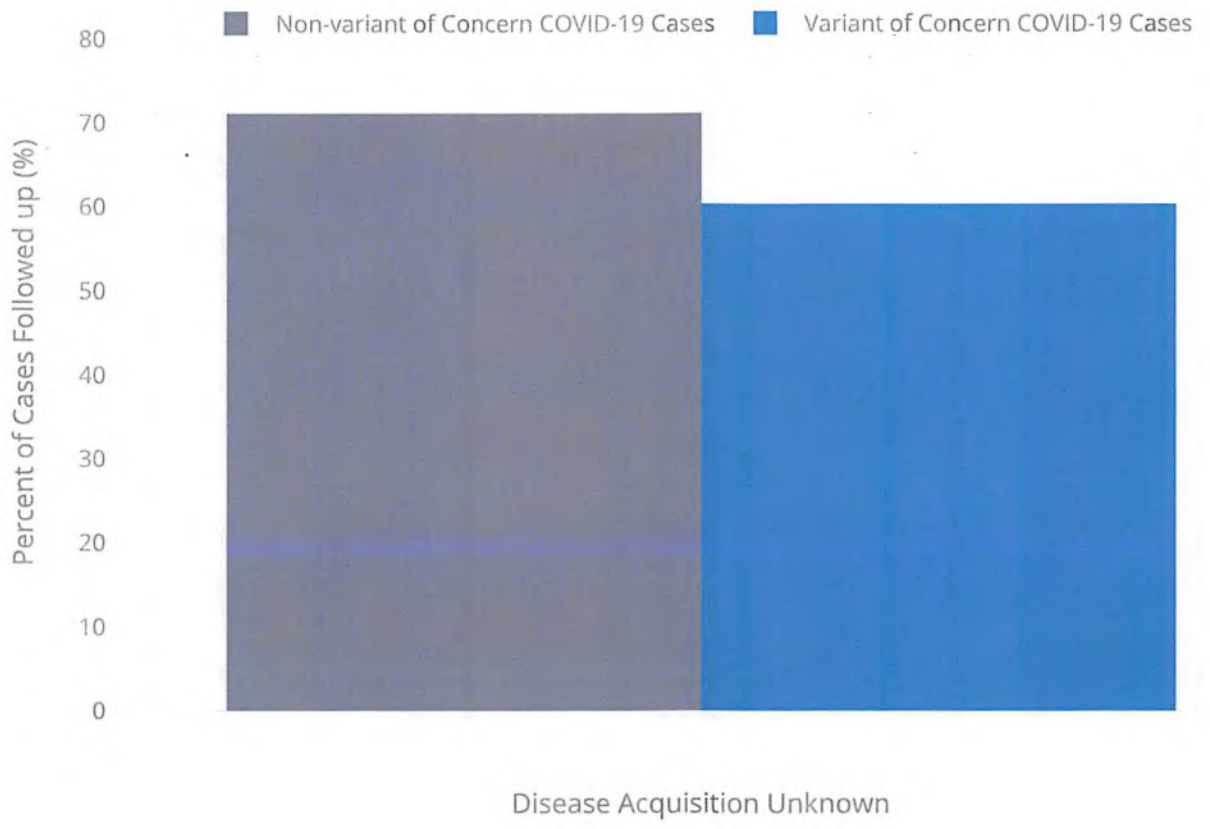
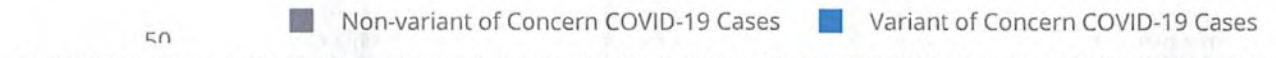


Figure 35: Percent of variants of concern (VOCs) and non-VOCs who were followed up and have an unknown place of disease acquisition. February 07, 2022.



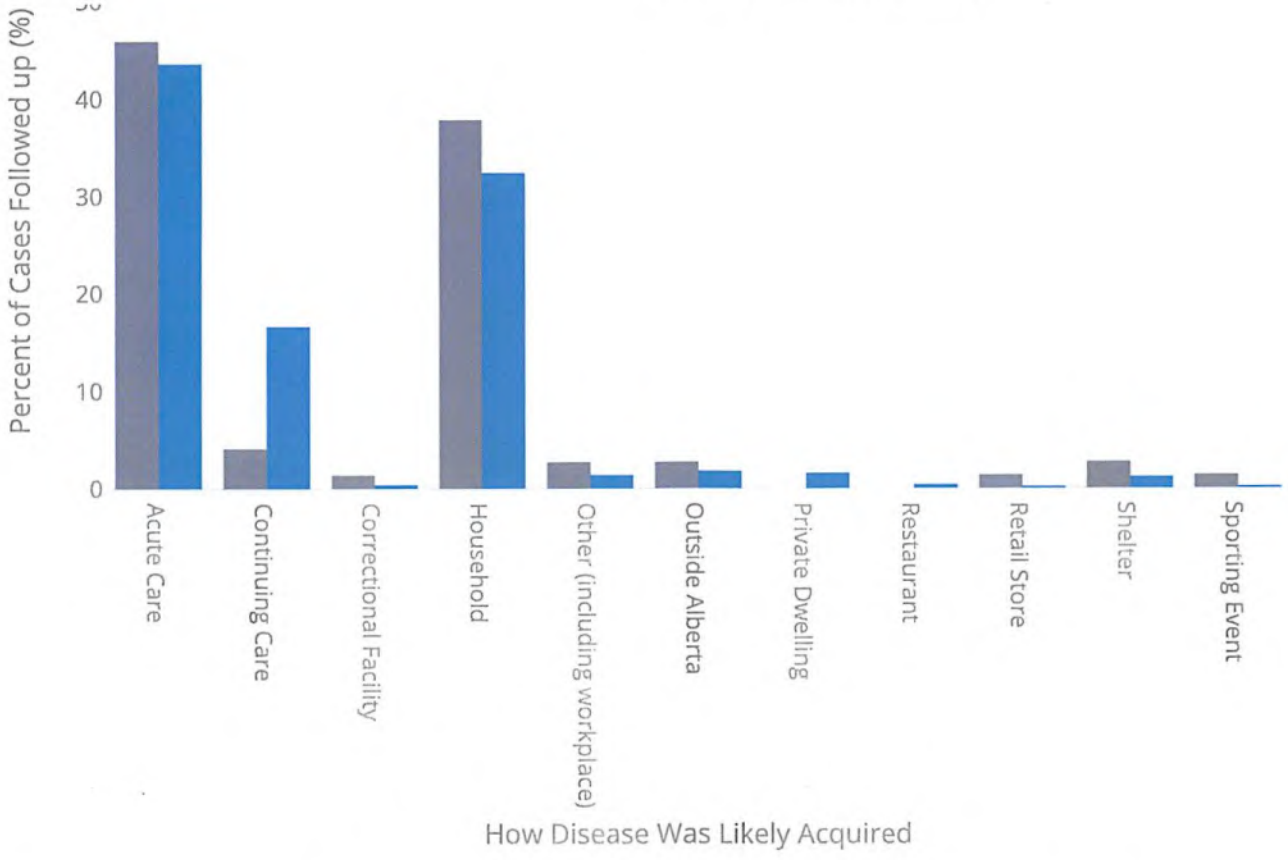


Figure 36: Where disease was likely acquired among active cases who have been followed-up with a known place of acquisition among variants of concern (VOCs) and non-VOCs. February 07, 2022.

Laboratory Testing

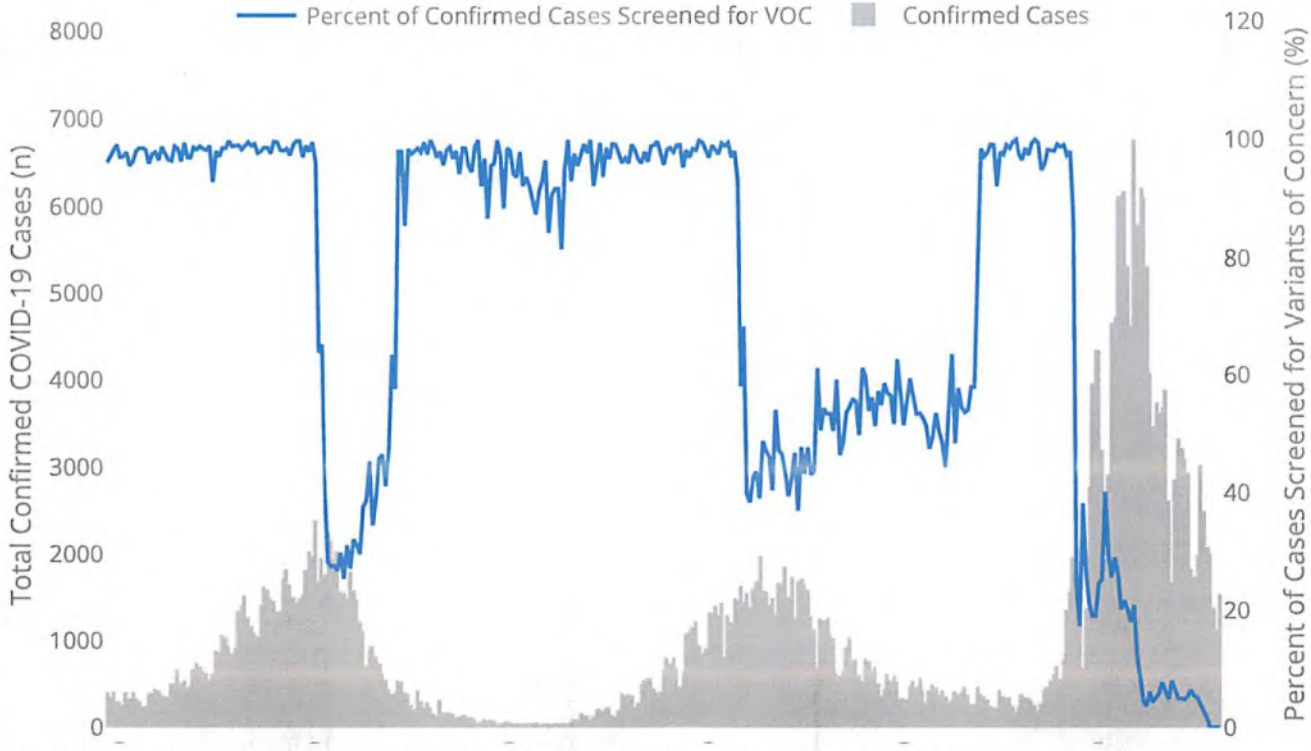


Figure 37: Total confirmed COVID-19 cases and percent of cases screend for variants of concern by day. Note: cases are identified as COVID-19 positive prior to being identified as a variant of concern. Data included up to end of day February 07, 2022.

Analytics and Performance Reporting Branch
Epidemiology and Surveillance Unit
2022-February-08 12:01

COVID-19 in Alberta

Highlights | New Cases | Total Cases | Characteristics | Vaccine Outcomes | Severe outcomes | Comorbidities | Healthcare capacity | Geospatial | Travel history | Laboratory testing | Variants of Concern | Data export | Data notes

Visit this link (https://www.alberta.ca/stats/covid-19-alberta-statistics.htm#data-export) to access various data-sets in csv format.

Analytics and Performance Reporting Branch
Epidemiology and Surveillance Unit
2022-February-08 12:01

COVID-19 in Alberta

Data sources

The Provincial Surveillance Information system (PSI) is a laboratory surveillance system which receives positive results for all Notifiable Diseases and diseases under laboratory surveillance from Alberta Precision Labs (APL). The system also receives negative results for a subset of organisms such as COVID-19. The system contains basic information on characteristics and demographics such as age, zone and gender. The Communicable Disease Reporting System (CDRS) at Alberta Health and the Communicable Disease Outbreak Management (CDOM) system at Alberta Health Services contains information on COVID-19 cases. Data Integration and Measurement Reporting (DIMR) database at Alberta Health Services contains up to date information on people admitted and discharged from hospital in Alberta. Information such as hospitalizations and ICU admissions are received through enhanced case report forms sent by Alberta Health Services (AHS).

Definitions

Recovered

Active and recovered status is a surveillance definition to try to understand the number of active cases in the population. It is not related to clinical management of cases. It is based on the assumption that a case is recovered 14 days after a particular date. For confirmed cases, specimen collected date is used and for probable cases date reported to Alberta Health is used. If a case is hospitalized, the recovered date is when their symptoms have resolved based on case follow-up, or 10 days after being discharged.

COVID-19 Deaths

A death resulting from a clinically compatible illness, in a probable or confirmed COVID-19 case, unless there is a clear alternative cause of death identified (e.g., trauma, poisoning, drug overdose).

A Medical Officer of Health or relevant public health authority may use their discretion when determining if a death was due to COVID-19, and their judgement will supersede the above criteria.

A death due to COVID-19 may be attributed when COVID-19 is the cause of death or is a contributing factor.

Lab Positivity

COVID-19 percent positivity in Alberta is calculated using the Test Over Test method, which is the same method employed by the US Centers for Disease Control and Prevention. The calculation is as follows:

Daily Number of Positive Tests / (Daily Number of Positive Tests + Daily Number of Negative Tests) Q/RT-PCR tests are the only COVID-19 tests included in this calculation.

https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/calculating-percent-positivity-faq.html (https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/calculating-percent-positivity-faq.html)

Comorbidities

The following comorbitities are included in respective analyses: Diabetes, Hypertension, COPD, Cancer, Dementia, Stroke, Liver cirrhosis, Cardiovascular diseases (including IHD and Congestive heart failure), Chronic kidney disease, and Immuno-deficiency.

Disclaimer

The content and format of this report are subject to change. Cases are under investigation and numbers may fluctuate as cases are resolved. Data included in the interactive data application are up-to-date as of end of day February 07, 2022.

TAB 11

ADVICE TO HONOURABLE JASON COPPING
MINISTER OF HEALTH
COVID-19 Measures in Schools
For Information

ISSUE
The use of public health measures to reduce the risk of COVID-19 transmission in schools.

PURPOSE
To provide information and analysis regarding public health measures implemented in schools and their impact on COVID-19 transmission, with a focus on Alberta cases and data.

ANALYSIS
- Public health measures implemented in Alberta have impacted the transmission of COVID-19 within schools and their surrounding communities, and this is consistent with similar evidence reported in the literature.
- Analysis of research literature indicates wearing masks can be effective in contributing to reducing the transmission of COVID-19 in public and community settings; however, the impact of masking in schools is less clear.
  - The range of policies in place across different jurisdictions limits the ability to evaluate the impact of specific measures for daycare or school settings due to variability in the combination of measures implemented.
  - It is difficult to determine the effect of removing or changing one measure (e.g. masking), as many of the studies examining COVID-19 incidence in schools had layered infection prevention and control measures in place.
- Studies found that transmission in schools has remained limited under a wide range of prevention measures, such as masking, cohorting, cancelling higher-risk activities, distancing, hygiene protocols, reduced class size, and enhanced ventilation.
- While in-person schooling carries an increased risk of infection for household members, studies looking at this outcome have shown mitigation measures like teacher masking, daily symptom screening, and the closure of extra-curricular activities were associated with significant reduction in risk.
- According to observed Alberta data, which could be influenced by factors other than masking, school boards without mask mandates at the start of the school year (September 2021) had three times more outbreaks in their schools in the first few months of the school year.
  - In addition, case and hospitalization rates per 100,000 population in Alberta for children (five to 11 years old) and adults (30 to 59 years old) were lower in areas where mask mandates were required.
- One specific outbreak in Westglen School in Edmonton (fall 2021) illustrates that a school outbreak can lead to increased spread within the local community (71 cases: one staff member and 70 students, see Figure 1).
  - The outbreak was opened September 23 (reported 10 per cent absenteeism and a positive case on September 20). Some symptomatic children continued to attend school until they moved to online learning on September 24.

- This outbreak has had a significant effect on case counts in the neighbourhood; while cases in Edmonton were stabilizing and decreasing, cases in the T5M postal code reversed trend, increasing significantly after the Westglen outbreak.
  - 66/94 (70 per cent) of all cases with the T5M postal code reported between September 17 and 26 are linked to the outbreak or are family members of outbreak cases.

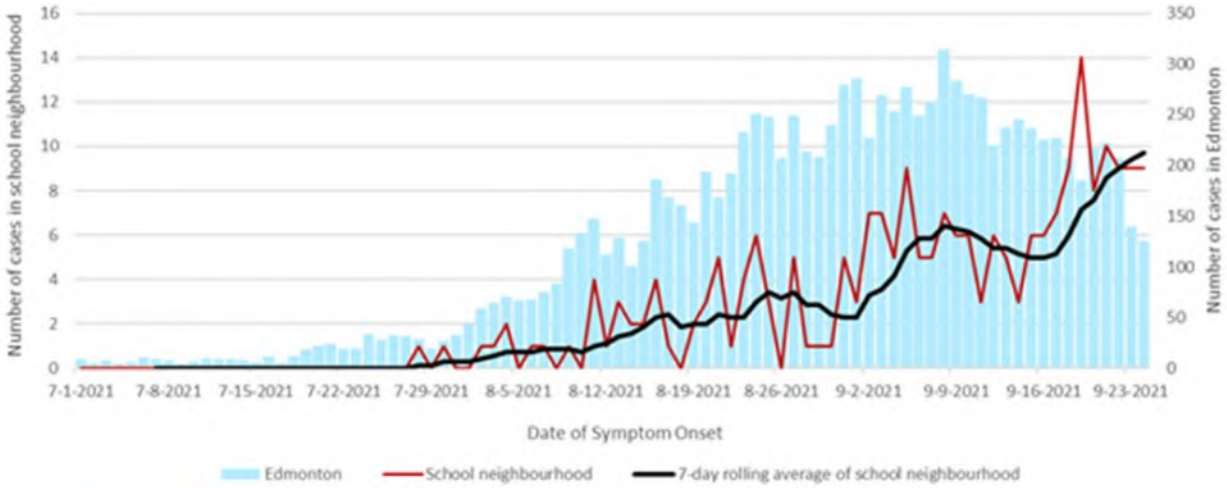


Figure 1: Number of cases in the neighbourhood surrounding the Westglen school and the City of Edmonton

- Additional information on the impact of COVID-19 measures in schools is attached (Attachments 1 and 2).

BACKGROUND

- Alberta Health has provided guidance to schools with the intent of reducing the risk of transmission. Most mandatory school measures were lifted on February 14, 2022, and the remaining mandatory measures were removed on March 1.
- Alberta Health has prepared guidance documents that include the following recommended practices:
  - Encouraging vaccination for eligible students and staff;
  - Active daily symptom screening of all staff, students, visitors, and volunteers;
  - Cohorting for kindergarten through grade six classes;
  - Increased hand hygiene;
  - Increased and enhanced cleaning; and
  - Increased distancing where possible to reduce crowding.

ATTACHMENTS

1. COVID Measures in Schools Alberta Data
2. COVID Measures in Schools Literature Summary

CONTACT:

Drafted by: Susan Novak, Policy and Planning Section Chief, 780-860-2144
Approved by: Ethan Bayne, Incident Commander, Alberta Heath EOC, 780-217-1826

COVID-19 – COVID and Schools

Questions

- **Outbreaks in schools with and without mask mandates.**
- **Provide Alberta school data comparing last year and this year.**

Overall Themes

- This data is observational, and therefore able to only identify correlation, not causation. There are multiple factors that influence COVID transmission that could also be impacting the trends identified below.
- School boards without mask mandates have 3 times more outbreaks in their schools, on average.
    - Case and hospitalization rates per 100,000 population lower in areas where mask mandates are required in both children (5-11 year old) and adults (30-59 years old).
    - Hospitalization rates per 100,000 population are lower in adults (30-59 years old) in areas with mask mandates.
- The outbreak in Westglen school in Edmonton (Fall 2021) is an example that illustrate that a school outbreak can lead to increased spread within the local community.
- Hospitalization rate per 100,000 population are higher (<10 years old) and comparable (10-19 years old) in the fifth wave compared to other waves.

Analysis: Masks Mandates

School boards without mask mandates had 3 times more outbreaks in their schools, on average.

Table 1. Top 10 school Boards with the highest proportion of outbreaks in their schools as of Sept 27, 2021.

School Board	Municipality	N Schools	N Outbreaks	Percent of schools with outbreaks (%)*	Mask mandate at start of school?
The Lakeland Roman Catholic Separate School Division	Bonnyville	8	6	75%	N

Alberta

The Wild Rose School Division	Rocky Mountain House	17	11	65%	N
The Grande Prairie School Division	Grande Prairie	20	11	55%	N
The Grande Prairie Roman Catholic Separate School Division	Grande Prairie	13	7	54%	N
The High Prairie School Division	High Prairie	13	6	46%	N
The Parkland School Division	Stony Plain	25	11	44%	N
The Holy Family Catholic Separate School Division	Peace River	9	4	44%	N
The Black Gold School Division	Nisku	31	11	35%	N
The Sturgeon School Division	Morinville	17	6	35%	N
The St. Thomas Aquinas Roman Catholic Separate School Division	Leduc	12	4	33%	N

* This is the same as the rate of outbreaks per 100 schools

Table 2. Schools with the 10 lowest proportions of outbreaks in their schools as of Sept 27, 2021.

School Board	Municipality & Area	N Schools	N Outbreaks	Percent of schools with outbreaks (%)*	Mask mandate at start of school?
The Greater St. Albert Roman Catholic Separate School Division	St. Albert	18	1	6%	Yes
The Northland School Division	Peace River	21	1	5%	Yes
The Edmonton School Division	Edmonton	232	12	5%	Yes
The Calgary School Division	Calgary	256	11	4%	Yes
The Edmonton Catholic Separate School Division	Edmonton	103	3	3%	Yes
The Rocky View School Division	Airdrie	52	1	2%	N
The Calgary Roman Catholic Separate School Division	Calgary	120	1	1%	Yes
The Wetaskiwin School Division	Wetaskiwin	22	0	0	N
The Aspen View School Division	Athabasca	18	0	0	N
The Canadian Rockies School Division	Canmore	8	0	0	Yes

* This is the same as the rate of outbreaks per 100 schools

Alberta

Table 3. Average percent of outbreaks per school board, by mask mandate status.

Mask mandate at start of school?	Average percent of outbreaks per school board
Implemented after 1st week	19.7
N	23.4
Y	7.3

A comparison of geographies with and without mask mandates

Method:

- "Masks Required" is defined as communities where 75% of schools required masks from the start of the school year (excludes francophone and private schools).
- "Other" is defined as communities that did not meet the 75% cut-off and/or do not require mask mandates. Note: small towns that had 1 of each public school, separate school, and private school would not meet the 75% cut-off.
- Limitations
    - Did not account for community vaccine coverage. This may impact hospitalization rate by communities in schools that have and do not have mask mandates.
    - Mask mandates were not available for all boards.

Results:

- Case and hospitalization rates per 100,000 population lower in areas where mask mandates are required in both children (5-11 year old) and adults (30-59 years old) (See Figure 1).
- Hospitalization rates per 100,000 population are lower in adults (30-59 years old) in areas with mask mandates (See Figure 1).

Alberta

COVID-19 – COVID and Schools

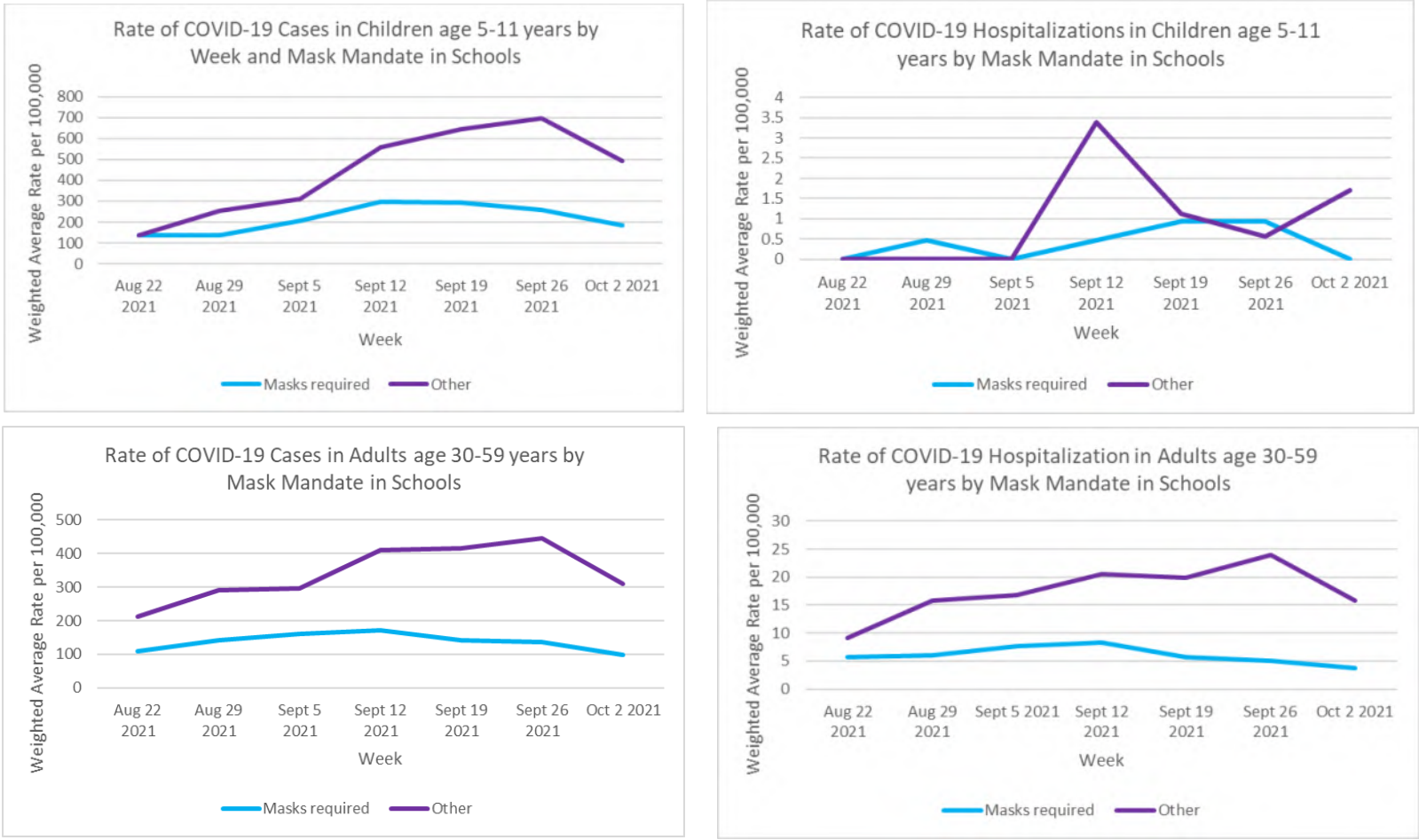


Figure 1. Rate of COVID-19 cases (Left) and hospitalization rates (right) per 100,000 population in children, 5-11 years old (top) and adults, 30-59 years old (bottom) by mask mandates in school.

NOTE: this work was done October 2021, prior to vaccine availability for 5-11 year olds. The 30-59 year olds were selected based on potential impacts on households.

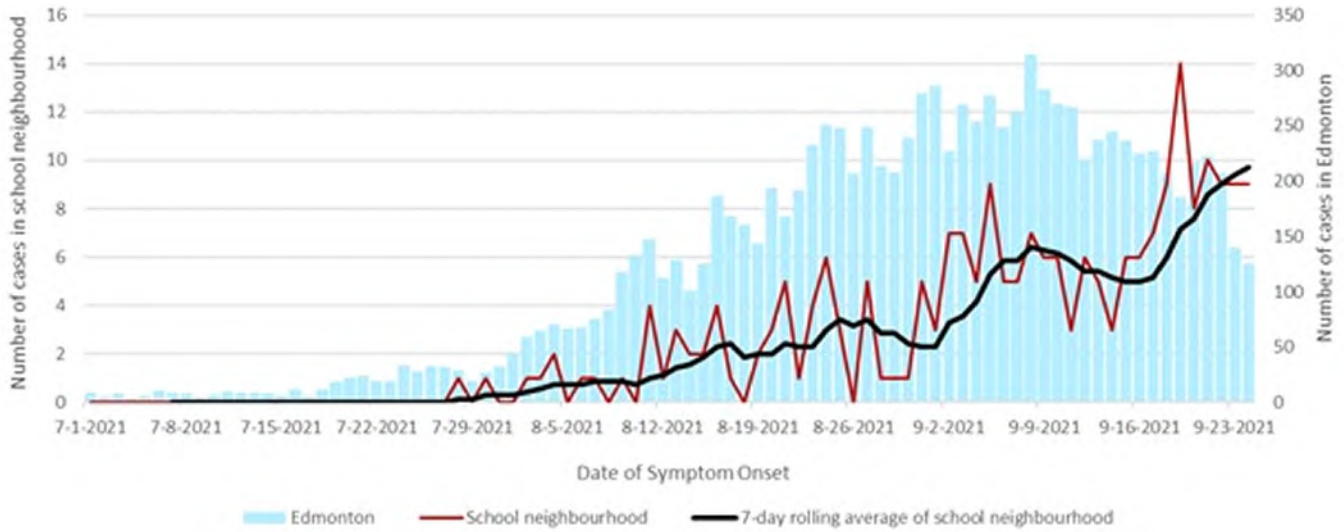
Alberta

Analysis: Westglen School

September 28, 2021

- 71 cases
  - 1 staff member, 70 students.
    - Staff member (music teacher) was not immunized.
    - Students spread roughly evenly across grades 1-6 .
  - The outbreak opened Sept 23rd – they had reported 10% absenteeism and a positive case on Mon Sept 20th.
    - Symptomatic children continued to attend school until they moved to online learning Sept 24th.
  - Even young children likely transmitted to their families.
    - As of Sept 26th, 14 families had additional cases in their families, the index case (ie earliest onset date) was an adult only once (7%).
      - 7 (50%) - index case was a child age 5-9.
      - 6 (43%) – index was a child age 10-12.
  - This outbreak has had a significant effect on case counts in the neighbourhood; while cases in Edmonton were stabilizing and decreasing, cases in the T5M postal code reversed trend, increasing significantly after the Westglen outbreak (See Figure 2).
    - **66/94 (70%) of all cases with the T5M postal code** reported between Sept 17-26 are linked to the outbreak or are family members of outbreak cases.

Figure 2. Number of cases in the neighbourhood surrounding the school and the City of Edmonton.



Analysis: Hospitalizations

Definition of waves:

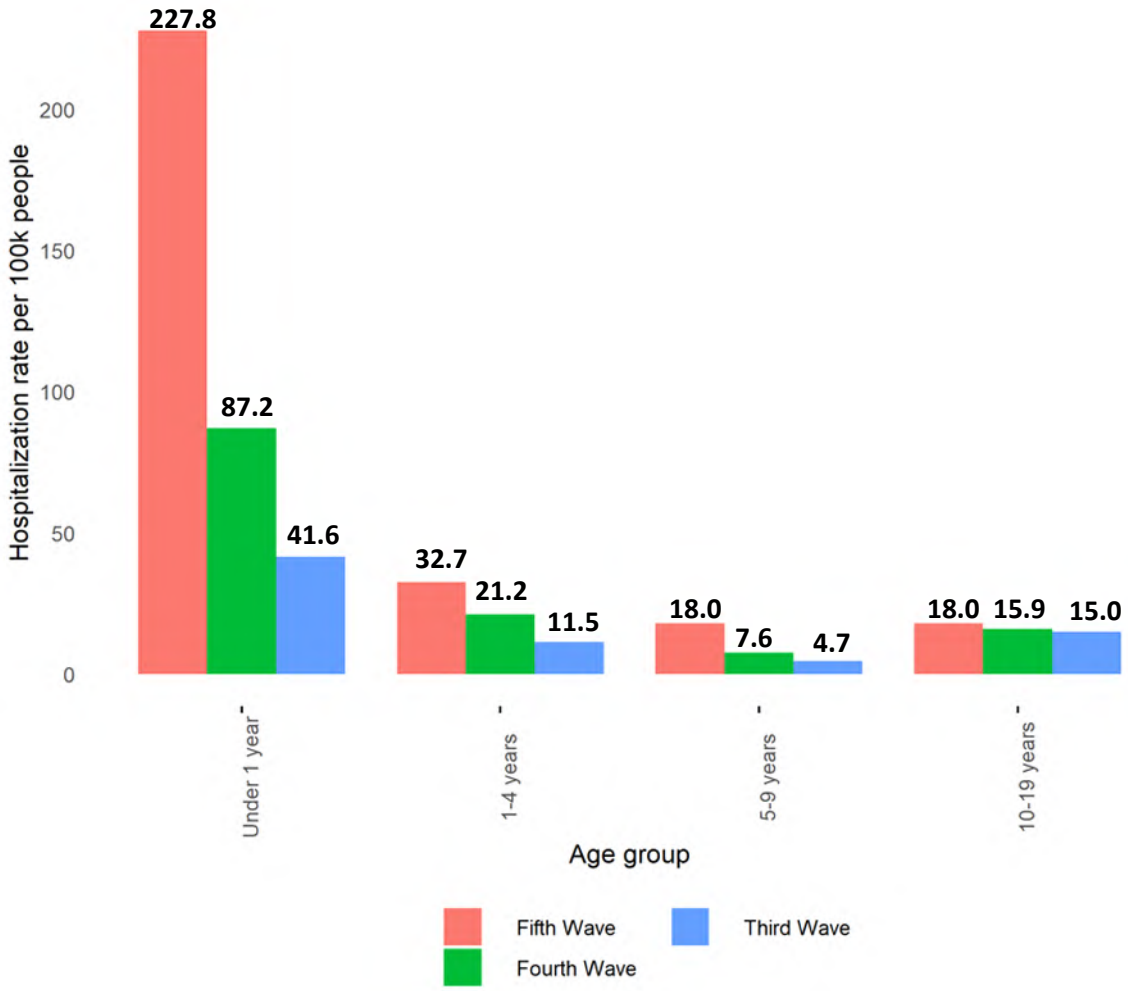
Third Wave: Feb 6, 2021 to July 9, 2021.
Fourth Wave: July 10, 2021 to December 15, 2021.
Fifth Wave: December 16, 2021 – Current.

Summary:

- Hospitalization rate per 100,000 population are higher (<10 years old) and comparable (10-19 years old) in the fifth wave compared to other waves.

COVID-19 – COVID and Schools

Figure 3. Hospitalization Rate per 100,000 population comparison across wave three to five among people under 20 years old.



School Masking Evidence Summary

Copied from Scott Fullmer's email dated February 7, 2022

Summary

1. According to the research literature, wearing masks can be effective in contributing to reducing transmission of COVID-19 **in public and community setting**s. This is informed by a range of research, including randomised control trials, contact tracing studies, and observational studies.
2. **The evidence for protection from masks, in schools is less direct,** but taken together with available evidence from all settings, there is support for the conclusion that face coverings in schools can contribute as part of a host of measures to reduce transmission. **What data do exist have been interpreted into guidance in many different ways**. The World Health Organization, for example, does not recommend masks for children under age 6. The European Centre for Disease Prevention and Control recommends against the use of masks for any children in primary school. In North America masking in schools was part of public health guidelines as schools returned after the first and second waves.
3. **Studies find that transmission in schools has remained limited and comparable to the wider community** under a wide range of prevention measures such as masking, cohorting, cancelling higher-risk activities, distancing, hygiene protocols, reduced class size and enhanced ventilation.
4. The studies available were performed prior to the emergence of the Omicron VOC.

Systematic Reviews of Multiple Measures

The evergreen MacMaster University literature review (49 studies) (August 2021) reports wide variability in policies in place across different jurisdictions limiting the ability to evaluate the impact of specific measures or make best practice recommendations for daycare or school settings due to variability in the combination of measures implemented. However, implementation of infection control measures is critically important to reducing transmission, especially when community transmission rates are high.

- There is evidence that wearing masks, maintaining at least 3ft of distance (especially amongst staff), restricting entry to the school to others, cancelling extracurriculars, introducing outdoor instruction, and daily symptom screening reduce the number of cases within schools;
- There are inconsistent findings for associations between ventilation, and class size.
- Hybrid or part-time in-person learning appears to be associated with higher incidence compared to full-time in-person.

In July 2021, European Centre for Disease Control and Prevention published its second update to its review of COVID-19 in children and the role of school settings in transmission. The review examined case-based epidemiological surveillance analysis from The European Surveillance System, grey, pre-print and peer reviewed scientific literature, focusing on studies published in 2021; and modelling of the effects of closing schools on community transmission based on data from the ECDC-Joint Research Centre (JRC) Response Measures Database.

- Similar to the literature review produced by Macmaster University, this report that implementing multiple physical distancing and hygiene measures can significantly reduce the possibility of transmission within schools (high confidence), including

- De-densification (classroom distancing, staggered arrival times, cancellation of certain indoor activities, especially among other students)
- Hygiene measures (handwashing, respiratory etiquette, cleaning, ventilation, and face masks for certain age groups).
- Timely testing and isolation or quarantine of symptomatic cases is important. Rapid antigen tests should be considered

The latest Cochrane literature review examined evidence is up to December 2020 on which measures implemented in the school setting allow schools to safely reopen, stay open, or both, during the COVID-19 pandemic. The review suggests that *many measures implemented in the school setting* can have positive impacts on the transmission of SARS-CoV-2, and on healthcare utilisation outcomes related to COVID-19.

- ***Measures reducing the opportunity for contacts***: by reducing the number of students in a class or a school, opening certain school types only (for example primary schools) or by creating a schedule by which students attend school on different days or in different weeks, the face-to-face contact between students can be reduced.
  - All 23 studies showed reductions in the spread of the virus that causes COVID-19 and the use of the healthcare system. Some studies also showed a reduction in the number of days spent in school due to the intervention.
- ***Measures making contacts safer***: by putting measures in place such as face masks, improving ventilation by opening windows or using air purifiers, cleaning, handwashing, or modifying activities like sports or music, contacts can be made safer.
  - Five (of 11) of these studies combined multiple measures, which means we cannot see which specific measures worked and which did not. Most studies showed reductions in the spread of the virus that causes COVID-19; some studies, however, showed mixed or no effects.
- ***Surveillance and response measures***: screening for symptoms or testing sick or potentially sick students, or teachers, or both, and putting them into isolation (for sick people) or quarantine (for potentially sick people).
  - Twelve (of 13) studies focused on mass testing and isolation measures, while two looked specifically at symptom-based screening and isolation. Most studies showed results in favour of the intervention, however some showed mixed or no effects.
- ***Multicomponent measures***: measures from categories 1, 2 and 3 are combined.
  - Three studies assessed physical distancing, modification of activities, cancellation of sports or music classes, testing, exemption of high-risk students, handwashing, and face masks. Most studies showed reduced transmission of the virus that causes COVID-19, however some showed mixed or no effects.

Transmission Compared to the Community

These four studies in Vancouver, Georgia, and Italy were some of the earlier studies in the first/second wave that found that students were less of a risk for secondary infections compared to teachers however, teachers rates of infection were no higher than other members of the community in occupations outside the home.

- **Vancouver (Oct 2020-May 2021)** Goldfarb et al. seroprevelance study showed **no detectable increase in SARS-CoV-2 infections in school staff** working in Vancouver public schools following a period of widespread community transmission **compared to the community**. These findings corroborate claims that, with *appropriate mitigation strategies in place*, in-person schooling is not associated with significantly higher risk for school staff.

- Of the 1,556 school staff who had their blood sample tested, 2.3% tested positive for antibodies. This percentage was similar to the number of infections in a reference group of blood donors matched by age, sex and area of residence.
- NPIs: (Physical distancing, Enhanced cleaning, Enhanced ventilation, Cohorts, Screening (staff and students), Regular surface cleaning, Unidirectional flow of students, Masks (not mandatory until Feb 2021 for grades 6-12 and for grades 4-12 in Apr 2021), Hand hygiene (hand sanitizer in classrooms and common areas), Quarantine policies, Staggered recess and lunch breaks)

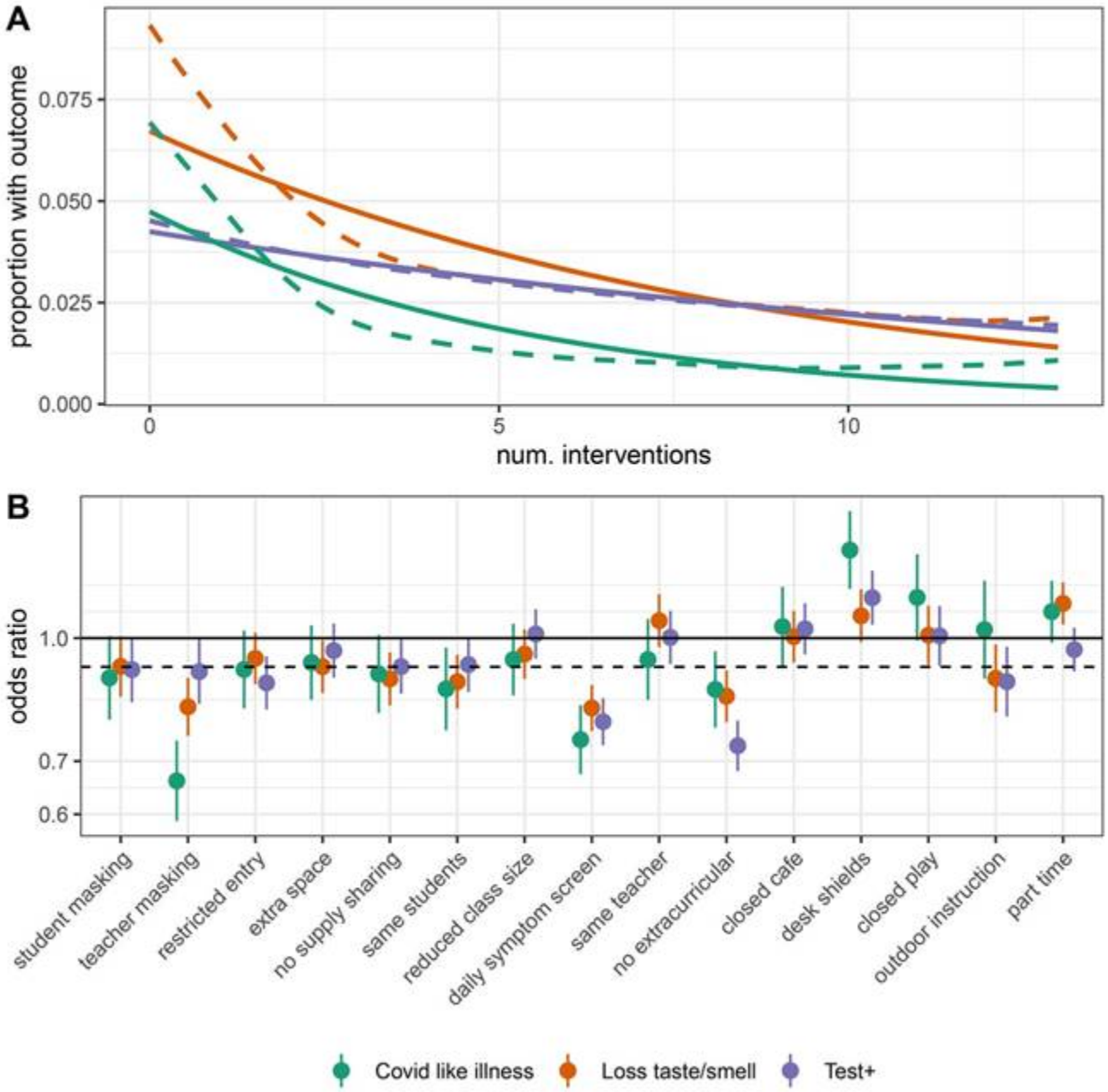
- **Georgia CDC Study –USA (Dec 2020-Jan 2021)** Gettings, J.R., et al. found that masking teachers was associated with a statistically significant decrease in COVID transmission, **but masking students was not**.
  - NPI's: (enhanced cleaning, enhanced ventilation, hand hygiene, masks – except during sports, and physical distancing)
  - Highest Secondary Attack Rates were:
    - Indoor High-contact sports settings - 23.8%
    - staff meetings/lunches - 18.2%
    - Elementary school classrooms 9.5%
  - Lowest Secondary Attack Rates:
    - Asymptomatic Students – 2.3%
    - Elementary Students – 2.7%
  - The SAR was higher for staff 13.1% vs student index cases 5.8% and for symptomatic 10.9% vs asymptomatic index cases 3.0
  - In school settings, J. Gettings et al. point out that in addition to masking, **schools that improved ventilation through dilution methods alone, COVID-19 incidence was 35% lower, whereas in schools that combined dilution methods with filtration, incidence was 48% lower**.
- **Georgia – USA (Dec 2020-Jan 2021)** J. A. W. Gold et al. examined incidence in a Georgia school district during December 1, 2020–January 22, 2021 identified nine clusters of COVID-19 cases involving 13 educators and 32 students at six elementary schools. Two clusters involved probable educator-to-educator transmission that was followed by educator-to-student transmission in classrooms and resulted in approximately one half (15 of 31) of school-associated cases. Preventing SARS-CoV-2 infections through multifaceted school mitigation measures and COVID-19 vaccination of educators is a critical component of preventing in-school transmission.
  - NPI's: (Masks - except while eating, Plastic dividers on desks but students sat less than 3 feet apart).
- **Italy (Sept 30 2020-Feb 2021)** Gandini et al. performed a cross-sectional and prospective cohort study in Italy during the second COVID-19 wave (from September 30, 2020 until at least February 28, 2021. Incidence and positivity were lower amongst elementary and middle school students compared to general population; incidence was higher in high school students in 3 of 19 regions. Incidence in teachers was no different from other occupations after adjusting for age.
  - NPI's: (Ban on sports and music, Frequent ventilation, Hand hygiene, Masks (staff, high school students), Negative test following exposure (some schools), Physical distancing (1m between seats), Reduced school hours, Temperature check, Unidirectional flow of students).

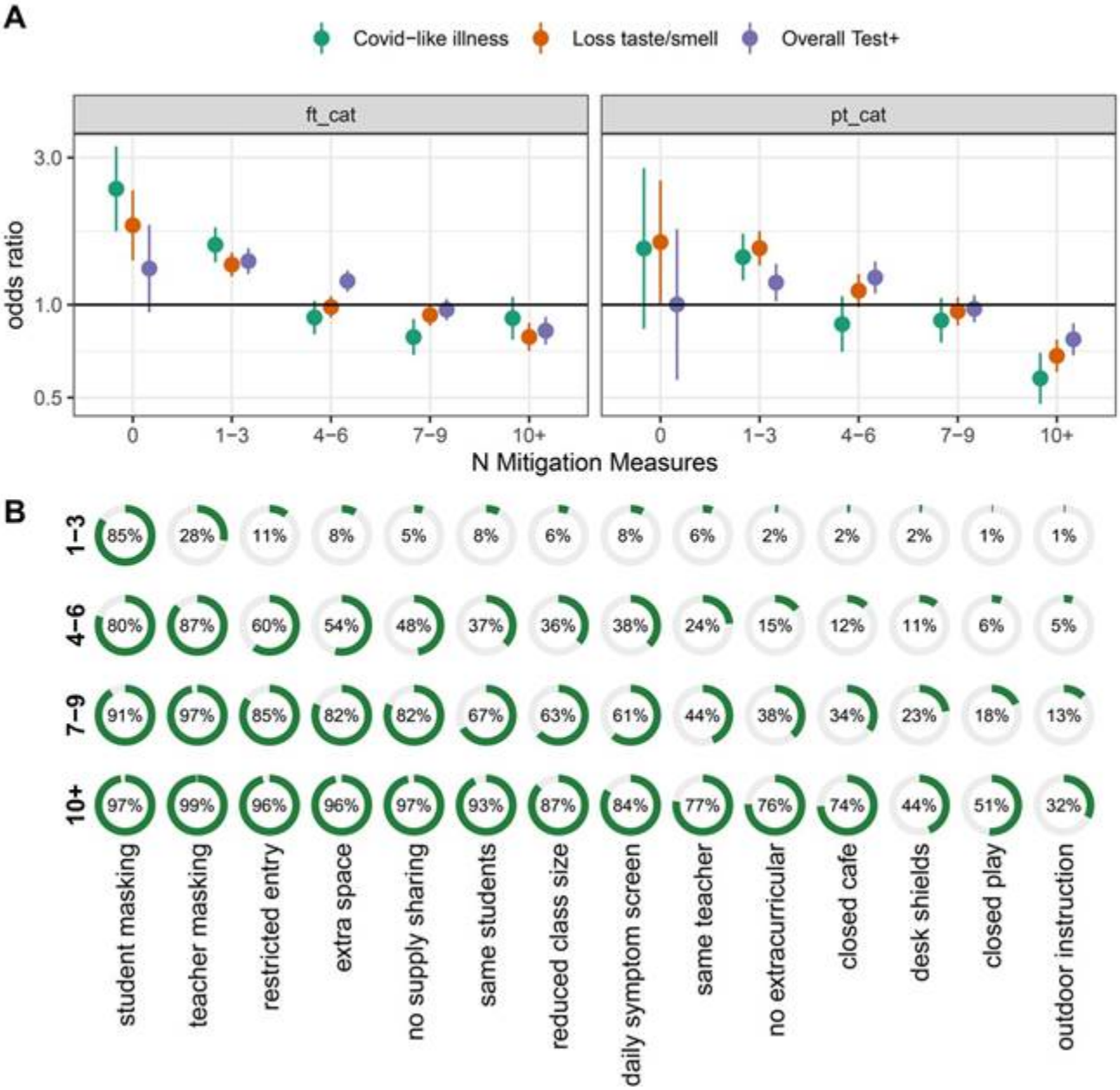
Impact of Multiple Mitigation Measures

These observational studies that assess the use of multiple interventions in schools and are a good example of the kinds of studies that show mixed results (as was noted in the systematic reviews)

- **Utah – USA (Dec 2020-Jan 2021)** R. B. Hershow et al. reviewed K-6 schools opening in Salt Lake County, Utah, from Dec 3 – Jan 21, 2021. Despite high community incidence and an inability to space students' classroom seats ≥6 ft apart, this investigation found low SARS-CoV-2 transmission and no school-related outbreaks in 20 Salt Lake County elementary schools with *high student mask use and implementation of multiple strategies* to limit transmission.
  - NPIs: (6ft distance, High mask use (86%), 81% in-person learning, Plexiglass barriers for teachers, Staggered mealtimes)
  - Other studies, similar to the Utah in North Carolina, Wisconsin, and Missouri, isolated the impact of masks specifically, but showed that taken together mitigation strategies reduced transmission.
- **Florida, New York, Mass – USA (2020-21)** E. Oster et al reported on the correlation of mitigation practices with staff and student COVID-19 case rates in Florida, New York, and Massachusetts during the 2020-2021 school year focusing on *student density, ventilation upgrades, and masking*. Ventilation upgrades are correlated with lower rates in Florida but not in New York. **Did not find any correlations with mask mandates.** All rates are lower in the spring, after teacher vaccination is underway.
  - NPI's Varied by state: (Cohorts, Enhanced ventilation, Masks, Reduced student density, Physical distancing (6 ft.), Symptom screening, Temperature checks)
- **USA All States (Dec 2020-Feb 2021)** J. Lessler et al. For every additional measure implemented there was a decrease in odds of a positive test (adjusted OR: 0.93, 95% CI=0.92,0.94); *symptoms screening* was associated with the greatest risk reduction. When *7 or more IPAC measures were implemented, risk largely disappeared (with a complete absence of risk with 10 or more IPAC measures*). Among those reporting 7 or more mitigation measures, *80% reported student/teacher mask mandates, restricted entry, desk spacing and no supply sharing*. Outdoor instruction, restricted entry, no extracurriculars, and daily symptom screening were associated with significant risk reductions.
  - NPI's : (Cancelled extracurriculars, Closed common spaces (playgrounds, cafeterias), Cohorting, Masks, Physical distancing (extra space, separators between desks), Reduced class size, Restricted entry, Symptom screening)
- **A Science Magazine Summary on in-person schooling concludes that in-person schooling carries with it increased COVID-19 risk to household members; but also evidence that common, low cost, mitigation measures can reduce this risk**
  - School-based mitigation measures are associated with significant reductions in risk, particularly daily symptoms screens, teacher masking, and closure of extra-curricular activities.
  - A positive association between in-person schooling and COVID-19 outcomes persists at low levels of mitigation, but **when seven or more mitigation measures are reported, a significant relationship is no longer observed.**
    - Regression treating each individual mitigation measure as having an independent effect shows that **daily symptom screening is clearly associated with greater risk reductions than the average measure with some evidence that teacher mask mandates and cancelling extra-curricular activities are also associated with larger reductions than average**.

- **<u>In contrast, closing cafeterias, playgrounds and use of desk shields are associated with lower risk reductions (or even risk increases);</u>** however this may reflect saturation effects as these are typically reported along with a high number of other measures. Notably, part-time in-person schooling is not associated with a decrease in the risk of COVID-19-related outcomes compared to full-time in-person schooling after accounting for other mitigation measures.





Evidence on Masking Alone

In community settings the conclusion on the effectiveness of face coverings to reduce transmission of COVID-19 in community settings is informed by a range of research, including transferable insight from other contagious diseases, modelling studies, laboratory experiments, contact tracing studies, and observational studies. The addition of randomised control trials and substantially more individual-level observational studies has increased the strength of the conclusions and strengthens the evidence for the effectiveness of face coverings in reducing the spread of COVID-19 in the community, through source control, wearer protection, and universal masking.

There are only 2 RCTs that have been done during the pandemic on masking (1 non-peer-reviewed report, both rated as medium quality) provided evidence on the effectiveness of face coverings to reduce transmission of COVID-19, for universal masking (Bangladesh) and 1 for wearer protection (Denmark).[1]

- Denmark RCT in Spring 2020 (H. Bundgaard et al.) The first was conducted in Denmark in the spring of 2020 and found no significant effect of masks on reducing COVID-19 transmission
    - Adults who spent 3 hours or more a day outside the home and did not wear a face covering while at work were randomised either to wearing study-provided surgical masks outside the home or no intervention.
    - There was a small, non-significant reduction in COVID-19 infections reported in the group that wore surgical masks: 42 of 2,392 participants (1.8%) developed COVID-19 in the intervention group compared with 53 of 2,470 participants (2.1%) in the control group.
    - The study was inconclusive, reporting a non-significant reduction in COVID-19 infections from wearer protection using surgical masks, but the results lacked precision due to an insufficiently large sample size and low prevalence in the study population, so few participants developed COVID-19.
- Bangladesh RCT in 2021 (J. Abaluck et al.) - reported that surgical masks (but not cloth) were modestly effective at reducing rates of symptomatic infection. However, neither of these studies included children, let alone vaccinated children.
    - Randomized trial involving nearly 350,000 people across rural Bangladesh. The study's authors found that surgical masks — but not cloth masks — reduced transmission of SARS-CoV-2 in villages where the research team distributed face masks and promoted their use.
    - **The study linked surgical masks with an 11% drop in risk, compared with a 5% drop for cloth**. That finding was reinforced by laboratory experiments whose results are summarized in the same preprint. The data show that even after 10 washes, surgical masks filter out 76% of small particles capable of airborne transmission of SARS-CoV-2, says Mushfiq Mobarak, an economist at Yale University in New Haven, Connecticut, and a co-author of the study. By contrast, the team found that 3-layered cloth masks had a filtration efficiency of only 37% before washing or use.
- **The UK PHE has produced two literature reviews on masking**
    - **In community** they assembled a committee to evaluate this evidence from their most recent literature review on face coverings in community included 25 studies (including 9 preprints and 2 non-peer reviewed reports): 2 randomised controlled trials (RCTs) and 23 observational studies. The evidence predominantly suggests that face coverings reduce the spread of COVID-19 in the community.
        - Respiratory Evidence Panel**: evidence suggests that all types of face coverings are, to some extent, effective in reducing transmission of SARS-CoV-2 in both healthcare and public, community settings** – this is through a combination of source control and protection to the wearer (high confidence).

[1] Both studies were used to guide previous advice on masking in Alberta, both excluded children

Eight contact tracing studies suggested that contacts of primary cases were less likely to develop COVID-19 if either the primary case or the close contact, or both, wore a face covering.

11 observational association studies had mixed results, with 6 studies suggesting face coverings were associated with reduced COVID-19 transmission and 5 suggesting no statistically significant association.

- In the school setting **(Jan 2022)** they conducted a literature review as well as publishing the results of their own study that looked at schools with mask mandates in secondary schools. The literature review on the Evidence of associations between COVID-19 and the use of masks in educational settings was inconclusive, but some studies showed higher rates of COVID-19 in schools without mask requirements for students.
    - "The new study presented in this report is a comparison of covid absence rates 2-3 weeks later in 123 schools which introduced masks on the 1st October 2020 with covid absence rates in 1192 schools which did not have a policy of mask wearing in school.
    - There were several differences between the two sets of schools included in this study including the covid absence rates at the start of the study (the schools which introduced masks had much higher rates). The researchers tried to adjust for these factors in their analysis.
        - **No Reduction in the UK with Masks in Schools: Schools where face coverings were used in October 2021 saw a reduction two to three weeks later in Covid absences from 5.3% to 3% - a drop of 2.3 percentage points.**
        - **In schools which did not use face coverings absences fell from 5.3% to 3.6% - a fall of 1.7 percentage points (not statistically significant)**
- Public Health Ontario has also assessed most of this evidence as well and summarized that several studies found that mask mandates in schools have been associated with lower incidence of SARS-CoV-2 infection. Many of the studies examining COVID-19 incidence in schools had layered Infection prevention and control measures in place, so it was challenging to measure the independent Impact of mask-wearing.

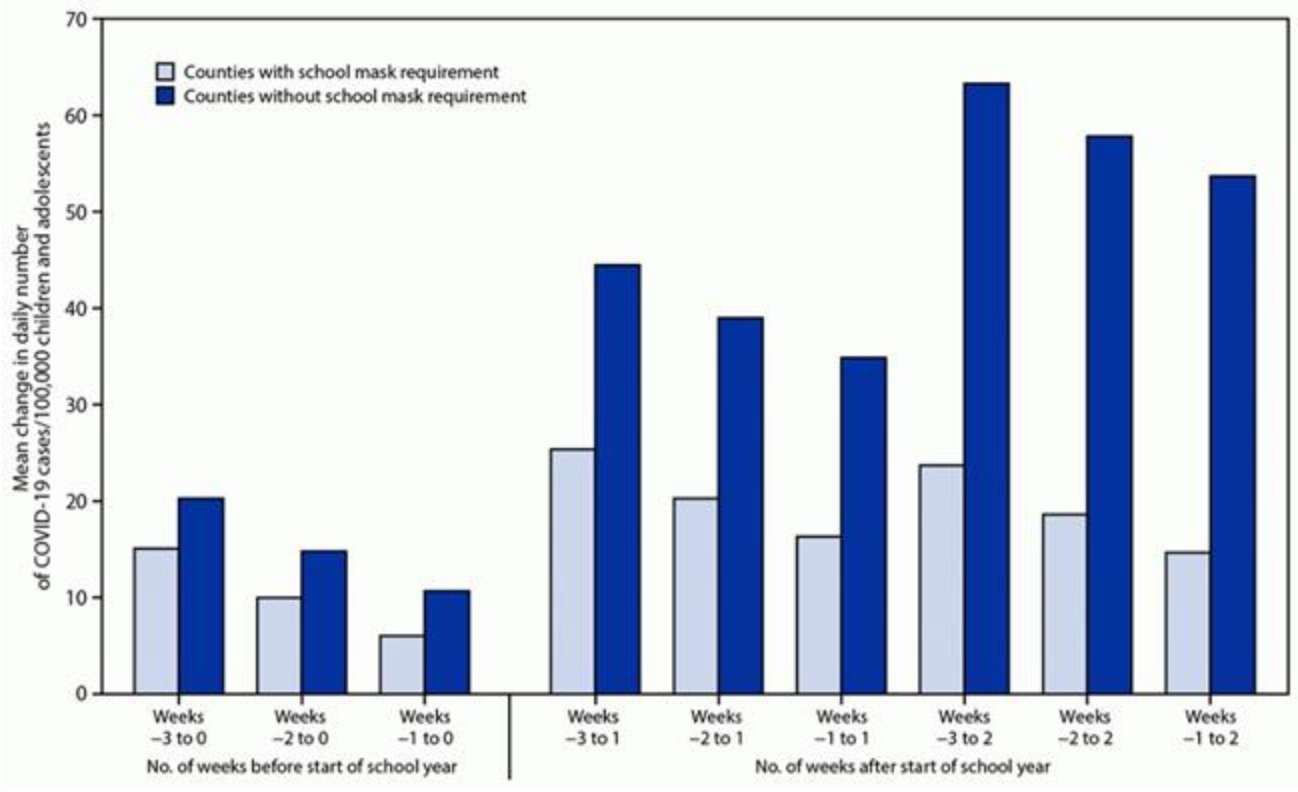
There are 3 commonly cited studies (all rated as low quality) assessing whether wearing a face covering was effective in schools in the UK, US and Germany in autumn and winter 2020, and in a summer camp in the US in summer 2020. These results provide less direct evidence of the effectiveness of face coverings than either the RCTs or contact tracing, but still provide evidence on the difference in COVID-19 transmission between people who did and did not wear face coverings in school and summer camp settings.

- **California Study**: D. Cooper et al. in a prospective cohort study in the US assessed whether face coverings were effective as universal masking in four schools in Autumn to Winter 2020 found SARS-CoV-2 infections in 17 learners (N=320) only during the surge. School A (97% remote learners) had the highest infection (10/70, 14.3%, $p<0.01$) and IgG positivity rates (13/66, 19.7%). School D (93% on-site learners) had the lowest infection and IgG positivity rates (1/63, 1.6%). Mitigation compliance [physical distancing (mean 87.4%) and face covering (91.3%)] was remarkably high at all schools.
- **Germany Study:** Theuring et al. in a cross-sectional study in Germany (n=177 primary school students, n=175 secondary school students and n=142 staff members) assessed whether face coverings were effective as wearer protection in 12 primary and 12 secondary schools in Germany in November 2020. It concluded that prevalence increased with inconsistent facemask-use in school, walking to school, and case-contacts outside school.
- **US Summer Camp Study**: S. Suh et al. conducted a cross-sectional study (n=486 US summer camps comprising 89,635 campers) assessed whether face coverings were effective as universal masking in

486 summer camps in the US in summer 2020. It found in both single and multi-NPI analyses, the risk of COVID-19 cases was lowest when campers always wore facial coverings.

More recent evidence from Delta Wave and CDC Commissioned Studies

- To demonstrate any independent effect of masks on COVID-19 transmission requires comparing communities with similar vaccination rates or statistically controlling for differences in vaccination rates or other covariates. Without making these adjustments, it is difficult to attribute differences in case rates, or differences in in-school transmission, to mask wearing in school.
- When CDC examined the evidence on school transmission, it concluded that the preponderance of the available evidence from United States schools indicates that even when students were placed less than 6 feet apart in classrooms, **there was limited SARS-CoV-2 transmission *when other layered prevention strategies were consistently maintained; notably, masking and student cohorts.***
    - The Oct 2021 Arizona CDC Study (M. Jehn et al.) in the Maricopa and Pima Counties concluded that **schools without mask mandates were more 3.5 times likely to have COVID-19 outbreaks than schools with mask mandates**. The study noted that given the high transmissibility of the SARS-CoV-2 B.1.617.2 (Delta) variant, universal masking, in addition to vaccination of all eligible students, staff members, and faculty and implementation of other prevention measures, remains essential to COVID-19 prevention in K–12 settings.
        - However, the study has been found to have numerous flaws as pointed out in this Atlantic Article – including a failure to quantify the size of outbreaks and failure to report testing protocols for the students. They also do not control for different vaccination rates in the counties, meaning that vaccination could have played a bigger role than masking.
    - Another Oct 2021 CDC study by S. E. Budzyn et al. **found that U.S. counties without mask mandates saw larger increases in pediatric COVID-19 cases after schools opened**, but again did not control for important differences in vaccination rates, stating it will be done at a later date.
        - The study examined 520 counties from July to September, 62% of which didn't have a school mask requirement.
        - Over the two-week period before and after school started, **counties with school mask requirements saw their COVID-19 rates rise by 16 daily cases per 100,000 children, on average**.
        - **Meanwhile, counties without school mask requirements saw their COVID-19 rates rise by 35 daily cases per 100,000 children**, as shown in the chart below.



These smaller studies are often shared online to show that there isn't a difference between schools that mask during the Delta variant's spread in the US:

- In Tennessee, two neighboring counties with similar vaccination rates, Davidson and Williamson, have virtually overlapping case-rate trends in their school-age populations, despite one having a mask mandate and one having a mask opt-out rate of about 23 percent.
- Another recent analysis of data from Cass County, North Dakota by Tracy Hoeg, comparing school districts with and without mask mandates, concluded that mask-optional districts had lower prevalence of COVID-19 cases among students this fall.
- Analyses of COVID-19 cases in Alachua County, Florida, also suggest no differences in mask-required versus mask-optional schools.