

COVID-19 Vaccinations and Breakthrough Infections

Analysis for cases November 1-30, 2021
and cases August 1-November 30, 2021

COVID-19 Vaccinations Work

- Measured at 21 day mark to allow for necessary immune response to first dose
- Two doses recommended for all vaccines currently offered in Saskatchewan
- It is anticipated that serious illness rates will decrease as residents receive second doses
- Two weeks after second dose is when optimum protection begins

November 2021: Reported COVID-19 Cases

Total	Unvaccinated or First dose <3 weeks	Vaccinated, First dose => 3 weeks	Vaccinated, Second dose =>2 weeks
3,361	2,004	150	1,207
% of cases	59.6%	4.5%	35.9%
Estimated SK case rate per 100,000 - denominator based on receipt of one dose or completed series			
Estimated cases/100,000	604	205	151

- Of the 3,361 cases in November, 59.6% (2,004) were unvaccinated, 7.3% (245) were less than five years old, and 19.9% (669) were 5-11 years old.
- Of the 150 cases with the first dose, 16.7% (25) had comorbid conditions and 3.3% (5) were 65 years and older.
- Of the 1,207 cases with the second dose, 19.9% (240) had comorbid conditions and 15.9% (192) of cases were 65 years and older.
- **Estimated case rates were 604/100,000 for the unvaccinated, 205/100,000 in those with first dose and 151/100,000 in those with second dose.**

November 2021: Breakthrough following Booster/Third Doses

- Of the 3,361 cases reported in November 2021, 40 had onset of illness at least 14 days after receiving a third COVID-19 immunization (booster or travel doses).
- 65.0% (26) were 20 to 69 years and 32.5% (13) were in the 70 and older age group.
- 32.5% (13) had at least one comorbid condition.
- 87.5% (35) were not hospitalized and 12.5% (5) were hospitalized.
- **No deaths were reported among the 40 cases.**

Aug – Nov 2021: Reported COVID-19 Cases

Total	Unvaccinated or First dose <3 weeks	Vaccinated, First dose => 3 weeks	Vaccinated, Second dose =>2 weeks
31,029	21,308	2,073	7,648
% of cases	68.7%	6.7%	24.6%

- From August to November 2021, there were 31,029 cases reported. 68.7% (21,308) were unvaccinated.
- Of the total cases, 7.4% (2,296) were less than five years old and 15.5% (4,799) were 5-11 years old.
- Of the 2,073 cases with the first dose, 13.8% (287) had comorbid conditions and 7.0% (145) were 65 years and older.
- Of the 7,648 cases with the second dose, 23.7% (1,810) had comorbid conditions, and 23.6% (1,804) were 65 years and older.

Aug-Nov 2021: Breakthrough following Booster/Third Doses

- Of the 31,029 cases reported from August 1 to November 30, 2021, 103 had onset of illness at least 14 days after receiving their third dose.
- 59.2% (61) were 20 to 69 years and 38.8% (40) were 70 and older.
- 62.1% (64) had no pre-existing comorbidity condition.
- 9.7% (10) were hospitalized
- 6.8% (7) had fatal outcome

November 2021: COVID-19 Hospitalizations

Total	Unvaccinated or First dose <3 weeks	Vaccinated, First dose => 3 weeks	Vaccinated, Second dose =>2 weeks
173	116	8	49
% of hospitalization cases	67.1%	4.6%	28.3%
Estimated SK hospitalization rate/100,000 - denominator based on receipt of one dose or completed series			
Estimated hospitalizations/100,000	35	11	6

- Of the 3,361 cases in November, 173 (5.1%) were hospitalized with 67.1% (116) unvaccinated. Of these 173 hospitalizations, 5.2% (9) were less than five years and 0.6% (1) were 5-11 years old.
- Of the eight (8) hospitalized cases with the first dose, 62.5% (5) had comorbid conditions and 25.0% (2) of cases were 65 years and older.
- Of the 49 hospitalized cases with the second dose, 55.1% (27) had comorbid conditions and 55.1% (27) of cases were 65 years and older.
- **Estimated hospitalization rates were 35/100,000 for the unvaccinated, 11/100,000 in those with first dose and 6/100,000 in those with second dose.**

Aug – Nov 2021: COVID-19 Hospitalizations

Total	Unvaccinated or First dose <3 weeks	Vaccinated, First dose => 3 weeks	Vaccinated, Second dose =>2 weeks
1512	1076	88	348
% of hospitalization cases	71.2%	5.8%	23.0%

- From August to November 2021, 31,029 cases were reported. 1,512 (4.9%) were hospitalized with 71.2% (1,076) unvaccinated.
- 2.6% (39) of the hospitalized cases were less than five years and 0.7% (11) were 5-11 years old.
- Of the 88 hospitalized cases with the first dose, 55.7% (49) had comorbid conditions and 42.0% (37) were 65 years and older.
- Of the 348 hospitalized cases with the second dose, 60.3% (210) had comorbid conditions and 74.4% (259) were 65 years and older.

November 2021: COVID-19 ICU Admissions

Total	Unvaccinated or First dose <3 weeks	Vaccinated, First dose => 3 weeks	Vaccinated, Second dose =>2 weeks
43	27	1	15
% of ICU cases	62.8%	2.3%	34.9%
Estimated SK ICU rate/100,000 - denominator based on receipt of one dose or completed series			
Estimated ICU cases/100,000	8	1	2

- Of the 3,361 cases in November, 43 (1.3%) cases were admitted to ICU with 62.8% (27) unvaccinated. Of these 43 ICU cases, one (1) case was 12-19 years and one (1) case was 11 years old and younger.
- Of the 15 hospitalized cases with the second dose, 33.3% (5) had comorbid conditions and 53.3% (8) of cases were 65 years and older.
- **Estimated ICU rates were 8/100,000 for the unvaccinated, 1/100,000 in those with first dose and 2/100,000 in those with second dose.**

Aug – Nov 2021: ICU Admissions

Total	Unvaccinated or First dose <3 weeks	Vaccinated, First dose => 3 weeks	Vaccinated, Second dose =>2 weeks
349	277	13	59
% of ICU cases	79.4%	3.7%	16.9%

- From August to November, there were 31,029 cases. 349 (1.1%) of these cases were admitted to ICU with 79.4% (277) unvaccinated.
- Four (4) cases admitted to ICU were less than five years and three (3) were 5-11 years old.
- Of the 13 ICU cases with the first dose, 76.9% (10) had comorbid conditions, and 30.8% (4) were 65 years and older.
- Of the 59 ICU cases with the second dose, 54.2% (32) had comorbid conditions, and 54.2% (32) were 65 years and older.

November 2021: COVID-19 Deaths

Total	Unvaccinated or First dose <3 weeks	Vaccinated, First dose => 3 weeks	Vaccinated, Second dose =>2 weeks
26	15	1	10
% of Death cases	57.7%	3.8%	38.5%
Estimated SK death rate/100,000 - denominator based on receipt of one dose or completed series			
Estimated deaths/100,000	5	1	1

- Of the 3,361 cases in November, 26 (0.8%) cases had fatal outcomes.
- Of the cases who died, 57.7% (15) were unvaccinated, 65.4% (17) were 65 years and older, and 34.6% (9) had a comorbid condition.
- There were no deaths in the under 20 years of age group.
- Of the 10 deaths with the second dose, 50.0% (5) had comorbid conditions and 70.0% (7) were 65 years and older.
- **Estimated death rates were 5/100,000 for the unvaccinated, 1/100,000 in those with first dose and one 1/100,000 in those with second dose.**

Aug – Nov 2021: COVID-19 Deaths

Total	Unvaccinated or First dose <3 weeks	Vaccinated, First dose => 3 weeks	Vaccinated, Second dose =>2 weeks
338	192	24	122
% of Death cases	56.8%	7.1%	36.1%

- Of the 31,029 cases reported from August to November, 338 (1.1%) had fatal outcomes. 56.8% (192) were unvaccinated, 53.0% (179) had comorbid condition, and 74.0% (250) were 65 years and older.
- There were no deaths in the under 20 years of age group.
- Of the 24 deaths among people with the first dose, 62.5% (15) had comorbid conditions and 75.0% (18) were 65 years and older.
- Of the 122 deaths among people with the second dose, 58.2% (71) had comorbid conditions, and 85.2% (104) were 65 years and older.

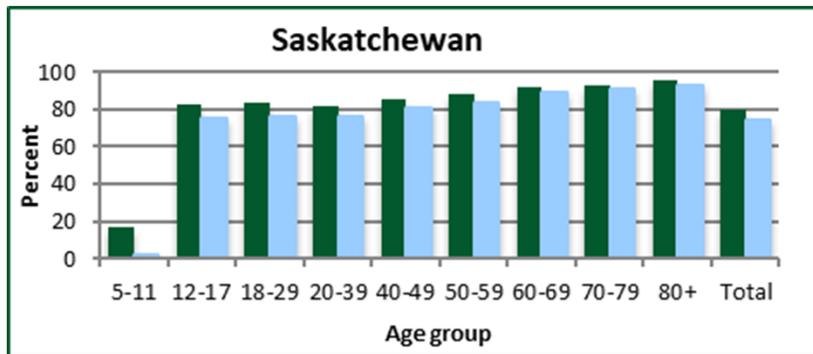
COVID-19 Hospitalizations – December 6, 2021

Age Group	Acute Care		ICU	
	COVID infectious	COVID Non-infectious	COVID infectious	COVID Non-infectious
11 and under	1	1		
12 to 19	1			
20 to 29	2	4		3
30 to 39	2	6	1	1
40 to 49	8	3	3	2
50 to 59	6	8	2	1
60 to 69	9	21	5	7
70 to 79	7	11	1	2
80+	8	7	1	
Total	44	61	13	16

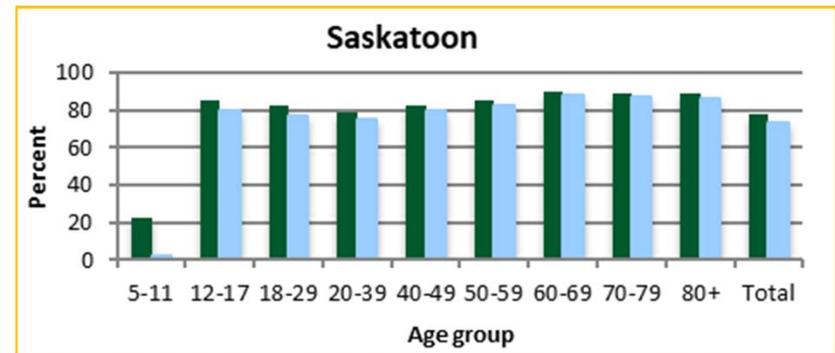
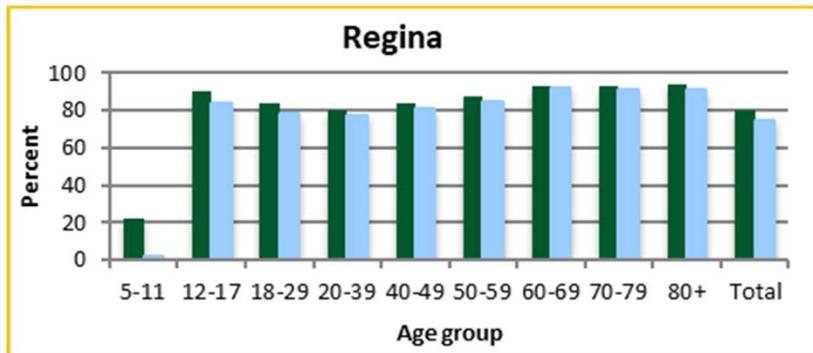
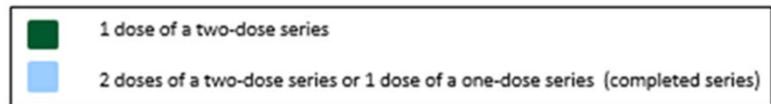
Data source: SHA dashboard, hospital census data as of December 6, 2021

- Six (13.6%) of the 44 infectious COVID-19 patients in acute care were less than 40 years old.
- One (7.7%) of the 13 infectious COVID-19 patients in ICU was less than 40 years old.
- In addition to SK ICUs, there was one resident in out-of-province ICU as of the date the data was received, and that case is not in the provincial numbers as above.

COVID-19 Vaccinations

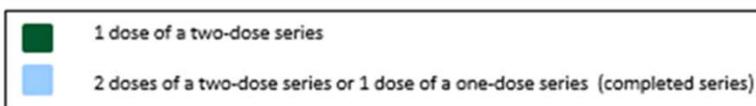
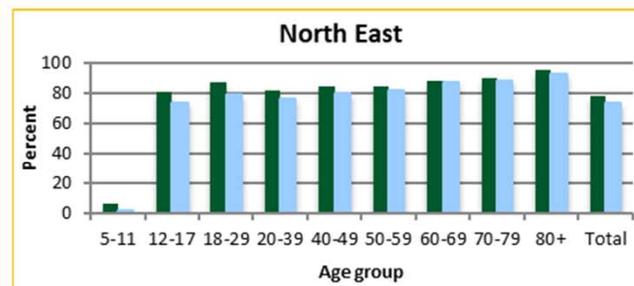
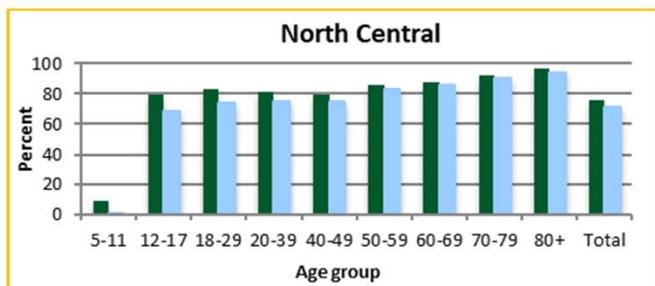
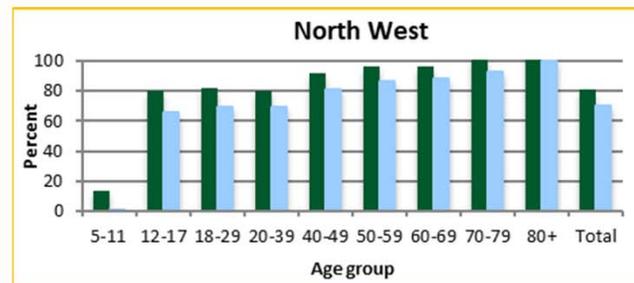
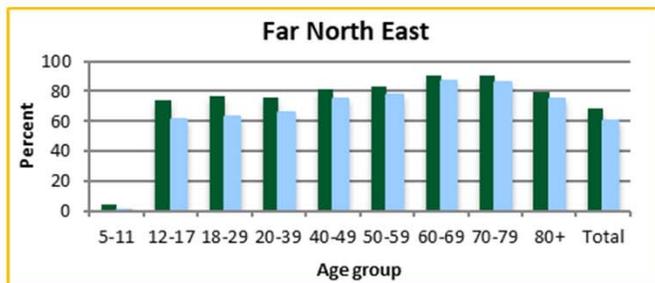
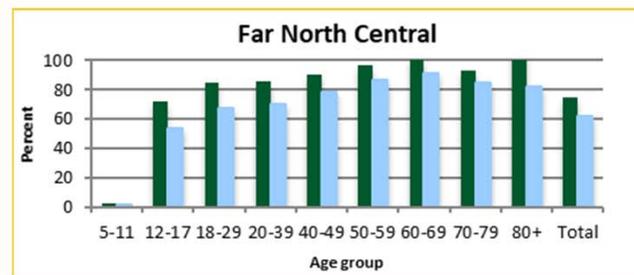
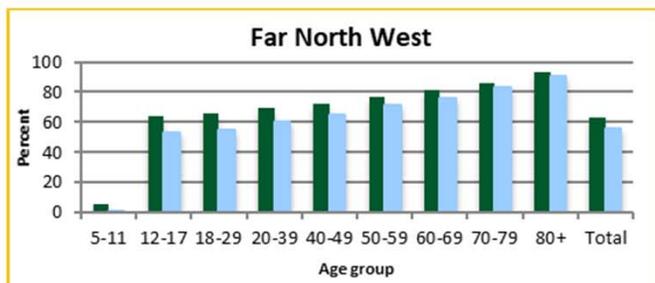


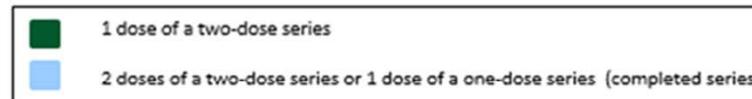
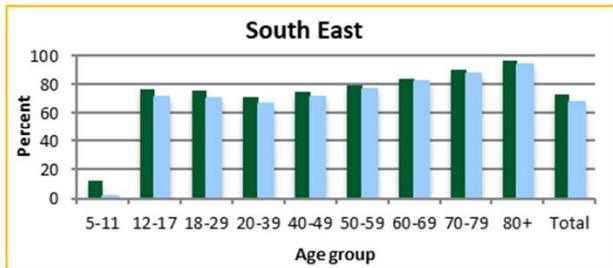
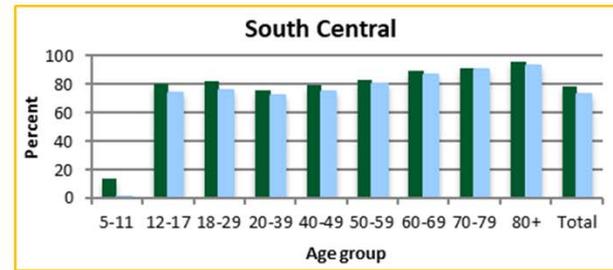
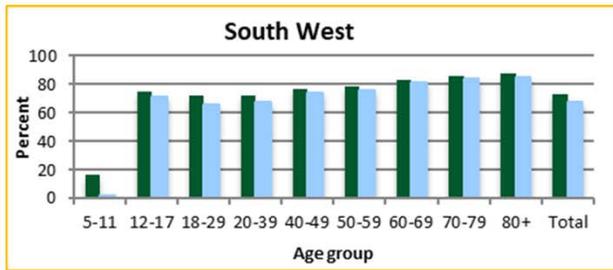
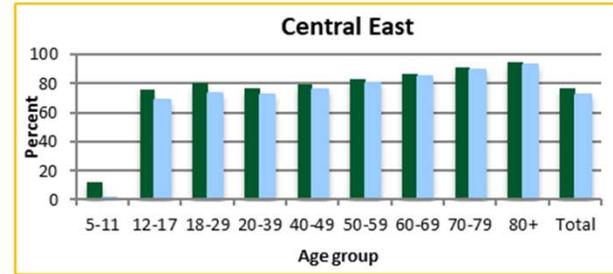
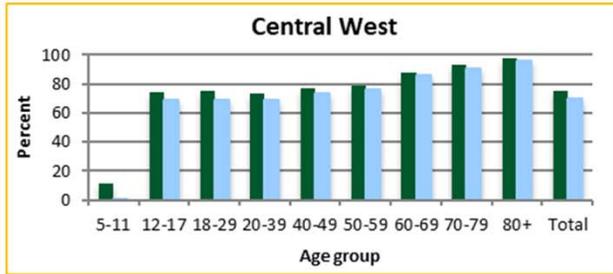
First and second dose uptake by population, provincially and by zone



As of November 28, 2021

Data source: Panorama November 30, 2021





Notes:

Comorbidities include hypertension, cardiovascular disease, diabetes, lung disease, pregnancy, obesity.

Data sources:

Numerator data source: Panorama, IOM and RRPL. Results are by reported date; *As of* November 30, 2021, and extracted on December 1, 2021.

Denominator data source: Panorama immunization registry extract on November 3, 2021 for doses administered up and including November 1, 2021.

Caveat:

- This is an estimate of the proportion of new cases by vaccination status based on those reported as immunized by November 1, 2021.
- Although the dates between cases and immunized are not perfectly aligned, it will provide an estimate of the share of cases among each vaccination group.
- Please note these proportions cannot be used to describe infection after immunization because time to build immunity has not been taken into account.
- A completed series is receipt of one dose of a one-dose vaccine or receipt of two doses of a two-dose series where the minimum interval criterion is met.
- ICU admission proportions and death proportions are based on small numbers and will be quite variable.

The actions taken by the people of Saskatchewan collectively will determine the outcome.

Simple measures reduce the risk of infection:

- Get the vaccine as soon as you are eligible to receive it
- Mask whenever you are away from your home
- Physically distance
- Stay home with even the mildest symptoms and get tested
- Reduce close contacts and non-essential travel
- Outdoors is better than indoors
- Wash hands/sanitize often

COVID-19 information is available at saskatchewan.ca/COVID19