

COVID-19 Integrated Epidemiology Situation Report

Week of April 17- 23, 2022

Purpose

This report provides COVID-19 surveillance information at the provincial and COVID-19 reporting zone levels on a weekly basis. Surveillance information is used for a variety of public health purposes including public communications and decision-making, both strategic and operational. The reporting week for most public health surveillance data runs from Sunday to Saturday and the data are analysed early the following week.

The hospital census data are compiled on a Wednesday to Wednesday cycle to ensure the most up-to-date information is available.

The report provides a snapshot of key indicators for the previous week. Where appropriate, longer term comparisons are offered to provide context on the profile of COVID-19 in Saskatchewan. New information is also introduced in this report, such as sentinel surveillance. Sentinel surveillance involves the collection of information about respiratory illness from a variety of sites across the province. For example, analysis of visits to emergency departments for COVID-like illness provides information about community transmission of respiratory illnesses in the province.

Highlights for the week

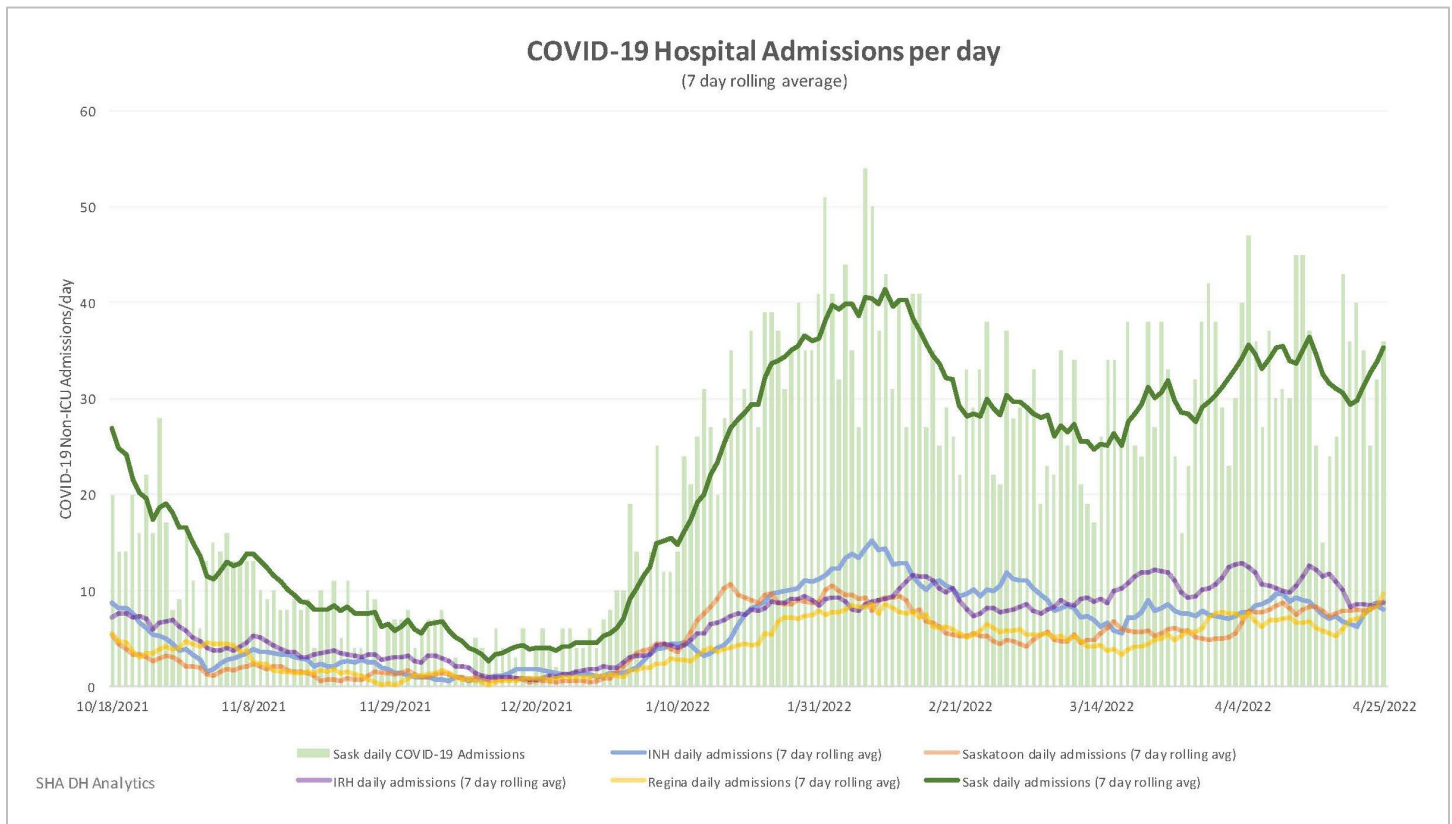
- 6,951 laboratory tests were performed in Saskatchewan reflecting 5.8 tests performed per 1,000 population.
- The number of tests was lower than the number of tests in the previous week (7,354).
- Slightly more than one in nine laboratory tests were positive (weekly test positivity of 11.7%), which was unchanged from the previous week (11.7%).
- 829 new cases were confirmed reflecting about 0.7 laboratory-confirmed cases per 1,000 population.
- The number of new laboratory-confirmed cases was lower than the number of new cases in the previous week (889).
- There were 264 new lineage results reported this week. Of the 264 variants of concern identified by whole genome sequencing, 100% were Omicron.
- The Omicron BA.2 sublineage accounted for 69.7% of the VOCs reported this week, which was higher compared to the previous week.
- There were 14 newly-reported COVID-19 deaths, 30.0% lower than in the previous week (20).
- During the two months period, from February 13 to April 16, 2022, the risk of hospitalization, ICU admission and death was five, nine and seven times higher respectively, among unvaccinated individuals compared to those vaccinated with three doses of a two-dose vaccine.
- There were 44.4 COVID-like illness patients per 1,000 emergency department visits which was higher than the average weekly rate in the previous six weeks (34.4 per week/1,000 visits).
- 22 confirmed COVID-19 outbreaks in long-term care and care home settings were reported this week.
- As of April 23, 2022, of the population five years and older, 85.8% received at least one dose of a two-dose COVID-19 vaccine and 80.8% completed a series.
- Among the population 18 years and older, 51.8% had received at least one booster vaccination.

Weekly COVID-19 Hospitalization Indicators: April 20, 2022 as compared to April 27, 2022

	20-Apr	27-Apr	Change from last reporting period
Total Covid Hospitalized	417	409	-8
Total Covid Adult ICU/ICU Surge	25	20	-5
Average Daily Admissions over past 7 days	31	32	+1
Total Covid Related Illness	160	166	+6
Total Incidental Covid Infection	225	231	+6
Total Patient Under Investigation	32	12	-20

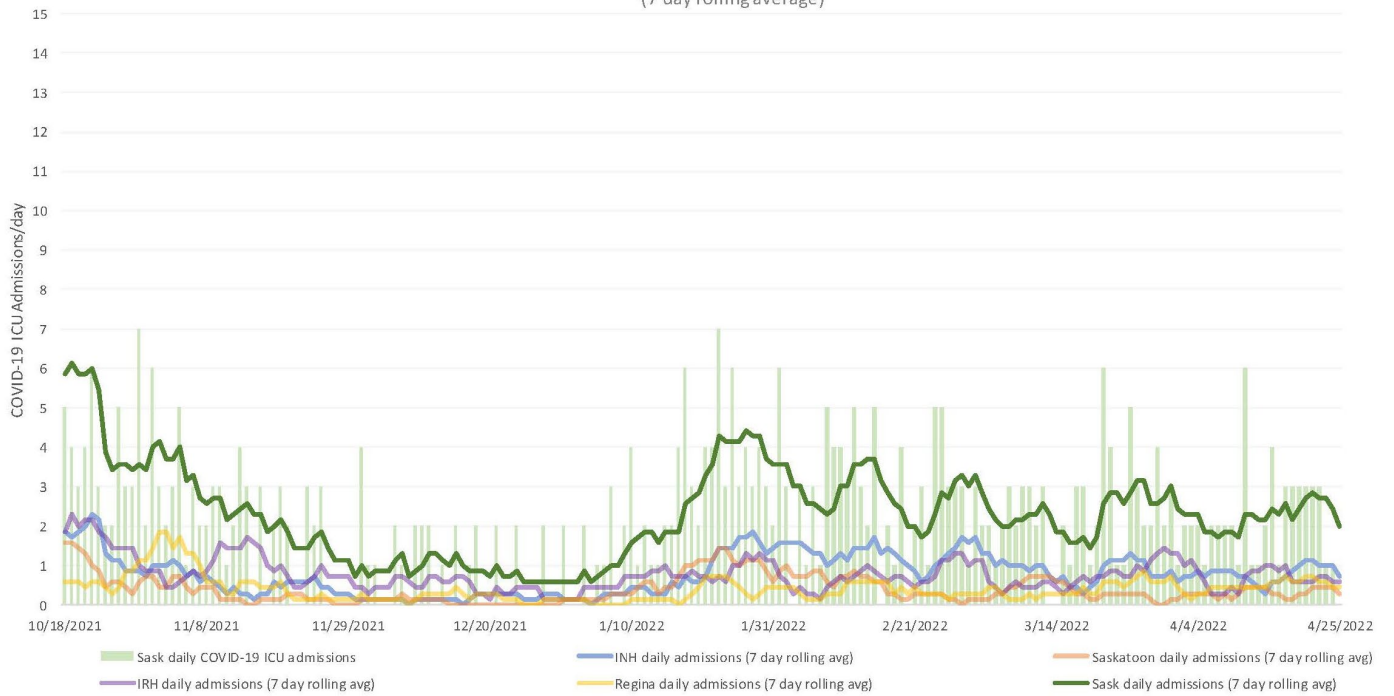
All data is reflective of the 12:00pm (noon) snapshot with the exception of the average daily admissions over past 7 days, which is reflective of the previous Wednesday to Tuesday reporting cycle.

Note: Because of the delay in date tested result, it affects the total number of COVID-19 admissions for a particular day. This lag in data impacts mostly the last couple of days from the day the report is updated.



COVID-19 ICU Admissions per day

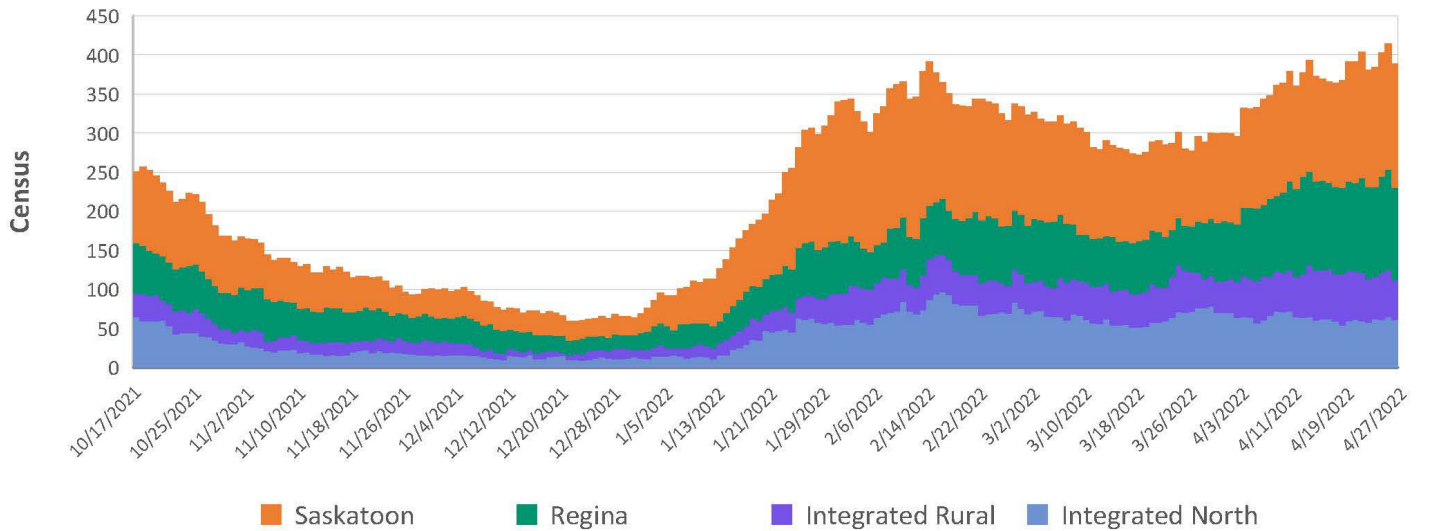
(7 day rolling average)



SHA DH Analytics

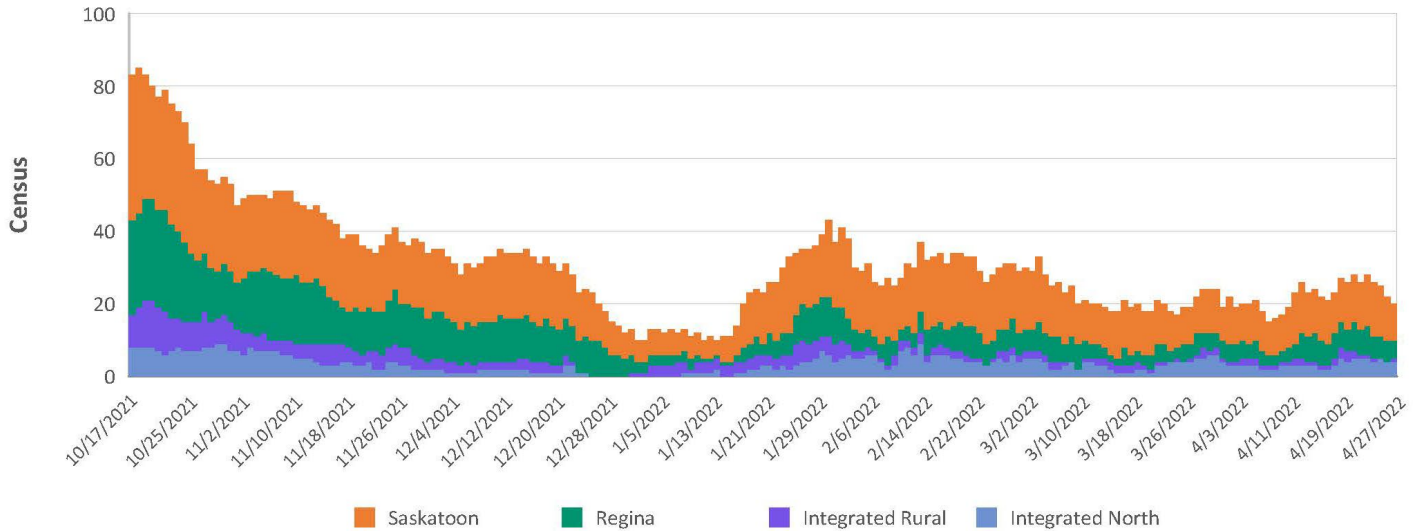
Saskatchewan Health Authority COVID-19 Daily Census at Noon by Facility ISA

COVID-19 Daily Census - Noon Snapshot For Inpatient



Saskatchewan Health Authority
 COVID-19 Daily Census at Noon
 by Facility ISA

**COVID-19 Daily Census - Noon Snapshot
 For ICU**



Distribution of Rapid Antigen Tests in Saskatchewan by Streams from November 2020 to April 22, 2022

Sector	SPSA	SHA	Sector Totals
SHA Internal	0	4,056,953	4,056,953
NITHA/ISC	2,554,085	433,720	2,987,805
Schools	1,104,875	1,390,000	2,494,875
Congregate Living	247,905	427,082	674,987
Law Enforcement & Fire Depts.	164,380	37,440	201,820
EMS	0	15,615	15,615
Test to Protect & Unclassified	0	310,120	310,120
Public Distribution Centres	7,826,085	1,372,660	9,198,745
Total Tests:	11,897,330	8,043,590	19,940,920

- There are currently 659 public distribution centres in the province. The full list is available at <https://www.saskatchewan.ca/government/health-care-administration-and-provider-resources/treatment-procedures-and-guidelines/emerging-public-health-issues/2019-novel-coronavirus/testing-information/rapid-testing/locations-for-rapid-antigen-self-test-kits>
- Previously reported rapid testing tables included all rapid test types, including Abbot ID Now tests which are a rapid PCR test used exclusively in healthcare settings. The table has been updated for the week ending March 31 to report rapid antigen tests only.

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A. Laboratory Surveillance

Overview of COVID-19 Laboratory Tests

Table 1: Summary of COVID-19 laboratory tests for the week of April 17 to 23, 2022, by zone

Zone	Current Week (April 17 to 23, 2022)			Previous Week (April 10 to 16, 2022)			Change from Previous Week	
	Total Number of Tests Performed	% Tested Positive*	Tests performed per 1,000 population	Total Number of Tests Performed	% Tested Positive	Tests performed per 1,000 population	Test Positivity	Tests performed per 1,000 population
FNW	143	2.8%	4.8	142	10.6%	4.8	↓ -7.8	→ 0.0
FNC**	20	10.0%	7.6	20	-5.0%	7.6	↑ 15.0	→ 0.0
FNE	122	9.8%	5.0	86	3.5%	3.5	↑ 6.3	↑ 1.5
NW	302	8.3%	3.7	342	9.6%	4.2	↓ -1.3	↓ -0.5
NC	257	8.6%	2.9	295	10.5%	3.3	↓ -1.9	↓ -0.4
NE	185	6.5%	4.5	218	10.1%	5.2	↓ -3.6	↓ -0.7
ST	1,286	14.7%	3.8	1,402	14.7%	4.1	→ 0.0	↓ -0.3
CW	121	16.5%	3.3	110	16.4%	3.0	↑ 0.1	↑ 0.3
CE	456	15.6%	4.6	543	12.2%	5.5	↑ 3.4	↓ -0.9
RE	473	14.0%	1.7	540	11.5%	2.0	↑ 2.5	↓ -0.3
SW	160	8.1%	4.1	185	14.1%	4.8	↓ -6.0	↓ -0.7
SC	295	15.9%	4.9	277	13.4%	4.6	↑ 2.5	↑ 0.3
SE	327	15.9%	3.7	270	13.7%	3.0	↑ 2.2	↑ 0.7
Unknown	2,804	9.9%		2,924	10.5%		↓ -0.6	
SK	6,951	11.7%	5.8	7,354	11.7%	6.1	→ 0.0	↓ -0.3

Source: RRPL Daily Test Count Table by new zones, extracted April 25, 2022; Covered Population, 08-Jul-2021 Ministry of Health version (2021 Version 1).

As of February 7, 2022 RRPL PCR testing was reserved for populations deemed to be at an elevated risk for severe outcomes (see details in Technical Notes)

*Test positivity is based on the number of tests that were positive and does not necessarily equal the number of cases in Table 2.

** Test positivity result for FNC zone for the previous week was associated with retraction of one (1) previously confirmed case by the SHA due to one or more of the following reasons: identification of cases from out of province, rejection of specimens, or amendment of reports.

For the week of April 17 – 23, 2022:

- 6,951 laboratory tests were performed in Saskatchewan.
- The number of tests per 1,000 population was 5.8. This was lower than the previous week (April 10 to 16, 2022) by 0.3 tests per 1,000 population. It was also lower than the average for the previous four weeks (March 20 to April 16, 2022) by 0.5 tests per 1,000 population where the weekly average rate was 6.3 tests per 1,000 population.
- The Far North Central zone had the highest testing rate (7.6 tests per 1,000 population). The Regina zone had the lowest testing rate (1.7 tests per 1,000 population).
- 11.7% of tests in the province were positive. This was equal to the previous week (April 10 to 16, 2022), but lower than the average for the previous four weeks (March 20 to April 16, 2022) by 0.8 percentage points where the average was 12.5%.
- The Central West zone (16.5%) had the highest test positivity. The Far North West zone had the lowest test positivity (2.8%).

Overview of COVID-19 Laboratory-Confirmed Cases

Table 2: Summary of new laboratory-confirmed COVID-19 cases per 1,000 population for the week of April 17 to 23, 2022 by zone

Zone	New cases		Previous Week		Change in Cases per 1,000 from Previous Week	Weekly Rate in Previous Four Weeks		Change from Previous 4-week Rate
	Confirmed cases	Cases ¹ per 1,000	Confirmed cases	Cases ¹ per 1,000		Confirmed cases	Cases ¹ per 1,000	
FNW	6	0.2	19	0.6	↓ -0.4	19	0.6	↓ -0.4
FNC	2	0.8			↑ 0.8	1	0.3	↑ 0.5
FNE	31	1.3	7	0.3	↑ 1.0	14	0.6	↑ 0.7
NW	47	0.6	66	0.8	↓ -0.2	99	1.2	↓ -0.6
NC	44	0.5	55	0.6	↓ -0.1	52	0.6	↓ -0.1
NE	23	0.6	31	0.7	↓ -0.1	38	0.9	↓ -0.3
ST	231	0.7	260	0.8	↓ -0.1	282	0.8	↓ -0.1
CW	26	0.7	38	1.0	↓ -0.3	37	1.0	↓ -0.3
CE	92	0.9	90	0.9	→ 0.0	111	1.1	↓ -0.2
RE	141	0.5	137	0.5	→ 0.0	188	0.7	↓ -0.2
SW	16	0.4	33	0.9	↓ -0.5	25	0.6	↓ -0.2
SC	55	0.9	50	0.8	↑ 0.1	56	0.9	→ 0.0
SE	72	0.8	58	0.6	↑ 0.2	75	0.8	→ 0.0
Pending	43		45			47		
SK	829	0.7	889	0.7	→ 0.0	1,041	0.9	↓ -0.2

Source: RRPL line list April 25, 2022.

¹ Proportion per 100,000 calculated using the Saskatchewan 2021 Covered Population, 08-Jul-2021 Ministry of Health SAS version (2021 Version 1)

Data should be interpreted with caution because they do not include cases detected by home rapid-antigen-test kits.

For a given week, the number of cases in Table 2 can be different from the number of tests used to calculate test positivity in Table 1, because the RRPL test dates may be in a different week than case dates used in Panorama, and may also include cases identified in laboratories other than the RRPL.

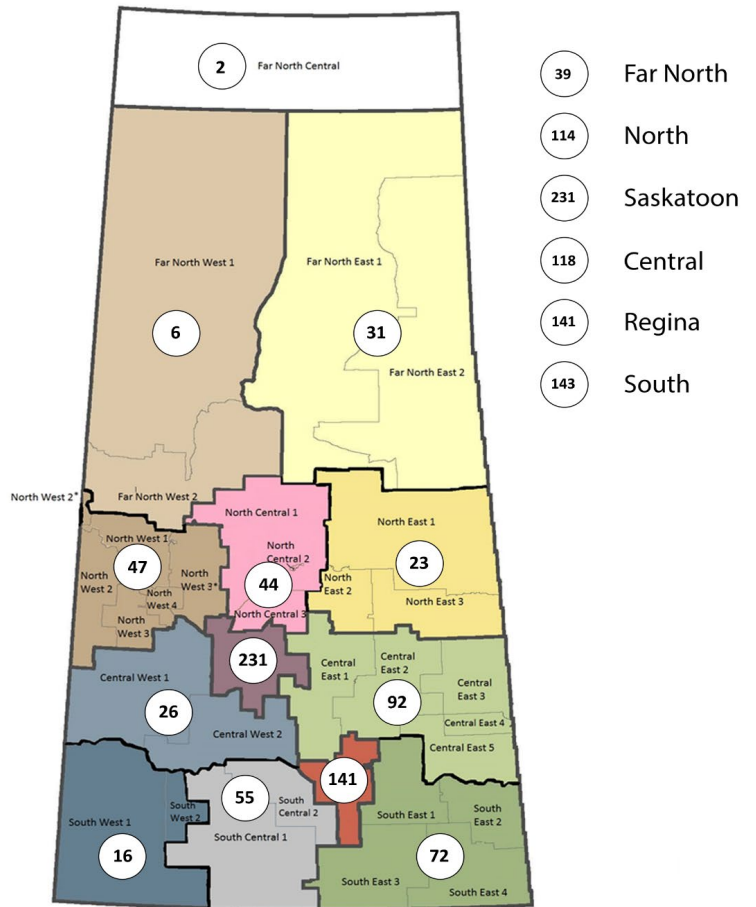
For the week of April 17 – 23, 2022

- 829 new cases were confirmed by a positive laboratory test.
- The proportion of new laboratory-confirmed cases was 0.7 per 1,000 population, unchanged from last week.
- It was lower than the average weekly rate for the previous four weeks (March 20 to April 16, 2022) by 0.2 cases per 1,000 population.
- The highest proportion of new cases for the week was in the Far North East zone, at 1.3 per 1,000 population. The lowest proportion was in the Far North West (0.2 per 1,000 population).
- Compared with last week's proportion of cases, four zones increased: FNC, FNE, SC, and SE. The remaining zones decreased or remained unchanged.
- Rates should be interpreted with caution because they do not include cases detected by home rapid-antigen test kits.

Figure 1: Map of new laboratory-confirmed COVID-19 cases by zone and area for the week of April 17 to 23, 2022

For the week of April 17 to 23, 2022:

- 39 new cases in the Far North (FNW, 6 cases; FNC, 2 cases; FNE, 31 cases)
- 114 new cases in the North (NW, 47 cases; NC, 44 cases; NE, 23 cases)
- 231 new cases in the Saskatoon area
- 118 new cases in the Central area (CW, 26 cases; CE, 92 cases);
- 141 new cases in the Regina area; and
- 143 new cases in the South (SW, 16 cases; SC, 55 cases; SE, 72 cases).
- 43 new cases still have pending residence information.



Source: RRPL line list April 25, 2022.

The zones include cases reported by First Nations (FN) jurisdictions based on the location of the FN community.

Far North – Far North West, Far North Central, Far North East; North – North West, North Central, North East; Saskatoon; Central – Central West, Central East; Regina; South – South West, South Central, South East.

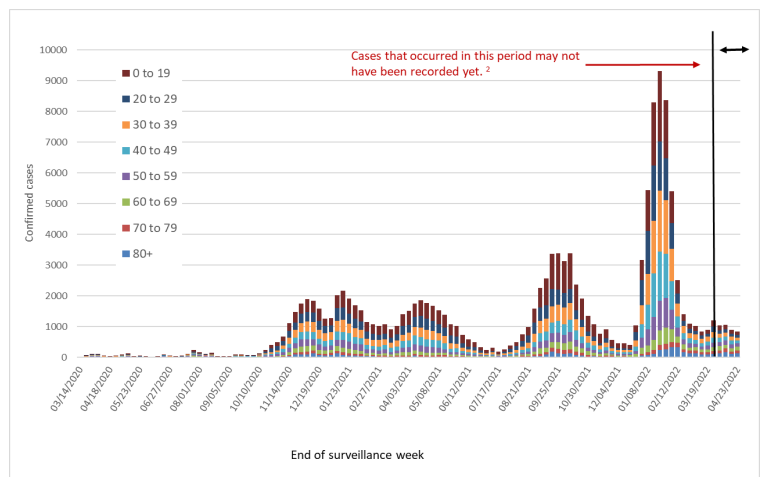
Figure 2: Laboratory-confirmed cases¹, by age group and week, March 8, 2020 to April 23, 2022

- From March 8, 2020 to April 23, 2022, there were 135,926 laboratory-confirmed cases.
- Close to half of the cases were between 20 and 49 years of age and over one quarter were younger than 20 years of age.

Source: Panorama IOM April 25, 2022.

¹ Panorama IOM record.

² Due to data entry lag, cases for this period may be under-reported and not captured in this figure.



Variants of Concern

Table 3: Distribution of Variants of Concern (VOC) among sequenced COVID-19 cases for the week April 17 to 23, 2022 by zone

MoH Zone	Current week (April 17 – 23 , 2022)				Previous week (April 10 – 16 , 2022)			
	Omicron VOC		Delta VOC	Total	Omicron VOC		Delta VOC	Total
	BA.2 sublineage	Other sublineage			BA.2 sublineage	Other sublineage		
Far North West	80.0%	20.0%		5	66.7%	33.3%		3
Far North Central	100%			1				0
Far North East	100%			1	16.7%	83.3%		6
North West	55.6%	44.4%		9	80.0%	20.0%		75
North Central	75.0%	25.0%		16	78.9%	21.1%		19
North East	37.5%	62.5%		8	55.6%	44.4%		9
Saskatoon	78.7%	21.3%		61	55.8%	44.2%		148
Central West	63.6%	36.4%		11	83.3%	16.7%		6
Central East	58.8%	41.2%		34	59.2%	40.8%		71
Regina	73.7%	26.3%		57	59.3%	40.7%		108
South West	100%			4	83.3%	16.7%		12
South Central	65.5%	34.5%		29	51.5%	48.5%		33
South East	83.3%	16.7%		18	56.1%	43.9%		41
Pending	30.0%	70.0%		10	62.5%	37.5%		8
Total	69.7%	30.3%	0	264	61.5%	38.5%	0	539

Source: Panorama April 25, 2022.

Notes:

Results are based on the date Variants of Concern (VOC) were reported by the provincial laboratory (RRPL).

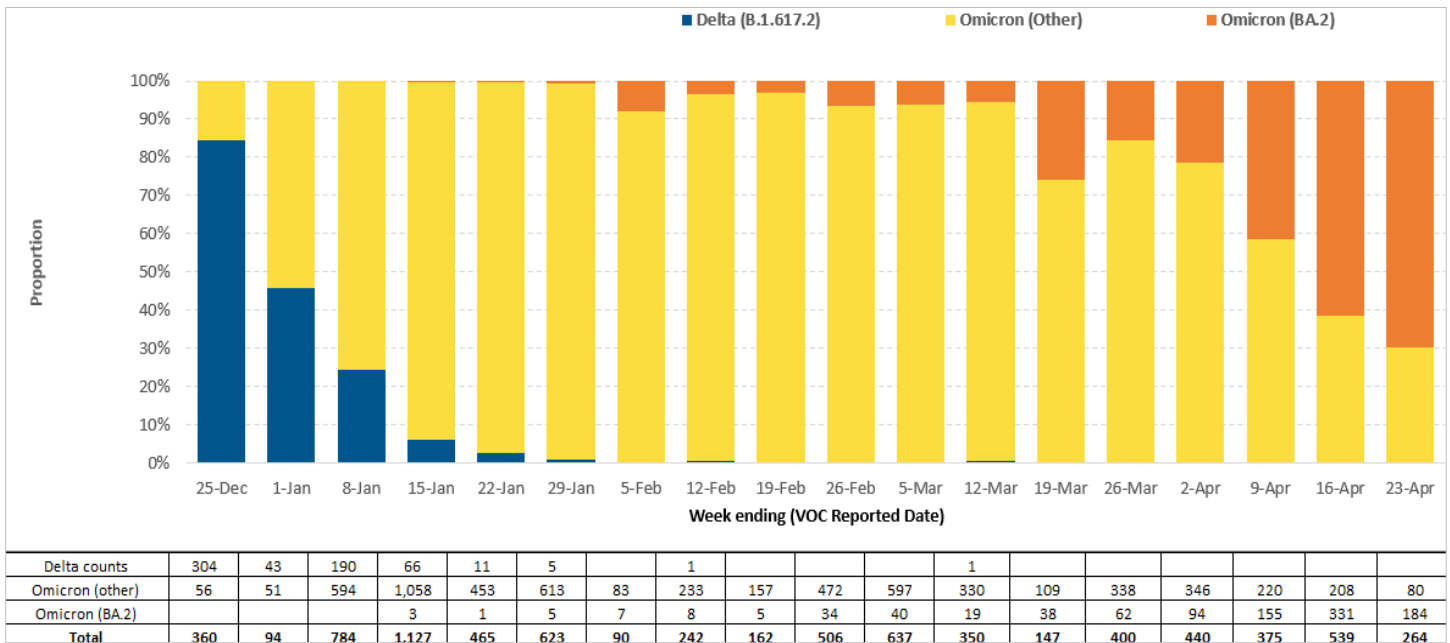
MoH zones are assigned based on information as available in the Panorama database.

Pending cases are those whose geographical information is not available at the time of reporting.

The number of positive tests submitted for sequencing changes from week to week.

- There were 264 VOCs reported during the current week (April 17 - 23) compared to 539 in the previous week (April 10 - 16).
- 69.7% of Omicron VOC were of sublineage BA.2 which was higher in comparison to the last reporting week.
- Of the total VOCs reported in the past two weeks, 100% were of Omicron lineage.

Figure 3: Distribution of VOCs among sequenced COVID-19 cases (N = 7,605) between weeks ending on December 25, 2021 and week ending on April 23, 2022



Data source: Panorama IOM; data extraction: April 25, 2022

VOC reported date are based on date VOC reported by the provincial lab (RRPL)

Results are based on the number of samples sequenced and the date VOCs were reported by RRPL.

- The Omicron VOC was first reported in South Africa and the World Health Organization designated Omicron as a variant of concern on November 26, 2021.
- Of all 7,605 VOCs reported between December 19, 2021 and April 23, 2022, 8.2% (621) were Delta VOC and 91.8% (6,984) were Omicron VOC.
- No Delta VOC cases were reported since mid-March 2022.
- The Omicron VOC rapidly increased since the first week of January and became the dominant variant in Saskatchewan.

B. Description of Severe COVID-19 Cases

Deaths

Table 4: Number and proportion of COVID-19 deaths newly reported during the week of April 17 to 23, 2022

- For the week of April 17 to 23, 2022, there were 14 newly-reported COVID-19 deaths.
- Almost half (6), of the newly reported deaths were in the Saskatoon zone.
- Of this week's newly reported deaths, 10 occurred within the week. Four (4) deaths occurred in previous weeks (February 20 to April 15, 2022), but were reported this week.
- Death rates should be interpreted with caution because of small numbers.

Zone	Deaths	
	Number	¹ Deaths per 100,000 population
FNW		
FNC		
FNE		
NW	1	1.2
NC	1	1.1
NE	1	2.4
ST	6	1.8
CW		
CE	3	3.0
RE	1	0.4
SW		
SC	1	1.7
SE		
Pending		
SK	14	1.2

Source: Panorama IOM April 25, 2022.

¹Proportion per 100,000 calculated using the Saskatchewan 2021 Covered Population, 08-Jul-2021 Ministry of Health SAS version (2021 Version 1).

This week's newly reported deaths did not necessarily occur in this past week. They may have occurred in previous weeks but only reported in this week.

Table 5: Age and sex distribution of deaths with COVID-19, newly reported the week of April 17 to 23, 2022

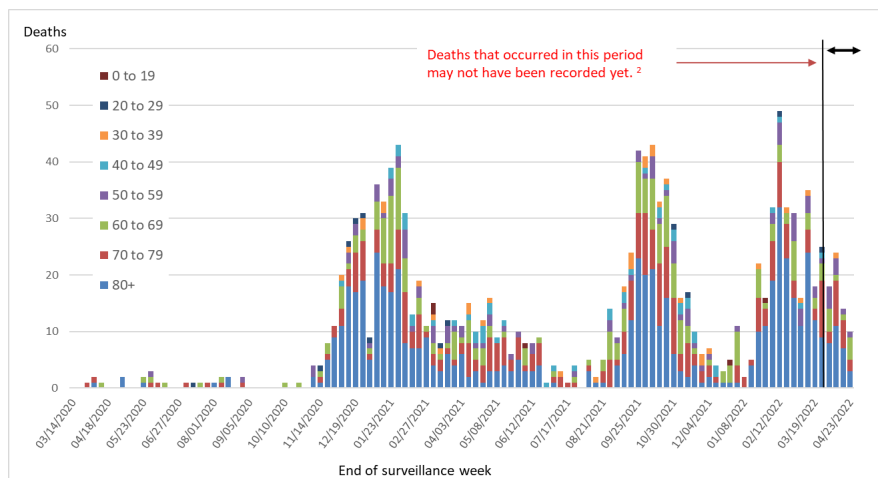
- For the week of April 17 to 23, 2022, there were 14 newly-reported COVID-19 deaths.
- Two (2) of the newly reported deaths, 14%, were among those 59 years and younger.
- Seven (7) of 14, one-half of the newly reported deaths, were among those 70 years of age or older.
- Over 60% of the total deaths were recorded among males this week.
- Of this week's newly reported deaths, 10 occurred within the week. Four (4) deaths occurred in previous weeks (February 20 to April 15, 2022), but were reported this week.

Age and sex distribution		Deaths	
		n	%
Age (years)	19 and younger		
	20 to 39		
	40 to 59	2	14
	60 to 69	5	36
	70 to 79	2	14
	80 or older	5	36
	TOTAL	14	100
Sex	Female	5	36
	Male	9	64
	TOTAL	14	100

Source: Panorama IOM April 25, 2022

Figure 4: Deaths¹ in COVID-19 cases, by age group and week of death, March 8, 2020 to April 23, 2022

- From March 8, 2020 to April 23, 2022, there were 1,310 cases with a fatal outcome.
- Over one in five deaths (290 or 22.1%) were in the 70 to 79 year age group and close to one half (603 or 46.0%) were in the 80 years and older group.
- Five (5) or 0.4% of deaths were reported in the age group 19 years and younger.



Source: Panorama IOM April 25, 2022

¹Death means the Panorama IOM record reported outcome-fatal.

²Due to data entry lag, deaths for this period may be under-reported and not captured in this figure.

Pre-existing Conditions

Table 6: Most common pre-existing conditions among severe COVID-19 cases in Saskatchewan between, March 8, 2020 and April 23, 2022**

- There were 2,952 severe cases who reported having one or more underlying pre-existing conditions.
- Of the cases with underlying condition, the most common pre-existing condition was hypertension (54.4%).

Co-morbidity	Number of cases (N=2,952*)	Percent
Hypertension	1,607	54.4%
Diabetes	1,332	45.1%
Heart Disease	1,088	36.9%
Lung Disease	822	27.8%
Obesity	233	7.9%
Pregnancy	62	2.1%

Source: Panorama IOM April 25, 2022

Note - Some cases reported recently are yet to be reported in Panorama.

*Number of cases represents unique clients who can have more than one underlying condition.

** Severe cases indicate those cases where case investigation showed admitted to hospital and/or ICU, and death.

Relative Risk by Vaccination Status

Figure 5: Comparison of relative risk of hospitalization, ICU admission and death among Saskatchewan residents by vaccination status, from February 13, 2022 to April 16, 2022



Source: SHA Digital Health Analytics

Unvaccinated - Individuals with no record of vaccine received or vaccinated with first dose but less than 21 days from receiving the first dose. Vaccinated with 2 doses - Individuals who have received their second dose for more than 14 days or if their third dose is less than 14 days. Vaccinated with 3 doses - Individuals who have received their third dose for more than 14 days.

Ages 12 years and older

Does not include cases with partial vaccination.

- This chart is updated every two weeks. An updated version of this chart will be included in the April 24-30 weekly report.
- Overall in Saskatchewan, the rates of COVID-19 hospitalization, ICU admission and deaths are higher among people who are unvaccinated than among people with two or three vaccinations.
- In each age group, rates of hospitalization, ICU admission and death are higher among unvaccinated individuals compared to those who have received two or three doses.
- Lower rates of severe outcomes in the three dose group compared to the two dose group are suggestive of the added benefits of the booster dose.
- The predominant variant during the observation period was Omicron, an indication that being fully vaccinated and boosted provides protection against the Omicron variant.
- Unvaccinated people were about seven times more likely to die than people who were vaccinated with three doses when adjusted for age.

C. Sentinel Surveillance

Sentinel surveillance, or community surveillance, uses information from health-related sources that reflects human behaviour among people who become ill but who may not be lab tested or become clinically severe with an infection. For example, these individuals may visit an emergency department or call HealthLine seeking health-related advice.

Respiratory viruses detected by the provincial laboratory network in the week of April 17-23 were respiratory syncytial virus (RSV) 20% positive tests, enterorhinovirus (13% positive tests) and influenza (11% positive tests). This compared to COVID-19 with 11.7% of tests that were positive.

Almost two-thirds (62%) of RSV this week was among children aged 0 to 4 years, mainly in Saskatoon and the far north area of the province. Almost half (46%) of influenza A was among children (ages 0-19 years). Another 43% was among adults 20-64 years. Lab-confirmed influenza cases were largely in Meadow Lake area and the far north area but also scattered geographically.

Emergency Department (ED) visits related to COVID-19-like illness (CLI)

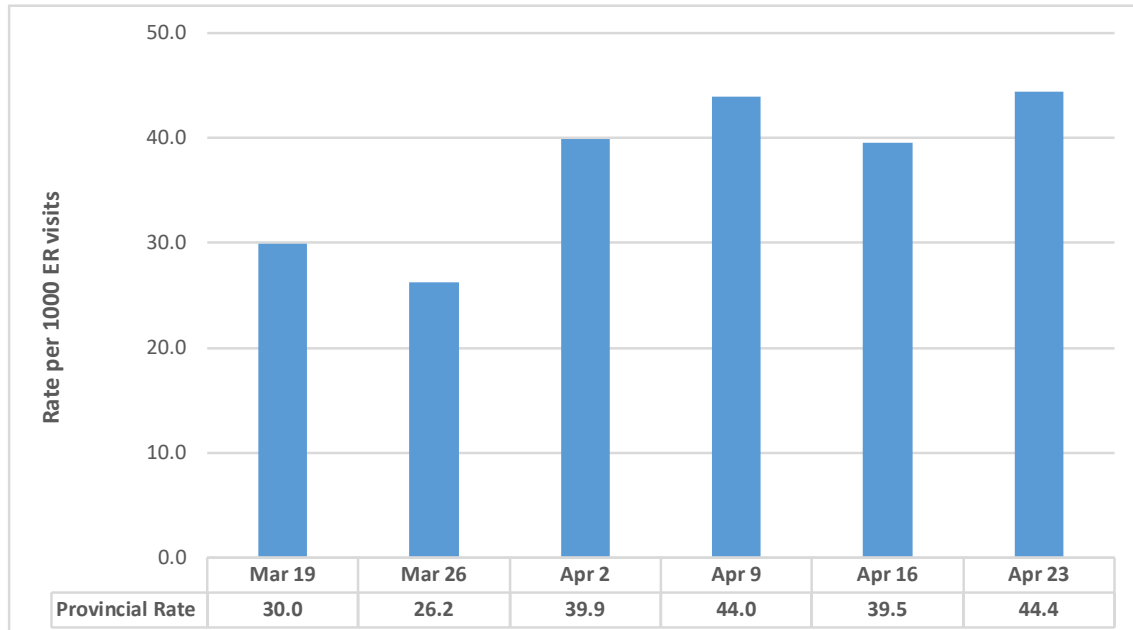
ED visit data regarding CLI is one component of community-based respiratory illness surveillance. Visitors may access EDs as their primary health care service or come when health provider offices are closed.

Table 7: COVID-19-like illness (CLI) surveillance (rate per 1,000 visits) in emergency departments by zone and week, March 19 to April 23, 2022

COVID-like patients per 1000 ER visits	COVID surveillance zone	Mar 19	Mar 26	Apr 2	Apr 9	Apr 16	Apr 23
Provincial Rate		30.0	26.2	39.9	44.0	39.5	44.4
KYHR	Far Northwest	15.6	11.9	15.9	32.5	32.5	43.3
AHA	Far North Central	No report	No report	No report	No report	No report	No report
MCHR	Far Northeast	No report	No report	No report	No report	No report	No report
PNHR	North West	27.2	29.7	39.4	33.6	37.3	30.5
PAHR	North Central	No report	No report	No report	No report	No report	No report
KTHR	North East	328.1	156.6	205.5	337.2	355.3	350.6
SKHR	Saskatoon	9.7	15.0	20.7	20.4	28.3	25.4
HHR	Central West	50.0	No report	80.6	103.7	34.2	277.8
SHR	Central East	No report	No report	No report	No report	No report	No report
RQHR	Regina	23.2	39.0	42.3	38.0	21.6	42.4
CHR	South West	136.4	142.9	65.2	78.9	0.0	No data
FHHR	South Central	0.0	0.0	0.0	No report	0.0	No data
SCHR	South East	162.2	No report	166.7	177.6	120.9	132.7
Age Group							
Preschool	1-4 years	68.4	52.0	66.4	89.8	43.6	78.8
School age	5 -19 years	28.9	31.4	25.3	26.6	39.4	44.0
Working age	20-64 years	24.1	19.0	33.2	38.0	37.8	36.6
Seniors	65 + years	27.1	25.6	49.5	43.5	41.8	46.5

Source: Emergency department surveillance data, April 25, 2022. No report: no report was submitted by the zone. No data: no data reported by ED

Figure 6: COVID-19-like illness surveillance in emergency departments, March 19 to April 23, 2022



Source: Emergency department surveillance data, April 25, 2022. CLI may present as the gradual onset of respiratory illness with fever and cough or one or more of the following – severe headache, chills, sore throat, arthralgia, myalgia, gastrointestinal disorder, prostration or shortness of breath which could be due to COVID-19.

- Seven of 13 zones submitted data in the reporting week ending April 23. This week's provincial rate of 44.4 COVID-like illness patients per 1,000 visits remained higher than the previous six week average of 34.4/1,000 visits.
- This week's rate represents 154 COVID-like illness patients among 3,465 visitors to the EDs.
- This week's preschool age rate of 78.8/1,000 visits was a sharp increase from last week (43.6/1,000 visits) and above the average rate of 65.5/1,000 visits over the previous six weeks.
- The school age rate at 44.0/1,000 visits is an increase over the last week and higher than the previous six-week average rate of 30.4/1,000 visits.
- The working age group rate at 36.6/1,000 visits was similar to the previous three weeks but higher than the average rate in previous six weeks (28.9/1,000 visits).
- The seniors' age group rate at 46.5/1,000 visits was also similar to the previous three weeks but higher than the previous six-week average rate of 34.3/1,000 visits.

HealthLine Callers with COVID-19-like Illness (CLI)

Table 8a: Rate of callers to HealthLine with respiratory-like symptoms per 1,000 calls by integrated service area (ISA)

- In the week ending April 24, of the 1,564 calls to HealthLine 811, 198 callers reported respiratory symptoms similar to COVID-19 and other common respiratory viral infections.
- The provincial rate was 126.6 callers per 1,000 calls, lower than 145.0/1,000 calls last week but marginally higher than the average rate in the six weeks prior (124.7/1,000 calls).
- Rate of callers with respiratory symptoms to HealthLine can fluctuate widely week over week, dependent on the number of ill people making calls to 811.

Integrated Service Area	Number of callers with symptoms	Rate per 1,000 calls
North East	24	131.9
North West	17	160.4
Regina	55	128.2
Saskatoon	70	126.1
South East	15	108.7
South West	17	110.4
Saskatchewan	198	126.6

Source: HealthLine Database April 25, 2022.

Table 8b: Weekly rate trend of callers to HealthLine with respiratory-like symptoms per 1,000 calls by integrated service area

- The rate of callers to HealthLine with respiratory-like symptoms was higher this week than the previous six-week average in all the Integrated Service Areas except Saskatoon and South East.
- The rate of callers with viral respiratory symptoms from an ISA to HealthLine fluctuates week over week. However there was a notable increase this week in

the North West ISA rate to 160.4 callers per 1,000 calls compared to the previous six week average of 129.8/1,000 calls and in the North East from 131.9/1,000 compared to 107.4/1,000 over the past six weeks.

Source: HealthLine Database April 25, 2022.

Integrated Service Area	20-Mar	27-Mar	3-Apr	10-Apr	17-Apr	24-Apr
North East	68.8	90.9	105.0	115.6	137.5	131.9
North West	116.8	133.3	177.4	110.3	142.9	160.4
Regina	92.6	121.5	165.7	134.9	131.1	128.2
Saskatoon	116.6	143.4	148.6	154.4	161.7	126.1
South East	117.0	141.5	149.6	83.8	181.8	108.7
South West	120.3	107.1	148.0	93.7	97.6	110.4
Province	103.5	126.5	150.5	128.2	145.0	126.6

D. Outbreak Surveillance

Table 9: New confirmed COVID-19 outbreaks in long-term care and other care home settings reported for the week of April 17 to 23, 2022, by zone

Surveillance Zones	# COVID-19 Outbreaks in LTC	# COVID-19 Outbreaks in care homes including personal care homes
Far North West		
Far North Central		
Far North East		
North West	2	
North Central		
North East		
Saskatoon	4	4
Central West	2	
Central East		
Regina	5	1
South West		
South Central		2
South East	2	
Total	15	7

Source: Outbreak line list, PHB, extracted April 25, 2022.

*By date of first notification.

- 22 confirmed new COVID-19 outbreaks in LTC and PCH settings were reported this week.
- 15 outbreaks were reported in long term care facilities. Outbreaks occurred in seven (7) personal care homes

Table 10: COVID-19 outbreaks in selected high risk settings, weeks ending March 19 to April 23, 2022

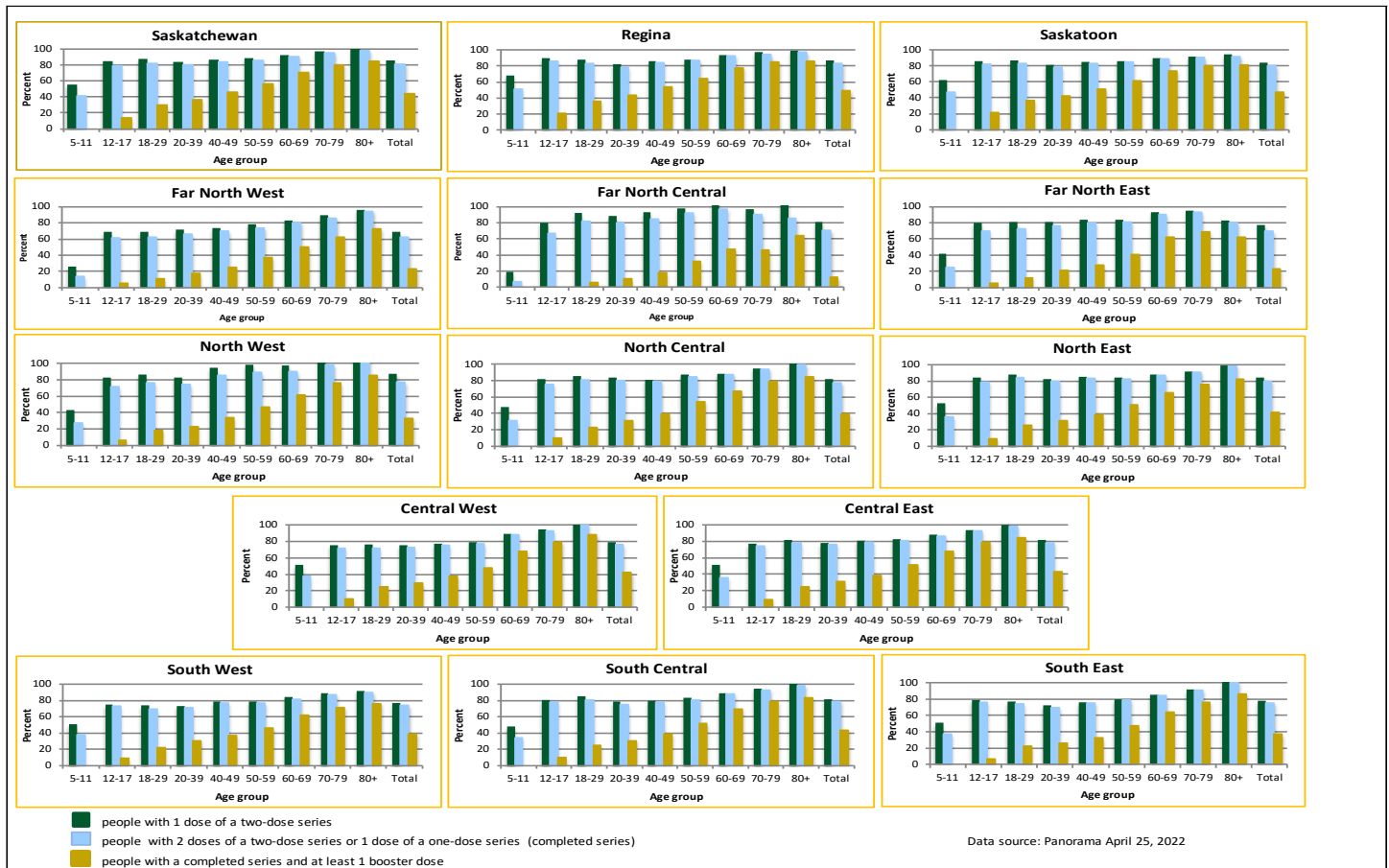
High risk setting	19-Mar	26-Mar	2-Apr	9-Apr	16-Apr	23-Apr	6-week total by setting
# COVID-19 Outbreaks in LTC	7	8	15	11	11	15	67
# COVID-19 Outbreaks in personal care homes, group homes, shelters	4	4	8	8	7	7	38
Total by week	11	12	23	19	18	22	105

Source: Outbreak line list, PHB, extracted April 25, 2022

- Over the past six weeks, sixty-seven (67) outbreaks occurred in long term care facilities, thirty-three (33) in personal care homes and five (5) in group homes. Seventy-seven (73%) of the 105 outbreaks are ongoing.
- Figures from previous weeks may change as outbreaks reported earlier as suspect have since been confirmed or outbreaks are entered to the Ministry's database.

E. Immunization

Figure 7: COVID-19 immunization coverage (% population 5 years and older) by age group and zone, up to and including April 23, 2022



Notes: Zone is based on the client's address in Panorama. People whose addresses cannot be mapped to a zone are counted only in the Saskatchewan total. The denominator used for coverage calculation is the Saskatchewan 2021 covered population (08-Jul-2021 Ministry of Health SAS version (2021 Version 1)). Completed series is defined as immunized with one dose of a one-dose vaccine or two doses of a two-dose vaccine where the minimum interval criterion is met. Booster doses are additional doses beyond the one or two-dose primary series, with the first additional dose administered 28 days or longer after primary series completion. Although certain sub-populations have been identified as requiring a three-dose primary series, they cannot be reliably identified in the Panorama immunization registry. These doses are therefore counted as booster doses. Lloydminster is in the North West zone. Some Alberta residents living in Lloydminster, AB are included in the numerator but they are not included in the denominator. This results in an overestimation of the percentage of the population immunized in the North West zone. Although proof of vaccination now allows for non-Health Canada approved vaccines (nonHCAVs), they are NOT included in the immunization coverage tables.

As of April 23, 2022:

- Of the population five years and older:
 - 85.8% received at least one dose of a two-dose COVID-19 vaccine, the same as the week earlier, April 16, 2022, and
 - 80.8% completed a series, the same as the week earlier.
- Among the population 12 years and older, 48.4% had received at least one booster, compared with 48.3% in the previous week.
- Among the population 18 years and older, 51.8% had received at least one booster, compared with 51.7% in the previous week.
- Among the youngest age group, five to 11 years of age, 56.5% received one dose and 41.0% completed their series, compared with 56.4% and 40.7% from the week earlier.
- Regina (82.7%), Saskatoon (80.2%), and North East (80.1%) are the only zones reporting over 80% of the eligible population with a completed series. All others are below 80%.

Table 11: Vaccine doses administered, by date and type of dose

Type of dose	Weekly doses - Date provided		Cumulative date provided
	April 17 to 23	Apr 10 to 16 *	Dec 15, 2020 to Apr 23, 2022
First of two	307	276	970,681
Second of two	513	382	912,271
Jansen single dose	5	6	2,240
Total primary series doses	825	664	1,885,192
First booster **	1,660	1,479	493,272
Second booster **	13,206	8,138	42,993
Additional boosters **	20	7	33
Total booster doses	14,886	9,624	536,298
TOTAL (including pediatric and boosters)	15,711	10,288	2,421,490
- of the total, all pediatric doses	508	348	107,498

* May not necessarily align with last week's report due to data cleaning

** Booster dose is defined as a dose received after completion of a one- or two-dose primary series and meeting the minimum interval criteria. Three-dose primary series cannot be reliably identified in the Panorama immunization registry and as a consequence these third doses will be misclassified as a booster dose.

- During the week of April 17 to 23, 2022, 15,711 doses of COVID-19 vaccine were administered, of which 508 (3.2%) were pediatric doses and 14,886 (94.7%) were booster doses.
- Since the start of the immunization campaign to April 23, 2022, 2.4 million doses of COVID-19 vaccine were administered.
- Of these, about 1.9 million (77.9%) were administered for a primary series, of which 107,498 were pediatric doses.

F. Abbreviations

General

CLI – COVID-19-like illness
 ED – emergency department
 FNIHB – First Nations and Inuit Health Branch
 ICU – intensive care unit
 IOM – Investigations and Outbreak Module – Panorama
 ISA – Integrated Service Area
 LTC – long-term care
 NA – not available
 NITHA – Northern Inter-Tribal Health Authority
 OOP – out of province
 PCR – polymerase chain reaction
 PHB – Population Health Branch
 SHA – Saskatchewan Health Authority
 SK – Saskatchewan
 SNP – single nucleotide polymorphism
 RRPL – Roy Romanow Provincial Laboratory
 WGS – whole genome sequencing
 WHO – World Health Organization

13 Zones

FNW – Far North West zone
 FNC – Far North Central zone
 FNE – Far North East zone
 NW – North West zone
 NC – North Central zone
 NE – North East zone
 ST – Saskatoon zone
 CW – Central West zone
 CE – Central East zone
 RE – Regina zone
 SW – South West zone
 SC – South Central zone
 SE – South East zone

G. Technical Notes

Case Definition and Methods Overview

Confirmed cases are people with laboratory confirmation of infection with the virus that causes COVID-19 using a Health Canada approved test or confirmed at a reference laboratory (NML or RRPL). It requires detection of at least one specific gene target by nucleic acid amplification tests (i.e., real-time PCR or nucleic acid sequencing).

Laboratory testing is reserved for priority populations at elevated risk for severe outcomes. More information on the priority populations may be found [here](#).

Statistics presented in this report represent counts and crude incidence rates for zones and aggregated to the provincial level.

Data sources are the provincially mandated Panorama database, the Roy Romanow Provincial Laboratory LabWare database, as well as local public health. Confirmed cases must meet the provincial case definition. Surveillance case definitions ensure uniform reporting to allow comparability of surveillance data. The definitions are not intended to be used for clinical or laboratory diagnosis or management of cases. Proportions are calculated using the 2021 SK covered population as the denominator.

The counts and rates presented in this summary report are dependent on the timely reporting by physicians and laboratories to the local Medical Health Officer and timely entry of notifiable disease information into Panorama IOM.

As the counts are constantly being updated, the numbers and rates calculated may differ from previous summary reports. This is a result of a combination of factors including late reporting, data cleaning and verification.

Data on COVID-19 cases use Panorama IOM as the primary source. However, in some instances when the case has not yet been entered into Panorama, the RRPL data becomes the source for the time being (e.g., age, sex, geography) until the case is eventually entered. Additionally, if certain data elements in Panorama are missing or unknown, RRPL also becomes the source to fill in the gaps where the information is available in the RRPL data.

The geographical assignment of cases follows the Panorama IOM rules for documenting geography, as opposed to the assignment of zones by RRPL. As a result, some RRPL location/geography of cases and testing information may not match Panorama IOM (testing information cannot be reconciled because negative tests are not entered into IOM). Panorama IOM geography guidelines take into consideration

the client's residence in a certain period, the residence upon diagnosis, and other factors. First Nations individuals under the jurisdiction of the First Nations and Inuit Health Branch (FNIHB) or the Northern Inter-Tribal Health Authority (NITHA) are included in the geographic areas.

Notifiable diseases are generally under-detected and underreported due to a number of factors including client's lack of contact with health care, inability to isolate organism, etc.

Rates based on small numbers may fluctuate dramatically over time and may not have public health significance.

As of February 7, 2022 RRPL PCR testing was reserved for populations deemed to be at an elevated risk for severe outcomes:

- Hospitalized patients, those admitted or transferred between acute, long-term care or personal care homes
- High-risk populations as ordered by the medical health officer: residents in long-term care, personal care homes and congregate living facilities; and international or travellers from areas of concern
- Priority symptomatic persons: health-care workers or essential workers who have a negative rapid antigen test but remain symptomatic; those with chronic illness (diabetes, history of cancer, cardiac failure, etc.)
- Symptomatic people living or working in First Nation and Métis communities
- Surgical patients with symptoms or a positive rapid antigen test if scheduled or expecting to receive surgery within the next 90 days
- Pregnant patients who are symptomatic and more than 30 weeks gestation
- Symptomatic immunocompromised individuals including all transplant donors and recipients prior to and post-transplant; all oncology patients prior to, receiving or post chemotherapy
- Newborns born to COVID-19-positive parents, prior to discharge.
- Health-care workers and workers deemed essential under the current public health order with negative rapid antigen results who remain symptomatic will be eligible for PCR tests.

In 2019/20 about one-third of the SK population aged one year and older had at least one of eight priority chronic conditions (asthma, COPD, diabetes, hypertension, heart failure, ischemic heart disease, stroke, and dementia), making about half of the population eligible for PCR testing.

Fatal Cases (Deaths) Table

- Includes all deaths entered into Panorama IOM.
- For those reported in the specified week, the deaths that were not previously reported are counted, regardless of when the death occurred.

VOC Section

Variant of concern (VOC) cases:

- VOCs are SARS-CoV-2 viruses that have undergone genetic modification or mutation causing in altered virus infectivity, replication and pathogenicity. As a result it can alter host immune response. The Roy Romanow Provincial Laboratory (RRPL) tests for and monitors COVID-19 variants of concern (VOCs) in Saskatchewan. Confirmation of VOC lineages is done by conducting whole genome sequencing (WGS) at RRPL or the National Microbiology Laboratory. It takes one to two weeks to complete WGS.
- Data sources for VOCs analysis include testing data from the RRPL, and epidemiological information from Panorama. Where geographical zone is missing in RRPL or Panorama data, the Saskatchewan postal code file is used to identify cases' geographical information.

Severe Case Immunization Status

- The rate of COVID-19 hospitalization, ICU admission or death by the vaccine status was obtained by summing the number of hospitalizations, ICU admissions or deaths (numerator) and dividing by the mid period population by vaccine status (denominator), multiplied by 100,000. This estimate was further divided by the number of days to obtain the daily rate.
- To eliminate bias of age, all rates are adjusted by age. Direct standardization method is employed using the Saskatchewan population as the standard population.
- Estimates of relative risk (i.e. rate ratios) are obtained by comparing vaccinated with two doses (three dose) and the unvaccinated / unprotected group.
- Age at first dose is used in this analysis. Individuals with unknown age are excluded from the age-specific analyses.

- Risk estimates may differ from other reports due to differing methodologies.

Emergency Department Visits

- Data collection from EDs: Monitoring will be done for a twenty-four hour period on at least one week day (the exact time period will vary with the ED schedule). The ED should report to local public health services in their area on Wednesday afternoon and public health will report to the Ministry of Health on Thursday each week. This may increase to include one weekend day in certain areas if CLI activity is increasing and laboratory-confirmations support the need to do so.
- The count of CLI patients in each of four broad age categories, preschool (approximately 0-4 years), school age (approx. 5-19 years), working age group (approx. 20-64 years), seniors (approx. 65 years plus) as a proportion of total ED admissions in those age categories is captured. The age group in which to place a patient is determined in part by the age groups used by the ED's administrative database. The categories are approximate but provide a general profile of the broad age groups most affected by COVID-19.
- Reporting ED surveillance information: Because there is no centralized data capture source for ED admissions in the province each health area sets up a mechanism for EDs to report to public health services.
- Public health aggregates raw data from their EDs on the prescribed data collection form and sends it to the Ministry of Health for overall provincial monitoring.
- FNIHB and NITHA will report to the local zone in which the ED or health centre is located. This does not preclude monitoring in First Nations health care facilities.

HealthLine callers with Respiratory Symptoms

- A count of protocols specific to callers with viral respiratory-like illness symptoms is completed by HealthLine nurses.
- The respiratory-like illness protocol count is tallied for a designated period each week and transformed into the rate of callers with respiratory symptoms from each zone per 1000 calls from that zone from callers with any type of symptom.

Outbreaks

- A confirmed outbreak is defined as two or more COVID-19 cases in settings outside a household where transmission is evident or there is a high level of suspicion of transmission.
- Outbreaks are reported by the week they were reported to the local public health office and not necessarily in the week that the outbreak began.
- # COVID-19 Outbreaks in LTC: number of COVID 19 outbreaks reported that occurred in a designated special care facility (LTC) (cumulative or in current reporting week).
- # COVID-19 Outbreaks in care homes: number of COVID 19 outbreaks reported that occurred in semi-closed settings where personal care is provided. This includes designated homes where the elderly reside or homes for the developmentally challenged (cumulative or in current reporting week). It also includes homes where residents are under the care of social services and in shelters.

H. Map of Saskatchewan by Zone and Sub-Zone

