

COVID-19 Integrated Epidemiology Situation Report

Week of June 19-25, 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

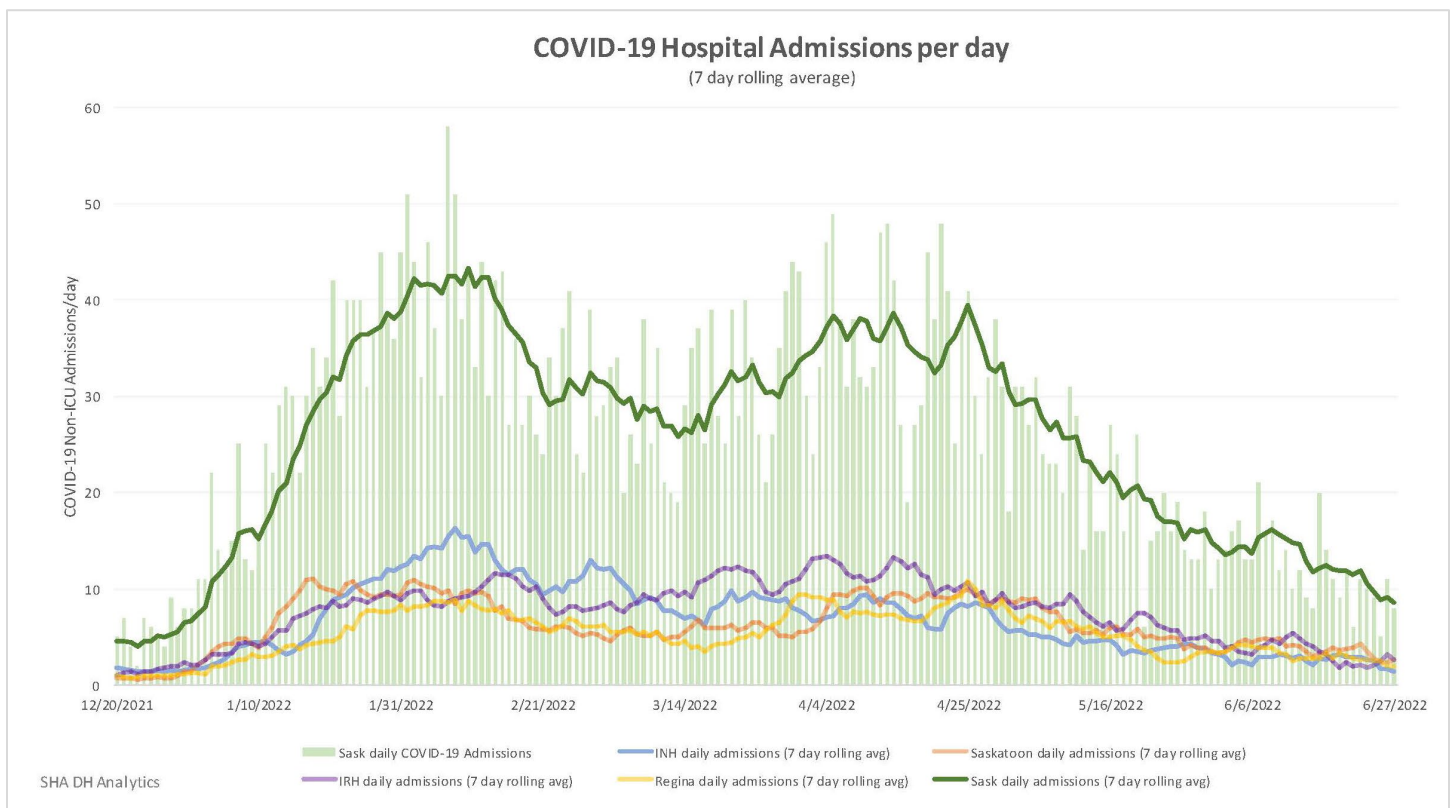
- 5,372 laboratory tests were performed in Saskatchewan, lower than previous week (n = 5,635); reflecting 4.5 tests performed per 1,000 population.
- The weekly test positivity of 3.8% this week is lower than the previous week (4.0%); the highest test positivity this week was in the South East zone (9.6%) and Regina (7%)
- 208 new cases were confirmed, reflecting 17 laboratory-confirmed cases per 100,000 population (lower than the previous week n = 231 new cases).
- The majority of laboratory-confirmed cases this week continue to be 50 years and older (57.2%).
- There were 168 new lineage results reported from June 19-25, 2022. Of the 168 variants of concern identified by whole genome sequencing, 100% were Omicron.
- The Omicron BA.2 sublineage accounted for 95.2% of the VOCs reported during June 19-25, 2022. BA.5 sublineage detections increased from 1.1% last week to 3.6% this week.
- Of this week's newly reported deaths, two (2) occurred within the week. One (1) death occurred earlier (June 18, 2022), but was reported this week.
- Vaccination remains the best protection against severe outcomes of COVID-19 infection. From December 20, 2021 to May 21, 2022, unvaccinated individuals had a 3 times higher risk of hospitalization and 6 times higher risk of ICU admission and death compared to three-dose recipients.
- Other respiratory viruses have similar or much higher test positivity than COVID-19. Enterorhinovirus (common cold) has a test positivity of over 26% compared to COVID-19 (4%).
 - Respiratory syncytial virus (RSV) – 2.5% test positivity
 - Parainfluenza – 7.1% test positivity
 - Enterorhinovirus (common cold) – 26.0% test positivity
- The rate of visitors to Emergency Departments with viral respiratory symptoms at 28.4 patients per 1,000 visits was a reversal of a declining trend since the end of April. Rates were higher than the previous six-week average in the North East, Central West, South West and South East reporting zones.
- Calls to 811 HealthLine for respiratory-like illness at 76.5 per 1,000 calls this week were higher compared to 71.8 per 1,000 calls last week. The highest rate was in the South East zone (96 per 1,000 calls).
- Three (3) COVID-19 outbreaks were reported this week compared to two last week. All three new outbreaks were in the Regina zone.
- Immunization coverage rates for primary series and booster uptake have remained stable over the last four weeks. Of the eligible populations five and older, 81.2% have completed a series.
- Of the population 12 and older, 49.4% have received a booster and of those 18 and older, 52.8% have received a booster.

Weekly COVID-19 Hospitalization Indicators: June 22, 2022 as compared to June 29, 2022

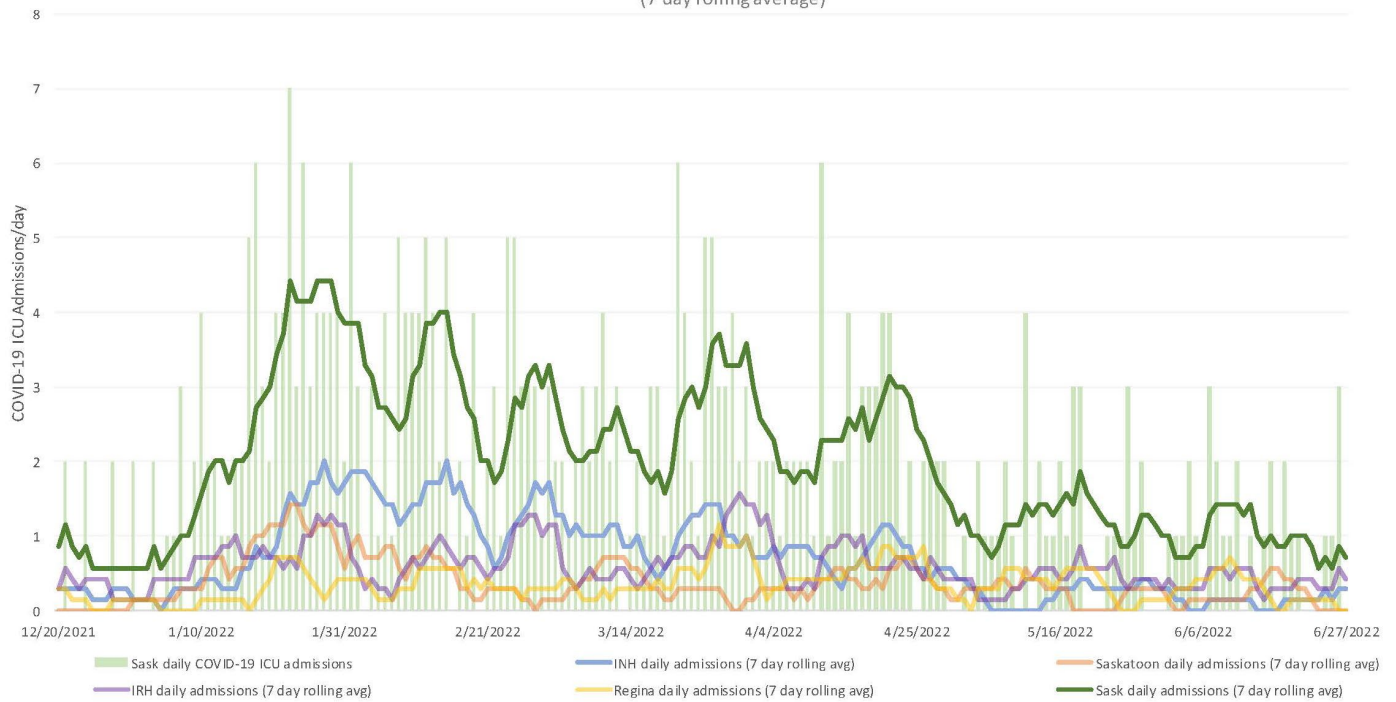
	22-Jun	29-Jun	Change from last reporting period
Total Covid Hospitalized	157	119	-38
Total Covid Adult ICU/ICU Surge	5	4	-1
Average Daily Admissions over past 7 days	11	9	-2
Total Covid Related Illness	46	30	-16
Total Incidental Covid Infection	108	79	-29
Total Patient Under Investigation	3	10	+7

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.

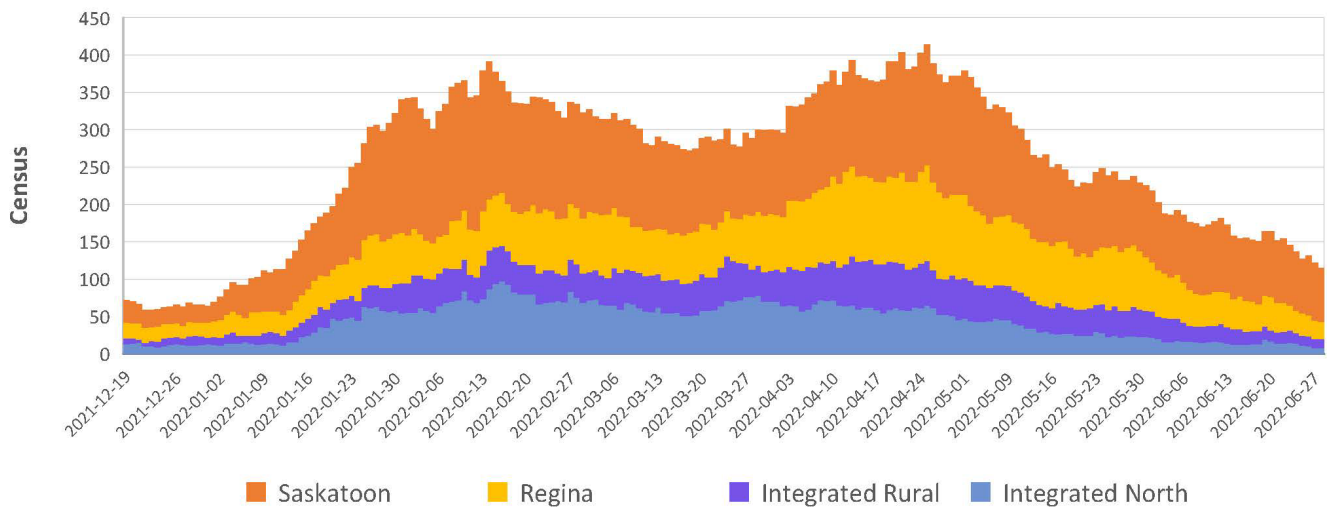


COVID-19 ICU Admissions per day (7 day rolling average)

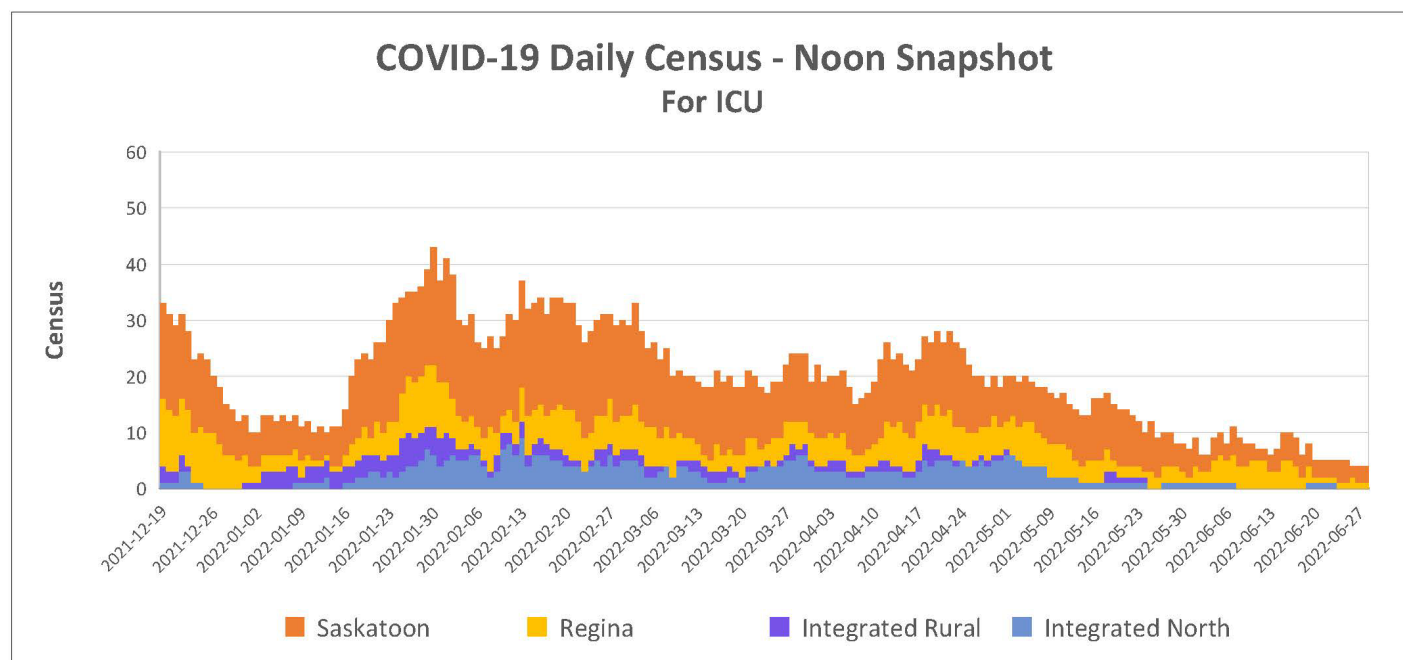


Saskatchewan Health Authority COVID-19 Daily Census at Noon by Facility ISA

COVID-19 Daily Census - Noon Snapshot For Inpatient



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



Distribution of Rapid Antigen Tests in Saskatchewan by Streams from November 2020 to June 24, 2022

Sector	SPSA	SHA	Sector Totals
SHA Internal	0	4,230,773	4,230,773
NITHA/ISC	3,218,585	433,720	3,652,305
Schools	1,192,895	1,390,000	2,582,895
Congregate Living	290,740	440,802	731,542
Law Enforcement & Fire Depts.	177,600	37,440	215,040
EMS	0	15,615	15,615
Test to Protect & Unclassified	0	320,290	320,290
Public Distribution Centres	8,341,245	1,372,660	9,713,905
Total Tests:	13,221,065	8,241,300	21,462,365

- There are currently 662 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.

Table of Contents

A. Laboratory Surveillance 6

 Overview of COVID-19 Laboratory Tests..... 6

 Overview of COVID-19 Laboratory-Confirmed Cases..... 7

 Variants of Concern..... 9

B. Description of Severe COVID-19 Cases..... 11

 Deaths..... 11

 Pre-existing Conditions 12

 Relative Risk by Vaccination Status 13

C. Sentinel Surveillance 14

 Emergency Department (ED) visits related to COVID-19-like illness (CLI) 14

 HealthLine Callers with COVID-19-like Illness (CLI) 16

D. Outbreak Surveillance 17

E. Immunization 18

F. Abbreviations..... 19

G. Technical Notes..... 20

 Case Definition and Methods Overview 20

 Fatal Cases (Deaths) Table 21

 Variants of Concern..... 21

 Severe Case Immunization Status 21

 Emergency Department Visits 21

 HealthLine callers with Respiratory Symptoms..... 21

 Outbreaks 22

H. Map of Saskatchewan by Zone and Sub-Zone 23

A. Laboratory Surveillance

Overview of COVID-19 Laboratory Tests

Table 1: Summary of COVID-19 laboratory tests for the week of June 19-25, 2022, by zone

Zone	Current Week (June 19 to June 25, 2022)			Previous Week (June 12 to June 18, 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	86	2.3%	2.9	90	1.1%	3.0	⬆️ 1.2	⬇️ -0.1
FNC	6		2.3	9		3.4	NA	⬇️ -1.1
FNE	64		2.6	59		2.4	NA	⬆️ 0.2
NW	269	5.2%	3.3	190	4.7%	2.3	⬆️ 0.5	⬆️ 1.0
NC	204	2.9%	2.3	184	2.7%	2.1	⬆️ 0.2	⬆️ 0.2
NE	143	4.9%	3.4	159	3.1%	3.8	⬆️ 1.8	⬇️ -0.4
ST	806	7.2%	2.4	934	6.7%	2.8	⬆️ 0.5	⬇️ -0.4
CW	95		2.6	80		2.2	NA	⬆️ 0.4
CE	348	2.9%	3.5	354	4.2%	3.6	⬇️ -1.3	⬇️ -0.1
RE	356	7.0%	1.3	290	3.4%	1.1	⬆️ 3.6	⬆️ 0.2
SW	130	2.3%	3.4	159	3.1%	4.1	⬇️ -0.8	⬇️ -0.7
SC	258	4.3%	4.3	236	3.8%	3.9	⬆️ 0.5	⬆️ 0.4
SE	188	9.6%	2.1	220	9.1%	2.5	⬆️ 0.5	⬇️ -0.4
Unknown	2,419	2.0%		2,671	2.9%		⬇️ -0.9	
SK	5,372	3.8%	4.5	5,635	4.0%	4.7	⬇️ -0.4	⬇️ -0.2

Source: RRPL Daily Test Count Table by new zones, extracted June 27, 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 not reported if total number of tests performed is less than 100 tests.

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

NA: Test positivity is not reported because total number of tests performed in one or two reported week(s) was/were less than 100 tests.

For the week of June 19-25, 2022:

- 5,372 laboratory tests were performed in Saskatchewan.
- The number of tests per 1,000 population was 4.5. This was slightly lower than the previous week (June 12 to June 18, 2022). It was also lower than the average for the previous four weeks (May 22 to June 18, 2022) where the weekly average rate was 4.8 tests per 1,000 population.
- The South Central zone had the highest testing rate (4.3 tests per 1,000 population). The Regina zone had the lowest testing rate (1.3 tests per 1,000 population).
- 3.8% of tests in the province were positive. This was slightly lower than the previous week (June 12 to June 18, 2022) by 0.2 percentage points. It was also lower than the average for the previous four weeks (May 22 to June 18, 2022) by 1.3 percentage points where the average was 5.1%.
- Of zones with reported test positivity, the South East zone (9.6%) had the highest, while the Far North West zone had the lowest (2.3%).
- Test positivity in Regina zone more than doubled from 3.4% to 7.0%.

Overview of COVID-19 Laboratory-Confirmed Cases

Table 2: Summary of new laboratory-confirmed COVID-19 cases per 100,000 population for the week of June 19-25, 2022, by zone

Zone	New cases		Previous Week		Change in Cases per 100,000 from Previous Week	Weekly Rate in Previous Four Weeks		Change from Previous 4-week Rate
	Confirmed cases	Cases ¹ per 100,000	Confirmed cases	Cases ¹ per 100,000		Confirmed cases	Cases ¹ per 100,000	
FNW	2	7	2	7	→ 0	8	28	↓ -21
FNC			1	38	↓ -38	1	28	↓ -28
FNE	1	4	1	4	→ 0	5	21	↓ -17
NW	19	23	17	21	↑ 2	24	29	↓ -6
NC	9	10	15	17	↓ -7	18	20	↓ -10
NE	7	17	7	17	→ 0	12	28	↓ -11
ST	70	21	73	22	↓ -1	96	28	↓ -7
CW	4	11	4	11	→ 0	9	23	↓ -12
CE	14	14	24	24	↓ -10	33	34	↓ -20
RE	40	15	29	11	↑ 4	52	19	↓ -4
SW	3	8	8	21	↓ -13	8	21	↓ -13
SC	14	23	9	15	↑ 8	12	20	↑ 3
SE	20	22	28	31	↓ -9	28	31	↓ -9
Pending	5		13			13		
SK	208	17	231	19	↓ -2	318	26	↓ -9

Source: RRPL line list June 27, 2022.

The rates in Table 2 are per 100,000. Prior to June 4 report, the rates were per 1,000. This has been changed due to smaller number of cases.

¹Proportion 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. This week there were three (3) out of province cases added to the totals

For the week of June 19-25, 2022

- 208 new cases were confirmed by a positive laboratory test.
- The proportion of new laboratory-confirmed cases was 17 per 100,000 population, lower than last week (19 per 100,000).
- It was lower than the average weekly rate for the previous four weeks (May 22 to June 18, 2022) by 9 cases per 100,000.
- The highest proportion of new cases for the week was in the North West and South Central zones, both at 23 per 100,000. The lowest proportion, in zones having a case, was in Far North East at 4 per 100,000.
- All zones, with the exception of South Central, decreased compared with their previous 4-week average.
- 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 per 100,000 population by zone and area for the week of May June 19-25, 2022

For the week of June 19-25, 2022:

- 5 new cases per 100,000 in the Far North (FNW, 7 cases per 100,000; FNC, no (0) case per 100,000; FNE, 4 cases per 100,000);
- 16 new cases per 100,000 in the North (NW, 23 cases per 100,000; NC, 10 cases per 100,000; NE, 17 cases per 100,000);
- 21 new cases per 100,000 in the Saskatoon area;
- 13 new cases per 100,000 in the Central area (CW, 11 cases per 100,000; CE, 14 cases per 100,000);
- 15 new cases per 100,000 in the Regina area;
- 20 new cases per 100,000 in the South (SW, 8 cases per 100,000; SC, 23 cases per 100,000; SE, 22 cases per 100,000); and
- 17 new cases per 100,000 in Saskatchewan.

Source: RRPL line list June 27, 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.

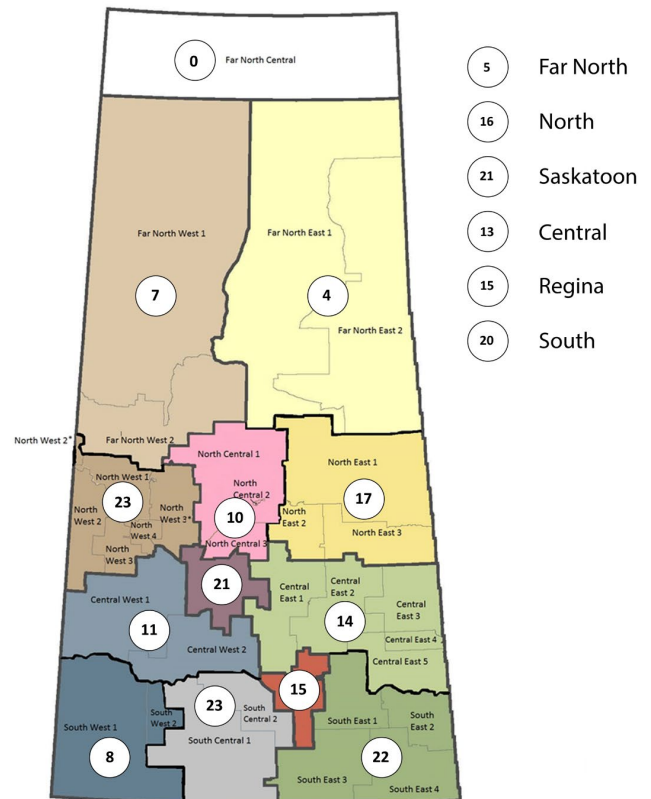


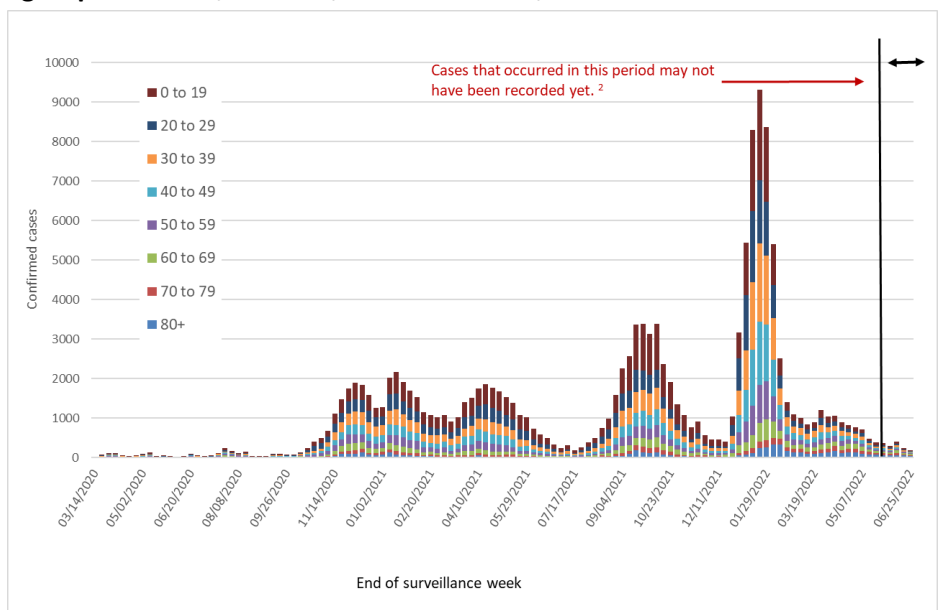
Figure 2: Laboratory-confirmed cases¹, by age group and week, March 8, 2020 to June 25, 2022

- From March 8, 2020 to June 25, 2022, there were 139,661 laboratory-confirmed cases.
- Close to half of all cases were between 20 and 49 years of age and over one-quarter were younger than 20 years of age.
- This week, more than half of laboratory-confirmed cases were 50 years and older (n = 119; 57.2%).

Source: Panorama IOM June 27, 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, by zone for June 19-25, 2022

MoH Zone	Current week (Jun 19-25)					Previous week (Jun 5-11)*				
	Omicron VOC and sublineage				Total	Omicron VOC and sublineage				Total
	BA.2	BA.4	BA.5	Other		BA.2	BA.4	BA.5	Other	
Far North West	100%				11	100%				1
Far North Central	100.0%				1					
Far North East										
North West	100%				7	71%	14.3%		14.3%	7
North Central	100%				6	83%			16.7%	6
North East	100%				3	100%				3
Saskatoon	93.7%		6.3%		63	93.1%		3.4%	3.4%	29
Central West	100%				3	100%				1
Central East	100%				10	100%				5
Regina	92.6%		7.4%		27	95.7%	4.3%			23
South West	100%				4	67%			33.3%	3
South Central	100%				4	75%			25.0%	4
South East	100%				11	100%				4
Pending	88.9%			11.1%	18	87.5%			12.5%	8
Total	95.2%	0.0%	3.6%	1.2%	168	90.4%	2.1%	1.1%	6.4%	94

Source: Panorama Jun 26, and RRPL 27, 2022

Notes:

* The Jun 5-11 data was used for previous week as there were no data available for Jun 12-18 due to a database sequencing issue.

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

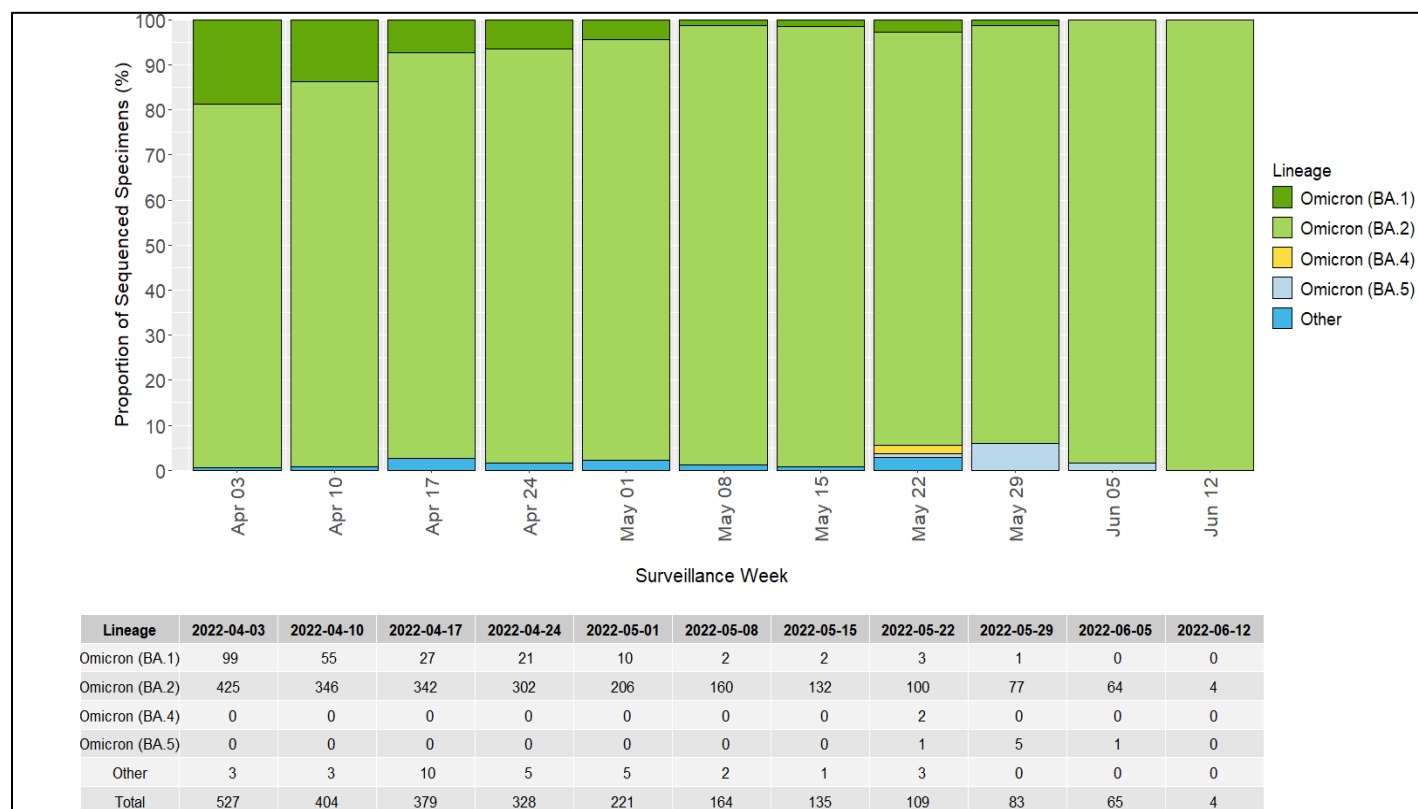
MoH zones are assigned based on information as available in the Panorama database.

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 168 VOCs reported during the week June 19-25, higher than the 94 that were reported from Jun 5-11, 2022.
- Of the total VOCs reported in the past two weeks, 100% were Omicron VOCs.
- While no BA.4 sublineage was detected this week, BA.5 sublineage has increased this week (3.6%) compared to 1.1% in the previous week.

Figure 3: Percentage of SARS-CoV-2 Variants by Surveillance Week, 2022



Data source: Dr. Keith MacKenzie, RRPL : June 27, 2022
Surveillance week is based on specimen collection date

- 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.
- The Omicron VOC rapidly increased since the first week of January 2022 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 for the week of June 19 to 25, 2022

Zone	Deaths	
	Number	Deaths per 100,000 population
FNW		
FNC		
FNE		
NW		
NC	1	1.1
NE		
ST	1	0.3
CW		
CE		
RE		
SW	1	2.6
SC		
SE		
Pending		
SK	3	0.2

Source: Panorama IOM June 27, 2022.

Proportion per 100,000 calculated using the Saskatchewan 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 were only reported in this week.

Death rates should be interpreted with caution because of small numbers.

- For the week of June 19 to 25, 2022, there were three (3) newly reported COVID-19 deaths.
- There was one (1) death in each of Saskatoon, North Central, and South West zones.
- Two (2) of the three deaths (67%) were among those 80 years of age or older.

Table 5: Age and sex distribution of COVID-19 deaths, newly reported the week of June 19 to 25, 2022

Age group and sex		Deaths	
		Number	%
Age	19 and younger		
	20 to 39	1	33
	40 to 59		
	60 to 69		
	70 to 79		
	80 and older	2	67
	Total	3	100
Sex	Female	1	33
	Male	2	67
	Total	3	100

Source: Panorama IOM June 27, 2022.

- Of the three deaths two (2) were male and one (1) was female.
- Of this week's newly reported deaths, two (2) occurred within the week. One (1) death occurred earlier (June 18, 2022), but was reported this week.

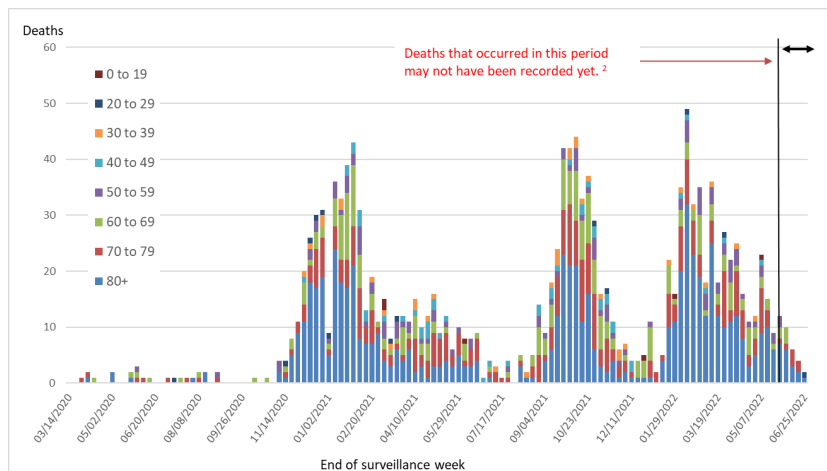
Figure 4: Deaths¹ in COVID-19 cases, by age group and week of death, March 8, 2020 to June 25, 2022

- From March 8, 2020 to June 25, 2022, there were 1,427 cases with a fatal outcome.
- Over one in five deaths (314 or 22%) were in the 70 to 79 year age group and close to half (665 or 46.6%) were in the 80 years and older group.
- Six (6), or 0.4% of deaths, were reported in the age group 19 years and younger (unchanged from last week).

Source: Panorama IOM June 27, 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, March 8, 2020 and June 25, 2022**

- During the period March 8, 2020 and June 25, 2022, there were 6,143 COVID-19 cases who were categorized as severe. Of these,
 - Over one-half of the severe cases (n = 3,168; 51.6%) had one or more pre-existing conditions listed in the case investigation record. Hypertension was the most common pre-existing condition (55.2%).
 - The remainder of the severe cases (n = 2,975; 48.4%) had no pre-existing condition listed in the case investigation record.

Co-morbidity	Number of severe cases with pre-existing conditions (n = 3,168)	Percent
Hypertension	1,749	55.2%
Diabetes	1,410	44.5%
Heart Disease	1,192	37.6%
Lung Disease	881	27.8%
Obesity	250	7.9%
Pregnancy	62	2.0%

Source: Panorama IOM June 27, 2022

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

*Number of cases represents unique clients with severe outcome and pre-existing condition

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

Relative Risk by Vaccination Status

Figure 5: Relative risk of hospitalization, ICU admission and death by vaccination status, Omicron wave, Saskatchewan



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.

Estimates are calculated from the period December 20, 2021 to May 21, 2022

- 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 six 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 June 19 – June 25 were rhinovirus (26.0%, 44/169 positive tests); parainfluenza (7.1%, 12/169 positive tests; respiratory syncytial virus (RSV) 2.0%, (7/358) positive tests; influenza (2.5% positive tests, 9/358). This compares to COVID-19 with 3.8% of tests that were positive.

The overall rate of RSV decreased marginally to 0.6/100,000 population from last week's rate (0.8/100,000). The 7 positive specimens were from individuals among four geographically disparate surveillance zones, Far North West, Saskatoon, South West and South Central. Four of the seven cases (57%) this week were among children aged 0 to 4 years with the remaining cases distributed between working age (2 cases) and senior age (1 case) people.

The overall rate of influenza decreased marginally to 0.7/100,000 population from 0.9/100,000 last week. Of the 9 positive influenza A lab confirmations this week, 66% were among adults 20-64 years (6 cases) with one case in each of the preschool, school age and senior age groups. Influenza A was detected in the North East zone (14.4/100,000 population, 6 cases) and Regina zone (1.1/100,000 population, 3 cases).

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

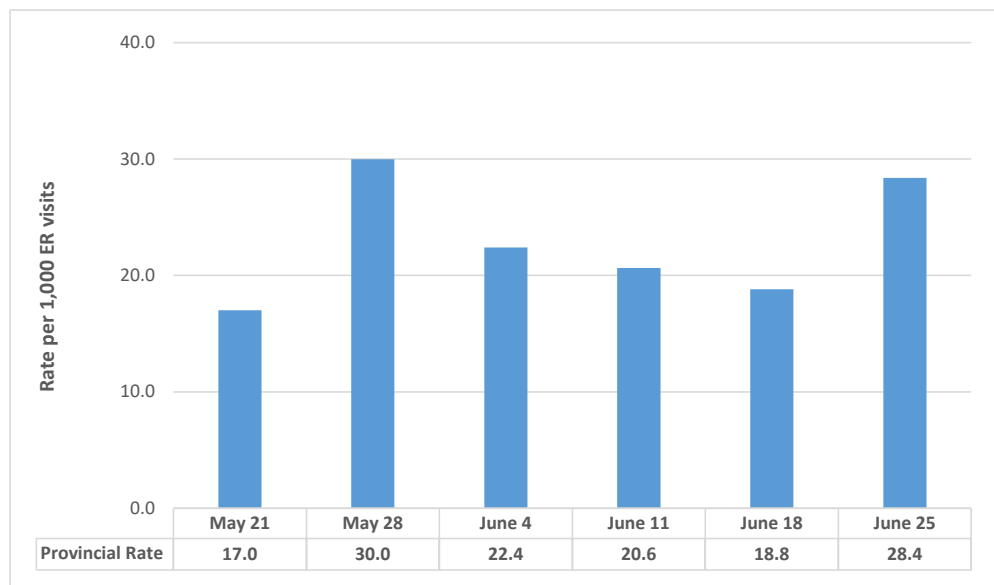
ED visit data regarding CLI is one component of community-based respiratory illness surveillance. Visitors may access EDs as their primary health care service or come when health provider offices are closed.

Table 7: COVID-19-like illness (CLI) surveillance (rate per 1,000 visits) in emergency departments by zone and week, May 14 to June 25, 2022

COVID-like patients per 1,000 ED visits	May 14	May 21	May 28	June 4	June 11	June 18	June 25
Provincial Rate	27.5	17.0	30.0	22.4	20.6	18.8	28.4
FNW	26.7	7.2	19.9	17.2	4.0	4.0	0.0
FNC	No report	No report	No report	No report	No report	No report	No report
FNE	No report	No report	No report	No report	No report	No report	No report
NW	26.9	14.0	11.7	16.2	11.5	8.4	6.2
NC	No report	No report	No report	No report	No report	No report	No report
NE	161.3	188.1	338.2	127.3	140.0	113.6	201.8
ST	11.0	3.8	16.8	3.3	10.8	8.3	3.4
CW	170.7	26.3	113.5	152.2	20.7	No report	125.0
CE	No report	No report	No report	No report	No report	No report	No report
RE	18.5	22.1	32.9	16.1	31.6	30.3	22.5
SW	153.8	48.4	32.3	21.3	22.2	125.0	100.0
SC	0.0	0.0	0.0	0.0	0.0	No report	0.0
SE	135.1	67.3	180.6	93.5	127.3	99.2	323.1
Preschool age 1-4 years	35.9	34.3	69.0	41.0	50.3	28.2	54.9
School age 5 -19	40.8	27.7	24.2	34.5	21.9	18.2	33.9
Working age 20-64	19.3	11.8	21.8	15.6	19.5	17.5	22.1
Seniors 65 +	34.8	14.4	38.0	21.7	10.0	18.2	25.2

Source: Emergency department surveillance data, June 27, 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, May 21 to June 25, 2022



Source: Emergency department surveillance data, June 27, 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.

- Nine (9) of 13 zones submitted data in the reporting week ending June 25. This week's provincial rate of 28.4 COVID-19-like illness patients per 1,000 visits was higher than the previous six-week average of 18.8/1,000 visits.
- This week's rate represents 113 COVID-19-like illness patients among 3,982 visitors to the EDs.
- This week's preschool age rate of 54.9/1,000 visits was a marked increase from last week (28.2/1,000 visits) and higher than the average rate of 43.1/1,000 visits over the previous six weeks. Pediatric rates can fluctuate widely week over week.
- The school age rate at 33.9/1,000 visits was higher than two weeks prior and higher than the average rate of 27.9/1,000 visits over the previous six-weeks.
- The working age group rate at 22.1/1,000 visits was higher than the three weeks prior and higher than the average rate over the previous six weeks (17.6/1,000 visits)
- The seniors age group rate at 25.2/1,000 visits this week was higher than the two weeks prior and marginally above the average rate of 22.9 /1,000 visits over the previous six weeks.
- The rate of visitors with COVID like illness to EDs varies week over week with directional changes being observed over the span of several weeks.

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), by week ending June 25, 2022

- In the week ending June 26, of the 1,321 calls to HealthLine (811), 101 callers reported having respiratory symptoms similar to COVID-19 and other common respiratory viral infections.
- The provincial rate was 76.5 callers per 1,000 calls, marginally higher than the 71.8/1,000 calls last week but below the average rate in the six weeks prior (88.5/1,000 calls) (See Table 8b).
- Rate of callers with respiratory symptoms to HealthLine can fluctuate 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	11	73.8
North West	4	41.2
Regina	31	83.1
Saskatoon	32	80.4
South East	14	95.9
South West	9	57.0
Saskatchewan	101	76.5

Source: HealthLine Database June 27, 2022.

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

Integrated Service Area	15-May	22-May	29-May	5-Jun	12-Jun	19-Jun	26-Jun
North East	82.5	99.3	63.6	44.6	89.7	87.9	73.8
North West	155.3	69.0	58.8	56.1	92.8	52.1	41.2
Regina	82.9	99.8	101.6	94.9	65.2	80.8	83.1
Saskatoon	104.5	110.2	96.5	103.4	87.8	72.5	80.4
South East	88.1	115.6	65.2	102.6	81.8	62.9	95.9
South West	89.6	115.1	100.0	103.0	72.4	48.8	57.0
Province	95.9	103.7	88.7	90.8	80.0	71.8	76.5

Source: HealthLine Database June 27, 2022.

Six-week average is the average of rate of callers to HealthLine from May 8, 2022 to June 19, 2022

- The rate of callers to HealthLine having respiratory-like symptoms was lower this week than the previous six-week average in all but the South East Integrated Service Areas (ISA), including North West and South West which have remained low in the past two weeks compared to previous weeks.
- The rate of callers with viral respiratory symptoms from an ISA to HealthLine fluctuates week over week.

D. Outbreak Surveillance

Table 9: New confirmed COVID-19 outbreaks in long-term care (LTC) and other care home settings reported for the week of June 19-25, 2022, by zone

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

Source: Outbreak line list, PHB, extracted June 27, 2022.

*By date of first notification.

- Two (2) confirmed new COVID-19 outbreaks in long term care facilities and one (1) in a personal care home were reported this week.

Table 10: COVID-19 outbreaks in selected high risk settings, weeks ending May 21–June 25 2022

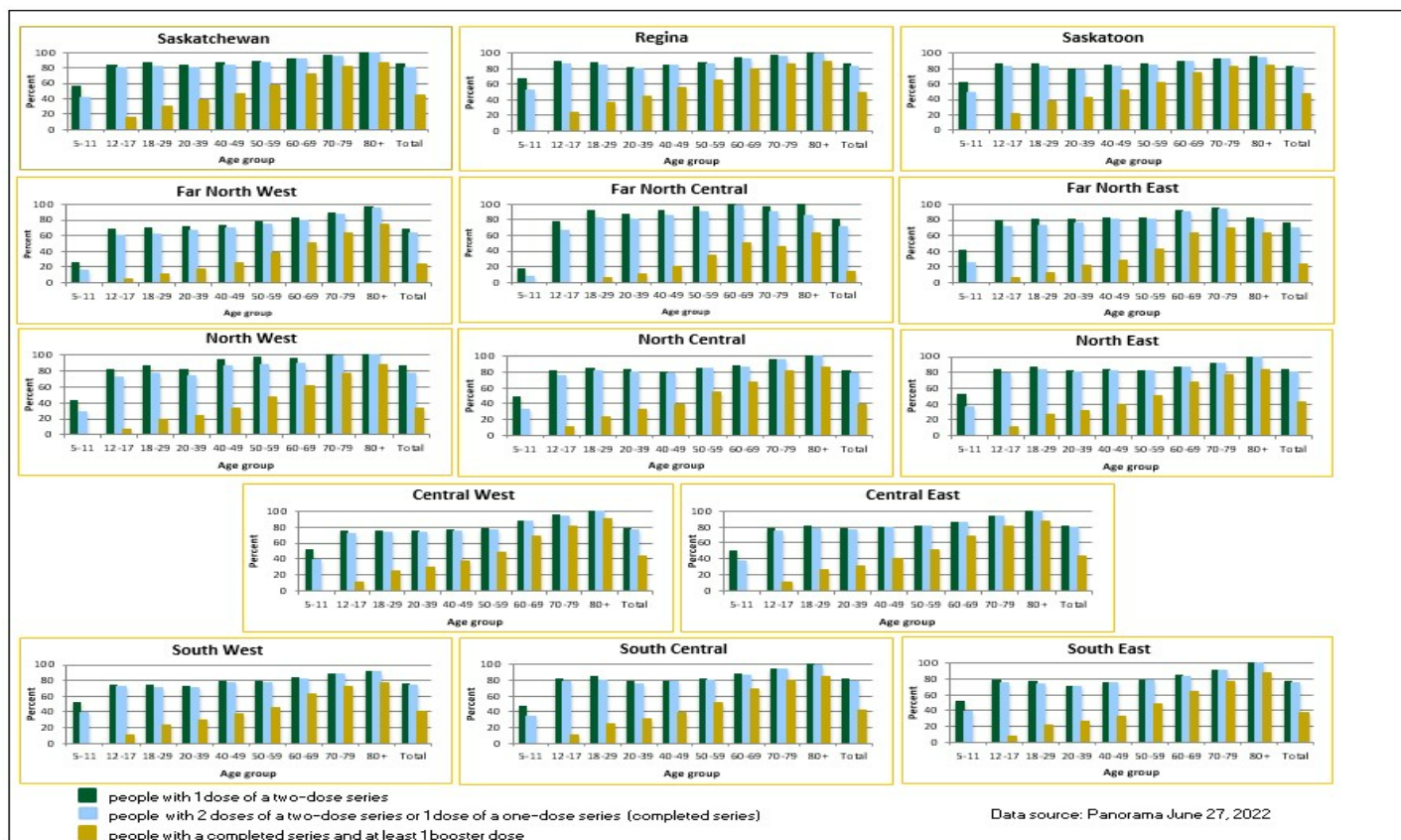
High risk setting	21-May	28-May	4-Jun	11-Jun	18-Jun	25-Jun	6-week total by setting
# COVID-19 Outbreaks in LTC	4	2	5	2	1	2	16
# COVID-19 Outbreaks in personal care homes, group homes, shelters	2	1	3	2	0	1	9
Total by week	6	3	8	4	1	3	25

Source: Outbreak line list, PHB, extracted June 27, 2022

- Over the past six weeks, sixteen (16) outbreaks occurred in long term care facilities, six (6) in personal care homes, and three (3) in group homes. Fifteen (60%) of the 25 outbreaks reported in the past six weeks are ongoing.
- Figures from previous weeks may change as outbreaks reported earlier are entered into the Ministry database.

E. Immunization

Figure 7: COVID-19 immunization coverage (% population 5 years and older) by age group and zone, December 15, 2020 to June 25, 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 June 25, 2022:

- Of the population five years and older:
 - 86.0% had received at least one dose and 81.2% completed a series, unchanged from the previous week. Regina (83.0%) is the only zone reporting over the Saskatchewan proportion for a completed series.
 - 44.5% have received at least one booster. Regina (49.9%) and Saskatoon (47.6%) are the only zones reporting over the Saskatchewan proportion.
 - 11.4% have received their second booster, up from last week. Regina, Central West, South Central, Saskatoon, and Central East zones are reporting over the Saskatchewan proportion
- Among the population 18 years and older, 52.8% have received at least one booster, similar to the previous week.
- Among the population 50 years and older, 71.0% have received at least one booster and 30.3% have received their second booster (not shown in chart).
- Among the youngest age group, five to 11 years of age, 42.3% completed their series, similar to the previous week (not shown in the chart).

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

Type of dose	Weekly doses - Date provided		Cumulative date provided
	June 19-25	June 12 -18 *	Dec 15, 2020 to June 25, 2022
First of two	206	158	973,099
Second of two	250	264	915,908
Jansen single dose	6	10	2,336
Total primary series doses	462	432	1,891,343
First booster **	516	686	503,457
Second booster **	2,323	2,910	129,146
Additional boosters **	128	154	3,128
Total booster doses	2,967	3,750	635,731
TOTAL (including pediatric and boosters)	3,429	4,182	2,527,074
- of the total, all pediatric doses	214	193	109,871

Source: Panorama IOM June 27, 2022

* 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 June 19 to 25, 2022, 3,429 doses of COVID-19 vaccine were administered, of which 214 (6.2%) were pediatric doses and 2,967 (86.5%) were booster doses.
- The total number of booster doses this week has declined compared to the previous week.
- Since the start of the immunization campaign to June 25, 2022, over 2.5 million doses of COVID-19 vaccine were administered.
- Of these, about 1.9 million (74.8%) were administered for a primary series, of which 109,871 were pediatric doses.

F. Abbreviations

General

CLI – COVID-19-like illness
 ED – emergency department
 EMS – Emergency Medical Services
 FNIHB – First Nations and Inuit Health Branch
 ICU – intensive care unit
 IOM – Investigations and Outbreak Module – Panorama
 ISA – Integrated Service Area
 ISC – Indigenous Service Canada
 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
 SPSA – Saskatchewan Public Safety Agency
 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.

Variants of Concern

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

