COVID-19 Integrated Epidemiology Situation Report

Week of June 5-11, 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

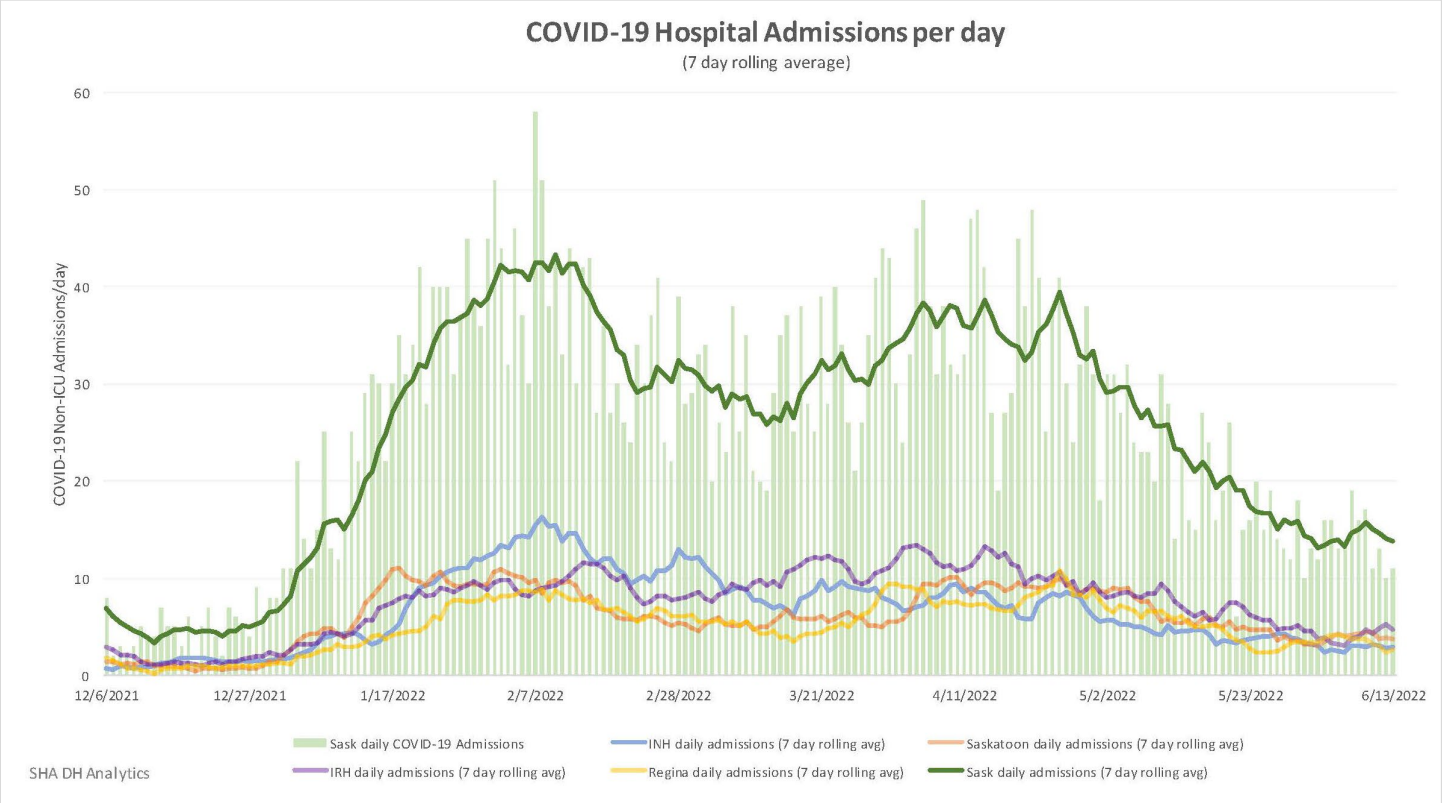
- 5,880 laboratory tests were performed in Saskatchewan, nearly identical to the previous week (n = 5,888); reflecting 4.9 tests performed per 1,000 population.
- The weekly test positivity of 6.5% is higher than the previous week (4.6%); the highest test positivity this week was in the Saskatoon area (7.5%)
- 394 new cases were confirmed, reflecting 24 laboratory-confirmed cases per 100,000 population (higher than the previous week n = 285 new cases). This week, the highest COVID-19 case rate was in South East (45 cases per 100,000).
- The majority of laboratory-confirmed cases this week continue to be 50 years and older (54.8%).
- There were 94 new lineage results reported this week. Of the 94 variants of concern identified by whole genome sequencing, 100% were Omicron.
- The Omicron BA.2 sublineage accounted for 90.4% of the VOCs reported this week. BA.2 sublineage is more transmissible compared to pre-variant 2020 COVID-19 and BA.1 sublineages, but there is no current evidence of increased severity.
- There were 17 newly reported COVID-19 deaths (two within the week and 15 in previous weeks).
- 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 equal or higher test positivity, as COVID 19; enterorhinovirus (common cold) test positivity is nearly 20%:
  - Respiratory syncytial virus (RSV) – 3.6% test positivity
  - Influenza – 6% test positivity
  - Enterorhinovirus (common cold) – 17.8% test positivity
- The highest rate of laboratory-confirmed other viral respiratory illness was in Far North zones.
- The rate of visitors to Emergency Departments with COVID-like symptoms, at 20.5 patients per 1,000 visits, was the continuation of a declining trend since the end of April.
- Calls to 811 HealthLine for respiratory-like illness was 80 per 1,000 calls this week compared to 91 per 1,000 calls last week –the lowest rate since the end of February. Calls to 811 for respiratory-like illness increased only in the North West and North East of SK this week compared to last, all other regions declined.
- Five (5) COVID-19 outbreaks were reported this week in long term care facilities and personal care homes, less than last week (8 outbreaks). The majority of new outbreaks were in the Saskatoon (n = 2; 40%).
- Immunization coverage rates for primary series and booster uptake have remained stable over the last four weeks. Of the eligible populations five and older, 81.1% have completed a series.
- Of the population 12 and older, 49.3% have received a booster and of those 18 and older, 52.6% have received a booster.

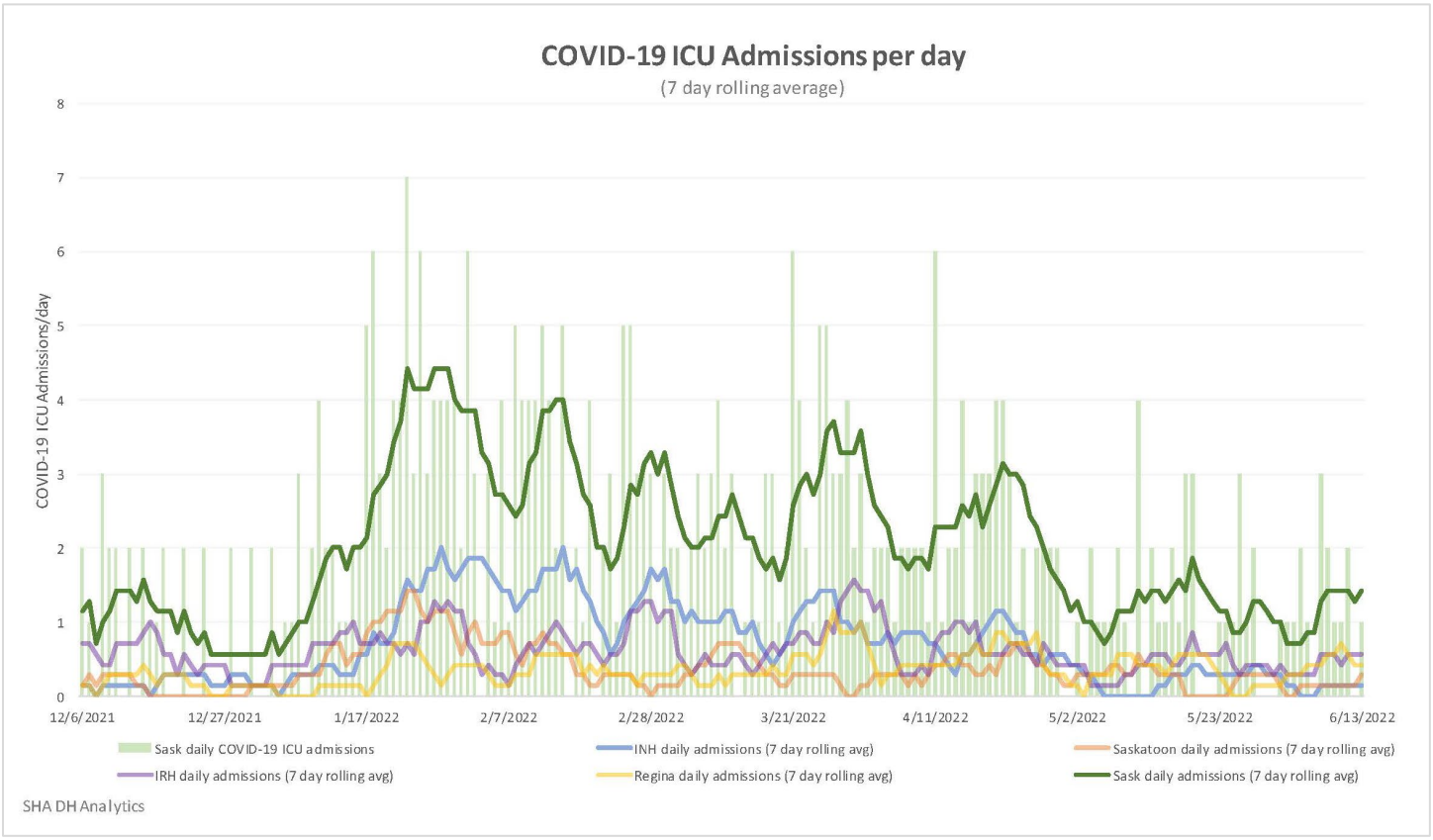
Weekly COVID-19 Hospitalization Indicators: June 8, 2022 as compared to June 15, 2022

	08-Jun	15-Jun	Change from last reporting period
Total Covid Hospitalized	187	165	-22
Total Covid Adult ICU/ICU Surge	10	6	-4
Average Daily Admissions over past 7 days	15	12	-3
Total Covid Related Illness	56	51	-5
Total Incidental Covid Infection	118	106	-12
Total Patient Under Investigation	13	8	-5

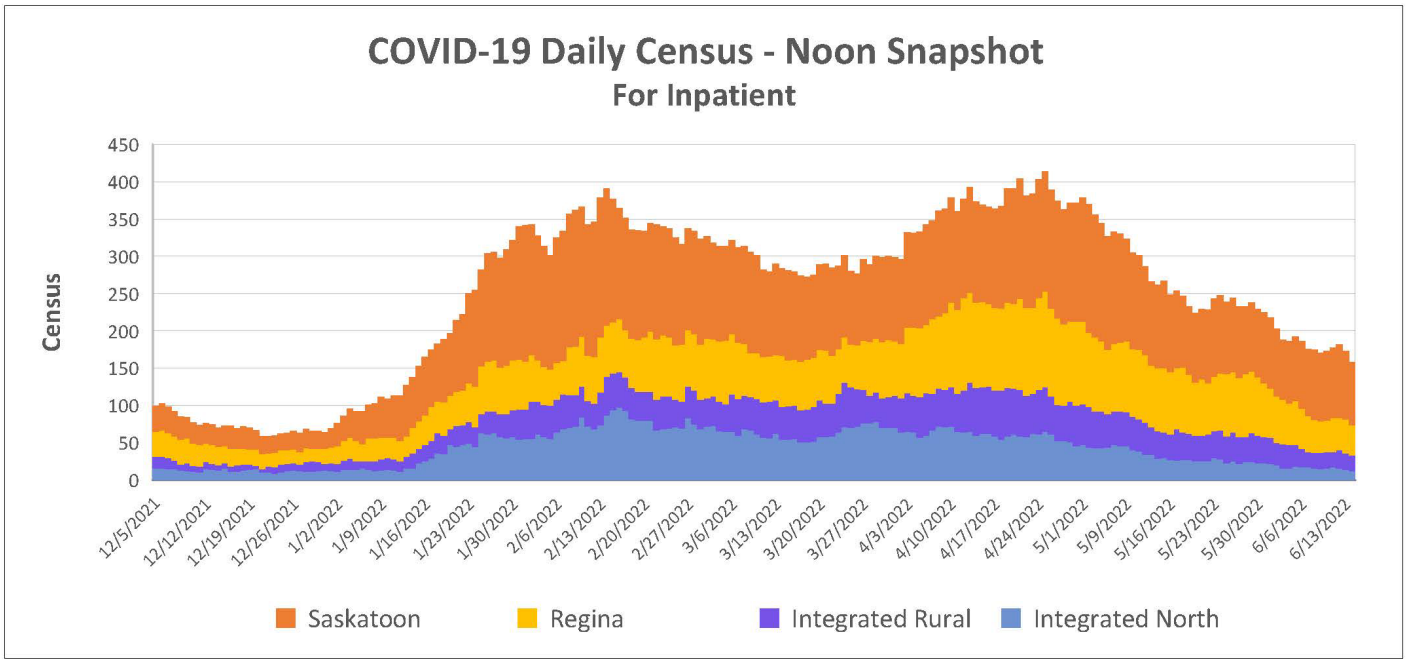
All data is reflective of the 12:00pm (noon) snapshot with the exception of the average daily admissions over past 7 days, which is reflective of the previous Wednesday to Tuesday reporting cycle.

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.





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



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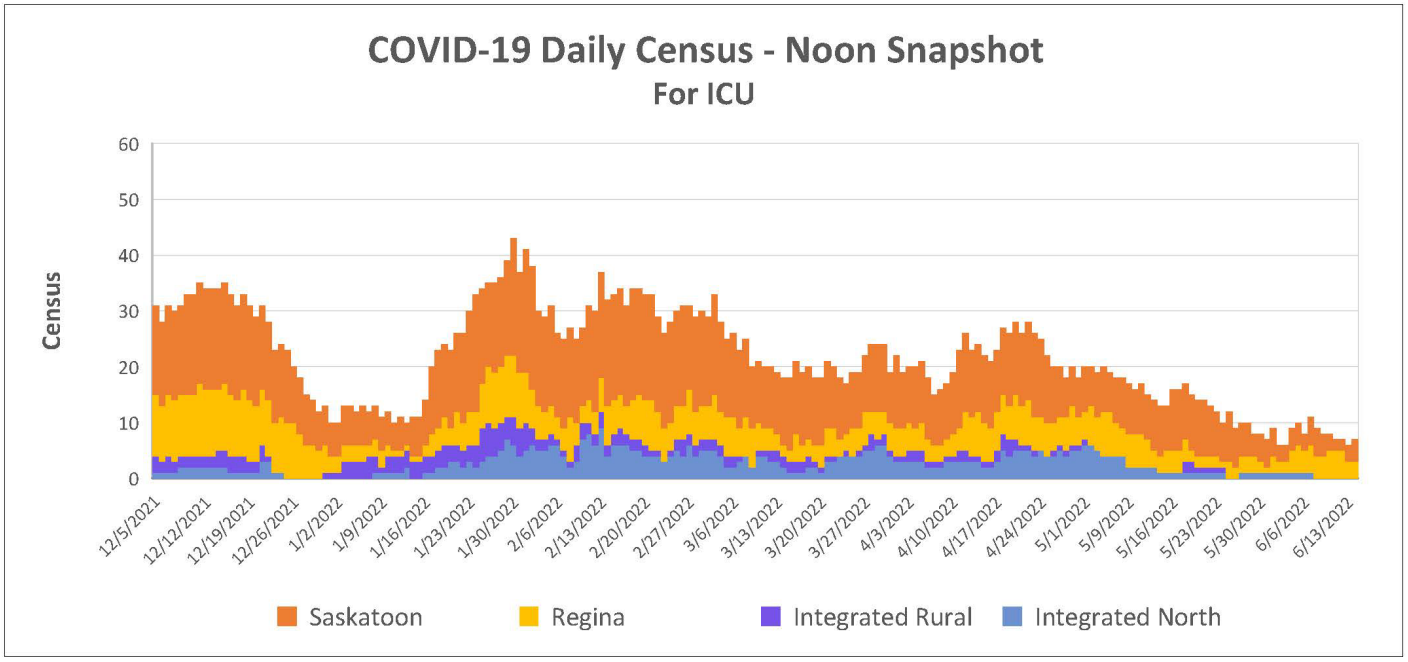

Distribution of Rapid Antigen Tests in Saskatchewan by Streams from November 2020 to June 10, 2022

Sector	SPSA	SHA	Sector Totals
SHA Internal	0	4,213,543	**4,213,543**
NITHA/ISC	3,185,105	433,720	**3,618,825**
Schools	1,138,895	1,390,000	**2,528,895**
Congregate Living	289,660	439,602	**729,262**
Law Enforcement & Fire Depts.	173,020	37,440	**210,460**
EMS	0	15,615	**15,615**
Test to Protect & Unclassified	0	319,290	**319,290**
Public Distribution Centres	8,309,385	1,372,660	**9,682,045**
Total Tests:	**13,096,065**	**8,221,870**	**21,317,935**

- 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.

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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 June 5-11, 2022, by zone

Zone	Current Week (June 5 to June 11, 2022)			Previous Week (May 29 to June 4, 2022)			Change from Previous Week	
	Total Number of Tests Performed	% Tested Positive^*	Tests performed per 1,000 population	Total Number of Tests Peformed	% Tested Positive^*	Tests performed per 1,000 population	Test Positivity	Tests performed per 1,000 population
FNW	121	5.0%	4.1	173	5.2%	5.8	-0.2	-1.7
FNC	9		3.4	8		3.0	NA	0.4
FNE	68		2.8	86		3.5	NA	-0.7
NW	206	2.9%	2.5	286	4.9%	3.5	-2.0	-1.0
NC	215	2.3%	2.4	207	4.8%	2.3	-2.5	0.1
NE	154	3.2%	3.7	140	3.6%	3.4	-0.4	0.3
ST	869	7.5%	2.6	912	6.7%	2.7	0.8	-0.1
CW	65		1.8	111	4.5%	3.0	NA	-1.2
CE	366	4.4%	3.7	408	5.1%	4.1	-0.7	-0.4
RE	415	4.1%	1.5	352	5.7%	1.3	-1.6	0.2
SW	163	3.7%	4.2	130	3.8%	3.4	-0.1	0.8
SC	237	4.6%	3.9	230	3.0%	3.8	1.6	0.1
SE	230	5.7%	2.6	201	10.0%	2.3	-4.3	0.3
Unknown	2,762	8.0%		2,644	3.1%		4.9	
SK	**5,880**	**6.5%**	**4.9**	**5,888**	**4.6%**	**4.9**	**1.9**	**0.0**

Source: RRPL Daily Test Count Table by new zones, extracted June 13, 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 5-11, 2022:

- 5,880 laboratory tests were performed in Saskatchewan.
- The number of tests per 1,000 population was 4.9. This was equal to the previous week (May 29 to June 4, 2022). However, it was lower than the average for the previous four weeks (May 8 to June 4, 2022) where the weekly average rate was 5.2 tests per 1,000 population.
- The South West zone had the highest testing rate (4.2 tests per 1,000 population). The Regina zone had the lowest testing rate (1.5 tests per 1,000 population).
- 6.5% of tests in the province were positive. This was higher than the previous week (May 29 to June 4, 2022) by 1.9 percentage points. It was also higher than the average for the previous four weeks (May 8 to June 4, 2022) by 1.0 percentage point where the average was 5.5%.
- Of zones with reported test positivity, the Saskatoon zone (7.5%) had the highest, while the North Central zone had the lowest (2.3%).

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 5-11, 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	9	30	8	27	↑ 3	8	26	↑ 4
FNC	1	38	1	38	→ 0	1	19	↑ 19
FNE	8	33	9	37	↓ -4	7	28	↑ 5
NW	25	30	23	28	↑ 2	29	35	↓ -5
NC	15	17	14	16	↑ 1	20	23	↓ -6
NE	12	29	5	12	↑ 17	14	32	↓ -3
ST	124	37	80	24	↑ 13	108	32	↑ 5
CW	10	27	8	22	↑ 5	10	27	→ 0
CE	39	40	29	29	↑ 11	40	40	→ 0
RE	60	22	55	20	↑ 2	73	27	↓ -5
SW	11	28	5	13	↑ 15	9	24	↑ 4
SC	19	31	9	15	↑ 16	16	26	↑ 5
SE	40	45	28	31	↑ 14	28	32	↑ 13
Pending	21		11			11		
SK	**394**	**33**	**285**	**24**	↑ **9**	**373**	**31**	↑ **2**

Source: RRPL line list June 13, 2022.

The rates in Table 2 are per 100,000. In past weeks, the rates were per 1,000. This has been changed due to smaller number of cases.

[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. This week there were 14 out of province cases and one other added to the totals.

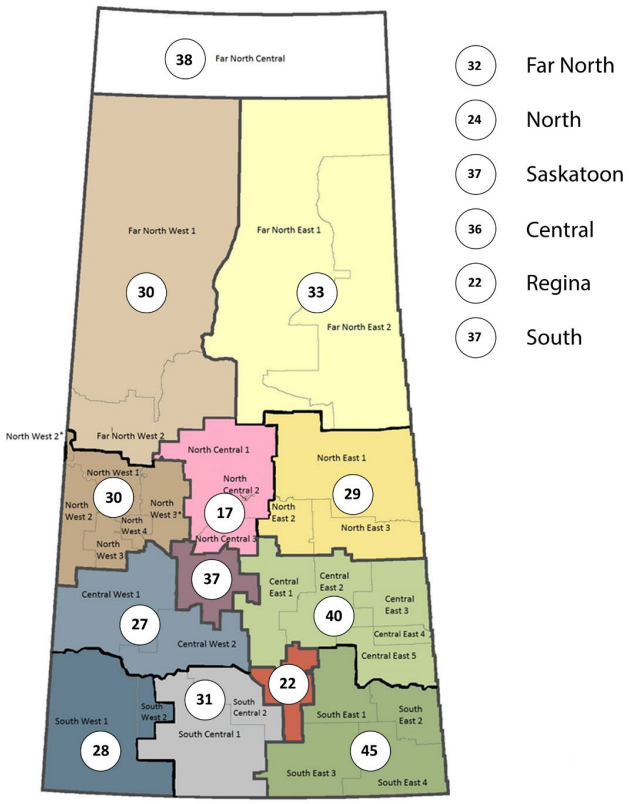
For the week of June 5-11, 2022

- 394 new cases were confirmed by a positive laboratory test.
- The proportion of new laboratory-confirmed cases was 33 per 100,000 population, higher than last week (24 per 100,000 population).
- It was higher than the average weekly rate for the previous four weeks (May 8 to June 4, 2022) by 2 cases per 100,000 population.
- The highest proportion of new cases for the week was in the South East zone, at 45 per 100,000 population. The lowest proportion was in North Central zone at 17 per 100,000.
- Compared to the previous week, and with the exception of Far North Central and Far North East, there were increases in all zones.
- 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 5-11, 2022

For the week of June 5-11, 2022:

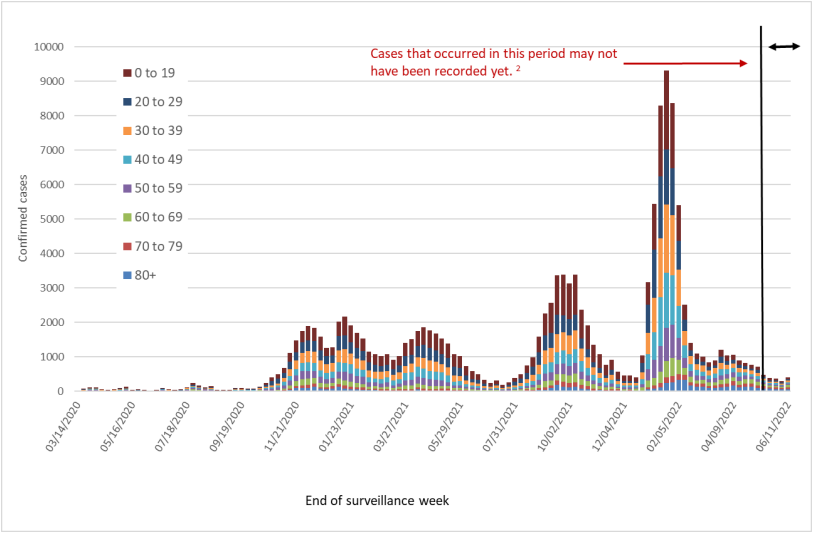
- 32 new cases per 100,000 in the Far North (FNW, 30 cases per 100,000; FNC, 38 cases per 100,000; FNE, 33 cases per 100,000);
- 24 new cases per 100,000 in the North (NW, 30 cases per 100,000; NC, 17 cases per 100,000; NE, 29 cases per 100,000);
- 37 new cases per 100,000 in the Saskatoon area;
- 36 new cases per 100,000 in the Central area (CW, 27 cases per 100,000; CE, 40 cases per 100,000);
- 22 new cases per 100,000 in the Regina area; and
- 37 new cases per 100,000 in the South (SW, 28 cases per 100,000; SC, 31 cases per 100,000; SE, 45 cases per 100,000).



Source: RRPL line list June 13, 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 cases[1], by age group and week, March 8, 2020 to June 11, 2022

- From March 8, 2020 to June 11, 2022, there were 139,224 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 = 216; 54.8%).



Source: Panorama IOM June 13, 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

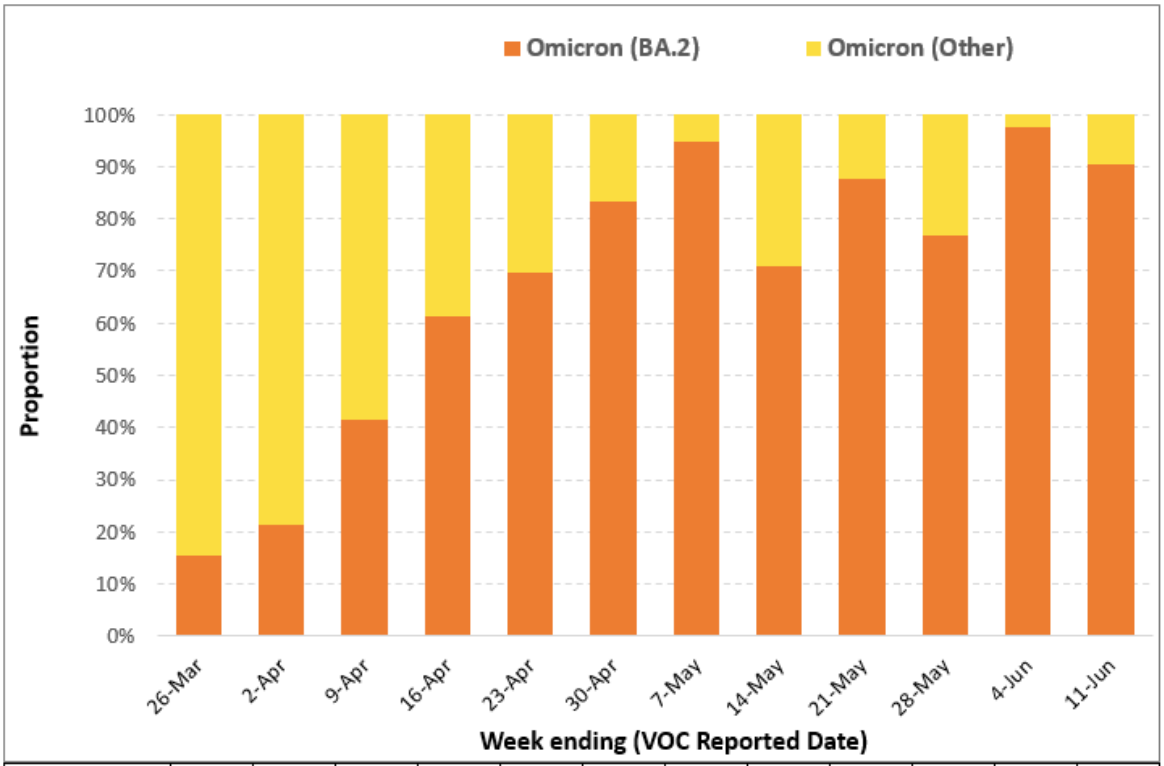
Table 3: Distribution of Variants of Concern (VOC) among sequenced COVID-19 cases for the week, by zone for June 5-11, 2022

MoH Zone	Current week (June 5-11, 2022)				Previous week (May 29-June 4, 2022)			
	Omicron VOC		Delta VOC	Total	Omicron VOC		Delta VOC	Total
	BA.2 sublineage	Other sublineage			BA.2 sublineage	Other sublineage		
Far North West	100%			**1**	100%			**2**
Far North Central				**0**				**0**
Far North East				**0**	50.0%	50.0%		**2**
North West	71%	28.6%		**7**	67%	33.3%		**3**
North Central	83.3%	16.7%		**6**	100%			**2**
North East	100%			**3**	100%			**4**
Saskatoon	93.1%	6.9%		**29**	100%			**37**
Central West	100%			**1**	100%			**1**
Central East	100%			**5**	100%			**13**
Regina	95.7%	4.3%		**23**	100%			**24**
South West	66.7%	33.3%		**3**	100%			**4**
South Central	75%	25.0%		**4**	100%			**15**
South East	100%			**4**	90%	10.0%		**10**
Pending	87.5%	12.5%		**8**	100%			**5**
Total	**90.4%**	**9.6%**		**94**	**97.5%**	**2.5%**		**122**

Source: Panorama June 13, 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 geograpical information is not available at the time of reporting.
The number of positive tests submitted for sequencing changes from week to week.

- There were 94 VOCs reported during the current week (June 5-11), lower than the 122 reported in the previous week (May 29-June 4).
- Of the total VOCs reported in the past two weeks, 100% were the Omicron VOCs.
- 90.4% of the Omicron VOC were of sublineage BA.2 compared to 97.5% last week.

Figure 3: Distribution of VOCs among reported COVID-19 cases (N = 4,104) between week ending March 26, 2022 and week ending June 11, 2022



Omicron (other)	338	346	220	208	80	95	13	77	42	101	3	9
Omicron (BA.2)	62	94	155	331	184	477	239	188	302	336	119	85
Total	**400**	**440**	**375**	**539**	**264**	**572**	**252**	**265**	**344**	**437**	**122**	**94**

Data source: Panorama IOM; data extraction: June 13, 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.
- The Omicron VOC rapidly increased since the first week of January and became the dominant variant in Saskatchewan.
- Of all 4,104 VOCs reported from the week ending on March 26, 2022 to the week ending on June 11, 2022, 62.7% (2,572) were BA.2 and 37.3% (1,532) were Omicron (Other).

B. Description of Severe COVID-19 Cases

Deaths

Table 4: Number and proportion of COVID-19 deaths newly reported for the week of June 5 to 11, 2022

Zone	Deaths	
	Number	Deaths per 100,000 population
FNW		
FNC		
FNE		
NW	1	1.2
NC	1	1.1
NE	1	2.4
ST	3	0.9
CW		
CE	6	6.1
RE	1	0.4
SW	1	2.6
SC	2	3.3
SE	1	1.1
Pending		
SK	**17**	**1.4**

Source: Panorama IOM June 13, 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.

Table 5: Age and sex distribution of COVID-19 deaths newly reported the week of June 5 to 11, 2022

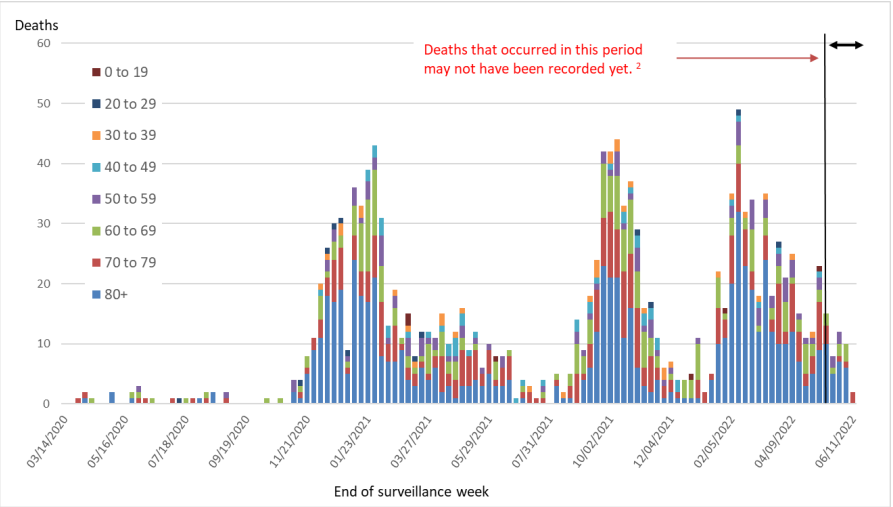
Age group and sex		Deaths	
		Number	%
Age	19 and younger		
	20 to 39	1	6
	40 to 59		
	60 to 69	2	12
	70 to 79	5	29
	80 and older	9	53
	TOTAL	**17**	**100**
Sex	Female	6	35
	Male	11	65
	Total	**17**	**100**

Source: Panorama IOM June 13, 2022.

- For the week of June 5 to 11, 2022, there were 17 newly reported COVID-19 deaths.
- Over one-third of the newly reported deaths, six (6), were in the Central East zone.
- Most of the newly reported deaths (9 or 53%) were among those 80 years of age or older.
- Close to two-thirds, 11 deaths, were among males.
- Of this week's newly reported deaths, two (2) occurred within the week. Fifteen (15) deaths occurred earlier (September 28, 2021 to June 4, 2022), but were reported this week.

Figure 4: Deaths[1] in COVID-19 cases, by age group and week of death, March 8, 2020 to June 11, 2022

- From March 8, 2020 to June 11, 2022, there were 1,412 cases with a fatal outcome.
- Over one in five deaths (310) were in the 70 to 79 year age group and close to half (655 or 46.4%) were in the 80 years and older group (similar to last week).
- 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 13, 2022

[1]Death means the Panorama IOM record reported outcome-fatal.
[2]Due to data entry lag, deaths for this period may be under-reported and not captured in this figure. This week, with the update of records, one (1) death was removed from the counts

Pre-existing Conditions

Table 6: Most common pre-existing conditions among severe COVID-19 cases in Saskatchewan, March 8, 2020 and June 11, 2022**

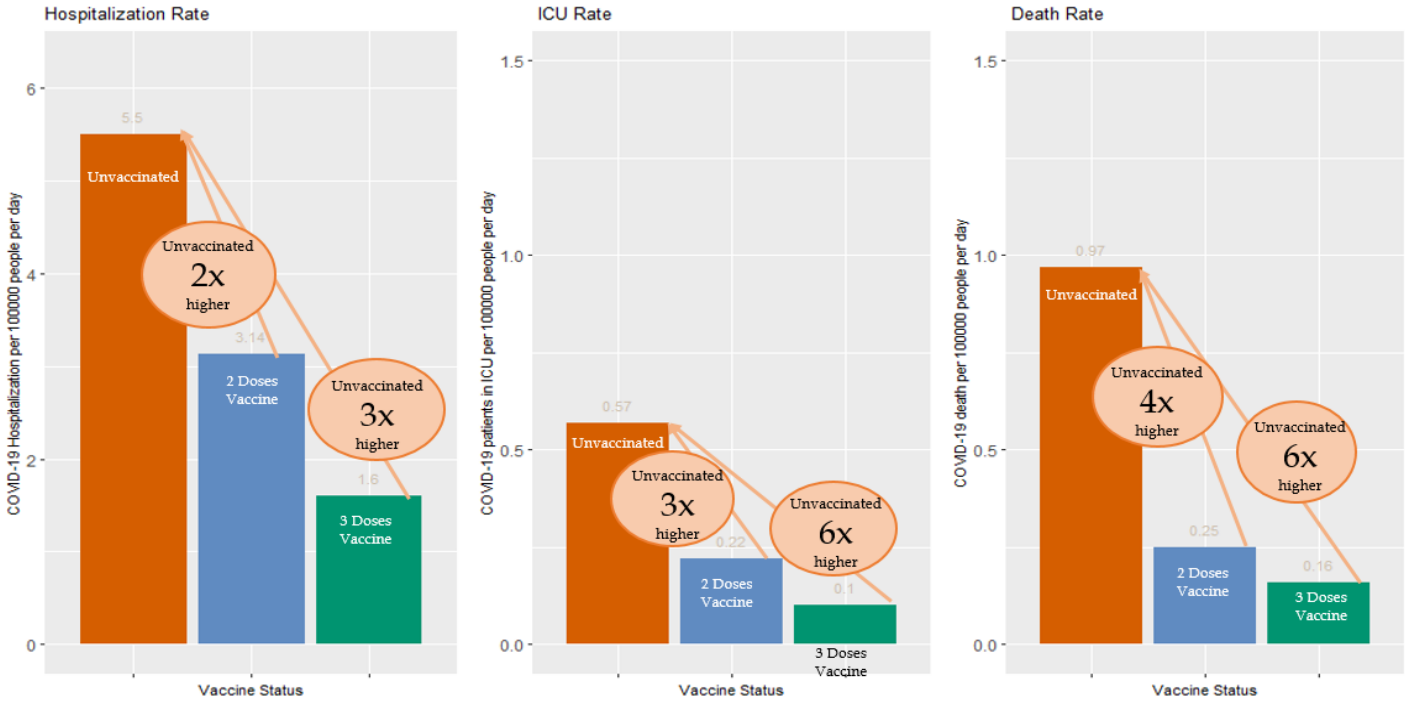
- During the period March 8, 2020 and June 11, 2022, there were 6,087 COVID-19 cases who were categorized as severe. Of these,
  - Over one-half of the severe cases (n = 3,139; 51.6%) had one or more pre-existing conditions listed in the case investigation record.
  - The remainder of the severe cases (n = 2,948; 48.4%) had no pre-existing condition listed in the case investigation record.

Co-morbidity	Number of severe cases with pre-existing conditions (n = 3,139*)	Percent
Hypertension	1,732	55.2%
Diabetes	1,399	44.6%
Heart Disease	1,182	37.7%
Lung Disease	869	27.7%
Obesity	248	7.9%
Pregnancy	62	2.0%

Source: Panorama IOM June 13, 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 5 – June 11 were respiratory syncytial virus (RSV) (3.6% 16/445 positive tests); enterorhinovirus (17.8%, 30/169 positive tests) and influenza (6% positive tests, 27/443). This compared to COVID-19 with 6.5% of tests that were positive.

The overall rate of RSV decreased at 1.3/100,000 population, a third of last weeks rate (3.6/100,000). The 16 positive specimens were mainly in the Far North East (16.5/100,000 population) and the Far North West (10.1/100,000 population) zones of the province though the virus circulated throughout the province. Seventy-five percent (75%) of positive RSV this week was among children aged 0 to 4 years while no lab-confirmed cases were among school age children and the remaining cases equally distributed between working age and senior age people

The overall rate of influenza decreased to 2.2/100,000 population from 3.1/100,000 population last week. This rate is at the inter seasonal level. Of the 27 positive influenza A lab confirmations this week, 33% was among school age children (ages 5-19 years, 9 cases). Another 19% was among preschool children (5 cases) and 37% among adults 20-64 years (10 cases). The highest rates of influenza A were in the Far North West (50.3/100,000 population) and the Far North East (16.5/100,000 population).

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

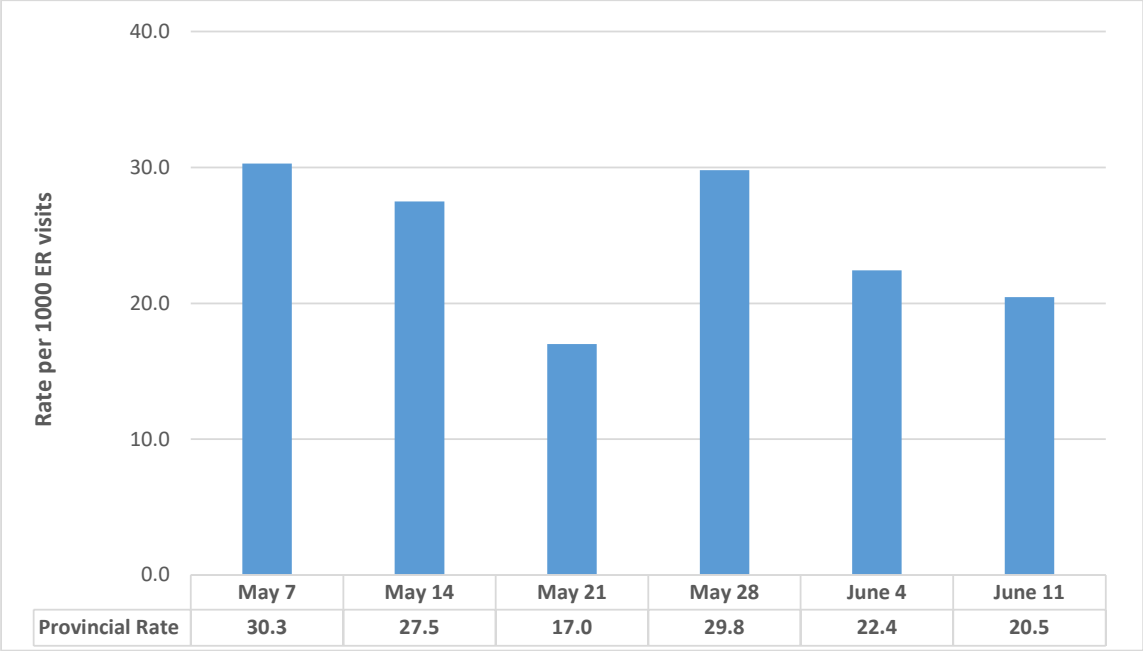
ED visit data regarding CLI is one component of community-based respiratory illness surveillance. Visitors may access EDs as their primary health care service or come when health provider offices are closed.

Table 7: COVID-19-like illness (CLI) surveillance (rate per 1,000 visits) in emergency departments by zone and week, April 30 to June 11, 2022

COVID-like patients per 1,000 ED visits	Apr 30	May 7	May 14	May 21	May 28	June 4	June 11
Provincial Rate	**36.4**	**30.3**	**27.5**	**17.0**	**29.8**	**22.4**	**20.5**
FNW	74.8	32.5	26.7	7.2	19.9	17.2	4.0
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	26.2	14.1	26.9	14.0	11.7	16.2	11.5
NC	No report	No report	No report	No report	No report	No report	No report
NE	161.3	205.9	161.3	188.1	338.2	138.6	153.8
ST	20.5	11.5	11.0	3.8	16.8	3.3	10.8
CW	108.7	39.2	170.7	26.3	113.5	152.2	20.7
CE	No report	No report	No report	No report	No report	No report	No report
RE	31.1	48.5	18.5	22.1	32.9	16.1	31.6
SW	53.6	52.6	153.8	48.4	18.2	21.3	12.2
SC	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	179.2	153.1	135.1	67.3	180.6	93.5	127.3
Preschool age 1-4 years	44.6	63.3	35.9	34.3	69.0	41.0	50.3
School age 5 -19	26.0	33.5	40.8	27.7	24.2	34.5	21.9
Working age 20-64	34.3	21.1	19.3	11.8	21.5	15.6	19.2
Seniors 65 +	45.3	34.7	34.8	14.4	38.1	21.7	10.1

Source: Emergency department surveillance data, June 13, 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 7 to June 11, 2022



Source: Emergency department surveillance data, June 13, 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 11. This week's provincial rate of 20.5 COVID-19-like illness patients per 1,000 visits was lower than the previous six-week average of 27.2/1,000 visits.
- This week's rate represents 81 COVID-19-like illness patients among 3,957 visitors to the EDs.
- This week's preschool age rate of 50.3/1,000 visits was an increase from last week (41.0/1,000 visits) and higher than the average rate of 48.0/1,000 visits over the previous six weeks. Pediatric rates can fluctuate widely week over week.
- The school age rate at 21.9/1,000 visits was lower than the average rate of 31.1/1,000 visits over the previous six-weeks.
- The working age group rate at 19.2/1,000 visits was lower than the average rate over the previous six weeks (20.6/1,000 visits).
- The seniors' age group rate at 10.1/1,000 visits this week was lower than last week (21.7/1,000 visits) and below the average rate of 31.5 /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 11, 2022

- In the week ending June 11, of the 1,350 calls to HealthLine (811), 108 callers reported respiratory symptoms similar to COVID-19 and other common respiratory viral infections.
- The provincial rate was 80 callers per 1,000 calls, marginally lower than the 90.8/1,000 calls last week and below the average rate in the six weeks prior (97.2/1,000 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.

Source: HeatlhLine Database June 13, 2022.

Integrated Service Area	Number of callers with symptoms	Rate per 1,000 calls
North East	14	89.7
North West	9	92.8
Regina	23	65.2
Saskatoon	38	87.8
South East	13	81.8
South West	11	72.4
Saskatchewan	**108**	**80.0**

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	1-May	8-May	15-May	22-May	29-May	5-Jun	12-Jun
North East	87.9	75.6	82.5	99.3	63.6	44.6	89.7
North West	79.2	87.0	155.3	69.0	58.8	56.1	92.8
Regina	89.9	97.3	82.9	99.8	101.6	94.9	65.2
Saskatoon	116.0	143.8	104.5	110.2	96.5	103.4	87.8
South East	94.6	99.2	88.1	115.6	65.2	102.6	81.8
South West	86.1	80.0	89.6	115.1	100.0	103.0	72.4
Province	**97.6**	**106.4**	**95.9**	**103.7**	**88.7**	**90.8**	**80.0**

Source: HealthLine Database June 13, 2022.
Six-week average is the average of rate of callers to HealthLine from May 1, 2022 to June 12, 2022

- The rate of callers to HealthLine with respiratory-like symptoms was lower this week than the previous six-week average in all the Integrated Service Areas (ISA) except North West (92.8/1,000 calls compared to 84.2/1,000 calls over the previous six weeks) and the North East (89.7/1,000 calls), compared to the previous week average of 75.6/1,000 calls.
- 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 5-11, 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	1	
North Central		
North East		1
Saskatoon	1	1
Central West		
Central East		
Regina		1
South West		
South Central		
South East		
Total	**2**	**3**

Source: Outbreak line list, PHB, extracted June 13, 2022.
*By date of first notification.

- Five (5) confirmed new COVID-19 outbreaks in long term care facilities and care homes were reported this week.
- Two (2) outbreaks were reported in long term care facilities, one (1) in personal care homes and two (2) in a group home.

Table 10: COVID-19 outbreaks in selected high risk settings, weeks ending May 7–June 11, 2022

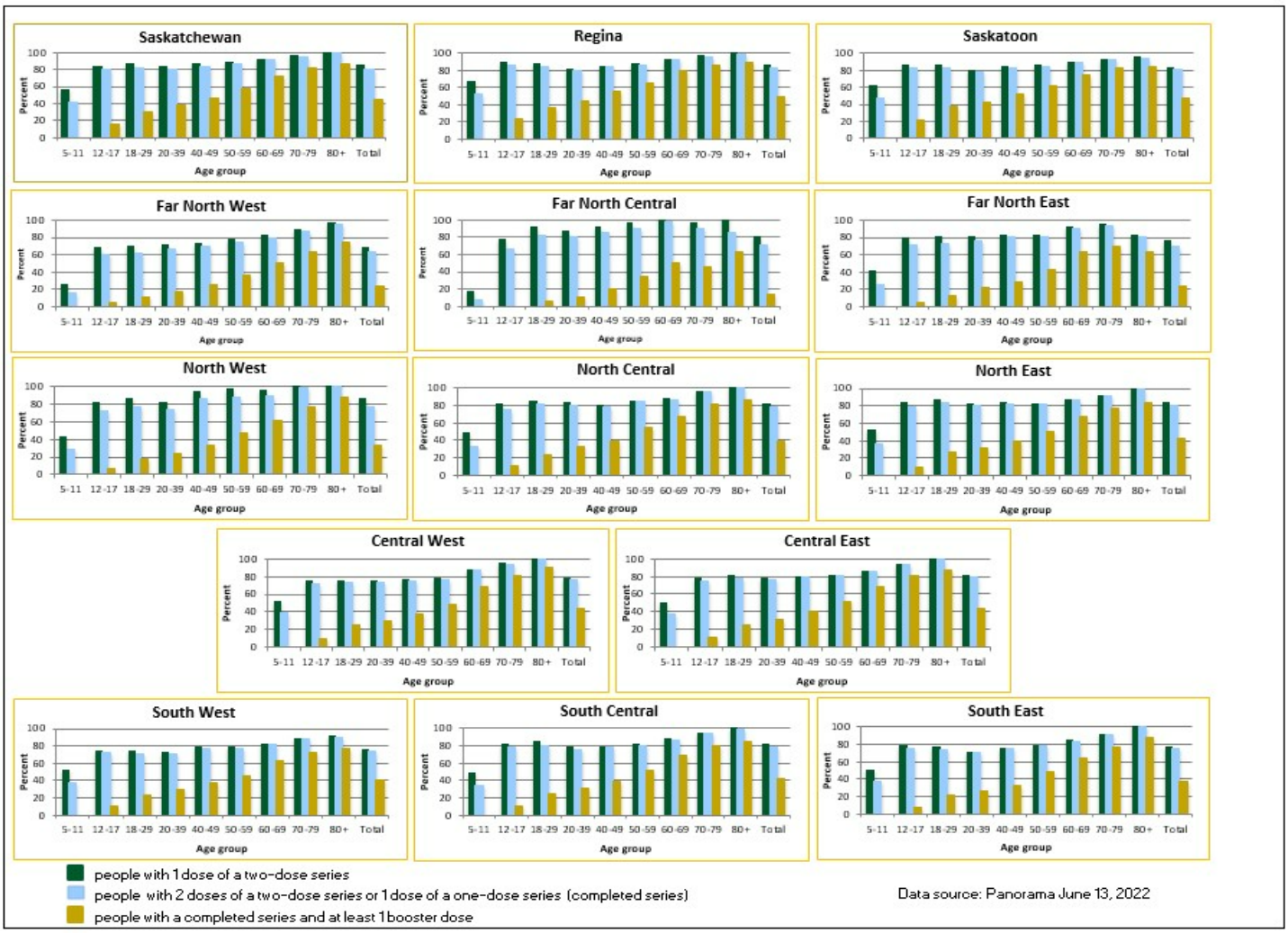
High risk setting	7-May	14-May	21-May	28-May	4-Jun	11-Jun	6-week total by setting
# COVID-19 Outbreaks in LTC	5	8	4	2	5	2	**26**
# COVID-19 Outbreaks in personal care homes, group homes, shelters	5	3	2	1	3	3	**17**
Total by week	**10**	**11**	**6**	**3**	**8**	**5**	**43**

Source: Outbreak line list, PHB, extracted June 13, 2022

- Over the past six weeks, twenty-six (26) outbreaks occurred in long term care facilities, nine (9) in personal care homes, and eight (8) in group homes. Twenty-two (51%) of the 43 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 11, 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 11, 2022:

- Of the population five years and older, 86.0% had received at least one dose and 81.1% completed a series, unchanged from the previous week.
- Among the population 12 years and older, 49.3% had received at least one booster, similar to the previous week.
- Among the population 18 years and older, 52.6% had received at least one booster, similar to the previous week.
- Among the youngest age group, five to 11 years of age, 42.0% completed their series, similar to the previous week.
- Unchanged from last week, Regina (83.0%), Saskatoon (80.5%), and North East (80.3%) 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
	June 5-11	May 29 to June 4 *	Dec 15, 2020 to June 11, 2022
First of two	222	232	972,675
Second of two	300	324	915,279
Jansen single dose	2	7	2,317
Total primary series doses	**524**	**563**	**1,890,271**
First booster **	755	852	502,142
Second booster **	3,259	4,395	123,829
Additional boosters **	184	208	2,846
Total booster doses	**4,198**	**5,455**	**628,817**
TOTAL (including pediatric and boosters)	**4,722**	**6,018**	**2,519,088**
- of the total, all pediatric doses	235	239	109,453

Source: Panorama IOM June 13, 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 5 to 11, 2022, 4,722 doses of COVID-19 vaccine were administered, of which 235 (5%) were pediatric doses and 4,198 (88.9%) were booster doses.
- The weekly number of booster doses has declined compared to the previous week.
- Since the start of the immunization campaign to June 11, 2022, over 2.5 million doses of COVID-19 vaccine were administered.
- Of these, about 1.9 million (75.0%) were administered for a primary series, of which 109,453 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 linages 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