COVID-19 Integrated Epidemiology Situation Report

Week of May 22 - 28, 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

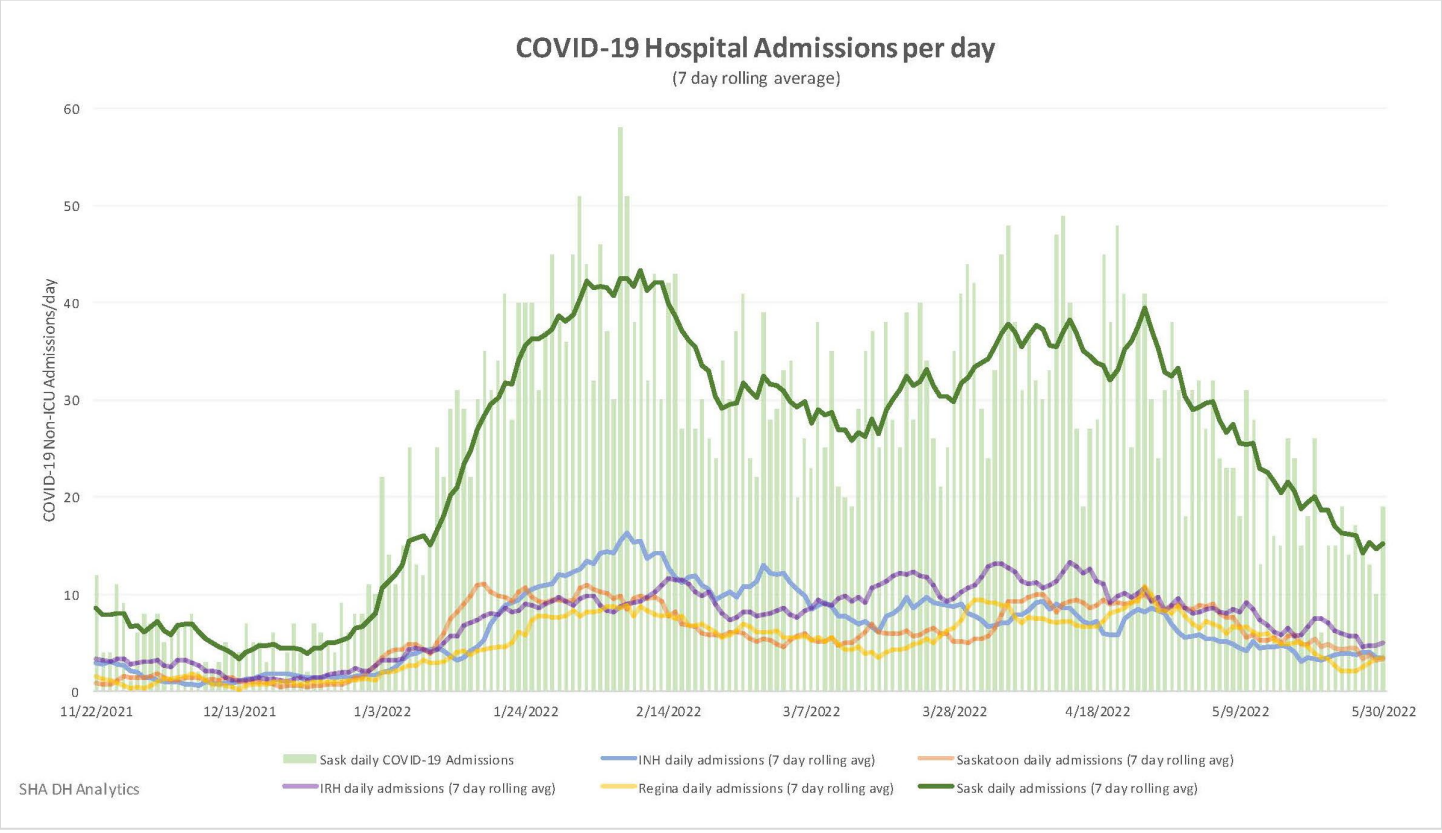
- 5,667 laboratory tests were performed in Saskatchewan reflecting 4.7 tests performed per 1,000 population.
- The number of tests was lower than the number of tests in the previous week (6,402).
- One in nineteen laboratory tests were positive. The weekly test positivity of 5.3% is a decrease from the previous week (5.5%). Test positivity was highest in the North East and test positivity in Regina nearly doubled this week (8.3% from 4.2%).
- 364 new cases were confirmed reflecting 0.3 laboratory-confirmed cases per 1,000 population.
- The number of new laboratory-confirmed cases was lower than the number of new cases in the previous week (376).
- The majority of laboratory-confirmed cases this week were 50 years and older (52.5%).
- There were 437 new lineage results reported this week. Of the 437 variants of concern identified by whole genome sequencing, 100% were Omicron.
- The Omicron BA.2 sublineage accounted for 76.9% of the VOCs reported this week, which was lower than the previous week (87.8%). 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 nine (9) newly-reported COVID-19 deaths (12 in the previous week).
- Vaccination remains your best protection against severe outcomes of COVID-19 infection. From Dec 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 a higher test positivity rate than COVID-19 in Saskatchewan:
    - Respiratory syncytial virus (RSV) – 7.4% test positivity
    - Influenza – 12.6% test positivity
    - Enterorhinovirus – 21.0% test positivity
- The highest rates of laboratory-confirmed other viral respiratory illness was in Far North zone.
- There were 29.6 COVID-19-like illness patients per 1,000 emergency department visits which was higher than last week (17 per 1,000)
- The number of COVID-19 outbreaks (3) reported this week in long term care facilities and personal care homes is lower than last week (5). Directional trends in COVID outbreaks over the past six weeks are consistent with declining trends in other COVID activity indicators.
- As of May 28, 2022, of the population five years and older, 85.9 per cent received at least one dose of a two dose COVID-19 vaccine and 81 per cent completed a series (unchanged from last week).
- Among the population 18 years and older, 52.5% received at least one booster vaccination (unchanged).

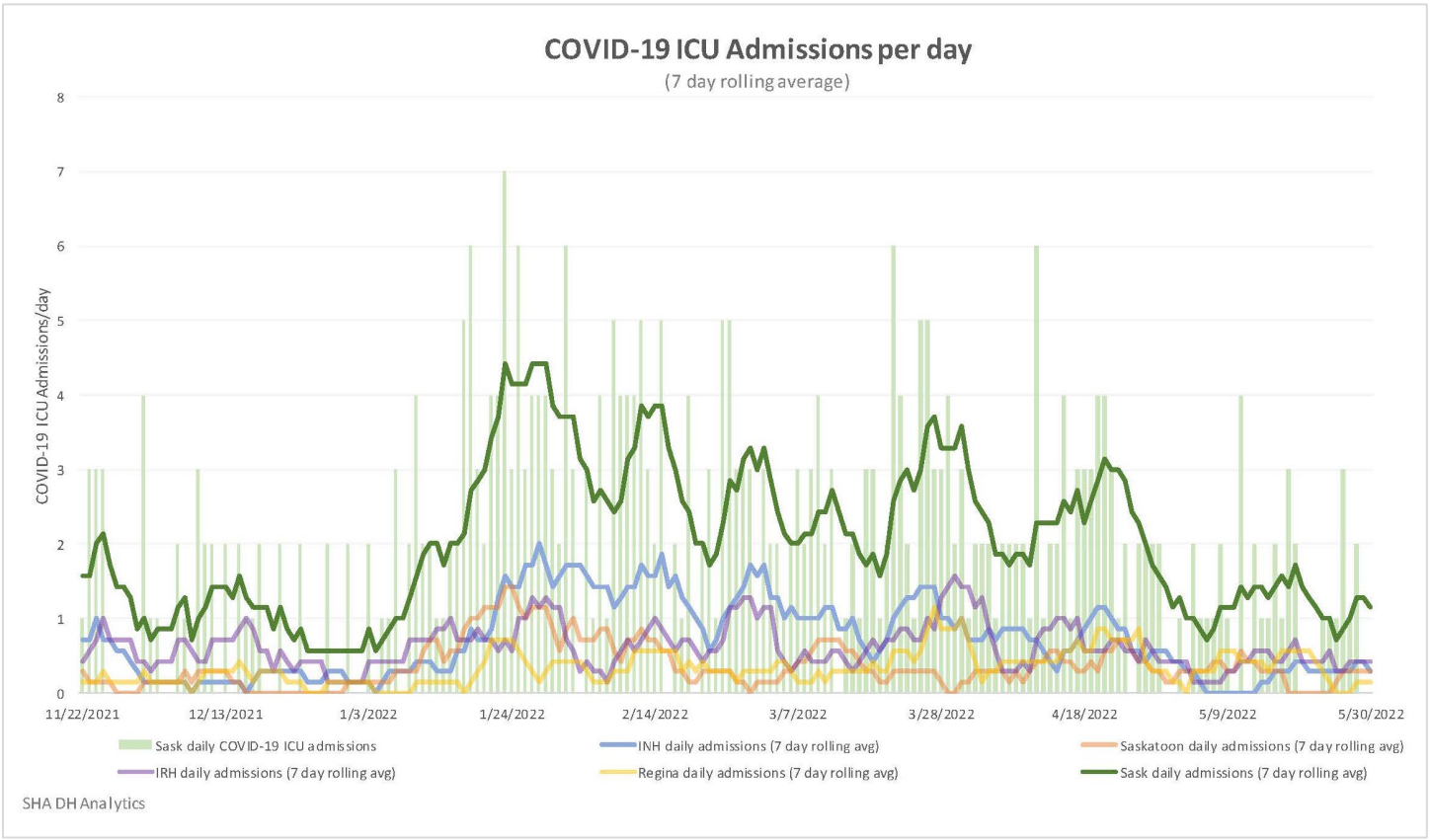
Weekly COVID-19 Hospitalization Indicators: May 25, 2022 as compared to June 1, 2022

	25-May	01-Jun	Change from last reporting period
Total Covid Hospitalized	258	232	-26
Total Covid Adult ICU/ICU Surge	10	6	-4
Average Daily Admissions over past 7 days	16	13	-3
Total Covid Related Illness	90	68	-22
Total Incidental Covid Infection	150	151	+1
Total Patient Under Investigation	18	13	-5

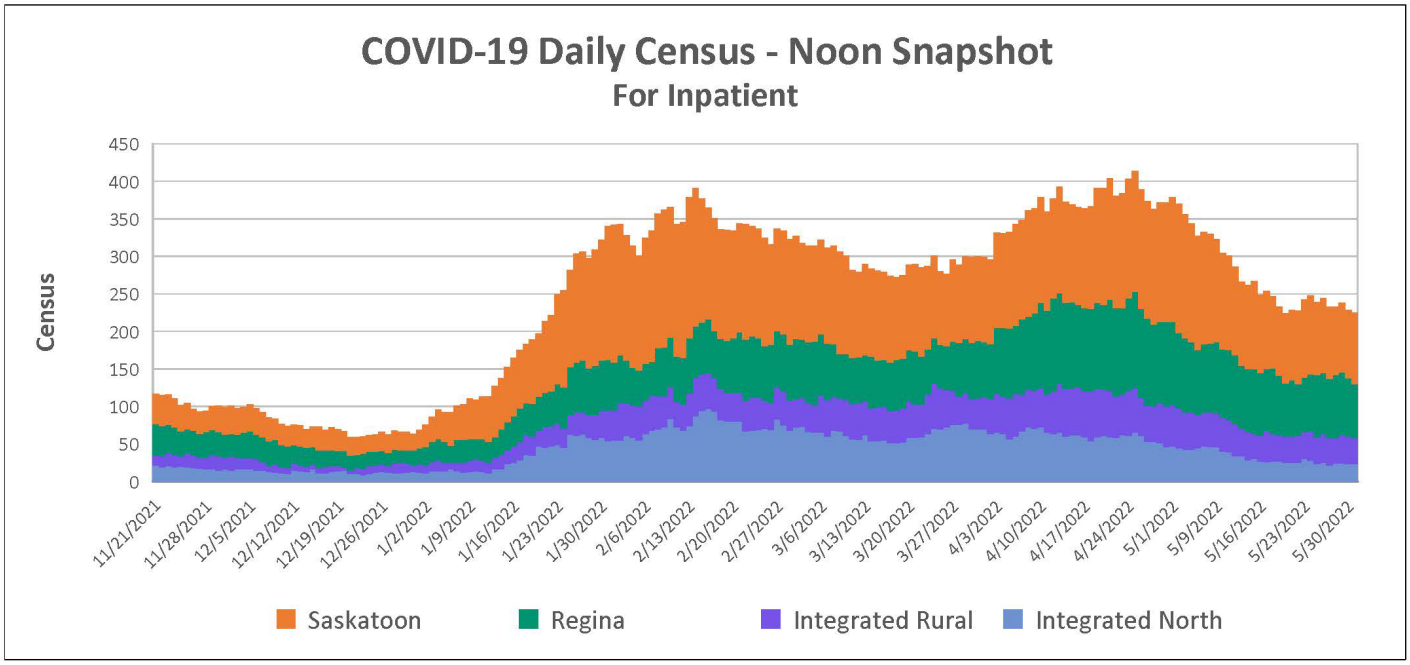
All data is reflective of the 12:00pm (noon) snapshot with the exception of the average daily admissions over past 7 days, which is reflective of the previous Wednesday to Tuesday reporting cycle.

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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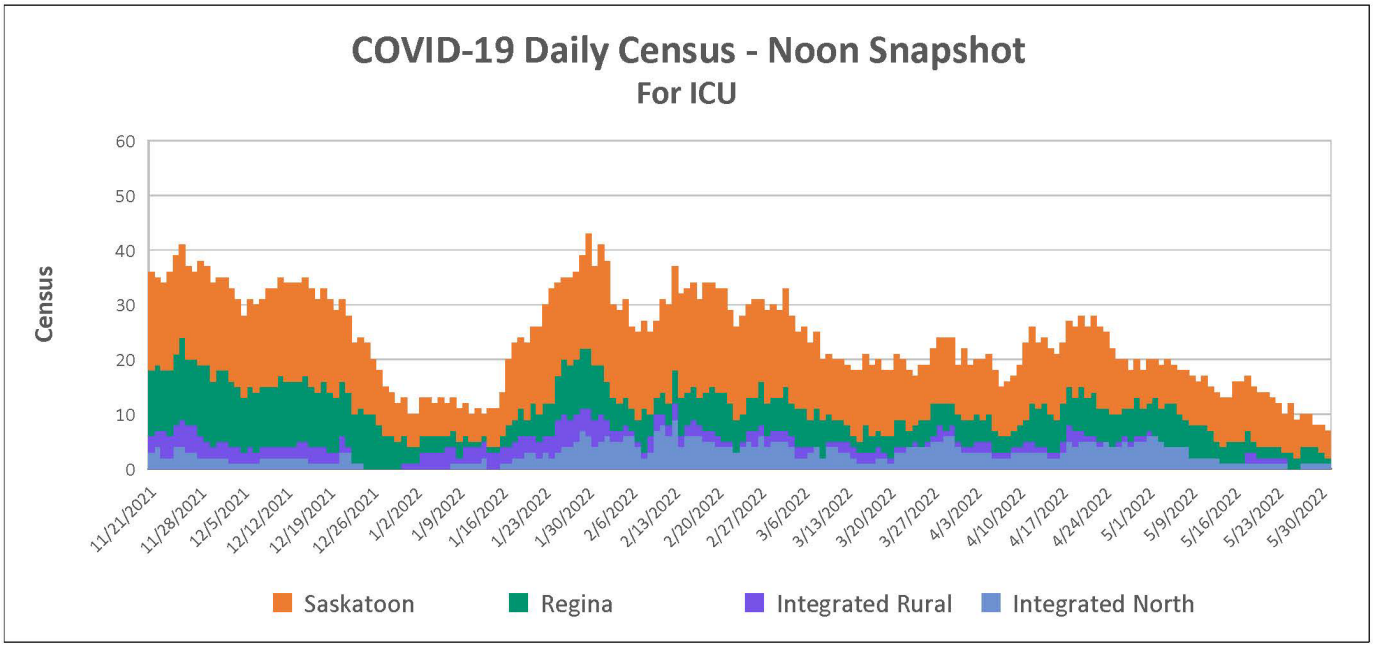

Distribution of Rapid Antigen Tests in Saskatchewan by Streams from November 2020 to May 27, 2022

Sector	SPSA	SHA	Sector Totals
SHA Internal	0	4,184,293	**4,184,293**
NITHA/ISC	3,024,725	433,720	**3,458,445**
Schools	1,125,935	1,390,000	**2,515,935**
Congregate Living	280,380	434,142	**714,522**
Law Enforcement & Fire Depts.	173,020	37,440	**210,460**
EMS	0	15,615	**15,615**
Test to Protect & Unclassified	0	318,160	**318,160**
Public Distribution Centres	8,297,505	1,372,660	**9,670,165**
Total Tests:	**12,901,565**	**8,186,030**	**21,087,595**

- There are currently 661 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 May 22-28, 2022, by zone

Zone	Current Week (May 22 to 28, 2022)			Previous Week (May 15 to 21, 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	182	6.6%	6.1	147	0.7%	4.9	5.9	1.2
FNC	8		3.0	10		3.8	NA	-0.8
FNE	81		3.3	99		4.1	NA	-0.8
NW	260	3.8%	3.2	245	4.9%	3.0	-1.1	0.2
NC	223	7.2%	2.5	227	4.0%	2.6	3.2	-0.1
NE	158	8.9%	3.8	196	3.6%	4.7	5.3	-0.9
ST	941	7.5%	2.8	1,013	7.7%	3.0	-0.2	-0.2
CW	96		2.6	96		2.6	NA	0.0
CE	345	7.0%	3.5	432	5.6%	4.4	1.4	-0.9
RE	372	8.3%	1.4	403	4.2%	1.5	4.1	-0.1
SW	129	4.7%	3.3	156	6.4%	4.0	-1.7	-0.7
SC	239	4.6%	4.0	222	11.3%	3.7	-6.7	0.3
SE	223	3.6%	2.5	241	9.5%	2.7	-5.9	-0.2
Unknown	2,410	3.7%		2,915	4.6%		-0.9	
SK	**5,667**	**5.3%**	**4.7**	**6,402**	**5.5%**	**5.3**	**-0.2**	**-0.6**

Source: RRPL Daily Test Count Table by new zones, extracted May 30 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 May 22-28, 2022:

- 5,667 laboratory tests were performed in Saskatchewan.
- The number of tests per 1,000 population was 4.7. This was lower than the previous week (May 15 to 21, 2022) by 0.6 tests per 1,000 population. It was also lower than the average for the previous four weeks (April 24 to May 21, 2022) where the weekly average rate was 5.8 tests per 1,000 population.
- The Far North West zone had the highest testing rate (6.1 tests per 1,000 population). The Regina zone had the lowest testing rate (1.4 tests per 1,000 population).
- 5.3% of tests in the province were positive. This was lower than the previous week (May 15 to 21, 2022) by 0.2 percentage points. It was also lower than the average for the previous four weeks (April 24 to May 21, 2022) by 2.1 percentage points where the average was 7.4%.
- The North East zone (8.9%) had the highest test positivity. Of zones with reported test positivity, the South East zone had the lowest (3.6%).

Overview of COVID-19 Laboratory-Confirmed Cases

Table 2: Summary of new laboratory-confirmed COVID-19 cases per 1,000 population for the week of May 22-28, 2022 by zone

	New cases		Previous Week		Change in Cases per 1,000 from Previous Week	Weekly Rate in Previous Four Weeks		Change from Previous 4-week Rate
Zone	Confirmed cases	Cases[1] per 1,000	Confirmed cases	Cases[1] per 1,000		Confirmed cases	Cases[1] per 1,000	
FNW	15	0.5	4	0.1	0.4	8	0.3	0.2
FNC			1	0.4	-0.4	1	0.2	-0.2
FNE	3	0.1	7	0.3	-0.2	7	0.3	-0.2
NW	30	0.4	23	0.3	0.1	47	0.6	-0.2
NC	22	0.2	16	0.2	0.0	29	0.3	-0.1
NE	21	0.5	10	0.2	0.3	14	0.3	0.2
ST	109	0.3	119	0.4	-0.1	185	0.5	-0.2
CW	12	0.3	9	0.2	0.1	13	0.3	0.0
CE	38	0.4	41	0.4	0.0	58	0.6	-0.2
RE	67	0.2	61	0.2	0.0	110	0.4	-0.2
SW	8	0.2	13	0.3	-0.1	16	0.4	-0.2
SC	12	0.2	31	0.5	-0.3	27	0.4	-0.2
SE	14	0.2	33	0.4	-0.2	47	0.5	-0.3
Pending	13		8			20		
SK	**364**	**0.3**	**376**	**0.3**	**0.0**	**579**	**0.5**	**-0.2**

Source: RRPL line list May 30, 2022.

[1] Proportion per 1,000 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 65 out of province cases and one other added to the totals.

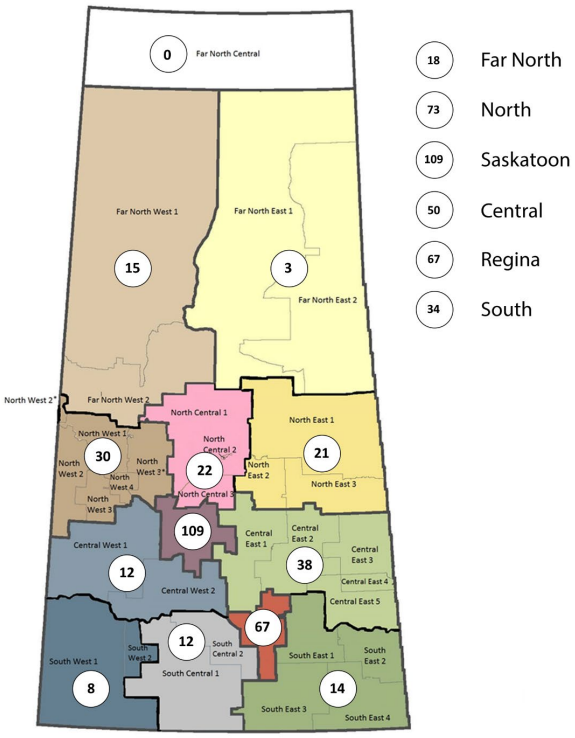
For the week of May 22-28, 2022

- 364 new cases were confirmed by a positive laboratory test.
- The proportion of new laboratory-confirmed cases was 0.3 per 1,000 population, the same as last week.
- It was lower than the average weekly rate for the previous four weeks (April 24 to May 21, 2022) by 0.2 cases per 1,000 population.
- The highest proportions of new cases for the week were in the Far North West and North East zones, at 0.5 per 1,000 population. The lowest proportion, in zones having cases, was in Far North East at 0.1 per 1,000 population.
- Compared with last week's proportions of cases, there were increases in the Far North West (0.4 per 1,000 population) and North East (0.3 per 1,000 population) zones; decreases in the Far North Central (0.4 per 1,000 population),South Central (0.3 per 1,000 population) and South East (0.2 per 1,000) zones; all others were similar.
- Rates should be interpreted with caution because they do not include cases detected by home rapid-antigen test kits.

Figure 1: Map of new laboratory-confirmed COVID-19 cases by zone and area for the week of May 22-28, 2022

For the week of May 22-28, 2022:

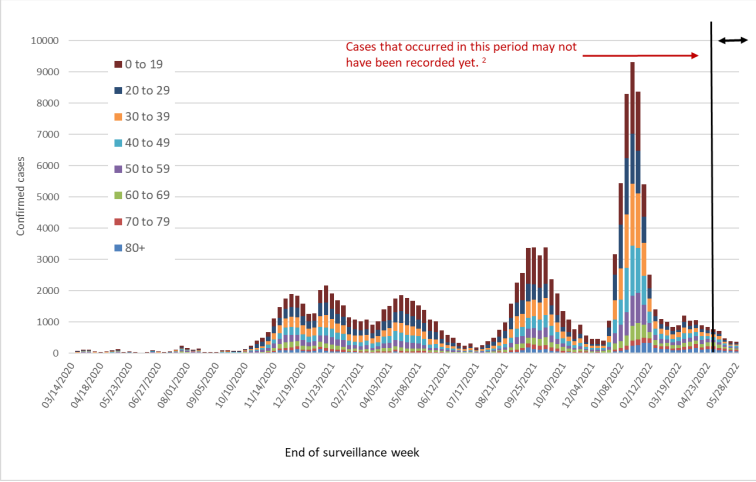
- 18 new cases in the Far North (FNW, 15 cases; FNE, 3 cases;
- 73 new cases in the North (NW, 30 cases; NC, 22 cases; NE, 21 cases);
- 109 new cases in the Saskatoon area;
- 50 new cases in the Central area (CW, 12 cases; CE, 38 cases;
- 67 new cases in the Regina area; and
- 34 new cases in the South (SW, 8 cases; SC, 12 cases; SE, 14 cases).
- 13 new cases still have pending residence information.



Source: RRPL line list May 30, 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 May 28, 2022

- From March 8, 2020 to May 28, 2022, there were 138,558 laboratory-confirmed cases.
- Close to one-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 one-half of laboratory-confirmed cases were 50 years and older (n = 191;52.5%).



Source: Panorama IOM May 30, 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

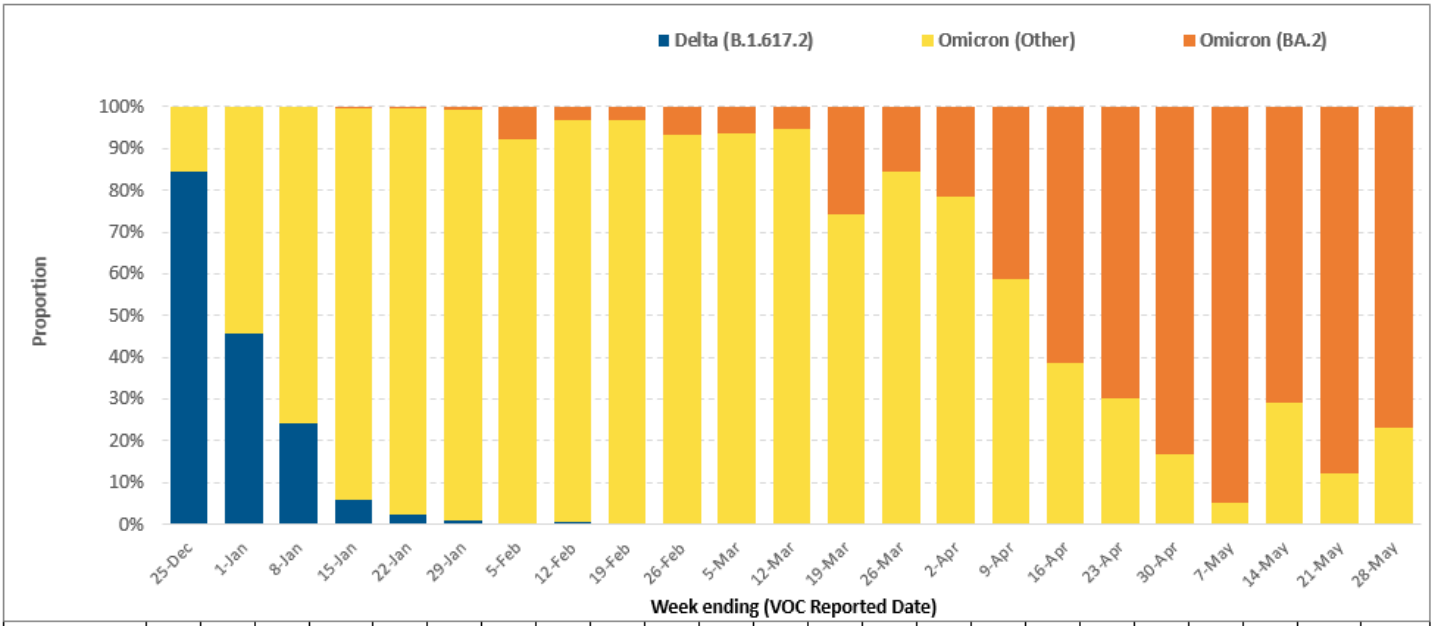
Table 3: Distribution of Variants of Concern (VOC) among sequenced COVID-19 cases for the week, by zone for May 22-28, 2022

MoH Zone	Current week (May 22 - 28 , 2022)				Previous week (May 15-21 , 2022)			
	Omicron VOC		Delta VOC	Total	Omicron VOC		Delta VOC	Total
	BA.2 sublineage	Other sublineage			BA.2 sublineage	Other sublineage		
Far North West	33%	66.7%		**3**	100%			**5**
Far North Central				**0**				**0**
Far North East	62.5%	37.5%		**8**				**0**
North West	67%	33.3%		**45**	100%			**30**
North Central	55.2%	44.8%		**29**	93%	6.7%		**15**
North East				**0**	100%			**2**
Saskatoon	73.5%	26.5%		**162**	96.6%	3.4%		**87**
Central West	50.0%	50.0%		**4**	66.7%	33.3%		**6**
Central East	86.5%	13.5%		**37**	80.0%	20.0%		**30**
Regina	92.2%	7.8%		**64**	77.1%	22.9%		**83**
South West	85.7%	14.3%		**7**	89%	11.1%		**9**
South Central	100%			**8**	73.3%	26.7%		**15**
South East	91.7%	8.3%		**36**	87%	13.3%		**30**
Pending	73.5%	26.5%		**34**	93.8%	6.3%		**32**
Total	**76.9%**	**23.1%**	**0**	**437**	**87.8%**	**12.2%**	**0**	**344**

Source: Panorama May 30, 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 437 VOCs reported during the current week (May 22-28), higher than the 344 VOCs reported in the previous week (May 15-21).
- Of the total VOCs reported in the past two weeks, 100% were the Omicron VOCs.
- 76.9% of the Omicron VOC were of sublineage BA.2 which was lower than the last week (87.8%). The decrease was due to inclusion of older samples for sequencing from January 2022, which resulted a decreased in the proportion of BA.2."

Figure 3: Distribution of VOCs among reported COVID-19 cases (N = 9,475) between week ending December 25, 2021 and week ending May 28, 2022



Delta counts	304	43	190	66	11	5		1				1											
Omicron (other)	56	51	594	1,058	453	613	83	233	157	472	597	330	109	338	346	220	208	80	95	13	77	42	101
Omicron (BA.2)				3	1	5	7	8	5	34	40	19	38	62	94	155	331	184	477	239	188	302	336
Total	**360**	**94**	**784**	**1,127**	**465**	**623**	**90**	**242**	**162**	**506**	**637**	**350**	**147**	**400**	**440**	**375**	**539**	**264**	**572**	**252**	**265**	**344**	**437**

Data source: Panorama IOM; data extraction: May 30, 2022
VOC reported date are based on date VOC reported by the provincial lab (RRPL)
Results are based on the number of samples sequenced and the date VOCs were reported by RRPL.

- The Omicron VOC was first reported in South Africa and the World Health Organization designated Omicron as a variant of concern on November 26, 2021.
- Of all 9,475 VOCs reported between December 19, 2021 and May 28, 2022, 6.9% (621) were Delta VOC and 93.4% (8,854) were Omicron VOC.
- Based on available sequence data, no Delta VOC cases were reported since mid-March 2022.
- The Omicron VOC rapidly increased since the first week of January and became the dominant variant in Saskatchewan.

B. Description of Severe COVID-19 Cases

Deaths

Table 4: Number and proportion of COVID-19 deaths newly reported during the week of May 22-28, 2022

- For the week of May 22 to 28, 2022, there were nine (9) newly-reported COVID-19 deaths.
- One-third of the newly reported deaths were in North Central and one-third in Central East, with three (3) deaths in each zone.
- Of this week's newly reported deaths, eight (8) occurred within the week. One (1) death occurred on February 26, 2022, but was reported this week.
- Death rates should be interpreted with caution because of small numbers.

Source: Panorama IOM May 30, 2022.
[1] Proportion per 100,000 calculated using the Saskatchewan 2021 Covered Population, 08-Jul-2021 Ministry of Health SAS version (2021 Version 1).
This week's newly reported deaths did not necessarily occur in this past week. They may have occurred in previous weeks but only reported in this week.

Deaths		
Zone	**Number**	**[1]Deaths per 100,000 population**
FNW		
FNC		
FNE		
NW		
NC	3	3.4
NE		
ST	2	0.6
CW		
CE	3	3.0
RE	1	0.4
SW		
SC		
SE		
Pending		
SK	**9**	**0.7**

Table 5: Age and sex distribution of deaths with COVID-19, newly reported the week of May 22-28, 2022

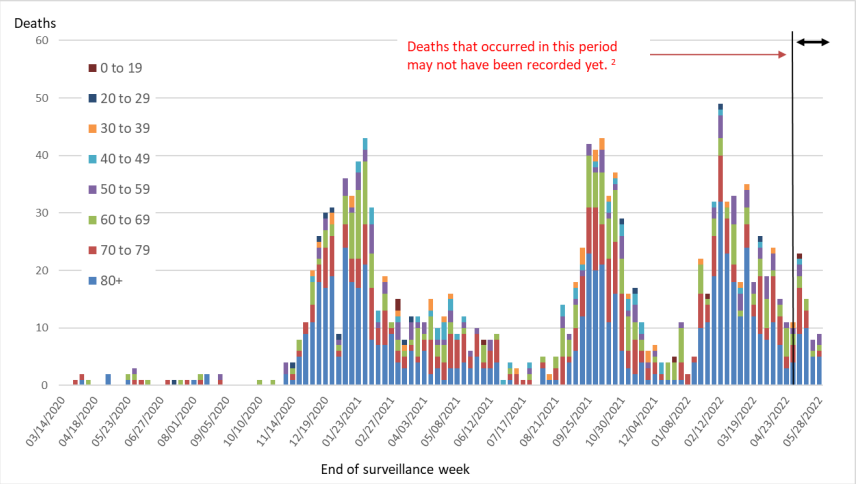
- For the week of May 22 to 28, 2022, there were nine (9) newly-reported COVID-19 deaths.
- Over one-half, five (5), of the newly reported deaths were among those 80 years of age or older.
- Over one-half, 56%, of the deaths were among males.
- Of this week's newly reported deaths, eight (8) occurred within the week. One (1) death occurred on February 26, 2022, but was reported this week.

Source: Panorama IOM May 30, 2022

Age and sex distribution		Deaths	
		n	**%**
Age (years)	19 and younger		
	20 to 39		
	40 to 59	2	22
	60 to 69	1	11
	70 to 79	1	11
	80 or older	5	56
	TOTAL	**9**	**100**
Sex	Female	4	44
	Male	5	56
	TOTAL	**9**	**100**

Figure 4: Deaths[1] in COVID-19 cases, by age group and week of death, March 8, 2020 to May 28, 2022

- From March 8, 2020 to May 28, 2022, there were 1,386 cases with a fatal outcome.
- Over one in five deaths (305 or 22.0%) were in the 70 to 79 year age group and close to half (639 or 46.1%) were in the 80 years and older group (unchanged from 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 May 30, 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.

Pre-existing Conditions

Table 6: Most common pre-existing conditions among severe COVID-19 cases in Saskatchewan, March 8, 2020 and May 28, 2022**

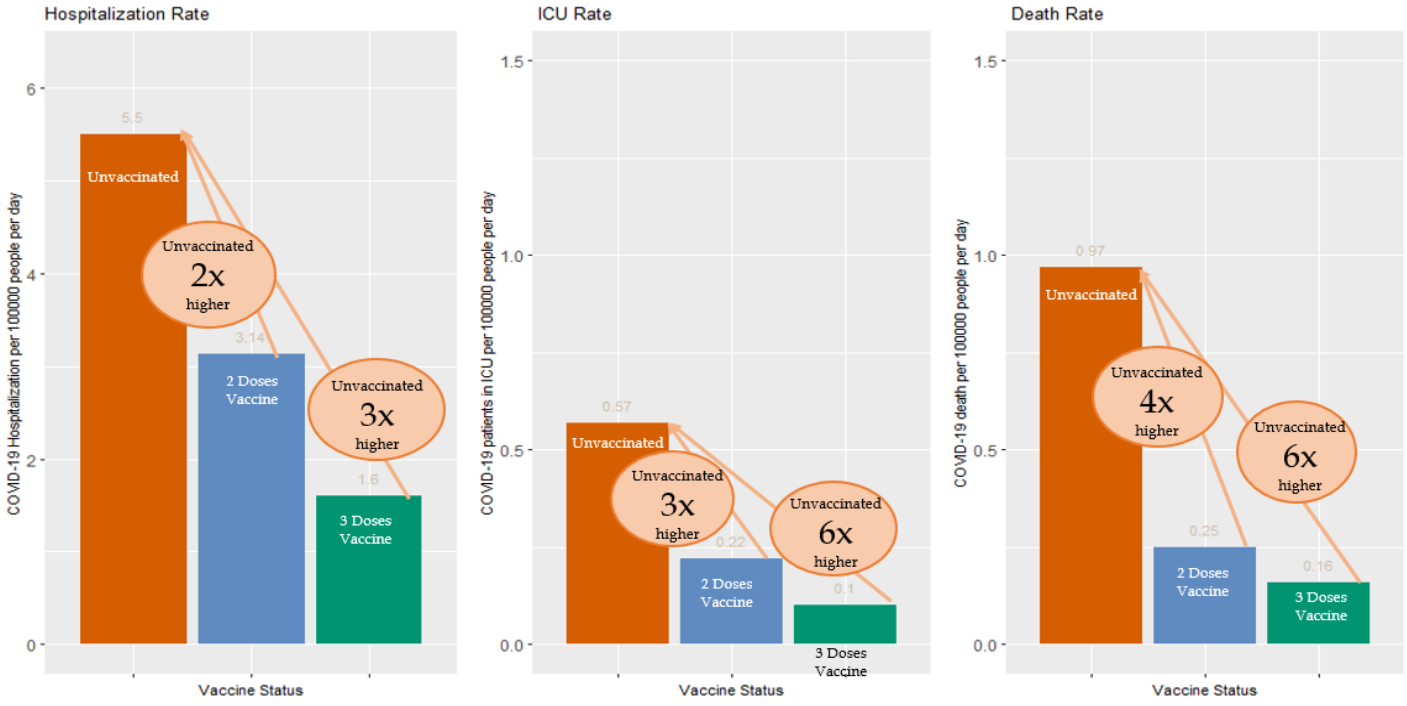
- During the period March 8, 2020 and May 28, 2022, there were 6,009 COVID-19 cases who were categorized as severe. Of these,
  - Over one-half of the severe cases (n = 3,086; 51.4%) had one or more pre-existing condition listed in the case investigation record.
  - The remainder of the severe cases (n = 2,923; 48.6%) had no pre-existing condition listed in the case investigation record.

Co-morbidity	Number of severe cases with pre-existing conditions (N=3,086*)	Percent
Hypertension	1,690	54.8%
Diabetes	1,384	44.8%
Heart Disease	1,161	37.6%
Lung Disease	858	27.8%
Obesity	241	7.8%
Pregnancy	62	2.0%

Source: Panorama IOM May 30, 2022
Note - Some cases reported recently are yet to be reported in Panorama.
*Number of cases represents unique clients who can have more than one underlying condition.
** Severe cases indicate those cases where case investigation showed admitted to hospital and/or ICU, and/or death.

Relative Risk by Vaccination Status

Figure 5: Comparison of relative risk of hospitalization, ICU admission and death among Saskatchewan residents by vaccination status, from December 20, 2021 to May 21, 2022



Source: SHA Digital Health Analytics
Unvaccinated - Individuals with no record of vaccine received or vaccinated with first dose but less than 21 days from receiving the first dose. Vaccinated with 2 doses - Individuals who have received their second dose for more than 14 days or if their third dose is less than 14 days. Vaccinated with 3 doses - Individuals who have received their third dose for more than 14 days.
Ages 12 years and older
Does not include cases with partial vaccination.

- 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 HeatlhLine seeking health-related advice.

Respiratory viruses detected by the provincial laboratory network in the week of May 22-28 were respiratory syncytial virus (RSV) 7.4%, (40/537) positive tests; enterorhinovirus (21.0%, 33/157 positive tests) and influenza (12.6% positive tests, 68/539). This compares to COVID-19 with 5.3% of tests that were positive.

The overall rate of RSV was down to 3.3/100,000 population from 4.4/100,000 last week. The 40 positive specimens were mainly in the Far North East (37.1/100,000) and the Far North West (16.8/100,000) zones of the province though the virus circulated widely throughout the province. Seventy-five percent (75%) of positive RSV this week was among children aged 0 to 4 years.

The overall rate of influenza decreased to 5.6/100,000 population from 6.6/100,000 last week. Of the 68 positive influenza A lab confirmations this week, 37% was among school age children (ages 5-19 years). Another 40% was among adults 20-64 years. The highest rates of influenza A were in the Far North West (130.8/100,000 population), the Far North East (12.4/100,000 population) and the South Central (11.6/100,000 population) zones.

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

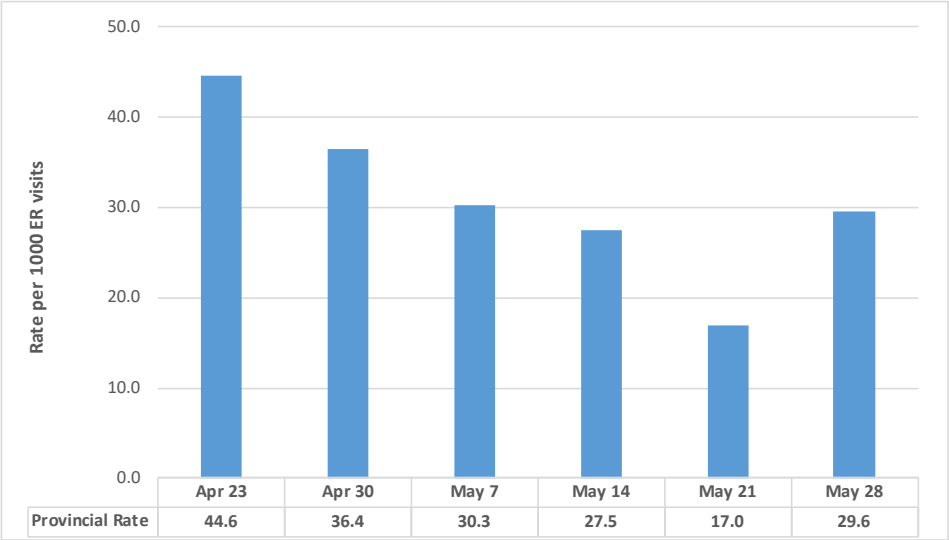
ED visit data regarding CLI is one component of community-based respiratory illness surveillance. Visitors may access EDs as their primary health care service or come when health provider offices are closed.

Table 7: COVID-19-like illness (CLI) surveillance (rate per 1,000 visits) in emergency departments by zone and week, April 9 to May 28, 2022

COVID-like patients per 1,000 ED visits	Apr 16	Apr 23	Apr 30	May 7	May 14	May 21	May 28
Provincial Rate	**39.5**	**44.6**	**36.4**	**30.3**	**27.5**	**17.0**	**29.6**
FNW	32.5	43.3	74.8	32.5	26.7	7.2	19.9
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	37.3	30.5	26.2	14.1	26.9	14.0	11.7
NC	No report	No report	No report	No report	No report	No report	No report
NE	355.3	350.6	161.3	205.9	161.3	188.1	338.2
ST	28.3	25.4	20.5	11.5	11.0	3.8	16.8
CW	34.2	277.8	108.7	39.2	170.7	26.3	113.5
CE	No report	No report	No report	No report	No report	No report	No report
RE	21.6	42.4	31.1	48.5	18.5	22.1	32.9
SW	0.0	100.0	53.6	52.6	153.8	48.4	0.0
SC	0.0	No data	0.0	0.0	0.0	0.0	0.0
SE	120.9	132.7	179.2	153.1	135.1	67.3	180.6
Preschool age 1-4 years	43.6	78.8	44.6	63.3	35.9	34.3	69.0
School age 5 -19	39.4	44.0	26.0	33.5	40.8	27.7	24.2
Working age 20-64	37.8	36.6	34.3	21.1	19.3	11.8	21.1
Seniors 65 +	41.8	46.5	45.3	34.7	34.8	14.4	38.1

Source: Emergency department surveillance data, May 30, 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, April 23 to May 28, 2022



Source: Emergency department surveillance data, May 30, 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 May 28. This week's provincial rate of 29.6 COVID-like illness patients per 1,000 visits was lower than the previous six-week average of 32.6/1,000 visits.
- This week's rate represents 124 COVID-like illness patients among 4,190 visitors to the EDs.
- This week's preschool age rate of 69.0/1,000 visits was an increase from last week (34.3/1,000 visits) and higher than the average rate of 50.1/1,000 visits over the previous six weeks. Pediatric rates can fluctuate widely week over week.
- The school age rate at 24.2/1,000 visits was lower than the average rate of 35.2/1,000 visits over the previous six-weeks.
- The working age group rate at 21.1/1,000 visits was lower than the average rate over the previous six weeks (26.8/1,000 visits)
- The seniors' age group rate at 38.1/1,000 visits this week was higher than the last week (14.4/1,000 visits) and slightly higher than the average rate of 36.3 /1,000 visits over the previous six weeks.

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

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

- In the week ending May 30, of the 1,455 calls to HeatlhLine (811), 129 callers reported respiratory symptoms similar to COVID-19 and other common respiratory viral infections.
- The provincial rate was 88.7 callers per 1,000 calls, it was lower than 103.7/1,000 calls last week and below the average rate in the six weeks prior of 112.5/1,000 calls (See Table 8b).
- Rate of callers with respiratory symptoms to HeatlhLine can fluctuate widely week over week, dependent on the number of ill people making calls to 811.

Source: HeatlhLine Database May 30, 2022.

Integrated Service Area	Number of callers with symptoms	Rate per 1,000 calls
North East	11	63.6
North West	6	58.8
Regina	38	101.6
Saskatoon	49	96.5
South East	9	65.2
South West	16	100.0
Saskatchewan	**129**	**88.7**

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

Integrated Service Area	17-Apr	24-Apr	1-May	8-May	15-May	22-May	29-May
North East	137.5	131.9	87.9	75.6	82.5	99.3	63.6
North West	142.9	160.4	79.2	87.0	155.3	69.0	58.8
Regina	131.1	128.2	89.9	97.3	82.9	99.8	101.6
Saskatoon	161.7	126.1	116.0	143.8	104.5	110.2	96.5
South East	181.8	108.7	94.6	99.2	88.1	115.6	65.2
South West	97.6	110.4	86.1	80.0	89.6	115.1	100.0
Province	**145.0**	**126.6**	**97.6**	**106.4**	**95.9**	**103.7**	**88.7**

Source: HeatlhLine Database May 30, 2022.
Six week average is the average of rate of callers to HeatlhLine from April 17, 2022 to May 29, 2022

- The rates of callers to HealthLine with respiratory-like symptoms were lower this week than the previous six-week average in all the Integrated Service Areas (ISA) except South West (100.0/1,000 calls compared to 96.5/1,000 calls over the previous six weeks). Regina's rate (101.6/1,000 calls) was lower than their previous six-week average of 104.9/1,000 calls.
- The rate of callers with viral respiratory symptoms from an ISA to HealthLine fluctuates week over week;however calls from the South West ISA in the past two weeks are higher than the first part of May, and higher than current provincial average. Rates of callers in the Regina and Saskatoon ISAs are also above the provincial rate this 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 May 22-28, 2022, by zone

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

Source: Outbreak line list, PHB, extracted May 30, 2022.
*By date of first notification.

- Only three (3) 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 and one (1) in a personal care home.

Table 10: COVID-19 outbreaks in selected high risk settings, weeks ending April 23 to May 21, 2022

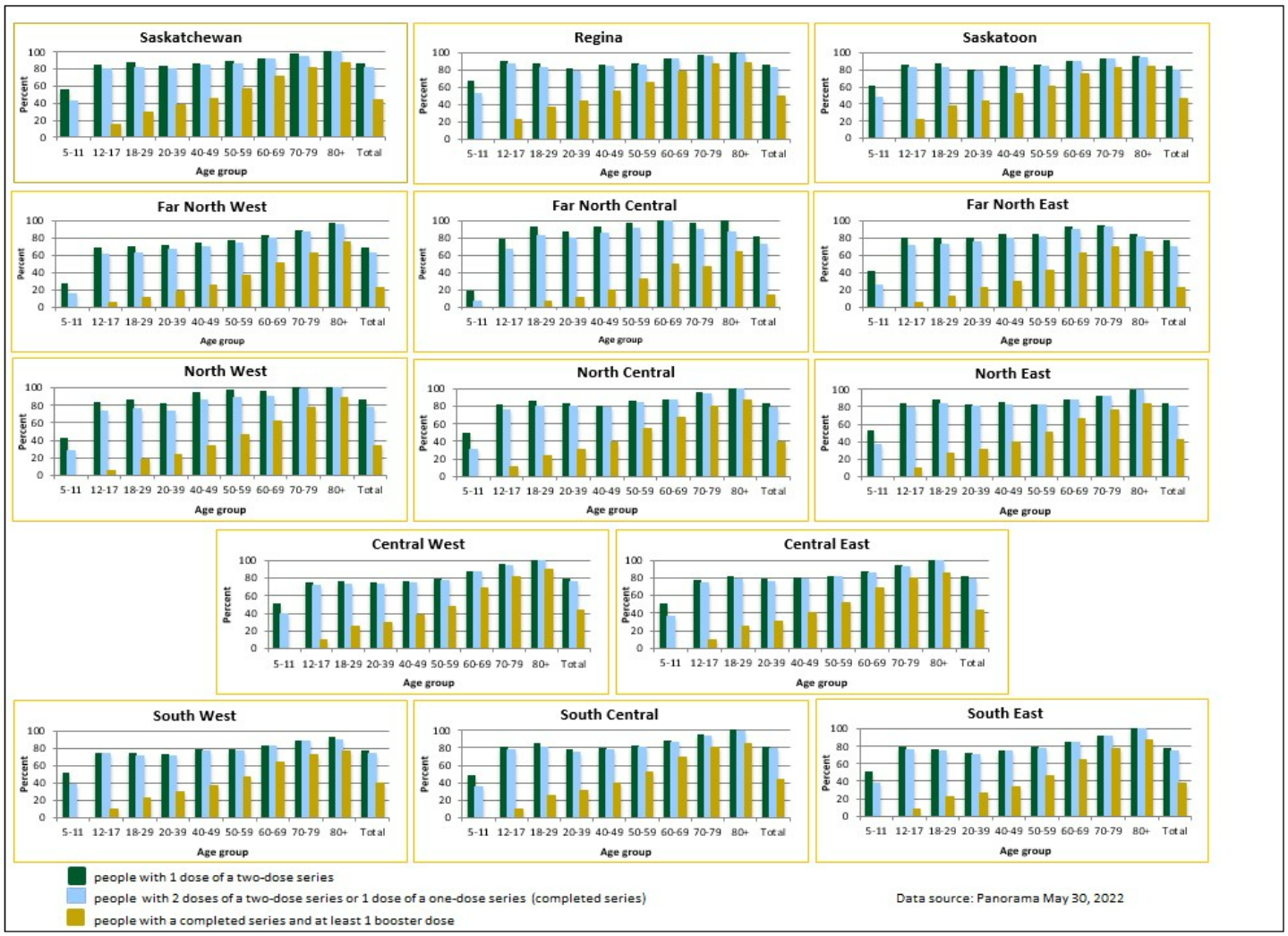
High risk setting	23-Apr	20-Apr	7-May	14-May	21-May	28-May	6-week total by setting
# COVID-19 Outbreaks in LTC	16	10	5	8	3	2	**44**
# COVID-19 Outbreaks in personal care homes, group homes, shelters	9	7	5	3	2	1	**27**
Total by week	**25**	**17**	**10**	**11**	**5**	**3**	**71**

Source: Outbreak line list, PHB, extracted May 30, 2022

- Over the past six weeks, forty-four (44) outbreaks occurred in long term care facilities, fifteen (15) in personal care homes, and twelve (12) in group homes. Thirty-seven (52%) of the 71 outbreaks reported in the past six weeks are ongoing.
- Reported outbreaks are decreasing over time
- Figures from previous weeks may change as outbreaks reported earlier are entered to 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 May 28, 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 May 28, 2022:

- Of the population five years and older, 85.9% had received at least one dose and 81.0% completed a series, unchanged from the previous week.
- Among the population 12 years and older, 49.1% had received at least one booster, similar to the previous week.
- Among the population 18 years and older, 52.5% had received at least one booster, similar to the previous week.
- Among the youngest age group, five to 11 years of age, 41.8% completed their series, similar to the previous week.
- Unchanged from last week, Regina (82.9%), Saskatoon (80.4%), and North East (80.2%) 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
	May 22 to 28	May 15 to 21 *	Dec 15, 2020 to May 28, 2022
First of two	213	245	972,142
Second of two	291	343	914,527
Jansen single dose	15	9	2,295
Total primary series doses	**519**	**597**	**1,888,964**
First booster **	822	1,101	500,418
Second booster **	5,634	9,472	116,032
Additional boosters **	264	436	2,451
Total booster doses	**6,720**	**11,009**	**618,901**
TOTAL (including pediatric and boosters)	**7,239**	**11,606**	**2,507,865**
- of the total, all pediatric doses	214	253	108,963

Source: Panorama IOM May 30, 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 May 22 to 28, 2022, 7,239 doses of COVID-19 vaccine were administered, of which 214 (3%) were pediatric doses and 6,720 (92.8%) were booster doses.
- Both the number of pediatric and the total number of booster doses have declined compared to the previous week.
- Since the start of the immunization campaign to May 28, 2022, 2.5 million doses of COVID-19 vaccine were administered.
- Of these, about 1.9 million (75.3%) were administered for a primary series, of which 108,963 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