

# COVID-19 Integrated Epidemiology Situation Report

## September 15, 2022 (Reporting period August 14 to September 10, 2022)

### Summary

- COVID-19 activity is increasing in the province of Saskatchewan. Compared to the previous reporting period, test positivity increased from 7.4 to 8.9%. Far North West (14.4%) and Central West (13.1%) have the highest test positivity.
- While calls to 811 for respiratory-like symptoms are stable provincially, they increased in North East and North West zones. Visits to emergency departments for respiratory-like symptoms have decreased provincially.
- Reported outbreaks in high-risk settings due to COVID-19 have decreased, from 46 to 41.
- Both COVID-19 hospital admissions and ICU admissions have increased.
- Reported deaths due to COVID-19 in Saskatchewan averaged six per week.
- Omicron sublineages BA.4/BA.5 have been the dominant sublineages detected in Saskatchewan since the week of June 26, 2022. The proportions of BA.4 and BA.5 sublineages (5.8% and 92.5%, respectively) have increased this month compared to last month (3.6% and 92.4%, respectively).
- As of September 10, 2022 more than 22.7 million rapid antigen test kits have been distributed in the province.
- As of September 10, 2022 there have been 119 Remdesivir prescriptions filled with 315 infusions completed. As of September 10, 2022, pharmacies have dispensed 956 courses of Paxlovid.
- With approximately 45% of the population receiving at least three doses, more Saskatchewan residents need to receive their COVID-19 booster doses. Effective August 15, 2022, individuals 18 years and older were eligible for a second booster dose four months after their third dose. Effective August 31, 2022, children five to 11 years of age were eligible for a booster dose. Immunization remains the best protection against severe outcomes of COVID-19 including hospitalization and death.

**Table 1: COVID-19 Indicators in Saskatchewan by surveillance period, June 26 – September 10, 2022**

Reporting Period	June 26-July 16	July 17 –August 13	August 14 – September 10
Number of new confirmed cases <sup>1</sup>	628 (209 per week)	1524 (381 per week)	1932 (483 per week)
Test positivity (%) <sup>2</sup>	4.0	7.4	8.9
BA.4 (%) <sup>*3</sup>	13.1	3.6	5.8
BA.5 (%) <sup>*3</sup>	92.8	92.4	92.5
RLI ED visits/1,000 <sup>4</sup>	27.5	37.0	29.5
CLI 811 calls/1,000 <sup>5</sup>	83.4	82.0	79.1
Number of confirmed outbreaks <sup>6</sup>	17	46	41
Number of hospital admissions <sup>7</sup>	280 (93 per week)	556 (139 per week)	594 (149 per week)
Number of ICU admissions <sup>7</sup>	18 (6 per week)	30 (8 per week)	38 (10 per week)
Number of reported deaths <sup>1</sup>	22 (7 per week)	27 (7 per week)	25 (6 Per week)
Total eligible population with at least 3 doses (%) <sup>8</sup>	44.6	44.8	45.3

**Source:**

<sup>1</sup> RRPL and Panorama IOM, extracted September 12, 2022. For deaths reported in a given period, the deaths that were not previously reported are counted, regardless of when the death occurred.

<sup>2</sup> RRPL daily summary extracted on July 18, August 15, and September 12, 2022

<sup>3</sup> RRPL with data extracted from the Saskatchewan COVID-19 Provincial Database on July 18, August 15, and September 12, 2022.

<sup>4</sup> Emergency departments –an average of 6 of the 13 areas reported in the past 4 week period

<sup>5</sup> HealthLine Database, June 27 to September 11, 2022

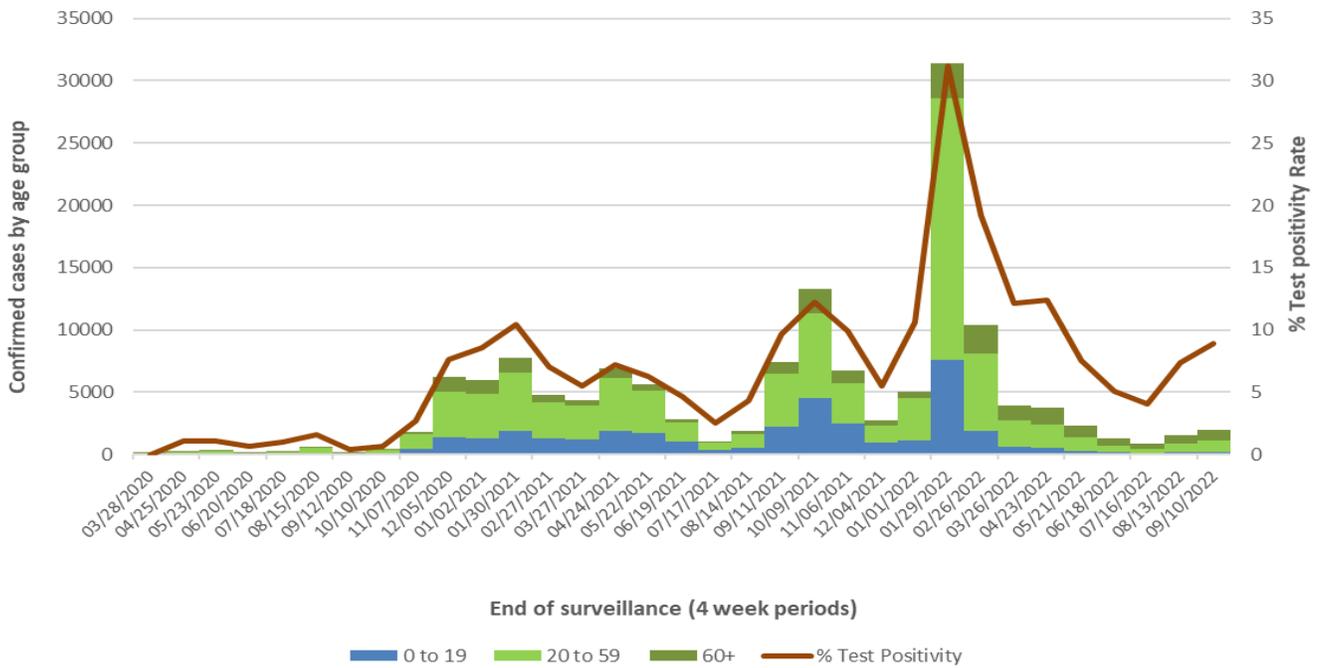
<sup>6</sup> Outbreak line list, Ministry of Health, extracted, June 27 to September 11, 2022

<sup>7</sup> Episode of Care (ADT, RPPL, Panorama), extracted on July 18, August 15, and September 12, 2022

<sup>8</sup> Panorama, extracted September 12, 2022

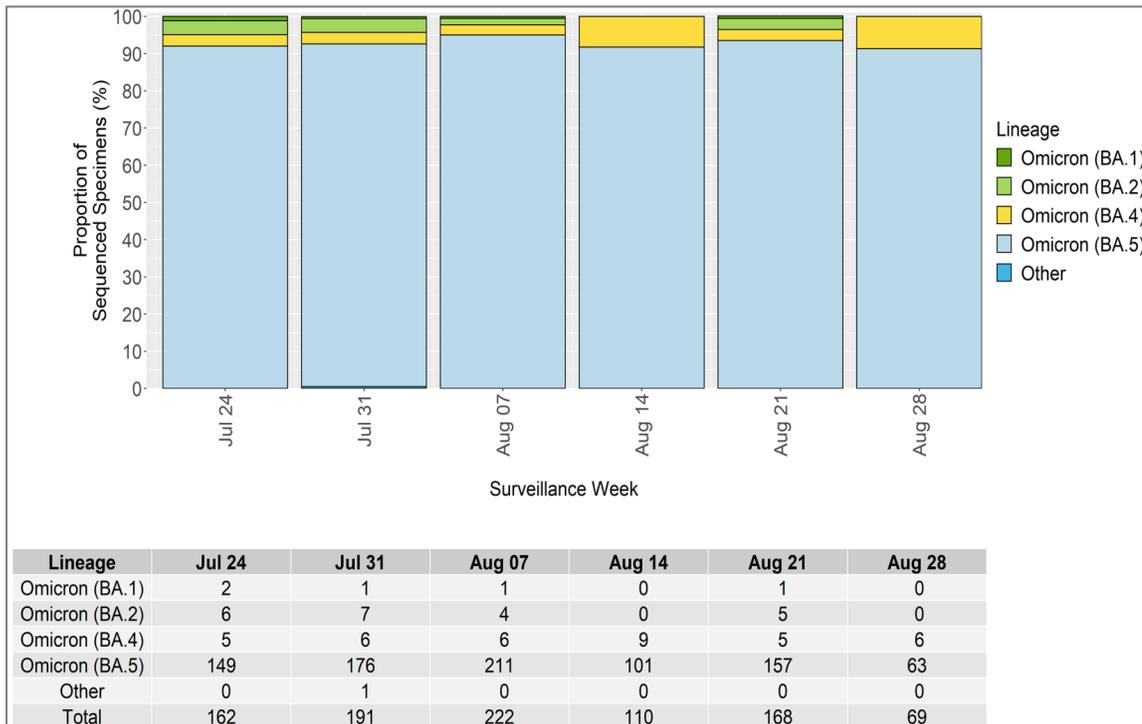
\* Most recent VOC data available from the provincial database as of September 3, 2022

**Figure 1: COVID-19 Cases (n = 143,747) and Test Positivity Rate by Age Group, March 28, 2020 – September 10, 2022**



Sources: RRPL Daily Summary Report extracted on September 12, 2022 (test positivity) and Panorama IOM extracted on September 12, 2022 (cases)

**Figure 2: Percentage of SARS-CoV-2 Variants by Surveillance Week\*, July 24 – September 3, 2022**

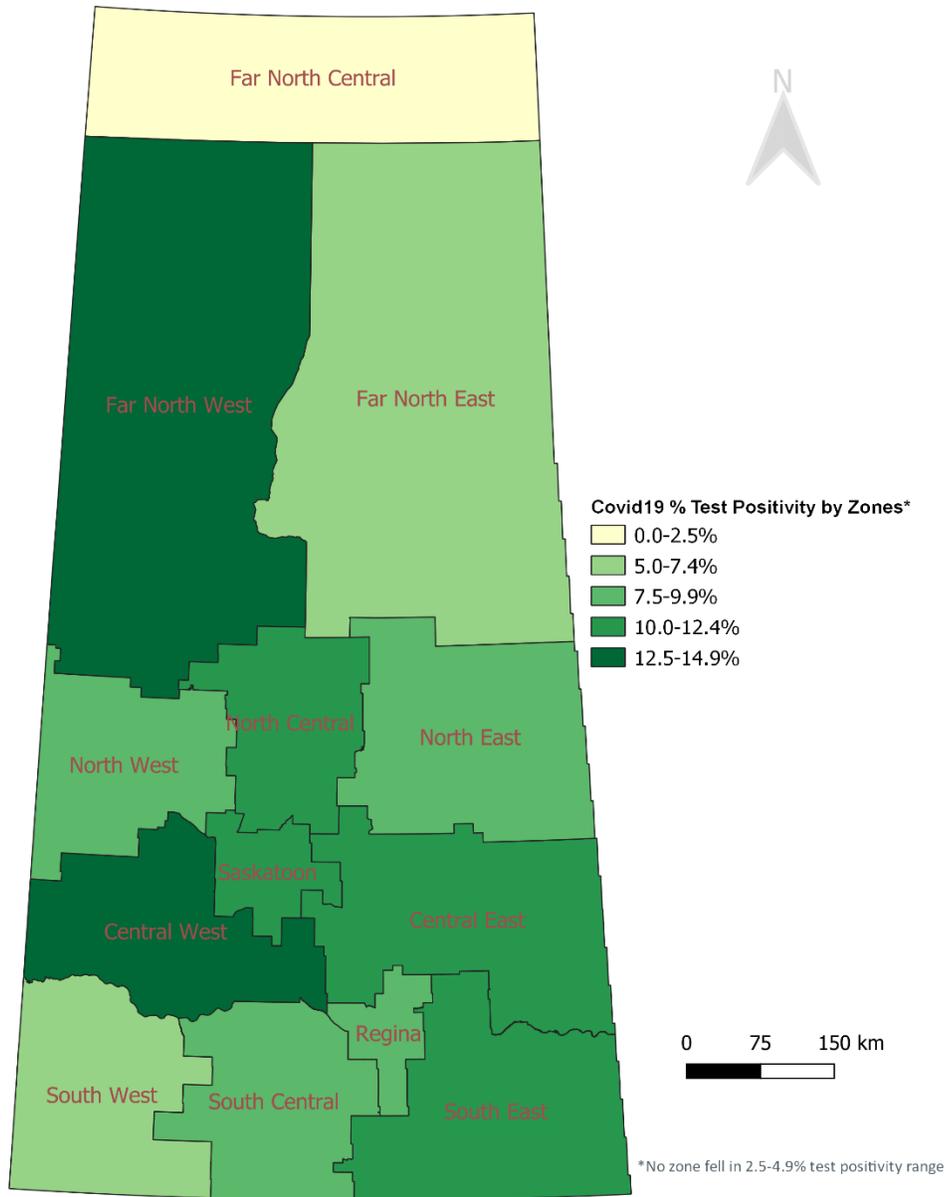


Source: Roy Romanow Provincial Laboratory, September 13, 2022

The most recent VOC data available from the Provincial database is as of surveillance week starting September 3, 2022

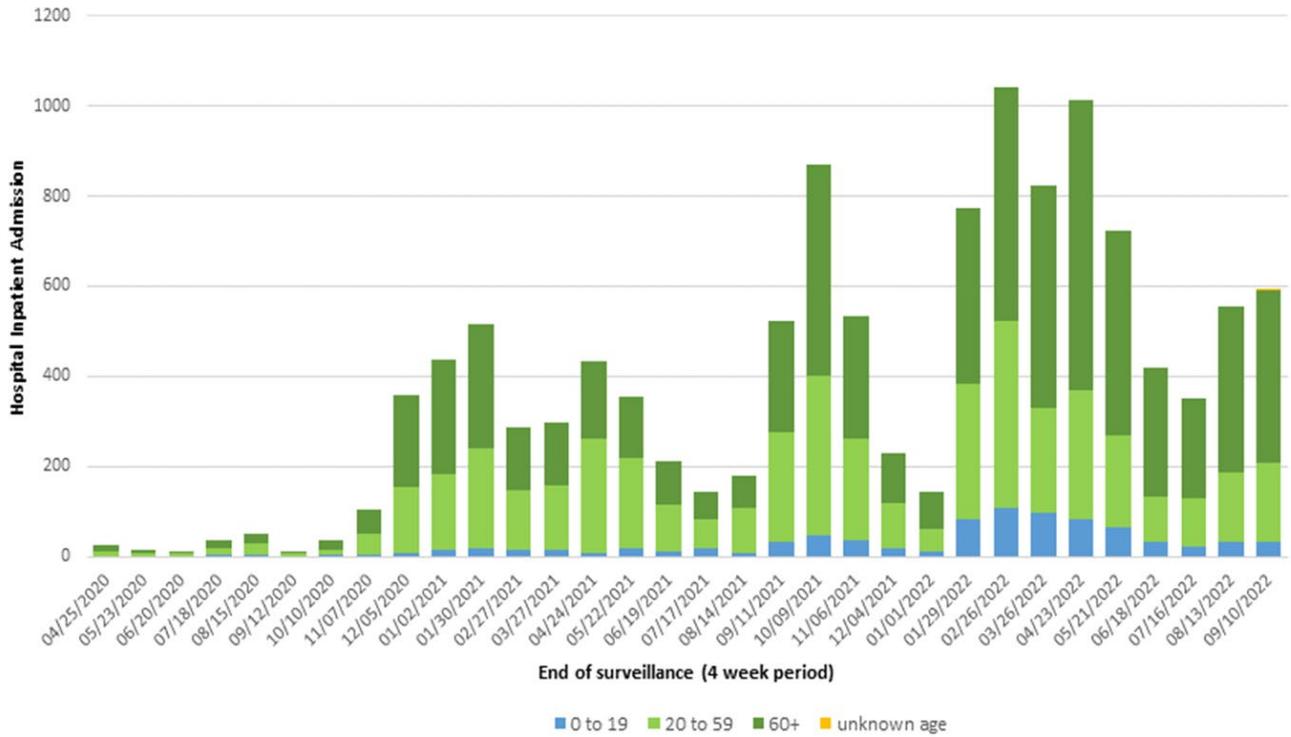
\* Surveillance week corresponds to specimen collection date.

Figure 3: Map of COVID-19 Test Positivity by Zone, August 14 – September 10, 2022



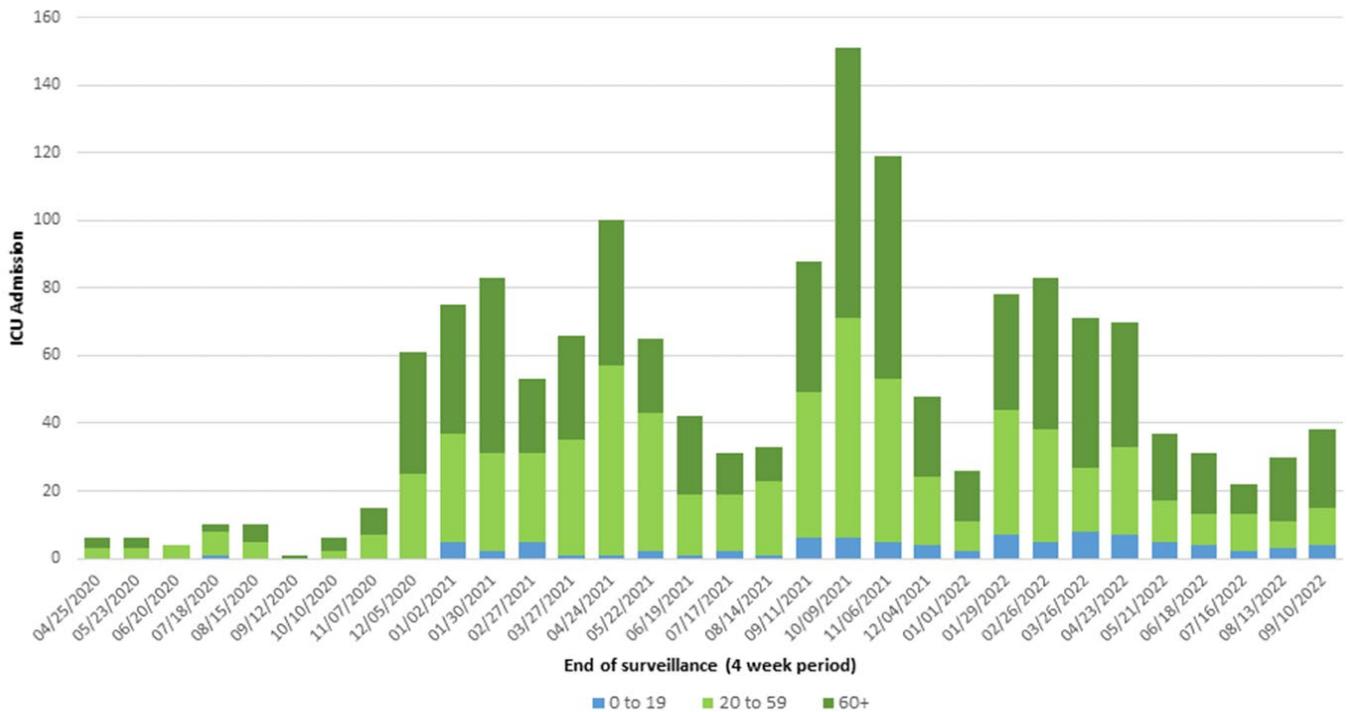
Source: RRPL Daily Test Count by new zones extracted September 12, 2022. See Table 2 below for actual test positivity values by zone

**Figure 4a: COVID-19 Hospital Admissions (N=12,095)\* by Age Group and Four-week Period March 29, 2020 to September 10, 2022**



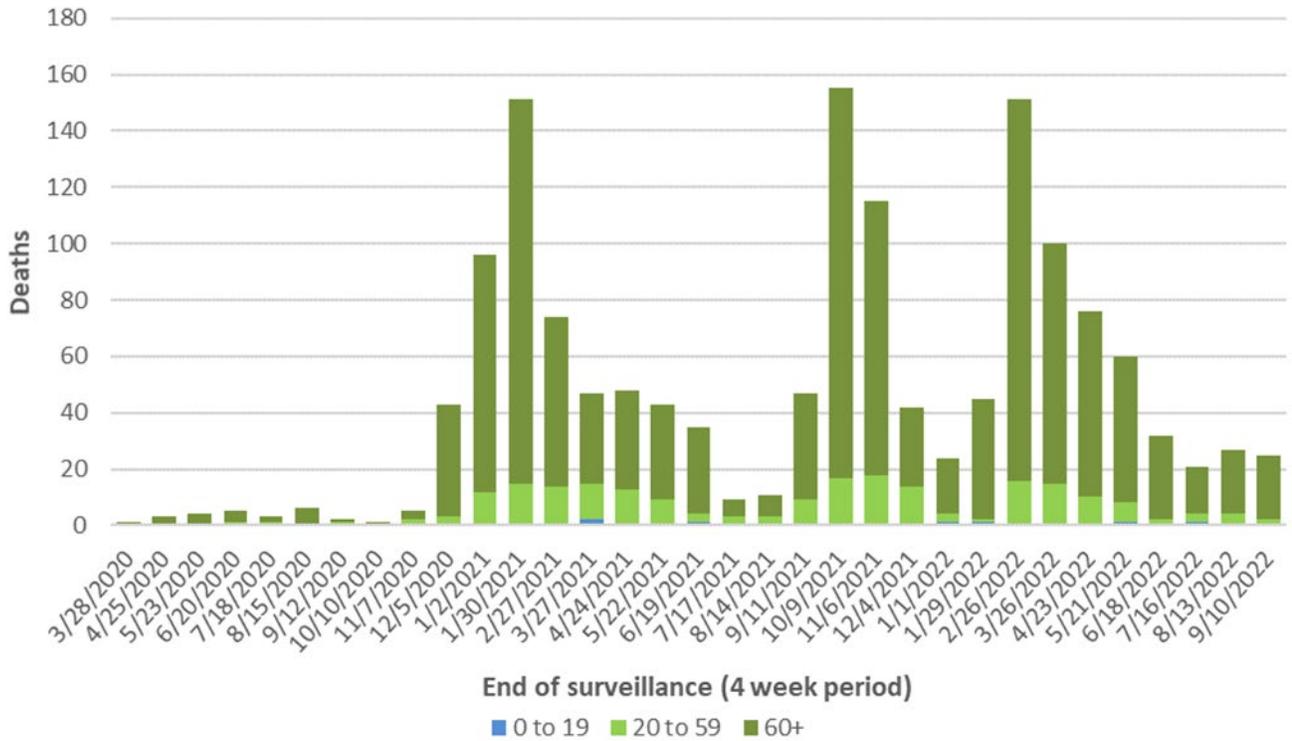
\*Source: Episode of Care (ADT, RPPL, Panorama), September 12, 2022  
 Due to data entry lag, hospital admission for the latest period may be under-reported and not captured in this figure.

**Figure 4b: COVID-19 ICU Admissions (N=1,559) by Age Group and Four-week Periods March 29, 2020 to September 10, 2022\***



\*Source: Episode of Care (ADT, RPPL, Panorama), September 12, 2022.  
 Due to data entry lag, ICU for the latest period may be under-reported and not captured in this figure.

**Figure 5: Deaths<sup>1,2</sup> (n = 1,507) in COVID-19 Cases by Age Group and Four-Week period, March 8, 2020 – September 10, 2022\***

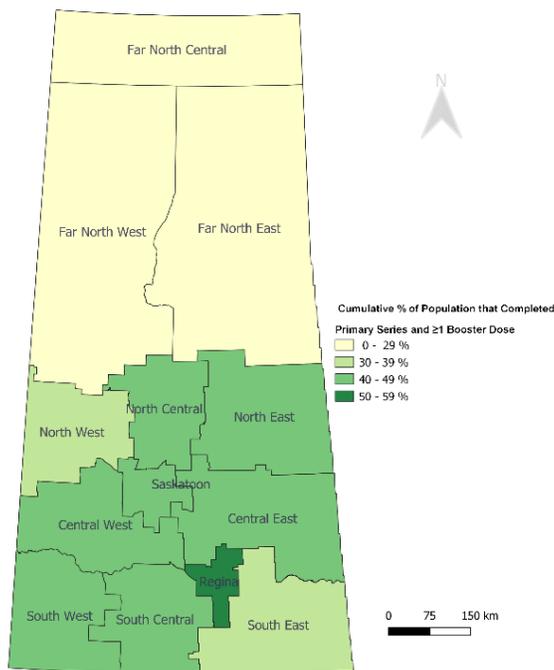


\*Source: Panorama IOM September 12, 2022

<sup>1</sup>Death means the Panorama IOM record reported outcome-fatal.

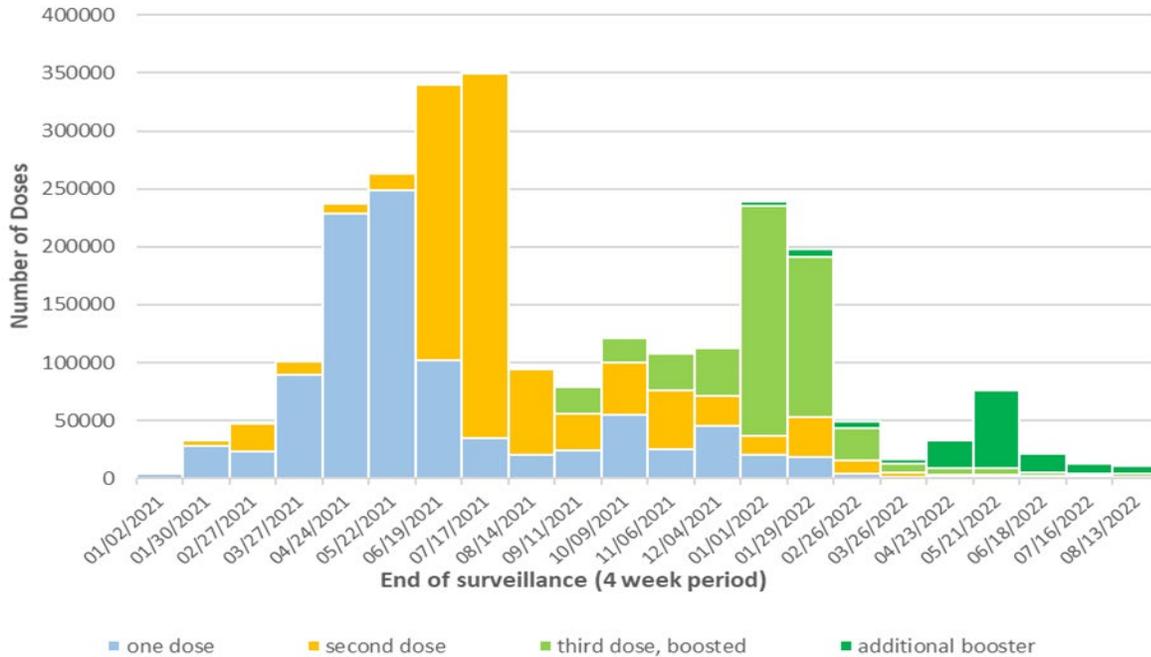
<sup>2</sup>Due to data entry lag, deaths for the latest period may be under-reported and not captured in this figure.

**Figure 6a: Map of Saskatchewan Residents with Up-to-Date<sup>1</sup> Vaccination Status by Zone to September 10, 2022**



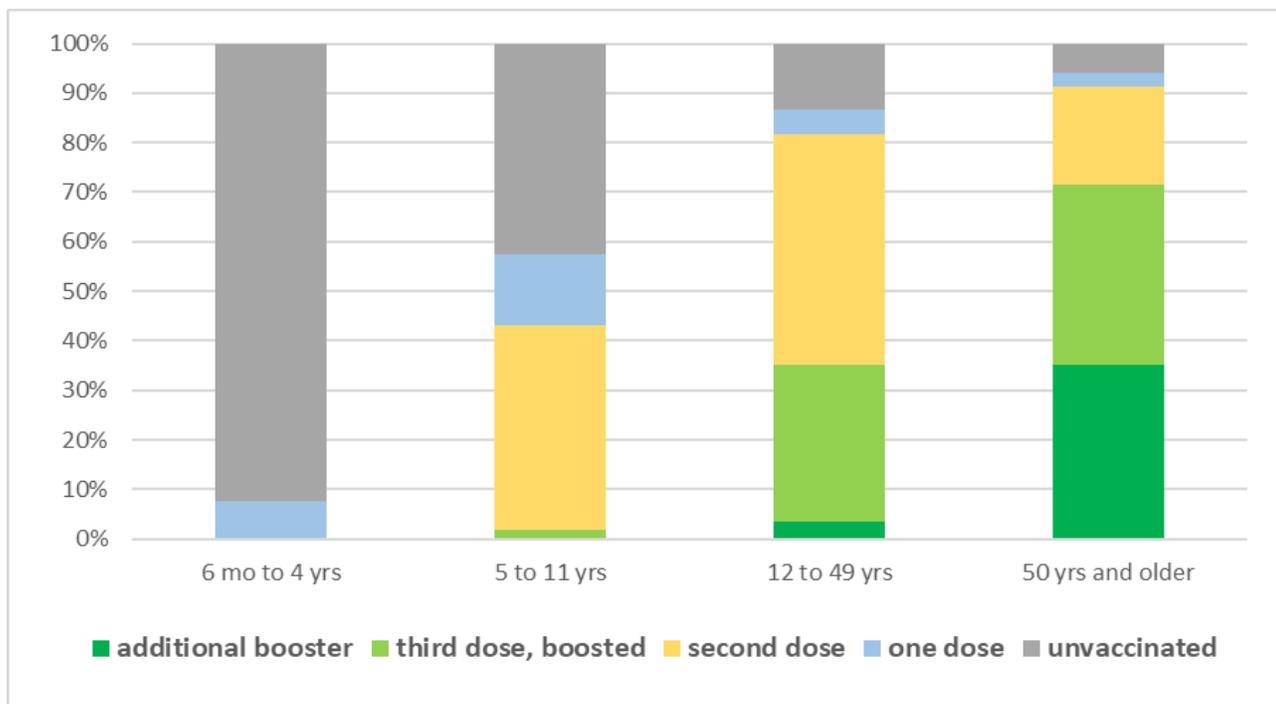
<sup>1</sup>Up-to-date represents those with a completed primary series, plus at least one additional dose. Source: Panorama September 12, 2022

**Figure 6b: Number of COVID-19 Vaccine Doses (n=983,424 dose 1; n=918,783 dose 2; n=512,503 dose 3; n=167,281 dose 4; total doses = 2,578,991) by Dose number and Four-week Period December 2020 to September 10, 2022**



Source: Panorama September 12, 2022

**Figure 6c: Proportion of Saskatchewan Residents by Age Group and Vaccination Status to September 10, 2022**



Source: Panorama September 12, 2022

**Table 2: Comparison of COVID-19 Test Positivity and COVID-19-Like Illness (CLI) Emergency Department Visits\* by Zones, June 26 – September 10, 2022**

<b>Far North West</b>		
<b>Reporting period</b>	<b>Test positivity (%)</b>	<b>RLI visits to EDs/1,000</b>
Jun 26 – Jul 16	3.3	3.8
Jul 17 - Aug 13	9.5	3.2
Aug 14 – Sep 10	14.4	37.8
<b>Far North Central</b>		
<b>Reporting period</b>	<b>Test positivity (%)</b>	<b>RLI visits to EDs/1,000</b>
Jun 26 – Jul 16	0	No report
Jul 17 - Aug 13	7.4	No report
Aug 14 – Sep 10	0	No report
<b>Far North East</b>		
<b>Reporting period</b>	<b>Test positivity (%)</b>	<b>RLI visits to EDs/1,000</b>
Jun 26 – Jul 16	2.8	No report
Jul 17 - Aug 13	3.2	No report
Aug 14 – Sep 10	7.1	No report
<b>North West</b>		
<b>Reporting period</b>	<b>Test positivity (%)</b>	<b>RLI visits to EDs/1,000</b>
Jun 26 – Jul 16	6.3	8.8
Jul 17 - Aug 13	10.1	11.2
Aug 14 – Sep 10	8.5	43.9
<b>North Central</b>		
<b>Reporting period</b>	<b>Test positivity (%)</b>	<b>RLI visits to EDs/1,000</b>
Jun 26 – Jul 16	3.9	No report
Jul 17 - Aug 13	7.4	No report
Aug 14 – Sep 10	11.7	No report
<b>North East</b>		
<b>Reporting period</b>	<b>Test positivity (%)</b>	<b>RLI visits to EDs/1,000</b>
Jun 26 – Jul 16	1.9	148.5
Jul 17 - Aug 13	7	97.5
Aug 14 – Sep 10	9.3	124.0
<b>Saskatoon</b>		
<b>Reporting period</b>	<b>Test positivity (%)</b>	<b>RLI visits to EDs/1,000</b>
Jun 26 – Jul 16	5.6	10.5
Jul 17 - Aug 13	10.1	5.8
Aug 14 – Sep 10	11.5	34.9
<b>Central West</b>		
<b>Reporting period</b>	<b>Test positivity (%)</b>	<b>RLI visits to EDs/1,000</b>
Jun 26 – Jul 16	9.5	51.3
Jul 17 - Aug 13	6.9	142.9
Aug 14 – Sep 10	13.1	112.6

<b>Central East</b>		
<b>Reporting period</b>	<b>Test positivity (%)</b>	<b>RLI visits to EDs/1,000</b>
Jun 26 – Jul 16	4.5	No report
Jul 17 - Aug 13	10	No report
Aug 14 – Sep 10	11.2	No report
<b>Regina</b>		
<b>Reporting period</b>	<b>Test positivity (%)</b>	<b>RLI visits to EDs/1,000</b>
Jun 26 – Jul 16	7.7	39.1
Jul 17 - Aug 13	7.9	37.1
Aug 14 – Sep 10	9.6	14.7
<b>South West</b>		
<b>Reporting period</b>	<b>Test positivity (%)</b>	<b>RLI visits to EDs/1,000</b>
Jun 26 – Jul 16	6.9	77.9
Jul 17 - Aug 13	8.4	57.7
Aug 14 – Sep 10	7.4	74.4
<b>South Central</b>		
<b>Reporting period</b>	<b>Test positivity (%)</b>	<b>RLI visits to EDs/1,000</b>
Jun 26 – Jul 16	2.1	0.0
Jul 17 - Aug 13	5.2	0.0
Aug 14 – Sep 10	8.2	0.0
<b>South East</b>		
<b>Reporting period</b>	<b>Test positivity (%)</b>	<b>RLI visits to EDs/1,000</b>
Jun 26 – Jul 16	3.8	144.0
Jul 17 - Aug 13	9	102.8
Aug 14 – Sep 10	10.2	106.6

\*RLI visits to EDs contains data as of August 14 to September 10, 2022. Note, *No report* indicates no report was submitted by the zone, and *No data* indicates no data reported by ED

**Table 3: Callers to HealthLine with COVID-19-like Illness, June 27 to September 11, 2022**

<b>Integrated Service Area</b>	<b>Number of callers with symptoms per 1,000 calls</b>		
	<b>Jun 27-Jul 17</b>	<b>July 18 – Aug 14</b>	<b>Aug 15 – Sep 11</b>
North East	72.0	61.6	97.1
North West	64.6	50.5	71.9
Regina	79.0	96.8	80.1
Saskatoon	97.8	94.0	90.6
South East	53.5	73.3	50.3
South West	113.2	54.6	56.9

Source: HealthLine Database, June 27 to September 11, 2022

# 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.

## Fatal Cases (Deaths) Table

- Includes deaths entered into Panorama IOM among laboratory confirmed cases.
- For those reported in the specified month, 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 altered virus infectivity, replication and pathogenicity. As a result it can alter host immune response. The Roy Romanow Provincial Laboratory (RRPL) tests for and monitors COVID-19 variants of concern (VOCs) in Saskatchewan. Confirmation of VOC lineages is done by conducting whole genome sequencing (WGS) at RRPL or the National Microbiology Laboratory. It takes one to two weeks to complete WGS.
- Data sources for VOCs analysis include testing data from the RRPL, and epidemiological information from Panorama. Where geographical zone is missing in RRPL or Panorama data, the Saskatchewan postal code file is used to identify cases' geographical information.

## 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.
- 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. Total number of confirmed outbreaks reported include outbreaks reported in high risk settings such as Long Term Care (LTC) homes and care homes
  - # 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.