

Community Respiratory Illness Surveillance Program (CRISP)

Situation Report: August 16, 2024 (Reporting Period July 14 – August 10, 2024)

Note: CRISP reports have transitioned to a monthly schedule. Regular bi-weekly CRISP reporting will resume in the fall.

Summary

- The COVID-19 test positivity rates and numbers of positive tests have increased from 8.7% (85 tests) to 10.1% (102 tests) in the last three weeks of this reporting period.
- Indicators of influenza activity are stable and remain low at inter-seasonal levels.
- The number of Respiratory Syncytial Virus (RSV) positive tests remained stable over the past four weeks, with test positivity at 0.3%, while 'other' respiratory virus test positivity decreased to 14.9% for the week ending August 10.
- During this reporting period, COVID-19, other respiratory viruses, and co-infected cases accounted for 84.2%, 9.6%, and 3.4%, respectively, of the viral respiratory illness hospitalizations in the province. There was a 10.4% decrease in hospital admissions for respiratory viruses from 77 for the previous two weeks to 69 for the most recent two weeks.
- Sentinel surveillance indicators of respiratory virus transmission in the community continue to fluctuate:
 - Data for weekly emergency department (ED) visits for respiratory-like illnesses (RLI) is unavailable for the reporting period due to changes in the ED triage data definition.
 - School illness absenteeism data for July 14 to August 10, 2024, is unavailable due to summer break.
 - RLI calls to the HealthLine have decreased over the past four weeks period from 55.6 per 1,000 calls for the week ending July 20, to 41.5 per 1,000 calls in the week ending August 10.
 - Five out of ten samples tested at the sentinel sites were positive for respiratory viruses, with COVID, Adenovirus, and Rhinovirus being the most frequently detected.
 - Wastewater analysis showed a range of COVID-19 levels from low to moderate across the different surveyed areas during this reporting period.

COVID-19

- In the most recent week, the proportions of laboratory-confirmed COVID-19 cases were highest among individuals 65 years and older (53.2%), followed by those aged 20 – 64 years old (36.2%).
- COVID-19 outbreaks in high-risk settings increased to seven for the most recent two weeks compared to two for the previous two weeks ending July 27.
- From June 23 to August 3, KP.3 and its sublineages (denoted as KP.3*) were the most detected COVID-19 variants (53.0%), followed by KP.2* (14.8%), and KP.3.1.1* (14.0%). KP.3.1.1 is a new variant under monitoring (VUM) as of July 19, 2024, according to the World Health Organization. The proportion of KP.3.1.1 was 52.4% for the week ending August 3.
- COVID-19 hospitalizations remained stable at 62 for the most recent two weeks.

- The proportion of staffed inpatient beds occupied by COVID-19 patients remained stable over this reporting period.
- Three COVID-19-associated deaths were reported over the past four weeks; from July 14 to August 10, 2024.

Influenza

- The number of weekly positive tests for influenza remain low and stable (two to five tests) over the past month.
- No influenza-associated deaths were reported during this reporting period.
- No Influenza hospitalization or ICU admission was reported for the most recent two weeks.

RSV and Other Respiratory Viruses¹

- No RSV outbreaks were reported over the past four weeks.
- No RSV hospitalizations or ICU admissions were reported for the most recent two weeks. Hospitalizations for 'Other' respiratory viruses decreased from nine for the previous two weeks to five for the most recent two weeks. A single case of 'Other' respiratory viruses ICU admission was reported for the most recent two weeks.
- Other respiratory viruses decreased to 75 positive lab detections in the most recent two weeks compared to 88 detections in the previous two-week period.
- Outbreaks due to 'other' viruses decreased from the previous reporting period. Six outbreaks were reported in high-risk settings over the past four weeks. Rhinovirus accounted for five of these outbreaks.

Notes:

¹ 'Other' respiratory viruses: Parainfluenza viruses 1 – 4; Adenovirus; Human Metapneumovirus, seasonal Coronavirus and Enterovirus/Rhinovirus;

* Represents all sublineages of Omicron

Table 1: Viral indicators by surveillance period, July 14 – August 10, 2024

Report date	SARS-CoV-2 positive laboratory test	SARS-CoV-2 test positivity	COVID-19 outbreaks	Influenza positive laboratory test	Influenza test positivity	Influenza outbreaks	RSV positive laboratory test	RSV test positivity	RSV Outbreaks	'Other' ¹ positive laboratory test	'Other' ¹ sample positivity	'Other' ¹ outbreaks
Aug 4- Aug 10	102	10.1%	3	2	0.3%	0	2	0.3%	0	39	14.9%	1
Jul 28- Aug 3	113	11.2%	4	2	0.3%	0	0	0.0%	0	36	13.1%	1
Jul 21- Jul 27	85	8.7%	1	5	0.8%	0	1	0.2%	0	39	14.3%	1
Jul 14- Jul 20	93	9.1%	1	2	0.3%	0	2	0.3%	0	49	16.1%	3

Notes: ¹Parainfluenza viruses 1 – 4; Adenovirus; Human Metapneumovirus, seasonal Coronavirus and Enterovirus/Rhinovirus. See Technical Notes for details.

[#]Starting with the week of Oct 22-28, 2023, the method for calculating test positivity for "Other" respiratory viruses has changed to more accurately reflect the number of positive results in laboratory samples tested for "other" respiratory viruses. For example, during the week of Oct 22-28, 64 of 347 samples tested for "Other" respiratory viruses were positive for one or more of these viruses, which results in a test positivity of 18.4%. Samples that tested positive for more than one of the "Other" viruses are counted only once.

Table 2: Lab-confirmed respiratory illness by age group, July 14 – August 10, 2024

Age group (Years)	COVID-19 case count	Influenza case count	RSV case count	'Other' virus case count ¹
0 – 4	9 (9.6%)	0	2 (100%)	39 (100%)
5-19	1 (1.1%)	0	0	
20 – 64	34 (36.2%)	1 (50.0%)	0	
≥65	50 (53.2%)	1 (50.0%)	0	
Total	94 (100.0%)	2 (100%)	2 (100%)	39 (100%)

Notes: ¹Parainfluenza viruses 1 – 4; Adenovirus; Human Metapneumovirus, seasonal Coronavirus and Enterovirus/Rhinovirus; age-specific data is unavailable for other respiratory pathogens. Individuals with co-infection of "Other" viruses are only counted once. Due to the rounding, total percentage may not add to 100%. See Technical Notes for further details.

Table 3: Sentinel* indicators by surveillance period, July 14 – August 10, 2024

Report date	School illness absenteeism ¹	RLI** ED visits per 1,000	RLI** 811 calls per 1,000	SARS-CoV-2 Wastewater indicator ³	Sentinel provider test positivity ⁴	Most commonly detected virus: Sentinel providers ⁴
Aug 4 – Aug 10	No data	No data	41.5	Low (n= 8), Medium (n= 0), Medium-high (n= 1), High (n= 0)	50% (n=5)	COVID, Adenovirus, Rhinovirus
Jul 28 – Aug 3	No data	No data	46.1	Low (n= 10), Medium (n= 0), Medium-high (n= 0), High (n= 0)	25% (n=1)	Enterovirus
Jul 21 – Jul 27	No data	No data	49.1	Low (n= 4), Medium (n= 4), Medium-high (n= 2), High (n= 0)	56% (n=5)	Adenovirus
Jul 14 – Jul 20	No data	No data	55.6	Low (n= 6), Medium (n= 2), Medium-high (n= 1), High (n= 0)	67% (n=6)	Adenovirus, Rhinovirus

Notes: *Sentinel surveillance are sampling programs representative of the population; ¹School absenteeism is the proportion of scheduled children who were absent from the class due to illness. The type of illness is not specified. ²No data because schools are currently on summer break

²Respiratory-like illnesses (RLI) reports are unavailable from July 14 – August 10, 2024, due data definition changes at triage. ³Count of wastewater treatment facilities reporting low, moderate or high levels of viral load causing COVID-19 infection. See Technical Notes and appendix for details ⁴Most commonly detected virus in Sentinel providers: COVID-19, Influenza A/B, Respiratory Syncytial Virus (RSV), Adenovirus, Metapneumovirus, Rhinovirus, Parainfluenza viruses (PIV) 1-4, and seasonal Coronaviruses (229E, HKU1, NL63, and OC43).

Table 4: Outcome, health care capacity, and immunization coverage indicators by surveillance period, Saskatchewan, July 14 – August 10, 2024[‡]

Report date	Hospital admissions – COVID-19 ¹	ICU admissions – COVID-19	Hospital admissions – Influenza	ICU admissions – Influenza	Hospital admissions – RSV	ICU admissions – RSV	% of staffed inpatient beds occupied by COVID-19 patients ²	Deaths – COVID-19	Deaths – Influenza ³	Proportion of population with COVID-19 vaccine administered ⁴	Proportion of population immunized for Influenza vaccine ⁴
Aug 4 – Aug 10	23	1	0	0	0	0	3.1	0	0	18.4%	24.9%
Jul 28 – Aug 3	39	4	0	0	0	0	2.9	1	0		
Jul 21 – Jul 27	32	3	1	0	1	0	3.1	0	0		
Jul 14 – Jul 20	29	3	0	0	2	0	3.4	2	0		

[‡]Additional information on hospital admission stratified by respiratory organism and age group is provided below in **Figure 3** and **4** respectively. Viral infection may not be the main reason for the admission.

Cases by respiratory organisms across the age groups

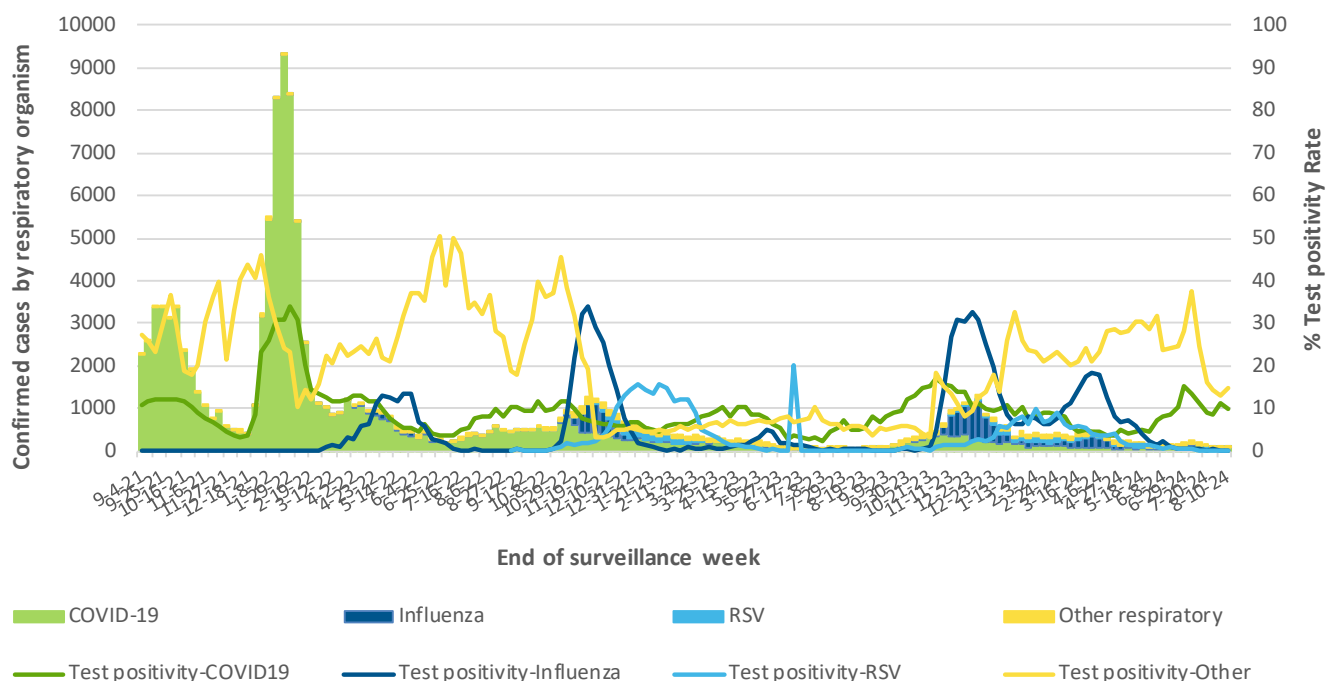
- From July 14 to August 10, there were 146 respiratory illness cases hospitalized with lab-positive COVID-19 (123), influenza (1), RSV (3), other respiratory illnesses (14), and co-infected cases (5). The COVID-19 lab positives were among the age groups of 0-19 (4), 20-59 (25) and ≥60 (94). The single Influenza lab positive was in the age group 20-59. The RSV lab positives cases were among the age group 0-19 (3). The other respiratory lab positives were in the age group of 0-19 (9), 20-59 (3), and ≥60 (2). The Co-infection lab positives were in the age group ≥60 (5).
- From July 14 to August 10, there were 14 respiratory illness cases admitted to the ICU with lab-positive Covid-19 (11) and other respiratory illnesses (3). The COVID-19 lab positives were among the age groups of 0-19 (1), 20-59 (2) and ≥60 (8). The other respiratory lab positives were in the age groups of 20-59 (1) and ≥60 (2).
- Notes:** ¹ The delay in date tested result affects the total number of Influenza (A/B), RSV and other respiratory virus admissions for a particular day. This lag in data impacts mostly the last couple of days from the day the report is updated. The counts for influenza, RSV, and other respiratory virus-associated hospital and ICU admissions refer to individuals with laboratory or point of care tests positive for influenza, RSV, and other respiratory viruses, respectively, occurring within four days before the admission date AND/OR at any point during the hospital stay. The counts for COVID-19 hospital and ICU admissions refer to individuals with laboratory tests positive for COVID-19 virus, occurring within 21 days before the admission date and/or at any point during the hospital stay or 7 days from the discharge. Episodes of care considers patients total movement within the health system related to their condition. It combines 2 or more admissions from 2 or more different facilities if they are transfers (No break in care). Transfer: Admission to any other hospital within 24 hours of discharge from previous hospital. Co-infected cases: positive for influenza and RSV or, positive for influenza and other respiratory virus or positive for RSV and other respiratory viruses or, positive for COVID-19 and influenza or, positive for COVID-19 and RSV or, Positive for COVID-19 and other respiratory viruses. Other includes Parainfluenza 1-4, Adenovirus, Enterovirus, Human Metapneumovirus, Rhinovirus, Seasonal Coronavirus (O43, NL63, 229E, HKU1f.)

²7-day average of percentage of acute inpatient beds staffed and in operation that are occupied by COVID-positive patients as of 8AM census

³ Includes deaths entered into Panorama IOM among lab-confirmed cases. Deaths reported based on the actual date of death. Deaths reported in previous periods subject to change due death reporting data lags. Based on Panorama update, one death was added in week 46; and one death removed from each week from week 47-50.

⁴The fall immunization campaign for COVID-19 and influenza started on October 10, 2023. The first doses of COVID-19 and influenza vaccines arrived in SK the week of September 18. Coverage is based on doses administered on or after September 18, 2023. The most recent rate is as of April 20, 2024.

Figure 1: Epidemic curve, respiratory illness by organism and test positivity, August 29, 2021 – August 10, 2024



Data sources: Panorama IOM extracted on August 14, 2024 (COVID-19 cases)

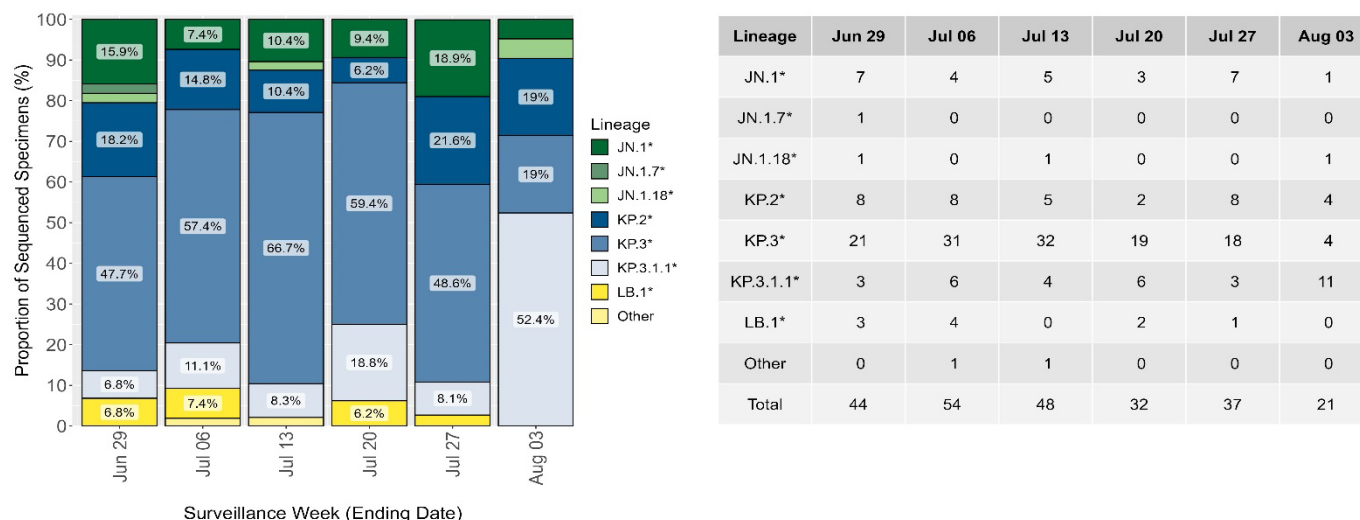
Respiratory Virus Detections Surveillance System (influenza and other respiratory) (RRPL extracted August 14, 2024)

As of September 4, 2022, COVID-19 cases include new and reinfections.

For the Four weeks of July 14 to August 10, 2024, there were:

- 365 COVID-19 cases (25 were 0 to 19 years; 126 were 20 to 59 years; and 214 were 60 years and older).
- 11 influenza lab detections
- 5 RSV detections
- 163 other viral lab detections (parainfluenza, adenovirus, human metapneumovirus, rhinovirus, coronavirus)

Figure 2: Percentage of SARS-CoV-2 variants, June 23 – August 3, 2024^{*,*}



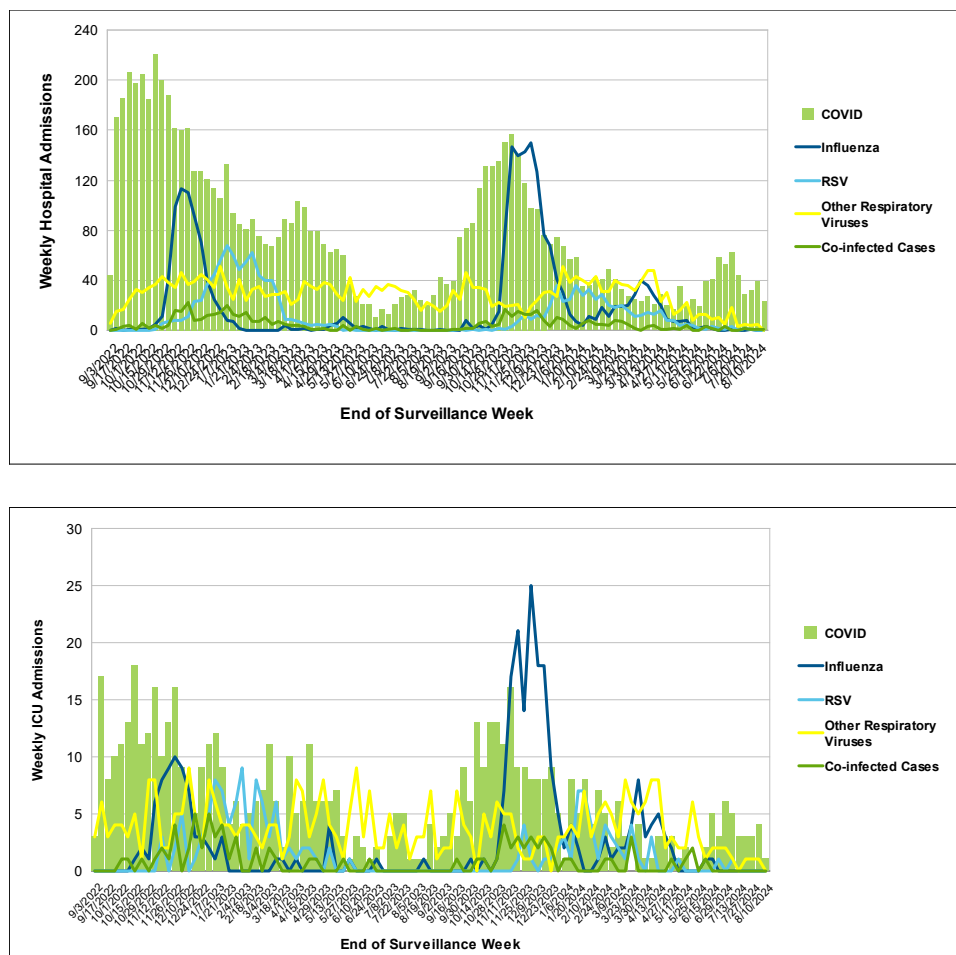
Data Source: Roy Romanow Provincial Laboratory, Saskatchewan Health Authority, as of August 13, 2024

^{*} Surveillance weeks correspond to specimen collection date.

^{*} Parent lineage reported also includes all sublineages derived from this parent lineage.

• "Other" represents non-VOC variant groups and their sublineages. For the current period of June 23 to August 3, the Other category includes XDV.1 (2 cases).

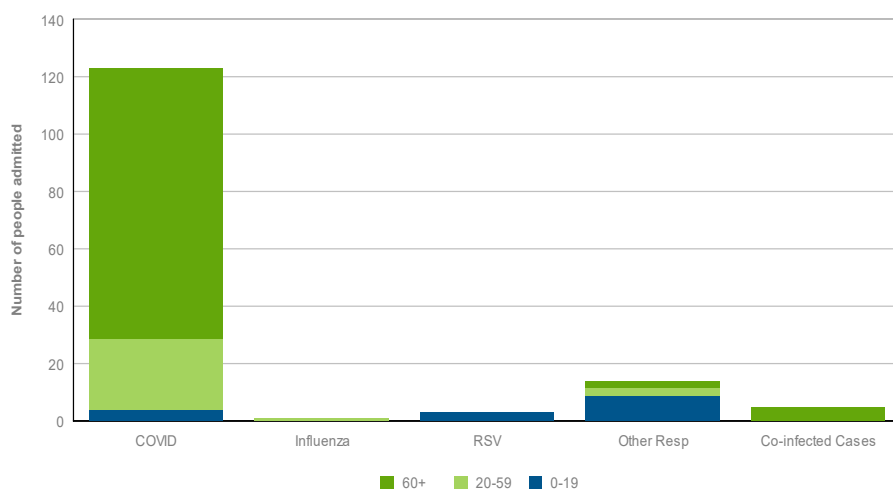
Figure 3: The number of COVID-19, influenza, RSV, other respiratory viruses, and co-infected cases admitted to hospital and ICU by week of the admission, September 03, 2022 – August 10, 2024*



Data source: Digital Health Analytics, Saskatchewan Health Authority, Episode of Care methodology (Admission, Discharge, Transfer Database (ADT, RRPL, Panorama); data extracted on August 13, 2024. * Viral infection may not be the main reason for the admission.

Note: The delay in date tested result 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. Includes lab or point of care positive for influenza, RSV, other respiratory viruses, four days prior to date of admission AND/OR at any point during admission. Episode of Care considers patients total movement within the health system related to their condition. It combines 2 or more admissions from 2 or more different facilities, if they are transferred (no break in care). Transfer = admission to any other hospital within 24 hours of discharge from previous hospital admission. Co-infected cases = positive for Influenza and RSV, or Influenza and 'other', or RSV and 'other', or, COVID-19 and Influenza, or, COVID-19 and RSV, or COVID-19 and 'other'.

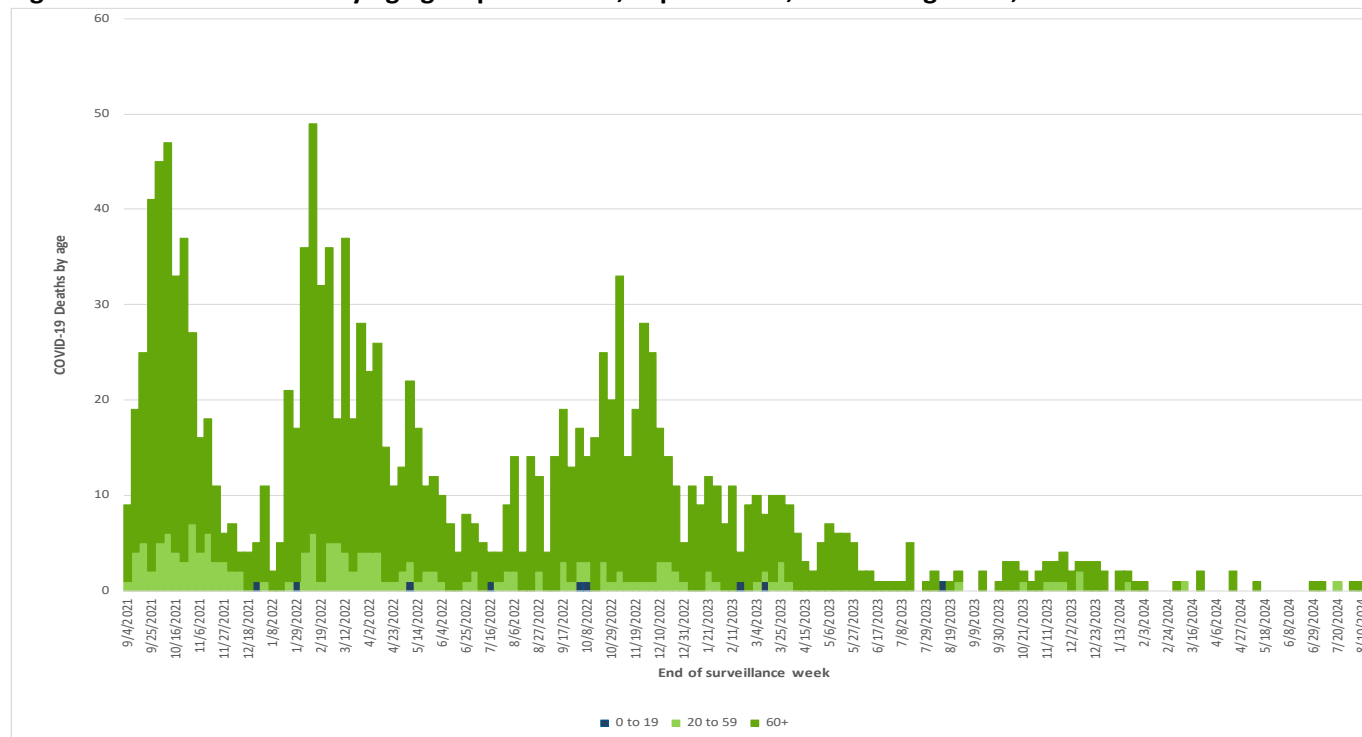
Figure 4: The number of COVID-19, influenza, RSV, other respiratory viruses, and co-infected cases admitted to hospital by age group, July 14 –August 10, 2024



Data source: Digital Health Analytics, Saskatchewan Health Authority, Episode of Care methodology (Admission, Discharge, Transfer Database (ADT, RRPL, Panorama); data extracted on August 13, 2024* Viral infection may not be the main reason for the admission.

Note: The delay in date tested result 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. Includes lab or point of care positive for influenza, RSV, other respiratory viruses, four days prior to date of admission AND/OR at any point during admission. Episode of Care considers patients total movement within the health system related to their condition. It combines 2 or more admissions from 2 or more different facilities if they are transferred (no break in care). Transfer = admission to any other hospital within 24 hours of discharge from previous hospital admission. Co-infected cases = positive for Influenza and RSV, or Influenza and 'other', or RSV and 'other', or, COVID-19 and Influenza, or, COVID-19 and RSV, or COVID-19 and 'other'.

Figure 5: COVID-19 deaths by age group and week, September 4, 2021 – August 10, 2024*



Source: Panorama August 14, 2024

In the past four weeks, July 14 to August 10, 2024, three deaths were reported among COVID-19 cases.

*Total COVID-19 deaths from March 2020 to date; n=2,066

Table 5: Community Respiratory Infection Surveillance Program Indicators by zone, August 4 – August 10, 2024

Location	Test positivity – SARS-CoV-2 (positive lab tests) ^{^1}	Test positivity – Influenza (positive lab tests)	Test positivity – RSV (positive lab tests)	RLI* visits to EDs per 1,000 ²	RLI* 811 calls per 1,000 ³	School illness absenteeism ⁴	Wastewater indicator [†]
Far North West (Meadow Lake & area)	13.3% (2)	0.0% (0)	0.0% (0)	No data	-	No data	Low
Far North Central	0.0% (0)	0.0% (0)	0.0% (0)	No data	-	No data	No data
Far North East (La Ronge & area)	9.1% (1)	0.0% (0)	0.0% (0)	No data	-	No data	No data
North West (Lloydminster & area/North Battleford)	9.4% (5)	0.0% (0)	0.9% (1)	No data	32.0	No data	Low
North Central (Prince Albert & area)	5.6% (2)	0.0% (0)	0.0% (0)	No data	-	No data	Low
North East (Melfort & area)	20.0% (2)	0.0% (0)	0.0% (0)	No data	44.6	No data	No data
Saskatoon	4.6% (14)	0.0% (0)	0.7% (1)	No data	48.5	No data	Low
Central West (Kindersley & area)	12.1% (4)	0.0% (0)	0.0% (0)	No data	-	No data	No data
Central East (Yorkton/Melville & area)	10.6% (7)	0.0% (0)	0.0% (0)	No data	-	No data	Low
Regina	18.5% (17)	0.0% (0)	0.0% (0)	No data	37.4	No data	Medium-high
South West (Swift Current/Maple Creek & area)	0.0% (0)	0.0% (0)	0.0% (0)	No data	29.4	No data	Low
South Central (Moose Jaw & area)	16.7% (4)	0.0% (0)	0.0% (0)	No data	-	No data	Low
South East (Weyburn/Estevan & area)	29.7% (11)	0.0% (0)	0.0% (0)	No data	45.2	No data	Low
Unknown/Out of Province	10.6% (33)	4.7% (2)	0.0% (0)	No data	-	No data	-
SASKATCHEWAN	10.1% (102)	0.3% (2)	0.3% (2)	No data	41.5	No data	-

Notes: ¹By week of lab detection; effective Oct 30, 2022, includes cases who tested positive more than once >= 90 days apart; ^{^1}For COVID-19 test positivity, all tests reported were performed within the province. ²Respiratory-like illnesses (RLI) reports are unavailable from July 14 – August 10, 2024, due data definition changes at triage. ³811 data available at the six Integrated Service Areas geographical level; ⁴ Unknown represents the number of students who were absent from the class due to illness with no known geography for the school. School absenteeism is the proportion of scheduled children who were absent from the class due to illness. The type of illness is not specified. [†]SK overall estimate is currently unavailable as this metric tends to overestimate and underestimate WW level due to varied patterns across regions, which is difficult to synchronize with the population size of each region.

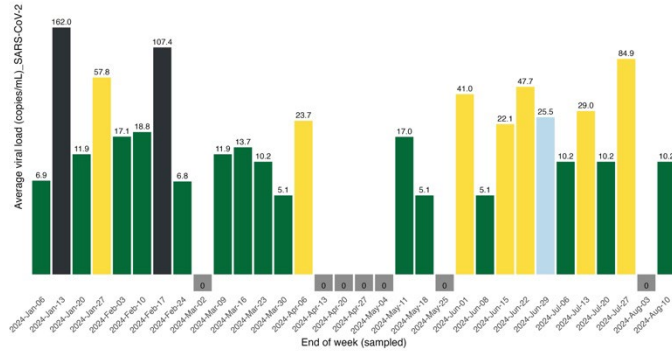
Technical Notes

1. Laboratory surveillance: Conducted through epidemiological analyses and Laboratory surveillance: Conducted through epidemiological analyses and positivity rate monitoring (counts and proportion of positive specimens, week of specimen collection, age category, geographical area, etiological type where applicable) of selected respiratory specimens submitted to the provincial laboratory in SK. Whole genome sequencing is conducted to detect changes (emergence of sub-lineages, variant proportion, etc) of clinical and public health importance among circulating respiratory organisms.
2. Sentinel health providers: Comprise a geographical-based network in practices across the province (n = 13 zones) who submit one to two specimens weekly to the Virology Section of the Roy Romanow Provincial Laboratory (RRPL), Saskatchewan Health Authority, from patients presenting with respiratory-like symptoms. Specimens are tested for a wider complement of respiratory organisms to monitor respiratory illness activity in the community. Assessment of co-infection (infected by more than one respiratory virus organism concurrently) occurs through sentinel provider submissions.
3. Wastewater data: Provided by the Roy Romanow Provincial Laboratory Wastewater Testing Team. Viral load for each zone was used to determine risk levels (Low, Medium, Medium-High, and High) based on viral copies per unit volume and weekly change percentage. Locations sampled include Saskatoon, Regina, Moose Jaw, North Battleford, Swift Current, Yorkton, Weyburn, Estevan, Meadow Lake, Melville, Town of Battleford, La Ronge, Unity, Assiniboia, Maple Creek, Lumsden, Watrous, Île-à-la-Crosse, Birch Hills, Southey, and Pasqua First Nation.
4. HealthLine 811 callers with Respiratory Symptoms (RLI): This count of response protocols collected by HealthLine nurses specific to callers reporting respiratory-like symptoms. HealthLine data is collected for a seven-day week, Monday to Sunday. Data is transformed into the rate of callers with respiratory symptoms from each Integrated Service Area (ISA) per 1000 calls from that ISA concerning any type of symptom.
5. A confirmed outbreak: Defined as two or more lab confirmed respiratory virus cases in high-risk settings 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. For this report outbreaks in high-risk settings comprise long term care facilities, personal care homes and group homes.
6. COVID hospitalized admissions is the number of C-19 positive cases that during the surveillance week were admitted as an inpatient to an acute care facility. This includes patients with C-19 related illness, incidental COVID infection, and patients under investigation. COVID ICU admissions is the number of C-19 positive cases that during the surveillance week were admitted to an ICU location in SK. This includes both infectious and non-infectious cases.
7. Influenza, RSV and other respiratory virus admissions: Delays in testing results affect the total number of Influenza, RSV and other respiratory virus admissions for a particular day. This lag in data has the greatest impact on the two days prior to when the report is updated. Counts include individuals who are laboratory positive for influenza, RSV, and other respiratory viruses, within four days prior to date of admission AND/OR at any point during the hospital stay. Episode of Care considers patients' total movement within the health system related to their condition. It combines 2 or more admissions from 2 or more different facilities, if they are transfers (i.e., no break in care). Transfer: Admission to any other hospital within 24 hours of discharge from previous hospital. Co-infected Cases = if positive for Influenza and RSV positive for Influenza and Other Respiratory viruses or, positive for RSV and Other respiratory viruses or, positive for Covid-19 and Influenza or, positive for Covid-19 and RSV or, positive for Covid-19 and Other Respiratory viruses.
8. Variant of Concern (VOC): 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 from the date a sample is collected. 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.

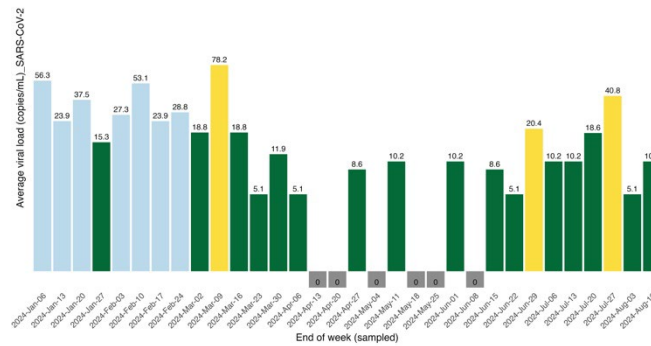
Lineages BA.2.86, JN.1, XBB, XBB.1.5, XBB.1.9.1, EG.5, XBB.1.16 and XBB.2.3 are all classified under the WHO label of "Omicron". Lineages that are not explicitly indicated in the analysis are aggregated under their corresponding parent lineage. Percentages are shown when a lineage or variant group constitutes 5% or more of total specimens evaluated for a given surveillance week.
9. COVID-19 cases: Effective September 4, 2022, COVID-19 cases are based on lab detection and include cases who tested positive more than once 90 days, or further, apart. Prior to this, cases include, only, first time cases reported and entered into Panorama.
10. COVID-19 Deaths: Includes deaths entered into Panorama IOM among laboratory confirmed cases. Deaths are reported based on the actual date of death. Deaths in previous periods may be adjusted from previous reports due to data lag.
11. COVID-19 Immunizations: Up-to-date (UTD) COVID-19 vaccination is the proportion of people having completed a primary series and one booster for ages five and older divided by the eligible population found in the Saskatchewan Covered Population, 12-Nov-2022 Ministry of Health version (2022 Version 2). Though vaccinated children six months to four years of age may be technically UTD, this specific definition does not apply to them. In addition, UTD in last six months is calculated by the proportion of people having received one or more boosters within the previous six months.
12. Influenza immunizations: UTD Influenza vaccination is the proportion of people, six months and older, having one influenza dose this season divided by the eligible population found in the Saskatchewan Covered Population, 12-Nov-2022 Ministry of Health version (2022 Version 2). Vaccination for the current influenza season officially began October 11, 2022. Some doses were administered prior to the start date.
13. Staffed Inpatient beds: Weekly average COVID Occupancy is a 7-Day average percentage of acute inpatient beds staffed and in operation COVID positive patients occupy. The full calculation of this metric is: Average COVID occupancy = $\frac{\sum (8am\ covid\ census)}{\sum (8am\ beds\ staffed\ and\ in\ operation)} \times 100\%$. Where "bed staffed and in operation" = "Planned beds" + "Surge Beds" - "Closed" and $\sum (...)$ indicates summation over 7-day period from Sunday to Saturday. 8am COVID census is taken from the ADT patient registration, which is fed to the provincial data-mart and archived hourly. 8am planned bed, surge beds, and closed beds is compiled via data feeds from APF (Saskatoon & Regina) and the provincial bed edits interface (INH & IRH).
14. Rate of COVID-19 hospitalization (ICU or Death) were calculated by summing the daily number of hospitalizations (ICUs or Deaths) for the period by vaccine status (numerator) divided by the mid period population by respective vaccine status (denominator), multiplied by 100,000. This estimate is further divided by the number of days to obtain the daily rate. Denominator for individuals in the Booster in the past 6-months group are all Saskatchewan residents who have had their booster dose within the last 6 months. To eliminate bias of age all rates are adjusted by age. Direct standardization method is employed using the Saskatchewan population as the standard population. Age at first dose used in the rate calculation. Individuals with unknown age are excluded from age-specific analyses. Estimates of relative risk (i.e., rate ratios) is obtained by comparing vaccinated with 2 doses (Any Booster dose) and unvaccinated. Risk estimates may differ from other reports due to differing methodologies. Relative risk estimates methodology is described elsewhere. See [Namrata Bains. Standardization of Rates \(March 2009\)](#).

Appendix: Wastewater Surveillance for SARS-CoV-2 by cities, Saskatchewan

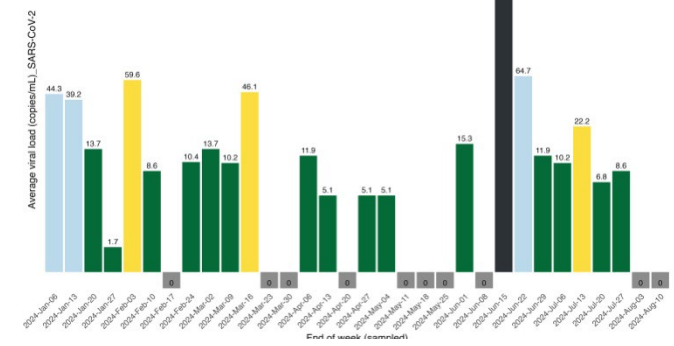
Meadow Lake



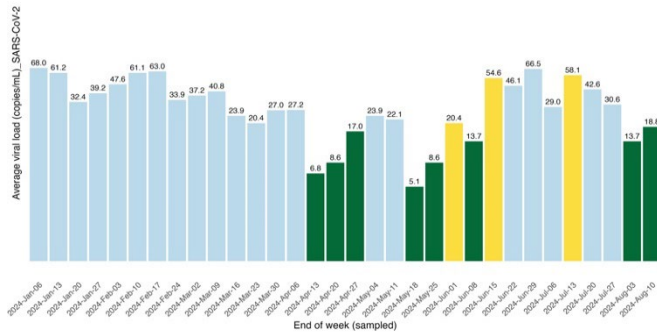
North Battleford



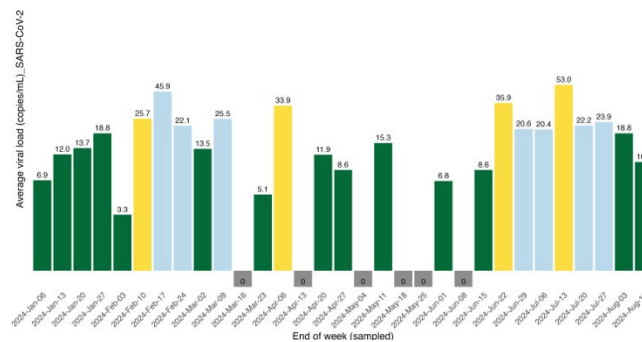
Battleford



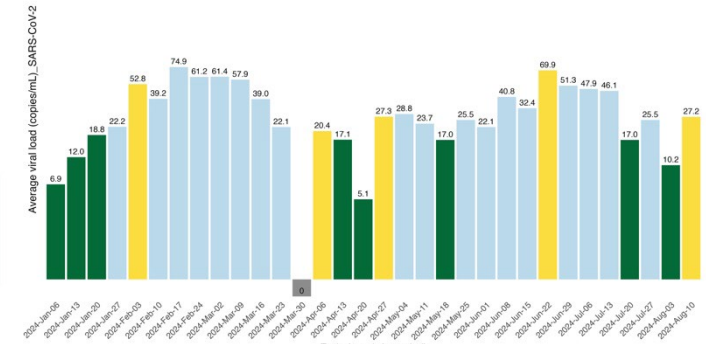
Saskatoon



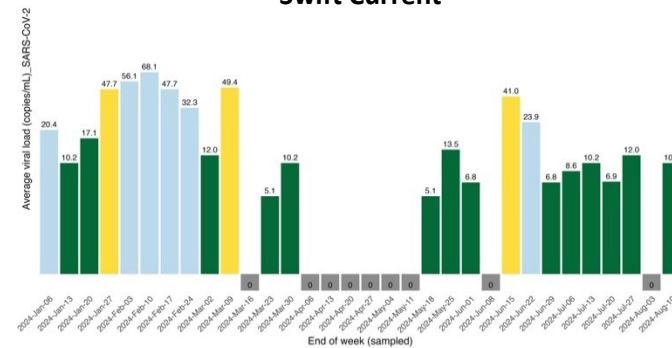
Yorkton



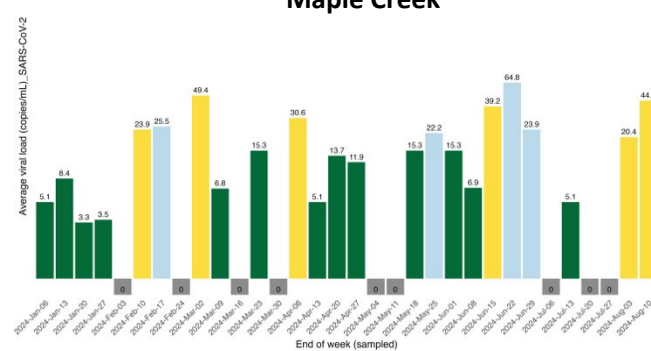
Regina



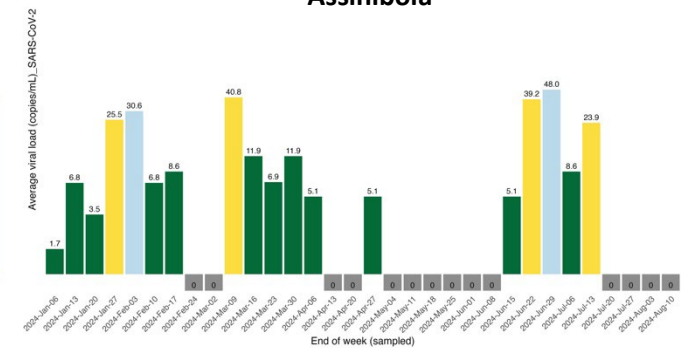
Swift Current



Maple Creek



Assiniboia

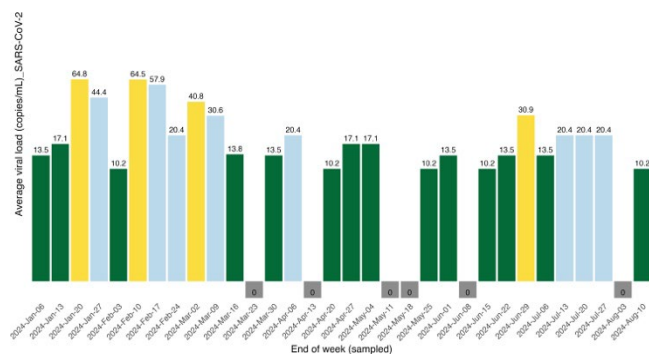


Quantitative Interpretation:

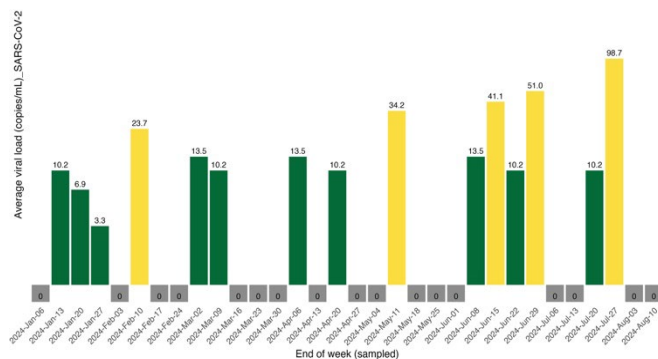
- Low: 0-20 copies per mL.
- Medium: 20-100 copies per mL and weekly change < 100%.
- Medium – High: 20-100 copies per mL and weekly change > 100%.
- High: > 100 copies per mL.

Technical Notes

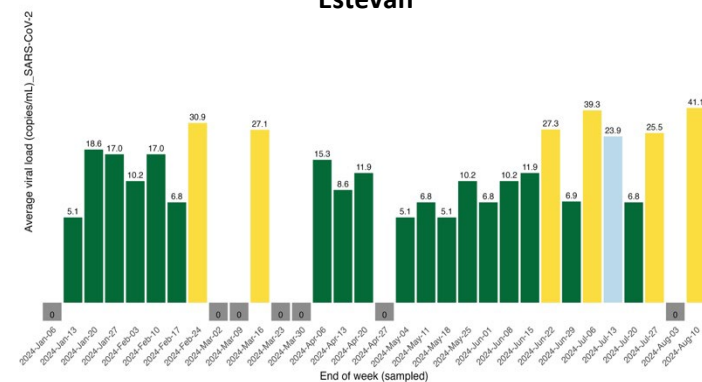
Moose Jaw



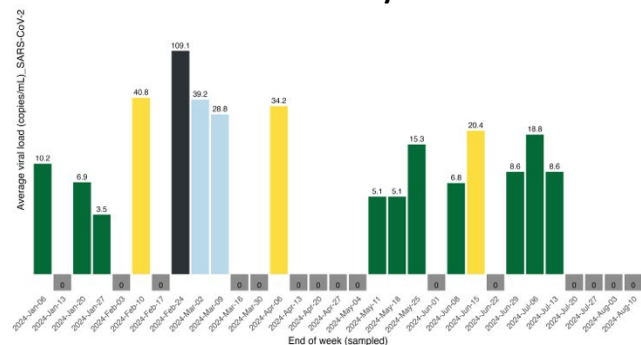
Lumsden



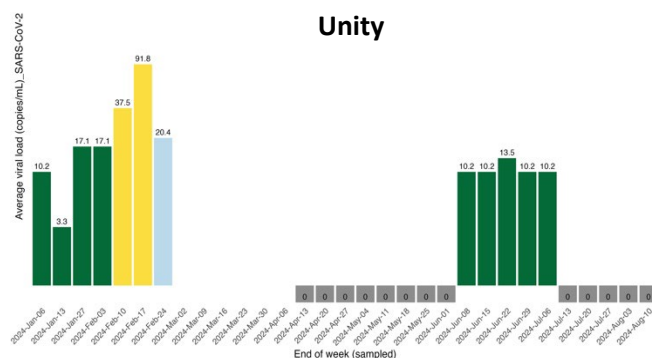
Estevan



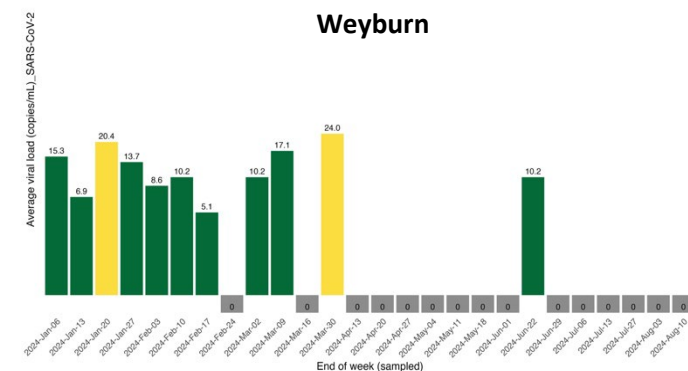
Southey



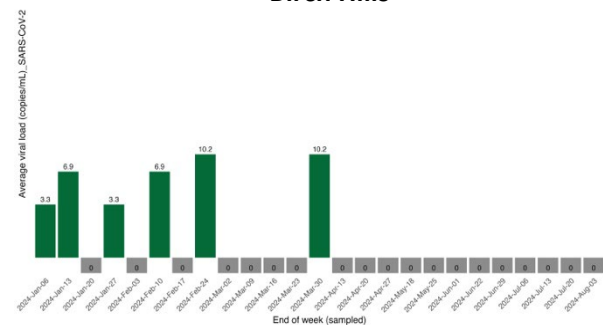
Unity



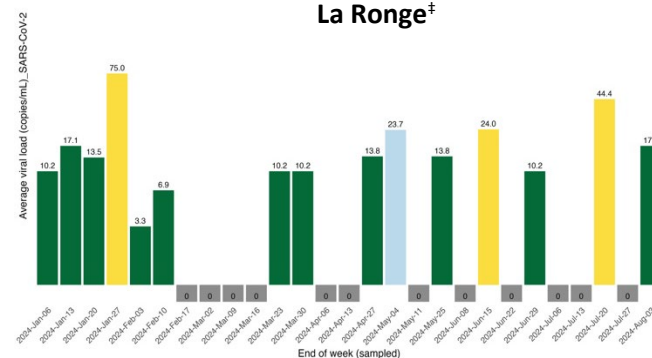
Weyburn



Birch Hills†



La Ronge†



Quantitative Interpretation:

- Low: 0-20 copies per mL.
- Medium: 20-100 copies per mL and weekly change < 100%.
- Medium – High: 20-100 copies per mL and weekly change > 100%.
- High: > 100 copies per mL.

