# Community Respiratory Illness Surveillance Program (CRISP) Situation Report: July 19, 2024 (Reporting Period June 16 – July 13, 2024)

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

**Summary**

- The number of COVID-19 positive test and test positivity rates have been decreasing in the past three weeks from June 23 – July 13, with a drop from 15.1% (171 tests) to 11.5% (138 tests).

- On July 11, 2024, a single human case of swine-origin Influenza A(H3N2)v was reported. Human cases are rare, and there was no evidence of person-to-person transmission from this case. The case was not hospitalized and has fully recovered. The public health investigation is complete.

- The number of Respiratory Syncytial Virus (RSV) positive tests decreased slightly in the most recent week over the past three weeks, with test positivity at 0.2%, while 'other' respiratory virus test positivity increased to 37.4% and then dropped to 24.7% for the week ending July 13.

- During the reporting period, COVID-19, Influenza, RSV, other respiratory viruses, and co-infections made up 81.0%, 0.4%, 2.5%, 14.8%, and 1.3% of viral respiratory illness hospitalizations, respectively. Total admissions decreased by 14.8% from 128 for the previous two weeks to 109 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 decreased from 7.0% to 2.9% in the final two-week of the school year, ending June 29. Data for June 30 – July 13, 2024, is unavailable due to summer break. The absenteeism relates to any cause, including respiratory symptoms.
    - RLI calls to the HealthLine has decreased over the past four weeks period from 62.5 per 1,000 calls for the week ending June 22, to 42.2 per 1,000 calls in the week ending July 13.
    - Three out of eight samples tested at the sentinel sites were positive for respiratory viruses, with Rhinovirus being the most frequently detected.
    - Wastewater data from the surveyed areas of the province continue to indicate a varied distribution of COVID-19 levels, ranging from low to moderately elevated concentrations.

**COVID-19**

- In the most recent week, the proportions of laboratory-confirmed COVID-19 cases were highest among individuals 65 years and older (59.0%) followed by those aged 20 – 64 years old (37.7%).

- **COVID-19 outbreaks in high-risk settings decreased** to nine (9) for the most recent two weeks compared to 14 for the previous two-week period.

- From May 26 to July 6, JN.1 and its sublineages (denoted as JN.1*) were the most commonly detected variants (43.4%), followed by KP.3* (27.2%) and KP.2* (12.8%). JN.1.7, JN.1.18, KP.2, KP.3 and LB.1 are new variants under monitoring (VUM) as of June 28, 2024, according to the World Health Organization. The proportion of JN.1.7 is 0%, JN.1.18 is 0%, KP.2 is 20.0%, KP.3 is 0% and LB.1 is 10.0% for the week ending July 6.

- COVID-19 hospitalizations decreased by 22 cases to 85 for the most recent two weeks. COVID-19 ICU admissions decreased from nine (9) for the previous two weeks to eight (8) for the most recent two weeks**.**

- The proportion of staffed inpatient beds occupied by COVID-19 patients has remained stable at 3.2% for the last two weeks. However, there was an increase from 2.1% to 3.2% over the last four weeks.

- Two COVID-19-associated deaths were reported over the past four weeks.

- The COVID-19 immunization campaign launched October 10, 2023. As of April 20, 2024, 18.4% of those aged six months and older have received a COVID-19 vaccine dose.

**Influenza**

- The number of weekly positive tests for influenza remained stable (3 to 5 tests) over the past month.

- No influenza-associated deaths were reported over the past four weeks.

- Influenza hospitalizations remained stable at one (1) for the most recent two weeks. There was not influenza ICU admission during the last two weeks.

- The influenza immunization campaign launched October 10, 2023. As of April 20, 2024, 24.9% of the Saskatchewan population have received an influenza vaccine.

**RSV and Other Respiratory Viruses**[1]

- No RSV outbreaks were reported over the past four weeks.

- RSV hospitalizations and ICU admissions remained stable at three (3) and one (1) for the most recent two weeks, respectively, while 'Other' respiratory virus hospitalizations increased from 15 to 20 for the most recent two weeks compared to the previous two weeks, and ICU admissions decreased from four (4) to one (1) over the same period.

- Other respiratory viruses increased to 199 positive lab detections in the current two weeks compared to 186 detections in the previous two-week period.

- Outbreaks due to 'other' viruses increased from the previous reporting period. Eight outbreaks were reported in high-risk settings over the past four weeks. **Rhinovirus accounted for four of these outbreaks.**

Notes:

[1] *'Other' respiratory viruses: Parainfluenza viruses 1 – 4; Adenovirus; Human Metapneumovirus, seasonal Coronavirus and Entero/Rhinovirus;*

** Represents all sublineages of Omicron*

**Table 1: Viral indicators by surveillance period, June 16 – July 13, 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jul 7 – Jul 13 | 138 | 11.5% | 4 | 3 | 0.4% | 0 | 1 | 0.2% | 0 | 71 | 24.7% | 2 |
| Jun 30 – Jul 6 | 169 | 13.5% | 5 | 5 | 0.6% | 0 | 3 | 0.4% | 0 | 128 | 37.4% | 2 |
| Jun 23 – Jun 29 | 171 | 15.1% | 6 | 5 | 0.6% | 0 | 3 | 0.4% | 0 | 102 | 28.4% | 1 |
| Jun 16 – Jun 22 | 118 | 10.5% | 8 | 3 | 0.4% | 0 | 3 | 0.4% | 0 | 84 | 24.5% | 3 |

***Notes:*** [1]*Parainfluenza viruses 1 – 4; Adenovirus; Human Metapneumovirus, seasonal Coronavirus and Entero/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 7 – July 13, 2024**

| Age group (Years) | COVID-19 case count | Influenza case count | RSV case count | 'Other' virus case count[1] |
|---|---|---|---|---|
| 0 – 4 | 1 (0.8%) | 0 (0.0%) | 0 (0.0%) | 71 |
| 5-19 | 3 (2.5%) | 1 (33.3%) | 0 (0.0%) | |
| 20 – 64 | 46 (37.7%) | 2 (66.7%) | 0 (0.0%) | |
| ≥65 | 72 (59.0%) | 0 (0.0%) | 0 (0.0%) | |
| Total | **122 (100%)** | **3 (100%)** | **0 (0.0%)** | **71 (100%)** |

***Notes:*** *[1]Parainfluenza viruses 1 – 4; Adenovirus; Human Metapneumovirus, seasonal Coronavirus and Entero/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, June 16 – July 13, 2024**

| Report date | School illness absenteeism[1] | RLI** ED visits per 1,000[2] | RLI** 811 calls per 1,000 | SARS-CoV-2 Wastewater indicator[3] | Sentinel provider test positivity[4] | Most commonly detected virus: Sentinel providers[4] |
|---|---|---|---|---|---|---|
| Jul 7 – Jul 13 | No data[&] | No data | 42.2 | Low (n= 5), Medium (n= 1), Medium-high (n= 3), High (n= 0) | Rhinovirus | 38% (n=3) |
| Jun 30 – Jul 6 | No data[&] | No data | 58.9 | Low (n= 6), Medium (n= 3), Medium-high (n= 0), High (n= 0) | Rhinovirus | 80% (n=4) |
| Jun 23 – Jun 29 | 2.9% | No data | 55.6 | Low (n= 4), Medium (n= 4), Medium-high (n= 1), High (n= 0) | Rhinovirus | 57% (n=4) |
| Jun 16 – Jun 22 | 7.0% | No data | 62.5 | Low (n= 4), Medium (n= 2), Medium-high (n= 3), High (n= 0) | COVID, Parainfluenza virus 3 | 67% (n=2) |

*Notes: *Sentinel surveillance are sampling programs representative of the population; [1]School absenteeism is the proportion of scheduled children who were absent from the class due to illness. The type of illness is not specified. [&] No data because schools are currently on summer break*
*[2]Respiratory-like illnesses (RLI) reports are unavailable from June 16 – July 13, 2024, due data definition changes at triage. [3]Count of wastewater treatment facilities reporting low, moderate or high levels of viral load causing COVID-19 infection. See Technical Notes and appendix for details [4]Most 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, June 16 – July 13, 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] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Jul 7 – Jul 13 | 30 | 3 | 0 | 0 | 0 | 0 | 3.2% | 0 | 0 | 18.4% | 24.9% |
| Jun 30 – Jul 6 | 55 | 5 | 1 | 0 | 3 | 1 | 3.2% | 1 | 0 | | |
| Jun 23 – Jun 29 | 51 | 6 | 0 | 0 | 1 | 0 | 2.7% | 1 | 0 | | |
| Jun 16 – Jun 22 | 56 | 3 | 0 | 0 | 2 | 1 | 2.1% | 0 | 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 June 16 to July 13, there were 237 respiratory illness cases hospitalized with lab-positive COVID-19 (192), influenza (1), RSV (6), other respiratory illnesses (35), and co-infected cases (3). The COVID-19 lab positives were among the age groups of 0-19 (12), 20-59 (27) and ≥60 (153). The Influenza lab positives were among the age group of ≥60 (1). The RSV lab positives cases were among the age group of 0-19 (6). The other respiratory lab positives were in the age group of 0-19 (25), 20-59 (6), and ≥60 (4). The Co-infection lab positives were in the age groups of 0-19 (2) and ≥60 (1).

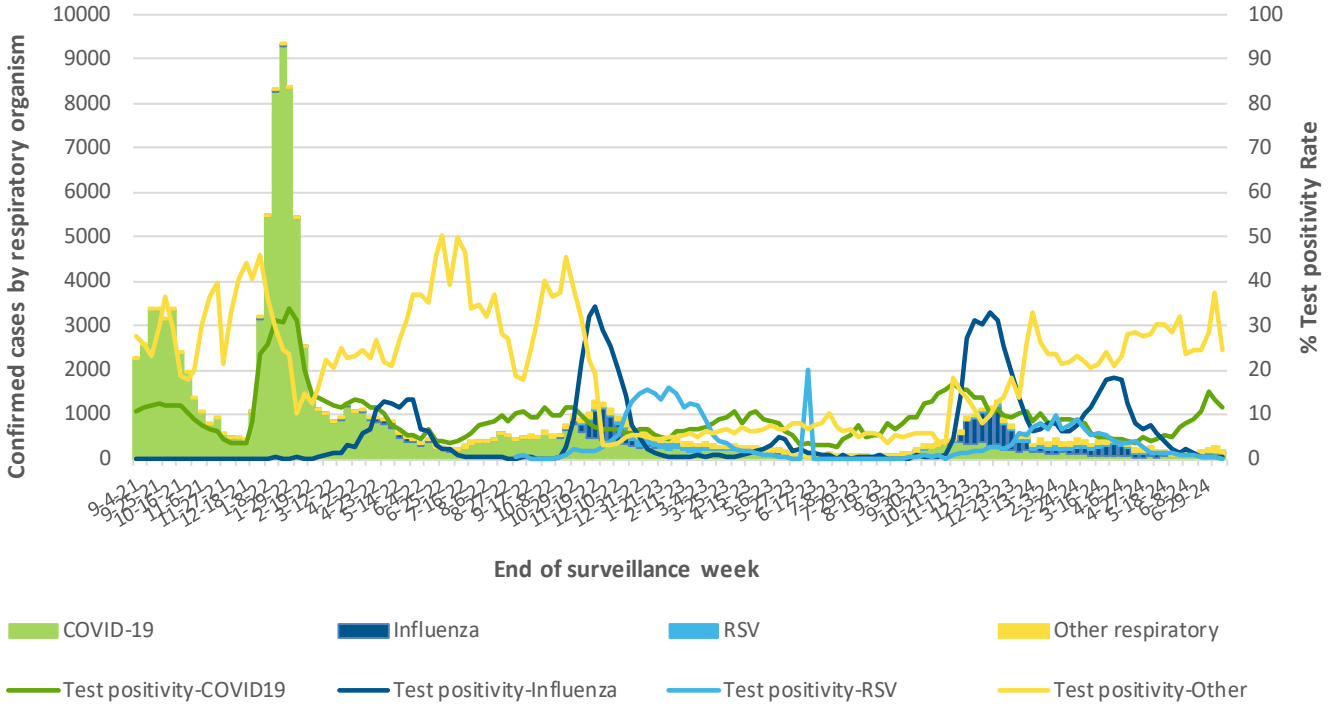
- From June 16 to July 13, there were 24 respiratory illness cases admitted to the ICU with lab-positive Covid-19 (17), influenza (2), other respiratory illnesses (5) and co-infected cases (0). The COVID-19 lab positives were among the age groups of 0-19 (2), 20-59 (5) and ≥60 (10). The RSV lab positives cases were among the age group of 0-19 (2). Other respiratory lab positives were in the age groups of 0-19 (2), 20-59 (2), and ≥60 (1).
- ***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 admission 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.)*

*[2]7-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.*

*[4]The 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.*

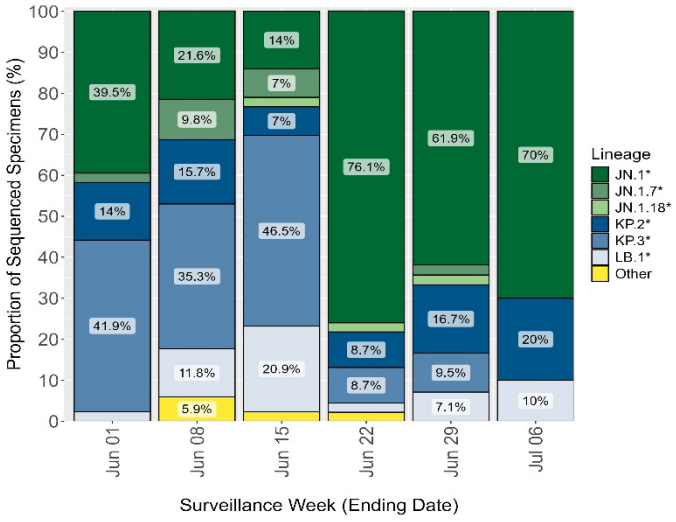
**Figure 1: Epidemic curve, respiratory illness by organism and test positivity, August 29, 2021 – July 13, 2024**




*Data sources: Panorama IOM extracted on July 17, 2024 (COVID-19 cases)*
*Respiratory Virus Detections Surveillance System (influenza and other respiratory) (RRPL extracted July 15, 2024)*
*As of September 4, 2022, COVID-19 cases include new and reinfections.*
*For the four weeks of June 16 to July 13, 2024, there were:*

- *495 COVID-19 cases (32 were 0 to 19 years; 154 were 20 to 59 years; and 309 were 60 years and older).*
- *16 influenza lab detections*
- *10 RSV detections*
- *385 other viral lab detections (parainfluenza, adenovirus, human metapneumovirus, rhinovirus, coronavirus)*

**Figure 2: Percentage of SARS-CoV-2 variants, May 26 – July 6, 2024¥***

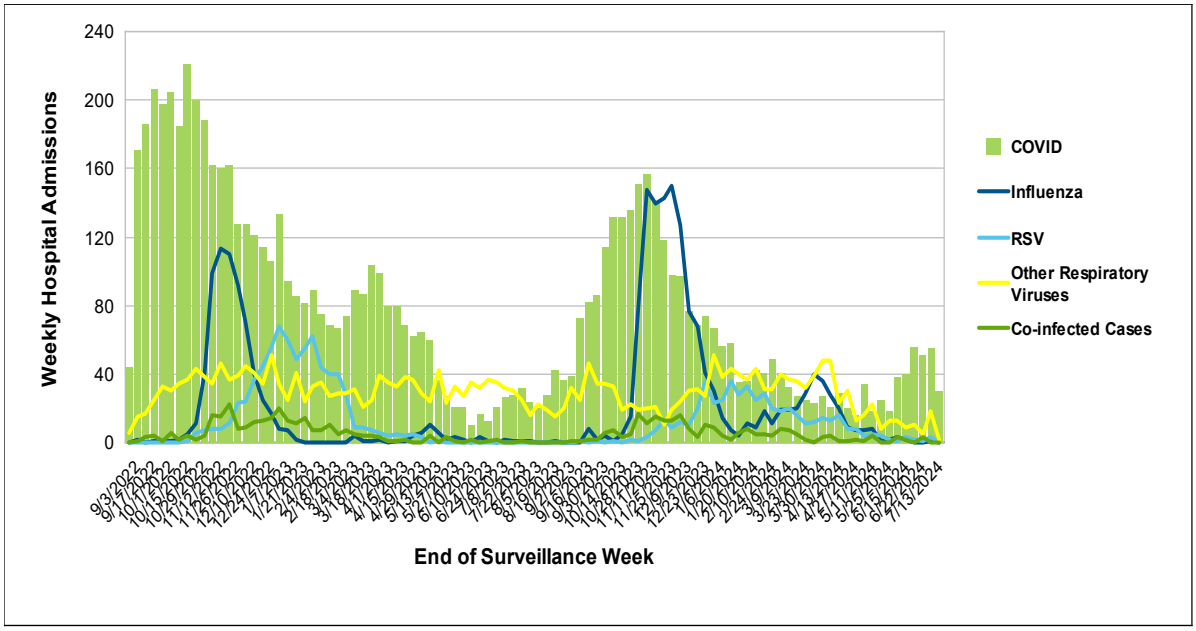


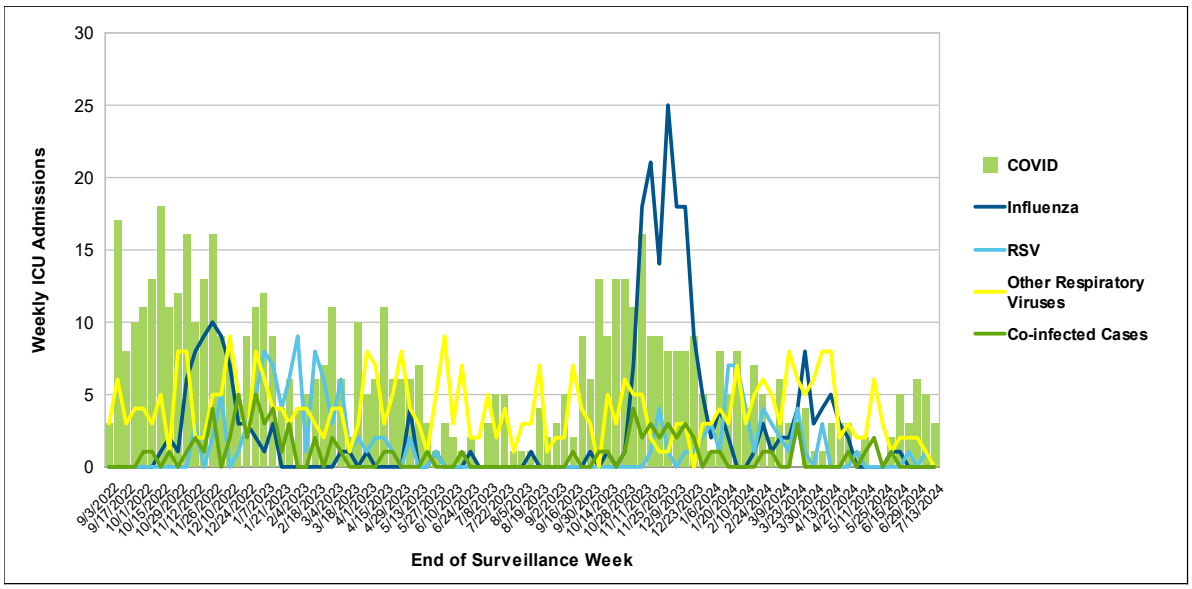

| Lineage | Jun 01 | Jun 08 | Jun 15 | Jun 22 | Jun 29 | Jul 06 |
|---|---|---|---|---|---|---|
| JN.1* | 17 | 11 | 6 | 35 | 26 | 7 |
| JN.1.7* | 1 | 5 | 3 | 0 | 1 | 0 |
| JN.1.18* | 0 | 0 | 1 | 1 | 1 | 0 |
| KP.2* | 6 | 8 | 3 | 4 | 7 | 2 |
| KP.3* | 18 | 18 | 20 | 4 | 4 | 0 |
| LB.1* | 1 | 6 | 9 | 1 | 3 | 1 |
| Other | 0 | 3 | 1 | 1 | 0 | 0 |
| Total | 43 | 51 | 43 | 46 | 42 | 10 |

***Data Source:*** *Roy Romanow Provincial Laboratory, Saskatchewan Health Authority, as of July 17, 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 May 26 to July 6, the Other category includes XDV.1 (4 cases) and XDK.1 (1 case).

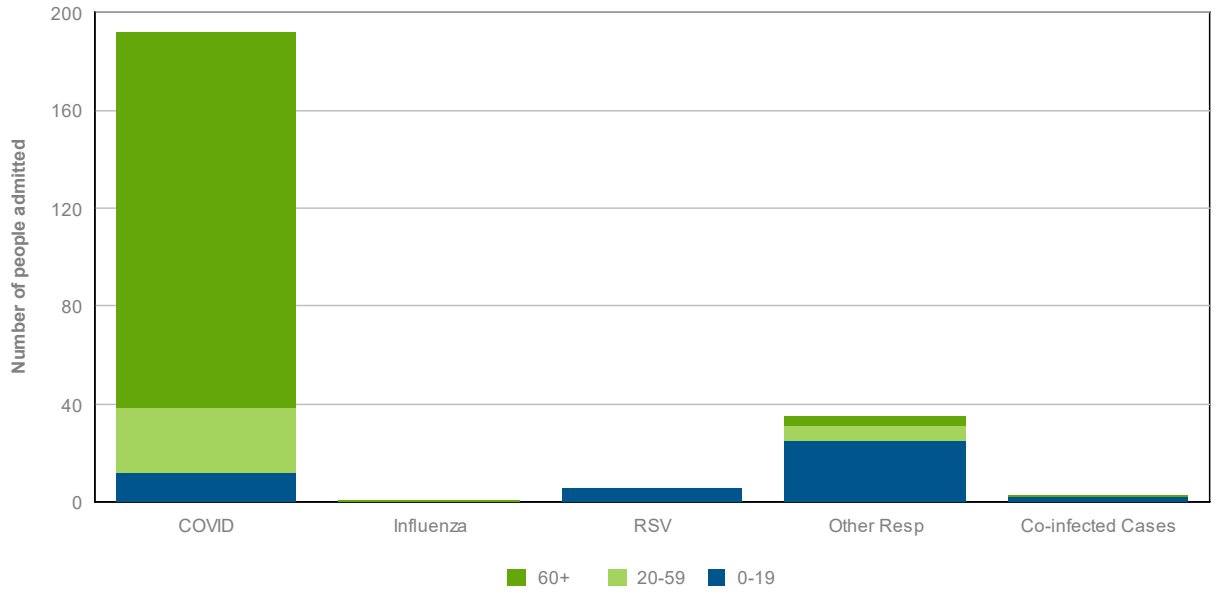
**Figure 3: The number of COVID-19, influenza, RSV, other respiratory viruses, and co-infected cases admitted to hospital and ICU by week of the admission, September 03, 2022 – July 13, 2024***



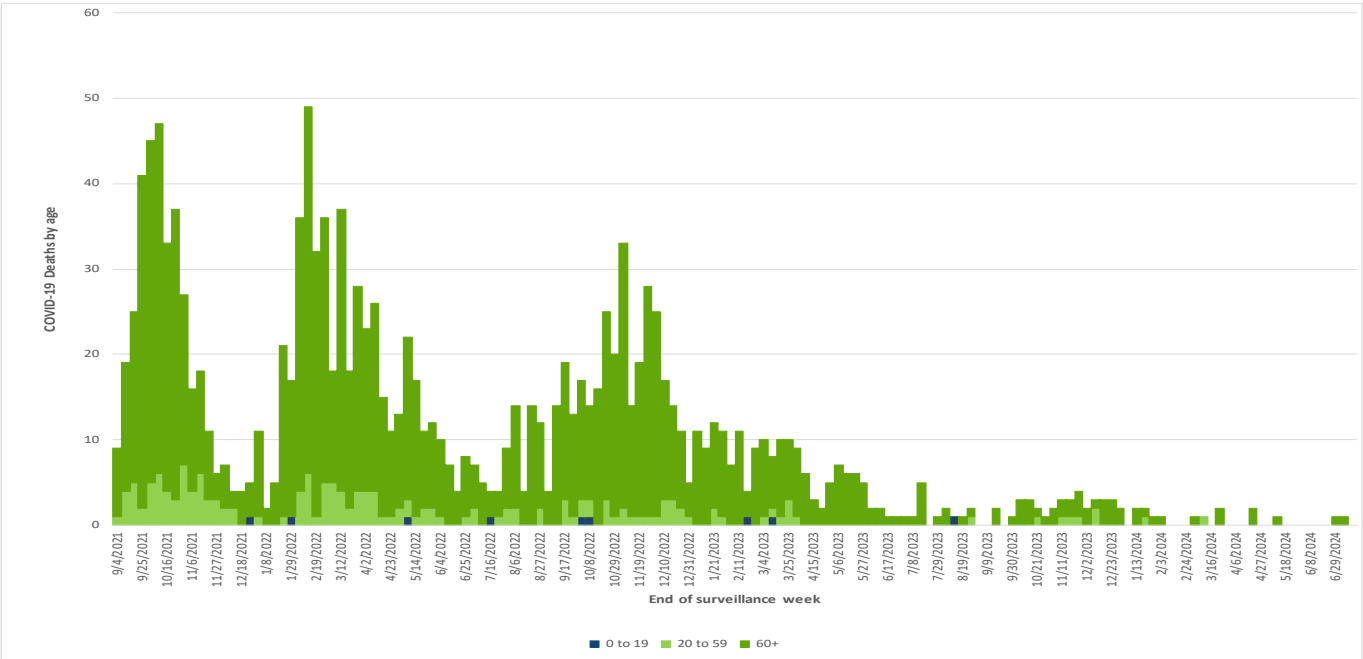

***Data source:*** *Digital Health Analytics, Saskatchewan Health Authority, Episode of Care methodology (Admission, Discharge, Transfer Database (ADT, RRPL, Panorama); data extracted on July 16, 2024* Viral infection may not be the main reason for the admission.*
***Note:*** *The delay in date tested 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, June 16 – July 13, 2024**




***Data source:*** *Digital Health Analytics, Saskatchewan Health Authority, Episode of Care methodology (Admission, Discharge, Transfer Database (ADT, RRPL, Panorama); data extracted on July 16, 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 – July 13, 2024***




Source: Panorama July 15, 2024
*In the past four weeks, June 16 to July 13, 2024, two deaths were reported among COVD-19 cases.*
**Total COVID-19 deaths from March 2020 to date; n=2,063*

**Table 5: Community Respiratory Infection Surveillance Program Indicators by zone, July 7 – July 13, 2024, 2024**

| Location | Test positivity – SARS-CoV-2 [1] (positive lab tests) | 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] | Wastewater indicator† |
|---|---|---|---|---|---|---|
| **Far North West** (Meadow Lake & area) | 9.1% (2) | 0.0% (0) | 0.0% (0) | No data | - | Medium-high |
| **Far North Central** | 0.0% (0) | 0.0% (0) | 0.0% (0) | No data | - | No Data |
| **Far North East** (La Ronge & area) | 7.7% (1) | 0.0% (0) | 0.0% (0) | No data | - | Low |
| **North West** (Lloydminster & area/North Battleford) | 5.3% (2) | 0.0% (0) | 0.0% (0) | No data | 24.4 | Low |
| **North Central** (Prince Albert & area) | 6.3% (3) | 0.0% (0) | 0.0% (0) | No data | - | No Data |
| **North East** (Melfort & area) | 8.3% (2) | 0.0% (0) | 0.0% (0) | No data | 25.4 | No Data |
| **Saskatoon** | 10.2% (39) | 1.2% (2) | 0.6% (1) | No data | 63.7 | Medium-high |
| **Central West** (Kindersley & area) | 4.3% (1) | 0.0% (0) | 0.0% (0) | No data | - | No Data |
| **Central East** (Yorkton/Melville & area) | 15.3% (11) | 0.0% (0) | 0.0% (0) | No data | - | Medium-high |
| **Regina** | 6.1% (6) | 0.0% (0) | 0.0% (0) | No data | 22.8 | Medium |
| **South West** (Swift Current/ Maple Creek & area) | 14.3% (6) | 1.9% (1) | 0.0% (0) | No data | 41.4 | Low |
| **South Central** (Moose Jaw &area) | 9.5% (2) | 0.0% (0) | 0.0% (0) | No data | - | Low |
| **South East** (Weyburn/Estevan & area) | 15.4% (4) | 0.0% (0) | 0.0% (0) | No data | 56.2 | Low |
| **Unknown/Out of Province** | 15.3% (59) | 0.0% (0) | 0.0% (0) | No data | - | - |
| **SASKATCHEWAN** | **11.5% (138)** | **0.4% (3)** | 0.2% (1) | **No data** | **42.2** | - |

*Notes: [1]By 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. [2]Respiratory-like illnesses (RLI) reports are unavailable from June 16 – July 13, 2024, due data definition changes at triage. [3] 811 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 occupance=$\sum$(8am covid census) ÷ $\sum$(8am beds staffed and in operation) × 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).

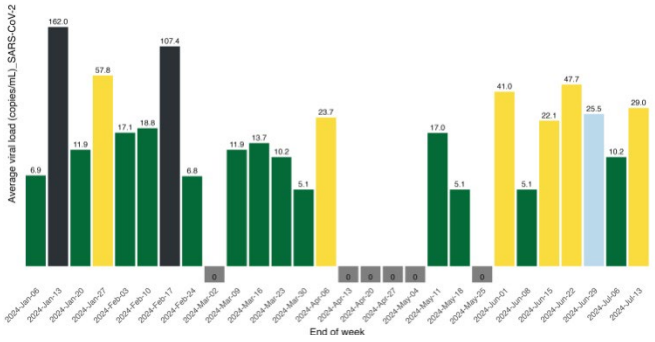
14. Rate of COVID-19 hospitalization (ICU or Death) were calculated by summing the daily number of hospitalizations (ICUs or Deaths) for the period by vaccine status (numerator) divided by the mid period population by respective vaccine status (denominator), multiplied by 100,000. This estimate is further 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).



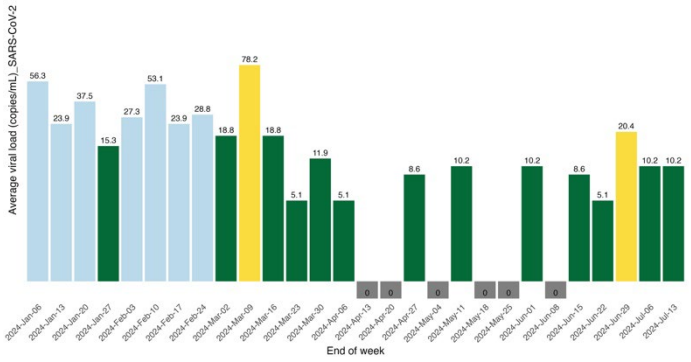
Saskatchewan

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

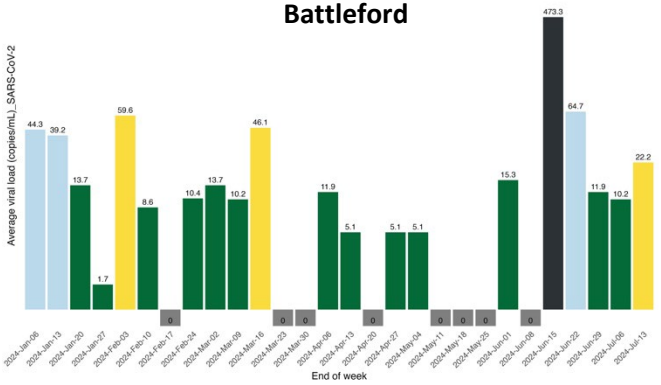
## Meadow Lake



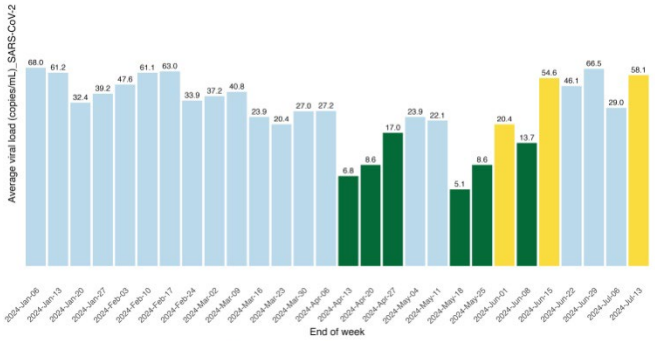

## North Battleford



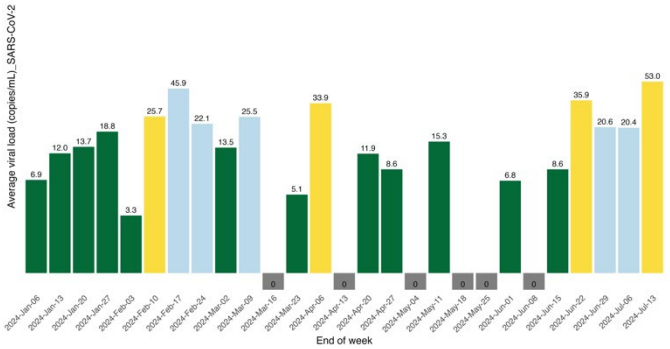

## Battleford



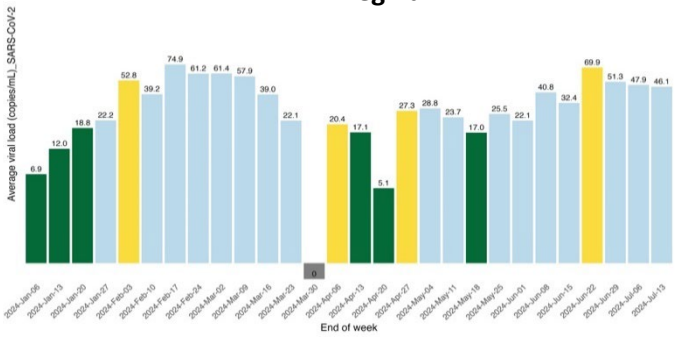

## Saskatoon



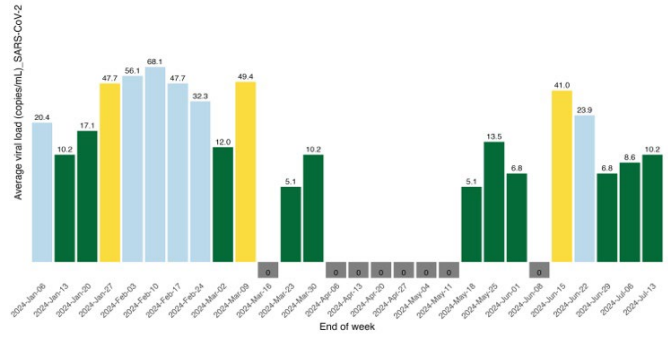

## Yorkton



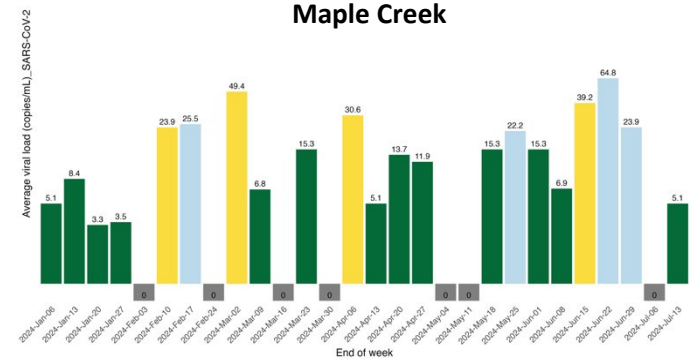

## Regina



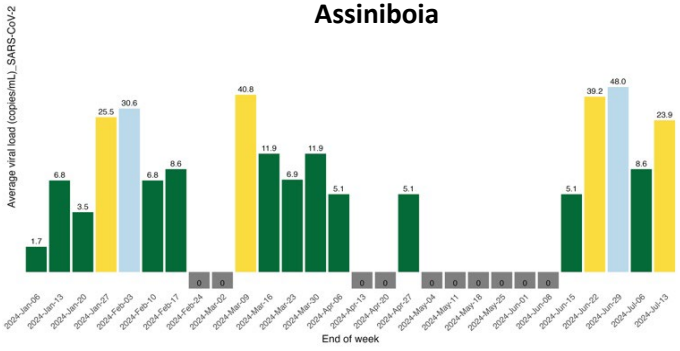

## Swift Current




## Maple Creek




## Assiniboia



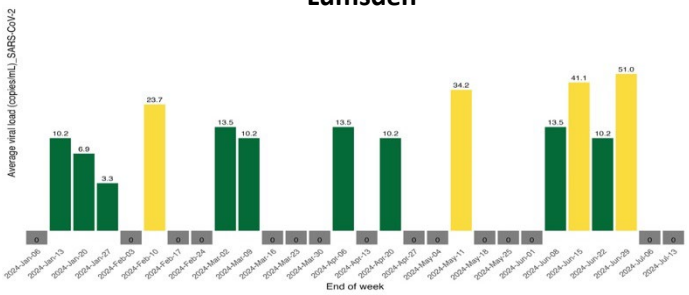

**Quantitative Interpretation**:

- 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.

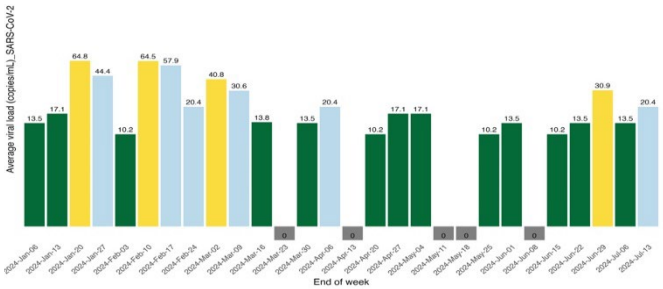
Saskatchewan

Low Medium Medium-High High

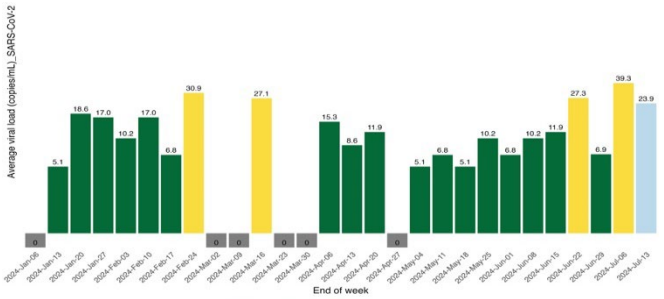
### Lumsden



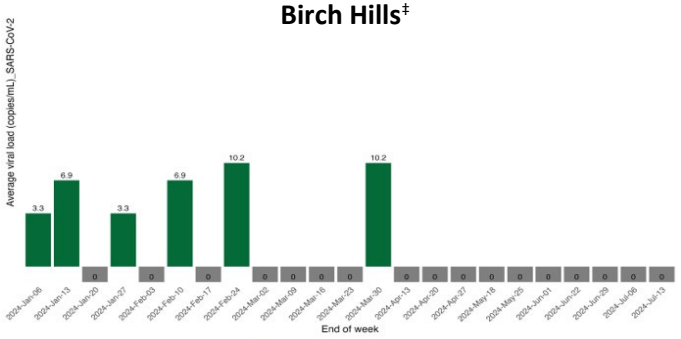

### Moose Jaw



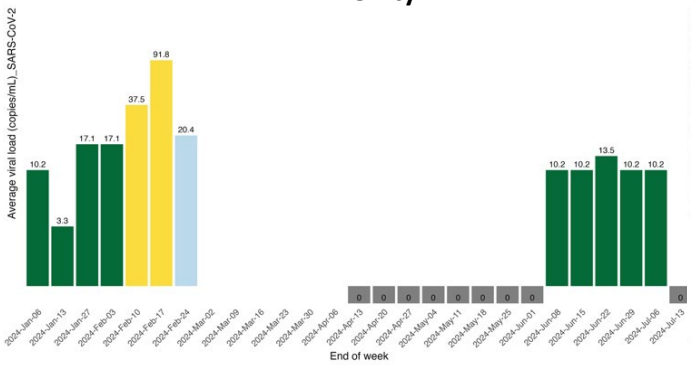

### Estevan



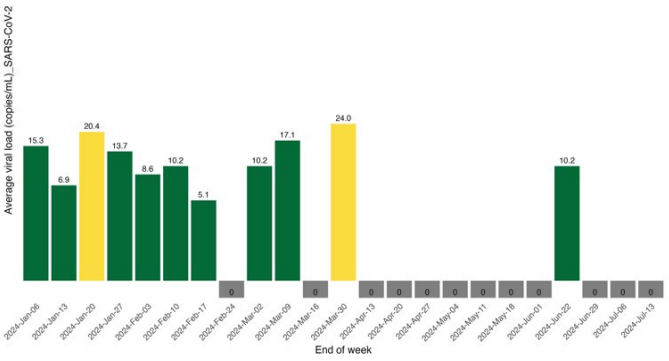

### Birch Hills‡



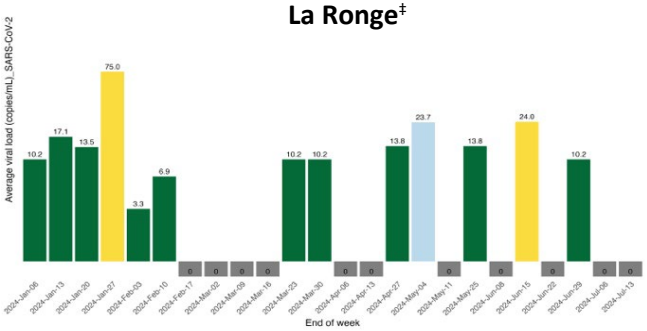

### Unity‡



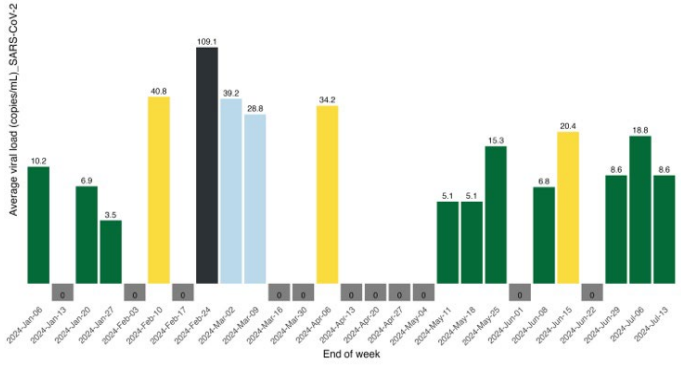

### Weyburn‡




### La Ronge‡




### Southey




**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.

‡Data for the weeks ending June 16 and July 13, 2024, (including other specified date gaps) are not available because wastewater samples were not received.

Low Medium Medium-High High