Community Respiratory Illness Surveillance Program (CRISP) Situation Report: March 1, 2024 (Reporting Period February 11-February 24, 2024)

Summary

- The number of positive tests for COVID-19 was similar this week compared to the week ending February 10. Test positivity for the most recent surveillance week was 8.5%, a decrease from 9.0% in the week ending February 10, 2024.

- 6,100 influenza positive laboratory tests were reported this season, 5409 (88.7%) were Influenza Type A and 691 (11.3%) Type B. Of the 111 influenza A viruses subtyped, 103 (92.8%) were H1N1, and 8 (7.2%) were H3N2. Test positivity increased from 6.2% in the week ending February 10, 2024, to 7.6% in the most recent week.

- The number of Respiratory Syncytial Virus (RSV) cases increased over the past two weeks. RSV test positivity for the most recent surveillance week was 9.0%, compared to 6.8% in the week ending February 10, 2024.

- COVID-19, Influenza, RSV, other respiratory viruses, and co-infected cases account for 37.7%, 12.6%, 22.8%, 24.2%, and 2.8% of the viral respiratory illness hospitalizations in the province. The total number of hospital admissions for respiratory viruses decreased by 11.9% from 244 to 215, over the previous two weeks.

- Sentinel surveillance indicators of respiratory virus transmission in the community continue to fluctuate:
    - Weekly emergency department visits for respiratory-like illnesses (RLI) increased from 14.7 per 1,000 in the week ending February 17 to 21.4 per 1,000 in the week ending February 24, 2024.
    - School absenteeism increased slightly from 12.8% in the week ending February 10, to 13.0% in the week ending February 17, 2024. There was no data available for the week ending February 24 as students were on family break week.
    - RLI calls to the HealthLine increased from 72.2 per 1,000 calls for the week ending February Feb 17, to 79.6 per 1,000 calls in the week ending February 24.
    - 88% (7/8) of samples tested at the sentinel provider sites were positive. The most commonly detected virus was Influenza B with three positive tests.
    - Current wastewater analysis showed that COVID-19 levels in the majority of the surveyed areas of the province remained moderately elevated, continuing the trend observed in preceding weeks.

COVID-19

- The number of positive tests for COVID-19 is stable, with 151 cases in the week ending February 24, 2024.
- In the most recent week, the proportions of COVID-19 cases were highest among those 65 years and older (48.9%), followed by individuals 20-64 years of age (33.8%).

- From February 11 to 24, 2024, there were nine COVID-19 outbreaks reported in high-risk settings compared to eight in the previous two-week period.
- From January 07, 2024, to February 10, 2024, JN.1 and its sublineages (denoted as JN.1*) were the most commonly detected variants (73.0%), followed by EG.5* (17.8%) and BA.2.86* (3.6%). The proportion of JN.1 and its sublineages (JN.1*) is 85.5% for the week starting January 28.
- COVID-19 hospitalizations have increased from 75 for the previous two weeks to 81 for the most recent two weeks, reflecting an 8.0% increase. COVID-19 ICU admissions decreased from 11 for the previous two weeks to seven (7) for the most recent two weeks.
- The proportion of staffed inpatient beds occupied by COVID-19 patients remained stable at to 4.2% for the current surveillance period (February 11-24, 2024).
- In the past two weeks, no COVID-19 associated death was reported.
- As of February 24, 2024, 18.1% of those aged six months and older have received a COVID-19 vaccine dose. Vaccination coverage is generally below 10% for ages six months to 64 years, except in Saskatoon (14.5%), Regina (14.2%), and North East (10.4%). Vaccination coverage for individuals aged 65 years and older was highest in Regina (58.4%), followed by Saskatoon (55.3%), Central West (51.0%), and South Central (50.0%)

Influenza

- The number of positive tests for influenza have increased from 79 in the week ending February 10, 2024, to 104 in the current surveillance week.
- No influenza-associated deaths were reported in this reporting period.
- Influenza hospitalizations have increased from 19 for the previous two weeks to 27 for the most recent two weeks. Influenza ICU admissions have remained stable at 3 for the most recent two weeks.
- As of February 24, 2024, 24.7% of the Saskatchewan population received influenza vaccine this season. For those aged 65 years and older overall coverage was 59.3%, the highest was in Regina (64.2%) and lowest in Far North Central (41.0%). For those aged less than 65 years the overall coverage was 17.6%; the highest was in Saskatoon (21.3%) and lowest was in Far North West (10.2%).

RSV and Other Respiratory Viruses[1]

- Other respiratory viruses increased to 210 positive lab detections in the current reporting two weeks compared to 199 detections in the previous two weeks. Test positivity in the most recent week increased to 23.2% from 22.0% in the previous week.
- The number of positive tests for RSV have increased from 77 in the week ending February 10, 2024, to 109 in the current surveillance week. The proportion of RSV cases was highest in the under 5 years age group.
- RSV hospitalizations have decreased from 58 for the previous two weeks to 49 for the most recent two weeks, reflecting 15.5% decrease. RSV ICU admissions have remained stable at seven (7) for the most recent two weeks. Hospitalizations for 'Other' respiratory viruses have decreased from 79 for

Notes:
[1] *Other respiratory viruses: Parainfluenza viruses 1 – 4; Adenovirus; Human Metapneumovirus, seasonal Coronavirus and Entero/Rhinovirus;*
** Represents all sublineages of Omicron*

the previous two weeks to 52 for the most recent two weeks. ‘Other’ respiratory viruses ICU admissions have remained stable at nine (9) for the most recent two weeks.

- Outbreaks due to ‘other’ viruses have remained stable. There were four outbreaks reported in high-risk settings over the past two weeks**.**

Table 1: Viral indicators by surveillance period, January 28 – February 24, 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
Feb 18-Feb 24	151	8.5%	6	104	7.6%	1	109	9.0%	2	107	23.2%	3
Feb 11-Feb 17	158	9.1%	3	86	6.3%	0	90	7.5%	6	103	22.0%	1
Feb 04-Feb 10	152	9.0%	5	79	6.2%	1	77	6.8%	1	86	21.2%	1
Jan 28-Feb 03	152	8.3%	3	114	7.8%	0	127	9.8%	4	113	23.4%	5

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, 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: Patient-confirmed respiratory illness by age group, February 18 – February 24, 2024

Age group (Years)	COVID-19 case count	Influenza case count	RSV case count	'Other' virus case count[1]
0 – 4	12 (9.0%)	22 (22.4%)	45 (44.1%)	107
5 – 19	11 (8.3%)	35 (35.7%)	6 (5.9%)	
20 – 64	45 (33.8%)	37 (37.8%)	18 (17.6%)	
≥65	65 (48.9%)	4 (4.1%)	33 (32.4%)	
Total	**133 (100%)**	**98 (100%)**	**102 (100%)**	107 (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, January 28 – February 24, 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]
Feb 18-Feb 24	No data	21.4	79.6	Low (n=1), Medium (n=7)	88% (n=7)	Influenza B
Feb 11-Feb 17	13.0%	14.7	72.2	Low (n=2), Medium (n=6), High (n=1)	57% (n=8)	RSV
Feb 04- Feb 10	12.8%	15.0	77.5	Low (n=3), Medium (n=4), Medium-high (n=2)	75% (n=3)	Influenza B, RSV, Rhinovirus
Jan 28- Feb 03	9.8%	19.6	82.4	Low (n=4), Medium (n=5)	80% (n=4)	COVID

*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. [2]Respiratory-like illnesses (RLI) are based on reports from ten of thirteen reporting areas for the Feb 18 – Feb 24 report date; report date of Feb 11 – Feb 17 are based on reports from nine of thirteen reporting areas. [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, RSV, Adenovirus, Metapneumovirus, Rhinovirus, Parainfluenza viruses 1-4, and seasonal Coronaviruses (229E, HKU1, NL63, and OC43).*

Table 4: Outcome, health care capacity, and immunization coverage indicators by surveillance period, Saskatchewan, January 28 – February 24, 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]
Feb 18-Feb 24	41	2	9	0	21	3	4.2%	0	0	18.1%	24.7%
Feb 11-Feb 17	40	5	18	3	28	4	4.2%	0	0	18.0%	24.6%
Feb 04-Feb 10	41	7	9	1	25	1	4.6%	0	0	17.9%	24.6%
Jan 28-Feb 03	34	4	10	0	33	4	4.9%	1	0	17.9%	24.5%

*[¥]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 February 11 to February 24, there were 215 respiratory illness cases hospitalized with lab-positive COVID-19 (81), influenza (27), RSV (49), other respiratory illnesses (52), and co-infected cases (6). The COVID-19 lab positives were among the age groups of 0-19 (11), 20-59 (17) and ≥60 (51). Patient age was missing for two (2) of the positive COVID-19 tests. The Influenza lab positives were among the age groups of 0-19 (5), 20-59 (10) and ≥60 (12). The RSV lab positives cases were among the age groups of 0-19 (33), 20-59 (6) and ≥60 (10). The other respiratory lab positives were in the age group of 0-19 (26), 20-59 (13), and ≥60 (13). The Co-infection lab positives were in the age groups of 0-19 (4) and ≥60 (2).
- From February 11 to February 24, there were 28 respiratory illness cases admitted to the ICU with lab-positive Covid19 (7), influenza (3), RSV (7), other respiratory illnesses (9), and co-infected cases (2).The COVID-19 lab positives were among the age groups of 0-19 (1), 20-59 (3) and ≥60 (3).The Influenza lab positives were among the age group of 20-59 (2) and ≥60 (1). The RSV lab positives cases were among the age groups of 0-19 (5) and 20-59 (2). The other respiratory lab positives were in the age groups of 0-19 (5), 20-59 (2) and ≥60 (2). The Co-infection lab positives were in the age groups of 0-19 (2).

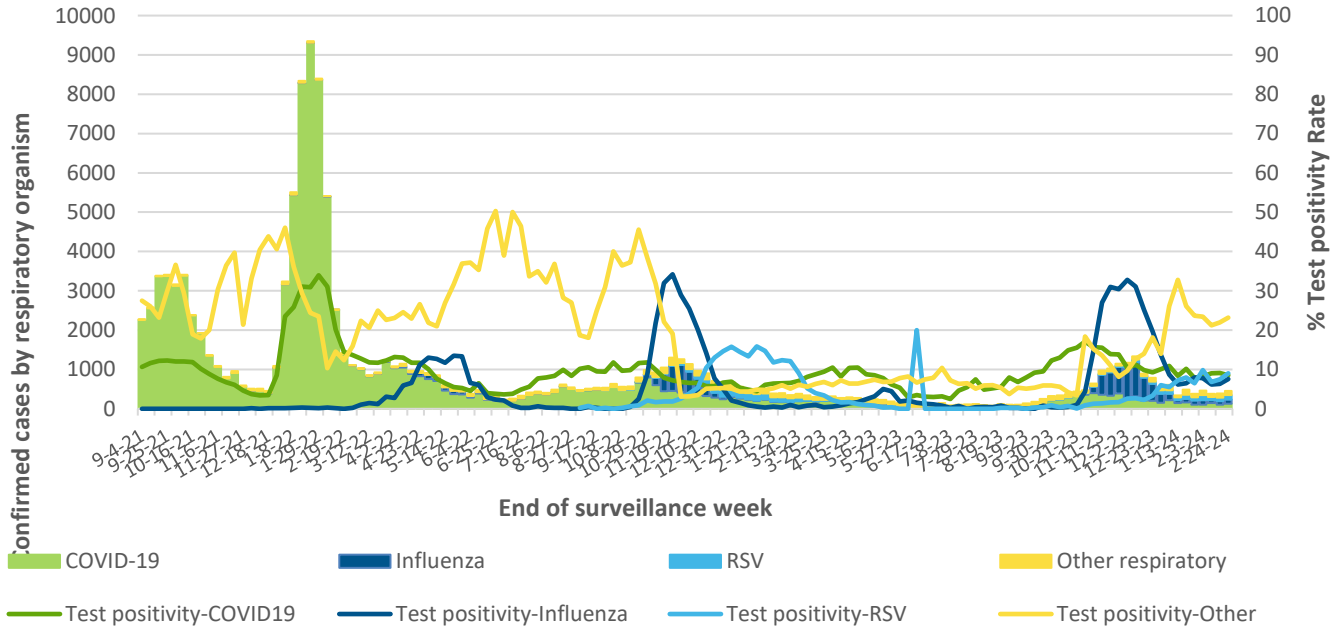
Notes: *[1] The delay in date tested result affects the total number of Influenza (A/B), RSV and other respiratory virus admissions for a particular day. This lag in data impacts mostly the last couple of days from the day the report is updated. The counts for influenza, RSV, and other respiratory virus-associated 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 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.

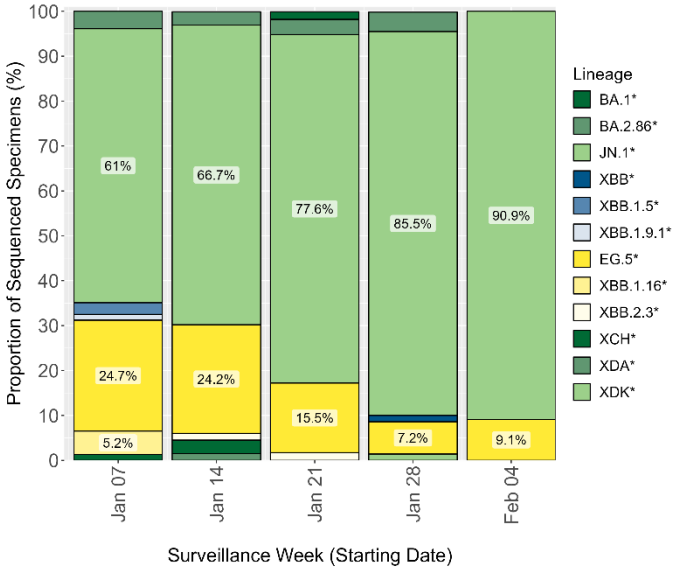
Figure 1: Epidemic curve, respiratory illness by organism and test positivity, August 29, 2021 – February 24, 2024



Data sources: Panorama IOM extracted on February 26, 2024 (COVID-19 cases)
Respiratory Virus Detections Surveillance System (influenza and other respiratory) (RRPL extracted February 26, 2024)
As of September 4, 2022, COVID-19 cases include new and reinfections.
For the two weeks of February 11 to February 24, 2024, there were:

- *240 COVID-19 cases (44 were 0 to 19 years; 64 were 20 to 59 years; and 132 were 60 years and older).*
- *190 influenza lab detections*
- *199 RSV detections*
- *210 other viral lab detections (parainfluenza, adenovirus, human metapneumovirus, rhinovirus, coronavirus)*

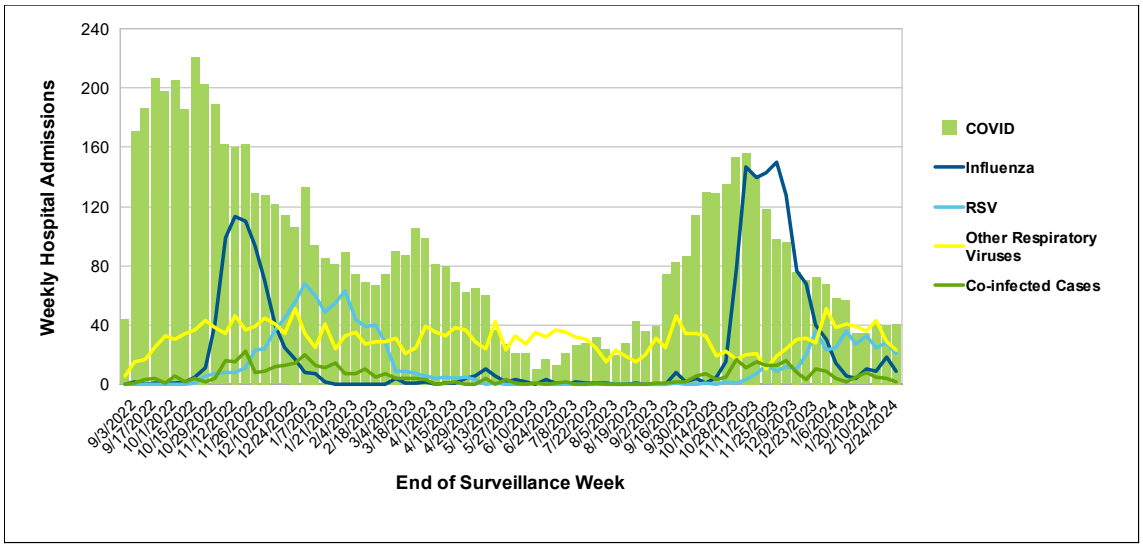
Figure 2: Percentage of SARS-CoV-2 variants by surveillance week starting¥, January 07-February 04, 2024*^

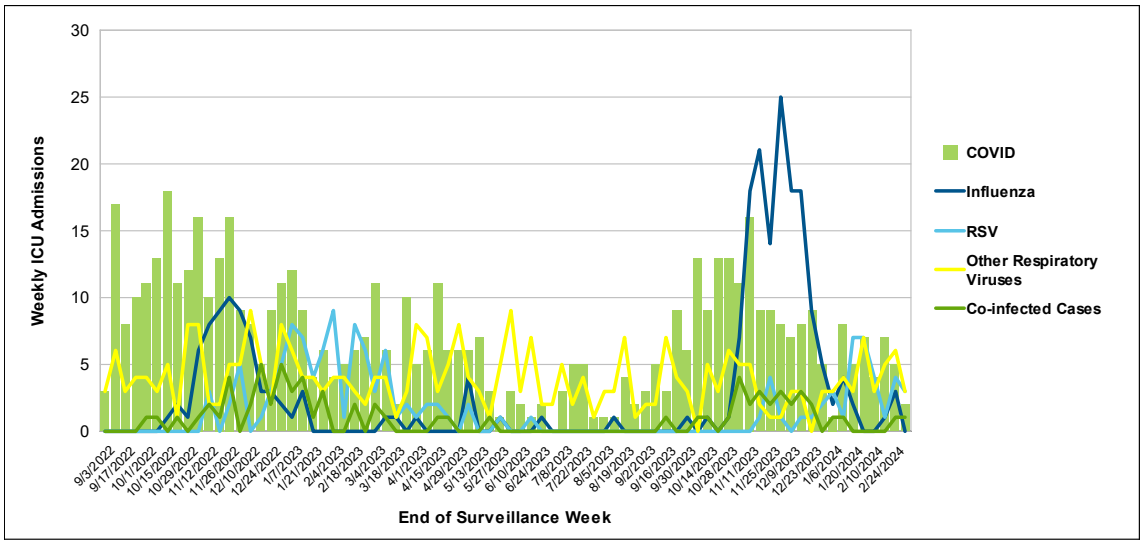


Lineage	Jan 07	Jan 14	Jan 21	Jan 28	Feb 04
BA.1*	0	0	1	0	0
BA.2.86*	3	2	2	3	0
JN.1*	47	44	45	59	10
XBB*	0	0	0	1	0
XBB.1.5*	2	0	0	0	0
XBB.1.9.1*	1	0	0	0	0
EG.5*	19	16	9	5	1
XBB.1.16*	4	0	0	0	0
XBB.2.3*	0	1	1	0	0
XCH*	1	2	0	0	0
XDA*	0	1	0	0	0
XDK*	0	0	0	1	0
Total	77	66	58	69	11

Data Source: *Roy Romanow Provincial Laboratory, Saskatchewan Health Authority, as of February 27, 2024*
The most recent SARS-CoV-2 variants data available from the Provincial database is as of surveillance week ending February 10,, 2024
¥ Surveillance weeks correspond to specimen collection date.
^ *Please interpret the SARS-CoV-2 variants data with caution due to partial data availability for surveillance week February 04-10,2024, and unavailable data for surveillance week February 11-17, 2024. These data will be included in the next scheduled CRISP report.*
***** Parent lineage reported also includes all sublineages derived from this parent lineage.

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 – February 24, 2024*

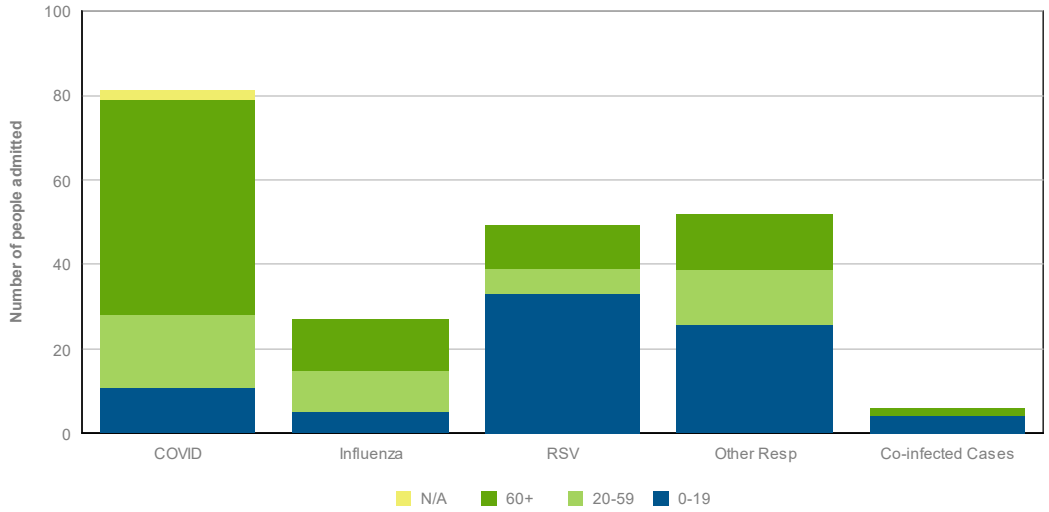




Data source: *Digital Health Analytics, Saskatchewan Health Authority, Episode of Care methodology (Admission, Discharge, Transfer Database (ADT, RRPL, Panorama); data extracted on February 27, 2024* Viral infection may not be the main reason for the admission*

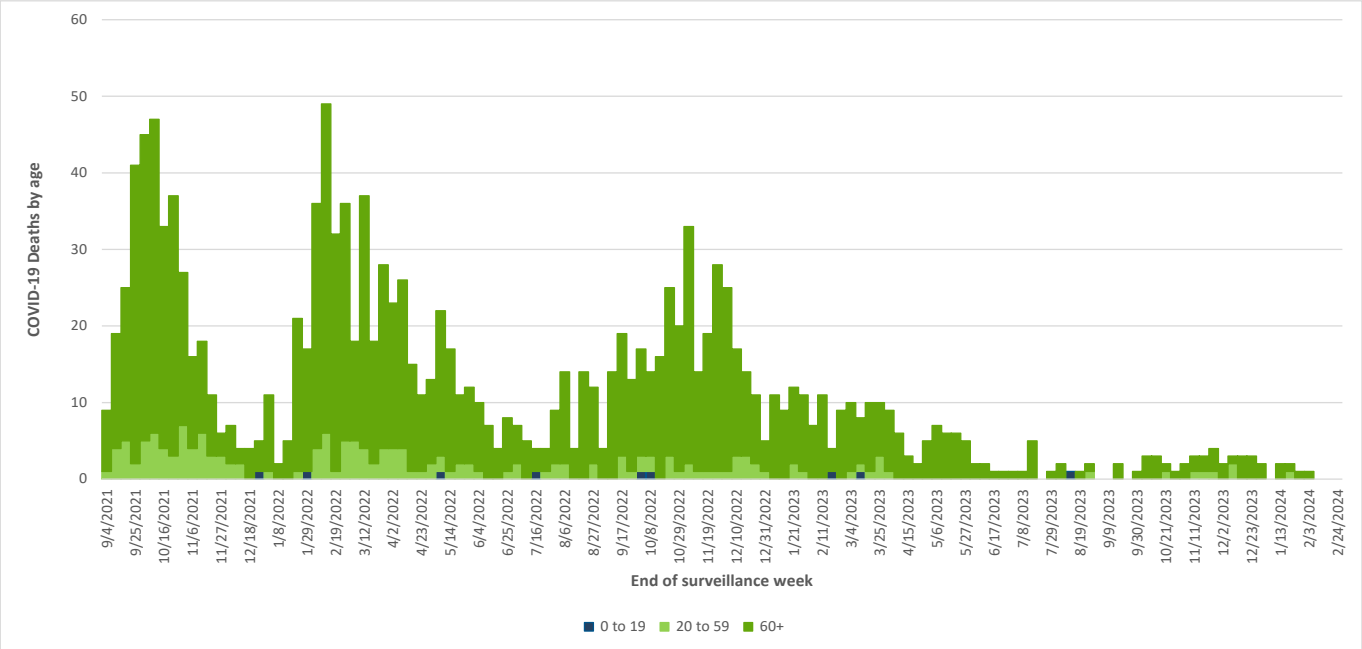
Note: *The delay in date tested result affects the total number of COVID 19 admissions for a particular day. This lag in data impacts mostly the last couple of days from the day the report is updated. Includes lab or point of care positive for influenza, RSV, other respiratory viruses, four days prior 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, February 11-February 24, 2024*



Data source: *Digital Health Analytics, Saskatchewan Health Authority, Episode of Care methodology (Admission, Discharge, Transfer Database (ADT, RRPL, Panorama); data extracted on February 27, 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 – February 24, 2024*



Source: Panorama February 26, 2024
In the past two weeks, January 28 to February 10, 2024, no death was reported in COVD-19 cases.
**Total COVID-19 deaths from March 2020 to date; n=2,054*

Table 5: Community Respiratory Infection Surveillance Program Indicators by zone, February 18 – February 24, 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]	School illness absenteeism[4]	Wastewater indicator†	Proportion of population with COVID-19 vaccine administered[5]		Proportion of population with Influenza vaccine adminstered[5]	
								<65 Yrs	≥65 Yrs	<65 Yrs	≥65 Yrs
Far North West (Meadow Lake & area)	4.3% (1)	16.4% (10)	10.0% (6)	No data	-	No data	Low	4.7%	33.3%	10.2%	45.9%
Far North Central	0.0% (0)	0.0% (0)	0.0% (0)	No data	-	No data	No data	3.1%	20.1%	12.4%	41.0%
Far North East (La Ronge & area)	12.5% (3)	0.0% (0)	33.3% (9)	No data	-	No data	No data	6.8%	44.6%	14.5%	53.2%
North West (Lloydminster & area/North Battleford)	14.5% (12)	4.0% (6)	7.6% (10)	30.0	28.2	No data	Medium	5.9%	43.2%	11.0%	51.0%
North Central (Prince Albert & area)	7.0% (7)	9.7% (7)	17.4% (12)	12.9	-	No data	No data	9.5%	49.4%	15.6%	57.9%
North East (Melfort & area)	5.4% (2)	8.2% (4)	4.4% (2)	150.7	114.9	No data	No data	10.4%	47.2%	16.3%	55.8%
Saskatoon	9.5% (45)	5.0% (11)	6.8% (15)	12.1	82.4	No data	Medium	14.5%	55.3%	21.3%	62.3%
Central West (Kindersley & area)	3.6% (1)	20.8% (5)	5.0% (1)	83.3	-	No data	No data	8.2%	51.0%	16.6%	61.5%
Central East (Yorkton/Melville & area)	6.2% (10)	13.8% (16)	8.6% (7)	22.3	-	No data	Medium	8.4%	47.2%	14.5%	55.6%
Regina	8.0% (18)	3.4% (11)	5.9% (19)	17.6	83.1	No data	Medium	14.2%	58.4%	19.4%	64.2%
South West (Swift Current/ Maple Creek & area)	5.1% (2)	5.9% (3)	8.3% (4)	27.6	99.2	No data	Medium	9.1%	46.1%	16.1%	55.5%
South Central (Moose Jaw &area)	16.1% (9)	6.8% (5)	9.7% (7)	0.0	-	No data	Medium	9.3%	50.0%	15.7%	58.9%
South East (Weyburn/Estevan & area)	8.6% (5)	10.1% (7)	22.4% (13)	64.3	60.2	No data	Medium	7.2%	44.4%	14.8%	56.9%
Unknown/Out of Province	7.7% (36)	14.7% (19)	7.8% (4)	No data		No data	-	-	-	-	-
SASKATCHEWAN	**8.5% (151)**	**7.6% (104)**	**9.0% (109)**	**21.4**	**79.6**	No data	-	**11.3%**	**51.2%**	**17.6%**	**59.3%**

*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. *Respiratory-like illness; [2] Based on reports from nine of thirteen reporting areas. [3] 811 data available at the six Integrated Service Areas geographical level; [4] No data was available from February 18-24 due to school closure (February break week). 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.; [5]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*

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. Respiratory-Like Illness (RLI) cases in Emergency Departments (EDs) across different regions of Saskatchewan are recorded using two primary systems: the Sunrise Clinical Manager (SCM) and the local public health offices (LPHO).

   The SCM ED data encompasses information from eight zones, namely Central East, North Central, North West, Regina, Saskatoon, South Central, South West, and South East (data received from both systems). On the other hand, the LPHO ED data covers three zones: North East, Central West, and South East (data received from both systems). It's important to note that the Far North West, Far North Central, and Far North East regions do not currently participate in RLI Surveillance for ED.

   Digital Health Analytics (DHA) compiles and summarizes SCM data over a 7-day monitoring period, spanning from Sunday to Saturday. In contrast, the LPHO aggregates raw data received from ED's on the prescribed data collection form. The data is monitored for a minimum of 24 hours, on at least one day each week. The specific timing of this monitoring may vary depending on the ED's schedule.

5. 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.

6. 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

7. 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.

8. 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

9. 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, BA.5, XBB, XBB.1.5, XBB.1.9.1, XBB.1.9.2, EG.5, XBB.1.16, XBB.2.3, XCH, and XDA 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.

10. 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.

11. 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.

12. 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.

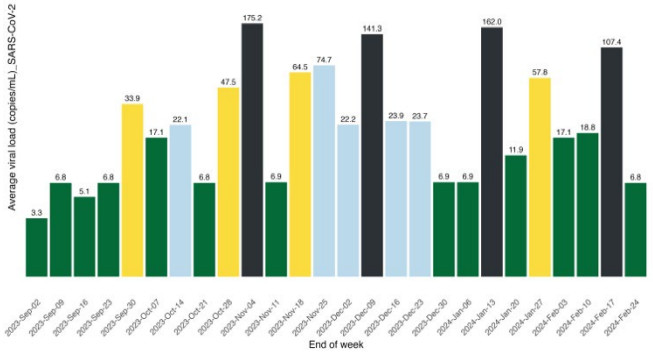
13. Influenza immunizations: UTD Influenza vaccination is the proportion of people, six months and older, having one influenza dose this season divided by the eligible population found in the Saskatchewan Covered Population, 12-Nov-2022 Ministry of Health version (2022 Version 2). Vaccination for the current influenza season officially began October 11, 2022. Some doses were administered prior to the start date.

14. 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).

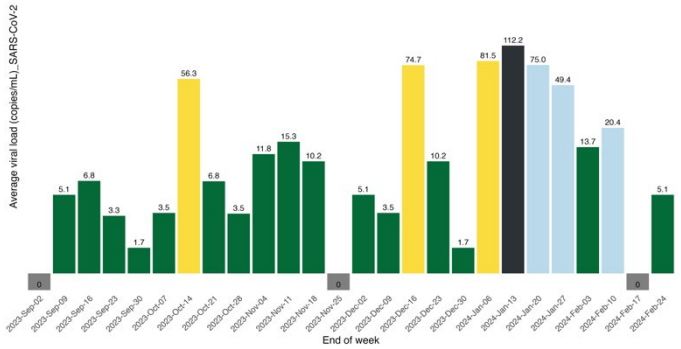
15. Rate of COVID-19 hospitalization (ICU or Death) were calculated by summing the daily number of hospitalizations (ICUs or Deaths) for the period by vaccine status (numerator) divided by the mid period population by respective vaccine status (denominator), multiplied by 100,000. This estimate is further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

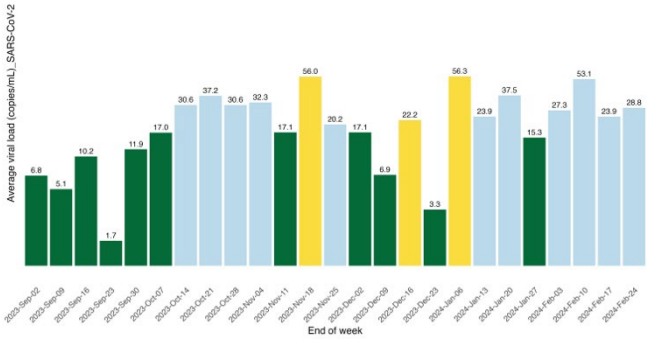
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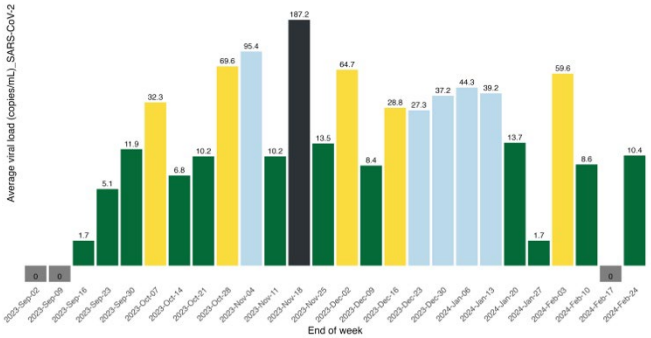
Ile-a-la-Crosse



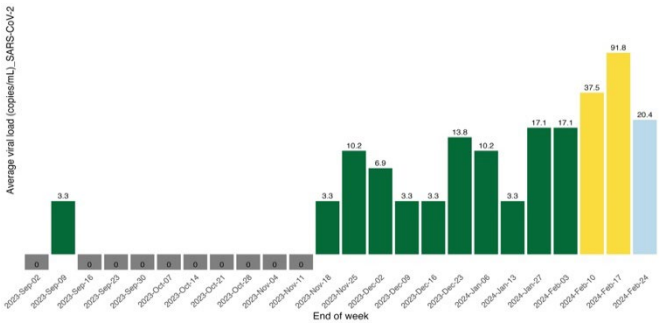
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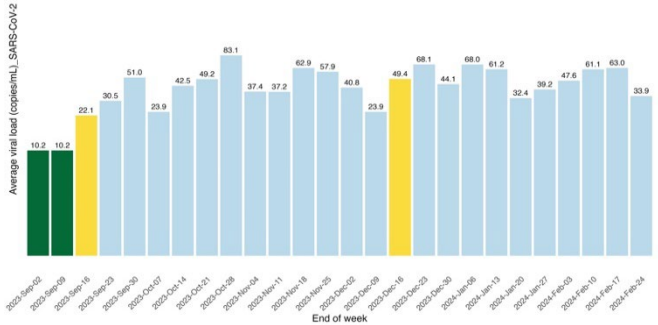
Battleford



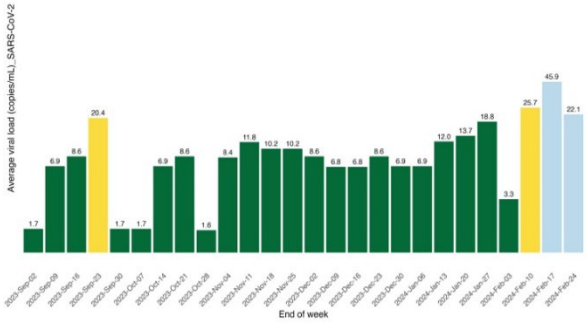
Unity



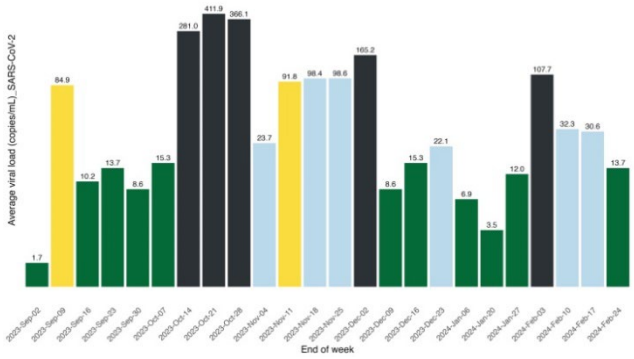
Saskatoon



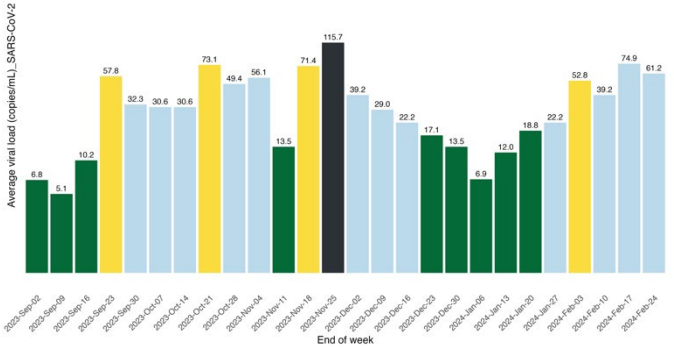
Yorkton



Melville



Regina

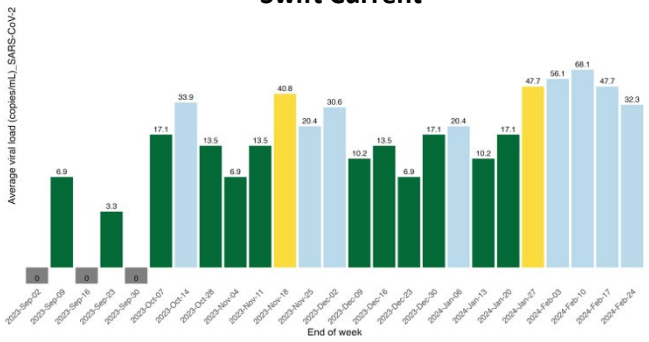


Quantitative Interpretation:

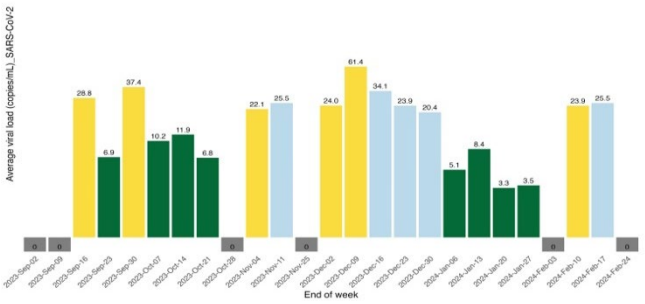
- Low: 0-20 copies per mL.
- Medium: 20-100 copies per mL and weekly change < 100%.
- Medium – High: 20-100 copies per mL and weekly change > 100%.
- High: > 100 copies per mL.

Low Medium Medium-High High

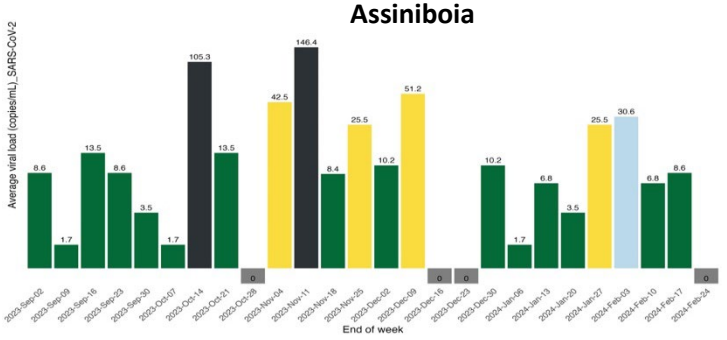
Swift Current



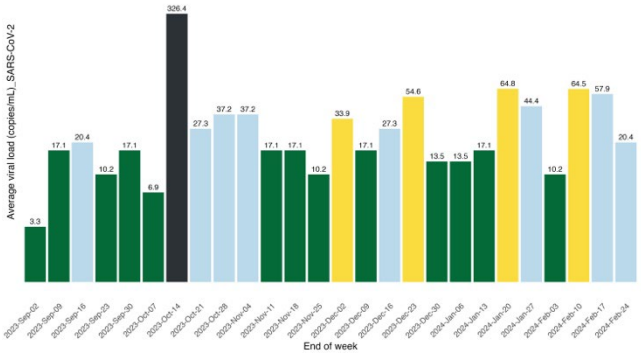
Maple Creek



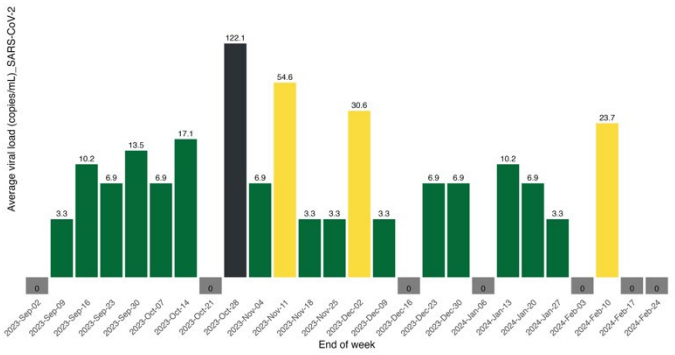
Assiniboia



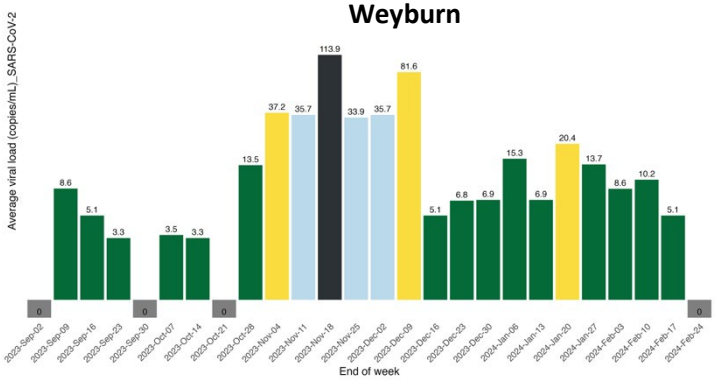
Moose Jaw



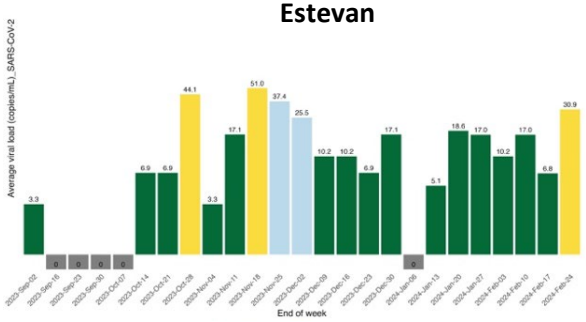
Lumsden



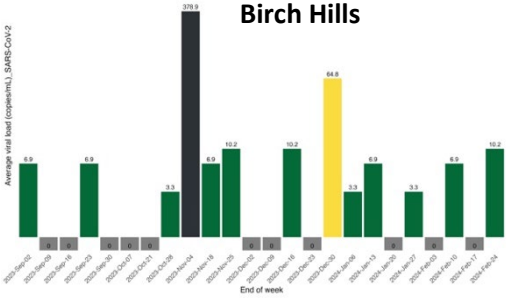
Weyburn



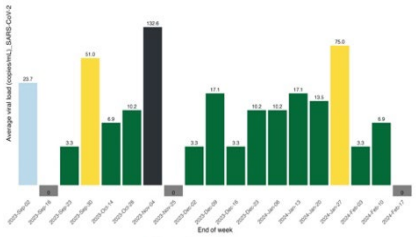
Estevan



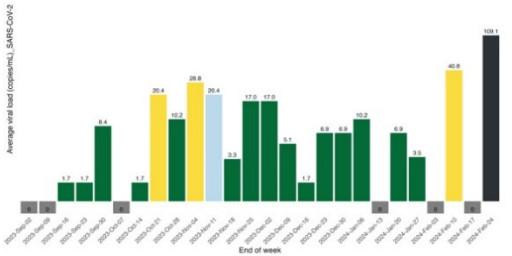
Birch Hills



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.

Low Medium Medium-High High

‡Data for La Ronge is not available for the week ending February 24, 2024, as wastewater samples were not received during that week.

Saskatchewan