Community Respiratory Illness Surveillance Program (CRISP) Situation Report: February 02, 2023 (Reporting Period Jan 15–28, 2023)

Summary

- In the first week of the new year (Jan 01 – 07), there was an increase in COVID-19 and Respiratory Syncytial Virus (RSV) cases. However, this increase did not continue into the most recent reporting weeks:
  - Number of positive lab tests for COVID-19 decreased from 371 in the first week of January to 242 in the most recent week. Test positivity decreased to 4.4 % from 6.9%.
  - RSV cases remained stable at 157 cases in each of the past two weeks. However, the proportion of positive laboratory tests increased from 13.3% to 15.9%. The highest number of cases remained among preschool aged children.
- Influenza activity in Saskatchewan continues to decrease.
- The majority of respiratory virus hospitalizations continue to be COVID-19, followed by RSV.
- Sentinel indicators of respiratory transmission in the community fluctuates, as the season wanes;
  - Weekly visits to the Saskatchewan emergency departments for respiratory-like illness (RLI) have increased from 18.4 in the previous week to 21.7 per 1,000 this week.
  - Calls to 811 HealthLine for RLIs decreased from 83.8 to 53.7 per 1,000.
  - School-illness absenteeism data indicated 4.6% of Saskatchewan students were absent due to illness Jan 01 – 07, which rose to 10.3% in the most recent surveillance week.
  - Saskatoon wastewater COVID-19 viral load remained moderate. Regina and South West reported an increase from moderate to moderate-high in the current week compared to the previous week.

COVID-19

- COVID-19 test positivity in Saskatchewan was 4.4% in the most recent week, a decrease from 6.9% in the first week of January. Cases are largely in the 20 to 64 years (45%) and 65+ (43%) age groups.
- COVID-19 outbreaks in high-risk settings fluctuated over the past four weeks. Nine new COVID-19 outbreaks were reported in high-risk settings last week compared to two to 11 per week in the previous three weeks.
- BA.5 and its sublineages (denoted as BA.5*) are the most commonly detected variants (93.4% of current reporting period), followed by XBB.1.5 (3.5%) and BA.2* (2.5%).
- COVID-19 hospitalizations decreased from 76 to 61 admissions per week.
- COVID-19 ICU admissions has decreased from 9 average weekly admissions in the previous two weeks to 4 average weekly admissions in the most recent two weeks.
- The proportion of staffed inpatient beds occupied by COVID-19 patients has decreased from 6.4% to 5.8% this week from the previous week.
- COVID-19 deaths remained stable at 18 in the previous and current two week periods.
- Having a COVID-19 booster in the last six months reduces the risk of a COVID-19 death eight times compared to unvaccinated individuals and over four times compared to those without a recent booster dose.

- With the exception of Regina, all areas of the province have less than 50% of their population up-to-date[1] for COVID-19 vaccines. Less than half of individuals aged 50+ have had more than one booster dose (47%).
- Of those aged five years and older, 21% have received their latest booster dose in the last six months. Only 20% of individuals aged 12+ years have received a bivalent booster dose (n = 207,609 doses).

Influenza

- Influenza cases decreased each week from 32 in the first week of January to seven cases this week.
- Influenza test positivity also dropped each week from 2.1% in the first week of January to 0.6% this week.
- Influenza cases occurred mainly among the working age group 20-64 years (4 of 7 cases) in the past week.
- No influenza outbreaks in high-risk settings were reported in the past month.
- No Influenza hospitalizations or ICU admissions were reported during the week of January 22-28, 2023.
- No deaths due to Influenza were reported in the past month.
- The influenza immunization campaign launched October 11, 2022. As of December 31, 2022, one-quarter of the Saskatchewan population (25%) have received an influenza vaccine. This is a one percent increase from the previous reporting period. There is a 12% decrease in doses administered compared to the same time last year.
- Influenza test positivity is low with 0-2 positive influenza lab tests across all zones.

Other Respiratory Viruses[2]

- RSV detections remained constant over the past three weeks at 157 to 159 cases per week. RSV has the highest lab test positivity of the respiratory viruses (15.9%).
- RSV cases are largely in the pediatric age group – in the most recent surveillance week, 95 cases (62%) were aged 0 – 4 years. A high volume of lab testing occurs in this age group, which is greatly impacted by this respiratory infection.
- RSV hospitalizations for the weeks of January 15 to 28, 2023 decreased by 19% compared to the preceding two weeks (from 126 to 102 admissions). RSV ICU admissions for the weeks of January 15 to 28, 2023 decreased by 33% compared to the preceding two weeks (from 15 to 10 admissions). Children aged 0 – 19 years account for 74% of RSV hospitalizations and ICU admissions over the past two weeks.
- 'Other' respiratory viruses declined 32% from the beginning of January to 96 lab detections in the past week.
- Outbreaks of 'other' viruses in high-risk settings varied between one and four outbreaks per week over the past month.

** Represents all sublineages of Omicron*

[1] Up-to-date = completed a primary series and at least one additional booster, age 5+ years

[2]Parainfluenza viruses 1 – 4 (PIV 1 – 4); Adenovirus (ADV); Rhinovirus (RV); Human Metapneumovirus (HMPV); NOTE: RSV test positivity now exceeds 1% and is reported separately.

Table 1: Viral indicators by surveillance period, January 01-28, 2023

Report date	COVID-19 positive laboratory test	COVID-19 test positivity	COVID-19 outbreaks	Influenza positive laboratory test	Influenza test positivity	Influenza outbreaks	RSV positive laboratory test	RSV test positivity	'Other'[1] positive laboratory test	'Other'[1] test positivity	'Other'[1] outbreaks
Jan 22 – 28, 2023	242	4.4%	9	7	0.6%	0	157	15.9%	96	4.9%	3
Jan 15 – 21, 2023	273	4.9%	2	11	0.9%	0	157	13.3%	101	4.4%	4
Jan 08 – 14, 2023	317	5.4%	11	21	1.5%	0	159	14.5%	120	4.4%	1
Jan 01 – 07, 2023	371	6.9%	7	32	2.1%	0	199	15.8%	142	5.1%	2

Notes: [1]*Parainfluenza viruses 1 – 4; Adenovirus; Human Metapneumovirus, seasonal Coronavirus. See Technical Notes for further details.*

Table 2: Patient-confirmed respiratory illness by age group, January 22-28, 2023

Age group (Years)	COVID-19 case count	Influenza case count	RSV case count	Others case count[1]
0-4	13 (6%)	0	95 (62%)	NA
5-19	12 (6%)	2 (29%)	18 (12%)	
20-64	92 (45%)	4 (57%)	16 (10%)	
≥65	89 (43%)	1 (14%)	24 (16%)	
Total	206 (100%)	7 (100%)	153 (100%)	96 (100%)

Notes: [1]*Parainfluenza viruses 1 – 4; Adenovirus; Human Metapneumovirus, seasonal Coronavirus; age-specific data is unavailable for other respiratory pathogens. 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 15-28, 2023

Report date	School illness absenteeism >=10%[1]	RLI** ED visits per 1,000[2]	RLI** 811 calls per 1,000	COVID-19 Wastewater indicator[3]	Sentinel provider test positivity	Most commonly detected virus: Sentinel providers
Jan 22 – 28, 2023	10.3%	21.7	53.7	Moderate (n=5), Moderate-high (n=2)	50.0	Adenovirus
Jan 15 – 21, 2023	10.6%	18.4	83.8	Low (n=3), Moderate (n=4)	N/A[¥]	N/A[¥]
Jan 08 – 14, 2023	8.6%	22.6	82.5	Low (n=3), Moderate (n=3), High (n=1)	N/A[¥]	N/A[¥]
Jan 01 – 07, 2023	4.6%	22.4	43.7	Low (n=1), Moderate (n=6)	20.0	Parainfluenza virus

*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. [¥]Not Available (N/A). **Respiratory-like illness (RLI) [2]Jan 15-Jan 21 based on reports from eight of thirteen reporting areas; Jan 22-Jan 28 based on reports from seven 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 for details).*

Table 4: Outcome, health care capacity and immunization coverage indicators by surveillance period, January 15-28, 2023[¥]

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[3]	Deaths – Influenza[3]	Proportion of population up-to-date – COVID-19 vaccine[4]	Proportion of population immunized for Influenza vaccine[5]
Jan 22 – 28, 2023	61	5	0	0	55	6	5.8%	7	0	46.1%	25%
Jan 15 – 21, 2023	76	3	2	0	47	4	6.4%	11	0	46.0%	
Jan 08 – 14, 2023	88	8	7	3	60	7	6.4%	7	0	46.0%	
Jan 01 – 07, 2023	127	11	7	1	66	8	6.0%	11	0	46.0%	

[¥]*Additional information on hospital admission stratified by respiratory organism and age group is provided below in **Figure 5** and **6** respectively. Viral infection may not be the main reason for the admission.*
[3]A eighteen COVID-19 deaths were reported in the past two weeks. *No influenza deaths reported in the last four weeks.*

Cases by respiratory organisms across the age groups

- From January 15 - 28, 2023, there were 324 respiratory illness cases hospitalized with lab-positive Covid19 (137), influenza (2), RSV (102), other respiratory illnesses (61), and co-infected cases (22). Among the 324 cases, 137 Covid19 lab positives were among age groups of 0-19 (10), 20-59 (36), and ≥60 (91). Influenza lab positives (2) were only among the age group of ≥60 (2). For RSV lab positives (102), cases were among the age groups of 0-19 (74), 20-59 (4) and ≥60 (24). For other respiratory lab positives (61), cases were in the age group of 0-19 (37), 20-59 (11), and ≥60 (13). For Co-infections lab positives (22), cases were in the age group of 0-19 (17), 20-59 (2), and ≥60 (3).
- From January 15 - 28, 2023, there were 28 respiratory illness cases admitted to the ICU with lab-positive Covid19 (8), influenza (0), RSV (10), other respiratory illnesses (6), and co-infected cases (4). Among the 28 cases, 8 Covid19 lab positives were among age groups of 20-59 (4) and ≥60 (4). Influenza lab positives (0). For RSV lab positives (10), cases were among the age groups of 0-19 (9) and ≥60 (1). For other respiratory lab positives (6), cases were in the age group of 0-19 (4) and 20-59 (2). For Co-infections lab positives (4), cases were among the age groups of 0-19 (3) and ≥60 (1).

Notes:

[1] Because of the delay in date tested result, it 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 resp viruses. Other includes: Parainfluenza 1-4, Adenovirus, Enterovirus, Human Metapneumovirus, Rhinovirus, Seasonal Coronovirus (O43, NL63, 229E, HKU1f.)

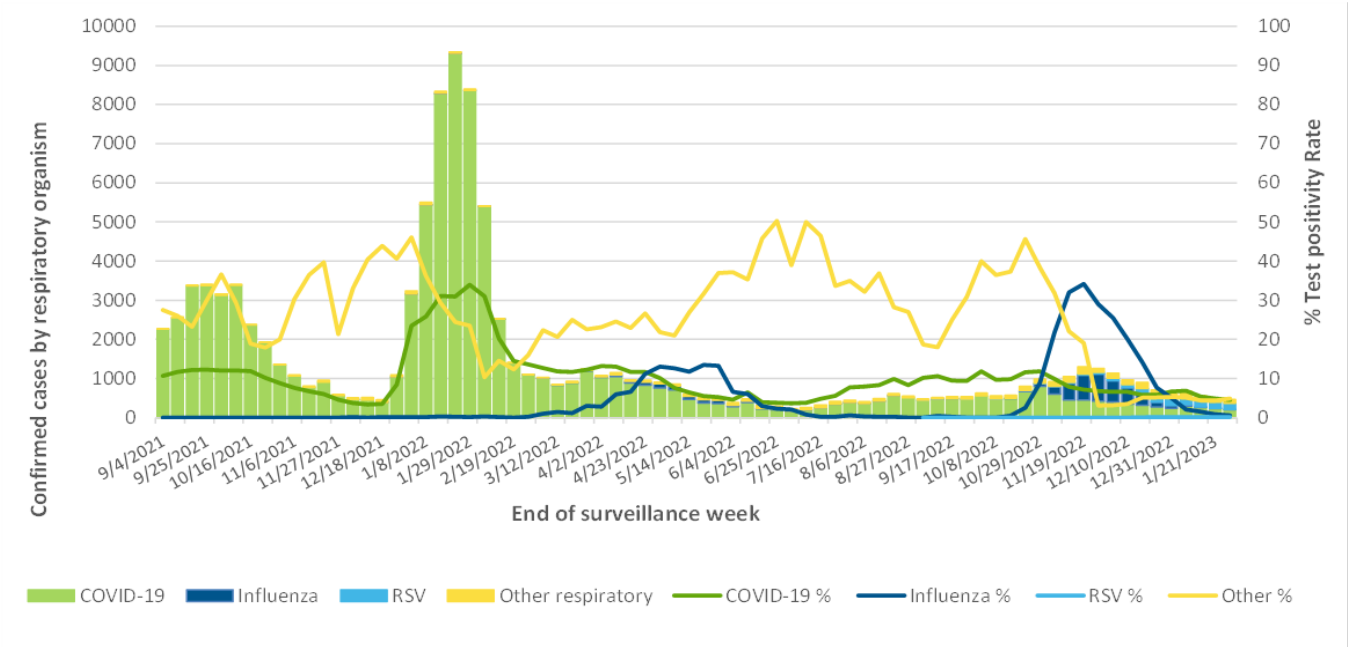
[2]7-day average of percentage of acute inpatient beds staffed and in operation that are occupied by COVID-positive patients as of 8AM census

[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

[4]Up-to-date =completed a primary series and at least one additional booster, age 5+ years.

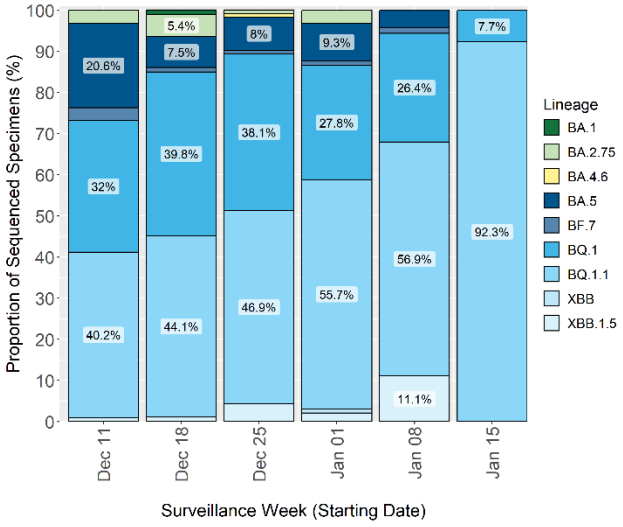
[5]Up-to-date = received a vaccination within the current influenza season, age 6 months+. The most recent rate is as of December 31, 2022. This column will be updated at month end. See Technical Notes for details.

Figure 1: Epidemic curve, respiratory illness by respiratory organism and test positivity, August 29, 2021 – January 28, 2023



Data sources: Panorama IOM extracted on January 30, 2023 (COVID-19 cases)
Respiratory Virus Detections Surveillance System (influenza and other respiratory) (RRPL extracted January 30, 2023)
As of September 4, 2022, COVID-19 cases include new and reinfections.
For the two weeks of Jan 15 to Jan 28, 2023, there were 438 COVID-19 cases (58 were 0 to 19 years; 157 were 20 to 59 years; and 223 were 60 years and older).
For the two weeks of Jan 15 to Jan 28, 2023, there were 18 influenza lab detections
For the two weeks of Jan 15 to Jan 28, 2023, there were 314 RSV detections
For the two weeks of Jan 15 to Jan 28, 2023, there were 197 other viral lab detections (parainfluenza, adenovirus, human metapneumovirus, rhinovirus, coronavirus)

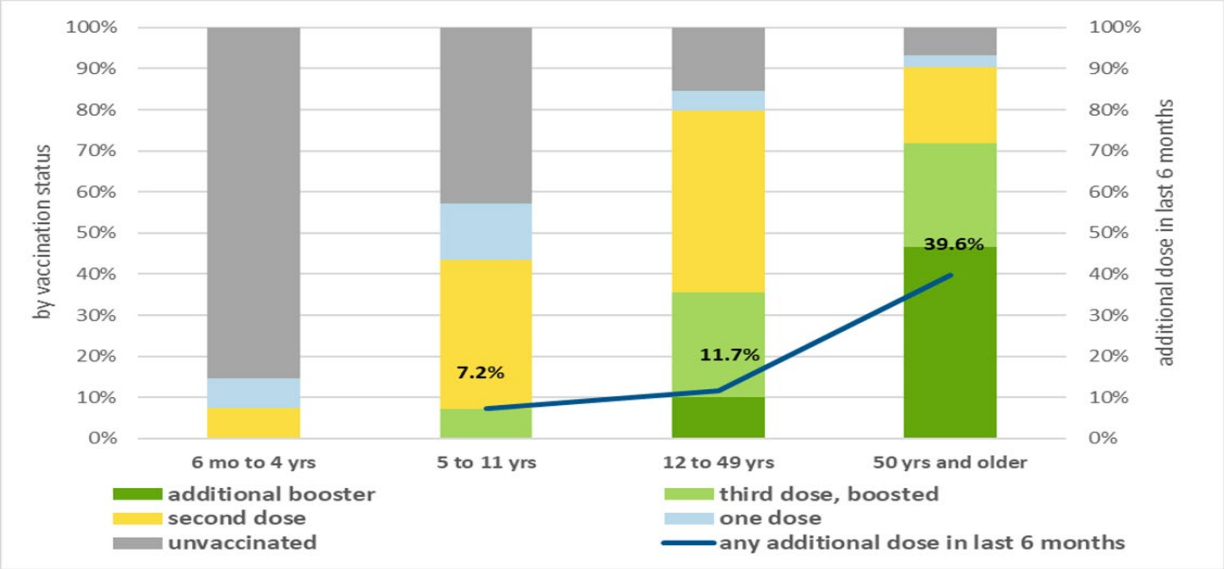
Figure 2: Percentage of SARS-CoV-2 variants by surveillance week*, December 11, 2022 – January 15, 2023



Lineage	Dec 11	Dec 18	Dec 25	Jan 01	Jan 08	Jan 15
BA.1	0	1	0	0	0	0
BA.2.75	3	5	1	3	0	0
BA.4.6	0	0	1	0	0	0
BA.5	20	7	9	9	3	0
BF.7	3	1	1	1	1	0
BQ.1	31	37	43	27	19	1
BQ.1.1	39	41	53	54	41	12
XBB	0	0	0	1	0	0
XBB.1.5	1	1	5	2	8	0
Total	97	93	113	97	72	13

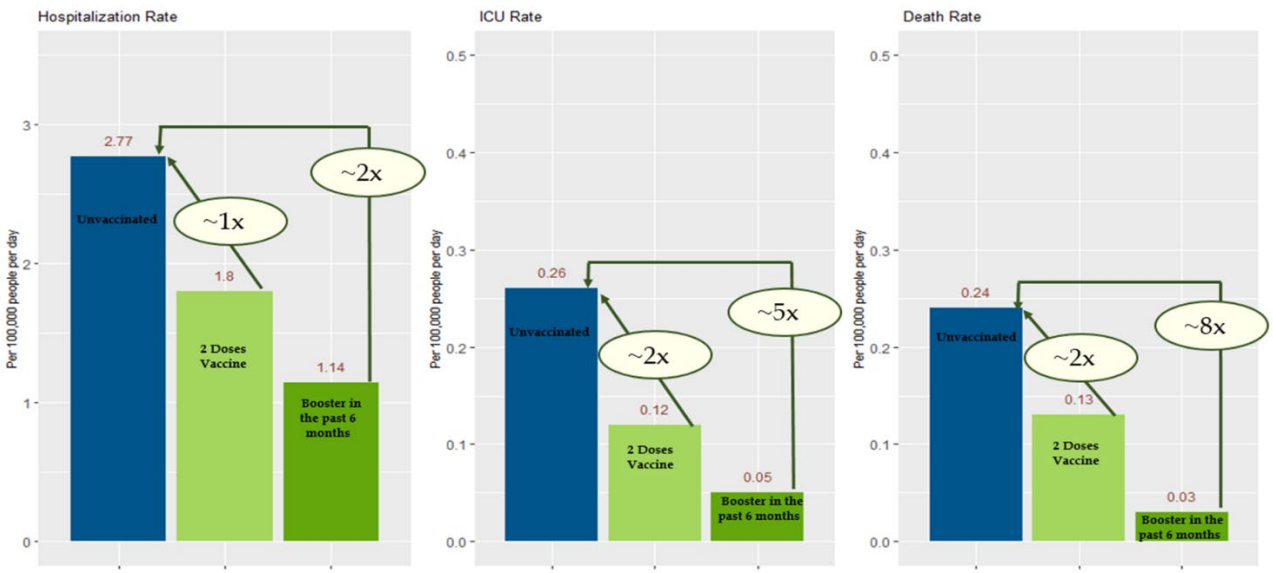
Data Source: *Roy Romanow Provincial Laboratory, Saskatchewan Health Authority, as of January 30, 2023.*
The most recent VOC data available from the Provincial database is as of surveillance week ending January 15, 2023.
VOC BA.4.6 was aggregated with BA.4; BF.7, BQ.1, and BQ.1.1 were aggregated with BA.5
* Surveillance week correspond to specimen collection date.

Figure 3: Proportion of residents by age group and COVID-19 vaccination status to January 28, 2023



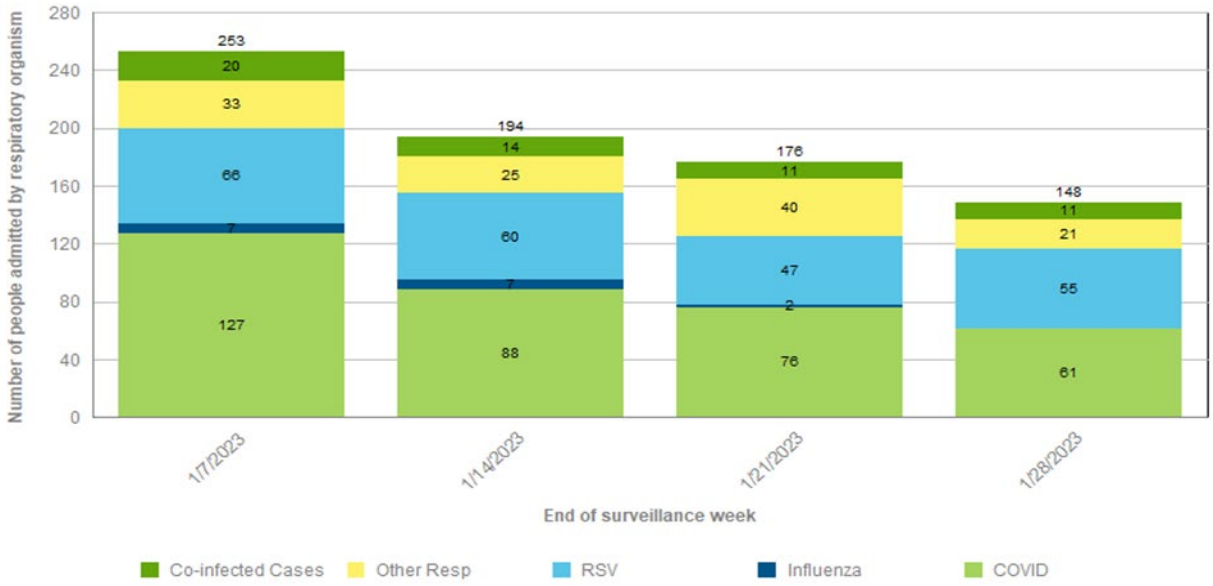
Data source(s): *Panorama January 30, 2023; Saskatchewan Covered Population, 12-Nov-2022, Ministry of Health version (2022 Version 2)*
Note: Of those five years and older: 46.1% have completed their series and received a booster dose; 21.5% have received their latest dose in the last six months. Of those 12 years and older, 19.9% (207,609) were administered a Moderna or a Pfizer bivalent. As of Jan 28, 2023, cumulatively doses administered are as follows: dose 1, n=993,560; dose 2, n=927,956; dose 3, n=532,303; completed plus 2 or more additional doses, n=374,538; total doses = 2,828,357.

Figure 4: Booster dose within last 6 months reduces the risk of Hospitalization, ICU admission or Death (age-adjusted rates), June 24, 2022 – December 24, 2022



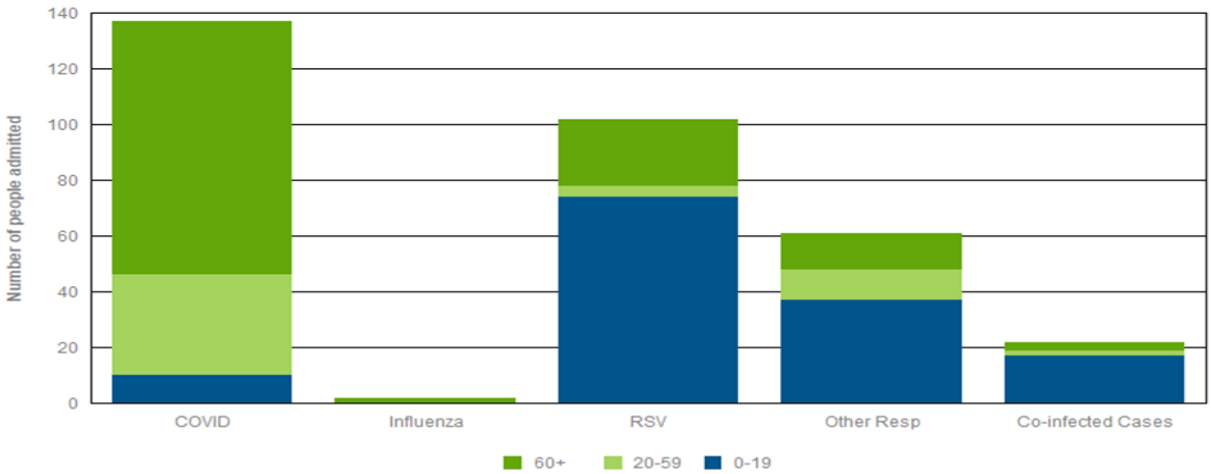
Data Source: *Digital Health Analytics, Saskatchewan Health Authority*
Definitions: *Unvaccinated - Individuals with no record of vaccine received or vaccinated with first dose but less than 21 days from receiving the first dose. Vaccinated with 2 doses - Individuals who have received their second dose for more than 14 days or their third dose is less than 14 days. Booster in the past 6 months - Individuals who have received any booster dose (3rd, 4th, 5th and so on) within the last 6 months. Details on methodology is provided in the Technical Notes.*

Figure 5: The number of COVID-19, influenza, RSV, other respiratory viruses and co-infected cases admitted to hospital by week of the admission, January 01 - 28, 2023*



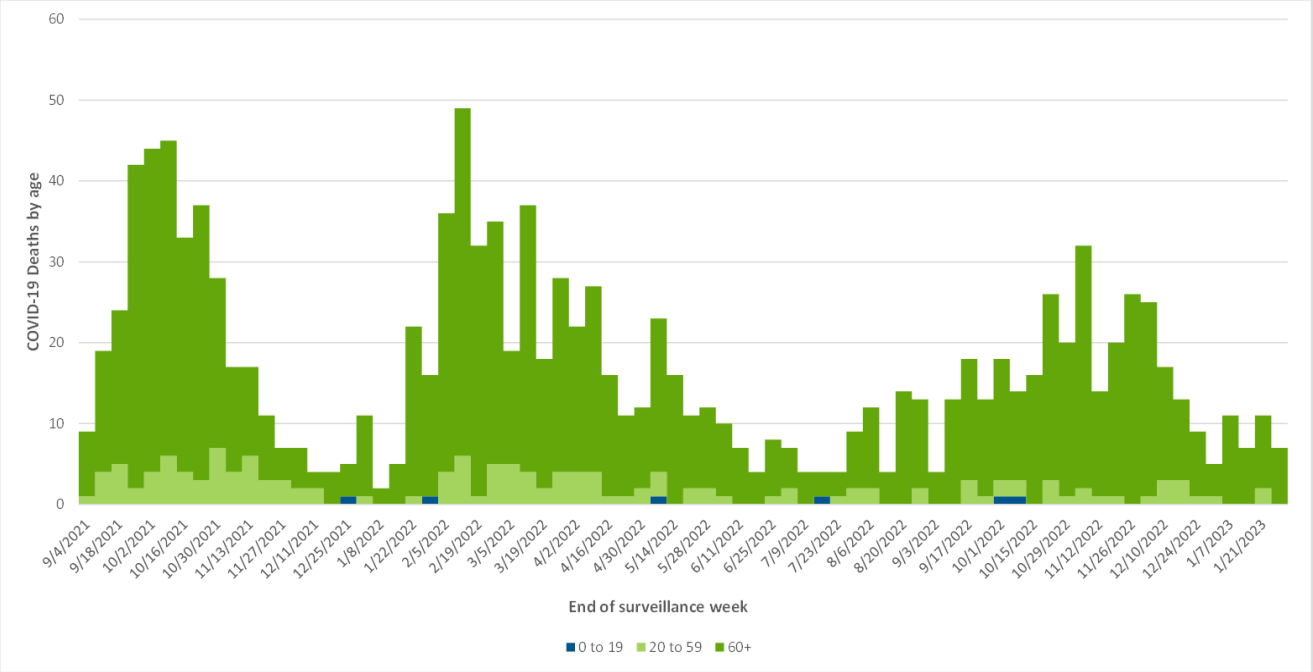
Data sources: *Digital Health Analytics, Saskatchewan Health Authority, Episode of Care methodology (Admission, Discharge, Transfer Database (ADT, RPPL, Panorama); data extracted on January 30, 2023. * Viral infection may not be the main reason for the admission.*
Note: *Because of the delay in date tested result, it affects the total number of COVID 19 admissions for a particular day. This lag in data impacts mostly the last couple of days from the day the report is updated. 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. 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 6: The number of COVID-19, influenza, RSV, other respiratory viruses and co-infected cases admitted to hospital by age group, January 15-28, 2023*



Data source: *Digital Health Analytics, Saskatchewan Health Authority, Episode of Care methodology (Admission, Discharge, Transfer Database (ADT, RPPL, Panorama); data extracted on January 30, 2023. * Viral infection may not be the main reason for the admission*
Note: *Because of the delay in date tested result, it affects the total number of COVID 19 admissions for a particular day. This lag in data impacts mostly the last couple of days from the day the report is updated. 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. 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 7: COVID-19 deaths by age group and week, September 4, 2021 – January 28, 2023*



Data sources: *Panorama January 30, 2023*
In the past two weeks, Jan 15 to Jan 28, there have been 18 deaths in COVD-19 cases, two in the 20 to 59 years age group and 16 in the 60 years or older group.
** Total COVID-19 deaths from Mar 2020 to Jan 30, 2023; n=1,858*

Table 5: Community Respiratory Infection Surveillance Program Indicators by zone, January 22-28, 2023

Location	Test positivity – COVID-19[1] (positive lab tests)	Test positivity – Influenza (positive lab tests)	RLI* visits to EDs per 1,000[2]	RLI* 811 calls per 1,000[3]	School illness absenteeism >=10%[4]	Wastewater indicator	Proportion of population up-to-date vaccination – COVID-19[5]	Proportion of population immunized for Influenza (December 31, 2022)[6]
Far North West (Meadow Lake and area)	9.0% (6)	0.0% (0)	No data	-	4.5%	-	24.3%	10%
Far North Central	0.0% (0)	0.0% (0)	No data	-	0.0%	-	14.5%	3%
Far North East (La Ronge and area)	0.0% (0)	0.0% (0)	No data	-	8.4%	-	25.0%	8%
North West (North Battleford/ Lloydminster and area)	4.6% (9)	0.0% (0)	No data	45.9	8.7%	Moderate	35.5%	17%
North Central (Prince Albert and area)	5.1% (10)	2.2% (1)	19.6	-	12.1%	Moderate	40.7%	21%
North East (Melfort and area)	4.6% (5)	5.0% (1)	69.0	25.2	10.9%	-	44.0%	25%
Saskatoon	8.2% (69)	0.4% (1)	5.3	81.2	9.9%	Moderate	49.1%	26%
Central West (Kindersley and area)	12.7% (9)	0.0% (0)	57.8	-	8.0%	-	44.0%	28%
Central East (Yorkton/Melville and area)	6.3% (21)	0.9% (1)	No data	-	10.3%	Moderate	45.8%	24%
Regina	6.5% (30)	0.3% (1)	20.7	45.0	10.5%	Moderate-high	51.8%	26%
South West (Swift Current/Maple Creek and area)	9.5% (10)	0.0% (0)	86.2	47.6	9.5%	Moderate-high	40.9%	25%
South Central (Moose Jaw and area)	1.4% (3)	0.0% (0)	No data	-	10.9%	Moderate	44.3%	25%
South East (Weyburn/Estevan and area)	5.4% (10)	2.0% (2)	101.1	41.9	13.7%	-	39.4%	23%
Unknown/Out of Province	2.3% (60)	0.0% (0)	No data		10.2%	-		
SASKATCHEWAN	**4.4% (242)**	**0.6% (7)**	**21.8**	**53.7**	**10.3%**	**-**	**46.1%**	**25%**

*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]Based on reports from seven of thirteen reporting areas; [3]811 data available at the five 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.; *Respiratory-like illness; [5]Up-to-date = completed a primary series and at least one additional booster, age 5+ years; [6]received a vaccination within the current influenza season, age 6 months+; Does not include doses administered through NITHA or FNIHB, therefore some zones underestimated coverage. This column will be updated at month end. ^Includes positive tests with pending locations. Numbers in parenthesis represents positive lab tests.*

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 University of Saskatchewan and University of Regina Wastewater Team. Viral load for each zone was used to determine risk level (Low, Medium, Medium-High, High) using a four-bin system based on 100% of early Omicron peak reported. Locations sampled, includes: Saskatoon, Regina, Lumsden, North Battleford, Prince Albert, Yorkton, Swift Current, Moose Jaw, and Weyburn
4. Data collection from Emergency Departments (ED): Monitoring is done for a twenty-four hour period on at least one-week day (the exact time vary with the ED schedule). The ED reports to local public health services in their area on Wednesday afternoon and public health report to the Ministry of Health on Thursday each week. The count of Respiratory Like Illness (RLI) patients as a proportion of total ED admissions is captured.
5. Reporting ED surveillance information: Because there is no centralized data capture source for ED admissions in the province, each health area sets up a mechanism for EDs to report to public health services. Public health aggregates raw data from their EDs on the prescribed data collection form and sends it to the Ministry of Health for overall provincial monitoring. FNIHB and NITHA will report to the local zone which the ED or health centre is located. This does not preclude monitoring in First Nations health care facilities.
6. 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.
7. 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
8. 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.
9. 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 or, 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.
10. 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 linages is done by conducting whole genome sequencing (WGS) at RRPL or the National Microbiology Laboratory. one to two weeks to complete WGS. Data sources for VOCs analysis include testing data from the RRPL, and epidemiological information from Panorama. Where geographical zone is missing in RRPL or Panorama data, the Saskatchewan postal code file is used to identify cases' geographical information.
11. VOC Lineages B.1.1.529, BA.1, BA.2, BA.2.3.20, BA.2.75, BA.4, BA.4.6, BA.5, BF.7, BQ.1, BQ.1.1, XBB, and XBB.1.5 are all classified under the WHO Label of "Omicron". Omicron lineages BA.2.3.20, BA.2.75, BA.4.6, BF.7, BQ.1, BQ.1.1, XBB, and XBB.1.5 are emerging global variants that RRPL continues to monitor. Lineages that are not explicitly listed are aggregated under their corresponding parent lineage (e.g., BA.1, BA.2, BA.4, or BA.5). Previously, BA.2.3.20 and BA.2.75 were sublineages aggregated with BA.2; BA.4.6 was aggregated with BA.4; BF.7, BQ.1, and BQ.1.1 were aggregated with BA.5. "Other" represents non-Omicron lineages as well as recombinant genomes. Percentages are shown when a lineage constitutes 5% or more of total specimens evaluated for a given surveillance week. BA.5 and its sublineages (denoted as BA.5*) are the most commonly detected variants (93.4% of current reporting period), followed by XBB.1.5 (3.5%) and BA.2* (2.5%).
12. 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.
13. 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
14. 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.
15. 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.
16. 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).
17. 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.