Community Respiratory Illness Surveillance Program (CRISP)
Situation Report: January 19, 2023 (Reporting Period Jan 01–14, 2023)

Summary

- In the first week of the new year (Jan 01 – 07), an increase in COVID-19 and RSV cases occurred; however, this increase was not sustained into the most recent reporting week.
    - COVID-19 lab-confirmed cases decreased from 371 in the first week of January to 317 in the most recent week. Test positivity decreased to 5.4% from 6.9%.
    - Respiratory Syncytial Virus (RSV) decreased from 199 to 159 positive laboratory tests with the highest respiratory virus test positivity of 14.5%, mainly in preschool age children.
- Influenza activity in Saskatchewan continues to decrease.
- The majority of respiratory virus hospitalizations continue to be COVID-19, followed by RSV.
- In the most recent reporting period, sentinel indicators of respiratory transmission are increasing; however, not to the level they were early December:
    - Weekly visits to the Saskatchewan emergency departments for respiratory-like illness (RLI) have increased from 18.5 per 1,000 visits in the previous week to 23.7 per 1,000 this week.
    - Calls to 811 HealthLine for RLIs increased from 61.7 to 72.5 per 1,000.
    - School illness absenteeism data indicated 4.6% of Saskatchewan students were absent due to illness Jan 01 – 07, which rose to 8.6% in the most recent surveillance week.
    - Saskatoon wastewater COVID-19 viral load increased from moderate to high, and Regina and South West reported decreased from moderate to low in the current week compared to the previous week.

COVID-19

- COVID-19 test positivity in Saskatchewan was 5.4%, a decrease from 6.9% previous week. Cases are largely in the 65 years and over age group (43%).
- COVID-19 outbreaks in high-risk settings have increased this week - ten new COVID-19 outbreaks were reported last week compared to four to six per week over the previous three weeks.
- BA.5 and its sublineages (denoted as BA.5*) are the most commonly detected variants (95.0% of current reporting period), followed by BA.2* (3.0%) and XBB.1.5 (1.3%).
- COVID-19 hospitalizations decreased from 119 to 81 admissions per week.
- COVID-19 ICU admissions remain stable with an average of eight admissions per week – most were 60+ years old.
- The proportion of staffed inpatient beds occupied by COVID-19 patients has increased from 5.1% in the previous week to 6.4% this week.
- COVID-19 deaths have increased from 10 in the previous two weeks to 16 in the current two week period.

- Having a COVID-19 booster in the last six months reduces the risk of a COVID-19 death eight times compared 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-date1 for COVID-19 vaccines. Less than half of individuals aged 50+ have had more than one booster dose (46%).
- Of those aged five years and older, 21% have received their latest booster dose in the last six months. Only 19% of individuals aged 12+ years received a bivalent booster dose (n = 200,725 doses).

Influenza

- Influenza detections decreased from 32 in the previous week to 21 positive laboratory tests this week.
- Influenza test positivity dropped from 7.7% in the 3rd week of December to 1.5% this week.
- Influenza cases occurred equally among preschool, 20-64 years and senior age groups in the past week.
- No influenza outbreaks in a high-risk setting were reported in the past two weeks.
- Influenza hospitalizations and ICU admissions have decreased in this reporting period.
- No deaths due to Influenza were reported in the past two weeks.
- 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, a one percent increase from the previous reporting period. This is a 12% decrease in doses administered compared to the same time last year.
- Influenza test positivity is low with 0-4 positive influenza lab tests across all zones.

Other Respiratory Viruses2

- RSV detections remained somewhat constant over the four weeks with a slight decrease from 199 positive tests in the previous week to 159 this week. RSV has the highest lab test positivity of the respiratory viruses (14.5%).
- RSV cases are largely in the pediatric age group – in the most recent surveillance week 75 cases (50%) were aged 0 – 4 years. Another 30% (45 cases) were among seniors.
- RSV hospitalizations decreased from 66 in the previous week to 59 admissions this week. RSV ICU admissions remained same as previous week, 8 admissions. The majority of RSV hospitalizations and ICU admissions occurred in children aged 0 – 19 years.
- 'Other' respiratory viruses fluctuated between 120 to 145 lab confirmations per week over the past month.
- Outbreaks of 'other' viruses in high-risk settings varied between zero and five 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, December 18 2022 – January 14, 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 08 – 14, 2023	317	5.4%	10	21	1.5%	0	159	14.5%	120	4.4%	1
Jan 01 – 07, 2023	371	6.9%	6	32	2.1%	0	199	15.8%	142	5.1%	2
Dec 25 – 31, 2022	302	6.7%	4	69	5.0%	1	176	14.5%	145	5.3%	4
Dec 18 – 24, 2022	326	5.8%	5	122	7.7%	2	167	13.0%	135	5.2%	5

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 08-14, 2023

Age group (Years)	COVID-19 case count	Influenza case count	RSV case count	Others case count[1]
0 - 4	20 (8%)	5 (25%)	75 (50%)	N/A
5 - 19	19 (7%)	1 (5%)	7 (5%)	
20 - 64	109 (42%)	8 (40%)	22 (15%)	
≥65	112 (43%)	6 (30%)	45 (30%)	
Total	260 (100%)	20 (100%)	149 (100%)	121

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 01-14, 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 08 – 14, 2023	8.6%	23.7	72.5	Low (n=3), Moderate (n=3), High (n=1)	N/A[¥]	N/A[¥]
Jan 01 – 07, 2023	4.6%	18.5	61.7	Low (n=1), Moderate (n=6)	20.0	Parainfluenza virus
Dec 25 – 31, 2022	N/A	32.3	140.5	No data	14.3	Adenovirus
Dec 18 – 24, 2022	8.5%	33.2	100.7	Low (n=2), Moderate (n=5)	41.7	Rhinovirus

*Notes: *Sentinel surveillance are sampling programs representative of the population; **Respiratory-like illness (RLI); [¥] Data not available for current reporting cycle*

[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. Due to Christmas break schools were closed and absenteeism data was not available for all school division for the week Jan 01 to Jan 07, 2023; Not Available (N/A).

[2]Jan 01-Jan 07 based on reports from seven of thirteen reporting areas; Jan 08-Jan 14 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

Table 4: Outcome, health care capacity and immunization coverage indicators by surveillance period, January 01-14, 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 08 – 14, 2023	81	7	7	3	59	8	6.4%	5	**0**	46.0%	25%
Jan 01 – 07, 2023	119	10	7	1	66	8	5.1%	11	**0**	46.0%	
Dec 25 – 31, 2022	99	9	16	4	53	4	5.7%	3	3	45.9%	
Dec 18 – 24, 2022	106	8	26	3	45	3	6.5%	7	1	45.9%	25%

[¥]*Additional information on hospital admission stratified by respiratory organism and age group is provided below in **Figure 4** and **5** respectively. Viral infection may not be the main reason for the admission.*
[3]A total of sixteen COVID-19 deaths were reported this season. *No influenza deaths reported in the last two weeks.*

Cases by respiratory organisms across the age groups

- From January 01 - 14, 2023, there were 426 respiratory illness cases hospitalized with lab-positive Covid19 (200), influenza (14), RSV (125), other respiratory illnesses (56), and co-infected cases (31). Among the 426 cases, 200 Covid19 lab positives were among age groups of 0-19 (15), 20-59 (48), and ≥60 (137). Influenza lab positives (14) were among age groups of 0-19 (5), 20-59 (1), and ≥60 (8). For RSV lab positives (125), cases were among the age groups of 0-19 (77), 20-59 (9) and ≥60 (39). For other respiratory lab positives (56), cases were in the age group of 0-19 (25), 20-59 (11), and ≥60 (31). For Co-infections lab positives (19), cases were in the age group of 0-19 (22), 20-59 (2), and ≥60 (7).
- From January 01 - 14, 2023, there were 53 respiratory illness cases admitted to the ICU with lab-positive Covid19 (17), influenza (4), RSV (16), other respiratory illnesses (10), and co-infected cases (6). Among the 53 cases, 17 Covid19 lab positives were among age groups of 0-19 (5) and ≥60 (12). Influenza lab positives (4) were among age groups of 0-19 (1), 20-59 (2) and ≥60 (1). For RSV lab positives (16), cases were among the age groups of 0-19 (11), 20-59 (1) and ≥60 (4). For other respiratory lab positives (10), cases were in the age group of 0-19 (7) and 20-59 (3). For Co-infections lab positives (6), cases were among the age groups of 0-19 (5) 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 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.)

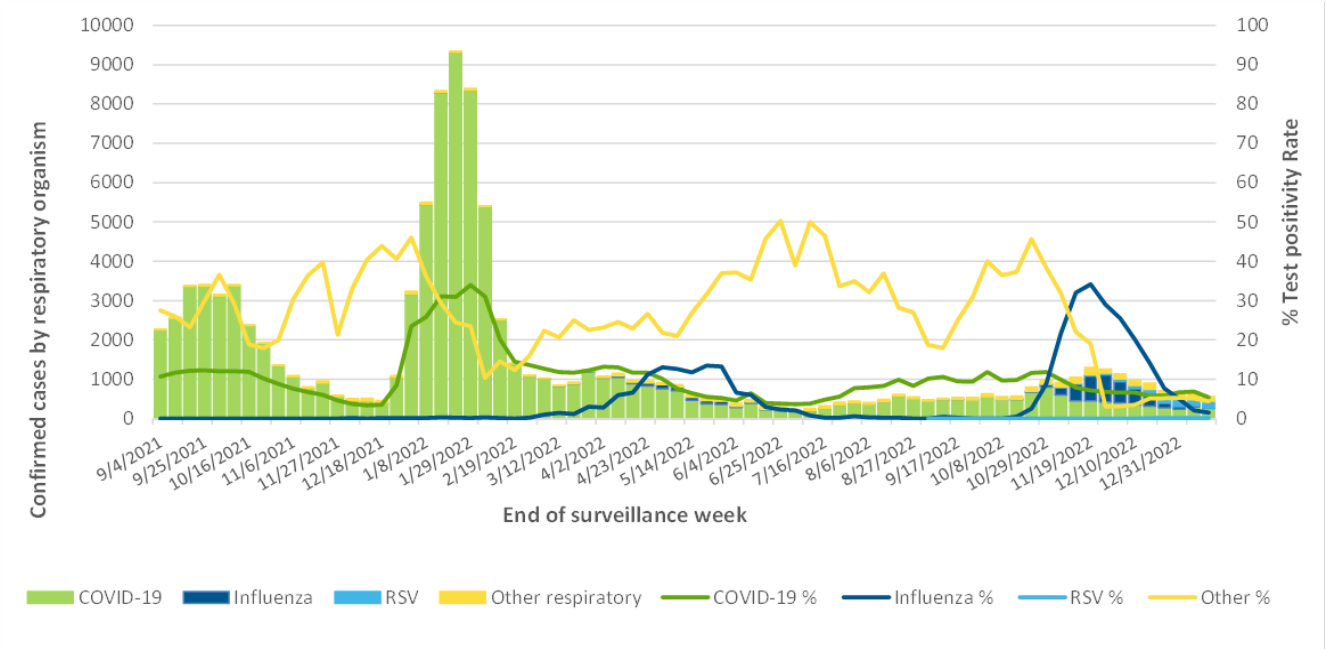
[2]7-day average of percentage of acute inpatient beds staffed and in operation that are occupied by COVID-positive patients as of 8AM census

[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 = 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.

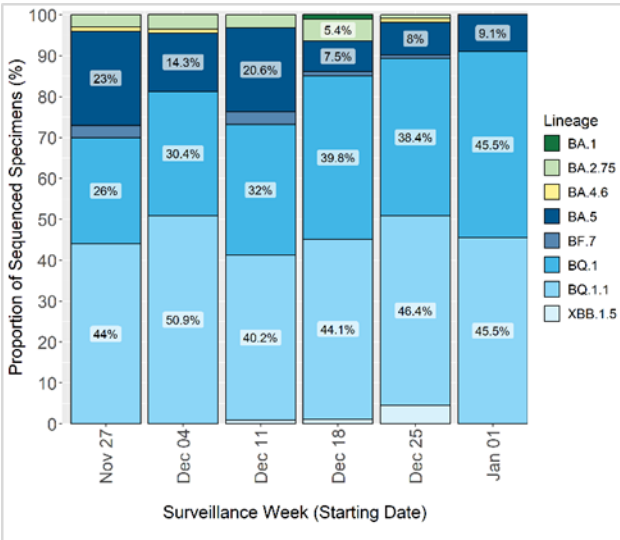
[5]Beginning November 27, 2022, the 2022 covered population is used to calculate coverage rates (2022 Saskatchewan Covered Population, 12-Nov-2022, Ministry of Health version (2022 Version 2)

Figure 1: Epidemic curve, respiratory illness by respiratory organism and test positivity, August 29, 2021 – January 14, 2023



Data sources: Panorama IOM extracted on January 16, 2023 (COVID-19 cases).
Respiratory Virus Detections Surveillance System (influenza and other respiratory) (RRPL extracted January 16, 2023)
As of September 04, 2022, COVID-19 cases include new and reinfections.
For the two weeks of Jan 01 to Jan 14, 2023, there were 562 COVID-19 cases (75 were 0 to 19 years; 208 were 20 to 59 years; and 279 were 60 years and older).
For the two weeks of Jan 01 to Jan 14, 2023, there were 53 influenza lab detections
For the two weeks of Jan 01 to Jan 14, 2023, there were 358 RSV detections.
For the two weeks of Jan 01 to Jan 14, 2023, there were 262 other viral lab detections (parainfluenza, adenovirus, human metapneumovirus, rhinovirus, coronavirus)

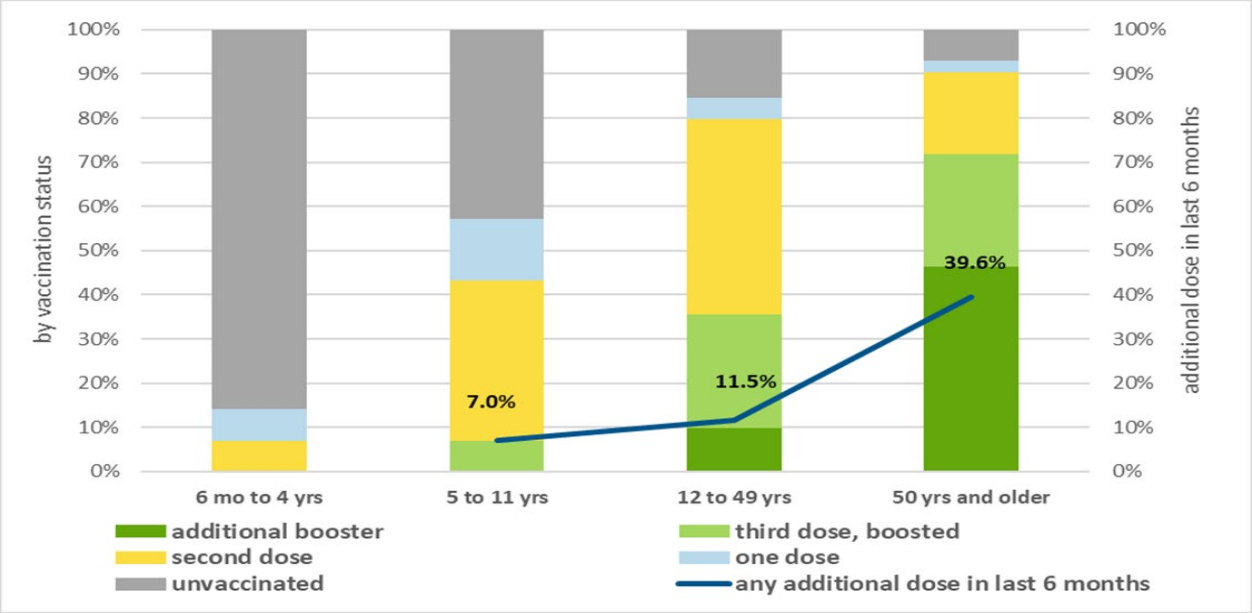
Figure 2: Percentage of SARS-CoV-2 variants by surveillance week*, November 27, 2022 – January 01, 2023



Lineage	Nov 27	Dec 04	Dec 11	Dec 18	Dec 25	Jan 01
BA.1	0	0	0	1	0	0
BA.2.75	3	4	3	5	1	0
BA.4.6	1	1	0	0	1	0
BA.5	23	16	20	7	9	2
BF.7	3	0	3	1	1	0
BQ.1	26	34	31	37	43	10
BQ.1.1	44	57	39	41	52	10
XBB.1.5	0	0	1	1	5	0
Total	100	112	97	93	112	22

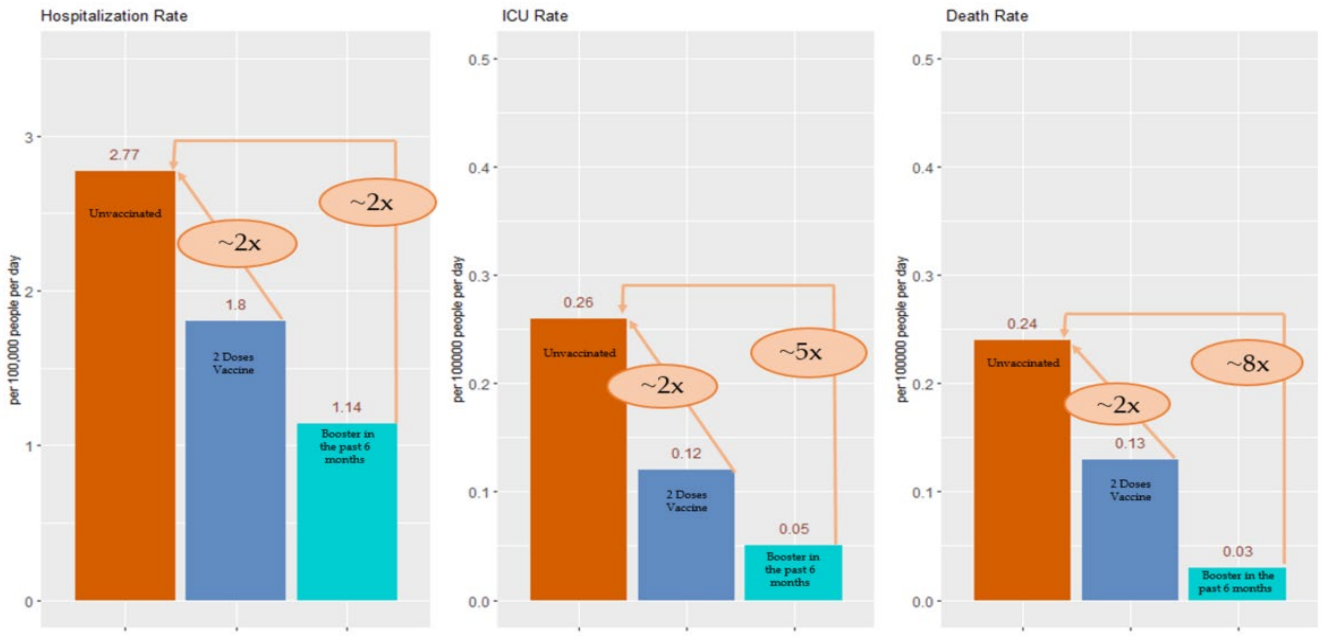
Data Source: *Roy Romanow Provincial Laboratory, Saskatchewan Health Authority, as of January 16, 2023.*
The most recent VOC data available from the Provincial database is as of surveillance week ending January 07, 2023
* Surveillance week correspond to specimen collection date.

Figure 3: Proportion of residents by age group and COVID-19 vaccination status to January 14, 2023



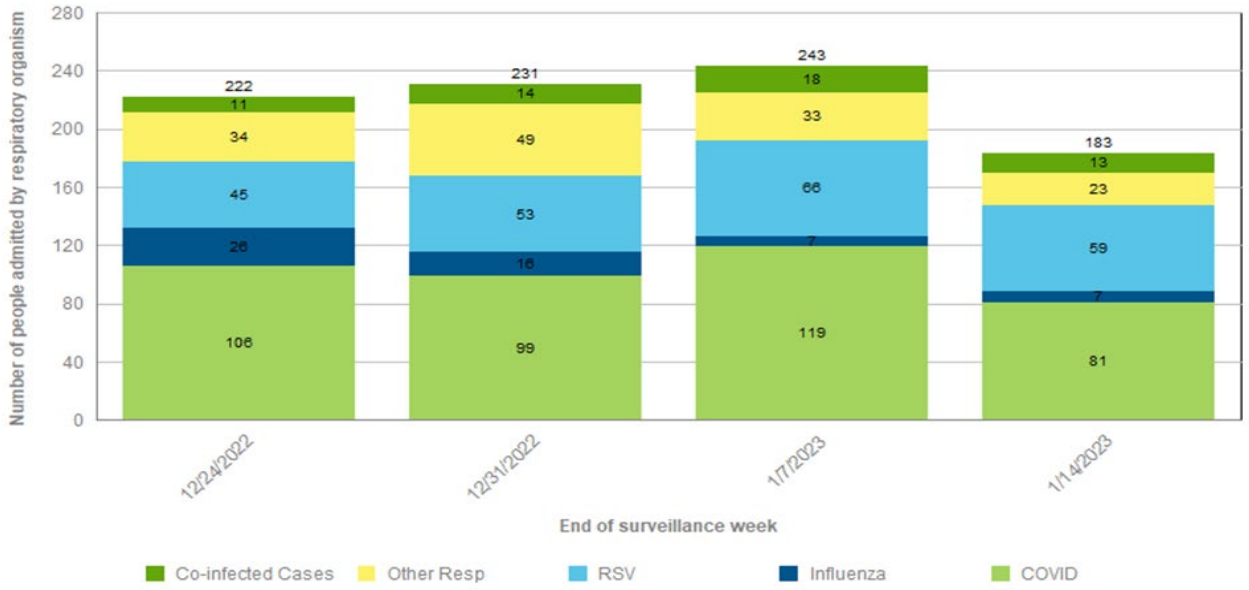
Data source(s): *Panorama January 16, 2023; Saskatchewan Covered Population, 12-Nov-2022, Ministry of Health version (2022 Version 2)*
Note: Of those five years and older: 46.0% have completed their series and received a booster dose. 21.4% have received their latest dose in the last six months. Of those 12 years and older, 19.3% were administered a Moderna or a Pfizer bivalent. As of Jan 14, 2023, cumulatively doses administered are as follow: dose 1, n=992,829; dose 2, n=927,186; dose 3, n=531,363; completed plus 2 or more additional doses, n=368,124; total doses = 2,819,502

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



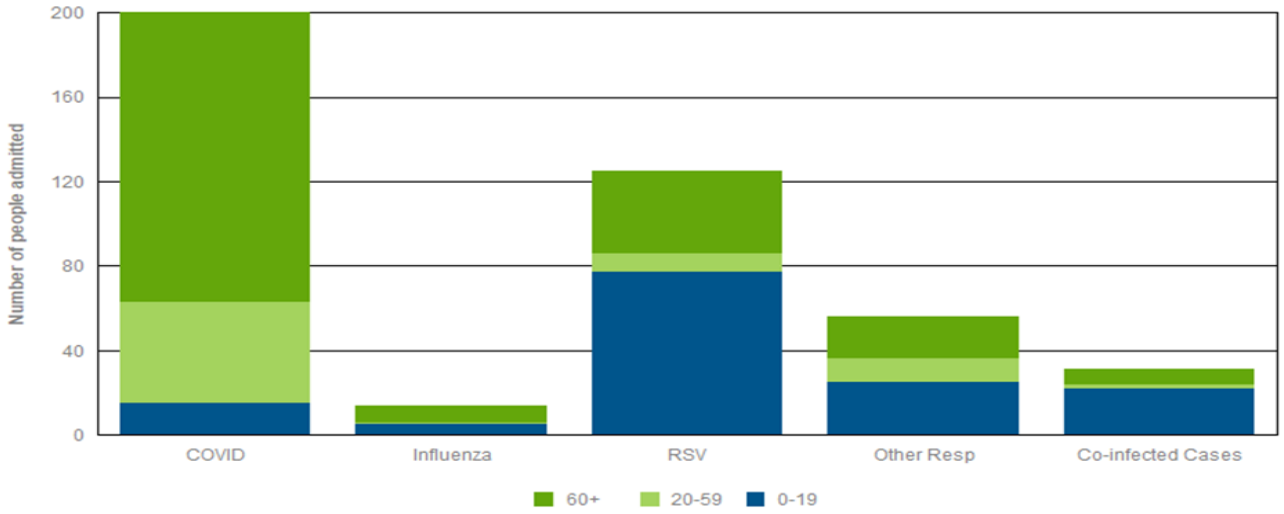
Data Source: *Digital Health Analytics, Saskatchewan Health Authority*
Definitions: *Unvaccinated - Individuals with no record of vaccine received or vaccinated with first dose but less than 21 days from receiving the first dose. Vaccinated with 2 doses - Individuals who have received their second dose 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, December 18, 2022 - January 14, 2023*



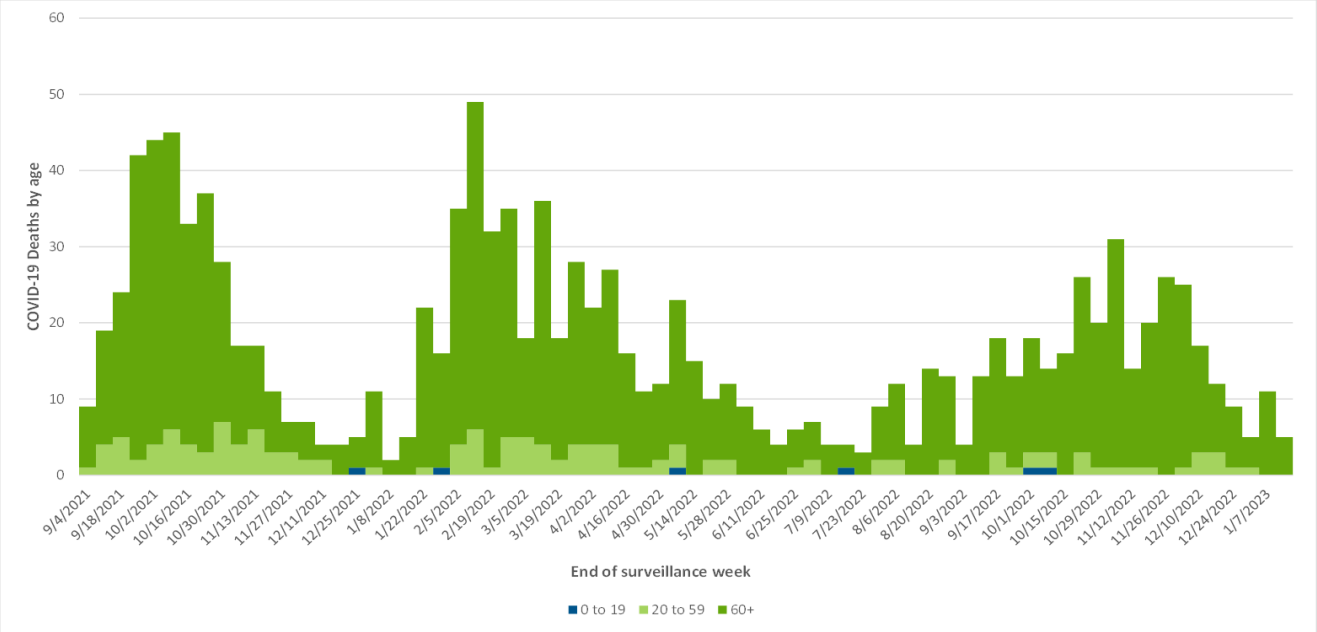
Data sources: *Digital Health Analytics, Saskatchewan Health Authority, Episode of Care methodology (Admission, Discharge, Transfer Database (ADT, RPPL, Panorama); data extracted on January 16, 2023. * Viral infection may not be the main reason for the admission.*
Note: *Because of the delay in date 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 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 01-14, 2023*



Data source: *Digital Health Analytics, Saskatchewan Health Authority, Episode of Care methodology (Admission, Discharge, Transfer Database (ADT, RPPL, Panorama); data extracted on January 16, 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 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 14, 2023*



Data sources: *Panorama January 16, 2023*

In the past two weeks, Jan 01 to Jan 14, there have been 16 deaths in COVD-19 cases, all in the 60 years or older group.

** Total COVID-19 deaths from Mar 2020 to Dec 31, 2022; n=1,826)*

Table 5: Community Respiratory Infection Surveillance Program Indicators by zone, January 08-14, 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[5]	Proportion of population up-to-date vaccination – COVID-19[6]	Proportion of population immunized for Influenza (December 31, 2022)[7]
Far North West (Meadow Lake and area)	7.3% (6)	0.0% (0)	8.2	-	2.9%	-	24.3%	10%
Far North Central	0.0% (0)	0.0% (0)	No data	-	0.0%	-	14.4%	3%
Far North East (La Ronge and area)	1.8% (1)	0.0% (0)	No data	-	6.5%	-	25.0%	8%
North West (North Battleford/ Lloydminster and area)	9.1% (22)	0.0% (0)	10.3	91.7	8.2%	Moderate	35.4%	17%
North Central (Prince Albert and area)	6.7% (13)	5.3% (3)	No data	-	9.5%	Moderate	40.6%	21%
North East (Melfort and area)	6.6% (7)	0.0% (0)	133.3	41.4	7.4%	-	43.9%	25%
Saskatoon	6.9% (64)	0.8% (3)	9.3	82.0	8.1%	High	49.0%	26%
Central West (Kindersley and area)	9.9% (7)	3.4% (1)	128.5	-	6.4%	-	43.9%	28%
Central East (Yorkton/Melville and area)	8.7% (34)	1.3% (2)	No data	-	8.4%	Moderate	45.7%	24%
Regina	8.3% (35)	1.0% (3)	No data	71.8	9.8%	Low	51.7%	26%
South West (Swift Current/Maple Creek and area)	5.1% (8)	2.6% (2)	78.4	49.6	8.8%	low	40.8%	25%
South Central (Moose Jaw and area)	2.1% (5)	1.4% (1)	No data	-	9.3%	Low	44.3%	25%
South East (Weyburn/Estevan and area)	5.1% (10)	3.8% (4)	145.8	82.8	10.3%	-	39.3%	23%
Unknown/Out of Province	3.8%^ (105)	2.6% (2)			4.6%	-		
SASKATCHEWAN	**5.4% (317)**	**1.5% (21)**	**23.7**	**72.5**	8.6%	**-**	**46.0%**	**25%**

*Notes: [1]by week of lab detection; effective Oct 30, 2022 includes cases who tested positive more than once >= 90 days apart; ^ 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, 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, 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 (95.0% of current reporting period), followed by BA.2* (3.0%) and XBB.1.5 (1.3%).
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.