The Montana Department of Health and Human Services (DPHHS) provides a weekly report throughout the influenza season that coordinates data from a variety of sources to give the most complete and up-to-date view of influenza activity in the state of Montana. All data are preliminary and may change as more complete information is received.

State Summary: Flu Activity is LOCAL¹

- Influenza activity decreased statewide from May 29 – June 04, 2022, with 40 new cases reported during week 22.
- Season to date, 6341 cases, 241 hospitalizations, and 9 deaths have been associated with influenza. The 2021-2022 season started on October 3, 2021.
- Influenza A has been the dominant subtype circulating in Montana, with minimal Influenza B activity reported but present.
- Influenza-like illness (ILI) in Montana increased slightly to 1.24% from 1.11%.
- RSV activity remained low over week 22, with 0.45% testing percent positivity.
  - The 2021-2022 RSV season onset started October 3, 2021 and offset January 22, 2022
- This is the final weekly report of the 2021-2022 influenza season in Montana. An annual report summarizing influenza activity for the season is in development.

Figure 1: A bar chart displaying total influenza cases reported in Montana as of 06/04/2022, separated based on the week reported.
Laboratory Surveillance

The Montana Public Health Laboratory (MTPHL) and designated molecular surveillance partner facilities report the number of specimens tested for influenza by polymerase chain reaction (PCR) assay, the number of positive influenza types (A or B), as well as the influenza A subtype (2009 H1N1 or H3). Table 1 presents this data as reported for week 22 and the ongoing season totals. Based on surveillance reports, Influenza A(H3) is currently the dominant subtype circulating in Montana.

### Influenza Type/Subtyping Surveillance Reports

<table>
<thead>
<tr>
<th></th>
<th>Week 22</th>
<th>Season Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of specimens tested</td>
<td>1345</td>
<td>47,205</td>
</tr>
<tr>
<td>Number of positive specimens</td>
<td>37 (2.75%)</td>
<td>2,475 (5.24%)</td>
</tr>
<tr>
<td>Positive Specimens by Type/Subtype</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influenza A</td>
<td>37 (100%)</td>
<td>2,459 (99.35%)</td>
</tr>
<tr>
<td>H1N1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>H3</td>
<td>6</td>
<td>514</td>
</tr>
<tr>
<td>Subtyping not performed</td>
<td>31</td>
<td>1,944</td>
</tr>
</tbody>
</table>

*Table 1: Influenza type and subtyping reports from the MTPHL and surveillance partners for the 2021-2022 influenza season, data as reported by 06/04/2022.*

Hospitalizations and Deaths

In Montana, influenza hospitalizations and deaths are reportable to local public health. Since October 3, 2021, 241 influenza-associated hospitalizations have been reported to DPHHS. Reported hospitalizations peaked during the first week of January this year. Of those hospitalized, the majority have been individuals over 65 years old. Nine influenza-related deaths have been reported during this influenza season, but deaths remain below seasonal averages. On week 17, hospitalizations increased above a 5-year seasonal average for the first time in the 2021-2022 influenza season. Overall, total influenza hospitalizations have remained lower than other recent flu seasons. Table 2, Figure 2, and Figure 3 show influenza hospitalization and death reports in more detail.

Flu hospitalizations are reported following laboratory confirmation of infection and when the case is hospitalized for complications related to their influenza illness. Flu deaths are deaths where influenza is listed as a factor contributing to death or indicated on a death record following a laboratory confirmed influenza infection.

### Influenza-associated Hospitalization and Death Reports in Montana, 2021–2022

<table>
<thead>
<tr>
<th></th>
<th>Week 22</th>
<th>Season</th>
<th>COVID-19 co-infection</th>
<th>Pediatric (0-17 years)</th>
<th>Adult &lt; 65 years</th>
<th>Adult &gt; 65 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitalizations</td>
<td>4</td>
<td>241</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

*Table 2: Influenza-associated hospitalizations and deaths as reported through 06/04/2022. Table also includes a running count of reported hospitalizations of patients with laboratory-confirmed co-infection of influenza and COVID-19, both of which are in active circulation this season.*
ILI Trends and Influenza Hospitalizations in Montana by Age Group, Montana, 2021–2022

![Graph showing ILI Trends and Influenza Hospitalizations in Montana by Age Group, Montana, 2021–2022](image)

Figure 2: Influenza-associated hospitalizations reported through 06/04/2022, graphed by the week the hospitalization occurred and by age group. Influenza-like illnesses (ILI) are graphed on the secondary (y) axis and displays the percentage all emergency department visits in the state due to ILI by week, based on reporting through ILINet.

Influenza Hospitalizations for 2021–2022 Season vs Season Averages, Montana

![Graph showing Influenza Hospitalizations for 2021–2022 Season vs Season Averages, Montana](image)

Figure 3: A comparison of the 5-year average of influenza hospitalizations per MMWR week, with the dark blue series representing hospitalizations in the 2019-2020 season (with 514 hospitalizations total). The orange line represents hospitalizations for the 2021-2022 season, reported through 06/04/2022. *Data from the 2020-2021 influenza season was not included in the 5-year average, since there were 0 confirmed influenza cases in Montana.
Influenza-like Illness Network (ILINet) and Syndromic Surveillance

The U.S. Outpatient ILI Surveillance Network (ILINet) is a national database that conducts surveillance for influenza like illness (ILI) in outpatient healthcare facilities. ILI has a standardized definition including fever (100°F or higher), cough, and/or sore throat. This season, Montana has over 30 facilities participating in ILINet Reporting through manual data entry or automatic syndromic surveillance data feeds. Information gathered from ILINet both nationally and from other states can be found on the CDC’s FluView Webpage. Figure 2 (above) includes data reported through ILINet each week.

ESSENCE is the syndromic surveillance system in Montana which collects real-time emergency department (ED) data from facilities throughout Montana. Figure 4 shows current and historical ESSENCE data, displaying the proportion of medical visits with a chief compliant of ILI each week.

The percentage of ILI-related ED visits in Montana decreased slightly during week 22, with ESSENCE measuring that 1.25% of outpatient visits in Montana were due to ILI. This is below baseline for Montana and below the national percentage of ILI visits, reported by ILINet as 2.32%.

**Percentage of ED and Healthcare Visits for ILI, Montana**

![Percentage of ED and Healthcare Visits for ILI, Montana](image)

*Figure 4: Data displays ILI surveillance reported through ESSENCE, showing the proportion of ED visits in Montana due to ILI. ESSENCE data is also displayed historically, back to the 2017-2018 season in pink, with the ongoing 2021-2022 season in dark blue. The Montana ILI baseline of 2.8% is also shown in dotted grey.*
Respiratory Syncytial Virus (RSV)

RSV is a respiratory virus with a seasonal circulation pattern that tends to closely mirror influenza. RSV remains one of the most common causes of childhood illnesses, and in children less than one year of age, it is the most common cause of bronchiolitis and pneumonia. RSV infections can also be severe in individuals over 65 years old, but symptoms for healthy adults are typically mild.

Surveillance for RSV in Montana is compiled from voluntary sentinel laboratories\(^4\), which report testing information weekly. Figure 5 and Figure 6 show the current results of RSV surveillance in the state for this season and historical circulation. During week 3, ending 01/22/2022, RSV percent positivity (the number of RSV tests that were positive compared to the total number of RSV tests run) fell below the 10% threshold for the second week in a row. This traditionally marks the offset of RSV season. Since COVID-19 and influenza circulation may influence RSV seasonality, it will continue to be monitored. Compared to previous seasons, the 2021-2022 RSV season started early during the week of 10/03/2021 and offset early during the week of 01/22/2021.

RSV percent positivity remained low during week 22, with 0.45% of RSV tests run by surveillance partners returning a positive result.

RSV Percent Positivity and Number of Tests Run by Week, Montana, 2021–2022

![Graph showing RSV tests and percent positivity by week](image-url)

*Figure 5: The number of RSV tests run (orange bars) compared to the percentage of the tests that were positive (green line), also known as the percent positivity or positivity rate, reported through 06/04/2022.*
Figure 6: RSV positivity rate for the ongoing 2021-2022 season compared to previous RSV seasons. The 2021-2022 RSV season positivity rate is shown by the dark blue line and represents data reported through 06/04/2022. This season, RSV appears to have begun circulating early, with the season officially starting on 10/03/2021 and offsetting during week 3, ending on 01/22/2022 when previous RSV season positivity typically starts to increase.
Additional Resources

- Montana DPHHS Influenza Information: http://dphhs.mt.gov/publichealth/cdepi/diseases/influenza
- CDC Influenza Information: www.cdc.gov/flu
- International Influenza Data (WHO): http://www.who.int/influenza/en/
- Influenza vaccine resources: visit https://www.vaccines.gov/ to find a location near you

Notes

1 Influenza Activity: State health departments may report geographic spread of influenza activity as no activity, sporadic, local, regional, or widespread. These levels are defined as follows:

- **No Activity**: No laboratory-confirmed cases of influenza and no reported increase in the number of cases of ILI.
- **Sporadic**: Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of ILI.
- **Local**: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of the state.
- **Regional**: Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of influenza in those regions.
- **Widespread**: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

2 Molecular influenza testing partner laboratories: Barrett Hospital and Healthcare, Big Sandy Medical Center, Bighorn County Hospital, Billings Clinic Hospital, Bozeman Deaconess Hospital, Cabinet Peaks Medical Center, Central Montana Medical Center, Community Medical Center, Deer Lodge Medical Center, Glacier Medical Associates, Grant Creek Family Practice, Great Falls Clinic, Holy Rosary Health Care, Liberty County Hospital, Livingston Healthcare, Logan Health, Madison Valley Hospital, North Valley Hospital, Phillips County Hospital, Pondera Medical Center, Rosebud Healthcare, Poplar Community Hospital, St. Joseph Hospital, St. Patrick’s Hospital, St. Peter’s Hospital, Sidney Health Center, Trinity Hospital, and VA Ft. Harrison.

3 Per the Administrative Rules of Montana 37.114.203 and 37.114.316, influenza is a reportable condition for the following:

- Influenza hospitalizations and deaths
- Influenza outbreaks in congregate settings
- Other illnesses of public health significance (novel influenza A)

4 RSV laboratory surveillance partners: Barrett Hospital and Healthcare, Big Sandy Medical Center, Bighorn County Hospital, Billings Clinic Hospital, Bozeman Deaconess Hospital, Cabinet Peaks Medical Center, Community Medical Center, Deer Lodge Medical Center, Great Falls Clinic, Holy Rosary Health Care, Liberty County Hospital, Livingston Healthcare, Logan Health, Phillips County Hospital, Poplar Community Hospital, Madison Valley Medical Center, North Valley Hospital, St. Peter’s Hospital, St. Vincent Hospital, Trinity Hospital, and VA Ft. Harrison.

For additional information on influenza activity in Montana, please contact your local health department or the Department of Public Health and Human Services’ Communicable Disease Epidemiology Section at (406) 444-0273 or visit https://dphhs.mt.gov/publichealth/cdepi/diseases/influenza.