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October 2025 Newsletter

TARRANT News & Updates

Greetings Sentinels!

Your Tarrant team has been preparing for the new season, re-dating all the forms, revising the protocol and getting them into the ethics review system.

Last week we mailed out the new kits and purple requisition forms for the 2025-2026 season. Please start using the new forms from November 01, 2025. Use the 2024-2025 requisition forms (green), until October 31, 2025. Please discard all old forms (2024-2025 requisition forms, [green]) on November 01, 2025 as ProvLab will no longer process last year's forms. Correct/complete documentation submitted for each specimen ensures payment of the \$30 compensation rate.

If you haven't received the new kits and requisition forms, please reach out to us and we will send them out to you right away.

Viral Watch Seasonal Update

Viral activity has been relatively quiet through the late summer months and fall, with both the number of samples submitted to Tarrant and the case positivity of key respiratory viruses remaining quite low (*Figure 1*). September brought a slight increase in the case positivity of both SARS-CoV-2 and parainfluenza viruses. Case positivity subsequently dropped throughout October, possibly in response to decreased transmission of viral infections among school-aged children as they remained at home due to the recent teacher strikes. Unlike the low levels of sustained transmission of other respiratory viruses, enterovirus and rhinovirus have seen a new peak in case positivity of above 30% in both September and October,

similar to what we saw at this time last year. Overall, the most prominent viruses of the 2024-25 season were influenza A (13.7% case positivity) and enterovirus/rhinovirus (12.7% case positivity), followed by SARS-CoV-2, which continues to be present in 6.2% of samples tested. We look forward to updating you in the coming week as we enter the 2025-26 season, which is sure to be accompanied by new trends and patterns for us to discuss!

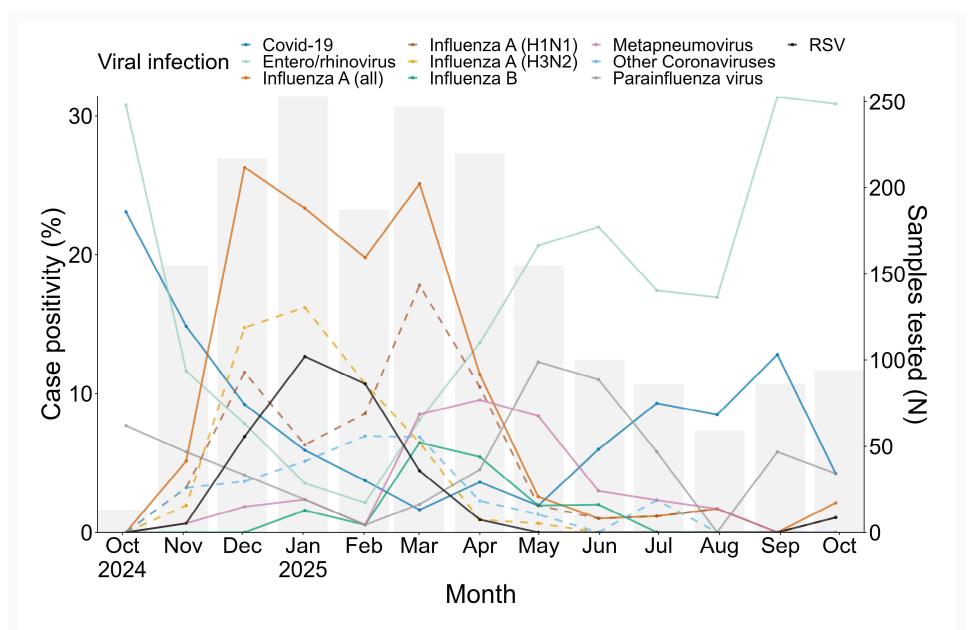


Figure 1: Monthly case positivity for several respiratory viruses circulating in Alberta between October 2024 and October

2025. All samples were collected by TARRANT sentinels.

Seasonal Trends

Fall arrived late this year. We can expect that the respiratory viral season will be not far behind. But it might be later than usual because of the teachers strike, so the usual opportunities for mixing virus among the children was reduced. When they all go back to school, there may be an explosion of infections.

Decreasing immunization likely increases infections and therefore hospitalizations and deaths1, especially among the elderly, those with chronic disease, (especially respirator), and the obese. Given the confusion in Alberta about immunization, mainly about COVID-19, this year we may have lower immunization rates, and therefore a worse season on that account. The southern hemisphere had an influenza H1N1 season, but Japan already has started this year with many H3N2 with the J4 variant, and so have some European countries. Flu immunization usually has a lower effectiveness against H3 than against H1 types, but it usually has some benefit: ranging from 30 to 60%.

To put this in context, usually community dwelling adults can get an infection around one year in 3. If we reduce that by 50%, the risk is reduced to one year in 6. Individuals can decide whether this is worthwhile for them.

One of the ideas for reducing respiratory virus infection is to use ultrafiltration of air, to reduce aerosols and therefore indoor infection. This is plausible, but a trial in the North-east US shows that this is not an easy solution2. In the trial, school classrooms were randomised to have HEPA air purifiers in the room or a dummy. While the HEPA purifiers did reduce air viral load somewhat, they did not reduce infection incidence3. Of course, the children would also have been exposed to infections in the corridors, the buses to and from school and elsewhere in their lives, so this outcome is not very surprising.

Maybe to reduce infection, they need HEPA filters for the whole school and wear high efficiency masks whenever inside with other people – unlikely behaviours for more than a few children.

The targets for respiratory viral prevention are: to reduce infections and transmission to others, hospitalisations, and long term, complications and deaths. The methods available are: immunization, reducing aerosol isolation when actively ill, using masks to reduce inhalation (and also exhalation that transmits to others), and drug treatment, if early diagnosis is made. Cleaning surfaces may also play a role.

Part of the difficulty of understanding respiratory viral infection prevention is the difficulty in conducting trials in community settings where most infections occur. That also applies to treatment trials, where each of the influenza and COVID antivirals appears to have marginal value in reducing duration and severity of the illness, but the trials did not measure reduced transmission. Each of these protective interventions is limited in effectiveness but the more methods that are used consistently, the greater the potential reduction in infection and transmission.

This leaves physicians in a difficult place, with uncertain methods available to us. Nonetheless we can try, especially to encourage our most "at risk" patients to reduce their risk by at least some of these methods

- 1. O'Halloran A, Habeck JW, Gilmer M, et al. Influenza-Associated Hospitalizations During a High Severity Season Influenza Hospitalization Surveillance Network, United States, 2024–25 Influenza Season. MMWR Morb Mortal Wkly Rep 2025;74:529–537. DOI: http://dx.doi.org/10.15585/mmwr.mm7434a1
- 2. Ye Sun, MD, MPH1; Dastan Haghnazari, BS2; Ching-Ying Huang, MS2 Air Purifier Intervention for Respiratory Viral Exposure in Elementary SchoolsA Secondary Analysis of a Randomized Clinical Trial JAMA Netw Open October 10, 2025 2025;8;(10):e2536951.doi:10.1001/jamanetworkopen.2025.36951

3. Phipatanakul W, Koutrakis P, Coull BA, et al; School Inner-City Asthma Intervention study team. Effect of school integrated pest management or classroom air filter purifiers on asthma symptoms in students with active asthma: a randomized clinical trial. JAMA. 2021;326(9):839-850. doi:10.1001/jama.2021.11559

Welcoming our new Research Assistant to the Team

Anamika Kambo, BA, MSc

Anamika graduated from the University of Calgary with a BA in Psychology and an embedded certificate in Mental Wellbeing and Resilience. She has recently completed her MSc in Health Psychology from the University College of London.

Avian Flu Outbreak in Petting Zoo

With the arrival of the fall season, came an unexpected instance of avian flu in the popular petting zoo Butterfield Acres located in Rocky View County. The farm remains closed after several cases of the pathogenic avian influenza (HPAI) were confirmed in their poultry this month. Alberta Health Services (AHS) stated that anyone who visited the farm during this outbreak was able to avoid contraction of the illness. 20 recent visitors were referred for testing of which 18 tested negative, therefore no further testing was required. The farm remained closed from October 13-17th after AHS issued for a formal closure order, and birds are stated to return after a 14-day vacancy period to ensure cleaning and disinfection is completed.

Thank you all for your support and participation in the TARRANT Viral Watch program so far.

Regards,

The Tarrant Viral Watch Team







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