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TARRANT VIRAL WATCH

May 2025 Newsletter

TARRANT News & Updates

Greetings Sentinels,

We were pleased to host some of our sentinels, partners, and colleagues at the recent TARRANT Annual General Meeting! Now, with the end of the 2024/2025 influenza season in sight, we would like to recap our AGM and update you on the current state of viral infections in the community.

TARRANT 2025 AGM Recap

On May 2, we held the annual Tarrant General Meeting, which was attended in-person and virtually by sentinel physicians, experts in viral illness, public health physicians, researchers, and students. Several leading experts shared updates on respiratory virus surveillance, vaccine effectiveness, and emerging public health threats.

Dr. Danuta Skowronski, Principal Investigator of the Canadian Sentinel Practitioner Surveillance Network (SPSN), presented a comprehensive overview of two decades of influenza surveillance in Canada. She emphasized the SPSN's use of the test-negative design as an efficient, scientifically robust approach to monitor seasonal respiratory virus trends and vaccine effectiveness. Our provincial contributions add to

the sample size and therefore narrow the estimates of effectiveness. Dr. Skowronski also underscored the global value of this work, particularly in tracking influenza virus evolution and informing vaccine strain selection for international immunization campaigns.

Dr. Christa Smolarchuk, Director of Public Health Analytics at Alberta Health, provided an Alberta perspective, summarizing recent provincial findings on respiratory virus epidemiology, vaccine effectiveness, and severe illness outcomes in Alberta. She noted that Alberta's estimates of vaccine effectiveness closely align with national data and pointed stakeholders to Alberta Health's interactive Respiratory Virus Dashboard for ongoing updates. **Dr. Mathew Diggle**, Consultant Clinical Microbiologist at Alberta Health Services, reported on rising RSV-related in-hospital mortality among seniors, highlighting the importance of RSV vaccination. He drew attention to co-circulating viruses like human metapneumovirus and the resurgence of Mycoplasma pneumoniae ("walking pneumonia"), whose typical epidemic cycle was disrupted by COVID-19 public health measures, resulting in increased case incidence over the past year.

Dr. Kevin Fonseca, Clinical Virologist at Alberta Precision Laboratories, discussed the alarming resurgence of measles in Alberta, where over 200 laboratory-confirmed cases have already surpassed historical highs

from 2000. He emphasized the value of molecular genotyping to trace transmission patterns and addressed the disproportionate impact on rural communities with lower vaccination coverage.

Lastly, **Dr. Matthew Croxen**, Microbiologist and Program Lead of Public Health Genomics at Alberta Precision Laboratories, presented on current genomic surveillance efforts for H5N1 avian influenza and SARS-CoV-2. He noted the severe impact of H5N1 on poultry, contrasted with its mild effect on waterfowl like mallards, which are carriers that play a key role in transmission. Importantly, he highlighted the virus's detection in cow mammary glands and the heightened risk this poses to raw milk consumers, despite pasteurization effectively neutralizing the virus. This virus has been circulating for some years now, and few human cases have been reported, none of which had severe disease outcomes. Dr. Skowronski suggested that similarities in the neuraminidase (N) component of H5N1 and H1N1 may mean that humans previously exposed to H1N1 have some level of prior immunity to this strain of avian influenza.


Viral Watch Update

As we approach the tail end of the 2024/2025 influenza season, we are beginning to see a decrease in case positivity for all viruses except for enterovirus/rhinovirus, human metapneumovirus (MPV), and parainfluenza viruses. Influenza A overall had a strong present this season, with H3N2 case positivity peaking at 16.3% in January, followed by an H1N1 peak of 17.8% in March (*Table 1*). Both Influenza A and Influenza B, which peaked later in the season, have been declining since March (*Figure 1*). Respiratory

syncytial virus (RSV) remained high, throughout January and February, with a positivity rate of 10.7% (*Table 1*), but also have been declining from March into May.

Conversely, in the later half of this influenza season, case positivity of enterovirus/rhinovirus and parainfluenza viruses have steadily increased since February (*Figure 1*). While the first half of May appears to have brought a sharp peak in both these infections, the number of samples tested so far this month is still quite low, so these values are likely to even out over the next couple of weeks. This pattern is likely to be reflected in MPV cases, which have maintained a steady case positivity rate around 9% in March and April but have increased to 13.6% in the first half of May (*Table 1*). Overall, we anticipate respiratory infection cases to continue to decrease as we exit the 2024/2025 influenza season.

Table 1: Monthly per-cent positivity and number of samples positive for 10 viral respiratory illnesses included in the Tarrant viral panel.

Month	Samples tested (N)	% Positivity (n positive)									
		Influenza A	Influenza A (H1N1)	Influenza A (H3N2)	Influenza B	RSV	Covid-19	Other coronaviruses	Parainfluenza virus	Meta-pneumovirus	Entero/ rhinovirus
October 2024	13	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	23.1% (3)	0.0% (0)	7.7% (1)	0.0% (0)	30.8% (4)
November 2024	155	5.2% (8)	3.2% (5)	1.9% (3)	0.0% (0)	0.6% (1)	14.8% (23)	3.2% (5)	5.8% (9)	0.6% (1)	11.6% (18)
December 2024	218	26.1% (57)	11.5% (25)	14.2% (31)	0.0% (0)	5.5% (12)	8.7% (19)	2.8% (6)	3.2% (7)	1.8% (4)	7.8% (17)
January 2025	252	23.4% (59)	6.3% (16)	16.3% (41)	1.6% (4)	10.7% (27)	6.0% (15)	4.4% (11)	1.6% (4)	2.4% (6)	3.6% (9)
February 2025	187	19.8% (37)	8.6% (16)	10.7% (20)	0.5% (1)	10.7% (20)	3.7% (7)	7.0% (13)	0.5% (1)	0.5% (1)	2.1% (4)
March 2025	247	25.1% (62)	17.8% (44)	6.5% (16)	6.5% (16)	4.5% (11)	1.6% (4)	6.9% (17)	2.0% (5)	8.5% (21)	8.1% (20)
April 2025	216	11.1% (24)	10.2% (22)	0.9% (2)	5.6% (12)	0.9% (2)	3.7% (8)	2.3% (5)	4.6% (10)	9.3% (20)	13.9% (30)
May 2025	44	4.5% (2)	2.3% (1)	2.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	15.9% (7)	13.6% (6)	18.2% (8)
Total	***1,333***	***18.7% (249)***	***9.7% (129)***	***8.6% (114)***	***2.5% (33)***	***5.5% (73)***	***5.9% (79)***	***4.3% (57)***	***3.3% (44)***	***4.4% (59)***	***8.3% (110)***

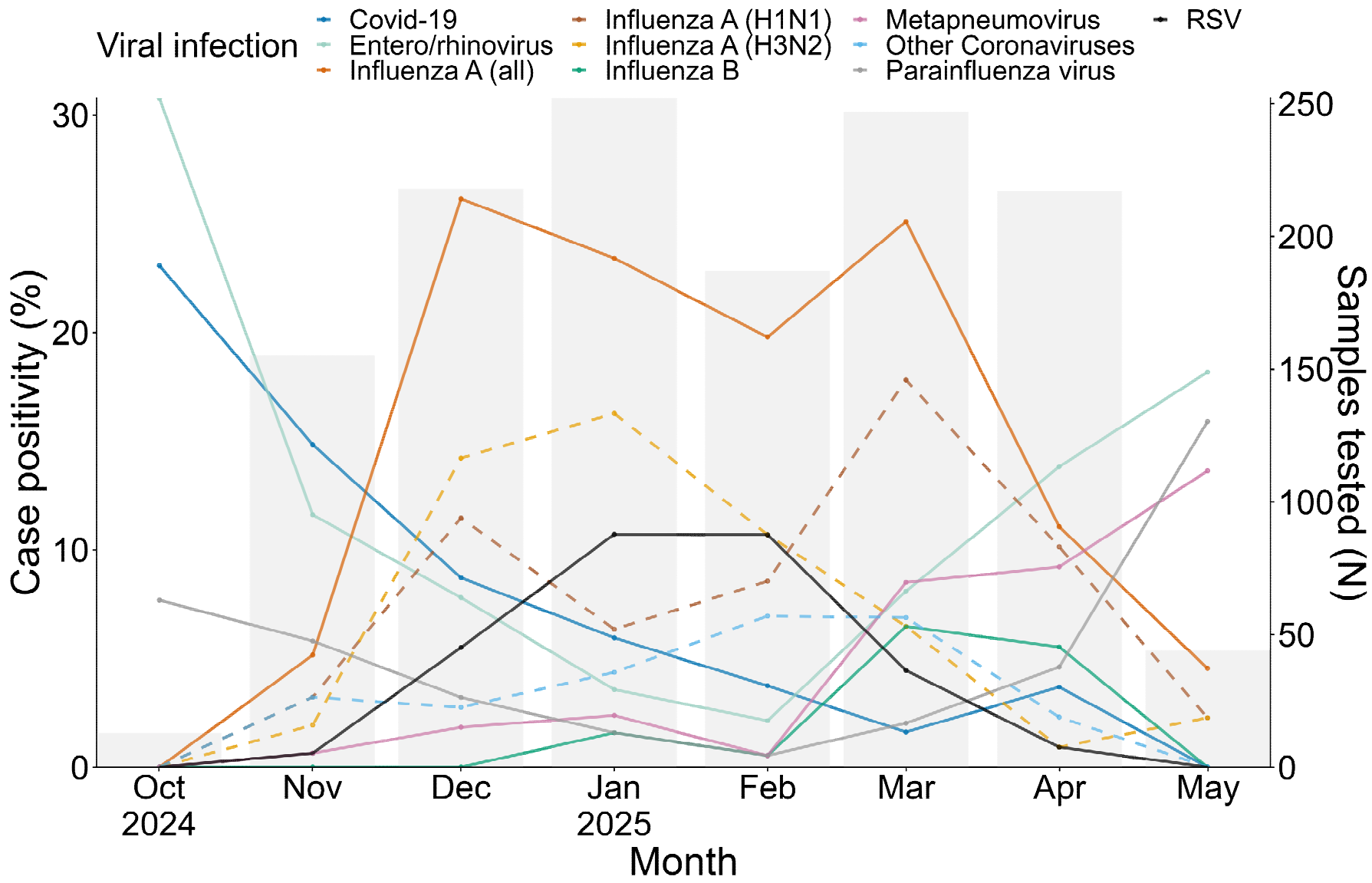

Figure 1: Monthly case positivity for 10 viral respiratory illnesses included in the Tarrant viral panel, and

total number of samples tested each month.

Thank you all for your support and participation in the TARRANT Viral Watch program so far. We couldn't do it without you!

Regards,

The Tarrant Viral Watch Team

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