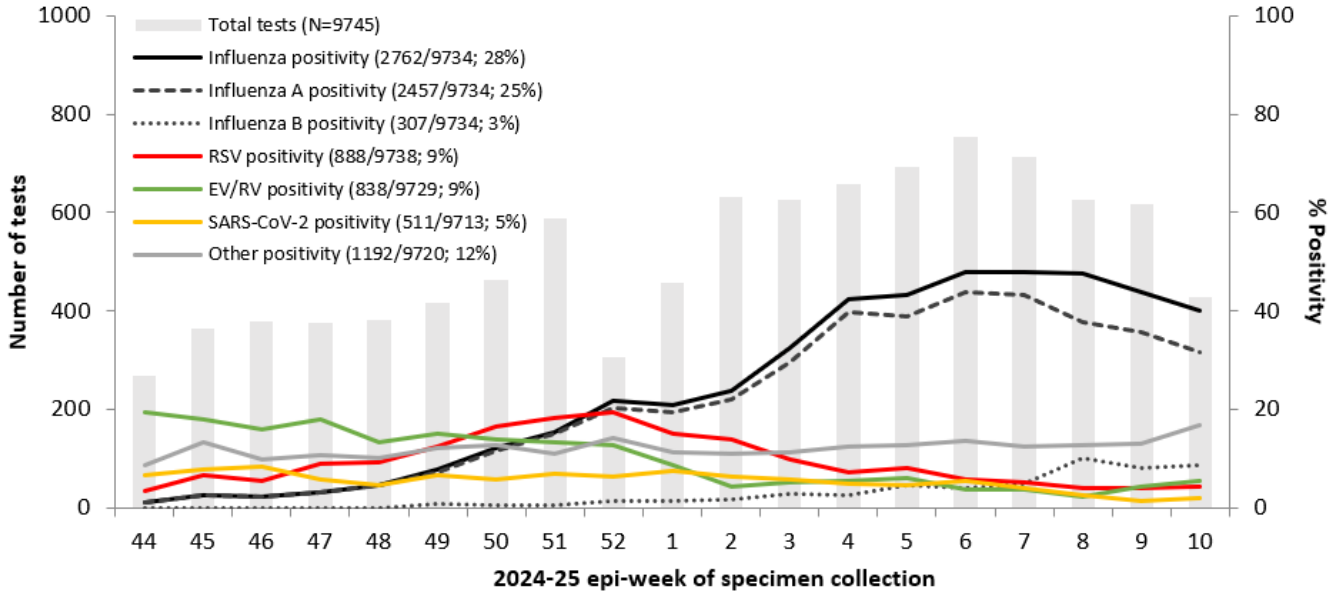
SPSN Report #5, 2024-25 Season
Epi Weeks 44 to 10: October 27, 2024 to March 8, 2025

Across SPSN provinces overall, the delayed 2024/25 influenza season has been characterized by co-circulating A(H1N1) (~65%) and A(H3N2) (~35%) viruses. Peak influenza A activity appears to have now passed, but influenza B shows recent increase. SARS-CoV-2 activity has remained low and stable across the study period. **The SPSN published interim vaccine effectiveness (VE) estimates for the 2024/25 influenza vaccine in late January**. We thank sentinels for their ongoing contributions in support of end-of-season analyses.

In mid-season publication in the peer-reviewed journal Eurosurveillance, the SPSN reported that the 2024/25 influenza vaccine reduced the risk of medically-attended influenza illness due to the predominant A(H1N1) subtype by about 53% and due to the A(H3N2) subtype by about 54%. Notable variants in circulating strains were also identified and continue to be monitored throughout the rest of the season. Updated influenza findings, including the potential role of emerging genetic variants, repeat vaccination and imprinting effects, will be presented at the BCCDC grand rounds on April 1st, 2025 (viewable here once posted on the website).

Figure 1. Respiratory virus testing and % positive, SPSN provinces combined, epi-weeks 44-10, 2024-25 (N=9745)



* Tallies subject to change as data become more complete, notably for the most recent weeks. Viruses included in "other" category: parainfluenza, seasonal coronaviruses, human metapneumovirus, adenovirus. Of influenza A viruses subtyped, 1479/2313 (64%) are A(H1) and 833/2313 (36%) are A(H3). There was 1 co-infection with A(H1) and A(H3). Overall, 364 participants were diagnosed with co-infections, mostly involving influenza. See **Figure 3** for findings by province. See **Table 2** for tallies by age group and province

The World Health Organization has recently announced the recommended influenza strains for the northern hemisphere's 2025-26 vaccine, changing only the A(H3N2) component of the 2024-25 vaccine:

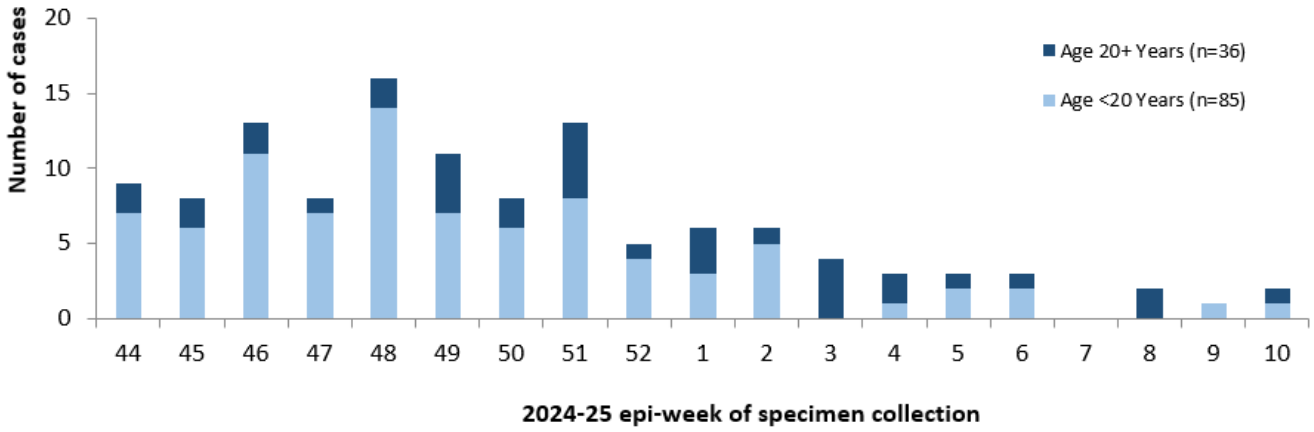
Season	A(H1N1)pdm09	A(H3N2)	B/Victoria*	B/Yamagata
2024-25	A/Victoria/4897/2022 (clade 6B.1A.5a.2a.1; "5a.2a.1") ["D"]**	A/Thailand/8/2022 (clade 3C.2a1b.2a.2a.3a.1; "2a.3a.1") ["J"]**	B/Austria/1359417/2021 (clade V1A.3a.2) ["C"]**	B/Phuket/3073/2013 (clade Y3)
2025-26	(unchanged)	A/Croatia/10136RV/2023 (clade 3C.2a1b.2a.2a.3a.1; "2a.3a.1") ["J.2"]**	(unchanged)	(unchanged)

*recommended component of trivalent vaccine whereas quadrivalent vaccine includes both B/Victoria and B/Yamagata lineages; **Nextstrain terminology

M pneumoniae and C pneumoniae

In BC and Quebec, SPSN testing includes the atypical bacteria *Mycoplasma pneumoniae* and *Chlamydophila pneumoniae.* With fewer cases detected in recent weeks, *M pneumoniae* activity has been higher overall in 2024/25 than prior seasons, with positivity during weeks 44 to 10 of 3% (72/2312) in BC and 2% (49/2281) in Quebec (Figure 2), versus <1% for the same period of prior seasons. As also indicated in prior SPSN reports, *C pneumoniae* detections, while low overall, are higher than recent prior seasons, with 0.4% positivity in both provinces (20/4593 combined) since week 44 (not shown).

Figure 2. SPSN *M pneumoniae* detections in BC and Quebec, by age category, epi-weeks 44-10, 2024-25 (N=121)*



* *M pneumoniae* reporting in BC and Quebec only. Tallies subject to change as data become more complete, notably for the most recent weeks.

Table 1. SPSN 2024-25 influenza and COVID-19 vaccine coverage among negative controls*

	2024-25 self-reported influenza vaccination			2024-25 self-reported COVID-19 vaccination		
Province	**Vaccinated**	**Total**	**% vaccinated**	**Vaccinated**	**Total**	**% vaccinated**
Alberta	195	636	31%	160	731	22%
BC	593	1547	38%	551	2058	27%
Ontario	823	2724	30%	616	3664	17%
Quebec	253	1551	16%	207	1852	11%
Overall	1864	6458	**29%**	1534	8305	**18%**

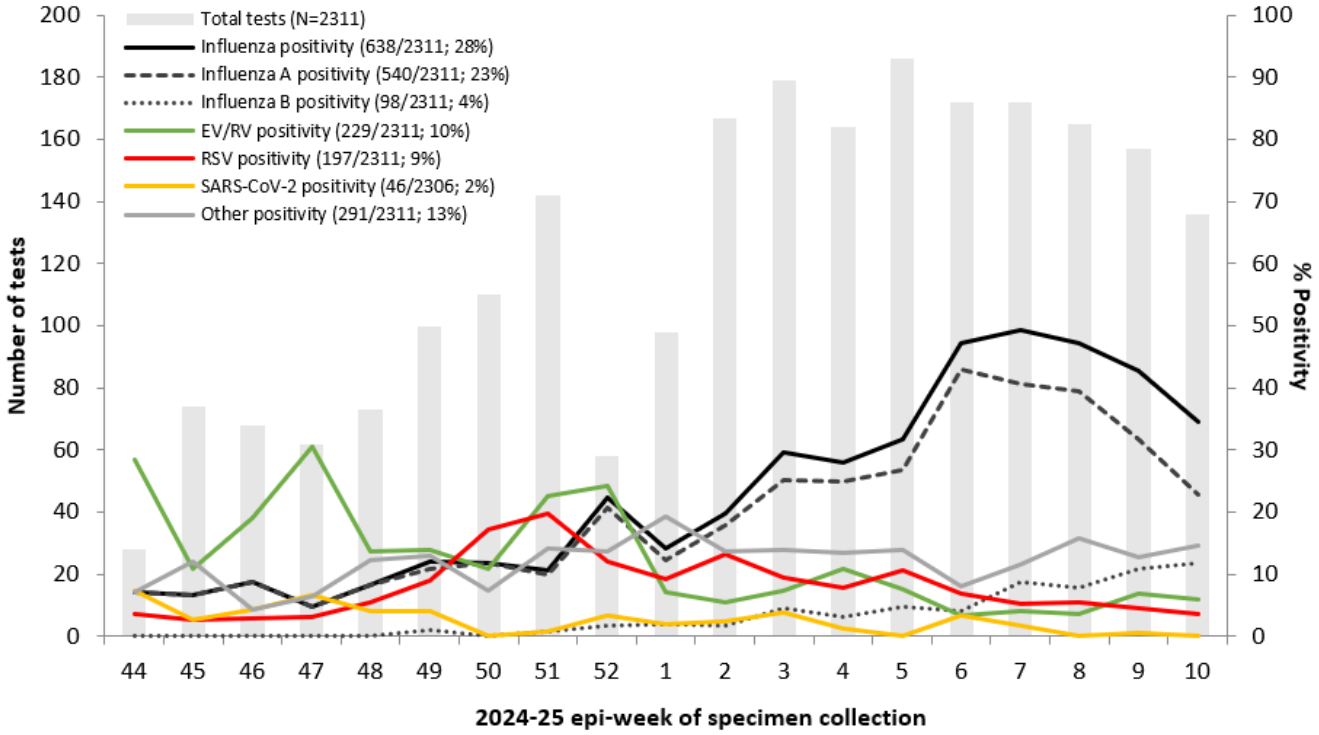
* Since epi-week 44: denominator includes specimens from SPSN patients with acute respiratory illness who tested negative for the target virus and for whom 2024-25 vaccine status (yes/no) was reported; numerator is tally reporting vaccine receipt regardless of timing in relation to specimen collection.

Table 2. Specimens submitted to the SPSN by province and age group, epi-weeks 44-10, 2024-25 (N=9745)

Province	<5 years	5-8 years	9-19 years	20-49 years	50-64 years	65+ years	Unknown	Total
Alberta	53	46	106	356	149	152	0	862
BC	198	187	418	878	327	303	0	2311
Ontario	489	309	495	1560	743	689	6	4291
Quebec	291	174	257	755	424	380	0	2281
Total	1031	716	1276	3549	1643	1524	6	9745

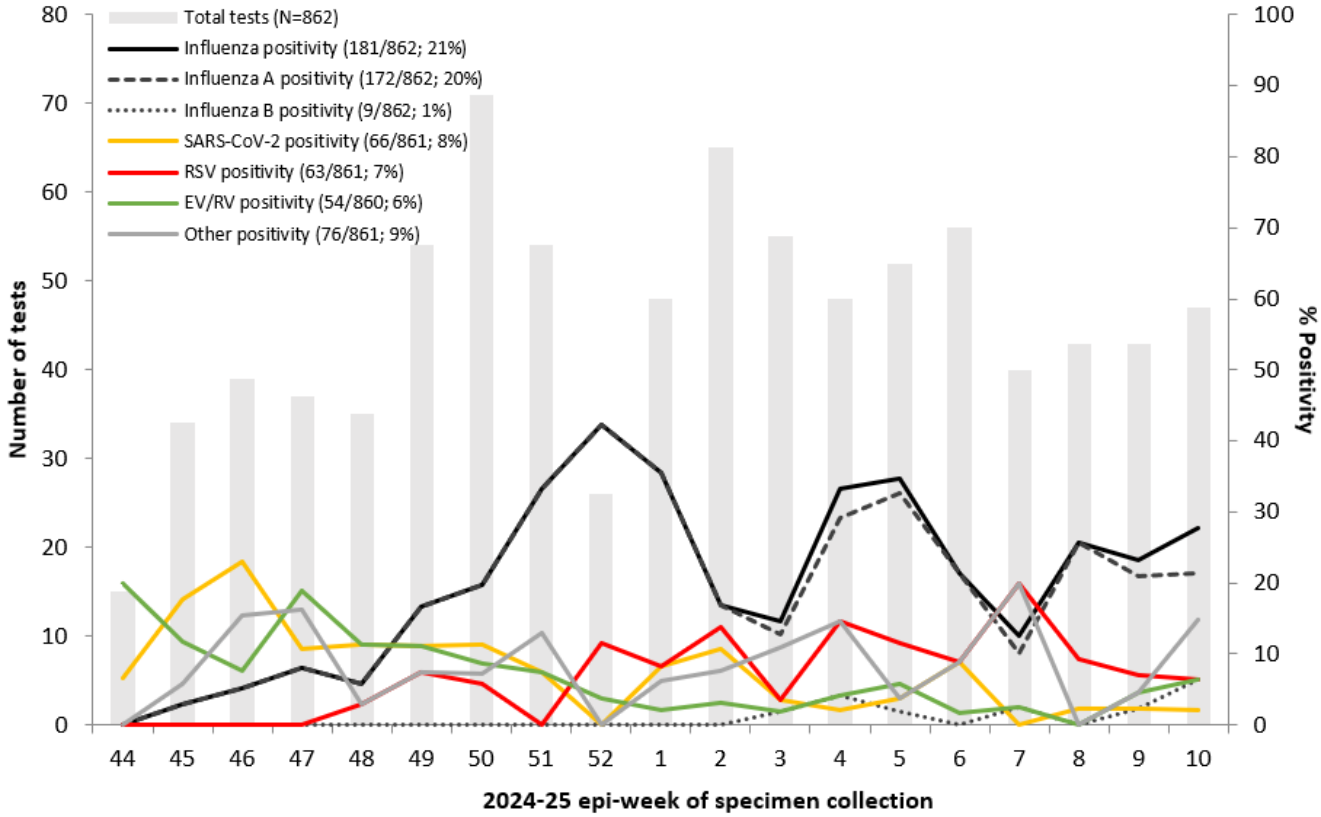
Figure 3. Weekly testing and percent positivity among SPSN specimens by province, epi-weeks 44-10, 2024-25

a) British Columbia



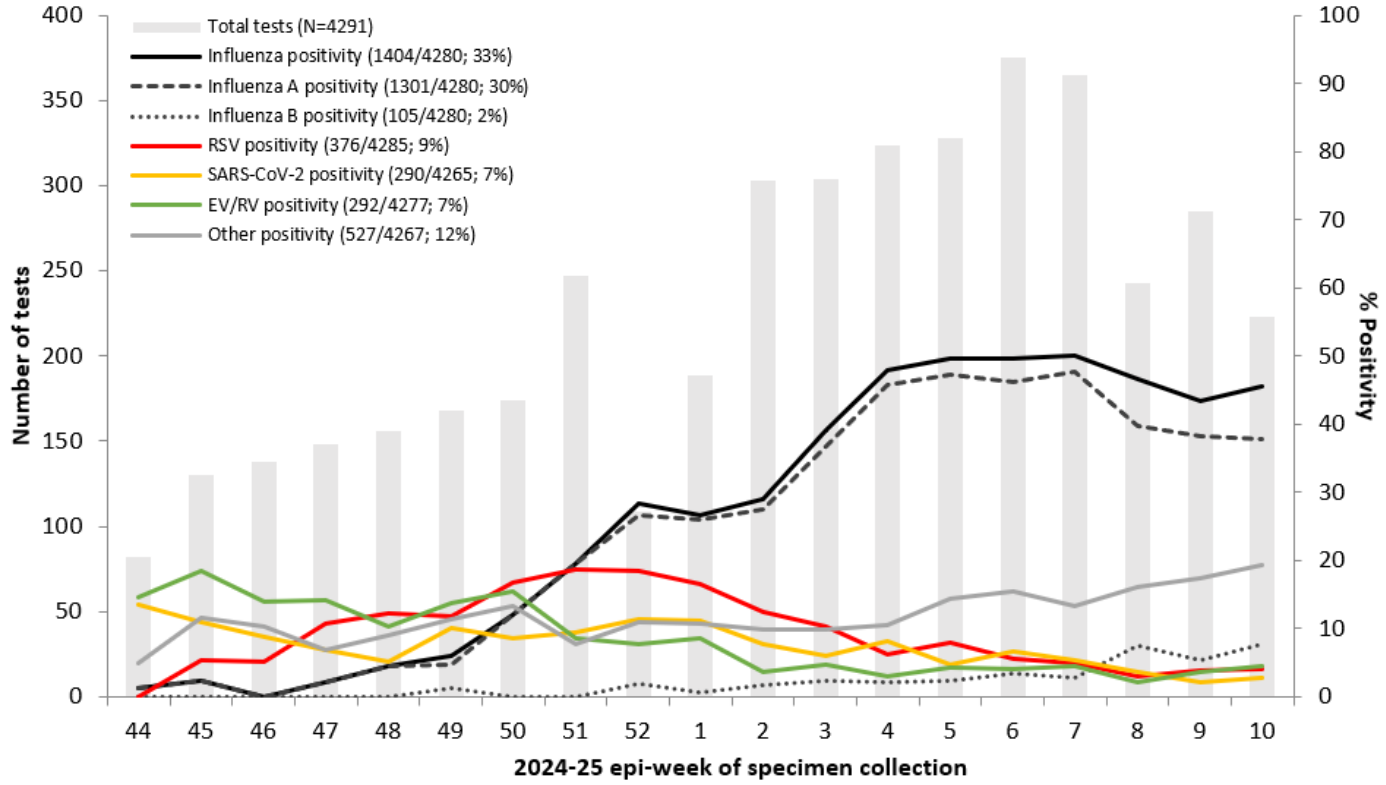
All tallies are subject to change as the season progresses and data become more complete, notably for the most recent weeks.

b) Alberta



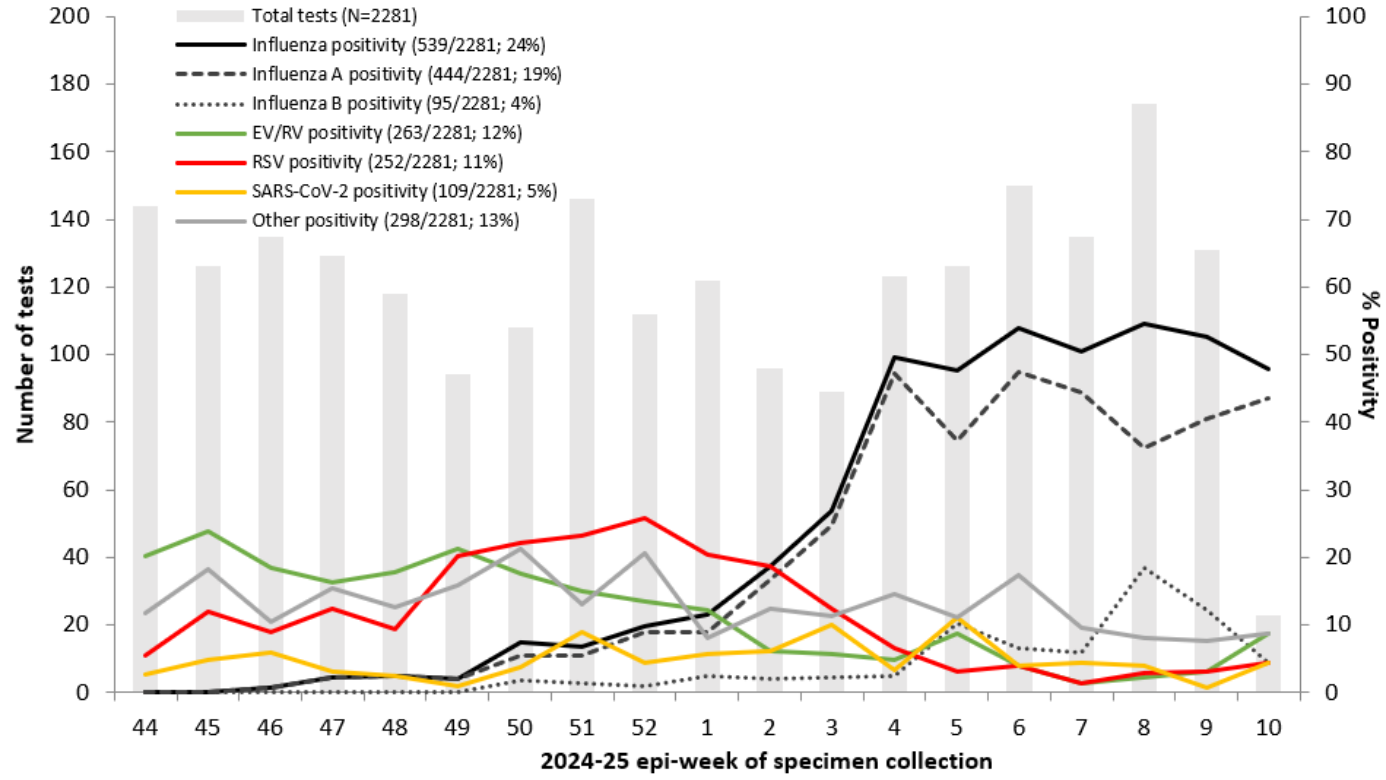
All tallies are subject to change as the season progresses and data become more complete, notably for the most recent weeks.

c) Ontario



All tallies are subject to change as the season progresses and data become more complete, notably for the most recent weeks.

d) Quebec



All tallies are subject to change as the season progresses and data become more complete, notably for the most recent weeks.

Table 3. Additional resources for respiratory pathogen surveillance

Canada BCCDC - Respiratory Disease Dashboard PHAC - FluWatch Surveillance PHAC - Human Emerging Respiratory Pathogens Bulletins **United States** Washington State - Influenza Updates California State - Influenza and Respiratory Disease Surveillance Report CDC - Weekly Influenza Surveillance Report **Europe** Joint ECDC—WHO/Europe - Flu News **Oceania** Australian Influenza Surveillance Reports New Zealand Institute of Environmental Science and Research (ESR) - Acute Respiratory Illness Infections Dashboard	**South Africa** National Institute for Communicable Diseases - Weekly Respiratory Pathogens Surveillance Report **World Health Organization** Global Influenza Updates Weekly Epidemiological Record Recommendations for Influenza Vaccine Composition Influenza at the Human-Animal Interface Summary and Assessment Updates **World Organization for Animal Health** OFFLU - Animal influenza