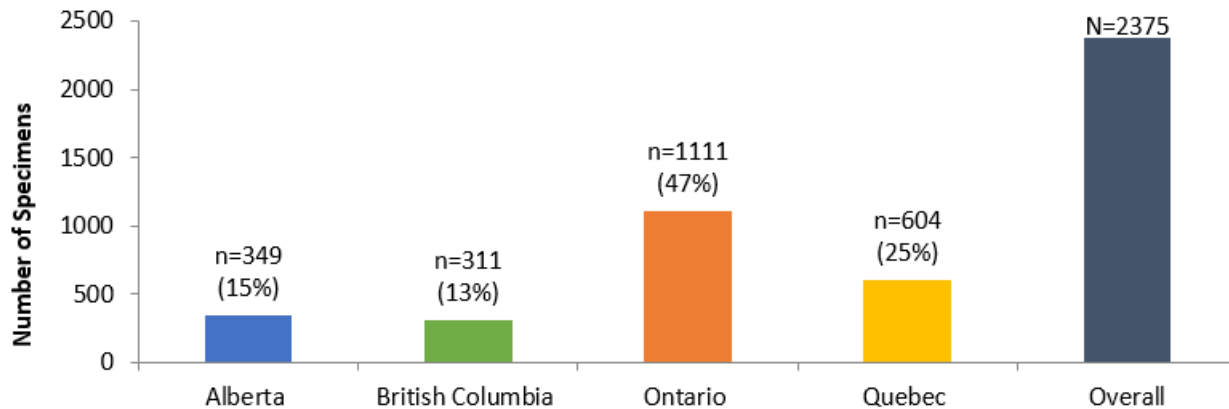


SPSN Report #6, 2023-24 Season

Epi Weeks 44 to 51: October 29 to December 23, 2023

Influenza A has been increasing in the lead up to the holiday period and is now the most commonly detected virus among SPSN specimens, with the A/H1N1 subtype predominating. We aim to derive interim vaccine effectiveness (VE) estimates in January and will pause further progress reports while focusing on that effort. Sentinels are urged to continue submitting specimens with completed questionnaires, and to stay tuned.

Figure 1. Tally* of specimens submitted to the SPSN overall and by province, **epi-weeks 44-51, 2023** (N=2375)



*All tallies are subject to change as the season progresses and data become more complete.

For the distribution of SPSN specimens by province and age group, see [Table 1](#).

SPSN specimens with at least one respiratory pathogen detected, epi-weeks 44-51, 2023: 1425/2375 (60%)

SPSN respiratory virus detections, all provinces^a combined, by period and order of frequency:

Cumulatively, since epi-week 44, N = 2375	Since last bulletin, epi-weeks 49-50 ^b , N = 842
Influenza viruses ^c : 423 (18%)	Influenza viruses: 228 (27%)
Respiratory syncytial virus (RSV): 294 (12%)	SARS-CoV-2: 105 (13%)
Enteroviruses (EV/RV): 292 (12%)	Enteroviruses (EV/RV): 87 (10%)
SARS-CoV-2: 286 (12%)	Respiratory syncytial virus (RSV): 79 (9%)
Other ^d : 228 (10%)	Other ^d : 87 (10%)

^aVaries by province; see [Figures 3a-d](#) for province-specific findings.

^bMost recent week excluded owing to potential delay in assay results.

^cOf 423 influenza viruses detected cumulatively, and typed to date, 401/423 are influenza A and 23/423 are influenza B. Of influenza A viruses subtyped (n=401), 313/401 (78%) are A(H1) and 53/401 (13%) are A(H3).

^dOther: parainfluenza, seasonal coronaviruses, human metapneumovirus, adenovirus. In British Columbia and Quebec, multiplex testing additionally includes *Mycoplasma pneumoniae* of which 6/915 (0.7%), 4 children and 2 adults, were positive since epi-week 44.

SPSN weekly respiratory virus findings since epi-week 35 are shown in [Figure 2](#), and **by province** in [Figure 3](#).

SPSN influenza-negative controls since epi-week 44, reporting 2023-24 influenza vaccination: 29% (537/1836*)

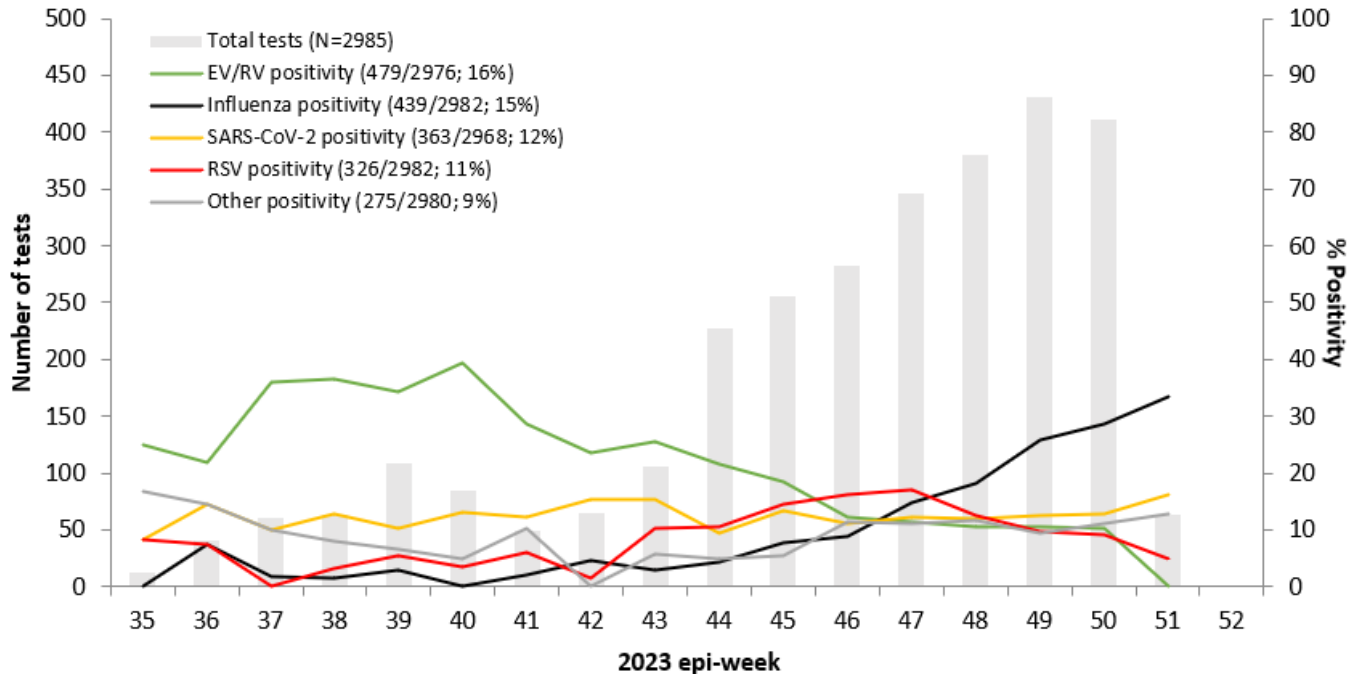
*Denominator includes specimens collected from SPSN patients with acute respiratory illness who tested negative for influenza virus and for whom 2023-24 influenza vaccine status (yes/no) was reported; numerator represents those reporting vaccine receipt.

For more respiratory pathogen surveillance globally, including from among [general laboratory specimens](#) in British Columbia, see references with hyperlinks provided in [Table 2](#).

Below are the vaccine components recommended by the [World Health Organization](#) for the 2023-24 season:

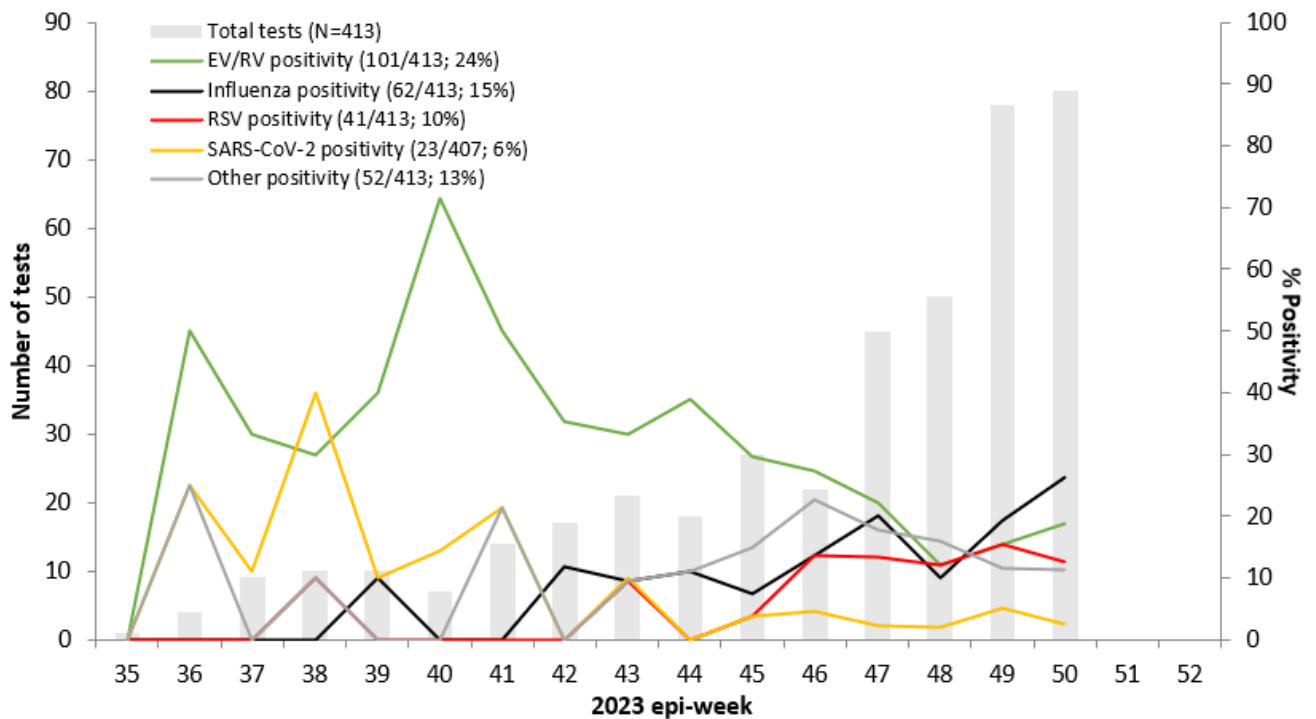
Season	A(H1N1)pdm09	A(H3N2)	B/Victoria*	B/Yamagata
2023-24 (current)	A/Victoria/4897/2022 (clade 6B.1A.5a.2a.1; "5a.2a.1")	A/Darwin/9/2021 (clade 3C.2a1b.2a.2a; "2a")	B/Austria/1359417/2021 (clade V1A.3a.2; "3a.2")	B/Phuket/3073/2013 (clade Y3)

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

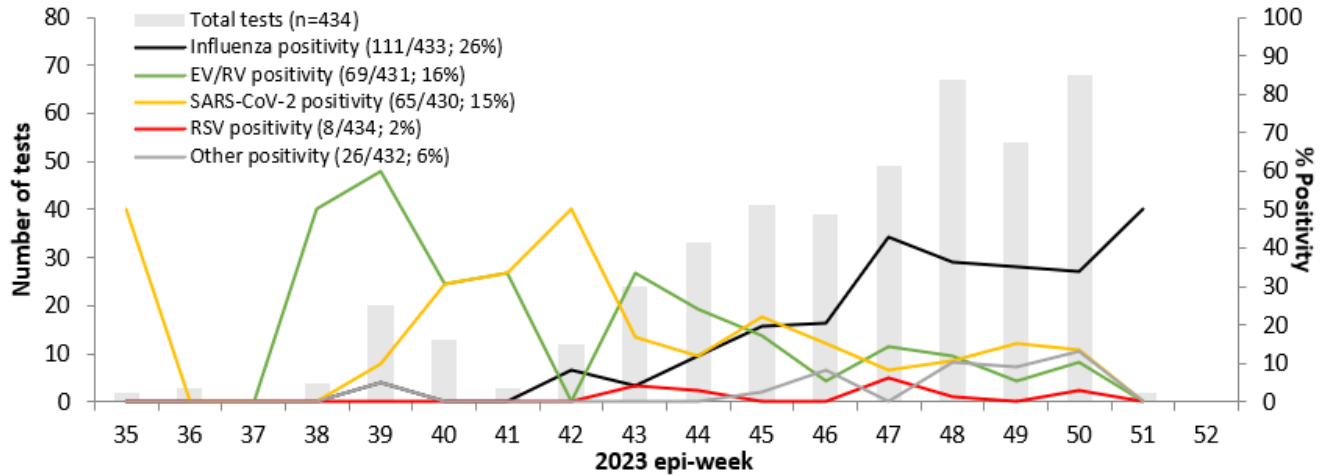
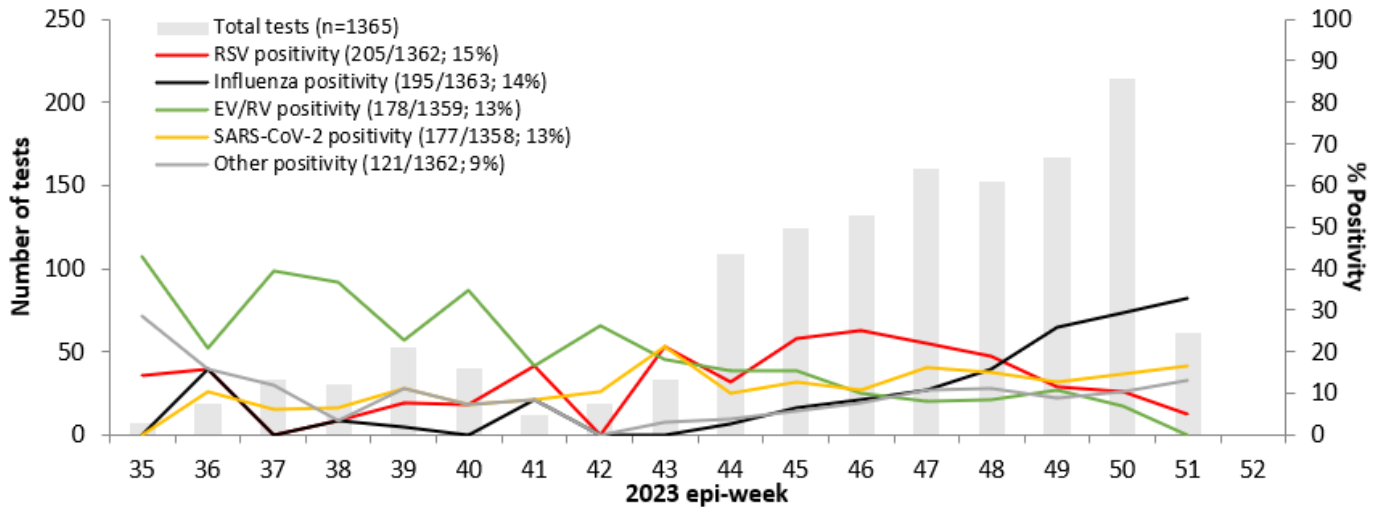
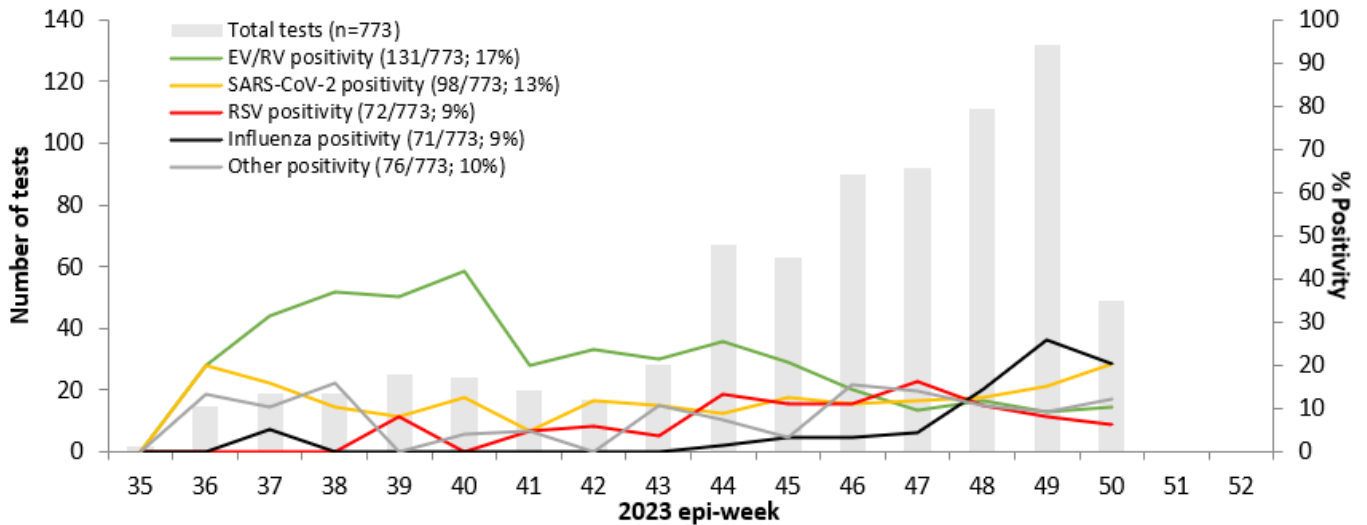
Figure 2. Weekly testing and percent positivity among SPSN specimens overall, epi-weeks 35-51, 2023


Among SPSN specimens overall, a total of 94 were diagnosed with co-infections, mostly involving EV/RV and another respiratory virus. In British Columbia and Quebec, multiplex testing additionally includes *Mycoplasma pneumoniae* of which 6/1186 (0.5%) were positive since epi-week 35, 4 children and 2 adults, both since epi-week 44 (6/924; 0.6%).

Figure 3. Weekly testing and percent positivity among SPSN specimens by province, epi-weeks 35-51, 2023

a) British Columbia


Note: Figure 2 and Figure 3 indicate specimens from both 2022-23 and 2023-24 requisitions. All values for the most recent epi-weeks are subject to change.

b) Alberta

c) Ontario

d) Quebec


Note: Figure 2 and Figure 3 indicate specimens from both 2022-23 and 2023-24 requisitions. All values for the most recent epi-weeks are subject to change.

Table 1. Specimens submitted to the SPSN by province and age group, **epi-weeks 44-51**, 2023 (N=2375)

Province	<5 years	5-8 years	9-19 years	20-49 years	50-64 years	65+ years	Unknown	Total
AB	26	21	47	146	63	46	0	349
BC	39	30	50	93	45	54	0	311
ON	192	88	112	366	171	181	1	1111
QC	85	30	42	211	136	100	0	604
Total	342	169	251	816	415	381	1	2375

Table 2. Additional resources for respiratory pathogen surveillance

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