

RESPIRATORY VIRUS DETECTION REPORT

December 3 to December 9, 2023
(Surveillance Week 2023-49)



Please note that the Respiratory Virus Detection Surveillance System (RVDSS) is a sentinel laboratory surveillance system that does not capture all respiratory virus testing performed in Canada; differences may exist between the data presented in this report and provincial/territorial epidemiological reports. SARS-CoV-2 laboratory data is included in this report to facilitate the comparison of positivity with other respiratory viruses. Interpretation should be made with caution as testing practices differ among viruses.

For additional SARS-CoV-2 surveillance information, please refer to the [COVID-19 epidemiology update](#).

Overall Summary

In week 49 (week ending December 9, 2023) in Canada, participating RVDSS laboratories reported 8,112 detections of SARS-CoV-2 from 46,500 tests (17.5% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 8,664 to 32,760 tests), activity of both flu and RSV is increasing, as is expected at this time of year.

- Following a short period of increase, SARS-CoV-2 national percent positivity in week 49 was slightly lower than the previous 2 weeks. Trends currently vary by region.
- At the national level, activity of influenza is increasing, but is within expected levels for this time of year (4,635 detections; 14.2% positive). Influenza percent positivity currently varies greatly by region.
- Activity of RSV continues to increase but is within expected levels for this time of year (2,223 detections; 7.5% positive).
- Activity of all other non-SARS-CoV-2 respiratory viruses is low and near expected levels typical of this time of year.
- 35/35 sentinel laboratories reported surveillance data

Abbreviations

ADV: Adenovirus

Atl: Atlantic Canada

BC: British Columbia

Can: Canada

EORLA: Eastern Ontario Regional Laboratory Association

EV/RV: Enterovirus/Rhinovirus

Flu: Influenza

Flu A(H1N1)pdm09: Influenza A(H1N1)pdm09

Flu A(H3): Influenza A(H3N2)

Flu A (UnS): Influenza A(Unsubtyped)

HCoV: Human coronavirus 229E/OC43/NL63/HKU1

HMPV: Human metapneumovirus

HPIV: Human parainfluenza virus

HSC: Health Sciences Centre

N.C.: Data not collected

N.R.: Data not reported for current week

ON: Ontario

PR: Prairies

P.H.O.L.: Public Health Ontario Laboratory

QC: Quebec

RSV: Respiratory syncytial virus

RVDSS: Respiratory Virus Detection Surveillance System

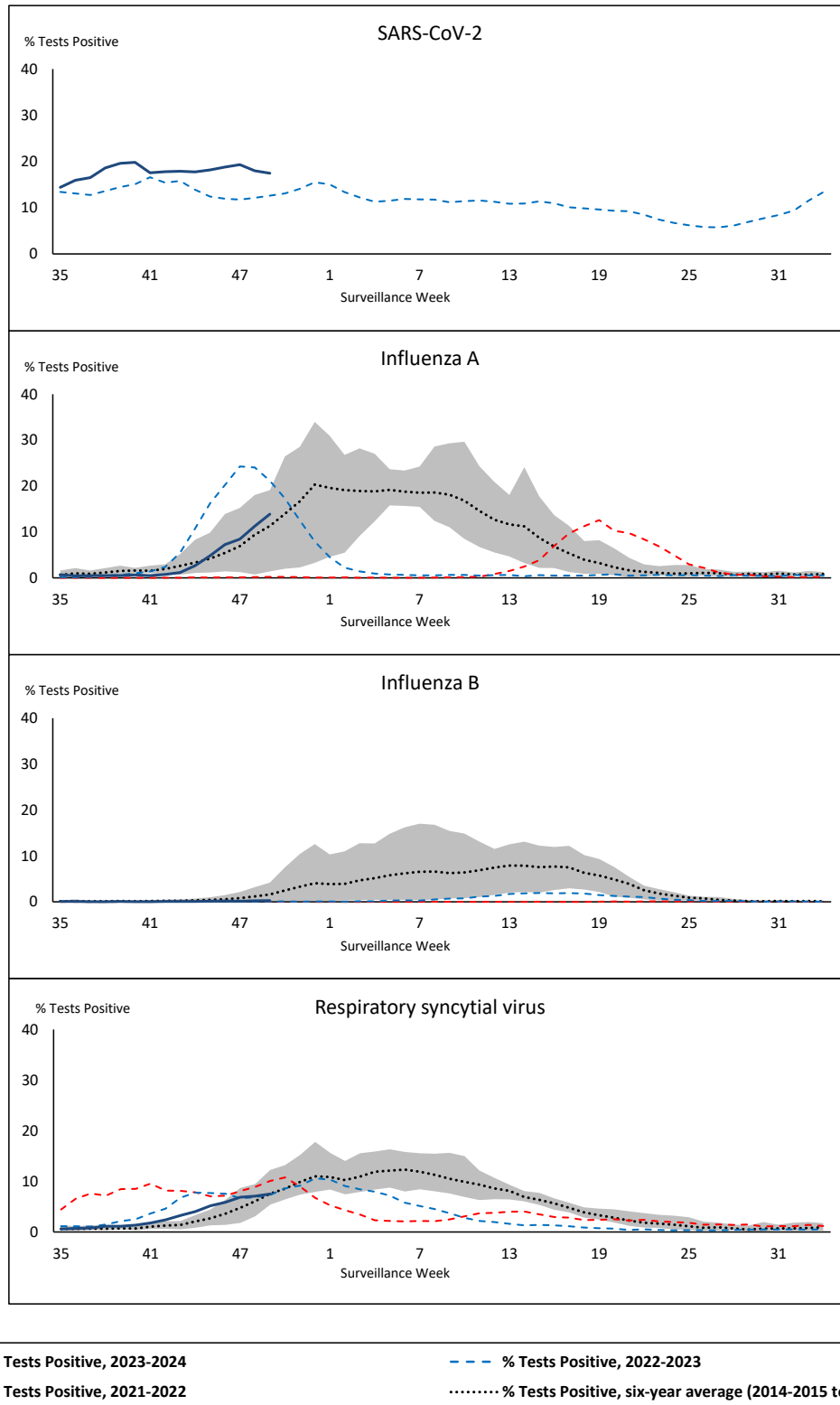
SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2

Terr: Territories of Canada

UHN: University Health Network



Figure 1: Positive severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), influenza, and respiratory syncytial virus tests (%) reported by participating laboratories in Canada by surveillance week compared to average and range from 2014-2015 to 2019-2020 season



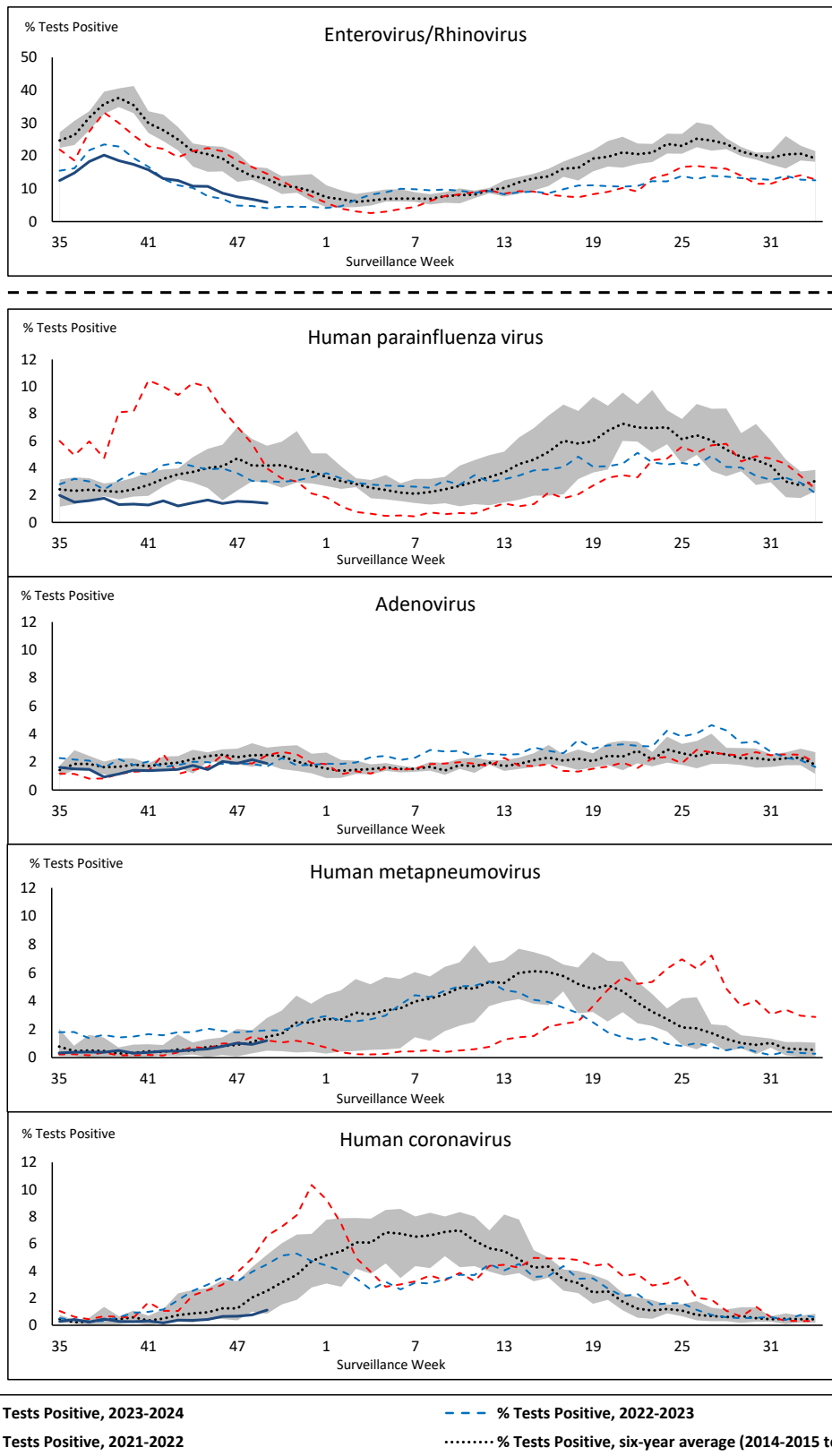
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

Note: Changes to testing practices during the COVID-19 pandemic may cause substantial changes to indicator estimates from previous years. Collection of laboratory testing practice meta-data to understand these changes is ongoing. Interpret trends with caution.

Note: SARS-CoV-2 surveillance was integrated into RVDSS at the beginning of the 2022-2023 season; no prior data is available for historical comparison.

Note: Data from week 11 of the 2019-2020 season onwards are excluded from the historical comparison due to the COVID-19 pandemic.

Figure 2: Positive tests (%) of other respiratory viruses reported by participating laboratories in Canada by surveillance week compared to average and range from 2014-2015 to 2019-2020 season



Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

Note: Changes to testing practices during the COVID-19 pandemic may cause substantial changes to indicator estimates from previous years. Collection of laboratory testing practice meta-data to understand these changes is ongoing. Interpret trends with caution.

Note: Data from week 11 of the 2019-2020 season onwards are excluded from the historical comparison due to the COVID-19 pandemic.

Note: % Tests Positive scale changes across the dashed line

Table 1: Respiratory virus detections for the week ending December 9, 2023 (surveillance week 2023-49)

Reporting Laboratory	SARS-CoV-2 Tested	SARS-CoV-2 Positive	Flu Tested	A(H1)pdm09 Positive	A(H3) Positive	A(UnS) Positive	Total Flu A Positive	Total Flu B Positive	RSV Tested	RSV Positive	HPIV Tested	HPIV 1 Positive	HPIV 2 Positive	HPIV 3 Positive	HPIV 4 Positive	Other HPIV Positive	ADV Tested	ADV Positive	HMPV Tested	HMPV Positive	EV/RV Tested	EV/RV Positive	HCoV Tested	HCoV Positive	
Newfoundland	715	138	523	0	0	49	49	2	523	40	523	0	3	2	4	0	523	15	523	8	523	27	523	3	
Prince Edward Island	238	50	115	0	0	4	4	0	115	8	19	0	0	0	0	0	19	0	19	0	19	5	19	0	
Nova Scotia	1442	354	983	0	0	48	48	1	864	90	17	0	0	0	0	0	17	1	17	0	17	2	17	0	
New Brunswick	1259	195	1166	87	1	83	171	0	1163	67	109	0	1	0	1	0	109	3	109	0	109	11	109	5	
Atlantic	3654	737	2817	87	1	184	272	3	2665	205	668	0	4	2	5	0	668	19	668	8	668	45	668	8	
Région Nord-Est	1920	347	1739	0	0	143	143	1	668	82	121	0	1	1	0	0	121	11	119	4	N.C.	N.C.	121	3	
Québec-Chaudière-Appalaches	2239	464	1199	0	0	68	68	3	1162	116	557	0	0	2	0	0	576	27	556	12	N.C.	N.C.	445	3	
Centre-du-Québec	2933	706	1130	0	0	83	83	0	774	123	51	0	1	1	1	0	51	2	51	2	N.C.	N.C.	52	3	
Montréal-Laval	3725	845	2237	0	0	145	145	3	1564	170	858	2	2	5	1	0	858	19	866	21	N.C.	N.C.	858	15	
Ouest du Québec	1844	503	457	1	0	35	36	0	454	66	23	0	0	0	1	0	23	2	23	1	N.C.	N.C.	23	0	
Montréal	1488	323	1368	0	0	106	106	3	1305	96	11	0	0	0	0	0	11	0	11	0	N.C.	N.C.	11	0	
Province of Québec	14149	3188	8130	1	0	580	581	10	5927	653	1621	2	4	9	3	0	1640	61	1626	40	N.C.	N.C.	1510	24	
P.H.O.L. - Ottawa	396	144	276	28	1	3	21	1	276	9	153	0	0	0	0	3	153	0	153	3	153	8	153	0	
EOCLA	1740	278	784	0	0	101	101	2	784	71	41	0	0	0	0	0	41	0	41	0	41	7	41	1	
P.H.O.L. - Kingston	225	85	116	2	0	0	2	0	116	17	90	0	0	0	0	1	90	0	90	0	90	4	90	0	
UHN / Mount Sinai Hospital	1462	156	659	3	1	30	34	1	659	21	48	0	0	0	0	0	48	0	48	0	48	0	48	0	
P.H.O.L. - Toronto	573	165	1046	49	46	5	53	1	1046	74	976	0	0	0	0	32	977	12	976	14	976	60	976	9	
Sick Kids Hospital - Toronto	176	19	137	8	4	0	12	0	137	21	137	2	0	1	0	0	137	4	137	3	137	22	137	1	
Shared Hospital Laboratory	2239	320	1743	40	38	14	92	6	1742	103	1722	0	0	0	0	8	1722	16	1728	3	1728	31	1728	7	
P.H.O.L. - Sault Ste. Marie	3	2	8	0	0	0	0	0	8	0	8	0	0	0	0	0	8	1	8	0	8	0	8	0	
P.H.O.L. - Timmins	47	12	44	3	1	0	4	0	44	8	35	0	0	0	0	1	35	0	35	0	35	1	35	0	
St. Joseph's - London	1100	206	637	0	0	33	33	0	637	73	56	0	0	0	0	0	56	1	56	0	56	5	56	0	
P.H.O.L. - London	586	224	402	34	1	0	21	1	402	41	319	0	0	0	0	9	319	3	319	1	319	17	319	0	
P.H.O.L. - Orillia	41	25	71	1	0	0	1	0	71	8	57	0	0	0	0	1	57	1	57	0	57	3	57	0	
P.H.O.L. - Thunder Bay	55	23	23	5	0	1	6	0	23	2	17	0	0	0	0	2	17	0	17	1	17	0	17	0	
P.H.O.L. - Sudbury	33	16	46	4	0	0	4	0	46	0	21	0	0	0	0	0	21	0	21	0	21	0	21	0	
P.H.O.L. - Hamilton	325	110	230	5	13	9	18	1	230	11	165	0	0	0	0	6	165	5	165	2	165	17	165	5	
P.H.O.L. - Peterborough	99	32	85	6	4	0	5	1	85	17	59	0	0	0	0	2	59	3	59	0	59	7	59	0	
St. Joseph's - Hamilton	2307	316	2030	0	0	173	173	4	2030	149	2030	0	0	12	0	0	2030	21	2030	10	2030	86	0	0	
Sault Area Hospital	241	41	125	12	0	3	15	0	125	1	97	3	0	0	3	0	97	3	97	0	97	4	97	0	
Province of Ontario	11648	2174	8462	200	109	372	595	18	8461	626	6031	5	0	13	3	65	6032	70	6037	37	6037	272	4007	23	
Manitoba	2055	320	1407	0	14	248	262	2	1407	44	109	0	0	0	1	0	109	7	119	10	109	8	119	3	
Saskatchewan	2876	363	2641	0	0	811	811	19	2302	65	532	3	0	1	2	0	532	4	532	28	532	21	532	3	
Alberta	7459	860	5452	1051	39	56	1458	32	5089	288	1133	2	4	9	0	0	1133	15	1114	1	1125	71	1133	20	
Prairies	12390	1543	9500	1051	53	1115	2531	53	8798	397	1774	5	4	10	3	0	1774	26	1765	39	1766	100	1784	26	
British Columbia	4272	440	3590	87	12	4	471	4	3475	325	746	1	6	4	5	0	746	27	746	7	695	123	695	16	
Yukon	55	4	41	0	0	0	6	0	41	3	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	
Northwest Territories	56	4	55	23	0	0	23	0	55	4	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	55	3	N.C.	N.C.
Nunavut	276	22	165	0	3	65	68	0	165	10	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	
Territories	387	30	261	23	3	65	97	0	261	17	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	55	3	N.C.	N.C.	
CANADA	46500	8112	32760	1449	178	2320	4547	88	29587	2223	10840	13	18	38	19	65	10915	206	10897	131	9221	543	8664	97	

The data in the RVDSS report represent surveillance data available at the time of writing. Data missing from the current week are denoted by N.R. Data not collected by reporting lab denoted by N.C.

Some specimens from Yukon (YT) are sent to reference laboratories in British Columbia and reported results reflect specimens identified as originating from YT.

Results from British Columbia comprise of specimens from the following sites: Children's and Women's Hospital Laboratory, Fraser Health Medical Microbiology Laboratory, Island Health, Providence Health Care, Vancouver Coastal Health sites, Victoria General Hospital, BCCDC Public Health Laboratory, Interior Health Authority sites and Northern Health Authority sites.

Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests positive.

Delays in the reporting of data may cause data to change retrospectively.

Table 2: Cumulative respiratory virus detections from August 27, 2023 to December 9, 2023 (surveillance weeks 2023-35 to 2023-49)

Reporting Laboratory	SARS-CoV-2 Tested	SARS-CoV-2 Positive	Flu Tested	A(H1)pdm09 Positive	A(H3) Positive	A(UnS) Positive	Total Flu A Positive	Total Flu B Positive	RSV Tested	RSV Positive	HPIV Tested	HPIV 1 Positive	HPIV 2 Positive	HPIV 3 Positive	HPIV 4 Positive	Other HPIV Positive	ADV Tested	ADV Positive	HMPV Tested	HMPV Positive	EV/RV Tested	EV/RV Positive	HCoV Tested	HCoV Positive	
Newfoundland	8280	1625	5532	0	0	199	199	4	5532	137	5532	6	21	9	55	0	5532	108	5532	32	5532	808	5532	21	
Prince Edward Island	3097	472	1016	0	0	14	14	0	1016	18	150	0	0	0	5	0	149	6	139	0	149	60	133	1	
Nova Scotia	21480	5386	10216	0	0	140	140	9	9779	351	528	15	2	1	9	0	528	24	521	2	528	166	527	0	
New Brunswick	13847	2083	11278	161	5	192	358	2	11070	219	1092	7	4	0	19	0	1092	34	1092	0	1092	277	1092	10	
Atlantic	46704	9566	28042	161	5	545	711	15	27397	725	7302	28	27	10	88	0	7301	172	7284	34	7301	1311	7284	32	
Région Nord-Est	24490	4715	18446	0	0	241	241	2	5438	278	972	14	9	5	14	0	972	54	954	27	N.C.	N.C.	972	6	
Québec-Chaudière-Appalaches	32968	6173	10976	0	0	128	128	13	10947	759	5059	17	8	4	9	0	5282	240	5060	88	N.C.	N.C.	4609	18	
Centre-du-Québec	35257	7266	9485	0	0	202	202	8	7385	668	591	12	8	6	6	0	591	31	591	16	N.C.	N.C.	606	5	
Montréal-Laval	47949	8478	21769	0	0	358	358	14	18584	1230	10757	85	34	48	21	0	10757	224	10789	163	N.C.	N.C.	10757	93	
Ouest du Québec	26608	6739	7781	2	0	106	108	11	7759	490	318	9	3	2	6	0	318	24	318	5	N.C.	N.C.	318	1	
Montréal	23677	4668	13471	0	0	266	266	16	12682	644	95	1	0	0	1	0	95	3	95	0	N.C.	N.C.	95	0	
Province of Québec	190949	38039	81928	2	0	1301	1303	64	62795	4069	17792	138	62	65	57	0	18015	576	17807	299	N.C.	N.C.	17357	123	
P.H.O.L. - Ottawa	5698	2183	3445	73	8	7	51	1	3444	70	2062	0	0	0	0	30	2062	3	2062	13	2062	316	2062	24	
EORLA	20730	2712	7908	0	0	268	268	11	7908	813	494	2	3	2	3	0	469	4	494	1	494	120	494	3	
P.H.O.L. - Kingston	3839	1284	1944	5	0	0	4	0	1944	84	1484	0	0	0	0	30	1484	8	1484	0	1484	267	1484	1	
UHN / Mount Sinai Hospital	16362	1595	9236	37	1	44	82	16	9236	102	372	0	0	4	1	0	372	1	372	0	372	18	372	1	
P.H.O.L. - Toronto	9455	3270	14915	290	140	19	327	8	14914	417	13486	0	0	0	0	392	13492	153	13481	84	13486	2046	13481	53	
Sick Kids Hospital - Toronto	1894	145	1633	31	25	20	76	1	1633	225	1633	13	7	12	13	0	1633	41	1633	10	1633	327	1633	9	
Shared Hospital Laboratory	22209	2561	19995	141	103	26	270	14	19997	933	19941	0	0	0	0	120	19939	166	19955	26	19982	1001	19957	46	
P.H.O.L. - Sault Ste. Marie	209	156	171	0	0	0	0	0	171	1	104	0	0	0	0	1	104	1	104	0	104	16	104	0	
P.H.O.L. - Timmins	536	184	417	4	1	0	5	0	417	25	335	0	0	0	0	13	335	4	335	0	335	36	335	0	
St. Joseph's - London	12528	2029	3741	0	0	82	82	4	3741	331	1125	0	0	0	0	13	1142	13	1142	1	1142	161	1142	4	
P.H.O.L. - London	7873	2740	5281	91	15	8	62	3	5280	245	4154	0	0	0	0	90	4154	24	4154	5	4154	542	4154	3	
P.H.O.L. - Orillia	293	88	668	4	1	0	5	0	667	48	637	0	0	0	0	17	637	12	637	3	637	126	637	0	
P.H.O.L. - Thunder Bay	952	348	477	6	0	1	7	0	477	2	389	0	0	0	0	19	389	3	389	3	389	45	389	1	
P.H.O.L. - Sudbury	371	193	372	4	0	0	4	0	370	1	243	0	0	0	0	4	244	1	243	0	243	36	243	0	
P.H.O.L. - Hamilton	3981	1367	3128	20	14	9	26	2	3128	112	2249	0	0	0	0	62	2249	35	2249	19	2249	393	2249	9	
P.H.O.L. - Peterborough	1184	439	1149	14	7	1	17	2	1149	176	978	0	0	0	0	28	978	22	978	4	978	208	978	3	
St. Joseph's - Hamilton	26882	3108	23077	0	0	384	384	20	23077	1137	23077	0	0	76	0	0	23077	158	23077	63	23077	1799	0	0	
Sault Area Hospital	2506	371	1600	23	3	7	33	0	1593	13	1191	13	0	3	11	0	1191	17	1191	0	1191	159	1201	0	
Province of Ontario	137502	24773	99157	743	318	876	1703	82	99146	4735	73954	28	10	97	28	819	73951	666	73980	232	74012	7616	50915	157	
Manitoba	23910	4508	18326	1	29	603	633	9	18326	174	1179	0	5	6	39	0	1179	66	1726	16	1179	348	1726	10	
Saskatchewan	33942	4583	20178	49	5	3809	3863	49	18936	269	6556	14	5	3	11	0	6556	168	6556	97	6556	848	6556	17	
Alberta	82841	12257	58774	4491	255	239	5551	154	54553	1235	17023	72	51	52	3	0	17019	203	16798	8	16712	2142	17022	116	
Prairies	140693	21348	97278	4541	289	4651	10047	212	91815	1678	24758	86	61	61	53	0	24754	437	25080	121	24447	3338	25304	143	
British Columbia	52656	8722	49071	950	184	57	1840	43	48813	1330	11393	73	82	38	105	0	11397	309	11282	147	10858	2195	10835	79	
Yukon	850	97	511	2	3	0	14	0	511	16	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	
Northwest Territories	369	40	312	43	4	0	47	0	312	7	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	312	64	N.C.	N.C.
Nunavut	1723	206	1068	0	7	103	110	0	1068	43	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
Territories	2942	343	1891	45	14	103	171	0	1891	66	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	312	64	N.C.	N.C.	
CANADA	571446	102791	357367	6442	810	7533	15775	416	331857	12603	135199	353	242	271	331	819	135531	2173	135546	835	116930	14524	111695	534	

The data in the RVDSS report represent surveillance data available at the time of writing. Data not collected by reporting lab denoted by N.C.

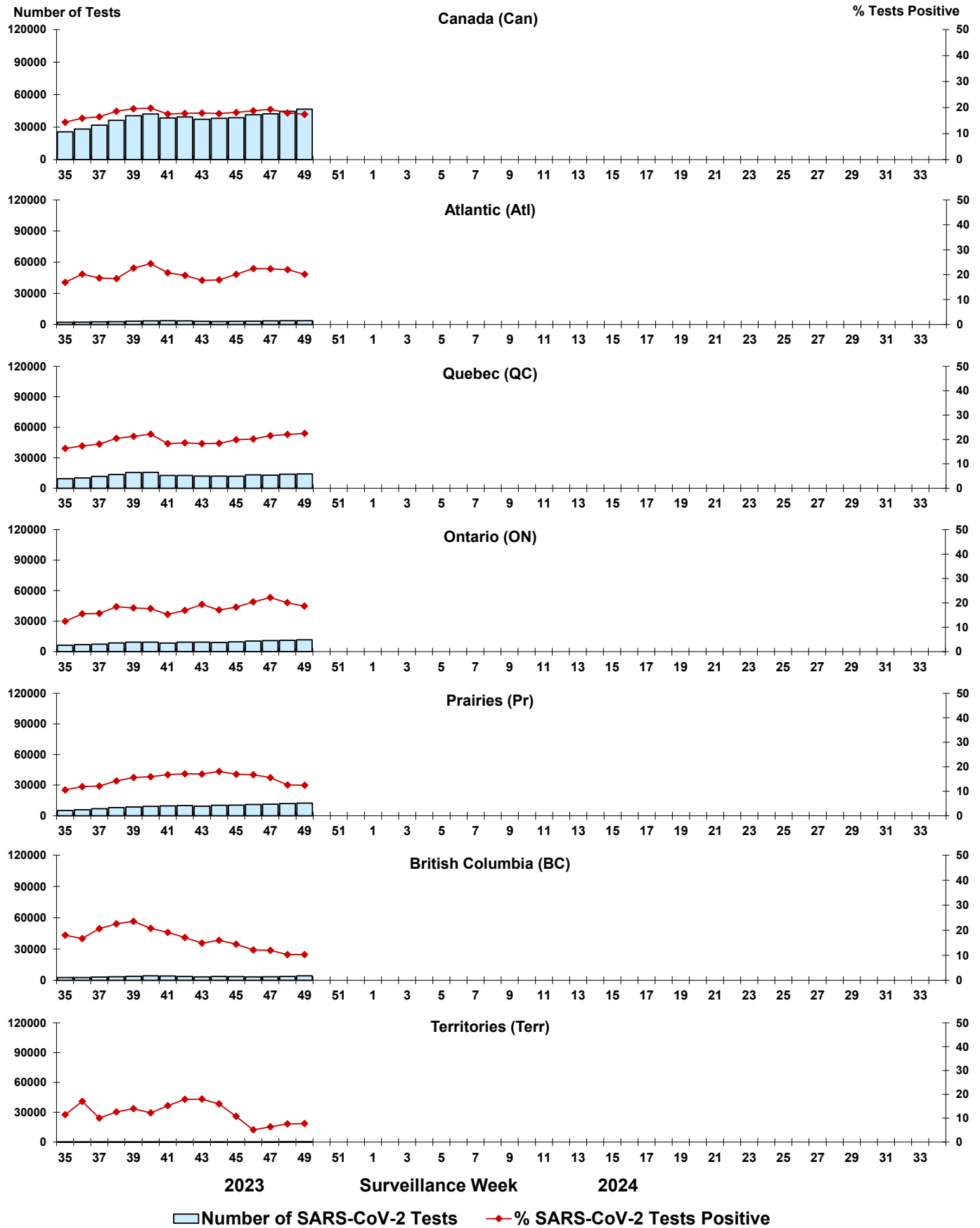
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Results from British Columbia comprise of specimens from the following sites: Children's and Women's Hospital Laboratory, Fraser Health Medical Microbiology Laboratory, Island Health, Providence Health Care, Vancouver Coastal Health sites, Victoria General Hospital, BCCDC Public Health Laboratory, Interior Health Authority sites and Northern Health Authority sites.

Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests positive.

Delays in the reporting of data may cause data to change retrospectively. Due to these delays, the sum of weekly report totals do not add up to cumulative totals.

Figure 3: Positive severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) tests (%) in Canada by region by surveillance week



Note: Differences in positivity between jurisdictions can reflect differences in testing practices. Please interpret with caution.

Figure 4: Positive Influenza (Flu) tests (%) in Canada by region by surveillance week

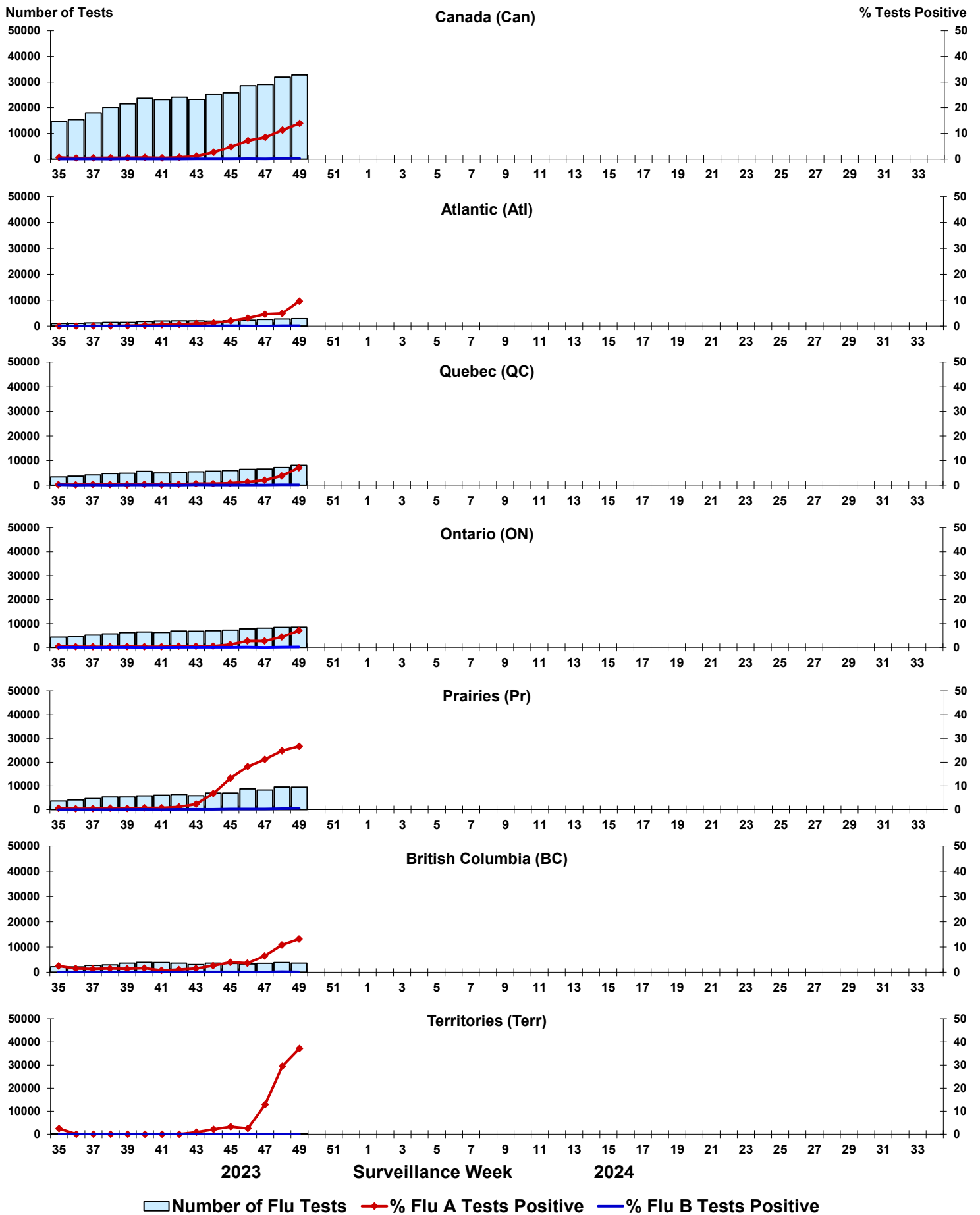


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

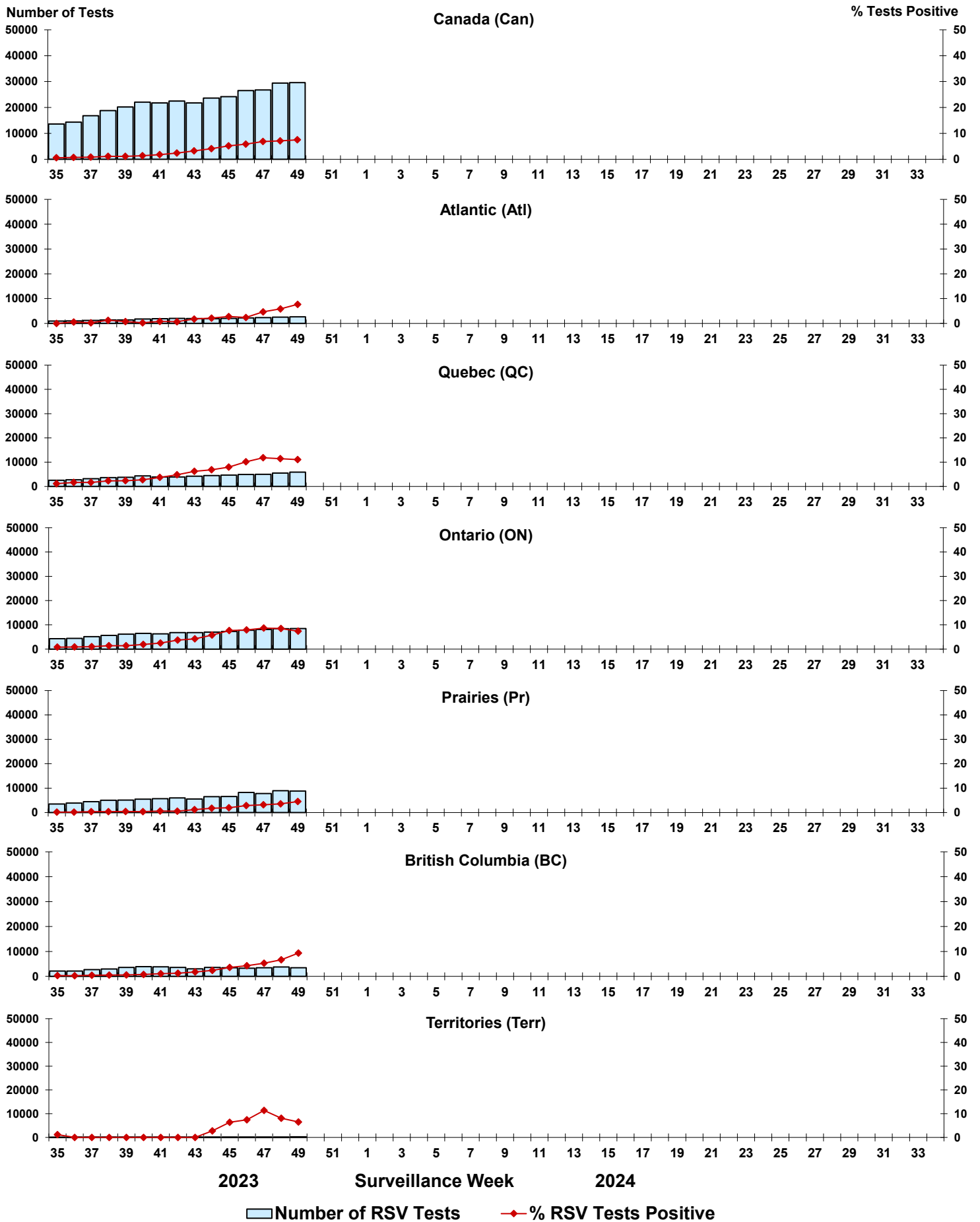


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

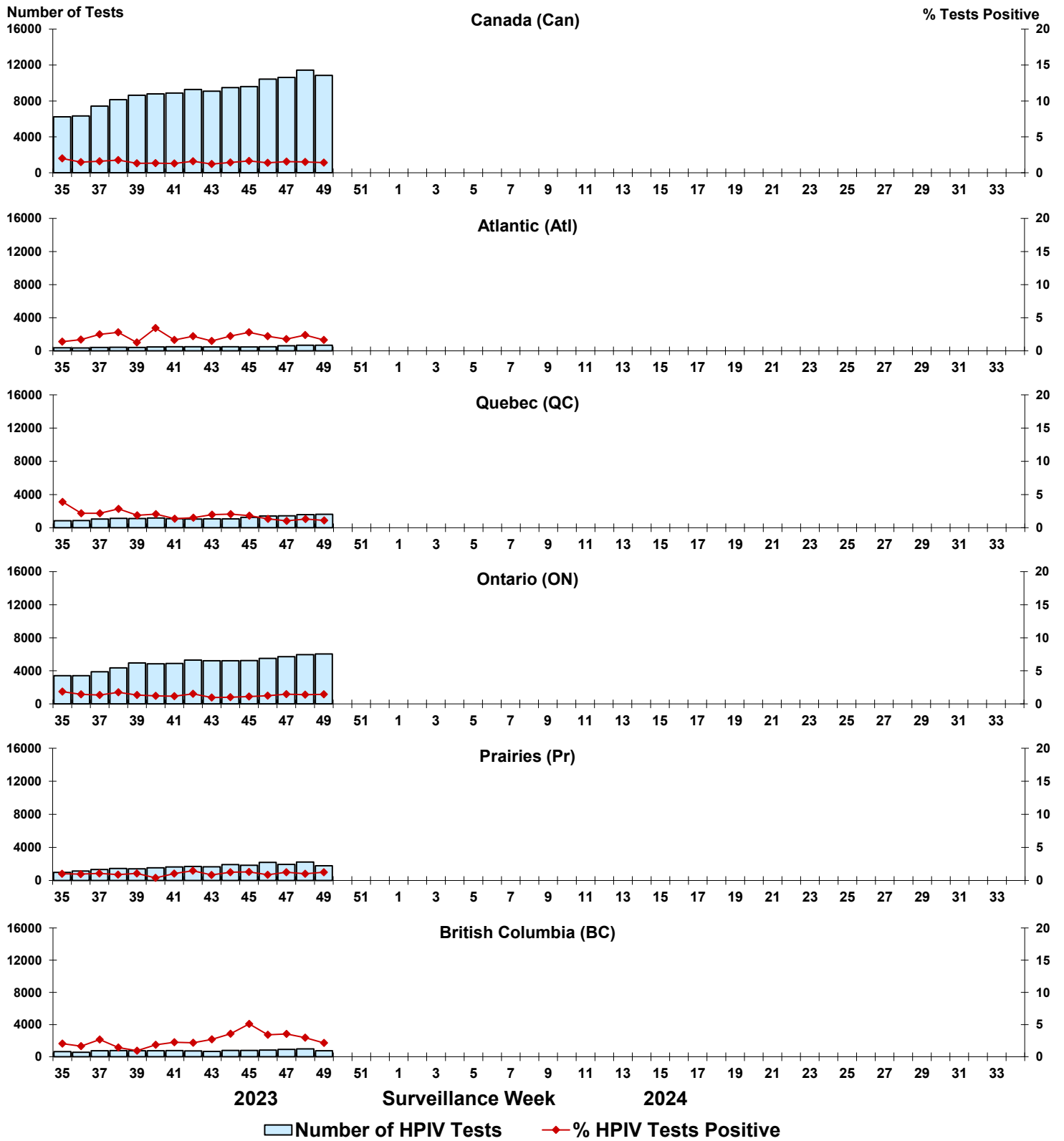


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

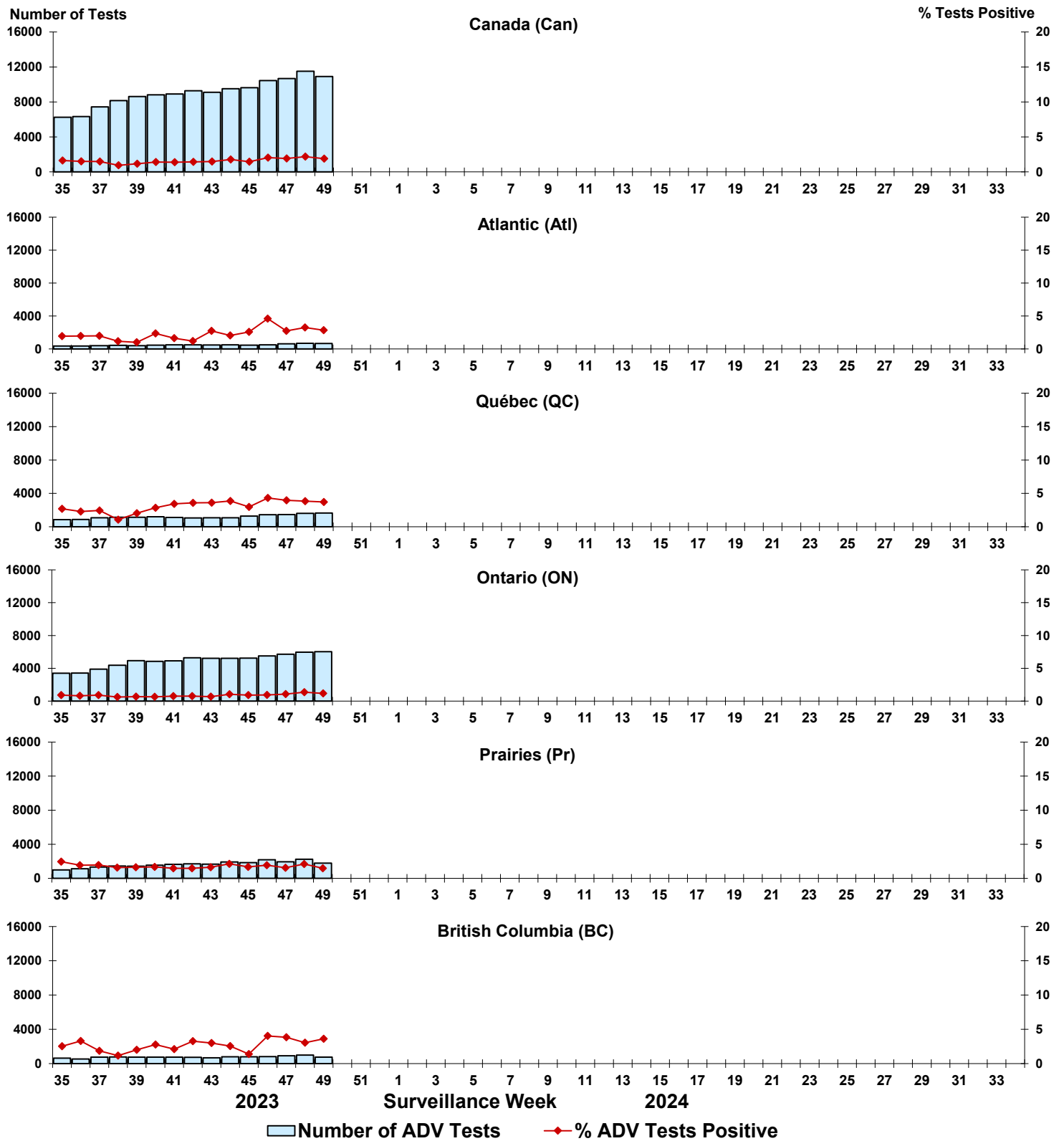


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

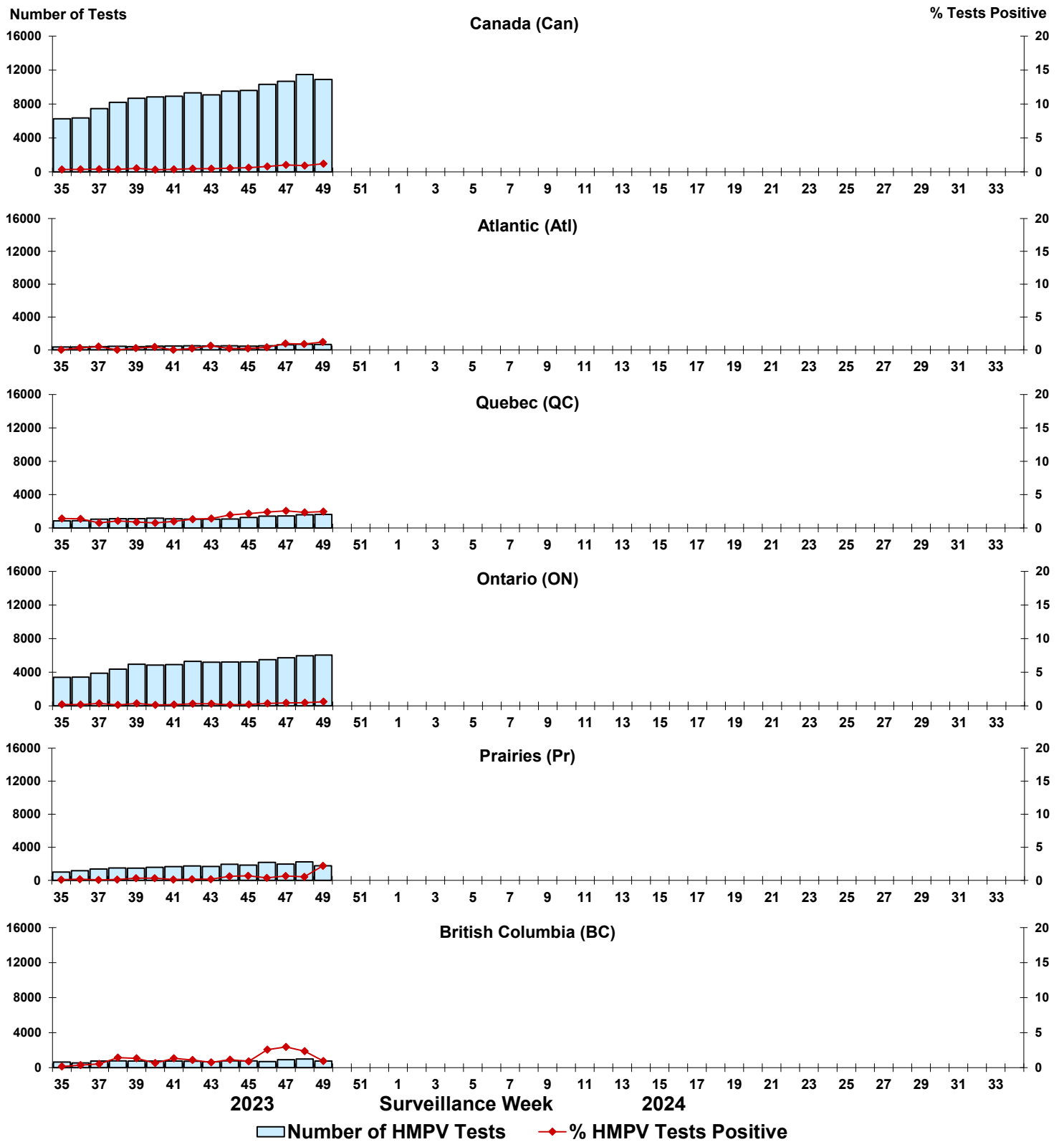


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

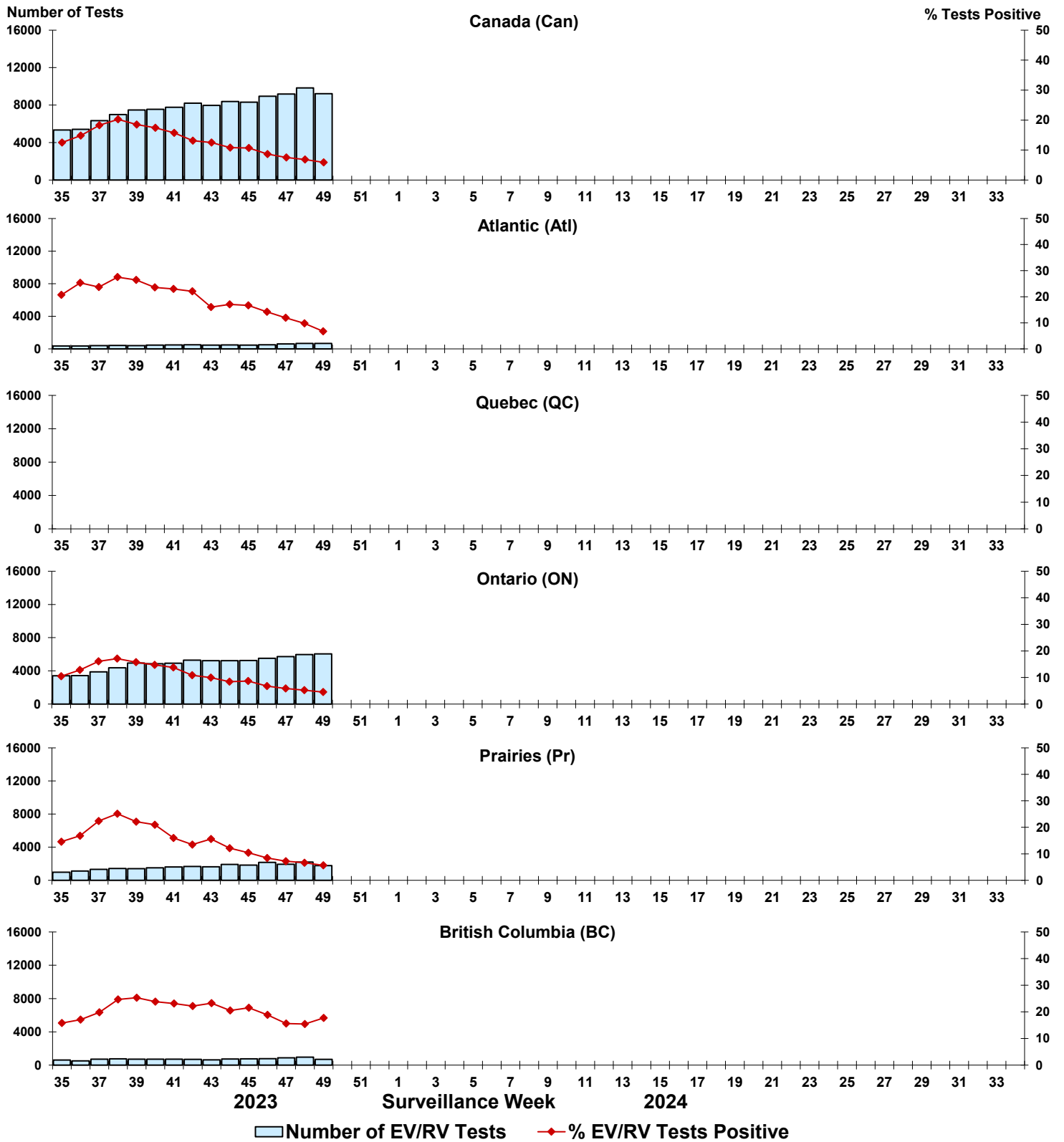


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

