

RESPIRATORY VIRUS DETECTION REPORT

October 15 to October 21, 2023
(Surveillance Week 2023-42)



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 42 (week ending October 21, 2023) in Canada, participating RVDSS laboratories reported 6,975 detections of SARS-CoV-2 from 39,259 tests (17.8% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 6,410 to 22,389 tests), activity of enterovirus/rhinovirus is highest.

- While there has been an observed increase in national SARS-CoV-2 percent positivity since early-July, some jurisdictions are showing early signs of levelling off or decreasing.
- Activity of enterovirus/rhinovirus is decreasing and remains below expected levels for this time of year (892 detections; 12.9% 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

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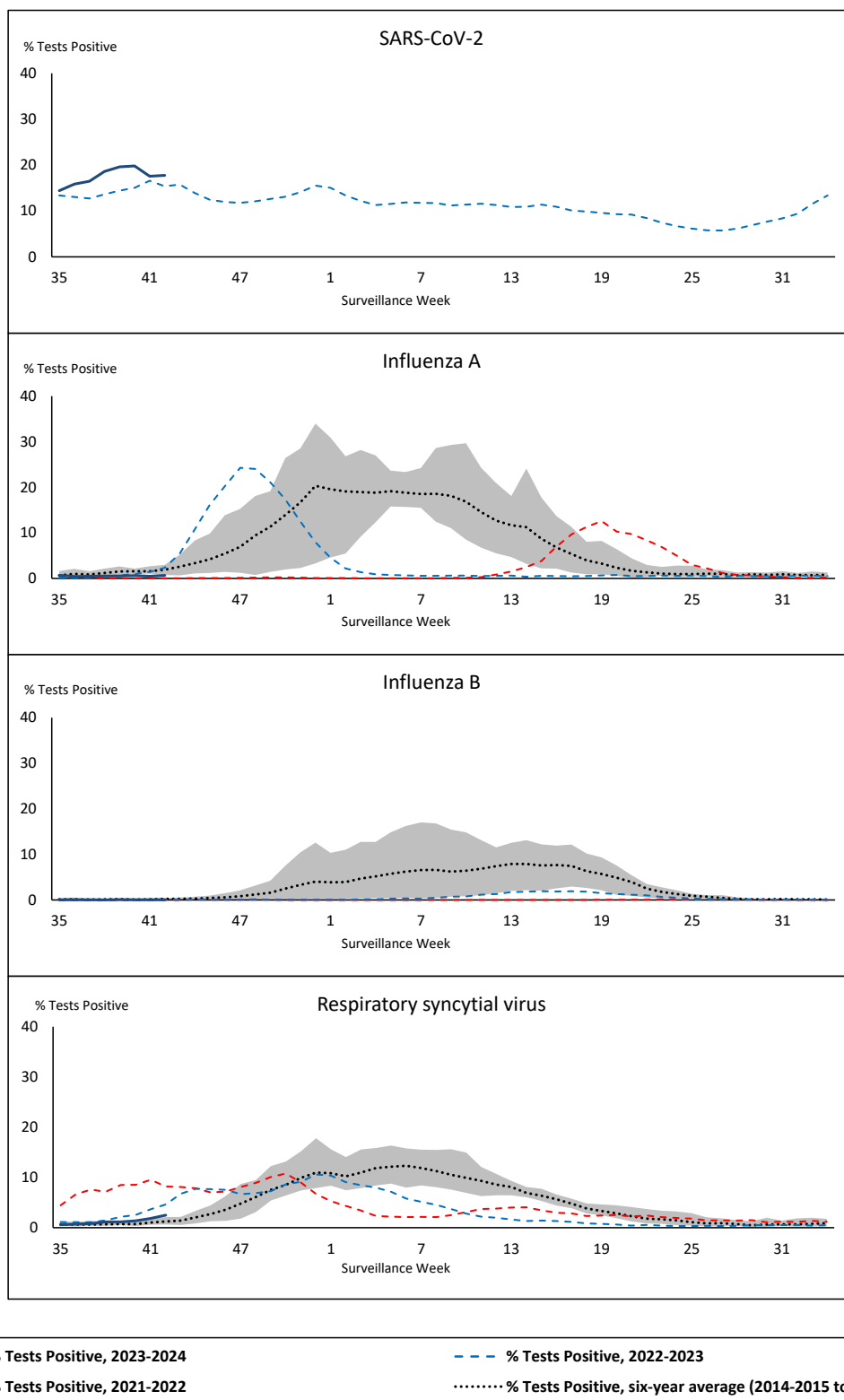


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Figure 1: Positive severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), influenza, and respiratory syncytial virus tests (%) reported by participating laboratories in Canada by surveillance week compared to average and range from 2014-2015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



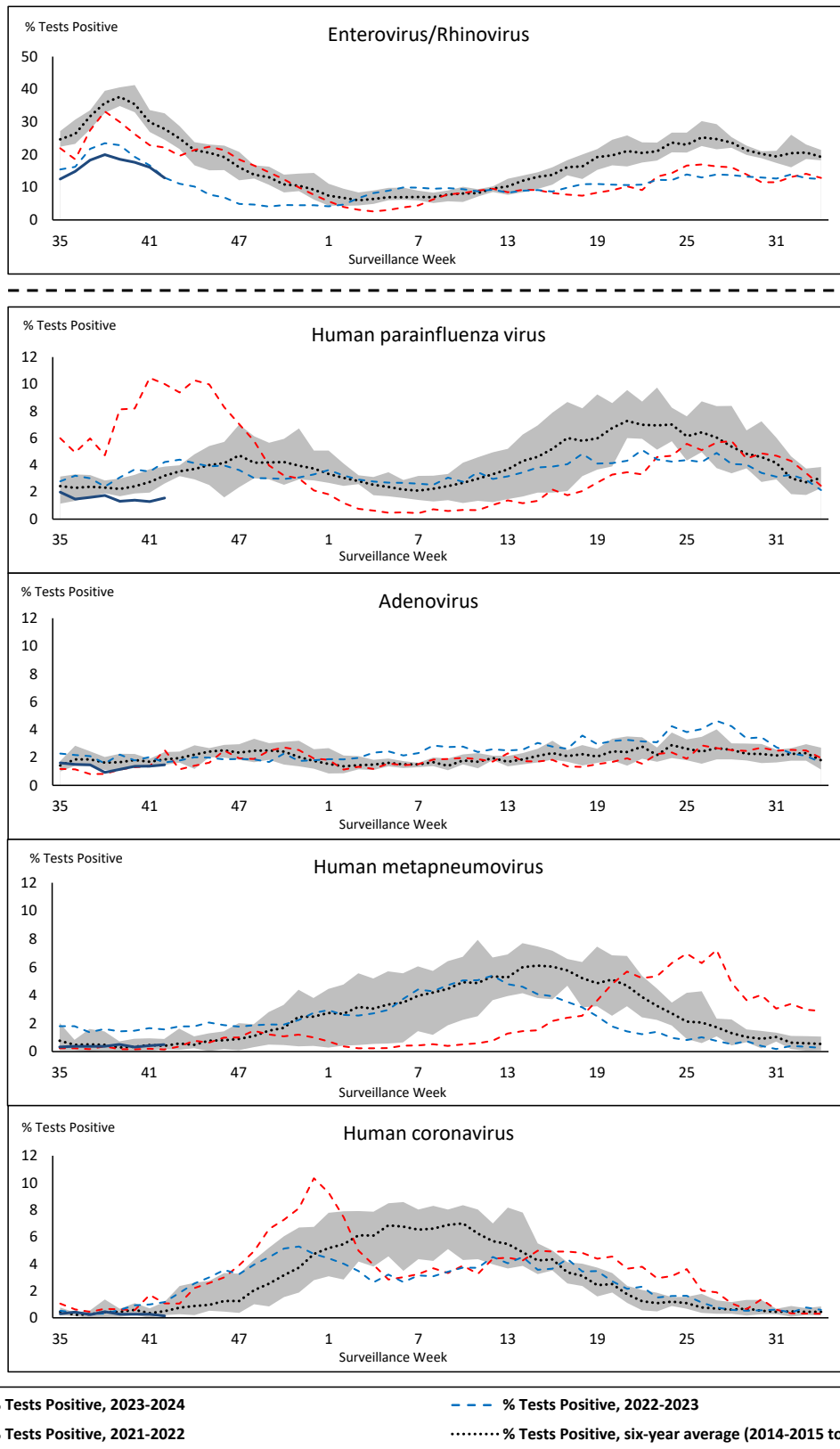
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 October 21, 2023 (surveillance week 2023-42)

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	571	108	387	0	0	4	4	0	387	4	387	0	1	1	5	0	387	3	387	1	387	69	387	1	
Prince Edward Island	278	39	117	0	0	1	1	0	117	0	10	0	0	0	0	0	10	0	10	0	10	6	10	0	
Nova Scotia	1683	383	713	0	0	6	6	1	713	8	34	1	0	0	1	0	34	3	34	0	34	13	34	0	
New Brunswick	961	158	812	3	0	0	3	0	798	2	67	0	1	0	1	0	67	0	67	0	67	22	67	0	
Atlantic	3493	688	2029	3	0	11	14	1	2015	14	498	1	2	1	7	0	498	6	498	1	498	110	498	1	
Région Nord-Est	1749	317	1311	0	0	4	4	0	285	11	59	2	1	0	0	0	59	0	59	4	N.C.	N.C.	59	0	
Québec-Chaudière-Appalaches	2084	369	589	0	0	1	1	0	589	30	244	0	1	0	1	0	252	17	244	2	N.C.	N.C.	244	0	
Centre-du-Québec	2222	435	478	0	0	2	2	1	475	22	36	3	0	0	0	0	36	3	36	1	N.C.	N.C.	36	0	
Montréal-Laval	3026	450	1307	0	0	5	5	0	1164	75	683	1	2	5	0	0	683	15	683	7	N.C.	N.C.	683	5	
Ouest du Québec	1951	457	609	0	0	5	5	0	608	21	12	0	0	0	0	0	12	3	12	0	N.C.	N.C.	12	0	
Montréal	1556	316	813	0	0	2	2	0	765	27	13	0	0	0	0	0	13	0	13	0	N.C.	N.C.	13	0	
Province of Québec	12588	2344	5107	0	0	19	19	1	3886	186	1047	6	4	5	1	0	1055	38	1047	14	N.C.	N.C.	1047	5	
P.H.O.L. - Ottawa	407	145	234	8	0	0	8	0	234	2	149	0	0	0	0	9	149	0	149	1	149	27	149	0	
EORLA	1491	202	534	0	0	3	3	3	534	61	34	0	0	1	0	0	34	0	34	1	34	9	34	1	
P.H.O.L. - Kingston	250	72	162	0	0	0	0	0	162	1	122	0	0	0	0	3	122	1	122	0	122	21	122	0	
UHN / Mount Sinai Hospital	959	98	619	0	0	3	3	1	619	4	27	0	0	1	0	0	27	0	27	0	27	1	27	0	
P.H.O.L. - Toronto	594	213	1055	8	2	0	8	0	1055	17	931	0	0	0	0	29	931	16	931	6	931	171	931	0	
Sick Kids Hospital - Toronto	120	6	112	0	0	0	0	0	112	11	112	4	1	1	0	0	112	3	112	0	112	39	112	0	
Shared Hospital Laboratory	1447	124	1447	1	2	0	3	0	1447	61	1447	0	0	0	0	7	1446	6	1452	0	1452	66	1452	1	
P.H.O.L. - Sault Ste. Marie	23	22	15	0	0	0	0	0	15	0	9	0	0	0	0	0	9	0	9	0	9	0	9	0	
P.H.O.L. - Timmins	24	2	19	0	0	0	0	0	19	0	18	0	0	0	0	1	18	0	18	0	18	1	18	0	
St. Joseph's - London	980	156	170	0	0	0	0	0	170	6	170	0	0	0	0	2	170	1	170	0	170	16	170	0	
P.H.O.L. - London	549	165	373	0	2	0	2	0	373	2	276	0	0	0	0	2	276	0	276	0	276	29	276	0	
P.H.O.L. - Orillia	23	6	55	0	0	0	0	0	55	2	54	0	0	0	0	3	54	2	54	0	54	18	54	0	
P.H.O.L. - Thunder Bay	69	28	34	0	0	0	0	0	34	0	30	0	0	0	0	0	30	0	30	0	30	2	30	0	
P.H.O.L. - Sudbury	19	5	24	0	0	0	0	0	24	0	23	0	0	0	0	0	23	0	23	0	23	8	23	0	
P.H.O.L. - Hamilton	232	87	182	2	0	0	0	0	182	1	147	0	0	0	0	5	147	1	147	4	147	18	147	0	
P.H.O.L. - Peterborough	76	23	98	0	0	0	0	0	98	18	77	0	0	0	0	4	77	1	77	0	77	7	77	0	
St. Joseph's - Hamilton	1866	197	1591	0	0	5	5	1	1591	68	1591	0	0	0	6	0	1591	8	1591	5	1591	130	0	0	
Sault Area Hospital	171	17	110	0	0	0	0	0	110	0	75	0	0	0	0	0	75	1	75	0	75	10	75	0	
Province of Ontario	9300	1568	6834	19	6	11	32	5	6834	254	5292	4	1	9	0	65	5291	40	5297	17	5297	573	3706	2	
Manitoba	1664	280	1347	0	0	7	7	0	1347	9	90	0	0	0	5	0	90	1	131	1	90	31	131	0	
Saskatchewan	2531	404	963	0	0	10	10	0	928	1	402	0	1	0	1	0	402	12	402	1	402	54	402	0	
Alberta	5759	1023	2660	29	5	1	35	4	2385	13	30	0	0	0	0	0	30	1	30	0	29	8	30	0	
Prairies	9954	1707	4970	29	5	18	52	4	4660	23	522	0	1	0	6	0	522	14	563	2	521	93	563	0	
British Columbia	3734	633	3324	18	0	0	36	4	3324	41	634	2	3	2	5	0	634	20	634	6	596	104	596	1	
Yukon	36	5	28	0	0	0	0	0	28	0	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	37	6	32	0	0	0	0	0	32	0	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	32	12	N.C.	N.C.
Nunavut	117	24	65	0	0	0	0	0	65	0	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	190	35	125	0	0	0	0	0	125	0	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	32	12	N.C.	N.C.	
CANADA	39259	6975	22389	69	11	59	153	15	20844	518	7993	13	11	17	19	65	8000	118	8039	40	6944	892	6410	9	

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 October 21, 2023 (surveillance weeks 2023-35 to 2023-42)

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	4036	723	2573	0	0	5	5	0	2573	18	2573	2	6	4	31	0	2573	31	2573	6	2573	546	2573	6	
Prince Edward Island	1506	182	270	0	0	2	2	0	270	0	65	0	0	0	2	0	64	4	54	0	64	35	64	0	
Nova Scotia	11355	2920	4359	0	0	19	19	1	4359	36	300	12	1	1	3	0	300	14	293	1	300	102	300	0	
New Brunswick	6647	998	4578	4	0	5	9	1	4491	19	467	6	2	0	3	0	467	7	467	0	467	134	467	1	
Atlantic	23544	4823	11780	4	0	31	35	2	11693	73	3405	20	9	5	39	0	3404	56	3387	7	3404	817	3404	7	
Région Nord-Est	12893	2362	8907	0	0	12	12	1	1967	45	467	8	4	2	13	0	467	12	465	10	N.C.	N.C.	467	0	
Québec-Chaudière-Appalaches	17708	3216	4222	0	0	15	15	2	4222	126	1898	8	2	1	6	0	1997	93	1898	21	N.C.	N.C.	1898	2	
Centre-du-Québec	17207	3586	2919	0	0	6	6	4	2910	89	232	9	2	2	3	0	232	10	232	4	N.C.	N.C.	232	1	
Montréal-Laval	26299	4311	10210	0	0	42	42	3	9225	260	5532	54	19	20	15	0	5532	89	5541	50	N.C.	N.C.	5532	40	
Ouest du Québec	14639	3670	3904	1	0	19	20	4	3898	103	144	5	3	1	4	0	144	10	144	3	N.C.	N.C.	144	1	
Montréal	12262	2443	6294	0	0	12	12	5	5805	126	53	1	0	0	1	0	53	0	53	0	N.C.	N.C.	53	0	
Province of Québec	101008	19588	36456	1	0	106	107	19	28027	749	8326	85	30	26	42	0	8425	214	8333	88	N.C.	N.C.	8326	44	
P.H.O.L. - Ottawa	3214	1166	1758	9	0	1	10	0	1758	10	1041	0	0	0	0	17	1041	0	1041	1	1041	206	1041	0	
EORLA	9695	1072	3322	0	0	10	10	4	3322	197	239	0	3	2	1	0	214	1	239	1	239	64	239	1	
P.H.O.L. - Kingston	2245	610	982	0	0	0	0	0	982	2	756	0	0	0	0	22	756	2	756	0	756	172	756	1	
UHN / Mount Sinai Hospital	7783	611	4353	0	0	7	7	5	4353	15	178	0	0	3	0	0	178	1	178	0	178	12	178	0	
P.H.O.L. - Toronto	4669	1524	7145	52	21	2	53	0	7145	54	6472	0	0	0	0	200	6473	67	6469	27	6472	1459	6469	18	
Sick Kids Hospital - Toronto	843	56	748	9	6	6	21	1	748	48	748	8	3	4	4	0	748	17	748	4	748	104	748	4	
Shared Hospital Laboratory	9113	914	9113	9	14	0	23	2	9114	209	9112	0	0	0	0	74	9110	64	9126	8	9126	654	9126	13	
P.H.O.L. - Sault Ste. Marie	115	87	115	0	0	0	0	0	115	0	60	0	0	0	0	0	60	0	60	0	60	12	60	0	
P.H.O.L. - Timmins	202	34	162	0	0	0	0	0	162	2	146	0	0	0	0	9	146	2	146	0	146	19	146	0	
St. Joseph's - London	6219	852	552	0	0	0	0	0	552	14	528	0	0	0	0	8	545	4	545	0	545	92	545	1	
P.H.O.L. - London	3795	1209	2548	0	2	0	2	1	2548	15	2012	0	0	0	0	44	2012	10	2012	0	2012	369	2012	0	
P.H.O.L. - Orillia	147	19	300	1	1	0	2	0	299	5	286	0	0	0	0	8	286	6	286	2	286	81	286	0	
P.H.O.L. - Thunder Bay	497	190	261	0	0	0	0	0	261	0	205	0	0	0	0	5	205	1	205	1	205	34	205	1	
P.H.O.L. - Sudbury	134	46	154	0	0	0	0	0	152	0	117	0	0	0	0	1	118	1	117	0	117	32	117	0	
P.H.O.L. - Hamilton	2091	609	1586	3	1	0	1	0	1586	16	1124	0	0	0	0	39	1124	12	1124	11	1124	281	1124	1	
P.H.O.L. - Peterborough	595	194	521	0	0	0	0	1	521	43	453	0	0	0	0	13	453	5	453	1	453	123	453	2	
St. Joseph's - Hamilton	13158	1425	11077	0	0	22	22	9	11077	199	11077	0	0	30	0	0	11077	65	11077	30	11077	1097	0	0	
Sault Area Hospital	871	101	638	0	1	0	1	0	631	2	512	0	0	2	0	0	512	6	512	0	512	101	522	0	
Province of Ontario	65386	10719	45335	83	46	48	152	23	45326	831	35066	8	6	41	5	440	35058	264	35094	86	35097	4912	24028	42	
Manitoba	11745	1987	9156	0	1	22	23	5	9156	27	524	0	4	4	18	0	524	28	853	1	524	231	853	3	
Saskatchewan	13940	1707	6071	0	0	26	26	3	5911	27	2489	3	5	0	6	0	2489	73	2468	16	2439	520	2489	7	
Alberta	37761	5669	22922	156	27	7	190	15	21118	83	5203	13	15	5	3	0	5203	51	5187	0	5114	942	5203	24	
Prairies	63446	9363	38149	156	28	55	239	23	36185	137	8216	16	24	9	27	0	8216	152	8508	17	8077	1693	8545	34	
British Columbia	27658	5522	24534	216	37	14	337	12	24517	167	5602	22	18	15	48	0	5602	129	5602	49	5327	1130	5304	18	
Yukon	465	61	254	0	1	0	2	0	254	0	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	160	24	124	0	0	0	0	0	124	0	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	124	44	N.C.	N.C.
Nunavut	698	100	467	0	0	0	0	0	467	1	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	1323	185	845	0	1	0	2	0	845	1	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	124	44	N.C.	N.C.
CANADA	282365	50200	157099	460	112	254	872	79	146593	1958	60615	151	87	96	161	440	60705	815	60924	247	52029	8596	49607	145	

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.

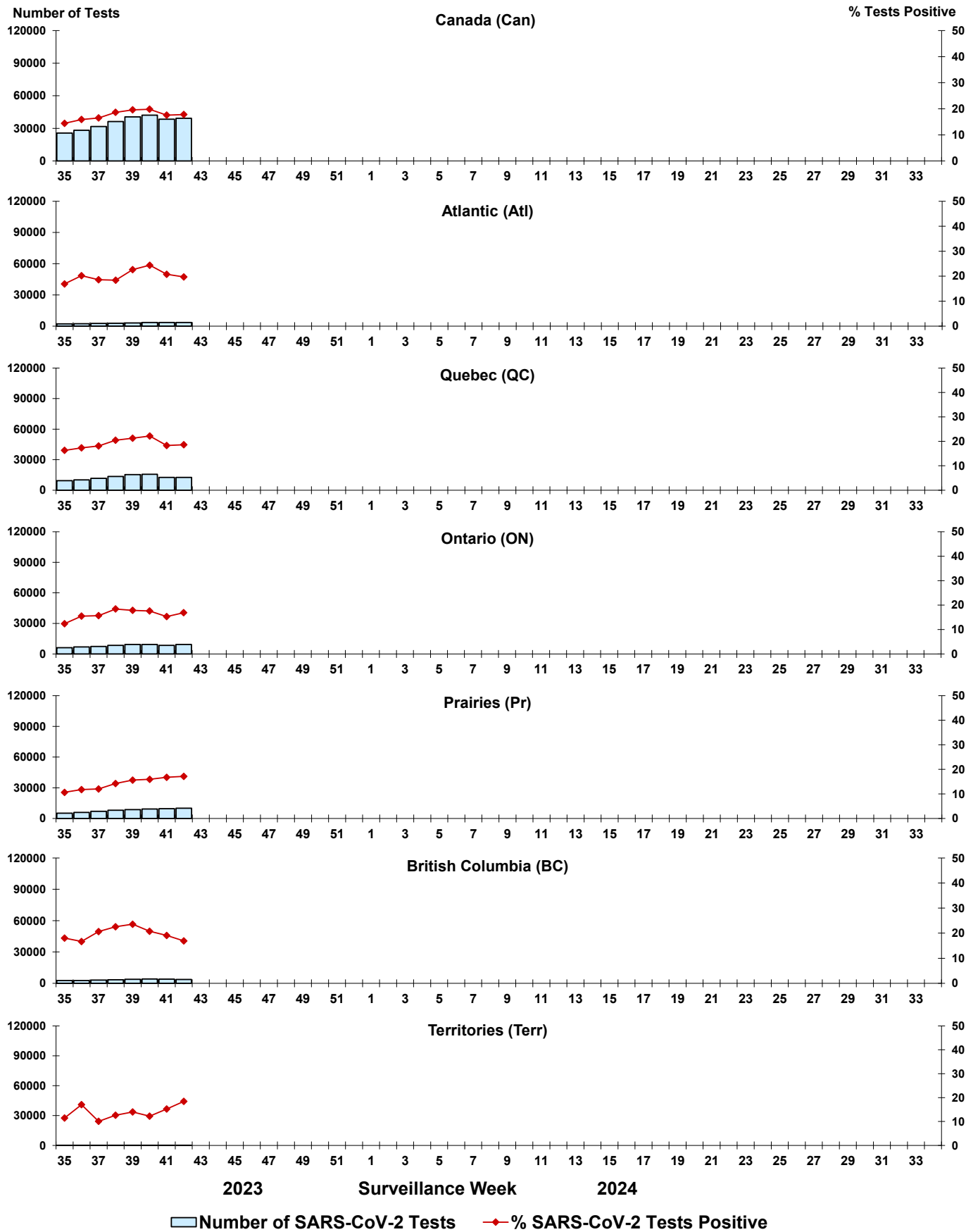
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Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests positive.

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

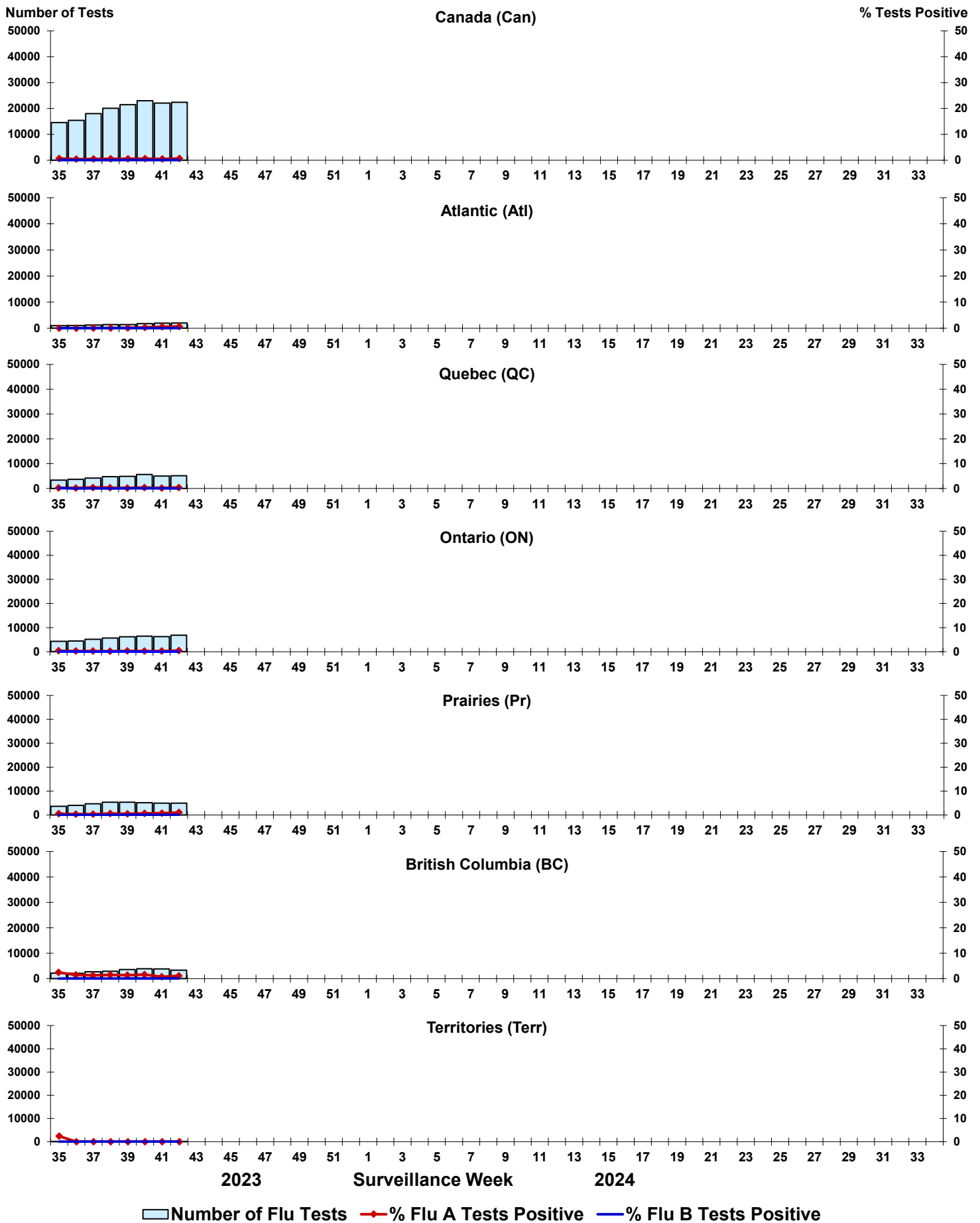


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

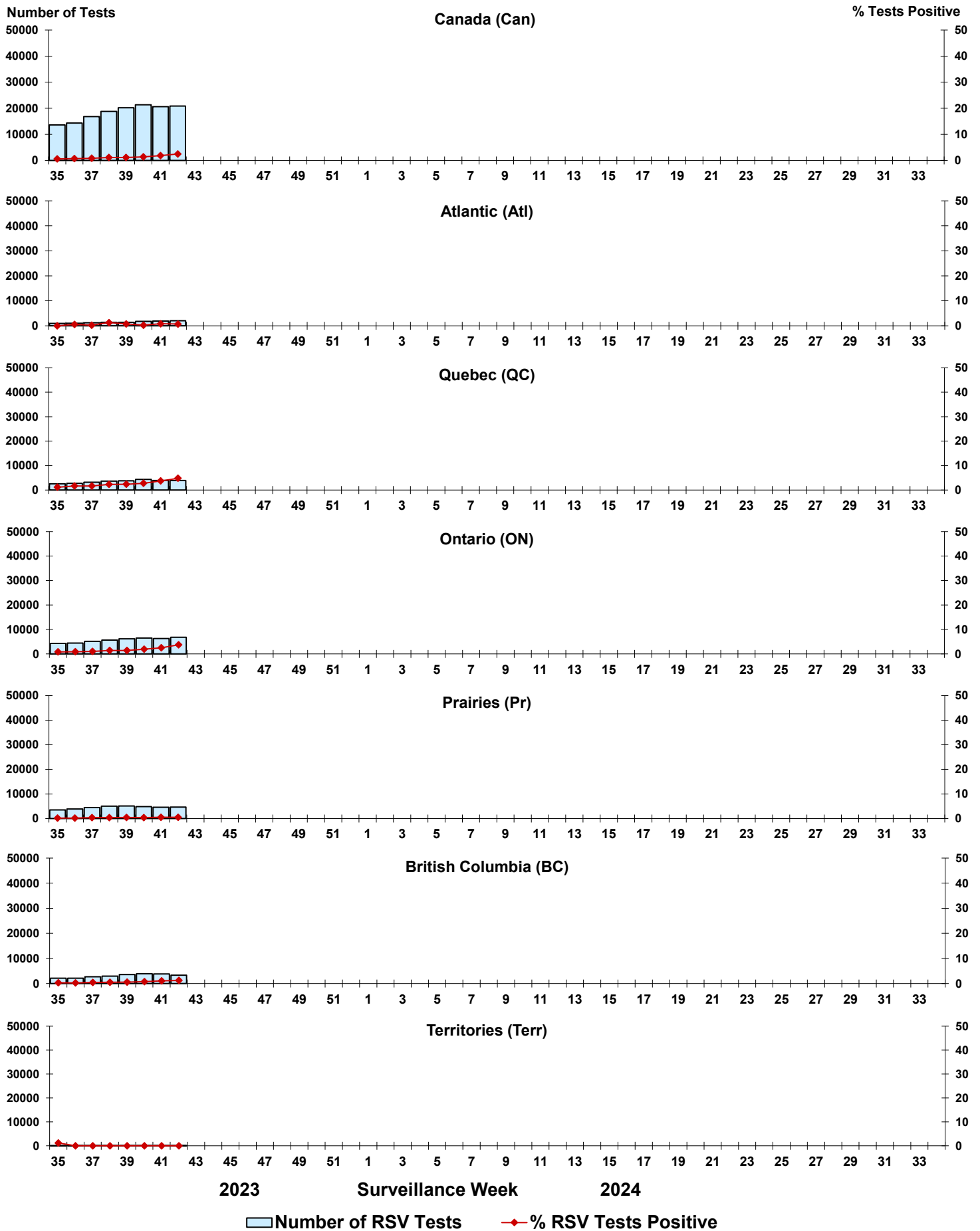


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

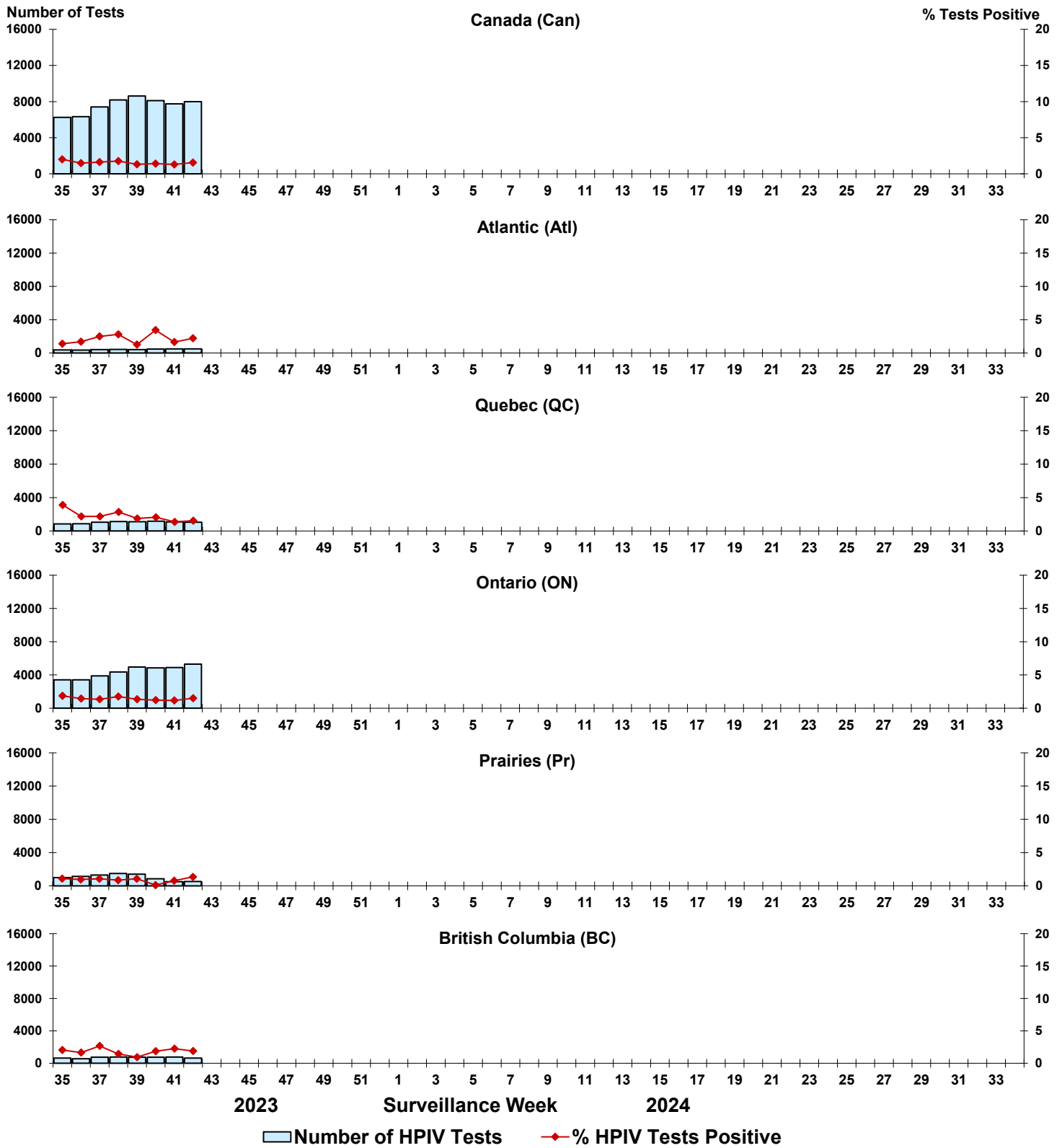


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

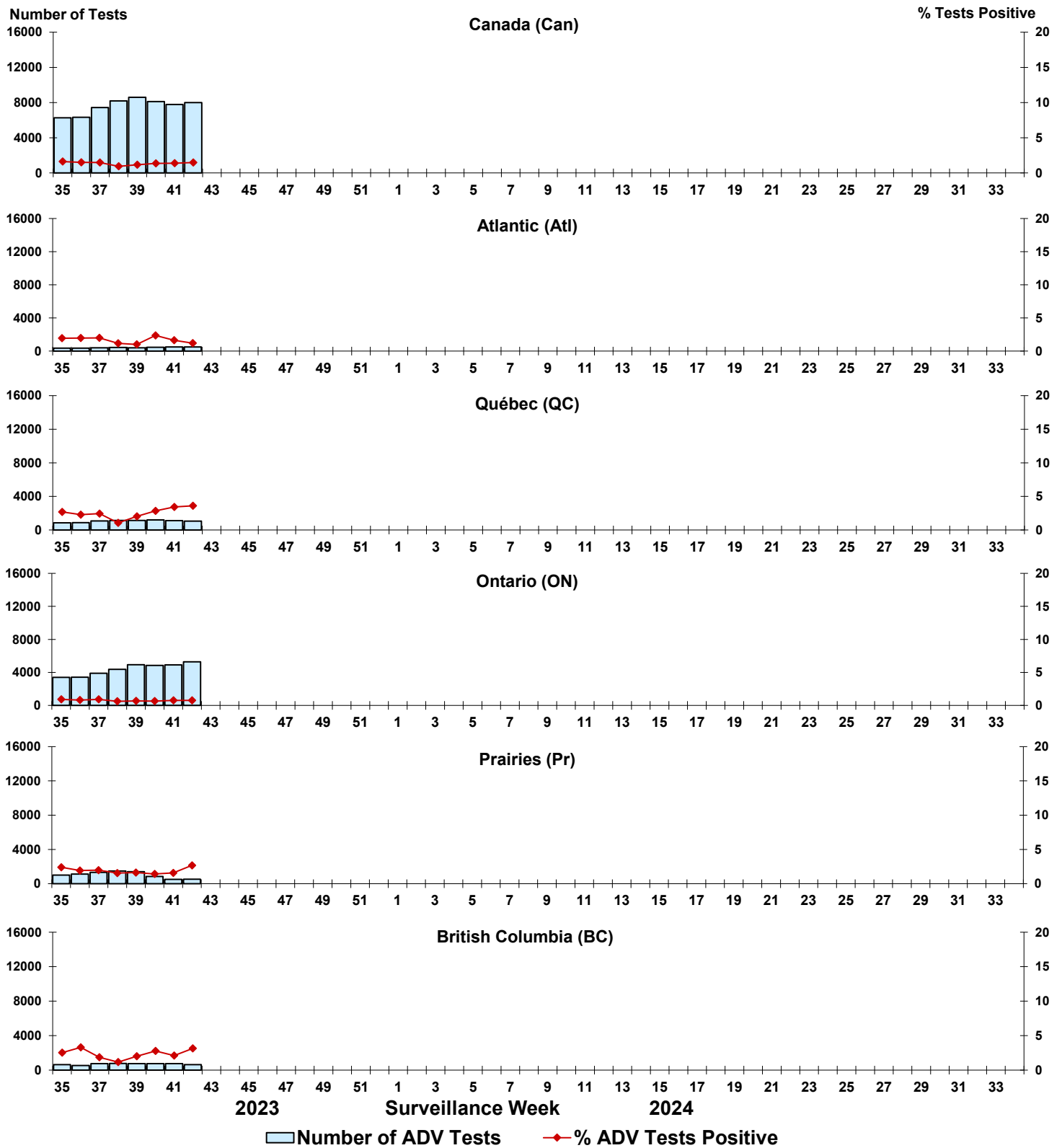


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

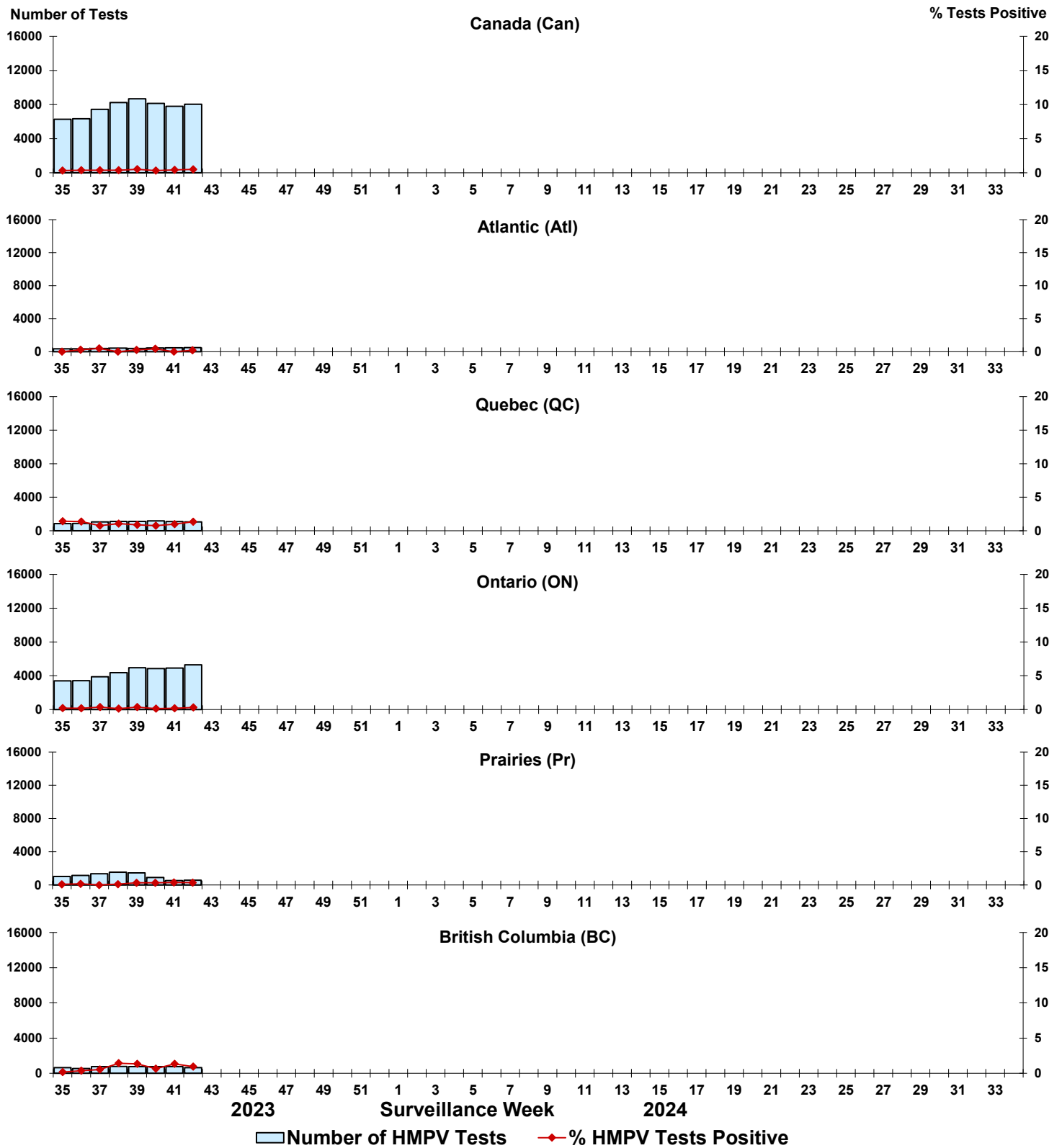


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

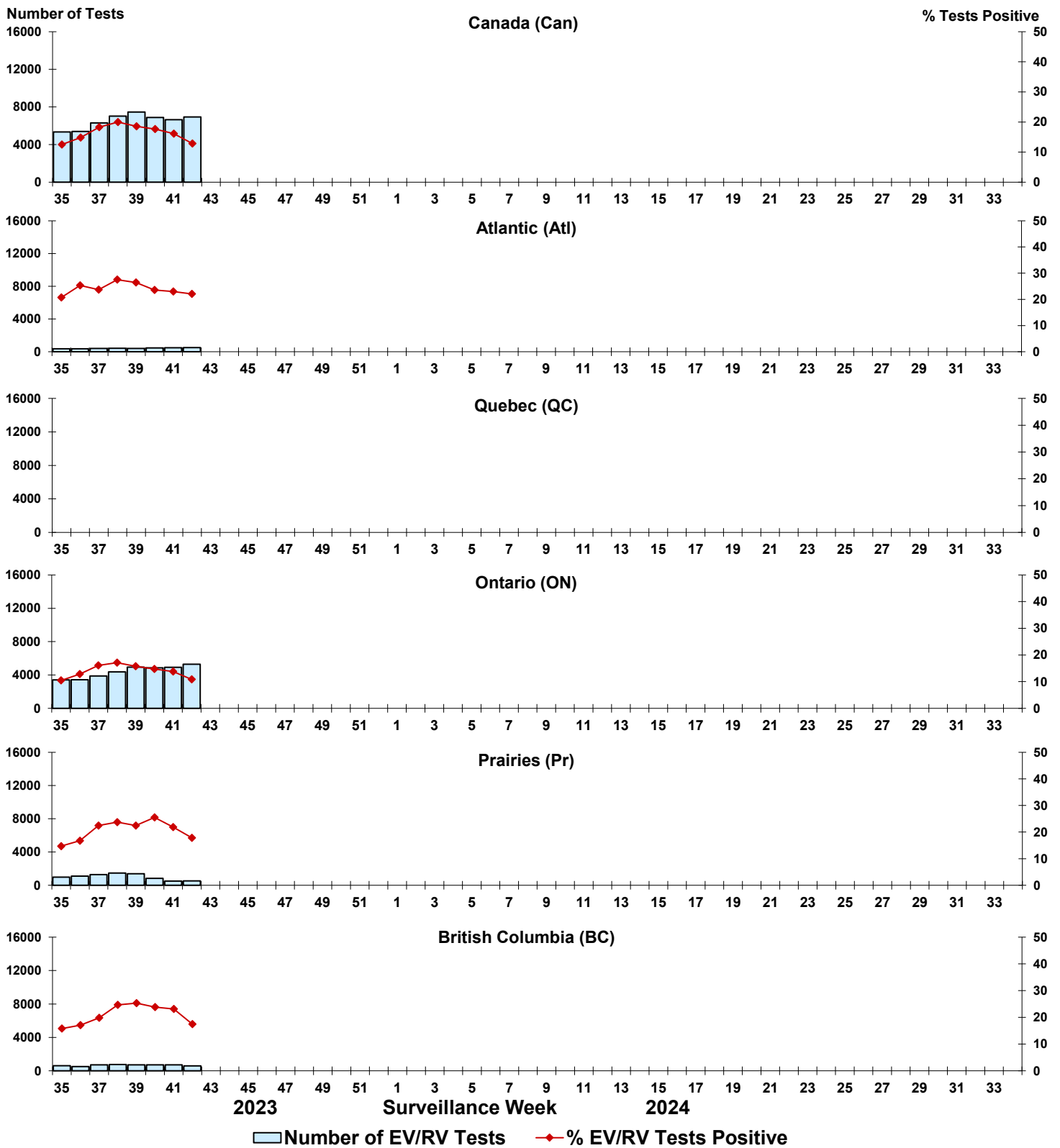


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

