

RESPIRATORY VIRUS DETECTION REPORT

October 1 to October 7, 2023
(Surveillance Week 2023-40)



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 40 (week ending October 7, 2023) in Canada, participating RVDSS laboratories reported 8,342 detections of SARS-CoV-2 from 42,117 tests (19.8% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 6,551 to 22,749 tests), activity of enterovirus/rhinovirus is highest.

- There has been an observed increase in national SARS-CoV-2 percent positivity since early-July.
- While activity of enterovirus/rhinovirus is highest, this is expected for this time of year and activity remains below expected levels (1,205 detections; 17.6% 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

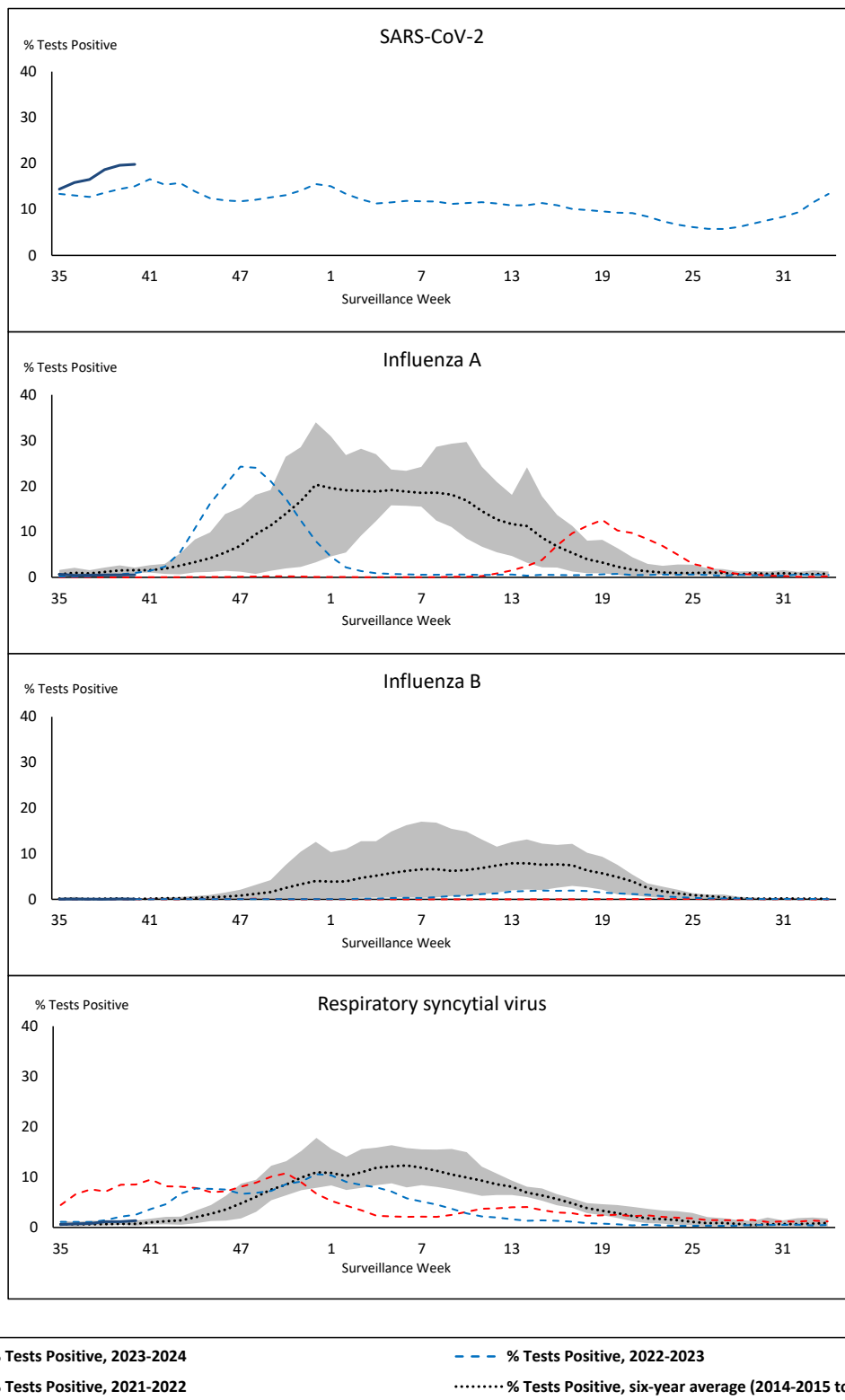
SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2

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



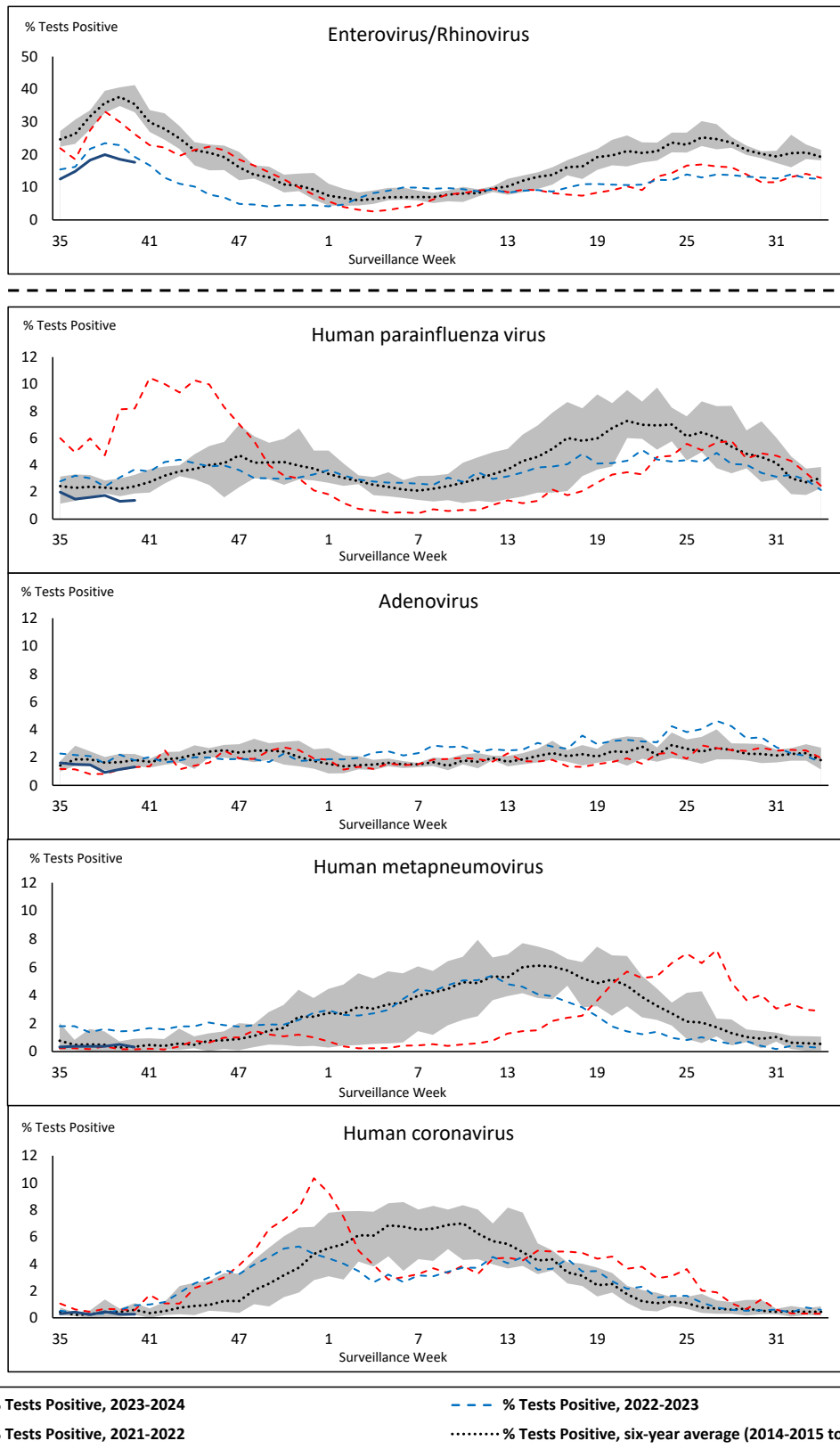
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 October 7, 2023 (surveillance week 2023-40)

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	519	105	350	0	0	0	0	0	350	1	350	0	1	1	6	0	350	6	350	2	350	67	350	1	
Prince Edward Island	191	23	38	0	0	0	0	0	38	0	10	0	0	0	1	0	10	0	0	0	10	6	10	0	
Nova Scotia	1885	575	710	0	0	4	4	0	710	3	52	2	0	0	1	0	52	3	52	0	52	18	52	0	
New Brunswick	949	162	677	0	0	2	2	0	663	1	55	3	0	0	1	0	55	2	55	0	55	19	55	0	
Atlantic	3544	865	1775	0	0	6	6	0	1761	5	467	5	1	1	9	0	467	11	457	2	467	110	467	1	
Région Nord-Est	2013	491	1357	0	0	4	4	0	323	12	76	1	1	2	2	0	76	2	76	0	N.C.	N.C.	76	0	
Québec-Chaudière-Appalaches	2838	609	635	0	0	2	2	0	635	17	264	2	0	0	0	0	277	15	264	3	N.C.	N.C.	264	0	
Centre-du-Québec	2581	559	573	0	0	0	0	0	573	12	30	0	0	0	1	0	30	2	30	0	N.C.	N.C.	30	0	
Montréal-Laval	3872	769	1446	0	0	6	6	0	1264	44	759	9	3	0	2	0	759	11	761	5	N.C.	N.C.	759	1	
Ouest du Québec	2385	663	659	1	0	6	7	0	658	13	26	0	0	0	0	0	26	1	26	1	N.C.	N.C.	26	0	
Montérégie	2006	389	946	0	0	1	1	2	870	19	8	0	0	0	0	0	8	0	8	0	N.C.	N.C.	8	0	
Province of Québec	15695	3480	5616	1	0	19	20	2	4323	117	1163	12	4	2	5	0	1176	31	1165	9	N.C.	N.C.	1163	1	
P.H.O.L. - Ottawa	536	171	283	0	0	0	0	0	283	0	172	0	0	0	0	3	172	0	172	0	172	41	172	0	
EORLA	1289	144	478	0	0	0	0	0	478	28	26	0	2	0	0	0	26	1	26	0	26	11	26	0	
P.H.O.L. - Kingston	292	109	136	0	0	0	0	0	136	0	85	0	0	0	0	3	85	1	85	0	85	18	85	0	
UHN / Mount Sinai Hospital	1152	102	634	0	0	1	1	0	634	6	14	0	0	0	0	0	14	0	14	0	14	0	14	0	
P.H.O.L. - Toronto	739	280	1033	5	4	0	8	0	1033	11	881	0	0	0	0	23	882	5	881	3	881	213	881	1	
Sick Kids Hospital - Toronto	113	7	87	1	3	2	6	0	87	5	87	1	0	1	0	0	87	1	87	1	87	2	87	2	
Shared Hospital Laboratory	1342	137	1342	1	3	0	4	0	1342	35	1343	0	0	0	0	8	1343	8	1346	1	1346	113	1346	2	
P.H.O.L. - Sault Ste. Marie	9	3	10	0	0	0	0	0	10	0	7	0	0	0	0	0	7	0	7	0	7	4	7	0	
P.H.O.L. - Timmins	19	1	17	0	0	0	0	0	17	0	17	0	0	0	0	0	17	0	17	0	17	2	17	0	
St. Joseph's - London	978	178	73	0	0	0	0	0	73	2	73	0	0	0	0	1	73	0	73	0	73	16	73	0	
P.H.O.L. - London	652	211	445	0	0	0	0	0	445	2	333	0	0	0	0	3	333	1	333	0	333	64	333	0	
P.H.O.L. - Orillia	22	1	45	0	0	0	0	0	45	1	44	0	0	0	0	1	44	1	44	0	44	16	44	0	
P.H.O.L. - Thunder Bay	83	40	52	0	0	0	0	0	52	0	20	0	0	0	0	2	20	0	20	0	20	2	20	1	
P.H.O.L. - Sudbury	16	3	17	0	0	0	0	0	17	0	12	0	0	0	0	0	12	0	12	0	12	1	12	0	
P.H.O.L. - Hamilton	155	30	154	0	0	0	0	0	154	0	117	0	0	0	0	6	117	1	117	1	117	31	117	0	
P.H.O.L. - Peterborough	96	30	70	0	0	0	0	0	70	6	63	0	0	0	0	1	63	1	63	0	63	16	63	0	
St. Joseph's - Hamilton	1679	178	1463	0	0	1	1	0	1463	30	1463	0	0	2	0	0	1463	11	1463	1	1463	149	0	0	
Sault Area Hospital	177	21	117	0	0	0	0	0	117	0	89	0	0	1	0	0	89	1	89	0	89	17	89	0	
Province of Ontario	9349	1646	6456	7	10	4	20	0	6456	126	4846	1	2	4	0	51	4847	32	4849	7	4849	716	3386	6	
Manitoba	1532	263	1200	0	0	2	2	0	1200	2	33	0	0	0	0	0	33	1	79	0	33	25	79	0	
Saskatchewan	2079	265	877	0	0	2	2	1	858	3	364	0	0	0	0	0	364	7	364	3	364	90	364	2	
Alberta	5519	932	2855	19	1	2	22	5	2604	12	435	0	0	0	0	0	435	3	434	0	426	95	435	1	
Prairies	9130	1460	4932	19	1	6	26	6	4662	17	832	0	0	0	0	0	832	11	877	3	823	210	878	3	
British Columbia	4203	867	3847	24	4	0	62	2	3847	21	729	2	4	2	6	0	729	21	729	5	680	163	657	7	
Yukon	72	8	38	0	0	0	0	0	38	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	24	2	18	0	0	0	0	0	18	0	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	18	6	N.C.	N.C.
Nunavut	100	14	67	0	0	0	0	0	67	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.	N.C.
Territories	196	24	123	0	0	0	0	0	123	0	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	18	6	N.C.	N.C.
CANADA	42117	8342	22749	51	15	35	134	10	21172	286	8037	20	11	9	20	51	8051	106	8077	26	6837	1205	6551	18	

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 7, 2023 (surveillance weeks 2023-35 to 2023-40)

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	2866	485	1814	0	0	0	0	0	1814	10	1814	1	4	2	21	0	1814	23	1814	5	1814	409	1814	4
Prince Edward Island	800	98	78	0	0	0	0	0	78	0	44	0	0	0	2	0	43	4	33	0	43	22	43	0
Nova Scotia	7943	2129	2959	0	0	7	7	0	2959	22	229	11	1	1	2	0	229	9	229	1	229	75	229	0
New Brunswick	4734	680	2962	0	0	3	3	1	2900	11	329	6	1	0	2	0	329	6	329	0	329	88	329	1
Atlantic	16343	3392	7813	0	0	10	10	1	7751	43	2416	18	6	3	27	0	2415	42	2405	6	2415	594	2415	5
Région Nord-Est	9474	1746	6384	0	0	8	8	1	1424	27	360	5	3	2	12	0	360	7	359	6	N.C.	N.C.	360	0
Québec-Chaudière-Appalaches	13333	2445	3024	0	0	12	12	2	3024	78	1392	7	1	1	5	0	1462	63	1392	17	N.C.	N.C.	1392	1
Centre-du-Québec	12858	2724	1994	0	0	2	2	2	1989	46	171	6	2	1	3	0	171	5	171	3	N.C.	N.C.	171	1
Montréal-Laval	20148	3384	7561	0	0	31	31	3	6836	138	4100	47	14	13	15	0	4100	54	4106	34	N.C.	N.C.	4100	28
Ouest du Québec	10720	2729	2678	1	0	12	13	3	2673	56	112	5	3	1	4	0	112	6	112	3	N.C.	N.C.	112	1
Montréal	9286	1902	4718	0	0	10	10	4	4288	72	35	1	0	0	0	0	35	0	35	0	N.C.	N.C.	35	0
Province of Québec	75819	14930	26359	1	0	75	76	15	20234	417	6170	71	23	18	39	0	6240	135	6175	63	N.C.	N.C.	6170	31
P.H.O.L. - Ottawa	2508	928	1325	1	0	1	2	0	1325	7	738	0	0	0	0	6	738	0	738	0	738	138	738	0
EORLA	6860	733	2333	0	0	3	3	1	2333	104	165	0	3	1	0	0	140	1	165	0	165	43	165	0
P.H.O.L. - Kingston	1724	474	672	0	0	0	0	0	672	1	523	0	0	0	0	17	523	1	523	0	523	122	523	1
UHN / Mount Sinai Hospital	5812	447	3115	0	0	3	3	4	3115	9	127	0	0	2	0	0	127	1	127	0	127	9	127	0
P.H.O.L. - Toronto	3570	1110	5038	41	16	1	39	0	5038	27	4590	0	0	0	0	148	4591	45	4587	16	4590	1072	4587	15
Sick Kids Hospital - Toronto	638	49	524	9	6	5	20	1	524	26	524	3	1	2	3	0	524	10	524	4	524	25	524	4
Shared Hospital Laboratory	6258	611	6258	7	12	0	19	2	6259	109	6257	0	0	0	0	62	6256	49	6266	6	6266	504	6266	12
P.H.O.L. - Sault Ste. Marie	90	63	96	0	0	0	0	0	96	0	47	0	0	0	0	0	47	0	47	0	47	11	47	0
P.H.O.L. - Timmins	137	26	106	0	0	0	0	0	106	1	94	0	0	0	0	8	94	1	94	0	94	15	94	0
St. Joseph's - London	4315	572	329	0	0	0	0	0	329	3	328	0	0	0	0	4	328	2	328	0	328	68	328	1
P.H.O.L. - London	2839	919	1867	0	0	0	0	1	1867	9	1474	0	0	0	0	36	1474	6	1474	0	1474	305	1474	0
P.H.O.L. - Orillia	111	12	207	1	1	0	2	0	206	3	194	0	0	0	0	4	194	3	194	2	194	52	194	0
P.H.O.L. - Thunder Bay	377	141	194	0	0	0	0	0	194	0	147	0	0	0	0	4	147	1	147	1	147	29	147	1
P.H.O.L. - Sudbury	93	29	97	0	0	0	0	0	97	0	78	0	0	0	0	0	79	1	78	0	78	18	78	0
P.H.O.L. - Hamilton	1732	483	1258	1	1	0	1	0	1258	9	858	0	0	0	0	32	858	9	858	7	858	232	858	1
P.H.O.L. - Peterborough	432	146	352	0	0	0	0	1	352	15	316	0	0	0	0	7	316	4	316	1	316	105	316	1
St. Joseph's - Hamilton	9600	1052	8031	0	0	11	11	8	8031	96	8031	0	0	20	0	0	8031	48	8031	22	8031	829	0	0
Sault Area Hospital	564	69	416	0	1	0	1	0	409	2	381	0	0	1	0	0	381	5	381	0	381	84	391	0
Province of Ontario	47660	7864	32218	60	37	24	101	18	32211	421	24872	3	4	26	3	328	24848	187	24878	59	24881	3661	16857	36
Manitoba	8568	1467	6657	0	0	10	10	5	6657	18	362	0	4	4	11	0	362	24	616	0	362	169	616	2
Saskatchewan	9116	962	4077	0	0	10	10	3	3983	19	1697	3	4	0	4	0	1697	56	1676	13	1647	393	1697	6
Alberta	26123	3609	17278	98	16	6	120	9	16126	52	5114	12	15	5	2	0	5114	49	5098	0	5027	924	5114	23
Prairies	43807	6038	28012	98	16	26	140	17	26766	89	7173	15	23	9	17	0	7173	129	7390	13	7036	1486	7427	31
British Columbia	19879	4110	17351	171	35	7	273	7	17334	79	4184	15	13	10	36	0	4184	93	4184	33	3988	855	3965	16
Yukon	383	50	205	0	1	0	2	0	205	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	87	10	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.
Nunavut	486	63	341	0	0	0	0	0	341	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	956	123	611	0	1	0	2	0	611	1	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	65	24	N.C.
CANADA	204464	36457	112364	330	89	142	602	58	104907	1050	44815	122	69	66	122	328	44860	586	45032	174	38385	6620	36834	119

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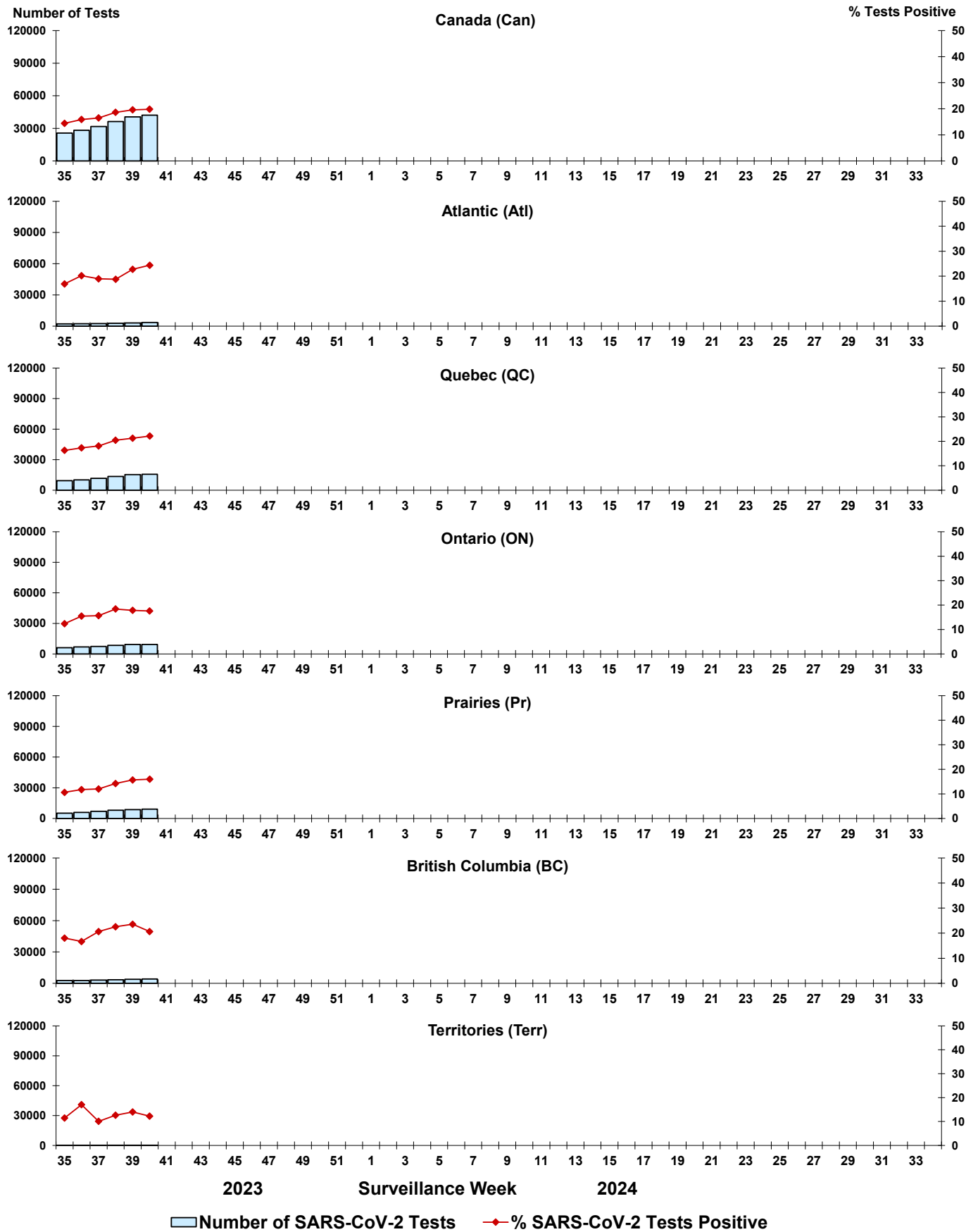
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Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests positive.

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

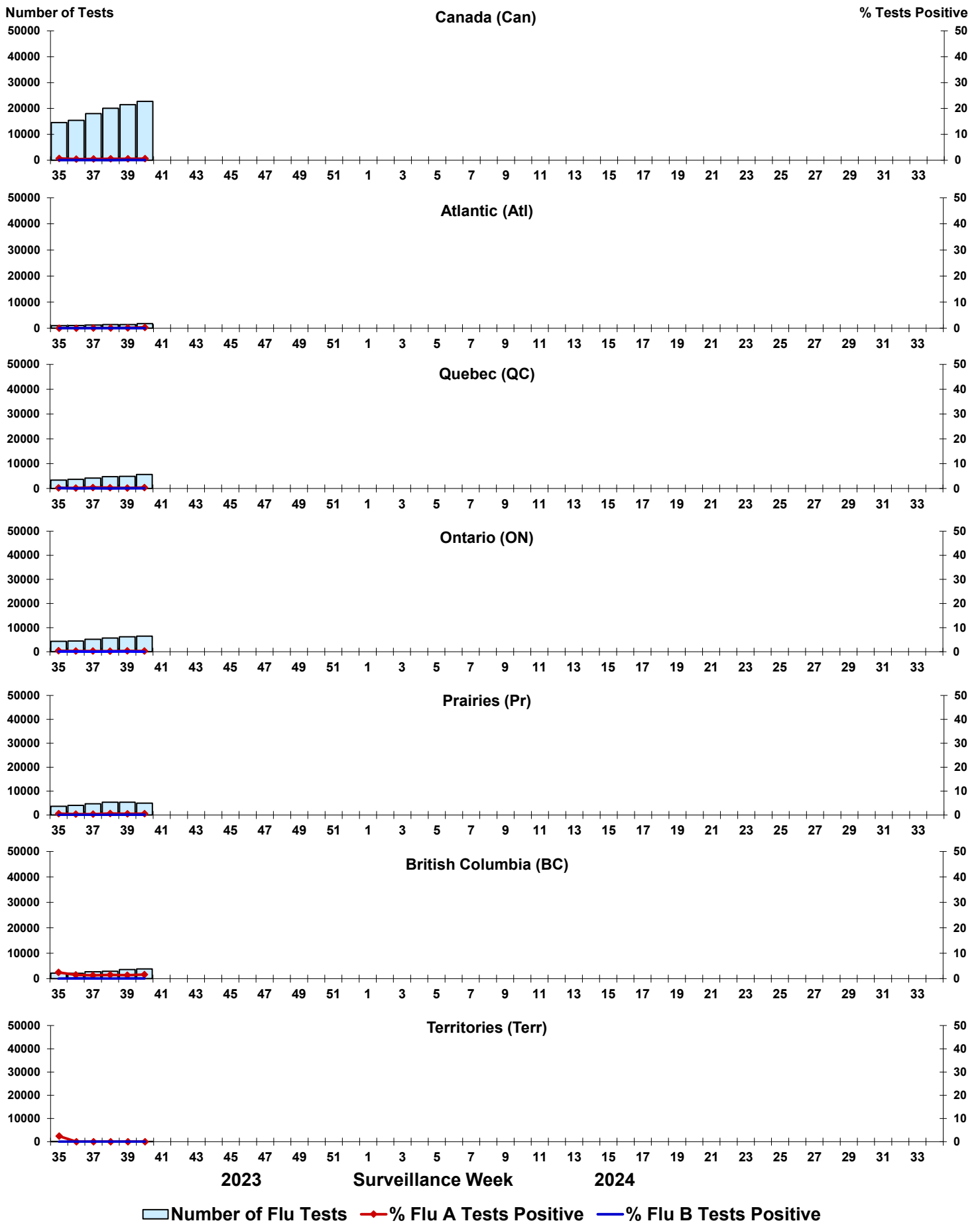


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

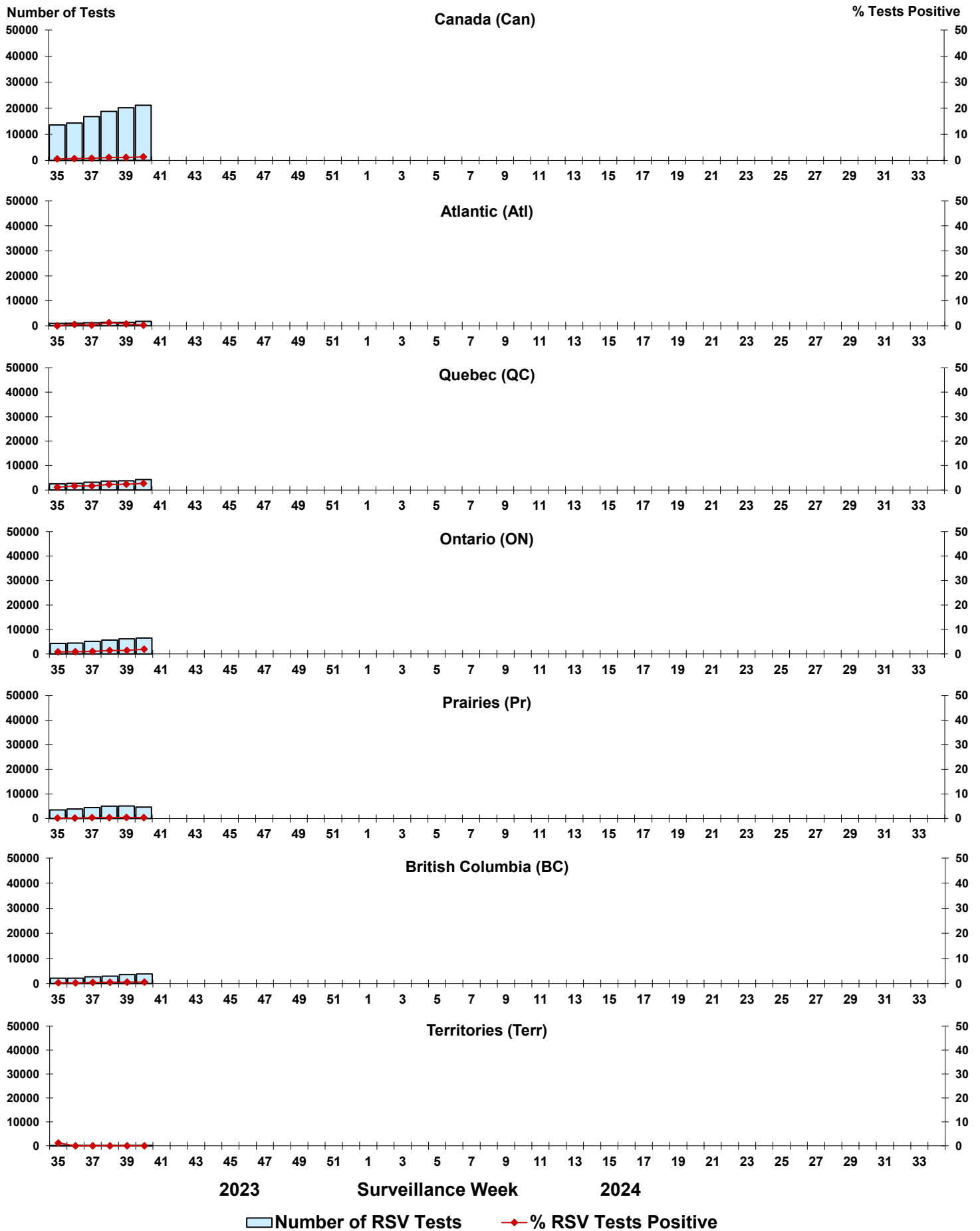


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

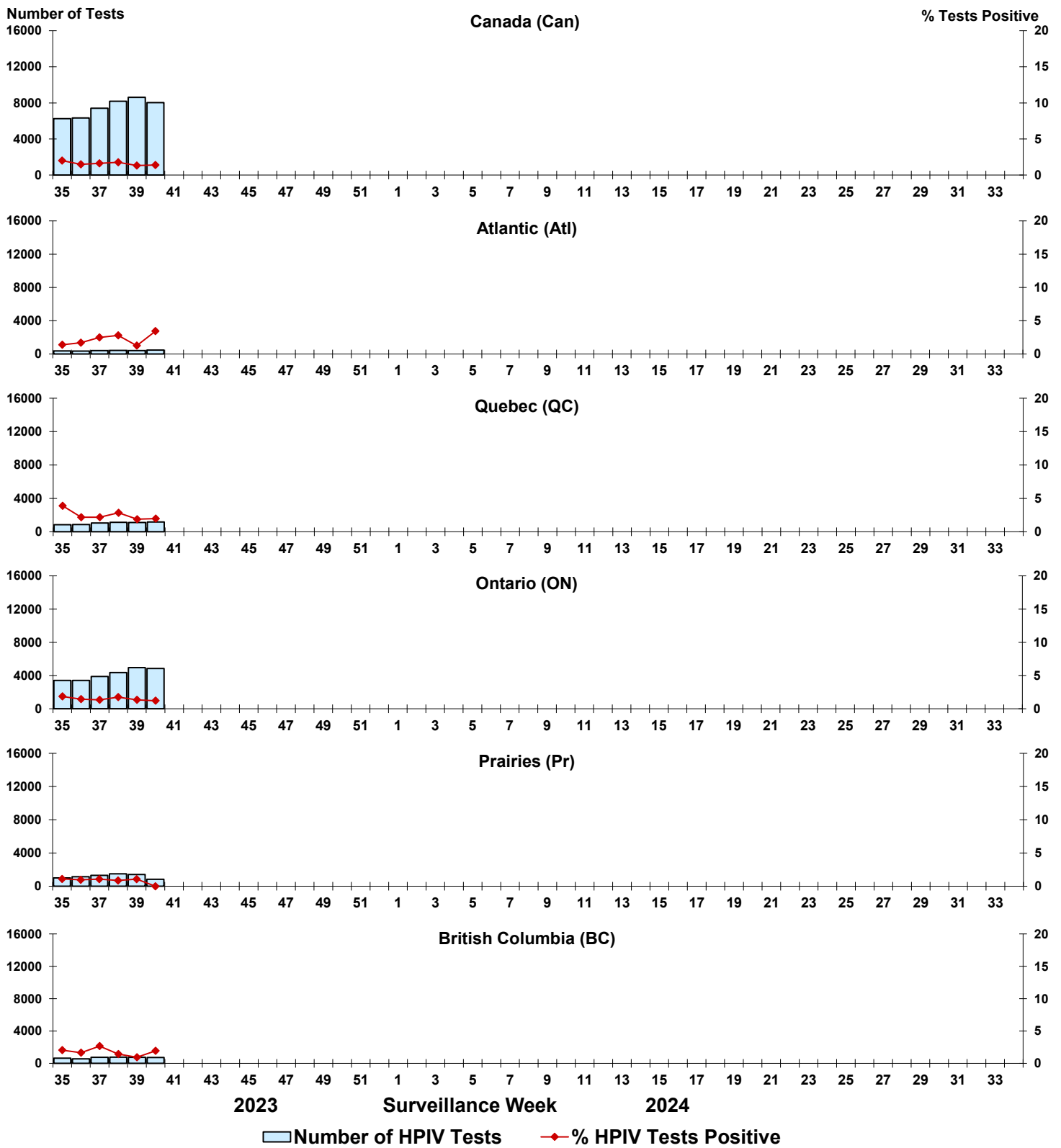


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

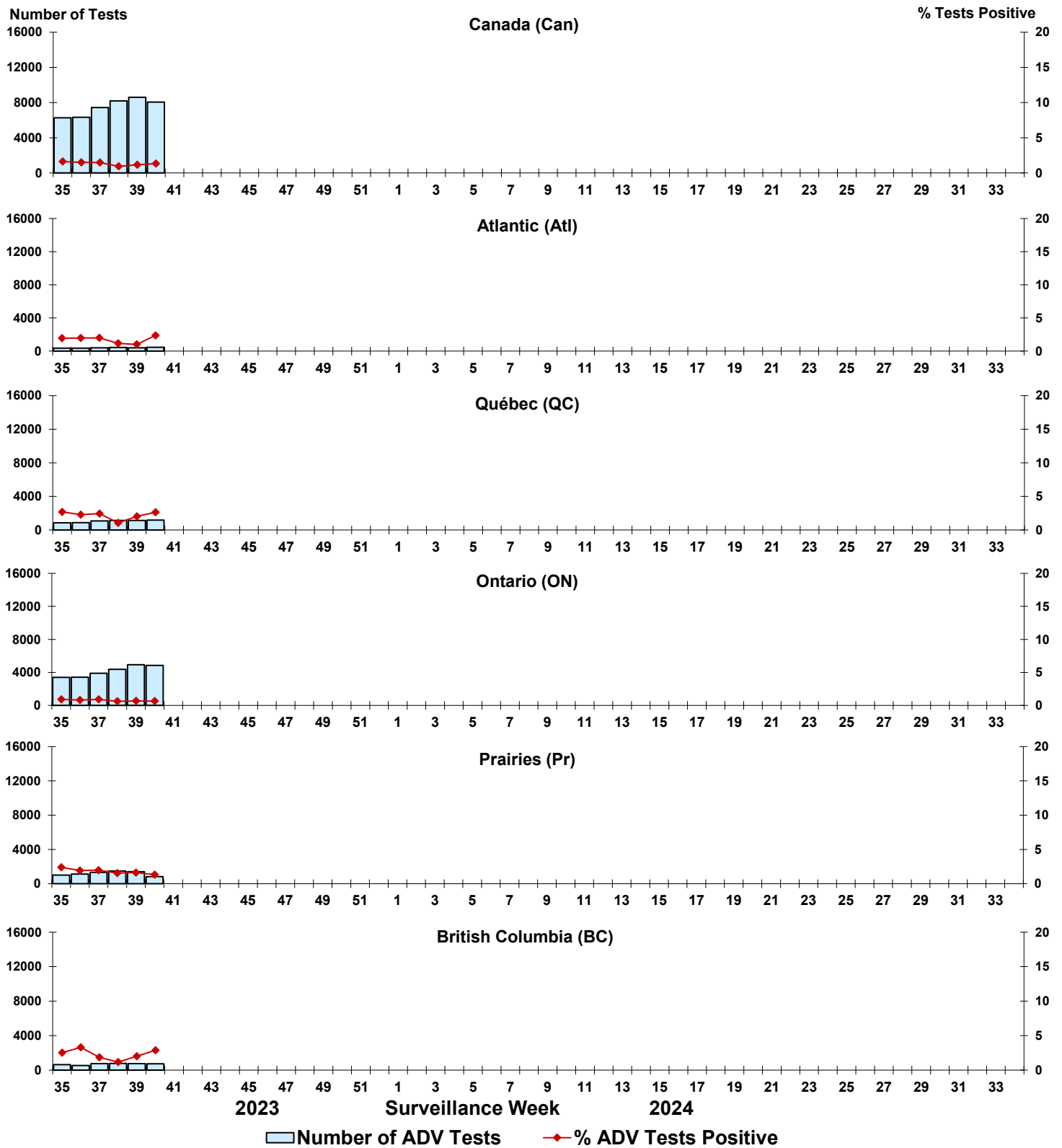


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

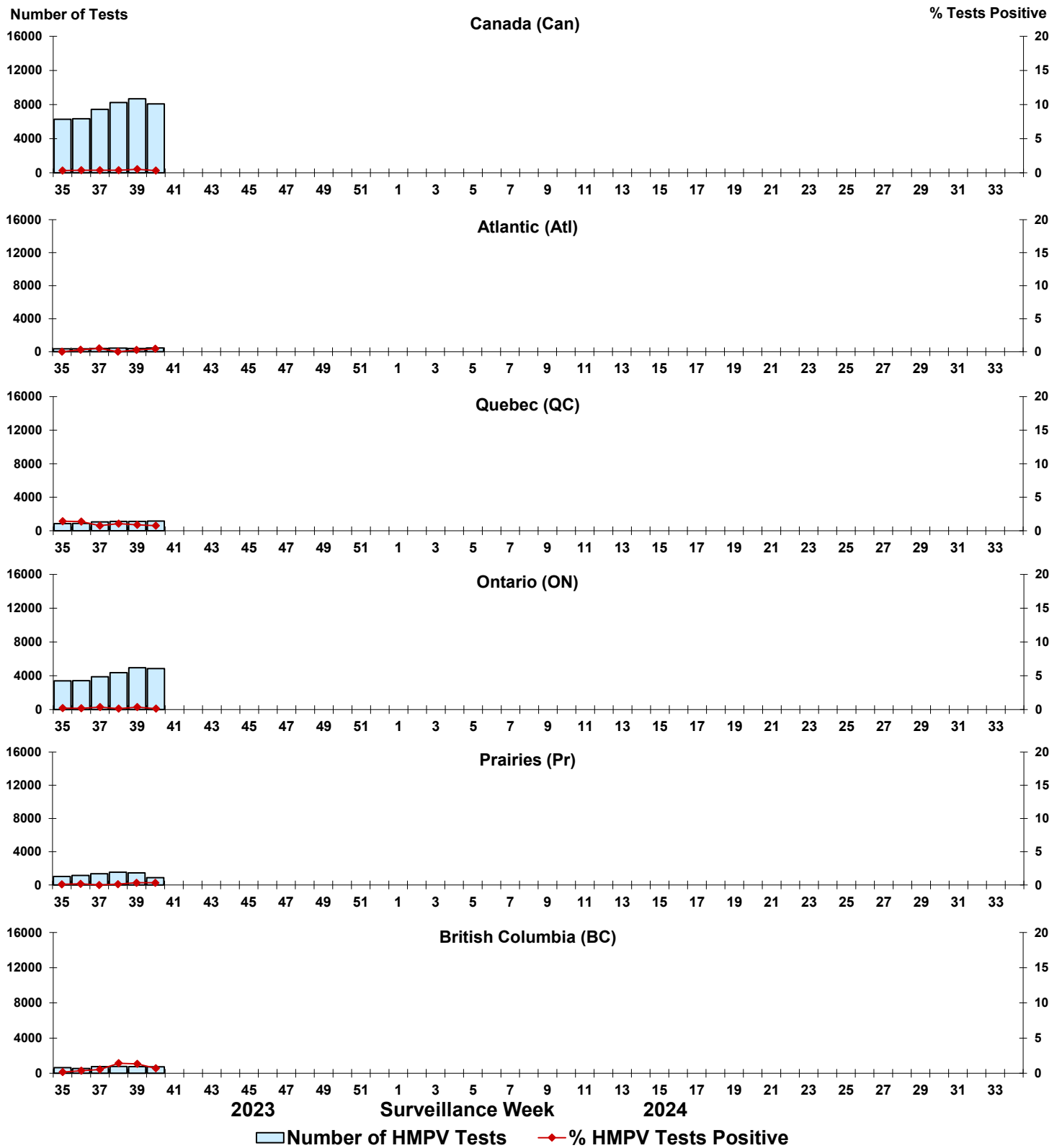


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

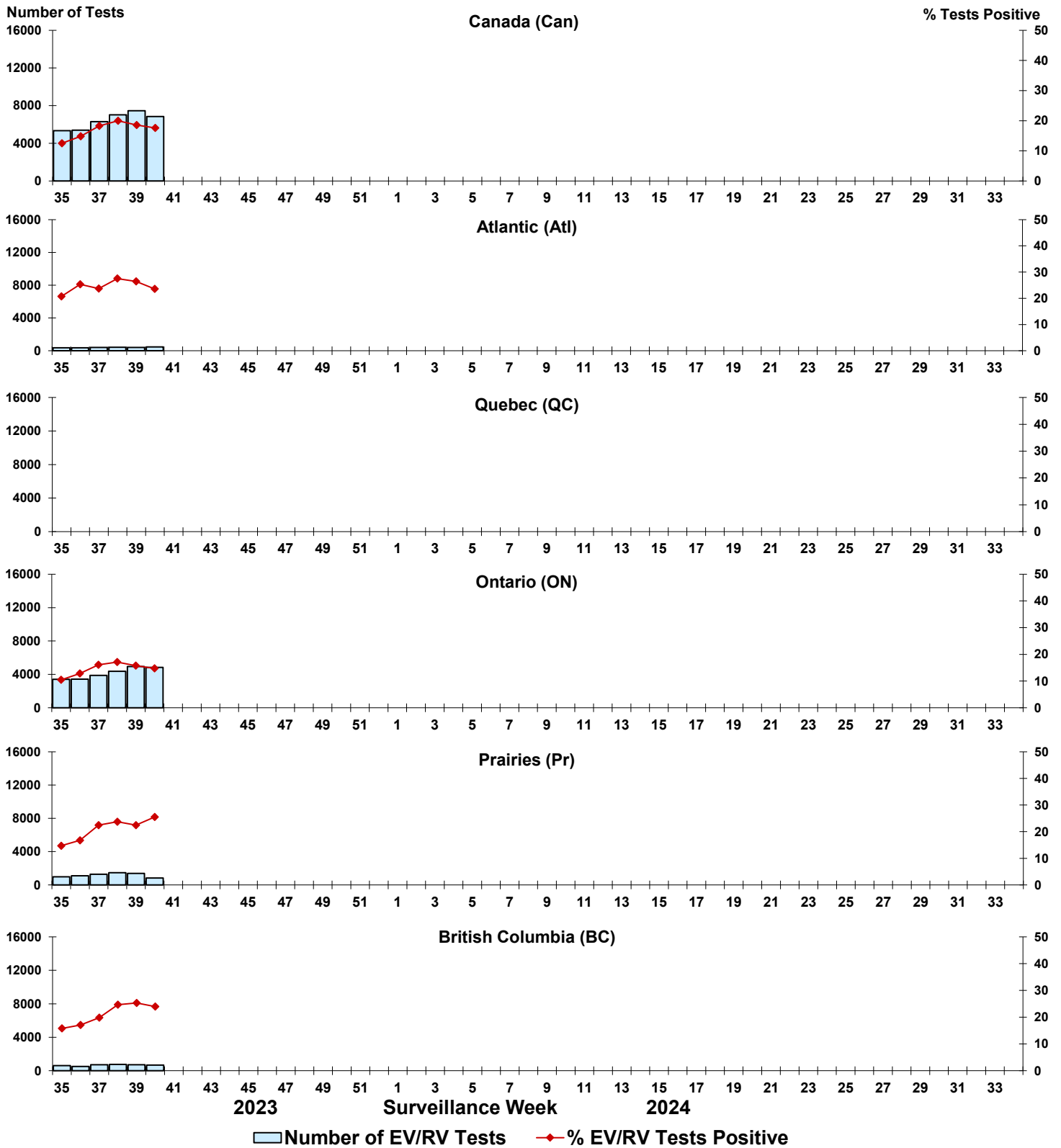


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

