

RESPIRATORY VIRUS DETECTION REPORT

September 24 to September 30, 2023
(Surveillance Week 2023-39)



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 39 (week ending September 30, 2023) in Canada, participating RVDSS laboratories reported 7,892 detections of SARS-CoV-2 from 40,336 tests (19.6% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 6,701 to 20,939 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 (1,343 detections; 18.7% positive).
- Activity of all other non-SARS-CoV-2 respiratory viruses is low and near expected levels typical of this time of year.
- 33/34 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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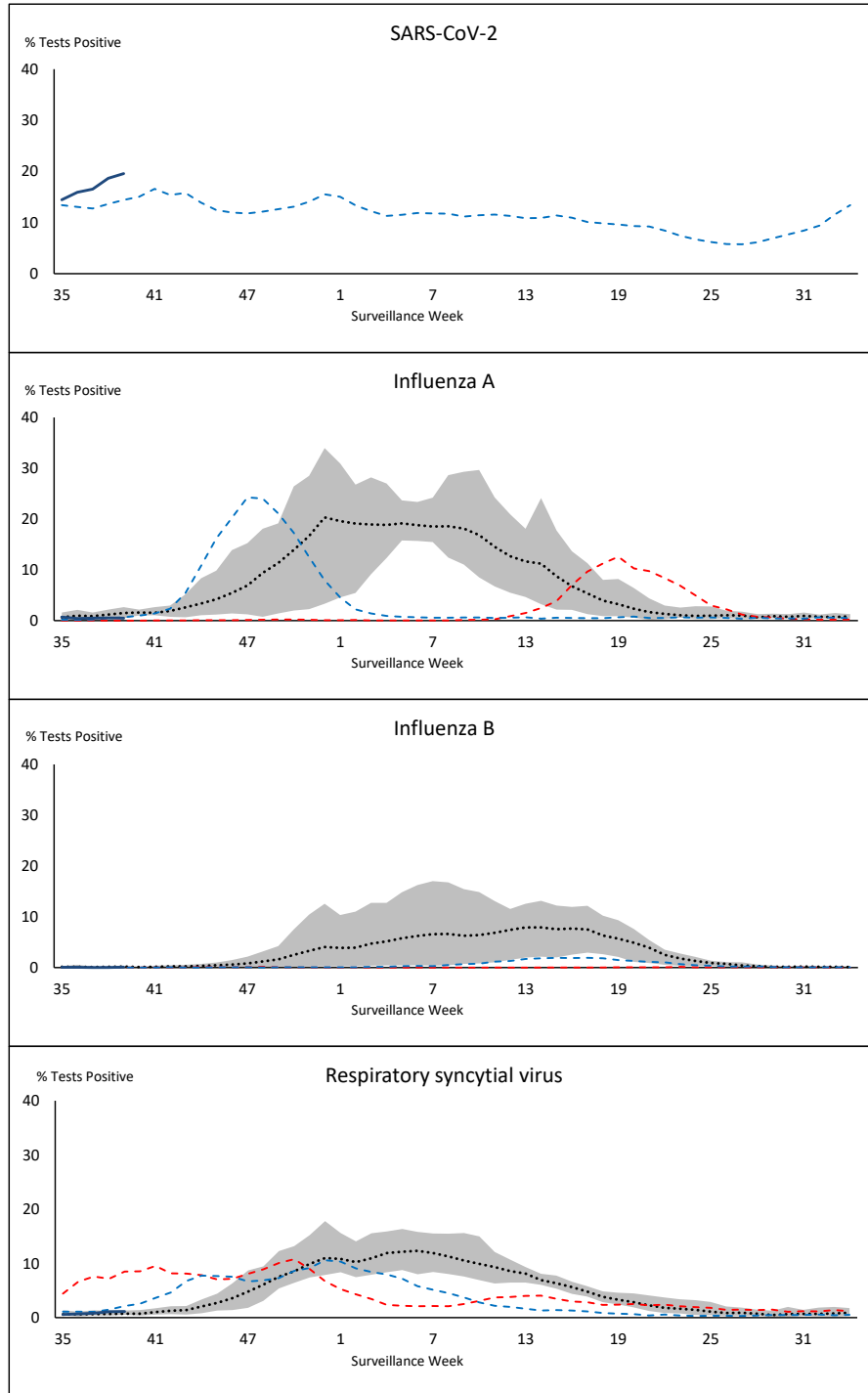


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Figure 1: Positive severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), influenza, and respiratory syncytial virus tests (%) reported by participating laboratories in Canada by surveillance week compared to average and range from 2014-2015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



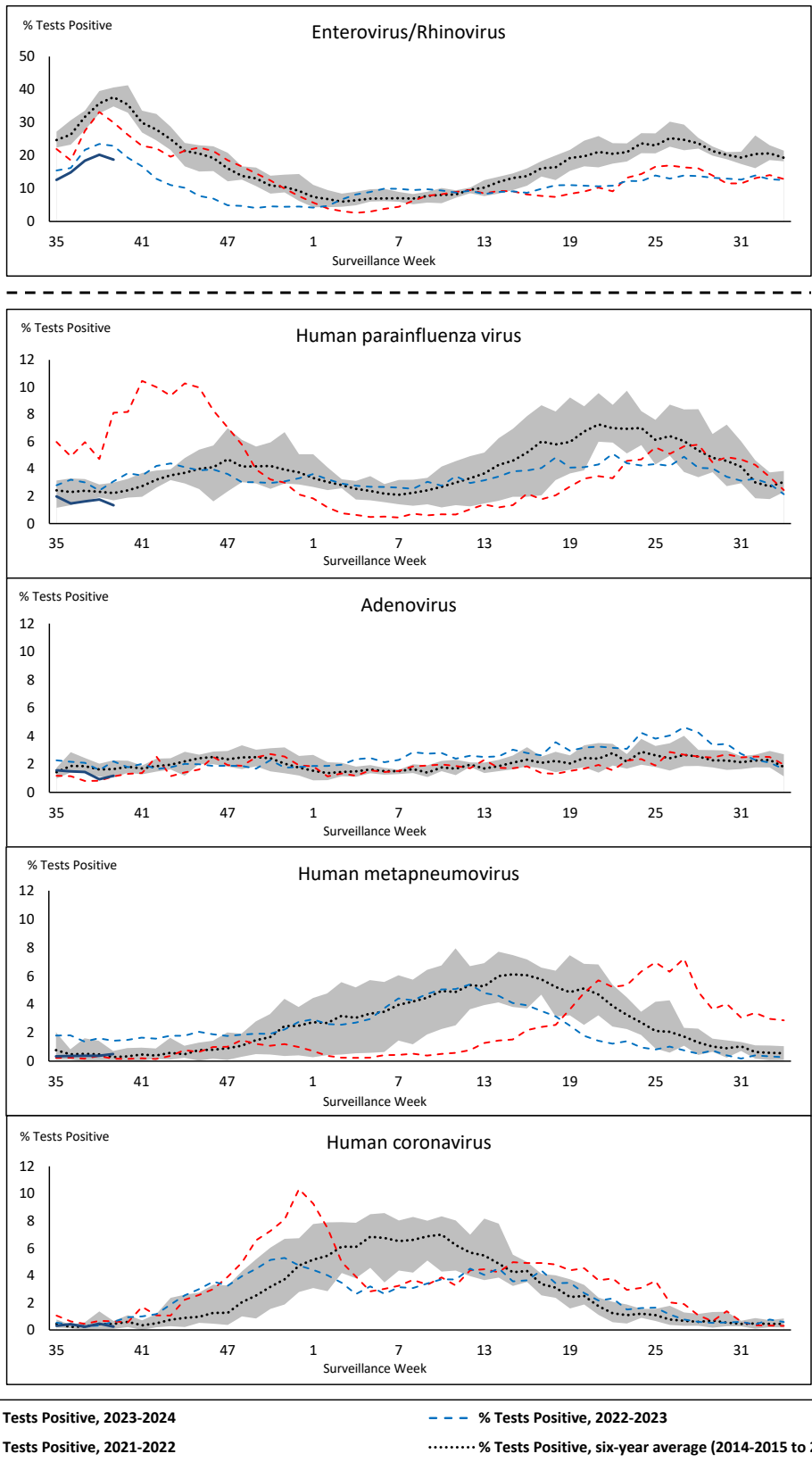
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 September 30, 2023 (surveillance week 2023-39)

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	501	87	307	0	0	0	0	0	307	1	307	0	0	0	4	0	307	2	307	1	307	73	307	0	
Prince Edward Island	147	21	6	0	0	0	0	0	6	0	5	0	0	0	0	0	5	0	5	0	5	2	5	0	
Nova Scotia	1603	489	564	0	0	2	2	0	564	8	33	0	0	0	0	0	33	2	33	0	33	15	33	0	
New Brunswick	855	111	526	0	0	0	0	1	515	2	56	1	0	0	0	0	56	0	56	0	56	16	56	0	
Atlantic	3106	708	1403	0	0	2	2	1	1392	11	401	1	0	0	4	0	401	4	401	1	401	106	401	0	
Région Nord-Est	1967	427	1160	0	0	0	0	1	306	8	68	1	0	0	3	0	68	4	68	0	N.C.	N.C.	68	0	
Québec-Chaudière-Appalaches	2732	520	594	0	0	1	1	1	594	21	285	1	0	0	0	0	296	8	285	4	N.C.	N.C.	285	0	
Centre-du-Québec	2525	517	366	0	0	1	1	1	364	11	20	0	0	0	0	0	20	0	20	1	N.C.	N.C.	20	0	
Montréal-Laval	3697	642	1255	0	0	7	7	0	1145	21	715	6	2	2	1	0	715	10	716	5	N.C.	N.C.	715	5	
Ouest du Québec	2370	711	546	0	0	0	0	1	543	15	17	1	1	0	2	0	17	1	17	0	N.C.	N.C.	17	0	
Montérégie	2140	466	918	0	0	1	1	0	828	14	4	0	0	0	0	0	4	0	4	0	N.C.	N.C.	4	0	
Province of Québec	15431	3283	4839	0	0	10	10	4	3780	90	1109	9	3	2	6	0	1120	23	1110	10	N.C.	N.C.	1109	5	
P.H.O.L. - Ottawa	287	125	177	0	0	1	1	0	177	0	114	0	0	0	0	1	114	0	114	0	114	24	114	0	
EORLA	1279	148	439	0	0	0	0	1	439	26	26	0	0	0	0	0	1	0	26	0	26	5	26	0	
P.H.O.L. - Kingston	405	94	145	0	0	0	0	0	145	1	132	0	0	0	0	2	132	0	132	0	132	28	132	0	
UHN / Mount Sinai Hospital	1110	116	548	0	0	0	0	2	548	2	24	0	0	0	0	0	24	0	24	0	24	2	24	0	
P.H.O.L. - Toronto	640	196	822	6	2	0	5	0	822	4	782	0	0	0	0	27	782	7	782	3	782	190	782	3	
Shared Hospital Laboratory	1292	151	1292	3	2	0	5	1	1292	19	1294	0	0	0	0	15	1294	10	1294	1	1294	113	1294	1	
P.H.O.L. - Sault Ste. Marie	42	32	42	0	0	0	0	0	42	0	11	0	0	0	0	0	11	0	11	0	11	1	11	0	
P.H.O.L. - Timmins	23	8	18	0	0	0	0	0	18	1	18	0	0	0	0	3	18	0	18	0	18	0	18	0	
St. Joseph's - London	862	146	60	0	0	0	0	0	60	0	59	0	0	0	0	1	59	0	59	0	59	13	59	1	
P.H.O.L. - London	621	229	402	0	0	0	0	0	402	4	333	0	0	0	0	5	333	1	333	0	333	65	333	0	
P.H.O.L. - Orillia	12	1	39	1	0	1	2	0	39	0	39	0	0	0	0	0	39	0	39	2	39	7	39	0	
P.H.O.L. - Thunder Bay	80	30	37	0	0	0	0	0	37	0	21	0	0	0	0	0	21	0	21	0	21	4	21	0	
P.H.O.L. - Sudbury	17	4	9	0	0	0	0	0	9	0	9	0	0	0	0	0	9	1	9	0	9	3	9	0	
P.H.O.L. - Hamilton	327	95	256	0	0	0	0	0	256	6	182	0	0	0	0	3	182	3	182	1	182	56	182	0	
P.H.O.L. - Peterborough	117	44	84	0	0	0	0	1	84	1	74	0	0	0	0	3	74	2	74	1	74	26	74	0	
St. Joseph's - Hamilton	1907	198	1623	0	0	2	2	1	1623	17	1623	0	0	5	0	0	1623	10	1623	8	1623	217	0	0	
Sault Area Hospital	126	26	78	0	0	0	0	0	78	0	78	0	0	0	0	0	78	0	78	0	78	18	78	0	
Province of Ontario	9147	1643	6071	10	4	4	15	6	6071	81	4819	0	0	5	0	60	4794	34	4819	16	4819	772	3196	5	
Manitoba	1714	335	1265	0	0	0	0	2	1265	1	68	0	1	2	3	0	68	4	121	0	68	35	121	1	
Saskatchewan	1855	245	722	0	0	1	1	2	703	6	308	0	0	0	0	0	308	8	308	5	308	76	308	1	
Alberta	5098	758	3034	21	0	1	22	2	2847	13	861	3	3	2	0	0	861	10	860	0	853	165	861	4	
Prairies	8667	1338	5021	21	0	2	23	6	4815	20	1237	3	4	4	3	0	1237	22	1289	5	1229	276	1290	6	
British Columbia	3891	911	3588	16	3	0	49	2	3588	20	736	2	1	1	3	0	736	15	736	10	705	180	705	1	
Yukon	71	5	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	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	23	4	17	0	0	0	0	0	17	0	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	17	9	N.C.	N.C.
Nunavut	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	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	94	9	17	0	0	0	0	0	17	0	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	17	9	N.C.	N.C.	
CANADA	40336	7892	20939	47	7	18	99	19	19663	222	8302	15	8	12	16	60	8288	98	8355	42	7171	1343	6701	17	

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 September 30, 2023 (surveillance weeks 2023-35 to 2023-39)

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	2347	380	1464	0	0	0	0	0	1464	9	1464	1	3	1	15	0	1464	17	1464	3	1464	342	1464	3	
Prince Edward Island	609	75	40	0	0	0	0	0	40	0	34	0	0	0	1	0	33	4	33	0	33	16	33	0	
Nova Scotia	6058	1554	2249	0	0	3	3	0	2249	19	177	9	1	1	1	0	177	6	177	1	177	57	177	0	
New Brunswick	3785	518	2285	0	0	1	1	1	2237	10	274	3	1	0	1	0	274	4	274	0	274	69	274	1	
Atlantic	12799	2527	6038	0	0	4	4	1	5990	38	1949	13	5	2	18	0	1948	31	1948	4	1948	484	1948	4	
Région Nord-Est	7461	1255	5018	0	0	4	4	1	1096	15	281	4	2	0	10	0	281	5	280	6	N.C.	N.C.	281	0	
Québec-Chaudière-Appalaches	10495	1836	2389	0	0	10	10	2	2389	61	1128	5	1	1	5	0	1184	48	1128	14	N.C.	N.C.	1128	1	
Centre-du-Québec	10278	2165	1423	0	0	2	2	2	1418	34	141	6	2	1	2	0	141	3	141	3	N.C.	N.C.	141	1	
Montréal-Laval	16275	2615	6115	0	0	25	25	3	5568	94	3336	38	11	12	13	0	3336	43	3340	29	N.C.	N.C.	3336	27	
Ouest du Québec	8340	2068	2018	0	0	6	6	3	2014	43	86	5	3	1	4	0	86	5	86	2	N.C.	N.C.	86	1	
Montréal	7280	1513	3772	0	0	9	9	2	3418	53	27	1	0	0	0	0	27	0	27	0	N.C.	N.C.	27	0	
Province of Québec	60129	11452	20735	0	0	56	56	13	15903	300	4999	59	19	15	34	0	5055	104	5002	54	N.C.	N.C.	4999	30	
P.H.O.L. - Ottawa	1972	757	1042	1	0	1	2	0	1042	7	566	0	0	0	0	3	566	0	566	0	566	97	566	0	
EORLA	5571	589	1855	0	0	3	3	1	1855	76	139	0	1	1	0	0	114	0	139	0	139	32	139	0	
P.H.O.L. - Kingston	1432	365	536	0	0	0	0	0	536	1	438	0	0	0	0	14	438	0	438	0	438	104	438	1	
UHN / Mount Sinai Hospital	4660	345	2481	0	0	2	2	4	2481	3	113	0	0	2	0	0	113	1	113	0	113	9	113	0	
P.H.O.L. - Toronto	2831	830	4005	36	12	1	31	0	4005	16	3709	0	0	0	0	125	3709	40	3706	13	3709	859	3706	14	
Shared Hospital Laboratory	4916	474	4916	6	9	0	15	2	4917	74	4914	0	0	0	0	54	4913	41	4920	5	4920	391	4920	10	
P.H.O.L. - Sault Ste. Marie	81	60	86	0	0	0	0	0	86	0	40	0	0	0	0	0	40	0	40	0	40	7	40	0	
P.H.O.L. - Timmins	118	25	89	0	0	0	0	0	89	1	77	0	0	0	0	8	77	1	77	0	77	13	77	0	
St. Joseph's - London	3337	394	256	0	0	0	0	0	256	1	255	0	0	0	0	3	255	2	255	0	255	52	255	1	
P.H.O.L. - London	2187	708	1422	0	0	0	0	1	1422	7	1141	0	0	0	0	33	1141	5	1141	0	1141	241	1141	0	
P.H.O.L. - Orillia	89	11	162	1	0	1	2	0	161	2	150	0	0	0	0	3	150	2	150	2	150	36	150	0	
P.H.O.L. - Thunder Bay	294	101	142	0	0	0	0	0	142	0	114	0	0	0	0	2	114	1	114	1	114	25	114	0	
P.H.O.L. - Sudbury	77	26	80	0	0	0	0	0	80	0	66	0	0	0	0	0	66	1	66	0	66	17	66	0	
P.H.O.L. - Hamilton	1577	453	1104	1	1	0	1	0	1104	9	740	0	0	0	0	26	740	8	740	6	740	201	740	1	
P.H.O.L. - Peterborough	336	116	282	0	0	0	0	1	282	9	253	0	0	0	0	6	253	3	253	1	253	89	253	1	
St. Joseph's - Hamilton	7921	874	6568	0	0	10	10	8	6568	66	6568	0	0	18	0	0	6568	37	6568	21	6568	680	0	0	
Sault Area Hospital	387	48	299	0	1	0	1	0	292	2	292	0	0	0	0	0	292	4	292	0	292	67	302	0	
Province of Ontario	37786	6176	25325	45	23	18	67	17	25318	274	19575	0	1	21	0	277	19550	146	19578	49	19581	2920	13020	28	
Manitoba	7036	1204	5457	0	0	8	8	5	5457	16	329	0	4	4	11	0	329	23	537	0	329	144	537	2	
Saskatchewan	7037	697	3143	0	0	8	8	2	3068	15	1333	3	4	0	4	0	1333	49	1312	10	1283	303	1333	4	
Alberta	20540	2625	14147	75	15	4	94	4	13282	39	4513	12	14	5	2	0	4513	45	4498	0	4444	793	4513	22	
Prairies	34613	4526	22747	75	15	20	110	11	21807	70	6175	15	22	9	17	0	6175	117	6347	10	6056	1240	6383	28	
British Columbia	15670	3235	13494	130	30	6	211	5	13477	58	3445	13	9	8	30	0	3445	72	3445	28	3298	691	3298	9	
Yukon	311	42	129	0	1	0	2	0	129	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	63	8	47	0	0	0	0	0	47	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	294	32	204	0	0	0	0	0	204	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	668	82	380	0	1	0	2	0	380	1	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	47	18	N.C.	N.C.
CANADA	161665	27998	88719	250	69	104	450	47	82875	741	36143	100	56	55	99	277	36173	470	36320	145	30930	5353	29648	99	

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.

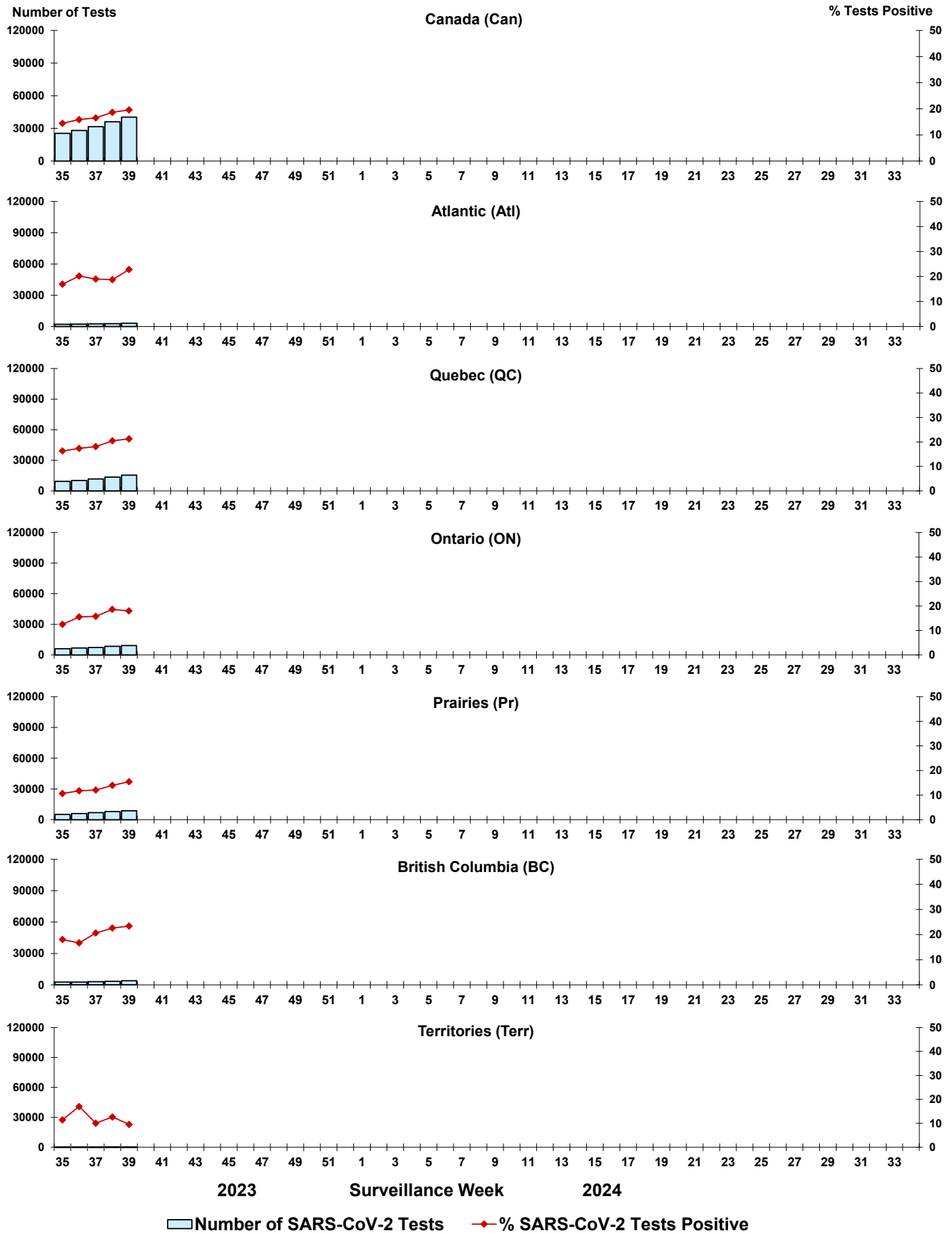
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Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests positive.

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

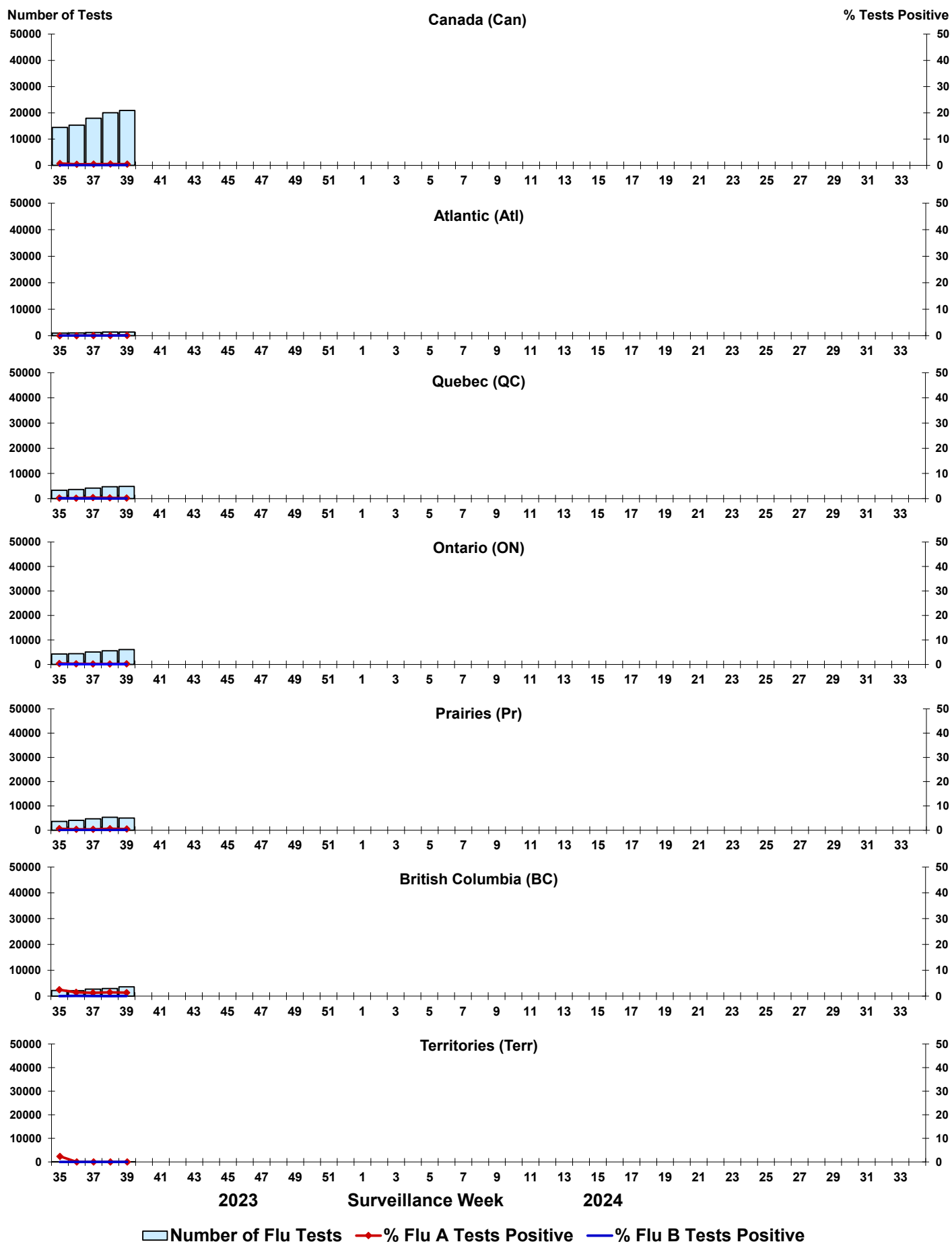


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

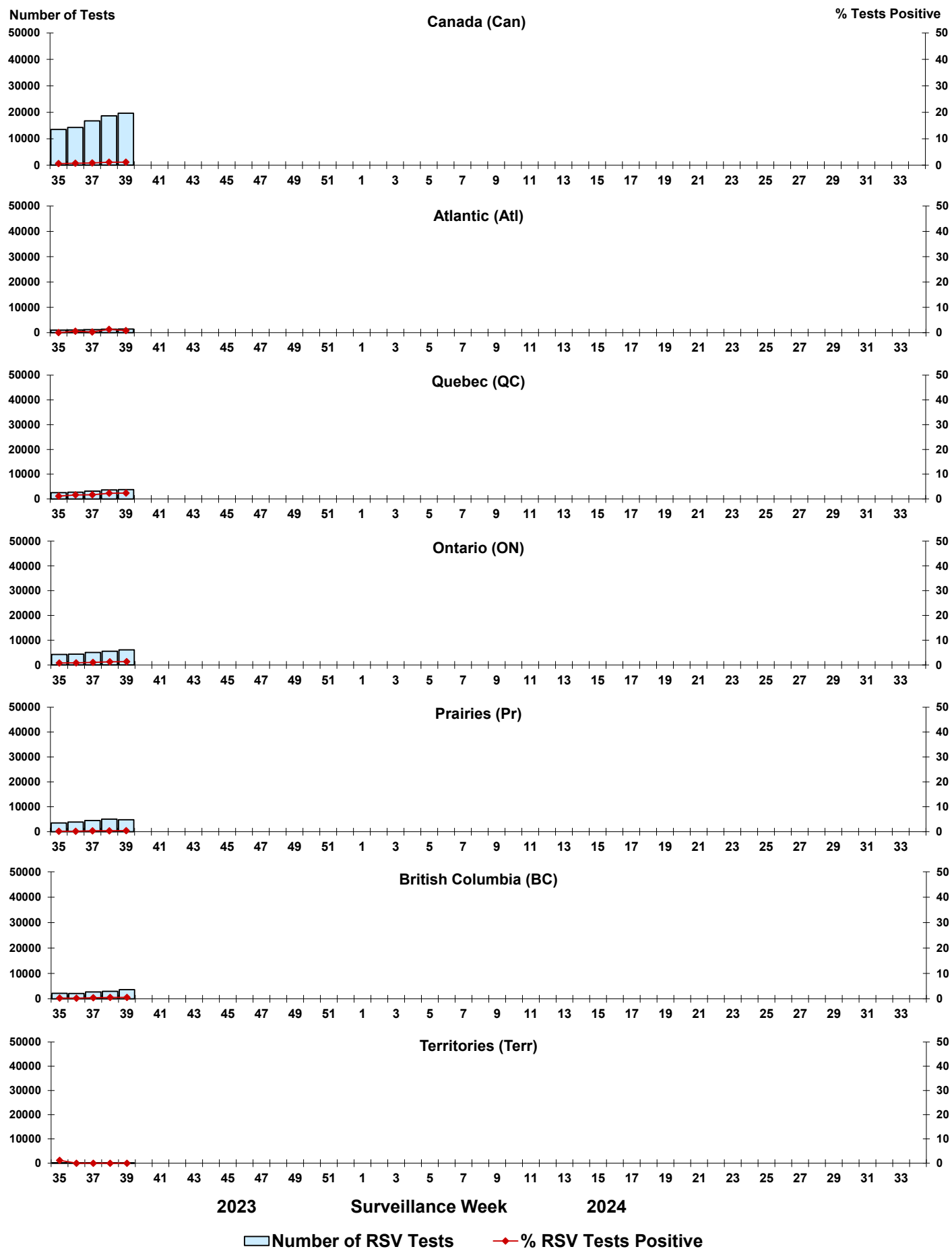


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

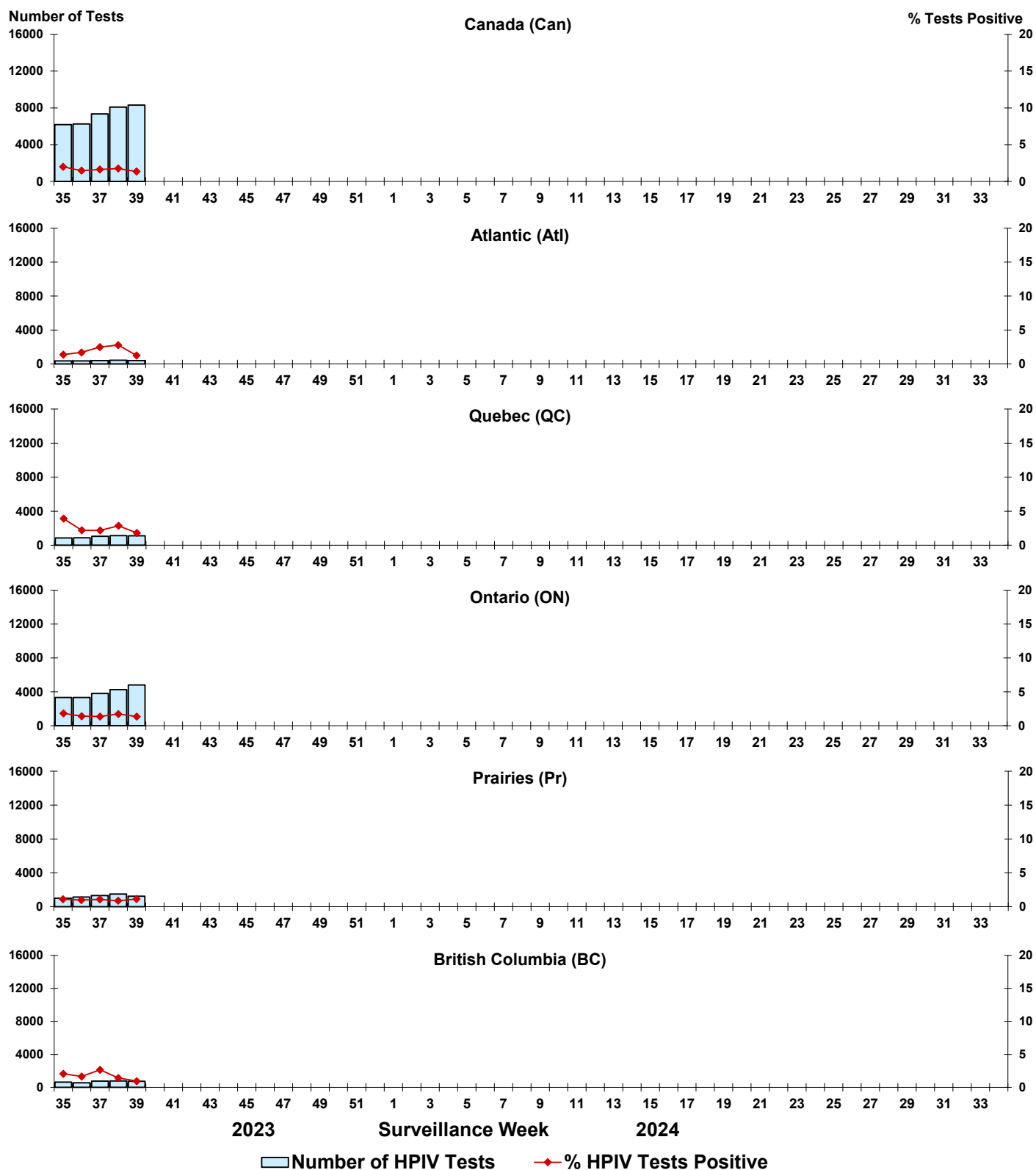


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

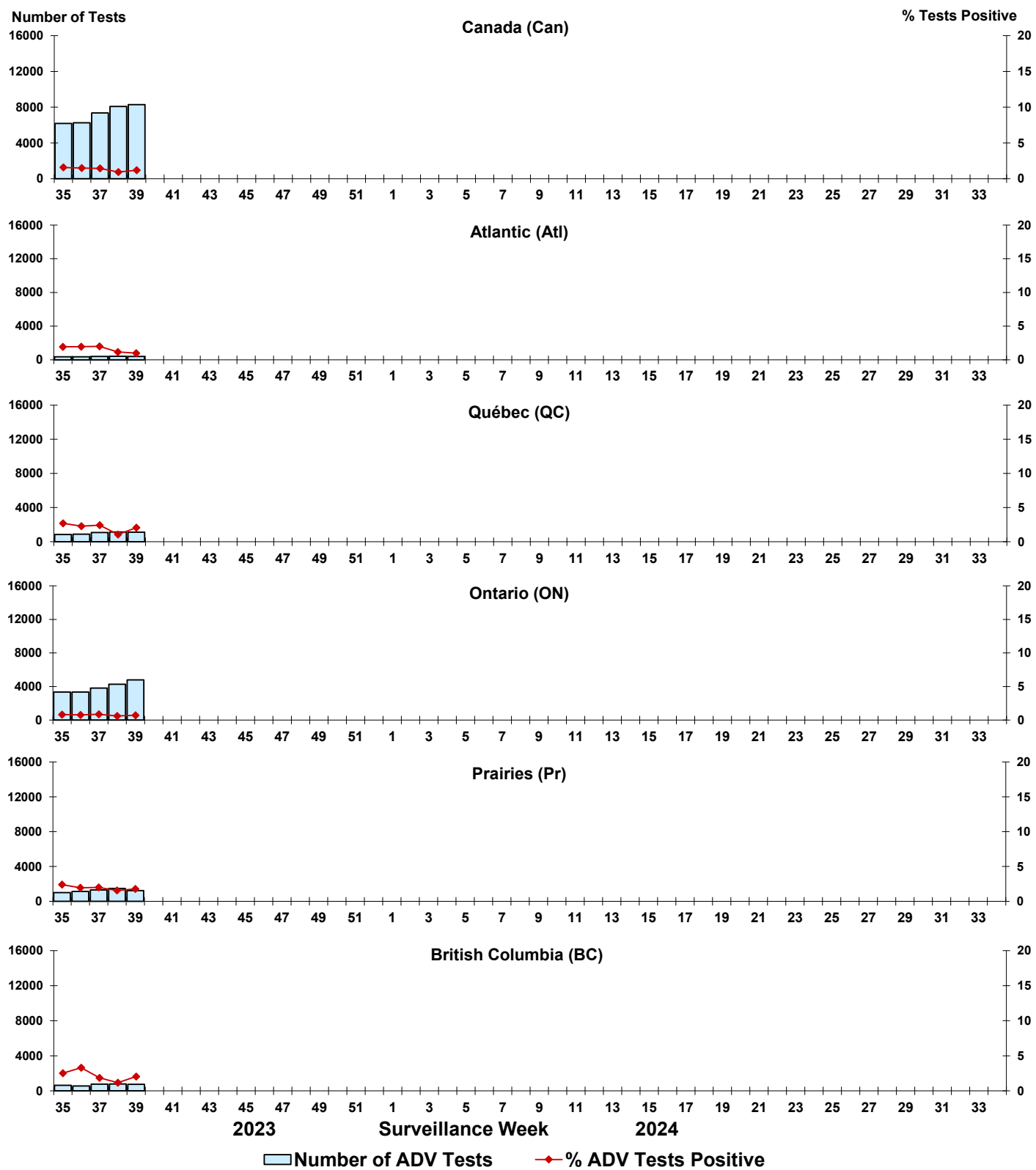


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

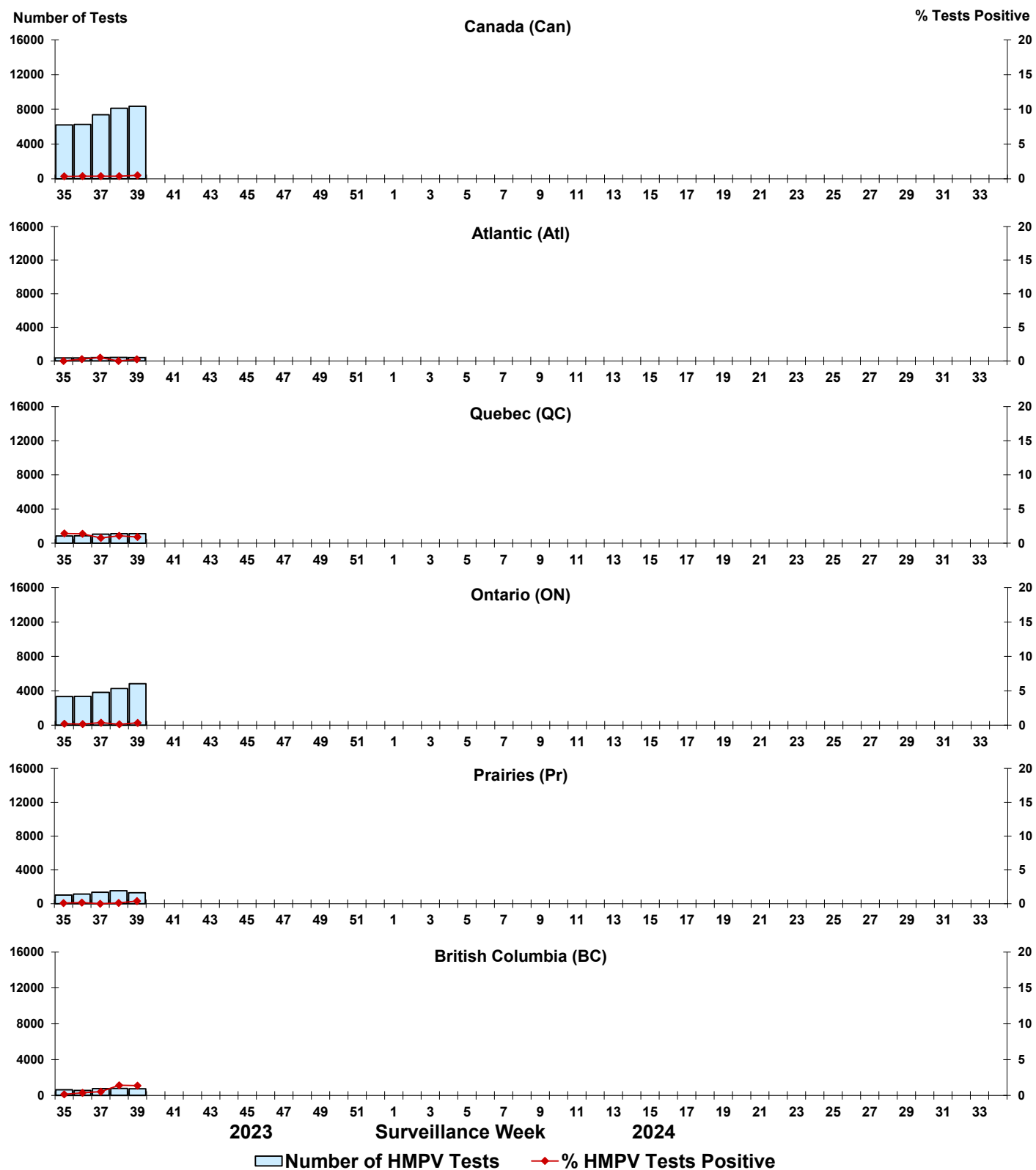


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

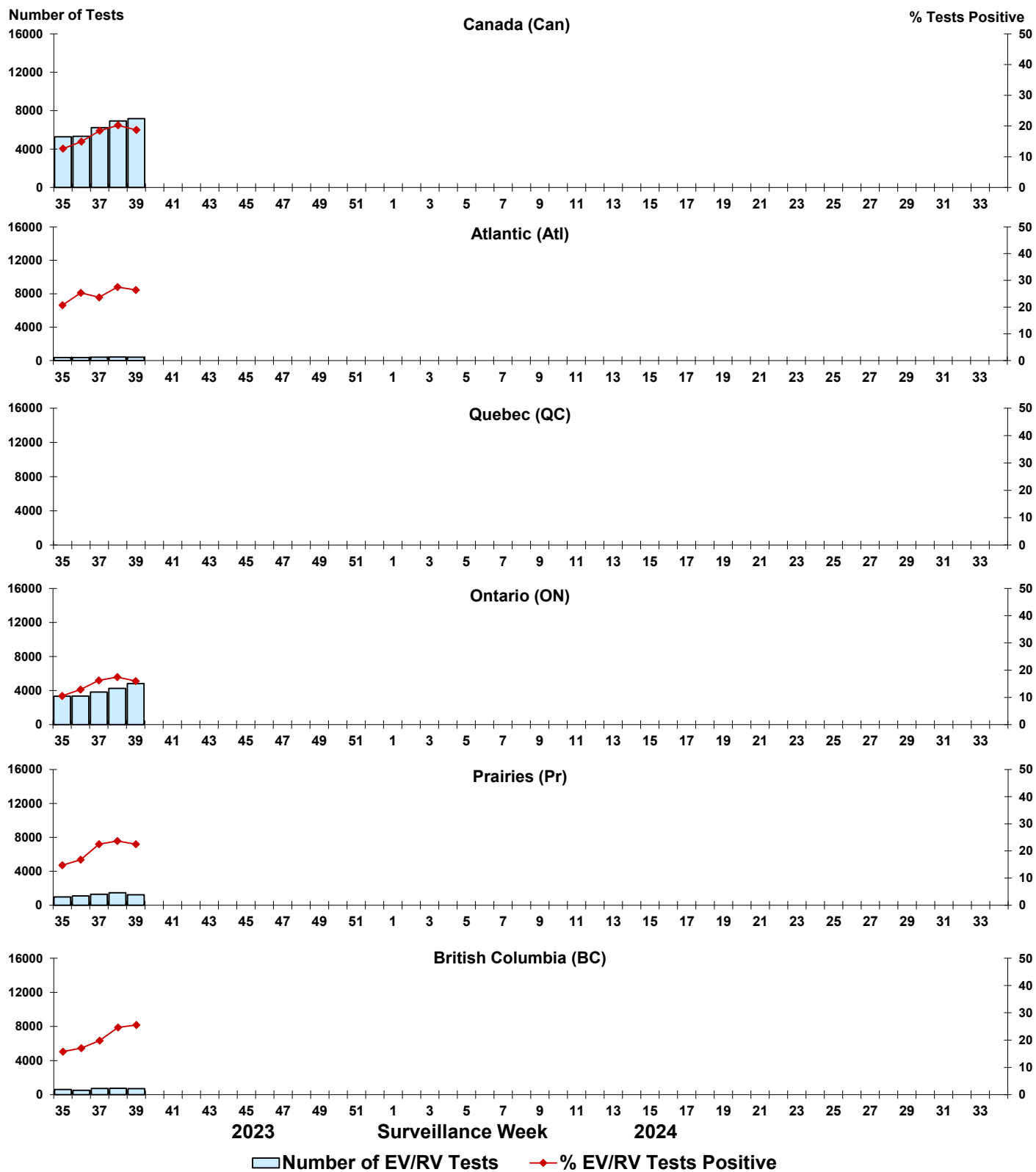


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

