

RESPIRATORY VIRUS DETECTION REPORT

January 29 to February 4, 2023
(Surveillance Week 2023-05)



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 5 (week ending February 4, 2023) in Canada, participating RVDSS laboratories reported 6,525 detections of SARS-CoV-2 from 56,805 tests (11.5% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 7,811 to 27,778 tests), activity of nearly all viruses is within or below expected levels.

- Activity of influenza remains low and stable at inter-seasonal levels. Influenza A accounts for the majority of influenza detections in Canada (206 detections; 0.7% positive) compared to influenza B (79 detections; 0.3% positive).
- Activity of respiratory syncytial virus (RSV) is decreasing. Compared to pre-pandemic seasons, RSV activity remains within expected levels typical of this time of year (1,667 detections; 7.1% positive).
- Activity of all other non-SARS-CoV-2 respiratory viruses is near expected levels typical of this time of year.
- 34/35 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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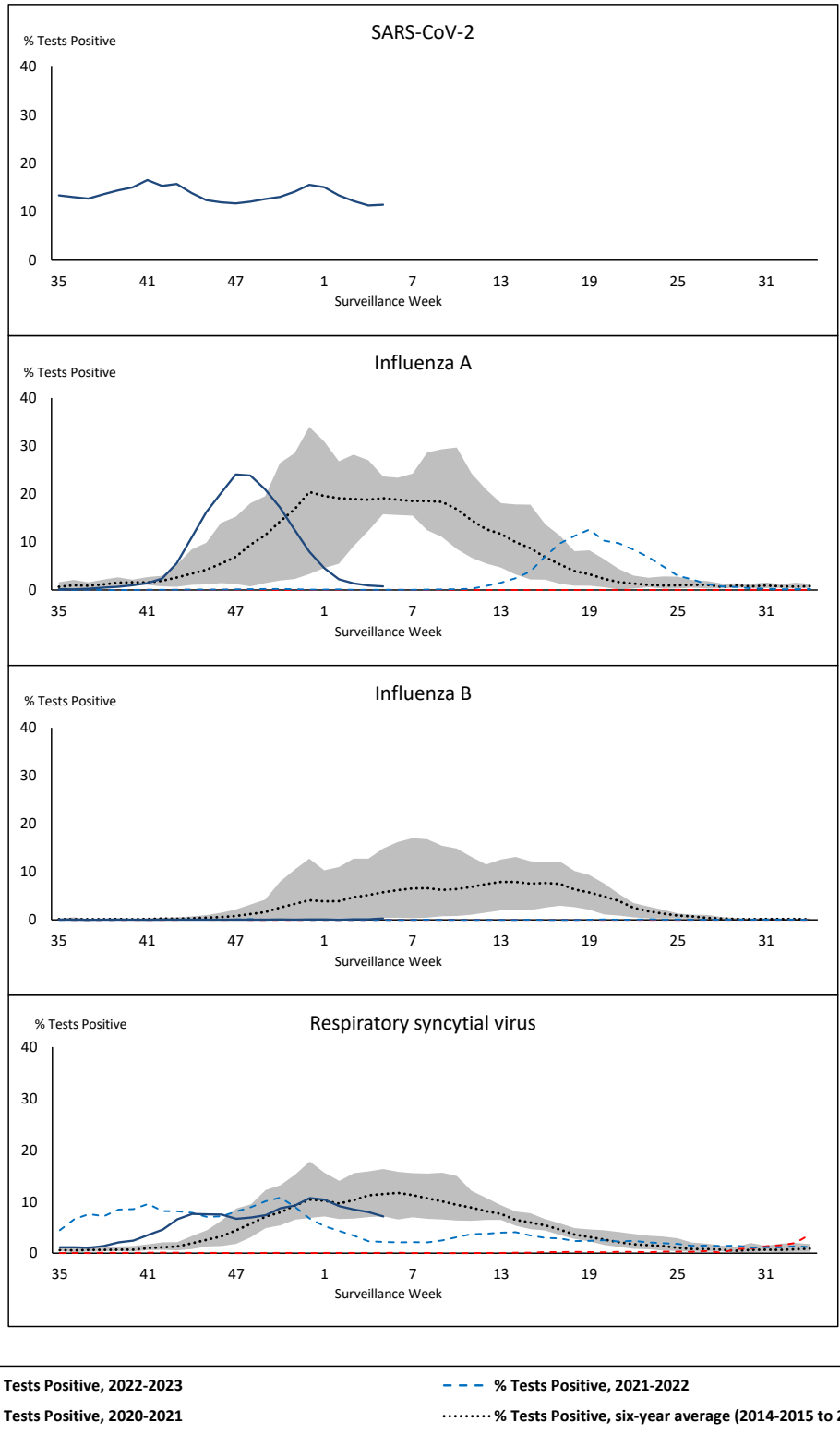


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Figure 1: Positive severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), influenza, and respiratory syncytial virus tests (%) reported by participating laboratories in Canada by surveillance week compared to average and range from 2014-2015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



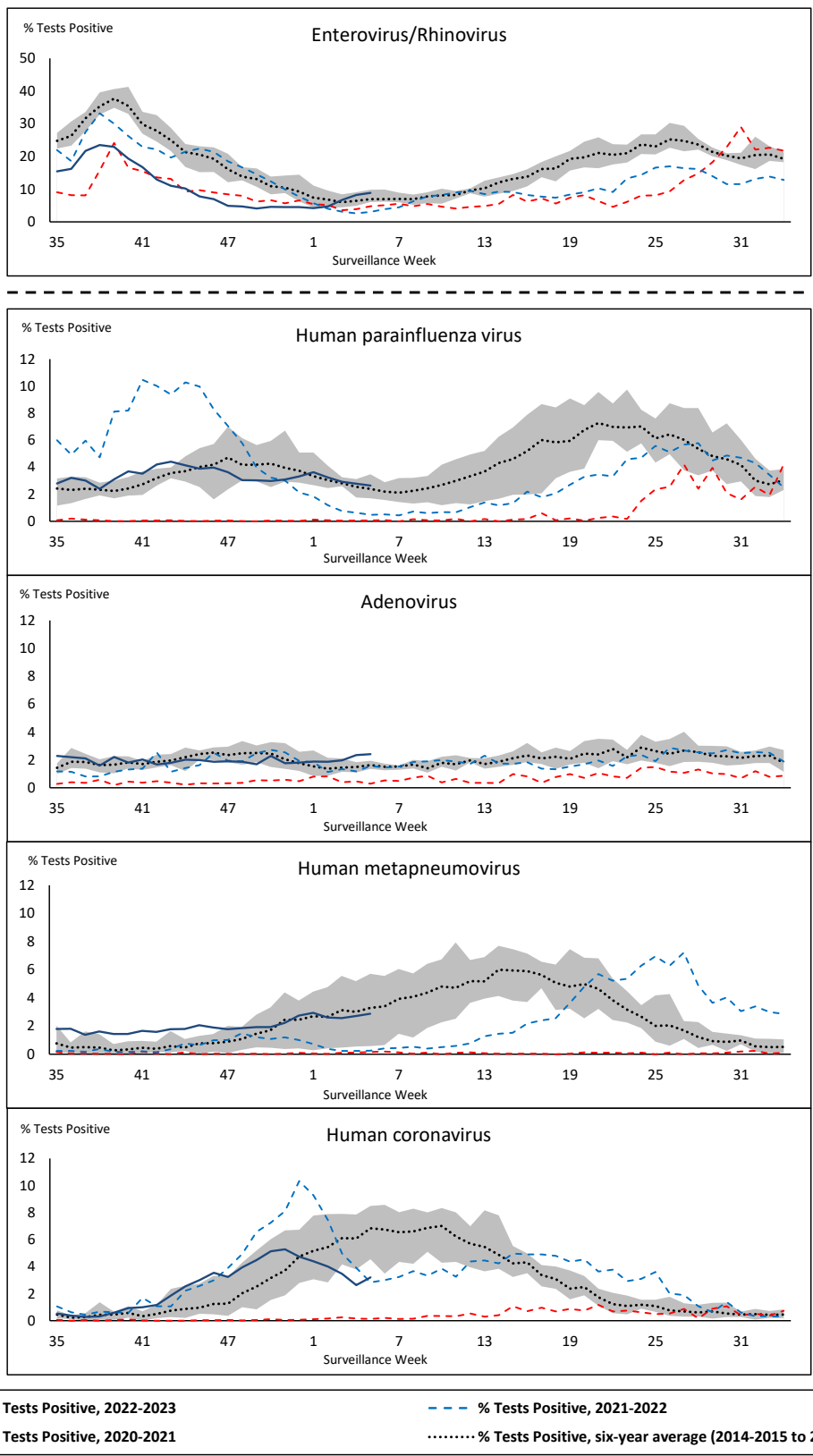
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 appropriate 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 February 4, 2023 (surveillance week 2023-05)

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	573	74	284	0	0	2	2	0	284	13	284	3	0	11	1	0	284	6	284	6	284	29	284	15	
Prince Edward Island	692	61	106	0	0	1	1	0	106	17	22	0	0	1	0	0	22	0	22	5	22	7	22	1	
Nova Scotia	2538	637	1301	0	0	4	4	0	1301	90	31	0	0	1	0	0	31	1	31	3	31	7	31	4	
New Brunswick	2155	357	1530	0	0	1	1	0	1215	110	259	0	1	1	0	0	259	22	259	10	259	23	259	8	
Atlantic	5958	1129	3221	0	0	8	8	0	2906	230	596	3	1	14	1	0	596	29	596	24	596	66	596	28	
Région Nord-Est	1878	135	1851	0	0	24	24	0	545	59	40	0	0	3	0	0	40	6	40	3	N.C.	N.C.	40	2	
Québec-Chaudière-Appalaches	3487	323	653	0	0	3	3	0	627	55	176	0	0	3	0	0	188	25	176	5	N.C.	N.C.	176	5	
Centre-du-Québec	3433	442	444	0	0	3	3	1	383	21	27	0	0	0	0	0	27	3	27	1	N.C.	N.C.	27	2	
Montréal-Laval	4266	487	3275	0	0	35	35	39	1413	49	512	0	0	13	0	0	512	33	516	6	N.C.	N.C.	512	36	
Ouest du Québec	2551	286	773	0	0	9	9	2	724	50	23	0	0	2	0	0	23	3	23	1	N.C.	N.C.	23	2	
Montérégie	2969	285	610	0	0	6	6	1	606	11	6	0	0	0	0	0	6	1	6	0	N.C.	N.C.	6	0	
Province of Québec	18584	1958	7606	0	0	80	80	43	4298	245	784	0	0	21	0	0	796	71	788	16	N.C.	N.C.	784	47	
P.H.O.L. - Ottawa	562	104	191	1	1	0	2	0	191	20	107	0	0	0	0	1	107	0	107	4	107	7	107	10	
EOURLA	1951	162	442	0	0	5	5	1	442	16	33	0	0	2	0	0	33	1	33	1	33	7	33	2	
P.H.O.L. - Kingston	737	118	89	0	0	0	0	0	89	11	70	0	0	0	0	0	70	0	70	0	70	3	70	2	
UHN / Mount Sinai Hospital	2430	164	751	0	0	3	3	1	751	10	118	0	0	0	0	0	118	0	118	1	118	4	118	8	
P.H.O.L. - Toronto	1025	228	832	7	6	0	5	1	832	57	738	0	0	0	0	35	738	15	738	20	738	76	738	33	
Sick Kids Hospital - Toronto	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
Shared Hospital Laboratory	2083	151	2082	4	6	2	12	5	2082	44	2069	0	0	0	0	18	2069	17	2099	29	2099	117	2099	15	
P.H.O.L. - Sault Ste. Marie	44	20	30	0	0	0	0	0	30	2	25	0	0	0	0	4	25	0	25	0	25	2	25	1	
P.H.O.L. - Timmins	198	8	22	0	0	0	0	0	22	4	22	0	0	0	0	1	22	0	22	0	22	2	22	4	
St. Joseph's - London	2937	330	819	0	0	2	2	2	819	18	73	0	0	0	0	3	73	3	73	0	73	9	73	1	
P.H.O.L. - London	842	164	372	1	1	0	2	1	372	30	265	0	0	0	0	8	265	3	265	9	265	28	265	8	
P.H.O.L. - Orillia	22	5	73	0	0	0	0	0	73	6	73	0	0	0	0	0	73	1	73	2	73	19	73	3	
P.H.O.L. - Thunder Bay	131	25	34	0	0	0	0	0	34	8	32	0	0	0	0	2	32	0	32	1	32	0	32	2	
P.H.O.L. - Sudbury	34	3	18	0	0	0	0	0	18	1	16	0	0	0	0	0	16	0	16	1	16	1	16	0	
P.H.O.L. - Hamilton	587	159	302	0	0	0	0	5	302	15	195	0	0	0	0	4	195	4	195	8	195	26	195	2	
P.H.O.L. - Peterborough	116	20	57	0	0	0	0	0	57	7	26	0	0	0	0	1	26	0	26	4	26	1	26	1	
St. Joseph's - Hamilton	2714	365	1405	0	0	12	12	3	1405	32	1405	0	0	21	0	0	1405	16	1405	31	1405	104	0	0	
Sault Area Hospital	257	69	136	0	0	1	1	0	136	8	70	1	0	2	0	0	70	1	70	2	70	1	70	4	
Province of Ontario	16670	2095	7655	13	14	25	44	19	7655	289	5337	1	0	25	0	77	5337	61	5367	113	5367	407	3962	96	
Manitoba	1435	142	1214	0	3	7	10	0	1214	75	114	2	0	4	0	0	114	4	134	7	114	8	134	9	
Saskatchewan	4047	248	1081	0	0	3	3	0	915	126	371	2	1	14	0	0	370	13	370	15	370	38	370	6	
Alberta	5447	568	3466	20	6	22	48	14	3068	322	1285	9	0	28	2	0	1285	17	1284	59	1250	102	1285	21	
Prairies	10929	958	5761	20	9	32	61	14	5197	523	1770	13	1	46	2	0	1769	34	1788	81	1734	148	1789	36	
British Columbia	4406	370	3434	1	0	0	13	3	3285	369	708	2	2	30	4	0	708	27	708	32	680	117	680	43	
Yukon	106	3	21	0	0	0	0	0	21	5	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	34	0	27	0	0	0	0	0	27	4	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	27	4	N.C.	N.C.
Nunavut	118	12	53	0	0	0	0	0	53	2	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	258	15	101	0	0	0	0	0	101	11	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	27	4	N.C.	N.C.
CANADA	56805	6525	27778	34	23	145	206	79	23442	1667	9195	19	4	136	7	77	9206	222	9247	266	8404	742	7811	250	

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

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

Table 2: Cumulative respiratory virus detections from August 28, 2022 to February 4, 2023 (surveillance weeks 2022-35 to 2023-05)

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	13751	2728	7564	1	246	667	914	0	7564	282	7564	10	29	72	19	0	7564	157	7564	267	7564	602	7564	281	
Prince Edward Island	25878	6209	2444	1	119	240	360	0	2444	223	1009	15	25	75	6	0	1009	59	1009	17	1009	317	1009	31	
Nova Scotia	100970	20522	27322	0	4	3608	3612	1	27312	2037	904	4	16	22	3	0	907	36	897	6	907	176	907	28	
New Brunswick	87421	12396	33105	4	132	4400	4536	6	26094	1648	2461	4	21	122	7	0	2461	179	2461	53	2461	446	2406	148	
Atlantic	228020	41855	70435	6	501	8915	9422	7	63414	4190	11938	33	91	291	35	0	11941	431	11931	343	11941	1541	11886	488	
Région Nord-Est	64401	8496	33233	0	2	3583	3585	8	11210	1130	869	7	3	52	0	0	869	50	861	58	N.C.	N.C.	869	43	
Québec-Chaudière-Appalaches	139615	13751	17554	0	0	2777	2777	12	17197	1741	4835	21	5	43	0	0	5120	342	4835	240	N.C.	N.C.	4835	194	
Centre-du-Québec	111039	15807	11878	0	0	1745	1745	16	10199	854	621	13	0	26	2	0	621	53	621	58	N.C.	N.C.	621	29	
Montréal-Laval	153049	20147	62561	0	9	5940	5949	131	33745	2309	14799	123	13	270	10	0	14808	618	14910	625	N.C.	N.C.	14484	457	
Ouest du Québec	85240	11672	15072	0	7	2149	2156	11	13060	1134	755	20	0	56	1	0	754	139	755	42	N.C.	N.C.	756	34	
Montérégie	109097	12879	15553	0	0	1630	1630	13	14938	982	89	0	0	2	0	0	89	2	89	4	N.C.	N.C.	89	2	
Province of Québec	662441	82752	155851	0	18	17824	17842	191	100349	8150	21968	184	21	449	13	0	22261	1204	22071	1027	N.C.	N.C.	21654	759	
P.H.O.L. - Ottawa	22672	5748	3399	14	134	65	208	0	3399	278	2417	0	0	0	0	58	2417	8	2417	35	2417	157	2417	84	
EOURLA	65543	7004	11209	0	0	1379	1379	4	11209	1200	881	8	3	37	16	0	881	43	881	26	881	199	881	61	
P.H.O.L. - Kingston	23116	3914	1903	2	88	38	128	1	1902	164	1579	0	0	0	0	66	1580	21	1580	24	1579	165	1580	55	
UHN / Mount Sinai Hospital	70914	5704	14676	4	43	345	392	16	14676	239	1052	0	0	4	0	0	1019	4	1052	1	1052	33	1052	50	
P.H.O.L. - Toronto	43547	9288	18224	82	2394	141	1092	2	18195	1082	15799	0	0	0	0	661	15802	248	15799	219	15799	1227	15799	660	
Sick Kids Hospital - Toronto	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Shared Hospital Laboratory	59837	4535	59839	68	1454	718	2240	27	59838	2023	37048	4	0	16	0	441	37061	332	37283	249	37231	1115	37123	589	
P.H.O.L. - Sault Ste. Marie	1411	275	466	1	52	15	58	0	466	13	406	0	0	0	0	41	406	1	406	26	406	16	406	13	
P.H.O.L. - Timmins	7193	762	756	0	161	6	156	0	755	70	734	0	0	0	0	42	734	12	734	11	734	50	734	32	
St. Joseph's - London	94627	12366	11938	0	0	870	870	18	11938	920	1337	0	0	0	0	50	1371	44	1371	7	1371	199	959	61	
P.H.O.L. - London	28056	6113	7319	9	581	61	633	5	7318	753	6023	0	0	0	0	313	6024	72	6024	60	6023	426	6024	229	
P.H.O.L. - Orillia	465	235	1788	6	260	23	289	0	1788	218	1729	0	0	0	0	108	1729	34	1729	38	1729	225	1729	88	
P.H.O.L. - Thunder Bay	6987	1481	755	0	107	3	110	0	754	78	664	0	0	0	0	32	664	15	664	9	664	44	664	16	
P.H.O.L. - Sudbury	1697	251	563	1	65	14	67	0	563	57	462	0	0	0	0	20	462	5	462	17	462	29	462	20	
P.H.O.L. - Hamilton	20899	5533	6195	7	299	91	397	11	6192	488	4442	0	0	0	0	190	4444	55	4442	52	4442	373	4442	163	
P.H.O.L. - Peterborough	3511	626	907	0	64	9	73	0	907	97	750	0	0	0	0	27	750	7	750	27	750	101	750	27	
St. Joseph's - Hamilton	69133	10631	29254	0	0	2683	2683	15	29254	2152	29254	0	0	802	0	0	29254	261	29254	204	29254	1979	0	0	
Sault Area Hospital	10212	1751	6526	1	260	256	517	0	6526	78	1911	35	0	45	2	0	1911	36	1911	88	1911	191	1911	44	
Province of Ontario	529820	76217	175717	195	5962	6717	11292	99	175680	9910	106488	47	3	904	18	2049	106509	1198	106759	1093	106705	6529	76933	2192	
Manitoba	50134	9076	25276	16	199	1752	1967	2	25276	1393	3808	4	4	136	6	0	3798	113	3924	161	3808	571	3924	152	
Saskatchewan	132171	10735	29333	2	41	3831	3874	8	22414	1613	9672	31	40	440	8	0	9675	233	9677	514	9675	845	9672	346	
Alberta	172645	28032	85952	877	7271	2709	10857	61	73731	6775	30023	165	62	626	34	0	30012	352	29978	717	29517	2617	30023	877	
Prairies	354950	47843	140561	895	7511	8292	16698	71	121421	9781	43503	200	106	1202	48	0	43485	698	43579	1392	43000	4033	43619	1375	
British Columbia	180915	17741	87575	337	4322	297	8706	50	81587	6444	18676	144	161	679	127	6	18664	427	18664	428	18120	2769	18117	737	
Yukon	4142	279	555	2	136	0	138	0	552	21	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	1276	150	1168	2	147	1	150	0	1168	67	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1168	238	N.C.	N.C.
Nunavut	3291	318	1682	3	230	3	236	0	1682	42	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	8709	747	3405	7	513	4	524	0	3402	130	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1168	238	N.C.	N.C.	
CANADA	1964855	267155	633544	1440	18827	42049	64484	418	545853	38605	202573	608	382	3525	241	2055	202860	3958	203004	4283	180934	15110	172209	5551	

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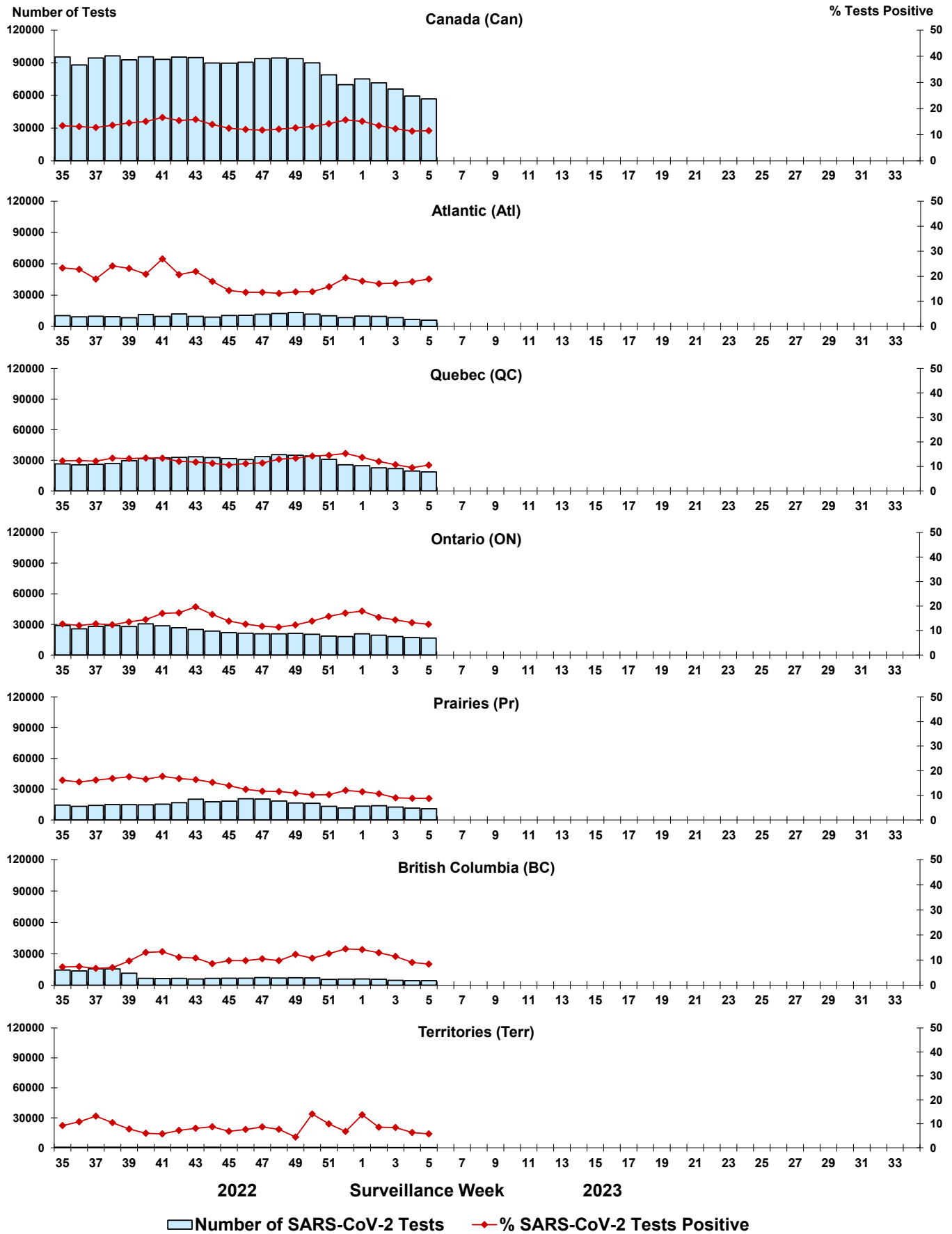
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Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests

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

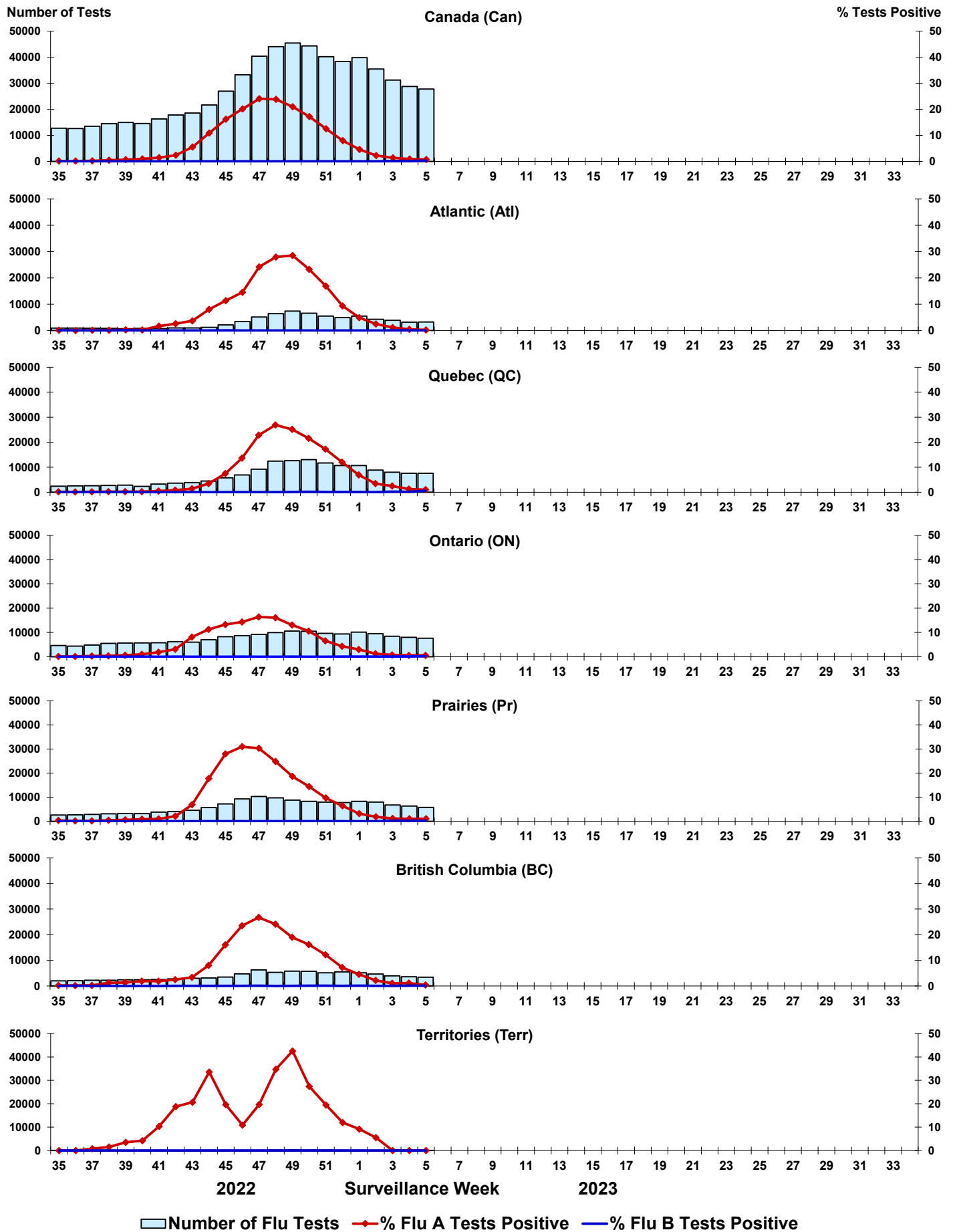


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

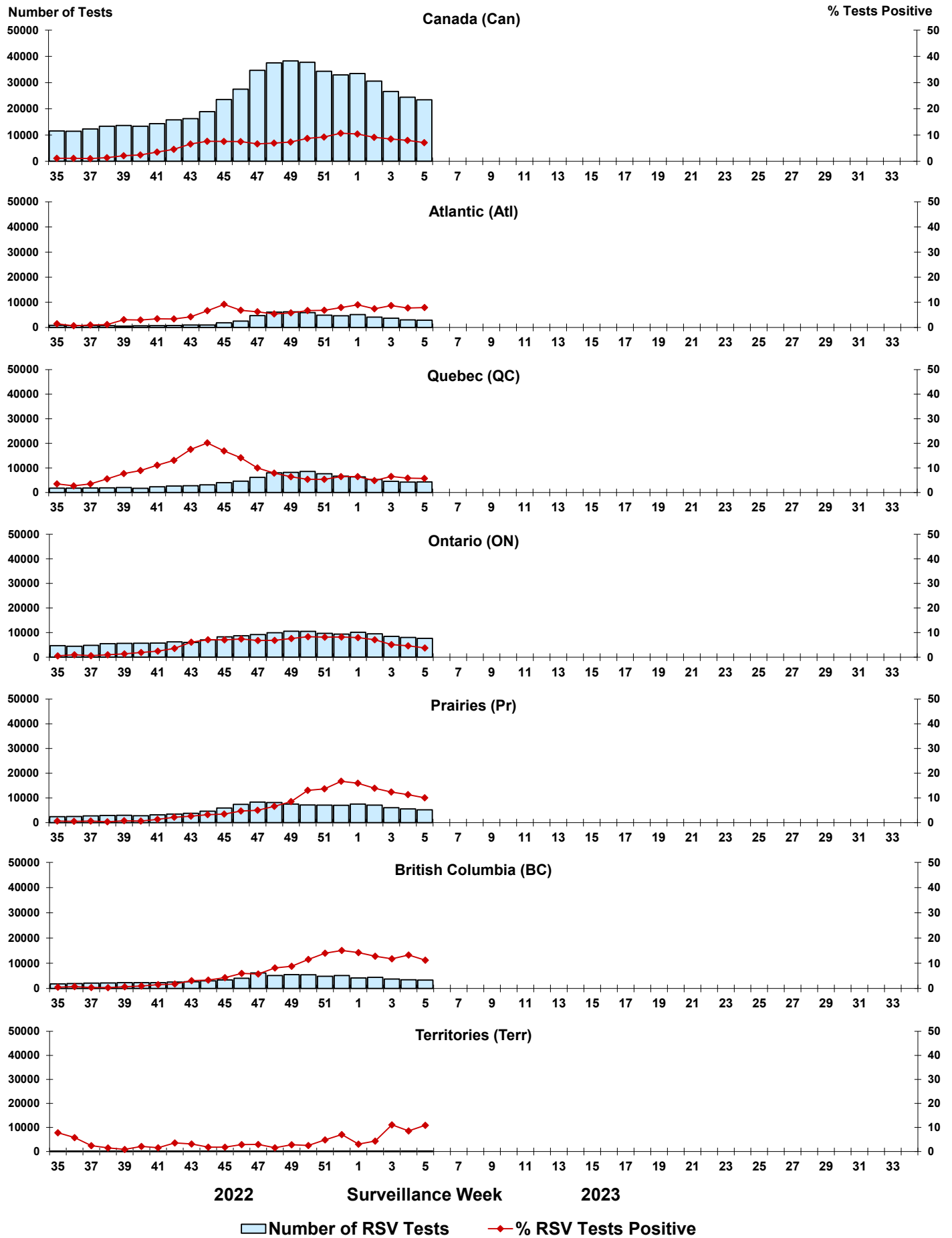


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

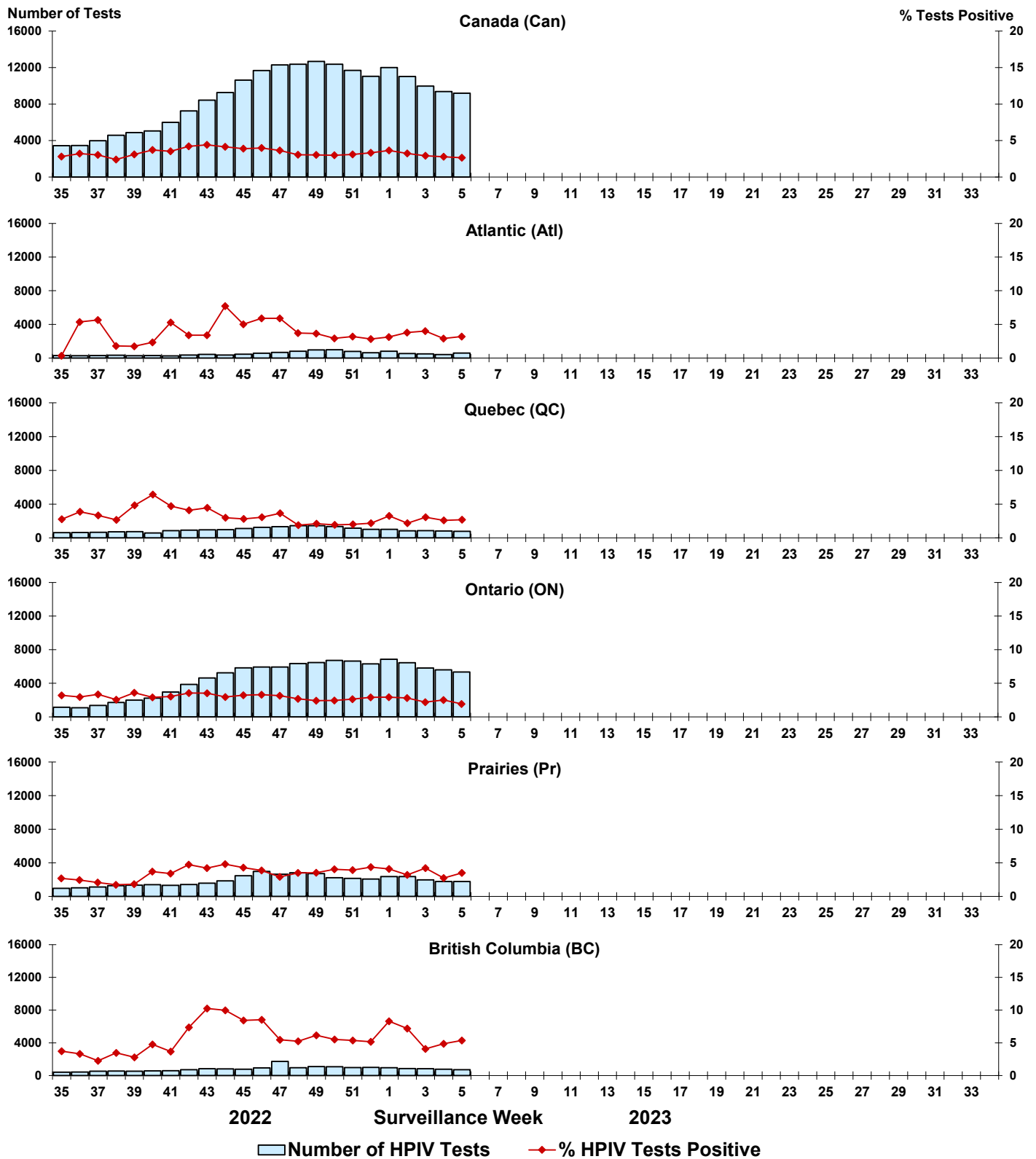


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

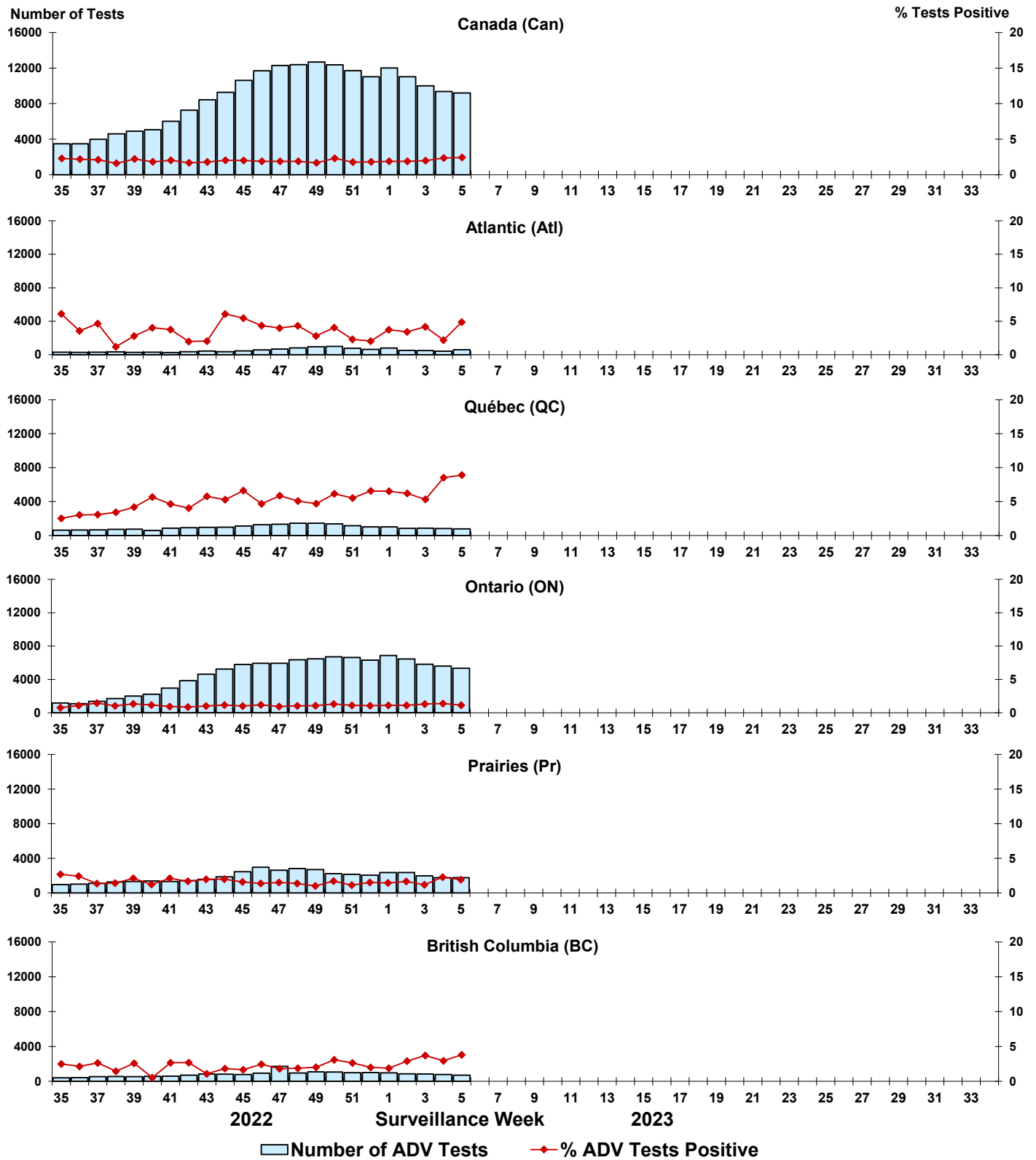


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

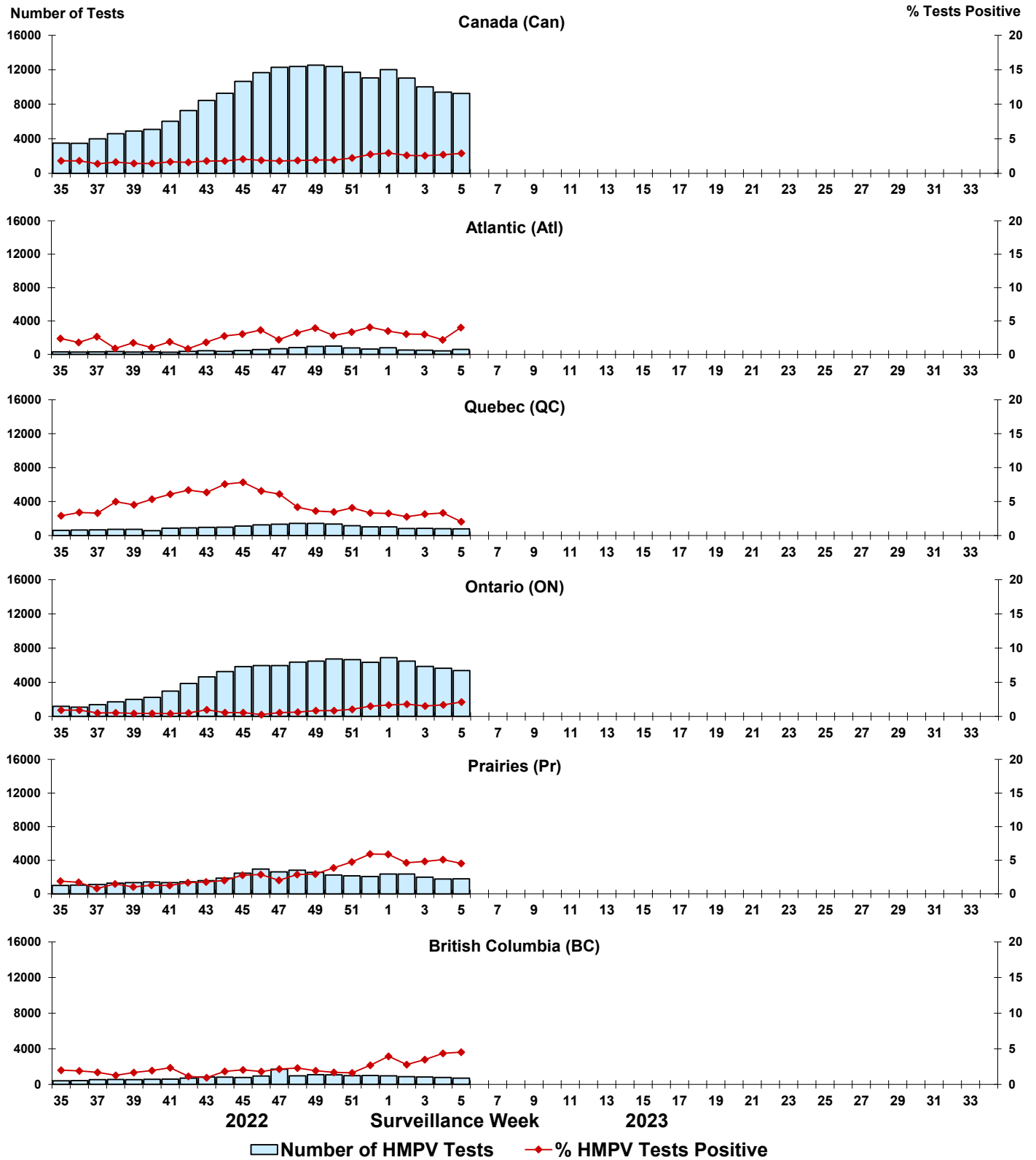


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

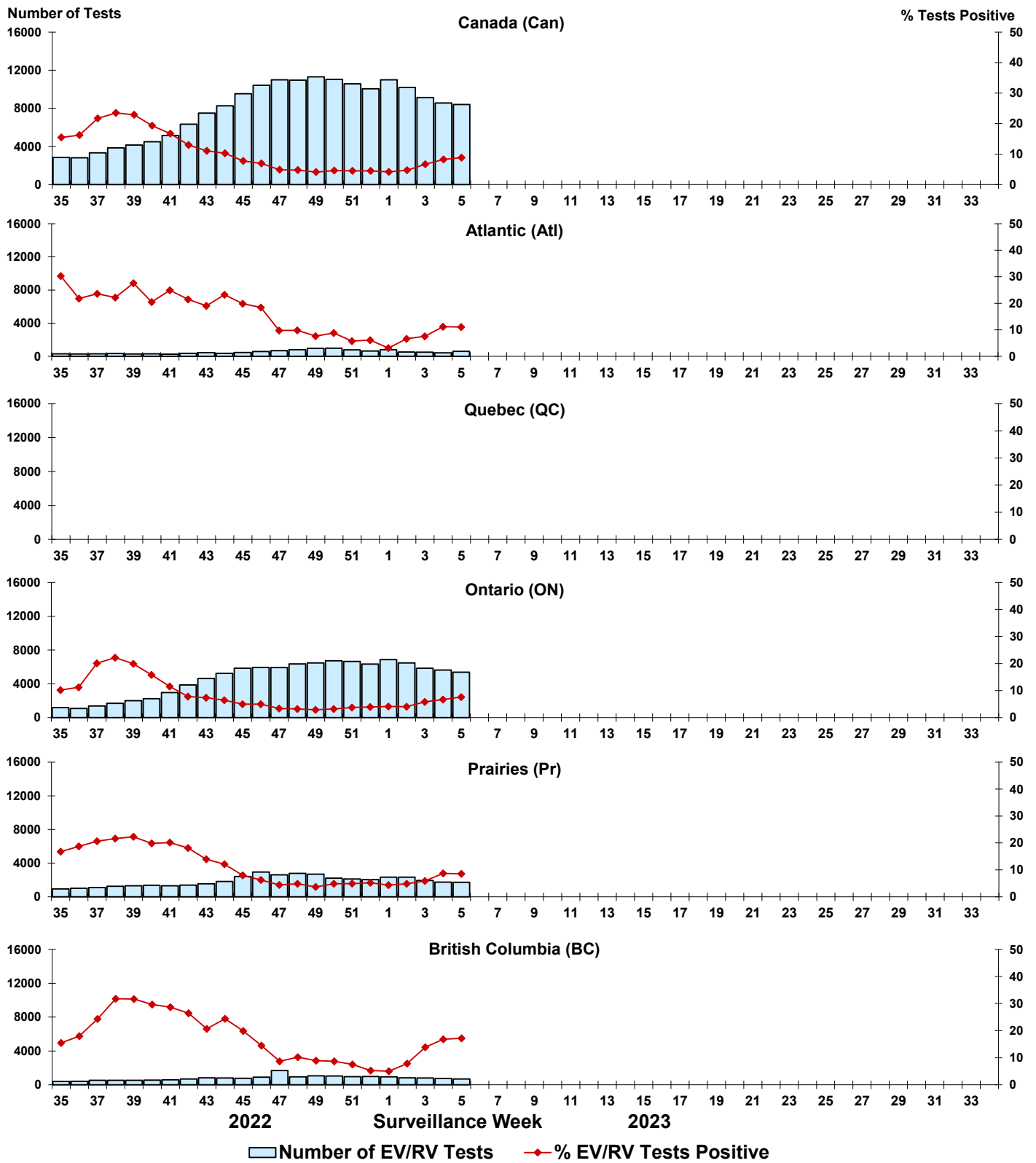


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

