

RESPIRATORY VIRUS DETECTION REPORT

July 30 to August 5, 2023
(Surveillance Week 2023-31)



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 31 (week ending August 5, 2023) in Canada, participating RVDSS laboratories reported 1,468 detections of SARS-CoV-2 from 17,163 tests (8.6% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 3,144 to 10,150 tests), activity of enterovirus/rhinovirus is highest.

- While activity of enterovirus/rhinovirus is highest, it remains below expected levels typical of this time of year (464 detections; 14.8% positive).
- Activity of all other non-SARS-CoV-2 respiratory viruses is low and near expected levels typical of this time of year.
- 33/35 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

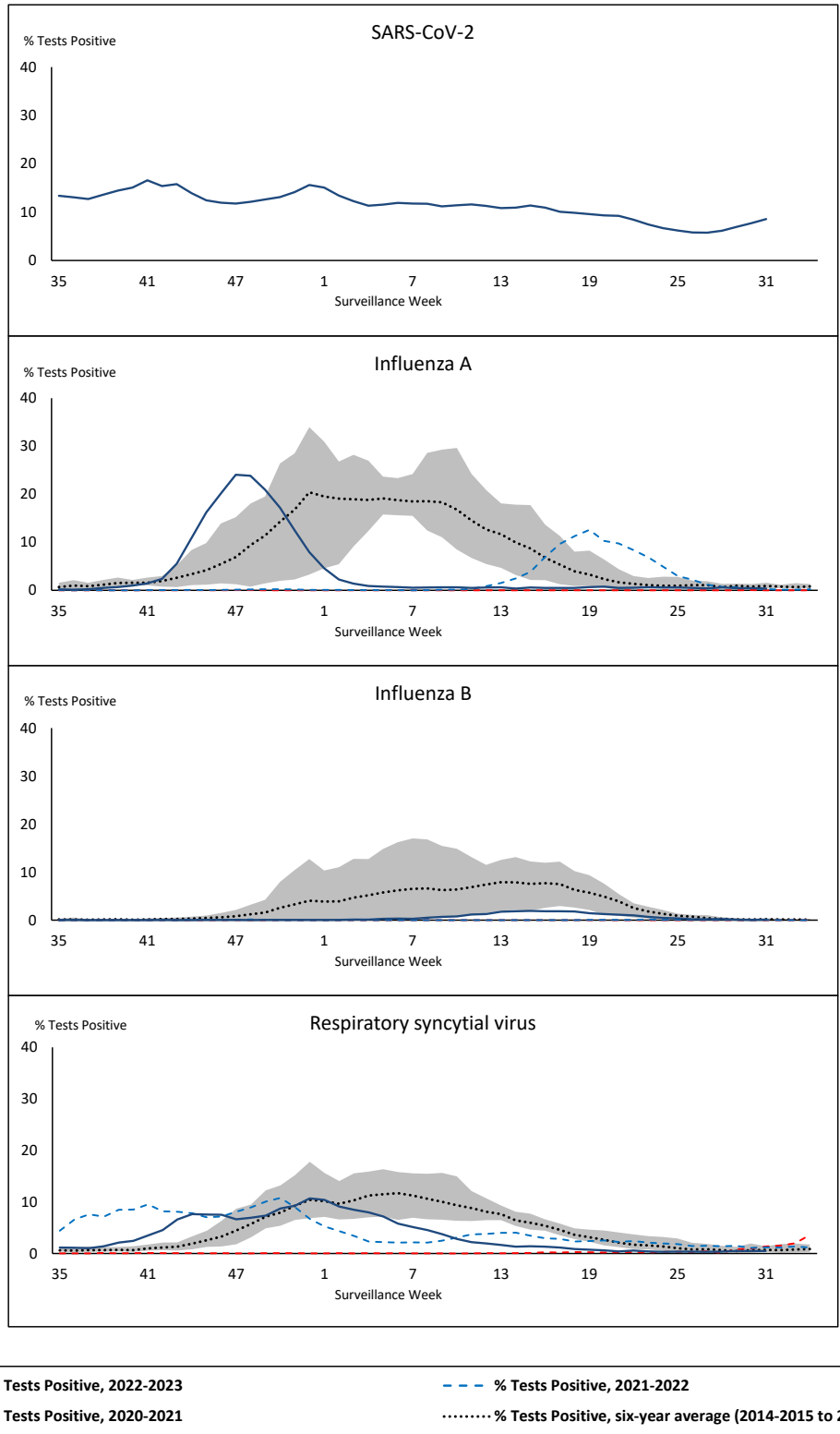
SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2

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



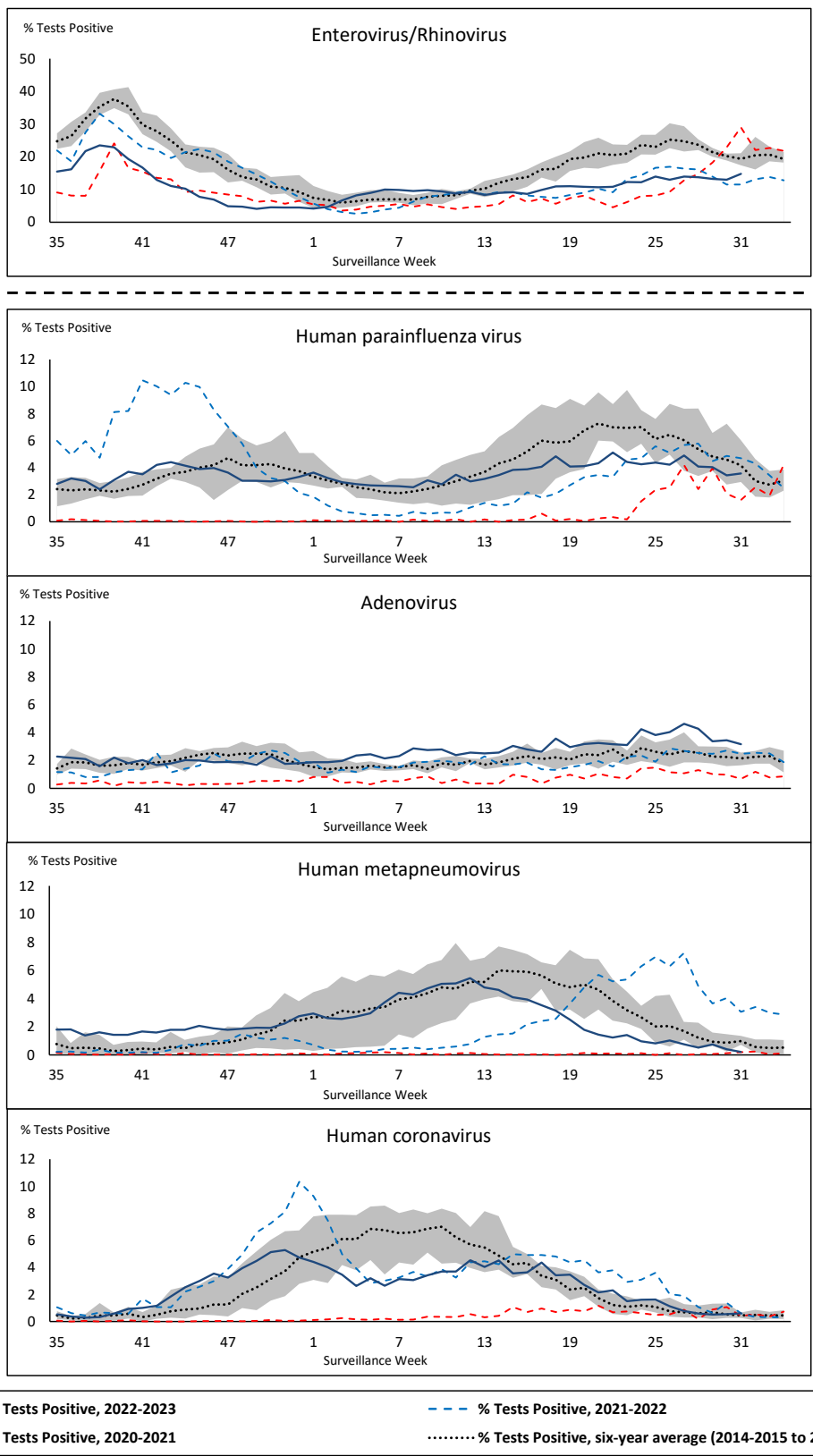
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 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 August 5, 2023 (surveillance week 2023-31)

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	276	23	187	0	0	0	0	1	187	3	187	0	0	0	2	0	187	4	187	0	187	27	187	1	
Prince Edward Island	60	4	5	0	0	0	0	0	5	0	4	1	0	0	0	0	4	0	4	0	4	2	4	0	
Nova Scotia	833	74	372	0	0	0	0	0	372	1	31	0	0	0	0	0	31	2	31	0	31	7	31	0	
New Brunswick	515	42	292	0	0	0	0	0	286	2	42	1	1	0	0	0	42	1	42	0	42	3	42	0	
Atlantic	1684	143	856	0	0	0	0	1	850	6	264	2	1	0	2	0	264	7	264	0	264	39	264	1	
Région Nord-Est	874	63	680	0	0	0	0	0	126	0	39	0	1	0	3	0	39	6	38	0	N.C.	N.C.	39	0	
Québec-Chaudière-Appalaches	1265	163	358	0	0	1	1	1	358	4	150	0	0	0	3	0	169	7	150	0	N.C.	N.C.	150	0	
Centre-du-Québec	954	110	157	0	0	0	0	0	157	1	34	1	0	0	3	0	34	2	34	0	N.C.	N.C.	34	0	
Montréal-Laval	1773	145	831	0	0	3	3	1	828	7	452	2	1	5	5	0	452	15	452	2	N.C.	N.C.	452	2	
Ouest du Québec	771	72	210	0	0	2	2	0	210	4	10	0	0	0	0	0	10	1	10	0	N.C.	N.C.	10	0	
Montérégie	726	56	460	0	0	1	1	0	459	3	1	0	0	0	0	0	1	0	1	0	N.C.	N.C.	1	0	
Province of Québec	6363	609	2696	0	0	7	7	2	2138	19	686	3	2	5	14	0	705	31	685	2	N.C.	N.C.	686	2	
P.H.O.L. - Ottawa	99	30	69	1	0	0	1	0	69	0	54	0	0	0	0	3	54	0	54	0	54	8	54	0	
EOURLA	616	35	207	0	0	0	0	1	207	3	12	0	2	0	0	0	12	0	12	0	12	1	12	0	
P.H.O.L. - Kingston	99	10	30	0	0	0	0	0	30	0	23	0	0	0	0	1	23	0	23	0	23	2	23	0	
UHN / Mount Sinai Hospital	782	23	431	0	0	0	0	0	431	1	15	0	0	3	0	0	15	0	15	0	15	0	15	0	
P.H.O.L. - Toronto	260	41	583	1	0	0	0	0	583	0	540	0	0	0	0	33	540	9	540	0	540	107	540	9	
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.	
Shared Hospital Laboratory	676	37	675	1	2	0	3	1	675	3	682	0	0	0	0	13	682	8	679	2	679	40	679	2	
P.H.O.L. - Sault Ste. Marie	5	0	6	0	0	0	0	0	6	0	3	0	0	0	0	0	3	0	3	0	3	0	3	0	
P.H.O.L. - Timmins	35	6	26	0	0	0	0	0	26	0	13	0	0	0	0	0	13	0	13	0	13	1	13	0	
St. Joseph's - London	522	28	36	0	0	0	0	0	36	0	36	0	0	0	0	0	36	2	36	1	36	5	36	0	
P.H.O.L. - London	185	27	142	0	0	0	0	0	142	1	129	0	0	0	0	7	129	0	129	0	129	46	129	0	
P.H.O.L. - Orillia	10	0	22	0	0	0	0	0	22	0	22	0	0	0	0	2	22	0	22	0	22	4	22	0	
P.H.O.L. - Thunder Bay	37	18	24	0	0	0	0	0	24	0	14	0	0	0	0	0	14	1	14	0	14	8	14	0	
P.H.O.L. - Sudbury	4	2	4	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	0	4	1	4	0	
P.H.O.L. - Hamilton	94	18	70	0	0	0	0	0	70	0	70	0	0	0	0	8	70	3	70	0	70	11	70	1	
P.H.O.L. - Peterborough	31	3	39	1	0	1	2	0	37	0	37	0	0	0	0	1	37	3	37	0	37	1	37	0	
St. Joseph's - Hamilton	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.	
Sault Area Hospital	63	6	63	0	0	0	0	0	63	0	44	0	0	0	0	0	44	1	44	0	44	6	44	1	
Province of Ontario	3518	284	2427	4	2	1	6	2	2425	8	1698	0	2	3	0	68	1698	27	1695	3	1695	241	1695	13	
Manitoba	844	70	736	0	0	1	1	0	736	2	48	0	0	0	0	0	48	4	73	0	48	17	73	0	
Saskatchewan	855	46	376	0	0	1	1	1	373	0	186	0	5	0	2	0	186	15	186	1	186	32	186	0	
Alberta	2128	160	1709	4	1	1	6	2	1659	9	532	1	4	1	0	0	532	10	530	0	521	70	532	1	
Prairies	3827	276	2821	4	1	3	8	3	2768	11	766	1	9	1	2	0	766	29	789	1	755	119	791	1	
British Columbia	1700	155	1293	8	1	0	14	1	1293	0	421	4	2	3	13	0	421	28	421	2	421	59	386	6	
Yukon	21	1	10	0	0	0	1	0	10	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	9	0	9	0	0	0	0	0	9	0	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	9	6	N.C.	N.C.
Nunavut	41	0	38	0	0	0	0	0	38	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	71	1	57	0	0	0	1	0	57	2	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	9	6	N.C.	N.C.	
CANADA	17163	1468	10150	16	4	11	36	9	9531	46	3835	10	16	12	31	68	3854	122	3854	8	3144	464	3822	23	

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 August 5, 2023 (surveillance weeks 2022-35 to 2023-31)

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	24987	4239	14666	8	246	680	934	11	14666	640	14666	74	33	388	160	0	14666	312	14666	386	14666	1299	14666	569
Prince Edward Island	33731	7339	4117	1	119	248	368	4	4117	384	1197	21	27	81	8	0	1197	82	1197	39	1197	350	1197	35
Nova Scotia	139973	26689	48018	0	4	3650	3654	15	48009	2431	1597	14	17	36	8	0	1604	66	1594	45	1604	310	1604	65
New Brunswick	112446	16181	53300	25	133	4438	4596	31	45226	2066	4258	39	34	166	8	0	4258	298	4258	187	4258	793	4203	236
Atlantic	311137	54448	120101	34	502	9016	9552	61	112018	5521	21718	148	111	671	184	0	21725	758	21715	657	21725	2752	21670	905
Région Nord-Est	103780	12011	63633	0	4	3887	3891	95	18248	1391	2132	32	10	95	14	0	2133	178	2110	100	N.C.	N.C.	2133	113
Québec-Chaudière-Appalaches	206097	19162	29708	0	0	2910	2910	185	29018	1965	9030	25	7	97	26	0	9857	802	9030	367	N.C.	N.C.	9030	344
Centre-du-Québec	168074	22110	17471	0	0	1786	1786	121	15702	1001	1319	16	2	55	22	0	1319	141	1319	77	N.C.	N.C.	1319	72
Montréal-Laval	235227	27664	115244	0	9	6321	6330	1586	65939	2824	27675	154	35	625	124	0	27684	1152	27838	854	N.C.	N.C.	27360	819
Ouest du Québec	126144	15680	26644	0	7	2206	2213	193	24344	1341	1230	22	1	68	14	0	1229	207	1230	65	N.C.	N.C.	1231	63
Montérégie	157782	17468	37749	0	0	1818	1818	267	34437	1252	202	0	0	2	0	0	202	4	202	6	N.C.	N.C.	202	5
Province of Québec	997104	114095	290449	0	20	18928	18948	2447	187688	9774	41588	249	55	942	200	0	42424	2484	41729	1469	N.C.	N.C.	41275	1416
P.H.O.L. - Ottawa	30295	7632	6329	27	136	66	223	3	6329	355	4476	0	0	0	0	139	4476	21	4476	115	4476	452	4476	211
EORLA	97047	9052	19100	0	0	1422	1422	59	19100	1322	1605	11	13	61	20	0	1605	58	1605	64	1605	346	1605	102
P.H.O.L. - Kingston	32240	5037	3584	9	92	38	138	3	3581	180	2860	0	0	0	0	144	2861	32	2860	81	2860	377	2860	106
UHN / Mount Sinai Hospital	106503	7796	28937	7	44	363	414	61	28937	326	2452	2	2	63	4	0	2419	7	2452	15	2452	99	2452	94
P.H.O.L. - Toronto	55181	11621	34747	187	2415	156	1177	76	34710	1359	30990	0	0	0	0	1469	30994	693	30987	1104	30990	3316	30987	1387
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	95078	6447	95077	147	1478	730	2355	393	95078	2234	72382	4	0	16	0	955	72395	805	72687	969	72635	2679	72527	1073
P.H.O.L. - Sault Ste. Marie	1907	346	772	1	52	15	58	0	772	25	679	0	0	0	0	54	679	4	679	31	679	58	679	44
P.H.O.L. - Timmins	9557	923	1200	0	161	6	156	0	1198	98	1096	0	0	0	0	56	1096	14	1096	29	1096	97	1096	49
St. Joseph's - London	130777	15605	21529	0	0	886	886	75	21529	1016	2693	0	0	0	0	96	2727	92	2727	74	2727	376	2316	108
P.H.O.L. - London	40017	8281	12913	18	586	63	649	27	12912	891	10536	0	0	0	0	556	10537	152	10537	267	10536	1112	10537	330
P.H.O.L. - Orillia	695	287	2650	6	261	23	290	16	2650	238	2572	0	0	0	0	151	2573	88	2572	83	2572	395	2572	108
P.H.O.L. - Thunder Bay	8929	1792	1231	0	107	3	110	0	1230	96	1084	0	0	0	0	38	1084	21	1084	29	1084	141	1085	39
P.H.O.L. - Sudbury	2198	324	881	1	65	14	67	0	881	79	760	0	0	0	0	30	760	9	760	51	760	54	760	25
P.H.O.L. - Hamilton	27681	7189	10631	36	305	92	416	41	10628	558	8107	0	0	0	0	358	8109	223	8107	265	8107	852	8107	302
P.H.O.L. - Peterborough	5669	1035	2066	4	68	12	84	19	2064	116	1721	0	0	0	0	74	1721	52	1721	50	1721	333	1721	50
St. Joseph's - Hamilton	110445	14161	58834	0	0	2780	2780	527	58834	2297	58834	0	0	1172	0	0	58834	1003	58834	960	58834	3810	0	0
Sault Area Hospital	13160	2172	9076	1	262	258	521	8	9076	173	3237	38	9	74	4	0	3237	60	3237	101	3237	364	3237	87
Province of Ontario	767379	99700	309557	444	6032	6927	11746	1308	309509	11363	206084	55	24	1386	28	4120	206107	3334	206421	4288	206371	14861	147017	4115
Manitoba	81474	12381	51227	18	204	1819	2041	87	51227	1804	6137	48	56	178	13	0	6127	183	6694	229	6137	1097	6694	225
Saskatchewan	179495	14082	47632	2	41	3998	4041	81	39348	2217	16295	168	132	534	113	0	16297	481	16297	686	16298	1993	16293	533
Alberta	263975	35396	153857	1098	7310	2851	11259	793	137954	7689	53168	396	189	985	151	0	53149	828	52356	1268	52287	5338	53167	1352
Prairies	524944	61859	252716	1118	7555	8668	17341	961	228529	11710	75600	612	377	1697	277	0	75573	1492	75347	2183	74722	8428	76154	2110
British Columbia	257992	27502	153688	581	4361	311	9161	330	145601	8273	34956	433	239	1184	326	6	34924	1264	34924	1219	33821	5352	33841	1201
Yukon	5544	412	1068	2	136	0	142	9	1066	61	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	1807	193	1641	10	147	1	158	5	1641	115	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1641	345
Nunavut	5682	398	3436	7	230	3	240	234	3436	160	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	13033	1003	6145	19	513	4	540	248	6143	336	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1641	345
CANADA	2871589	358607	1132656	2196	18983	43854	67288	5355	989488	46977	379946	1497	806	5880	1015	4126	380753	9332	380136	9816	338280	31738	319957	9747

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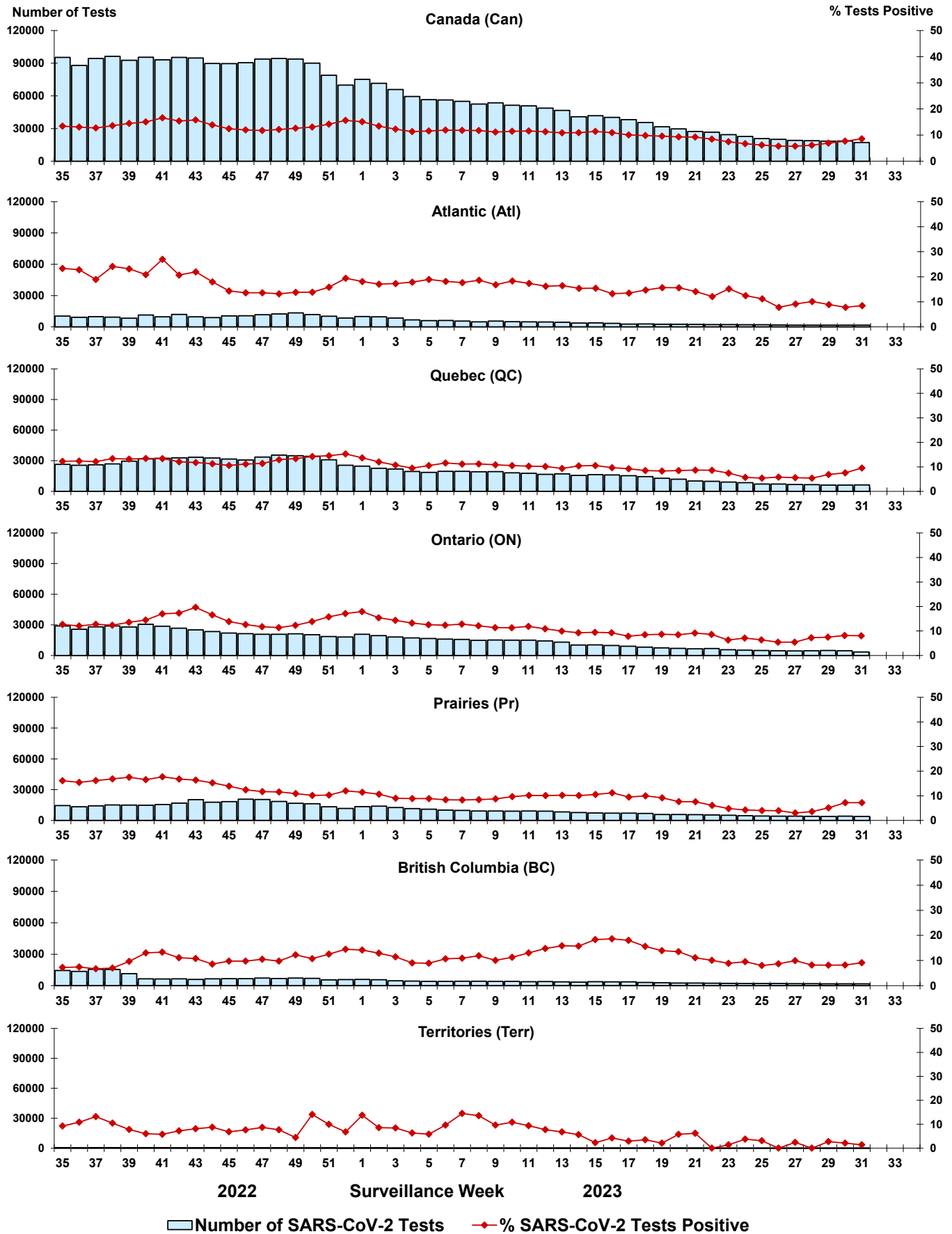
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Results from British Columbia comprise of specimens from the following sites: Children's and Women's Hospital Laboratory, Fraser Health Medical Microbiology Laboratory, Island Health, Providence Health Care, Vancouver Coastal Health sites, Victoria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

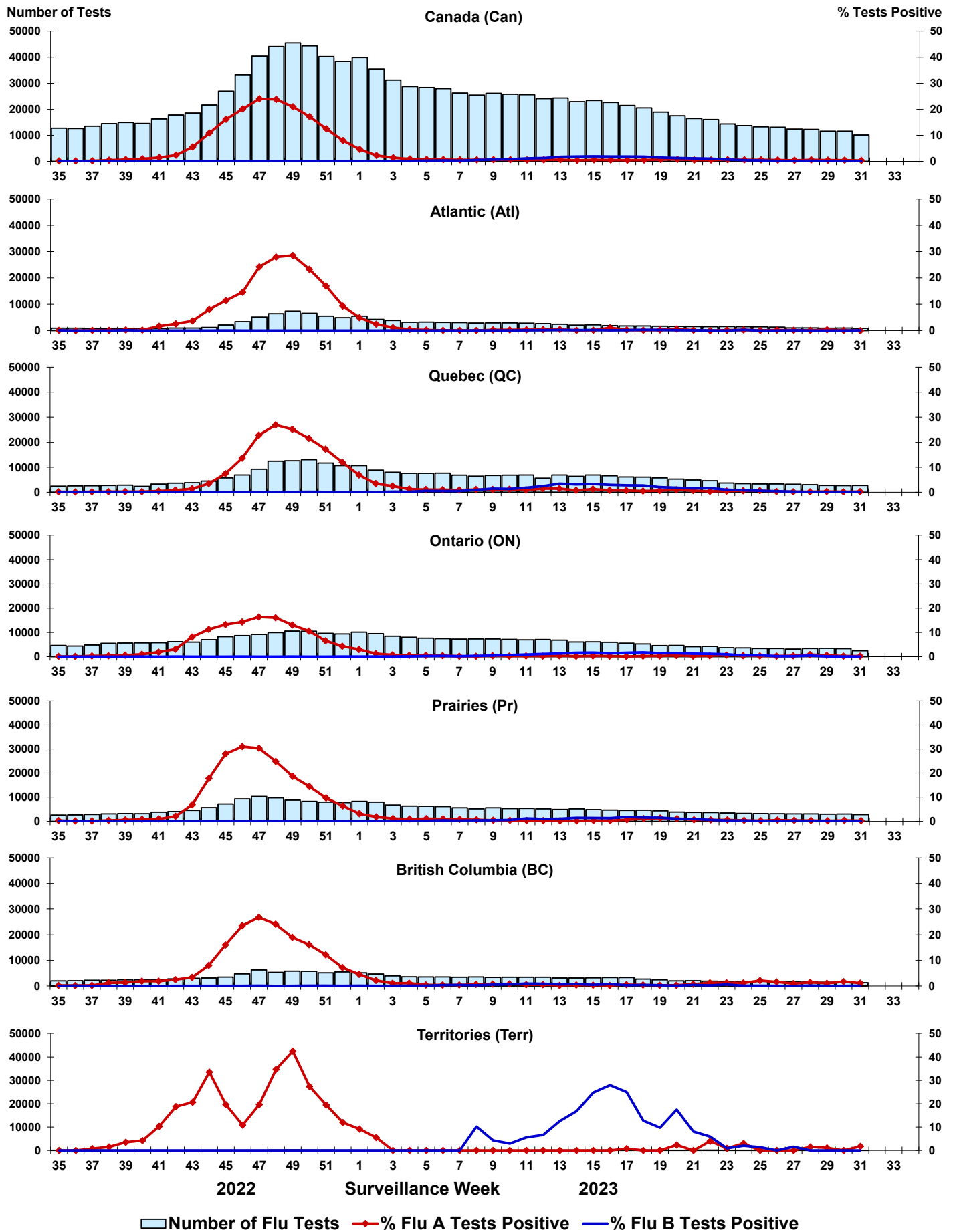


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

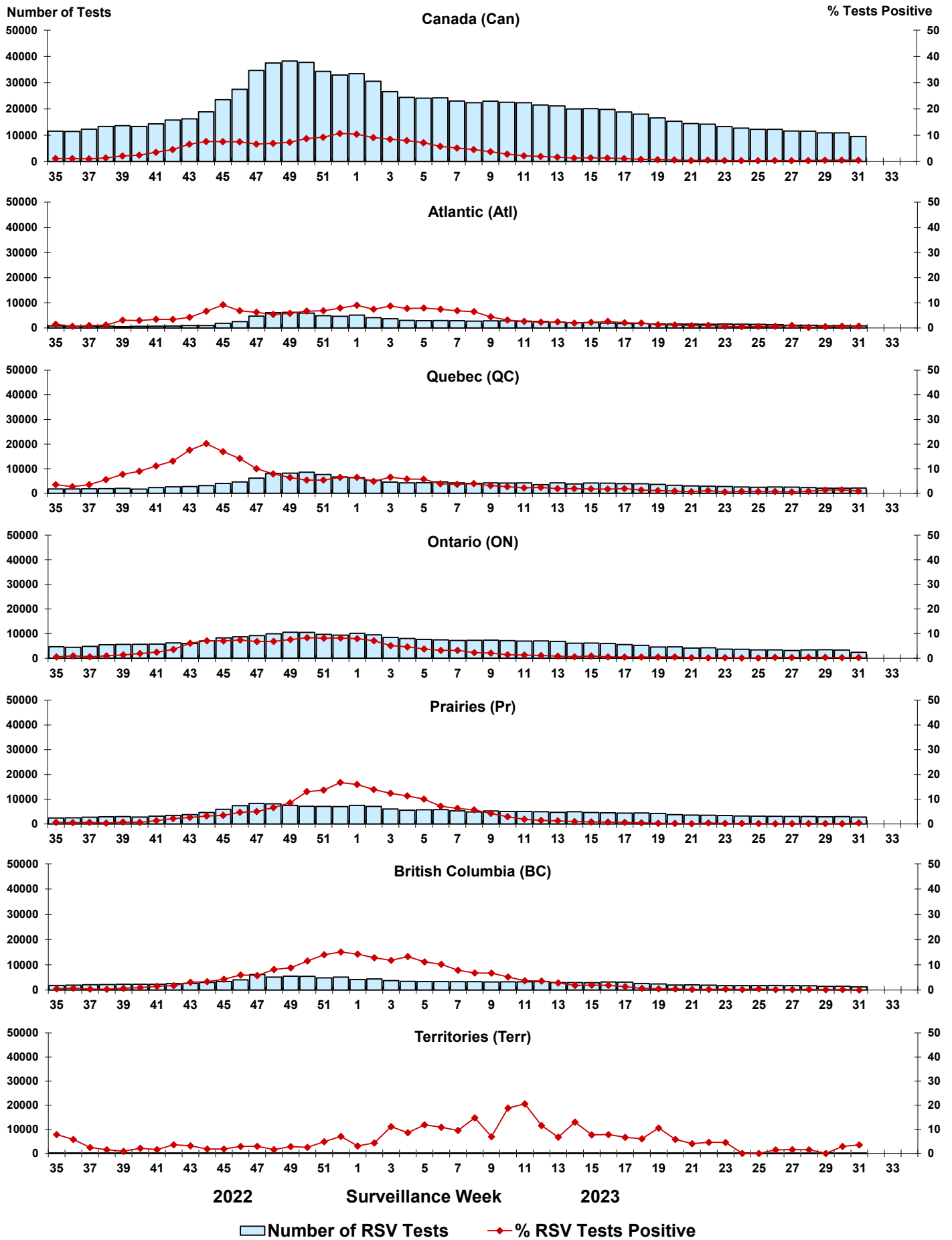


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

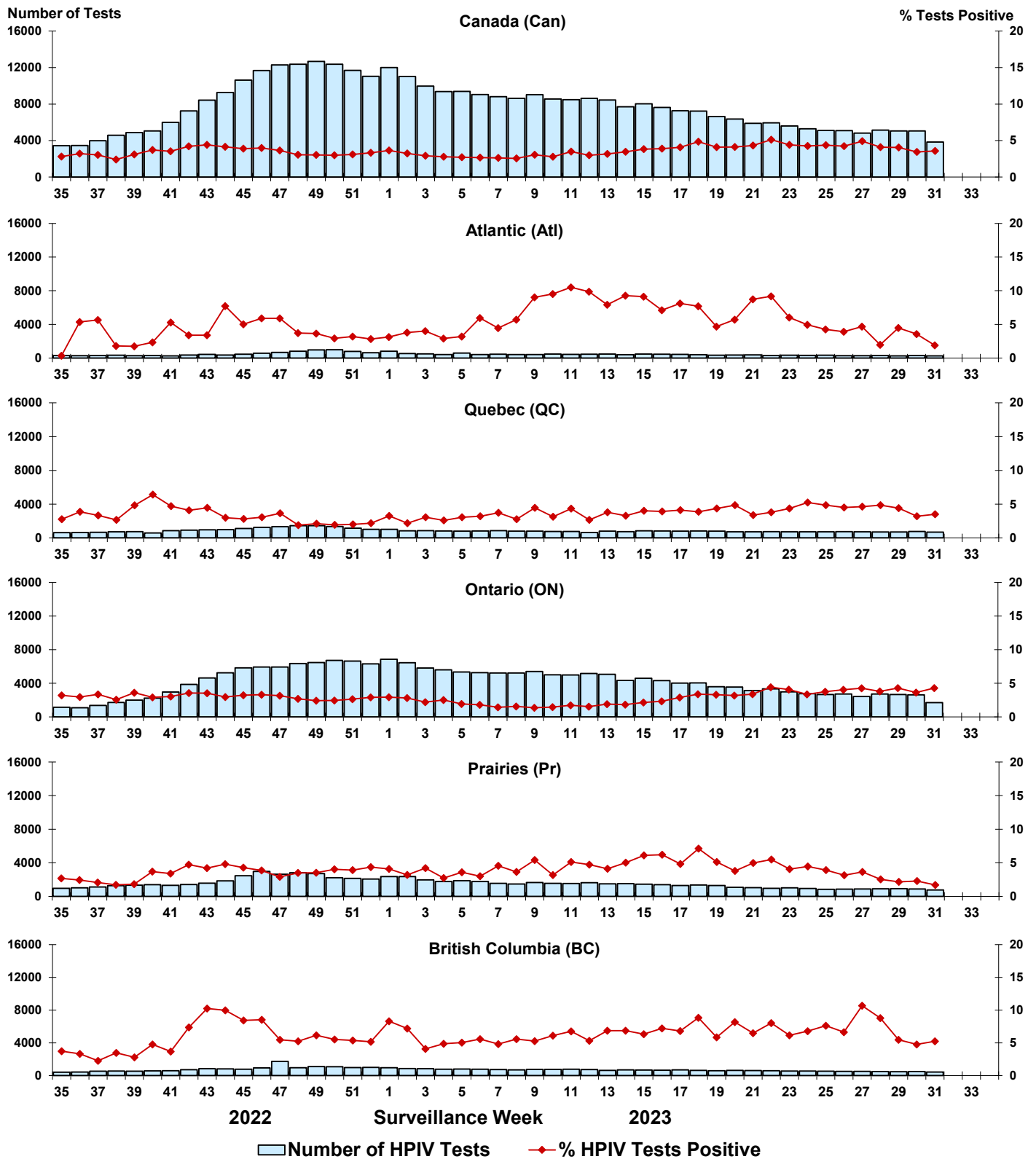


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

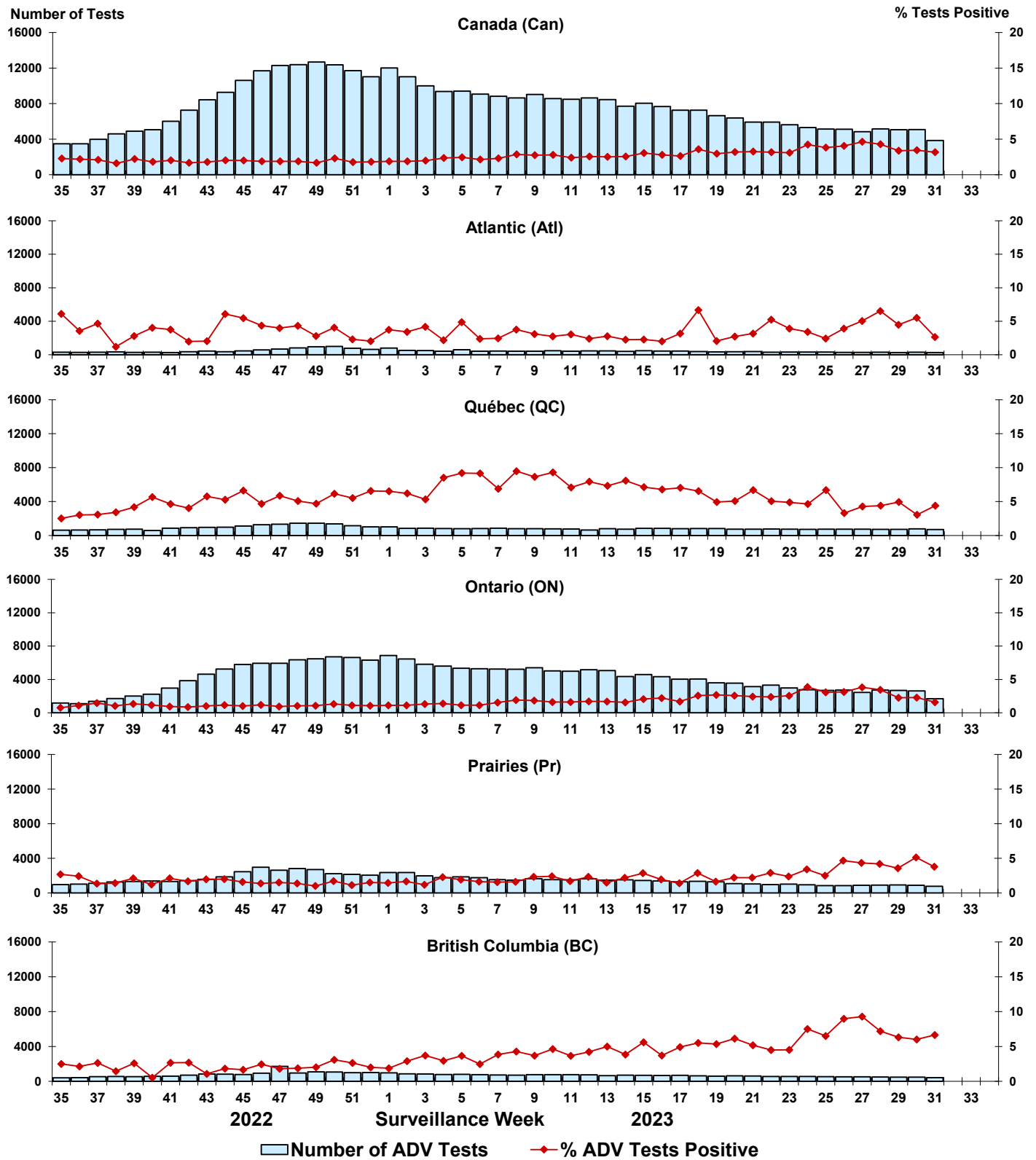


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

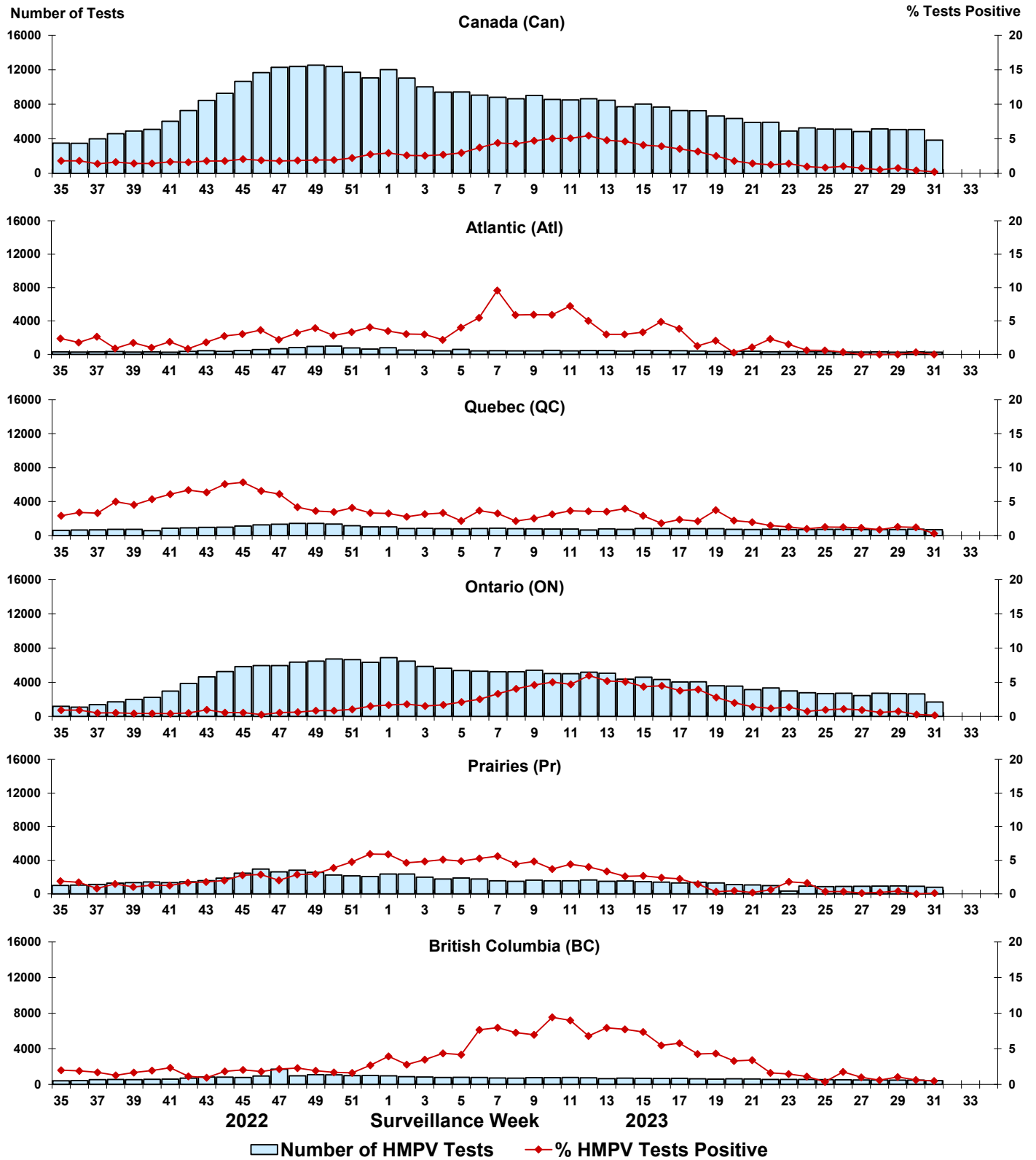


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

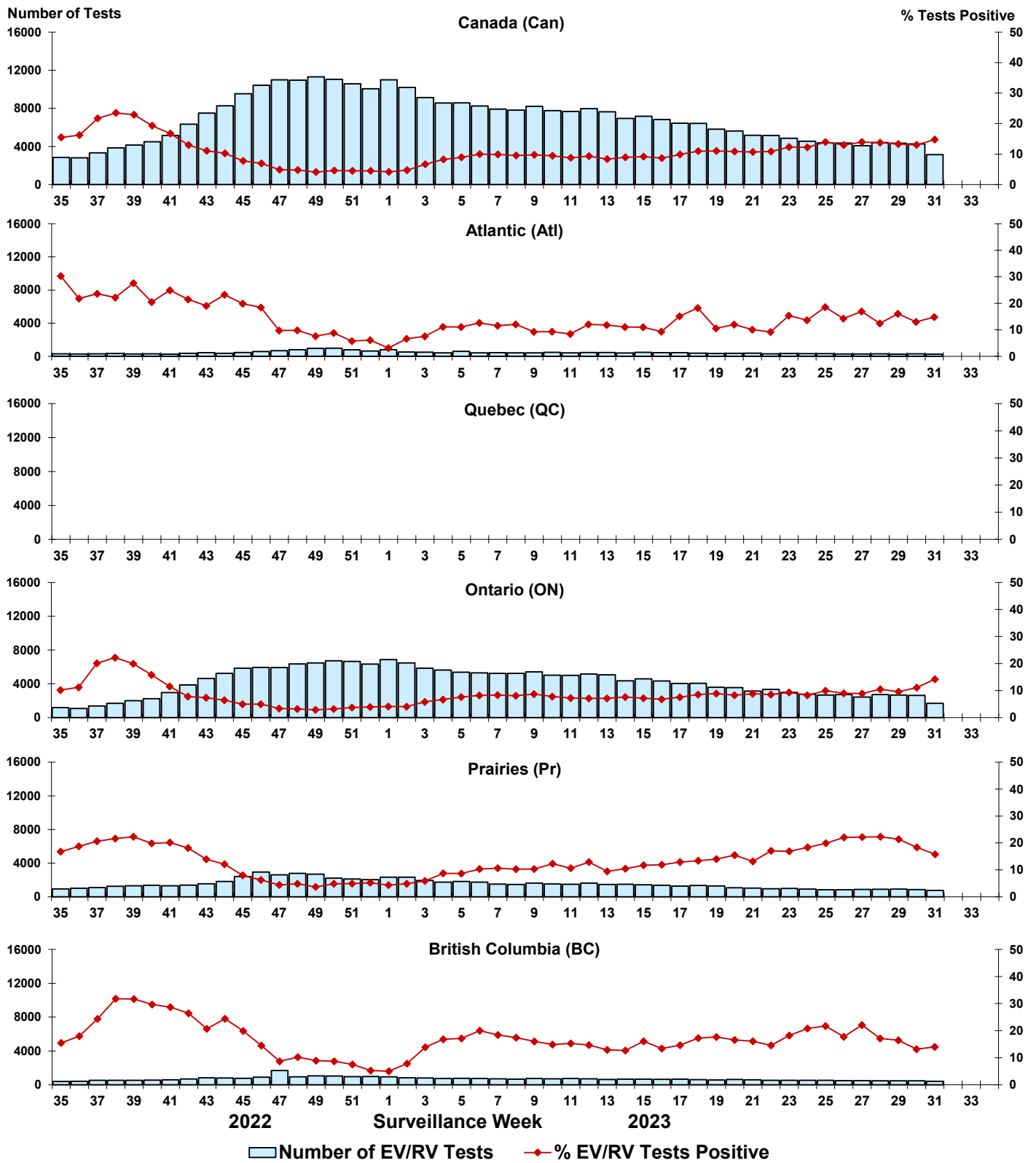


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

