

RESPIRATORY VIRUS DETECTION REPORT

July 16 to July 22, 2023
(Surveillance Week 2023-29)



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 29 (week ending July 22, 2023) in Canada, participating RVDSS laboratories reported 1,146 detections of SARS-CoV-2 from 16,798 tests (6.8% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 3,981 to 11,022 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 (534 detections; 12.9% positive).
- Activity of all other non-SARS-CoV-2 respiratory viruses is near or below expected levels typical of this time of year.
- 32/35 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

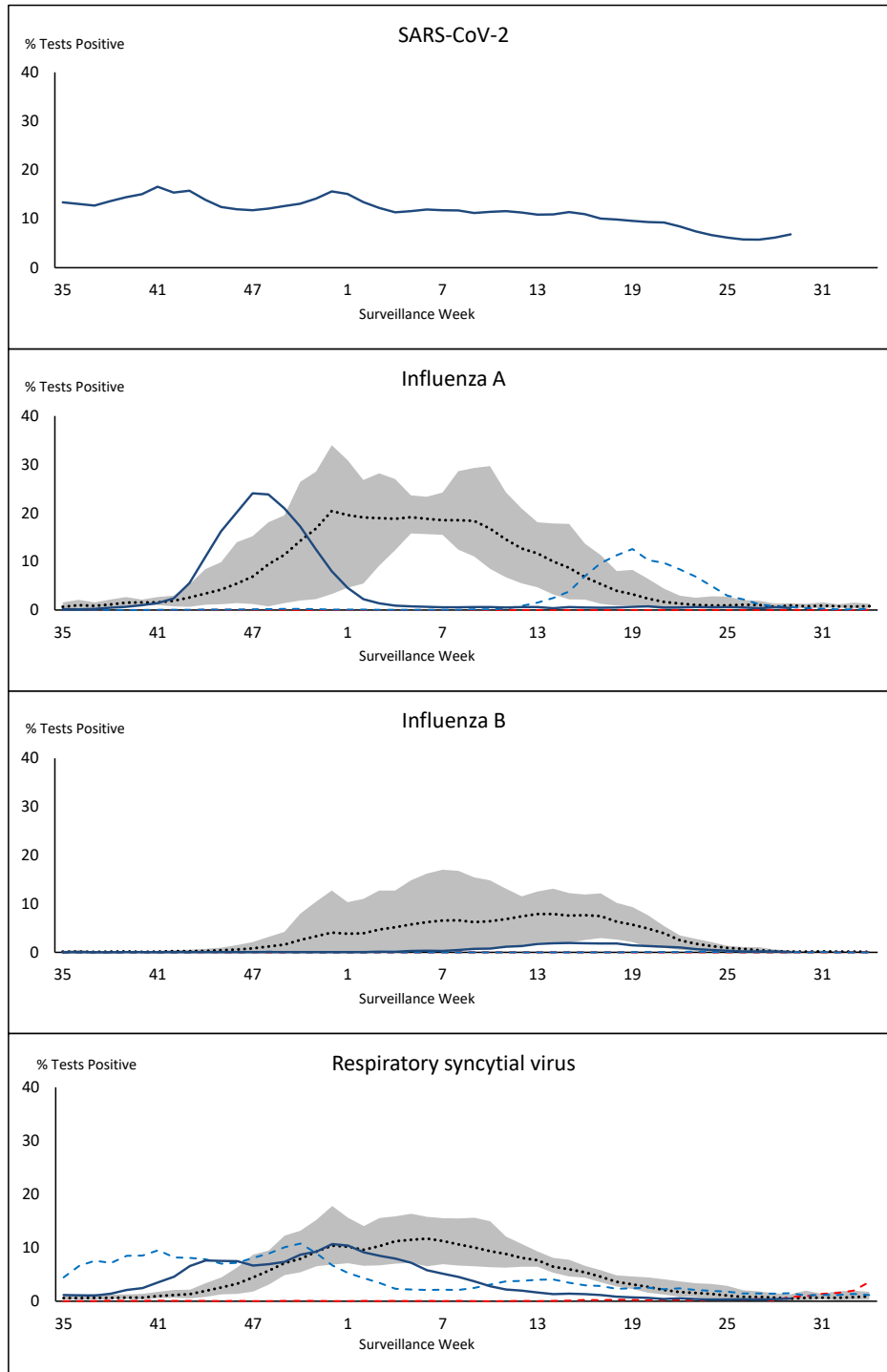
SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2

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



— % Tests Positive, 2022-2023 - - - % Tests Positive, 2021-2022
- - - % Tests Positive, 2020-2021 ⋯ % Tests Positive, six-year average (2014-2015 to 2019-2020)

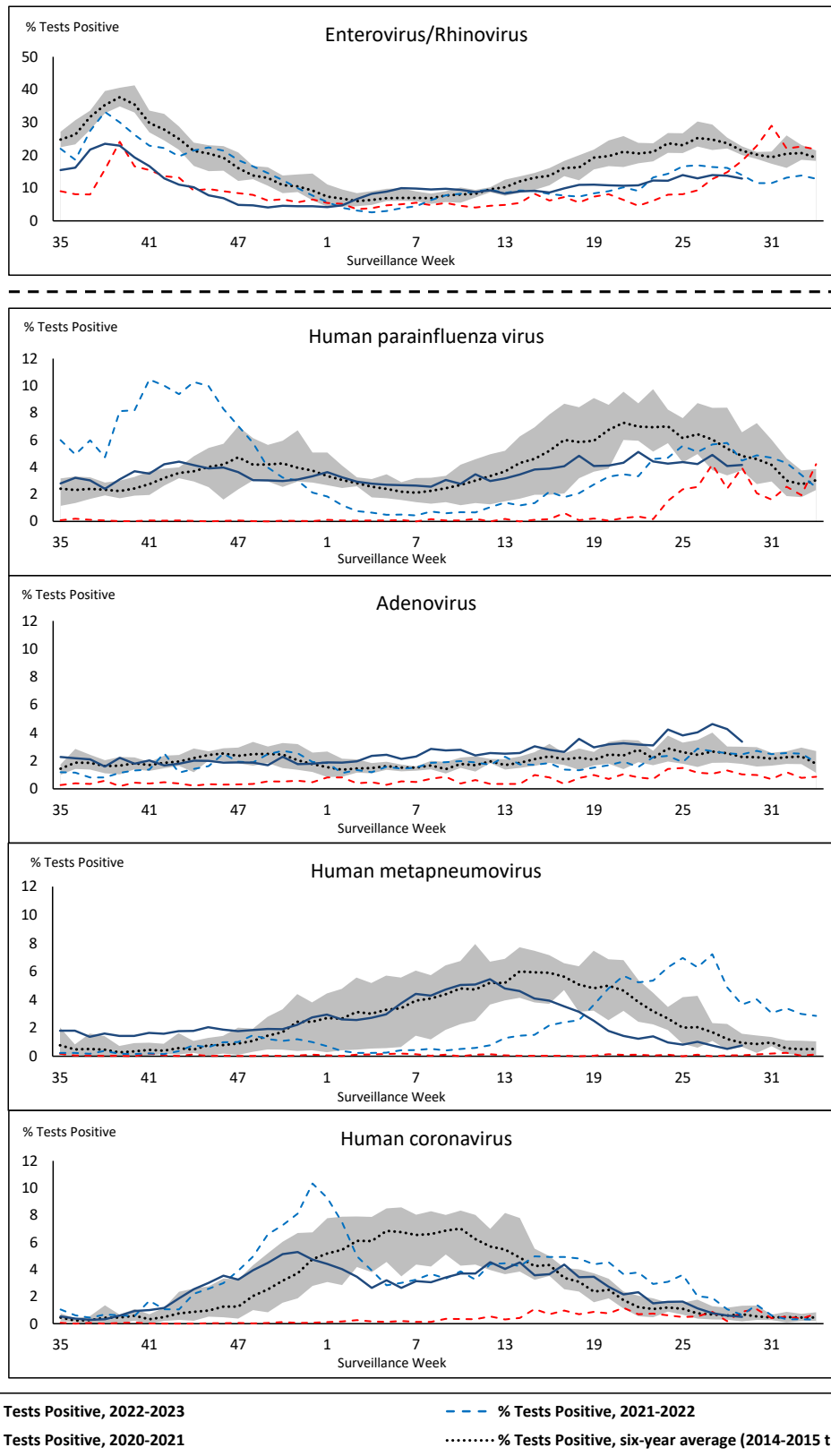
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 July 22, 2023 (surveillance week 2023-29)

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	292	31	192	0	0	1	1	0	192	2	192	2	0	0	3	0	192	10	192	0	192	26	192	3	
Prince Edward Island	51	2	7	0	0	0	0	0	7	0	5	0	0	0	0	0	5	0	5	0	5	3	5	0	
Nova Scotia	N.R.	N.R.	256	0	0	0	0	0	256	3	20	2	1	1	2	0	20	0	20	0	20	6	20	1	
New Brunswick	462	42	277	1	0	1	2	0	275	0	42	1	0	0	0	0	42	2	42	0	42	8	42	0	
Atlantic	805	75	732	1	0	2	3	0	730	5	259	5	1	1	5	0	259	12	259	0	259	43	259	4	
Région Nord-Est	916	30	775	0	0	0	0	0	182	1	64	0	0	0	3	0	64	7	63	0	N.C.	N.C.	64	0	
Québec-Chaudière-Appalaches	1271	127	328	0	0	0	0	1	328	7	148	0	0	0	1	0	171	13	148	3	N.C.	N.C.	148	0	
Centre-du-Québec	851	45	132	0	0	0	0	0	131	3	24	0	0	0	1	0	24	2	24	1	N.C.	N.C.	24	0	
Montréal-Laval	1807	109	769	0	0	5	5	0	774	9	437	3	1	9	13	0	437	12	437	5	N.C.	N.C.	437	3	
Ouest du Québec	693	53	183	0	0	2	2	1	183	2	13	0	0	0	0	0	13	0	13	0	N.C.	N.C.	13	0	
Montréal	589	61	496	0	0	1	1	0	489	4	5	0	0	0	0	0	5	0	5	0	N.C.	N.C.	5	0	
Province of Québec	6127	425	2683	0	0	8	8	2	2087	26	691	3	1	9	18	0	714	34	690	9	N.C.	N.C.	691	3	
P.H.O.L. - Ottawa	118	49	52	0	0	0	0	0	52	0	38	0	0	0	0	0	38	0	38	0	38	9	38	0	
EOCLA	618	24	225	0	0	2	2	0	225	6	28	0	4	0	0	0	28	1	28	0	28	4	28	0	
P.H.O.L. - Kingston	101	7	53	2	0	0	2	0	51	0	35	0	0	0	0	4	35	0	35	0	35	9	35	0	
UHN / Mount Sinai Hospital	774	18	517	0	0	2	2	1	517	1	48	0	0	5	0	0	48	0	48	0	48	8	48	1	
P.H.O.L. - Toronto	294	47	492	6	0	0	3	0	489	0	468	0	0	0	0	47	468	15	468	3	468	75	468	4	
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	729	27	729	2	2	0	4	0	729	4	733	0	0	0	0	20	733	15	736	2	736	33	736	1	
P.H.O.L. - Sault Ste. Marie	4	0	5	0	0	0	0	0	5	0	5	0	0	0	0	0	5	0	5	0	5	1	5	0	
P.H.O.L. - Timmins	14	3	9	0	0	0	0	0	9	0	9	0	0	0	0	0	9	0	9	0	9	1	9	0	
St. Joseph's - London	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.	
P.H.O.L. - London	216	41	152	0	0	0	0	0	152	2	135	0	0	0	0	8	135	3	135	3	135	18	135	0	
P.H.O.L. - Orillia	9	2	24	0	0	0	0	1	24	0	24	0	0	0	0	0	24	0	24	0	24	6	24	0	
P.H.O.L. - Thunder Bay	90	28	35	0	0	0	0	0	35	0	29	0	0	0	0	0	29	0	29	0	29	4	29	1	
P.H.O.L. - Sudbury	3	0	9	0	0	0	0	0	9	0	9	0	0	0	0	0	9	0	9	4	9	0	9	0	
P.H.O.L. - Hamilton	133	17	104	0	2	0	2	0	104	0	104	0	0	0	0	12	104	2	104	0	104	9	104	1	
P.H.O.L. - Peterborough	32	0	71	1	0	0	1	0	71	0	63	0	0	0	0	3	63	3	63	0	63	17	63	0	
St. Joseph's - Hamilton	1010	43	860	0	0	3	3	1	860	0	860	0	0	11	0	0	860	17	860	7	860	53	860	0	
Sault Area Hospital	55	0	55	0	0	0	0	0	55	0	41	1	0	0	0	0	41	3	41	0	41	5	41	0	
Province of Ontario	4200	306	3392	11	4	7	19	3	3387	13	2629	1	4	16	0	94	2629	59	2632	19	2632	252	1772	8	
Manitoba	753	34	656	0	0	2	2	1	656	2	53	0	1	0	0	0	53	0	73	2	53	26	73	0	
Saskatchewan	943	50	396	0	0	0	0	0	446	0	206	2	3	0	5	0	206	10	207	1	207	46	206	0	
Alberta	2177	112	1727	2	0	1	3	0	1664	3	553	1	5	1	1	0	553	20	552	1	545	90	553	2	
Prairies	3873	196	2779	2	0	3	5	1	2766	5	812	3	9	1	6	0	812	30	832	4	805	162	832	2	
British Columbia	1750	143	1408	9	1	0	13	1	1408	1	440	4	2	6	12	0	440	28	440	5	427	72	427	3	
Yukon	26	1	13	0	0	0	1	0	13	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	17	0	15	0	0	0	0	0	15	0	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	15	5	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.	
Territories	43	1	28	0	0	0	1	0	28	0	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	15	5	N.C.	N.C.	
CANADA	16798	1146	11022	23	5	20	49	7	10406	50	4831	16	17	33	41	94	4854	163	4853	37	4138	534	3981	20	

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 28, 2022 to July 22, 2023 (surveillance weeks 2022-35 to 2023-29)

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	24412	4191	14276	8	246	680	934	10	14276	632	14276	73	33	388	151	0	14276	303	14276	386	14276	1245	14276	567
Prince Edward Island	33614	7329	4101	1	119	248	368	4	4101	384	1188	20	27	81	8	0	1188	82	1188	39	1188	348	1188	35
Nova Scotia	137612	26506	47009	0	4	3650	3654	15	47000	2429	1509	12	17	36	8	0	1516	62	1506	45	1516	293	1516	63
New Brunswick	111385	16084	52712	25	133	4437	4595	31	44652	2064	4164	38	32	166	8	0	4164	287	4164	186	4164	787	4109	236
Atlantic	307023	54110	118098	34	502	9015	9551	60	110029	5509	21137	143	109	671	175	0	21144	734	21134	656	21144	2673	21089	901
Région Nord-Est	102109	11903	62273	0	4	3887	3891	95	17987	1390	2044	31	9	95	9	0	2045	170	2025	99	N.C.	N.C.	2045	113
Québec-Chaudière-Appalaches	203575	18855	28998	0	0	2909	2909	184	28308	1959	8733	25	6	97	21	0	9508	781	8733	367	N.C.	N.C.	8733	344
Centre-du-Québec	166336	21950	17192	0	0	1786	1786	121	15428	998	1264	15	2	53	18	0	1264	137	1264	76	N.C.	N.C.	1264	72
Montréal-Laval	231574	27407	113572	0	9	6317	6326	1584	64268	2805	26699	150	32	613	115	0	26708	1130	26861	847	N.C.	N.C.	26384	813
Ouest du Québec	124589	15537	26216	0	7	2203	2210	193	23916	1334	1204	22	1	68	14	0	1203	205	1204	63	N.C.	N.C.	1205	63
Montréal	156305	17363	36849	0	0	1815	1815	267	33550	1239	191	0	0	2	0	0	191	4	191	6	N.C.	N.C.	191	5
Province of Québec	984488	113015	285100	0	20	18917	18937	2444	183457	9725	40135	243	50	928	177	0	40919	2427	40278	1458	N.C.	N.C.	39822	1410
P.H.O.L. - Ottawa	30093	7575	6209	26	136	66	222	3	6209	355	4371	0	0	0	0	135	4371	21	4371	115	4371	434	4371	211
EOCLA	95835	8992	18652	0	0	1421	1421	58	18652	1316	1576	11	10	61	20	0	1576	58	1576	64	1576	341	1576	102
P.H.O.L. - Kingston	32009	5005	3500	9	92	38	138	3	3497	180	2799	0	0	0	0	141	2800	32	2799	81	2799	361	2799	104
UHN / Mount Sinai Hospital	104937	7739	28076	7	44	363	414	61	28076	324	2413	2	2	56	4	0	2380	7	2413	15	2413	96	2413	93
P.H.O.L. - Toronto	54728	11541	33598	182	2415	156	1175	76	33562	1357	29937	0	0	0	0	1394	29941	667	29934	1100	29937	3087	29934	1374
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	93667	6380	93667	146	1475	730	2351	391	93668	2231	70962	4	0	16	0	928	70975	783	71267	966	71215	2612	71107	1070
P.H.O.L. - Sault Ste. Marie	1890	346	754	1	52	15	58	0	754	25	664	0	0	0	0	54	664	4	664	31	664	54	664	44
P.H.O.L. - Timmins	9499	911	1157	0	161	6	156	0	1155	98	1066	0	0	0	0	56	1066	14	1066	29	1066	94	1066	49
St. Joseph's - London	128968	15448	21413	0	0	886	886	72	21413	1016	2577	0	0	0	0	95	2611	89	2611	72	2611	365	2200	108
P.H.O.L. - London	39631	8217	12663	18	586	63	649	27	12662	890	10306	0	0	0	0	540	10307	152	10307	266	10306	1043	10307	330
P.H.O.L. - Orillia	680	287	2609	6	261	23	290	16	2609	237	2531	0	0	0	0	145	2532	86	2531	83	2531	387	2531	108
P.H.O.L. - Thunder Bay	8857	1765	1194	0	107	3	110	0	1193	96	1058	0	0	0	0	38	1058	20	1058	29	1058	132	1059	39
P.H.O.L. - Sudbury	2188	322	869	1	65	14	67	0	869	79	748	0	0	0	0	30	748	9	748	51	748	50	748	25
P.H.O.L. - Hamilton	27439	7162	10445	36	304	92	415	41	10442	558	7932	0	0	0	0	346	7934	216	7932	265	7932	830	7932	300
P.H.O.L. - Peterborough	5617	1031	1998	3	67	11	81	19	1998	116	1655	0	0	0	0	71	1655	48	1655	50	1655	327	1655	50
St. Joseph's - Hamilton	109442	14101	57980	0	0	2777	2777	526	57980	2295	57980	0	0	1161	0	0	57980	982	57980	958	57980	3757	0	0
Sault Area Hospital	13031	2153	8947	1	262	258	521	8	8947	173	3144	38	9	74	4	0	3144	58	3144	101	3144	355	3144	85
Province of Ontario	758511	98975	303731	436	6027	6922	11731	1301	303686	11346	201719	55	21	1368	28	3973	201742	3246	202056	4276	202006	14325	143506	4092
Manitoba	79784	12260	49756	18	202	1815	2035	87	49756	1799	6028	48	55	178	11	0	6018	171	6529	229	6028	1054	6529	225
Saskatchewan	177601	13961	46713	2	41	3995	4038	80	38454	2217	15875	167	124	532	110	0	15877	452	15878	685	15879	1922	15873	533
Alberta	259621	35063	150152	1090	7308	2849	11247	790	134407	7680	51941	392	179	982	151	0	51923	792	51136	1268	51085	5141	51940	1347
Prairies	517006	61284	246621	1110	7551	8659	17320	957	222617	11696	73844	607	358	1692	272	0	73818	1415	73543	2182	72992	8117	74342	2105
British Columbia	254469	27197	150844	558	4357	311	9119	328	142757	8269	34018	424	234	1177	300	6	33986	1205	33986	1214	32900	5228	32955	1191
Yukon	5482	409	1036	2	136	0	141	9	1034	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	1788	193	1622	10	147	1	158	5	1622	115	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1622	333	N.C.
Nunavut	5469	396	3252	7	230	3	240	234	3252	156	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	12739	998	5910	19	513	4	539	248	5908	332	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1622	333	N.C.	N.C.
CANADA	2834236	355579	1110304	2157	18970	43828	67197	5338	968454	46877	370853	1472	772	5836	952	3979	371609	9027	370997	9786	330664	30676	311714	9699

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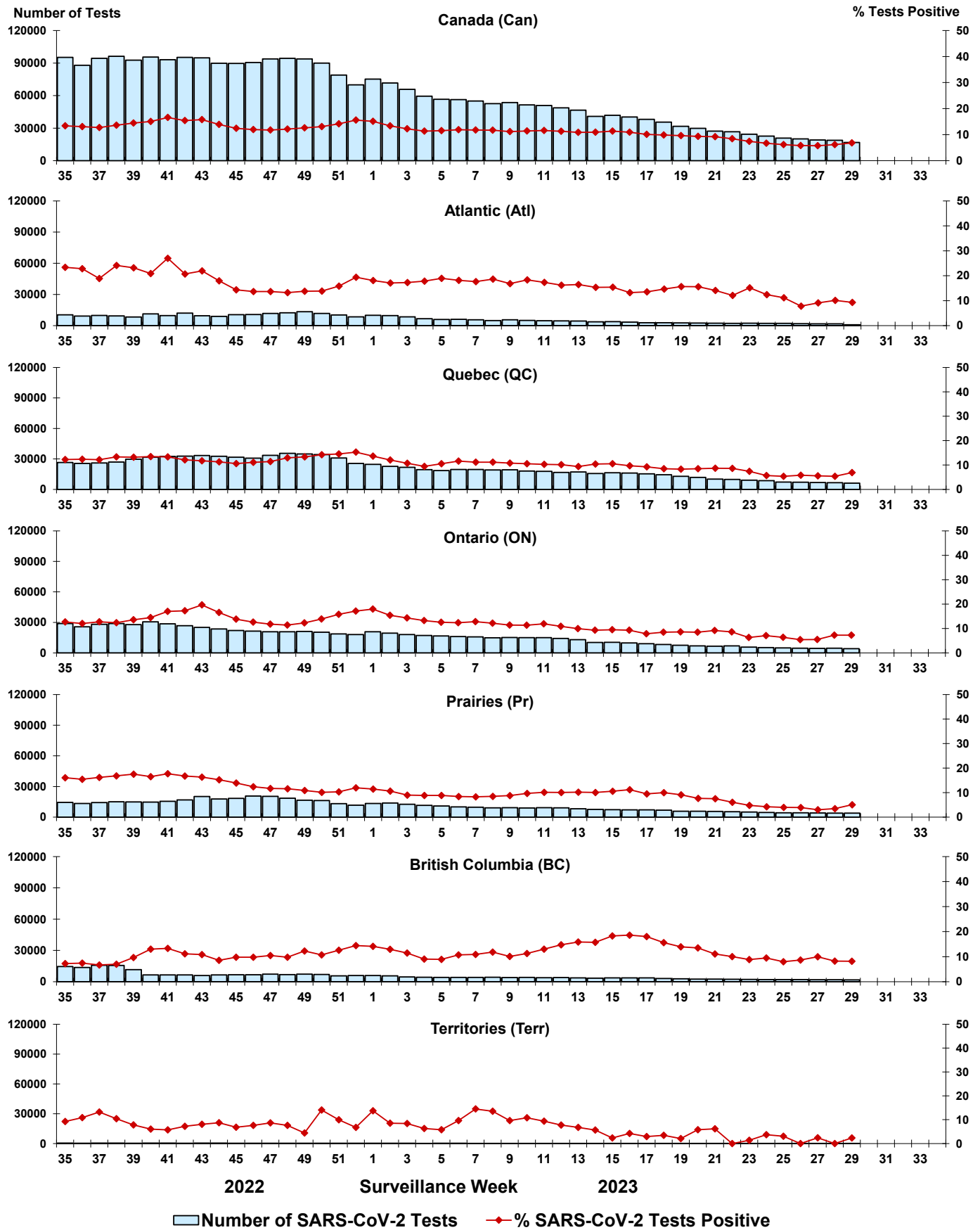
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Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests positive.

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

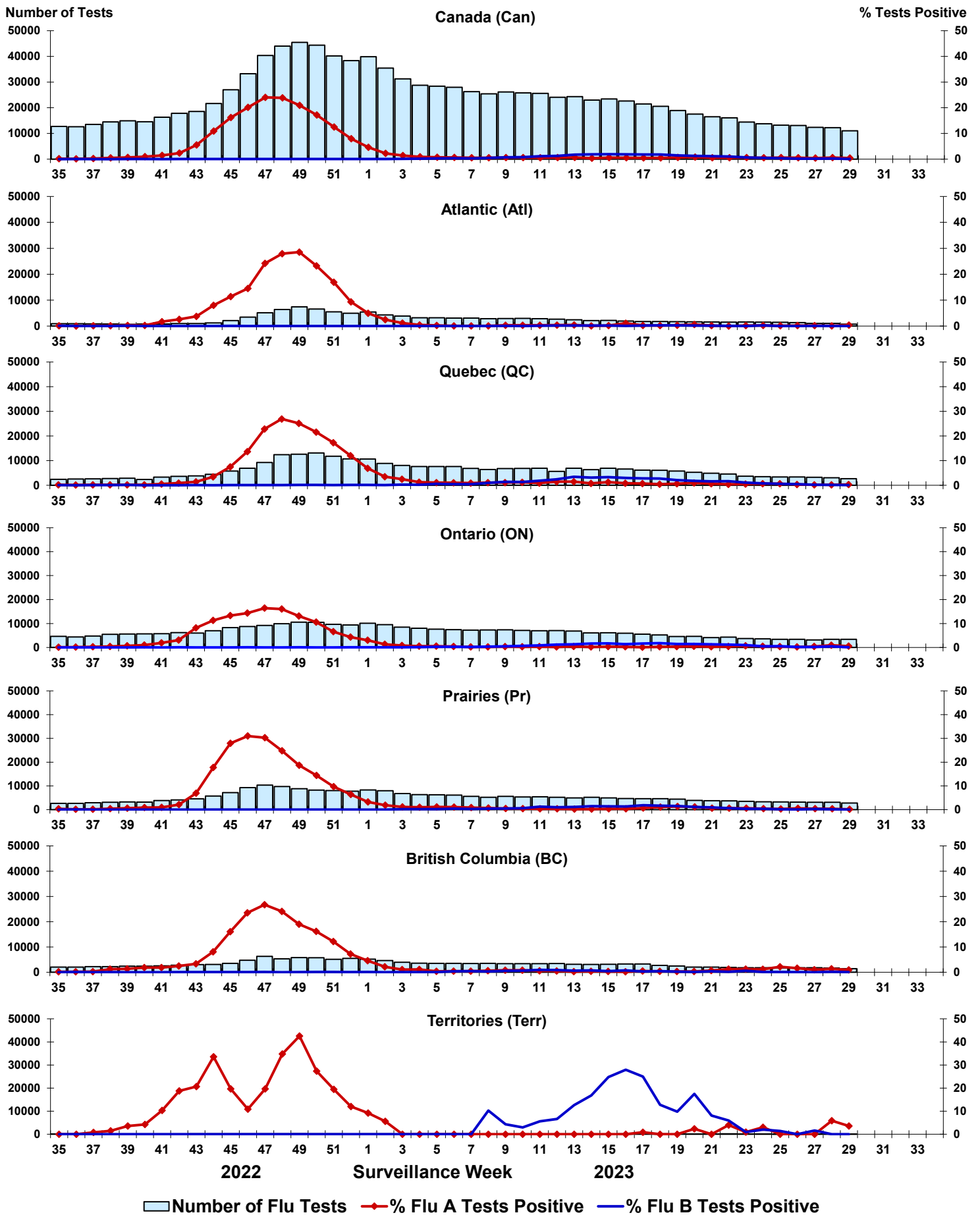


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

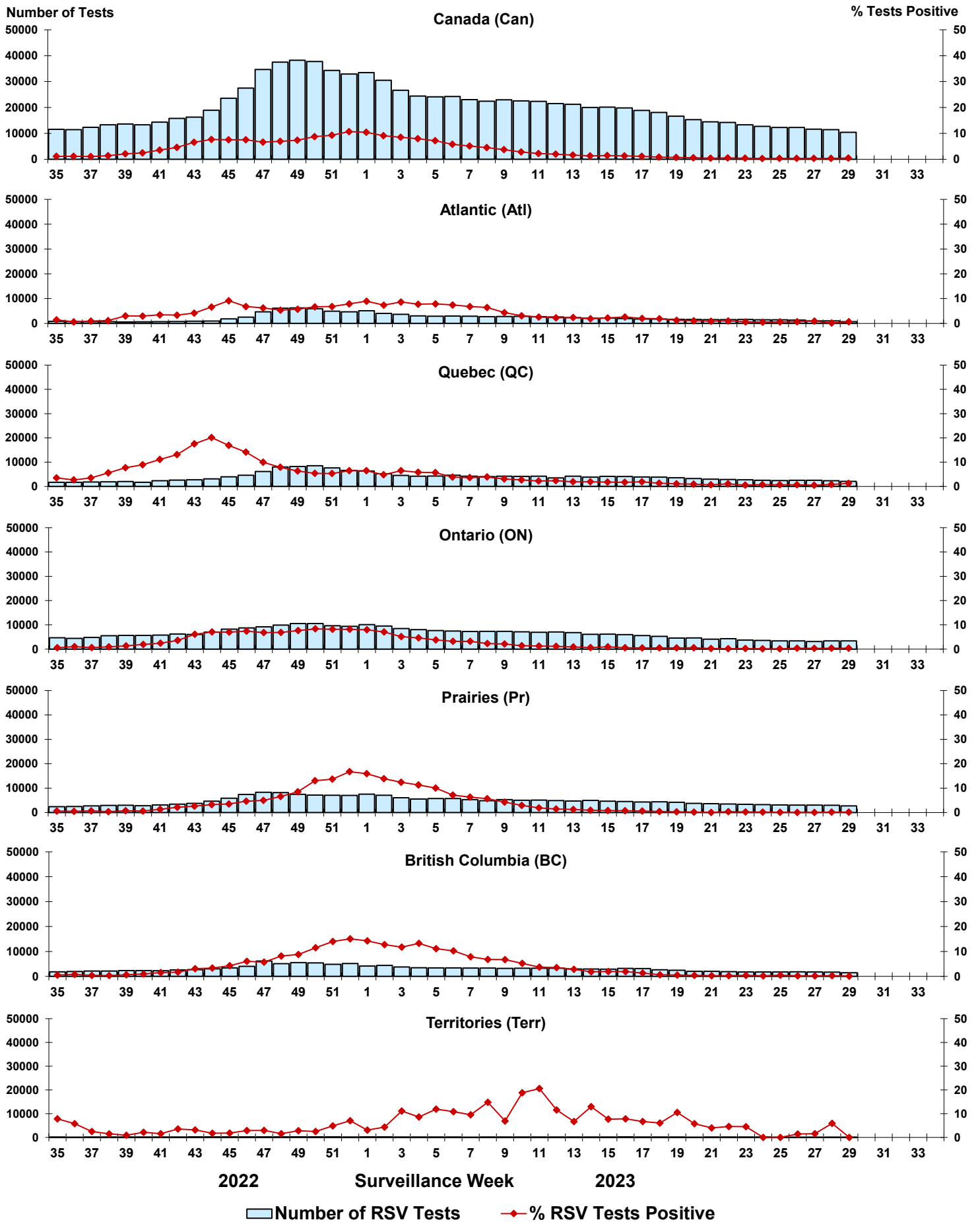


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

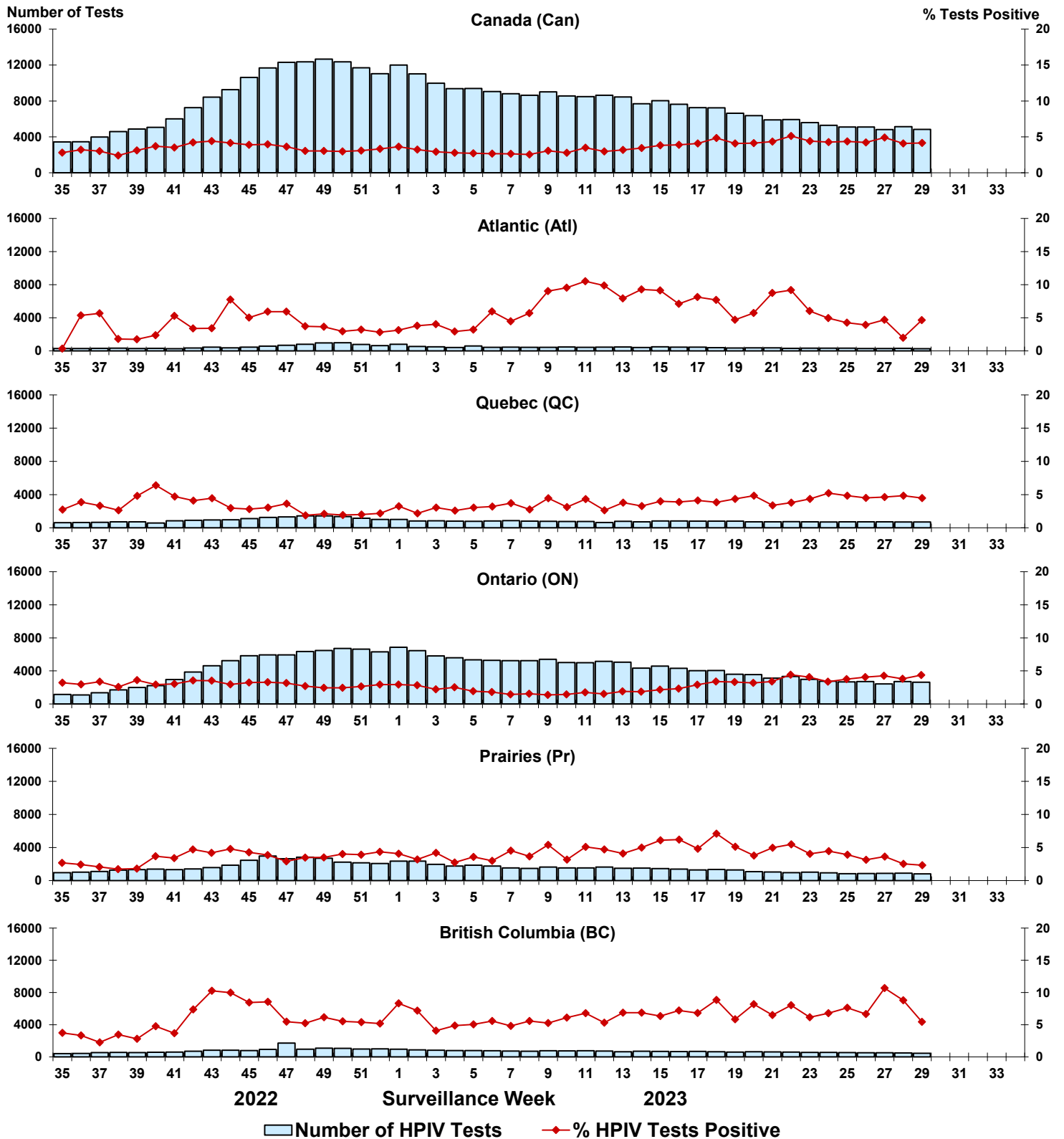


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

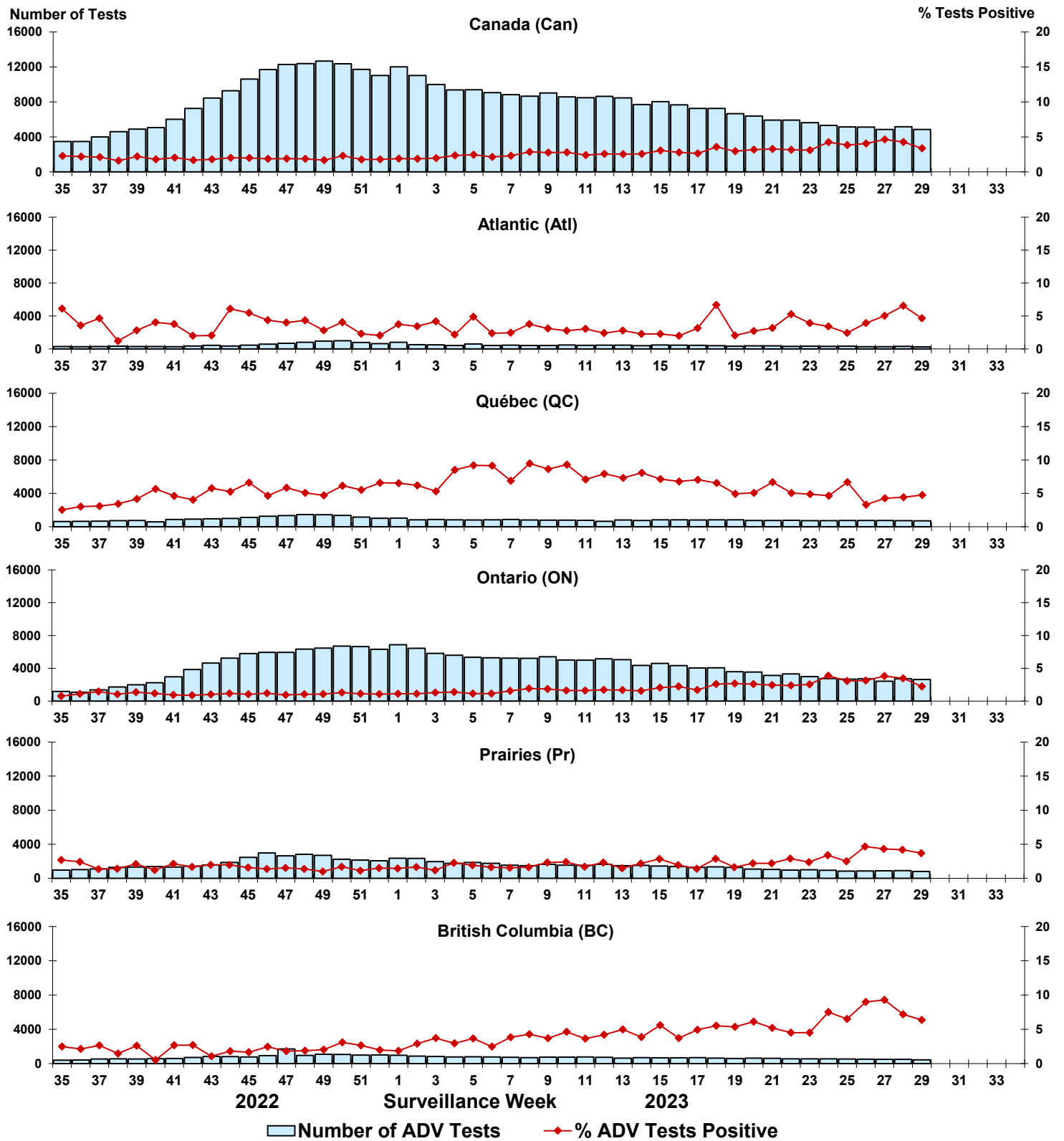


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

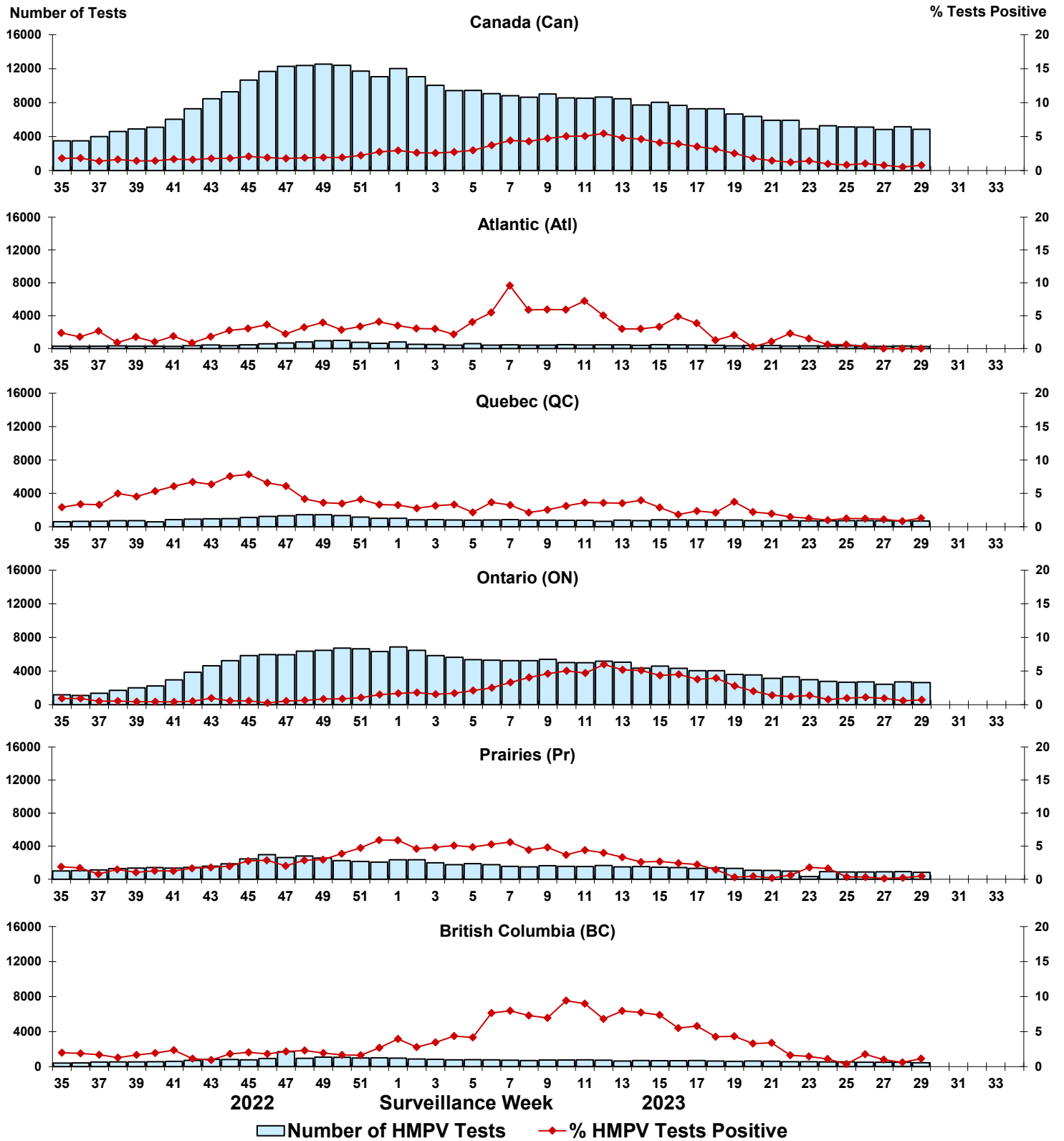


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

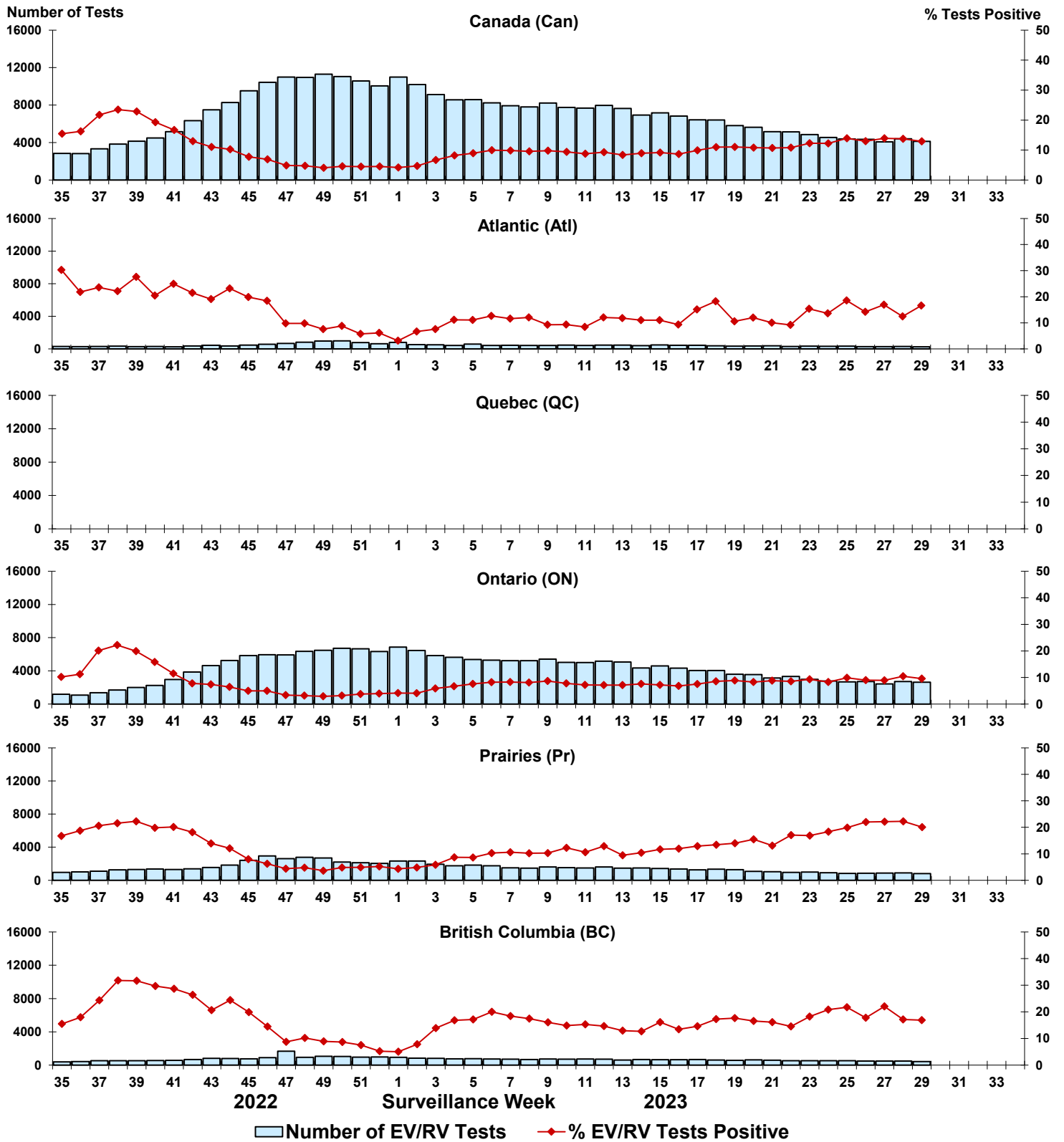


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

