

RESPIRATORY VIRUS DETECTION REPORT

January 8 to January 14, 2023
(Surveillance Week 2023-02)



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 2 (week ending January 14, 2023) in Canada, participating RVDSS laboratories reported 9,575 detections of SARS-CoV-2 from 71,421 tests (13.4% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 9,117 to 34,515 tests), activity of all viruses is stable or decreasing.

- Activity of influenza continues to decrease sharply and is now below the epidemic threshold. Influenza A accounts for nearly all influenza detections in Canada (779 detections; 2.3% positive).
- Activity of RSV is following seasonal trends at the national level. Compared to pre-pandemic seasons, RSV activity is near average levels typical of this time of year (2,671 detections; 9.2% positive).
- Activity of all other non-SARS-CoV-2 respiratory viruses is 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

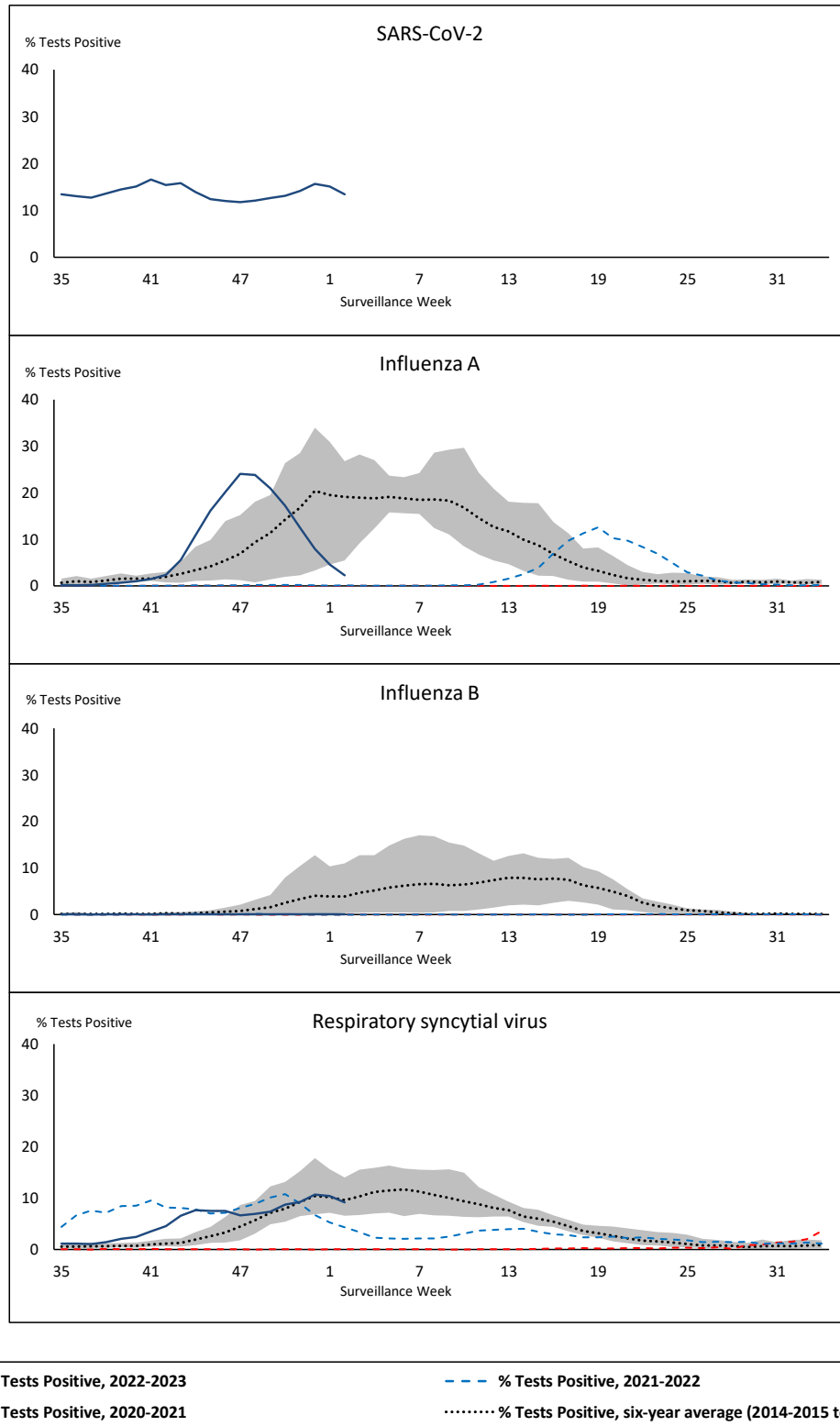
SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2

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



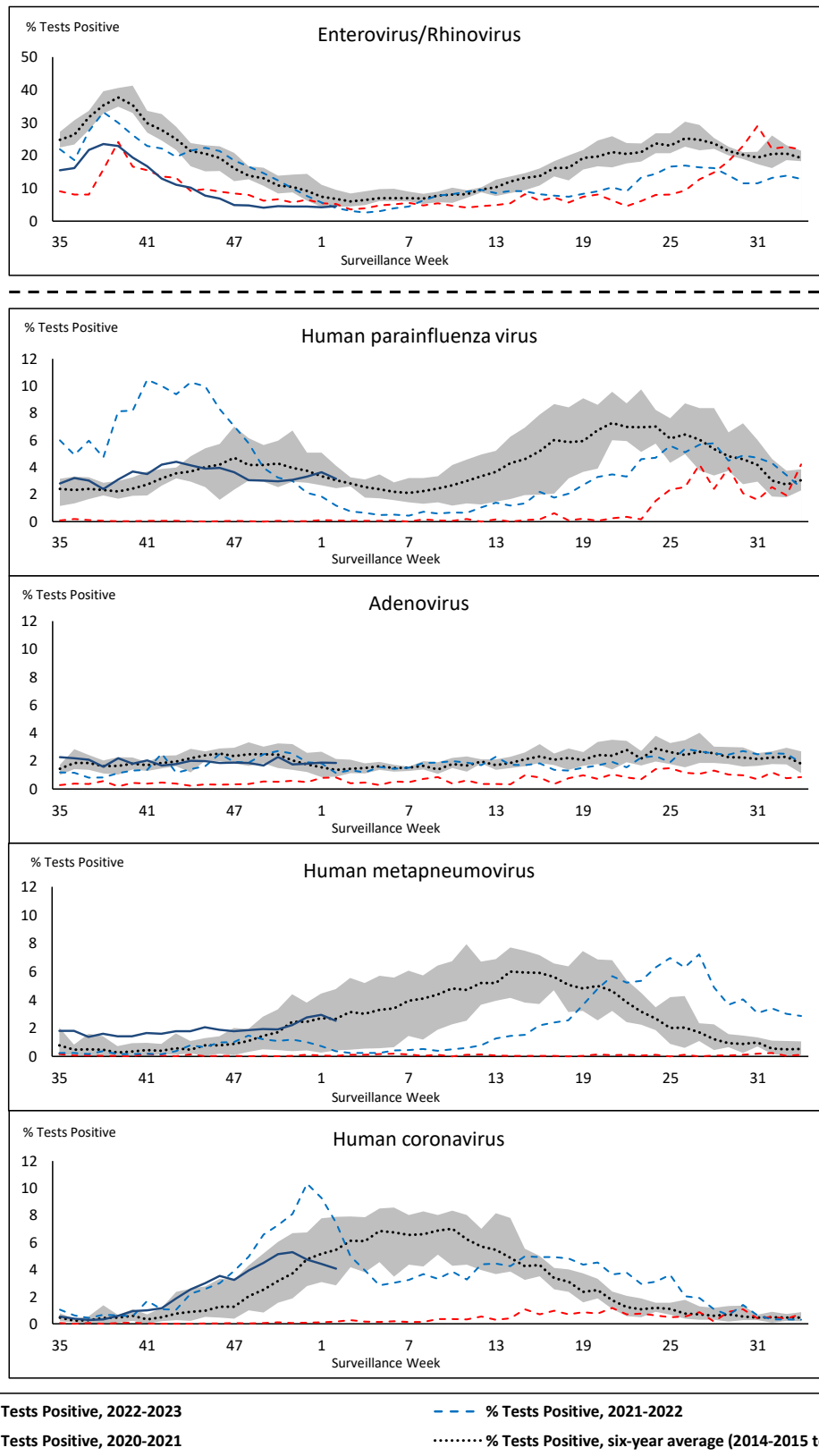
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 January 14, 2023 (surveillance week 2023-02)

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	724	100	374	0	0	19	19	0	374	8	374	0	1	10	0	0	374	6	374	5	374	14	374	39	
Prince Edward Island	903	162	200	0	0	10	10	0	200	30	20	0	0	3	0	0	20	1	20	0	20	4	20	2	
Nova Scotia	3796	938	1574	0	0	38	38	0	1574	138	33	0	0	1	0	0	33	1	33	0	33	2	33	1	
New Brunswick	4207	444	2143	0	8	31	39	1	1930	126	99	0	0	5	0	0	99	10	99	11	99	15	99	10	
Atlantic	9630	1644	4291	0	8	98	106	1	4078	302	526	0	1	19	0	0	526	18	526	16	526	35	526	52	
Région Nord-Est	2628	314	1718	0	0	112	112	1	559	45	30	0	0	1	0	0	30	3	30	0	N.C.	N.C.	30	2	
Québec-Chaudière-Appalaches	5348	555	1018	0	0	49	49	0	965	53	165	0	1	1	0	0	174	14	165	12	N.C.	N.C.	165	3	
Centre-du-Québec	3849	509	521	0	0	17	17	0	414	19	25	1	0	1	1	0	25	5	25	2	N.C.	N.C.	25	2	
Montréal-Laval	4123	566	3787	0	1	97	98	6	1577	45	565	0	0	9	0	0	565	24	568	6	N.C.	N.C.	565	21	
Ouest du Québec	3211	382	1021	0	0	18	18	1	989	63	20	0	0	3	0	0	20	4	20	1	N.C.	N.C.	21	0	
Montérégie	3376	398	757	0	0	12	12	0	731	27	5	0	0	0	0	0	5	0	5	0	N.C.	N.C.	5	0	
Province of Québec	22535	2724	8822	0	1	305	306	8	5215	252	810	1	1	15	1	0	819	50	813	21	N.C.	N.C.	811	28	
P.H.O.L. - Ottawa	812	208	249	1	0	1	2	0	249	32	140	0	0	0	0	4	140	0	140	8	140	5	140	10	
EOURLA	1877	146	508	0	0	14	14	0	508	41	30	1	0	1	0	0	30	3	30	1	30	5	30	1	
P.H.O.L. - Kingston	733	179	133	0	0	0	0	0	133	20	82	0	0	0	0	2	82	1	82	0	82	2	82	5	
UHN / Mount Sinai Hospital	2737	266	700	1	0	6	7	0	700	14	68	0	0	0	0	0	68	0	68	0	68	4	68	2	
P.H.O.L. - Toronto	1172	283	1205	5	24	3	18	0	1205	129	1011	0	0	0	0	37	1011	12	1011	26	1011	66	1011	73	
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	2436	233	2436	6	22	2	30	3	2436	93	2432	0	0	0	0	36	2432	24	2450	27	2450	48	2450	35	
P.H.O.L. - Sault Ste. Marie	20	3	20	0	4	2	4	0	20	0	16	0	0	0	0	3	16	0	16	1	16	0	16	3	
P.H.O.L. - Timmins	200	15	55	0	1	0	1	0	55	14	52	0	0	0	0	0	52	2	52	1	52	2	52	6	
St. Joseph's - London	3462	449	908	0	0	5	5	3	908	71	85	0	0	0	0	5	85	2	85	0	85	7	85	3	
P.H.O.L. - London	969	252	523	0	1	0	1	2	523	68	368	0	0	0	0	17	368	7	368	3	368	8	368	16	
P.H.O.L. - Orillia	6	0	64	2	2	0	4	0	64	9	62	0	0	0	0	2	62	2	62	9	62	5	62	2	
P.H.O.L. - Thunder Bay	285	75	74	0	0	0	0	0	74	12	60	0	0	0	0	6	60	1	60	3	60	0	60	1	
P.H.O.L. - Sudbury	79	16	67	0	1	2	2	0	67	11	49	0	0	0	0	1	49	0	49	4	49	2	49	3	
P.H.O.L. - Hamilton	882	310	504	0	4	2	6	0	504	37	257	0	0	0	0	11	257	4	257	5	257	32	257	6	
P.H.O.L. - Peterborough	197	45	51	0	1	0	1	0	51	10	31	0	0	0	0	0	31	0	31	2	31	2	31	3	
St. Joseph's - Hamilton	3208	474	1659	0	0	25	25	0	1659	108	1659	0	0	47	0	0	1659	14	1659	25	1659	70	0	0	
Sault Area Hospital	377	42	377	0	4	1	5	0	377	7	44	3	0	5	1	0	44	0	44	1	44	4	44	6	
Province of Ontario	19452	2996	9533	15	64	63	125	8	9533	676	6446	4	0	53	1	124	6446	72	6464	116	6464	262	4805	175	
Manitoba	1834	208	1499	1	3	25	29	0	1499	131	127	0	0	2	0	0	127	3	157	9	127	9	157	20	
Saskatchewan	5352	271	1382	0	0	21	21	0	1100	159	545	3	0	19	0	0	545	20	545	31	545	29	545	18	
Alberta	6645	971	4385	24	23	41	88	1	3902	605	1559	6	2	32	5	0	1557	15	1553	58	1538	67	1559	22	
Prairies	13831	1450	7266	25	26	87	138	1	6501	895	2231	9	2	53	5	0	2229	38	2255	98	2210	105	2261	60	
British Columbia	5692	736	4491	7	16	0	99	1	3640	543	746	0	1	38	13	0	746	23	746	22	714	53	714	55	
Yukon	128	7	45	0	1	0	5	0	45	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.	
Northwest Territories	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.	
Nunavut	153	18	67	0	0	0	0	0	67	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	281	25	112	0	1	0	5	0	112	3	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	0	0	N.C.	N.C.	
CANADA	71421	9575	34515	47	116	553	779	19	29079	2671	10759	14	5	178	20	124	10766	201	10804	273	9914	455	9117	370	

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.

Non-SARS-CoV-2 specimens and select SARS-CoV-2 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 January 14, 2023 (surveillance weeks 2022-35 to 2023-02)

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	11810	2481	6657	1	246	661	908	0	6657	232	6657	4	29	48	16	0	6657	135	6657	244	6657	540	6657	233
Prince Edward Island	23723	5921	2049	1	117	234	352	0	2049	147	946	15	25	72	6	0	946	56	946	11	946	301	946	24
Nova Scotia	91895	18279	23006	0	4	3571	3575	1	23005	1716	806	4	16	21	2	0	805	34	795	2	805	161	805	19
New Brunswick	79543	11398	28460	2	128	4390	4520	4	22093	1312	2023	3	19	112	7	0	2023	147	2023	38	2023	389	1968	135
Atlantic	206971	38079	60172	4	495	8856	9355	5	53804	3407	10432	26	89	253	31	0	10431	372	10421	295	10431	1391	10376	411
Région Nord-Est	58030	8025	27994	0	2	3472	3474	8	9690	962	728	7	3	45	0	0	728	37	721	45	N.C.	N.C.	728	36
Québec-Chaudière-Appalaches	127090	12718	15328	0	0	2731	2731	10	15057	1581	4275	20	5	39	0	0	4521	285	4275	212	N.C.	N.C.	4275	179
Centre-du-Québec	100600	14496	10522	0	0	1721	1721	13	9163	809	549	13	0	23	2	0	549	44	549	56	N.C.	N.C.	549	25
Montréal-Laval	139944	18697	52491	0	9	5799	5808	67	29537	2149	13192	121	13	224	10	0	13201	521	13293	599	N.C.	N.C.	12877	3621
Ouest du Québec	77214	10777	12677	0	7	2122	2129	7	10783	954	680	20	0	51	1	0	679	127	680	39	N.C.	N.C.	681	26
Montérégie	99583	11894	13508	0	0	1597	1597	11	12931	903	80	0	0	2	0	0	80	1	80	4	N.C.	N.C.	80	1
Province of Québec	602461	76607	132520	0	18	17442	17460	116	87161	7358	19504	181	21	384	13	0	19758	1015	19598	955	N.C.	N.C.	19190	629
P.H.O.L. - Ottawa	20809	5316	2769	5	131	62	193	0	2769	213	2042	0	0	0	0	50	2042	6	2042	27	2042	132	2042	54
EOURLA	59339	6423	9799	0	0	1365	1365	3	9799	1128	786	8	3	31	16	0	786	40	786	25	786	184	786	53
P.H.O.L. - Kingston	21033	3514	1630	2	88	38	128	1	1629	122	1392	0	0	0	0	65	1393	20	1393	22	1392	158	1393	52
UHN / Mount Sinai Hospital	63396	5148	12441	4	43	328	375	14	12441	203	732	0	0	4	0	0	699	1	732	0	732	23	732	36
P.H.O.L. - Toronto	40560	8584	15623	66	2367	140	1074	1	15594	917	13558	0	0	0	0	571	13561	194	13558	159	13558	1016	13558	538
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	53030	4010	53033	56	1433	713	2202	19	53032	1865	30296	4	0	16	0	363	30309	259	30435	165	30383	759	30277	540
P.H.O.L. - Sault Ste. Marie	1281	245	359	1	52	14	57	0	359	3	307	0	0	0	0	30	307	0	307	20	307	10	307	5
P.H.O.L. - Timmins	6575	729	672	0	161	6	156	0	671	49	650	0	0	0	0	40	650	11	650	10	650	47	650	24
St. Joseph's - London	85651	11311	9503	0	0	861	861	11	9503	818	1127	0	0	0	0	44	1161	38	1161	6	1161	172	749	59
P.H.O.L. - London	25315	5477	6016	8	579	60	630	3	6015	621	5149	0	0	0	0	277	5150	66	5150	32	5149	362	5150	198
P.H.O.L. - Orillia	413	216	1611	6	260	23	289	0	1611	205	1552	0	0	0	0	106	1552	30	1552	32	1552	188	1552	82
P.H.O.L. - Thunder Bay	6478	1390	645	0	106	3	109	0	644	57	566	0	0	0	0	25	566	15	566	6	566	42	566	14
P.H.O.L. - Sudbury	1578	243	486	1	65	14	67	0	486	40	397	0	0	0	0	19	397	5	397	11	397	23	397	20
P.H.O.L. - Hamilton	18889	4933	5148	5	297	90	392	4	5145	415	3760	0	0	0	0	159	3762	42	3760	38	3760	303	3760	155
P.H.O.L. - Peterborough	3149	575	766	0	64	9	73	0	766	79	667	0	0	0	0	25	667	7	667	18	667	96	667	26
St. Joseph's - Hamilton	60980	9558	24992	0	0	2653	2653	8	24992	2026	24992	0	0	716	0	0	24992	214	24992	139	24992	1703	0	0
Sault Area Hospital	9374	1575	6087	1	259	253	513	0	6087	55	1765	33	0	42	2	0	1765	35	1765	85	1765	186	1765	32
Province of Ontario	477850	69247	151580	155	5905	6632	11137	64	151543	8816	89738	45	3	809	18	1774	89759	983	89913	795	89859	5404	64351	1888
Manitoba	45471	8593	21435	16	195	1729	1940	0	21435	1137	3409	2	4	125	6	0	3399	105	3493	141	3409	552	3493	127
Saskatchewan	118030	10025	25524	0	0	3852	3852	8	19294	1153	8456	28	37	393	8	0	8459	193	8461	453	8459	736	8456	323
Alberta	156410	26098	74016	815	7240	2638	10693	19	63242	5494	26014	139	60	526	29	0	26004	302	25974	520	25587	2323	26014	816
Prairies	319911	44716	120975	831	7435	8219	16485	27	103971	7784	37879	169	101	1044	43	0	37862	600	37928	1114	37455	3611	37963	1266
British Columbia	167557	16448	76479	314	4299	290	8610	42	70405	5167	16236	137	158	580	116	6	16224	344	16224	331	15763	2402	15760	596
Yukon	3792	263	487	0	132	0	140	0	484	12	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	939	126	861	2	114	0	116	0	861	33	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	2932	281	1502	3	230	3	236	0	1502	36	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	7663	670	2850	5	476	3	492	0	2847	81	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	861	210	N.C.	N.C.
CANADA	1782413	245767	544576	1309	18628	41442	63539	254	469731	32613	173789	558	372	3070	221	1780	174034	3314	174084	3490	154369	13018	147640	4790

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.

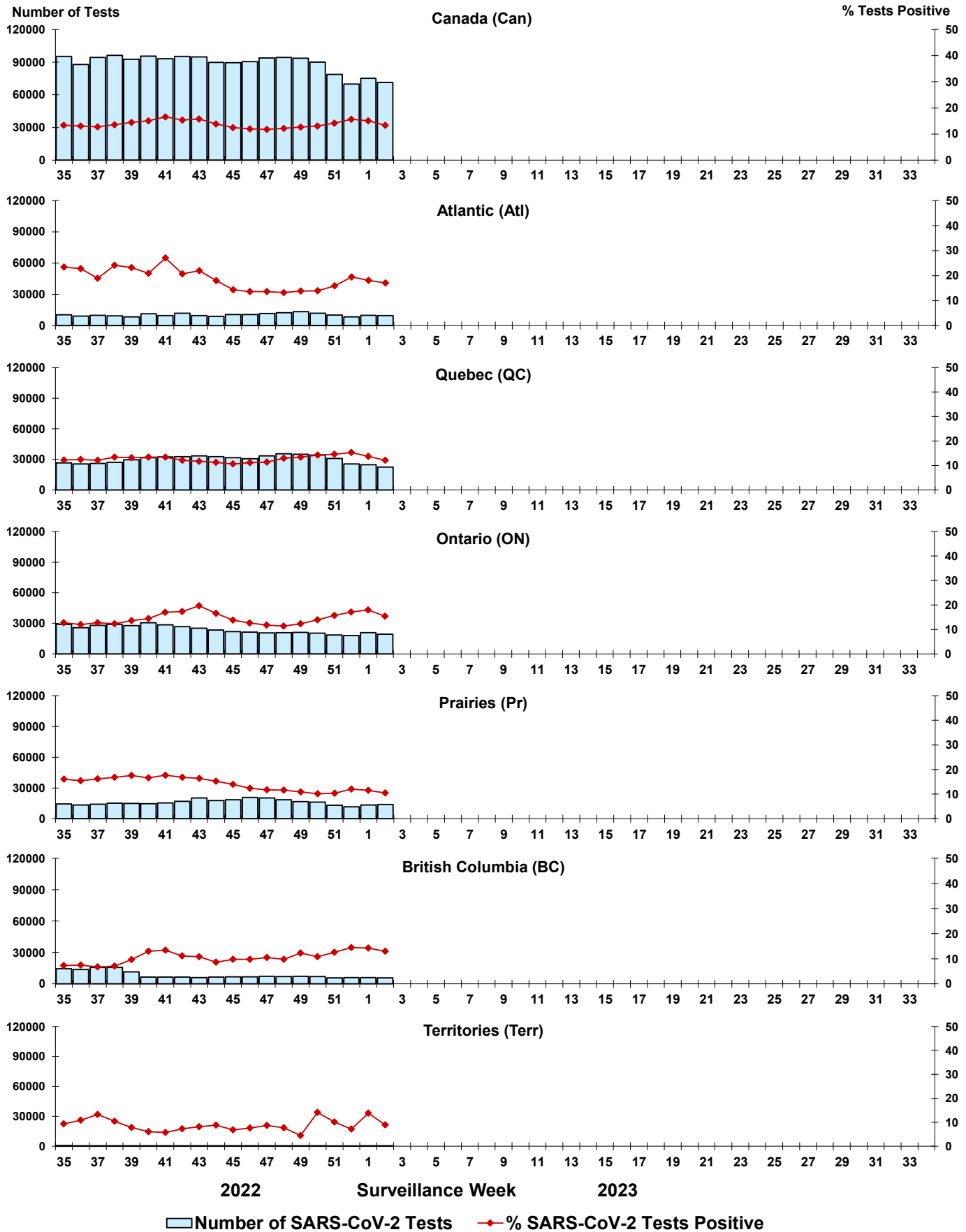
Non-SARS-CoV-2 specimens and select SARS-CoV-2 specimens from Yukon (YT) are sent to reference laboratories in British Columbia and reported results reflect specimens identified as originating from YT.

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.

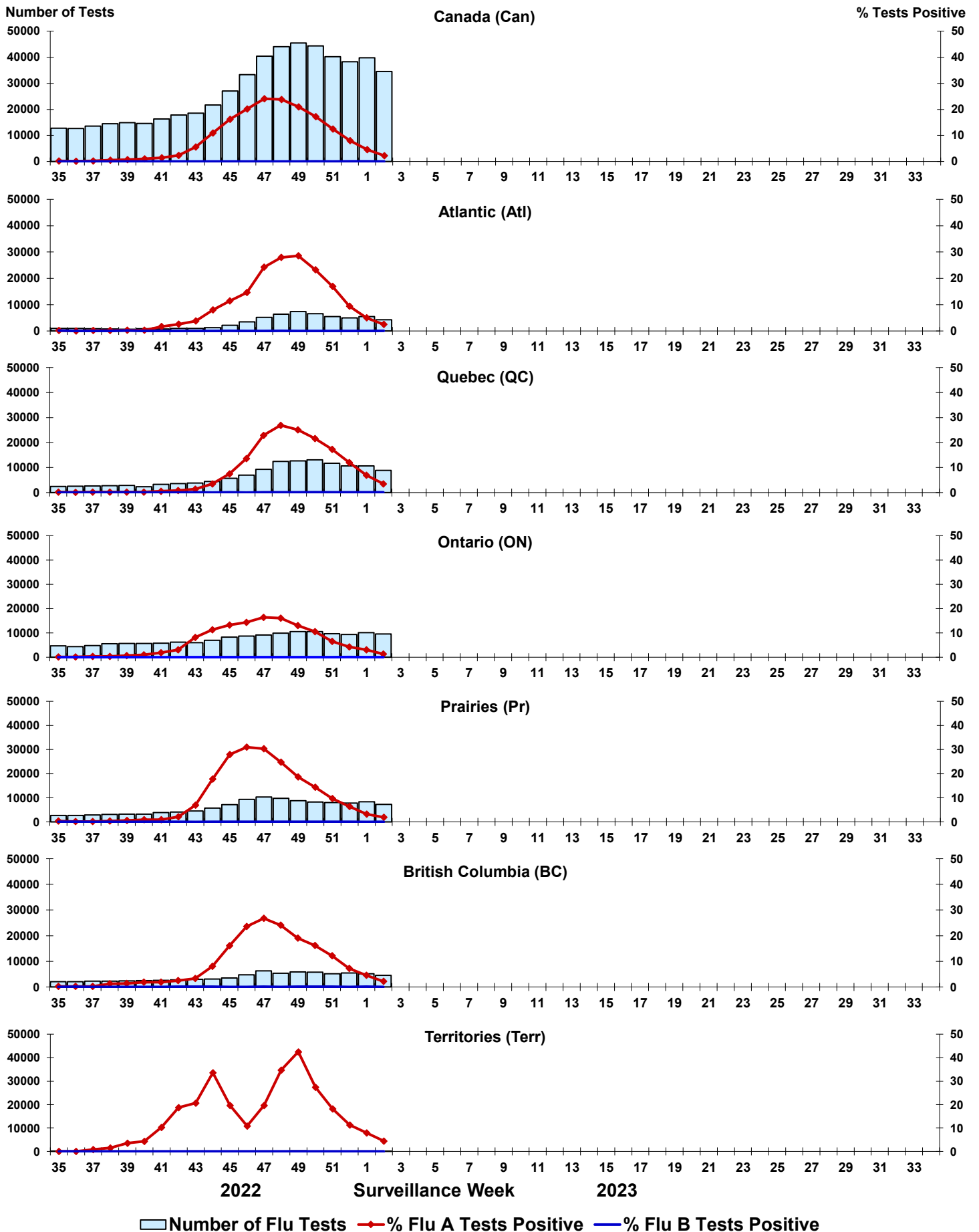
Delays in the reporting of data may cause data to change retrospectively. Due to these delays, the sum of weekly report totals do not add up to cumulative totals.

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



Number of Flu Tests % Flu A Tests Positive % Flu B Tests Positive

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

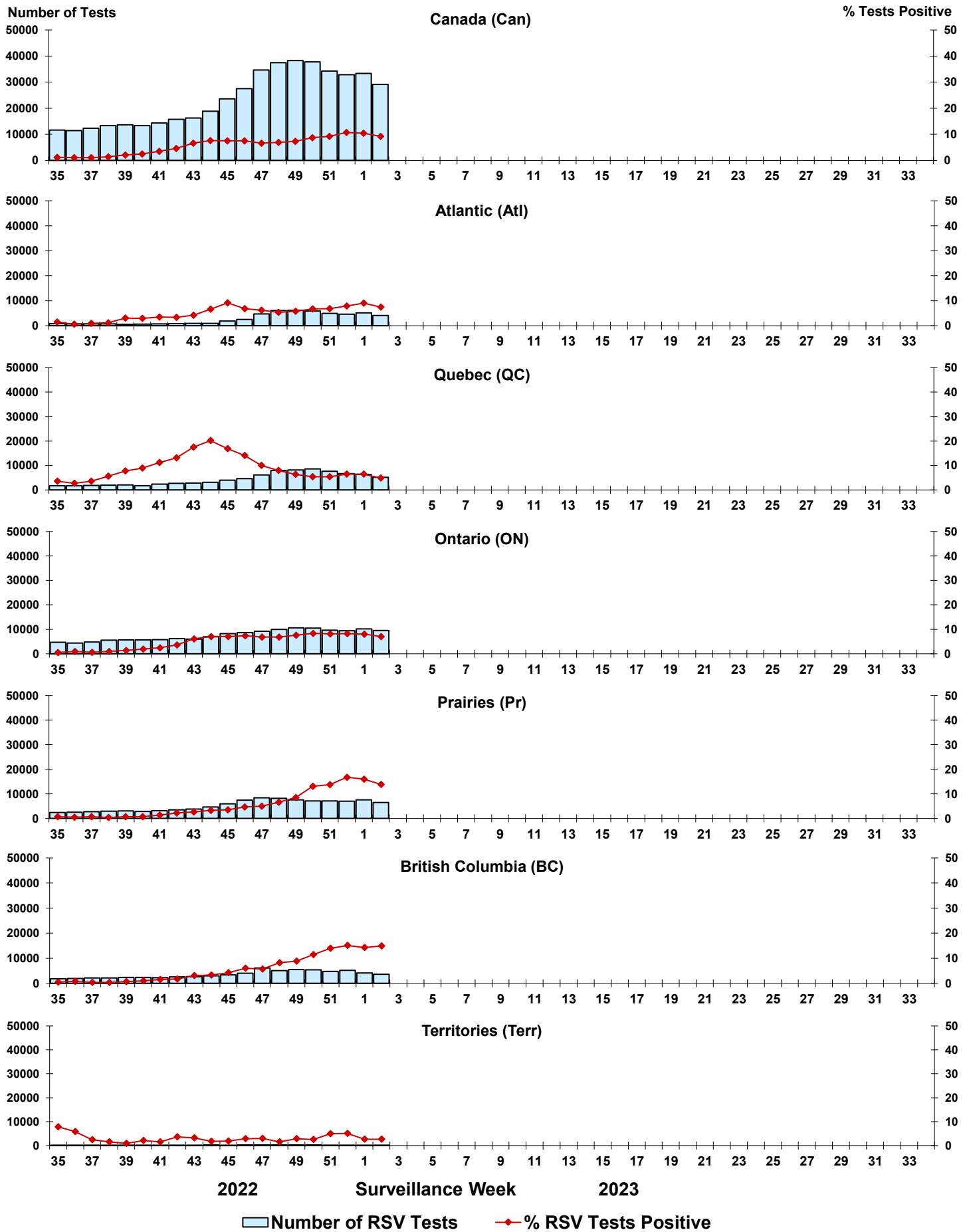


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

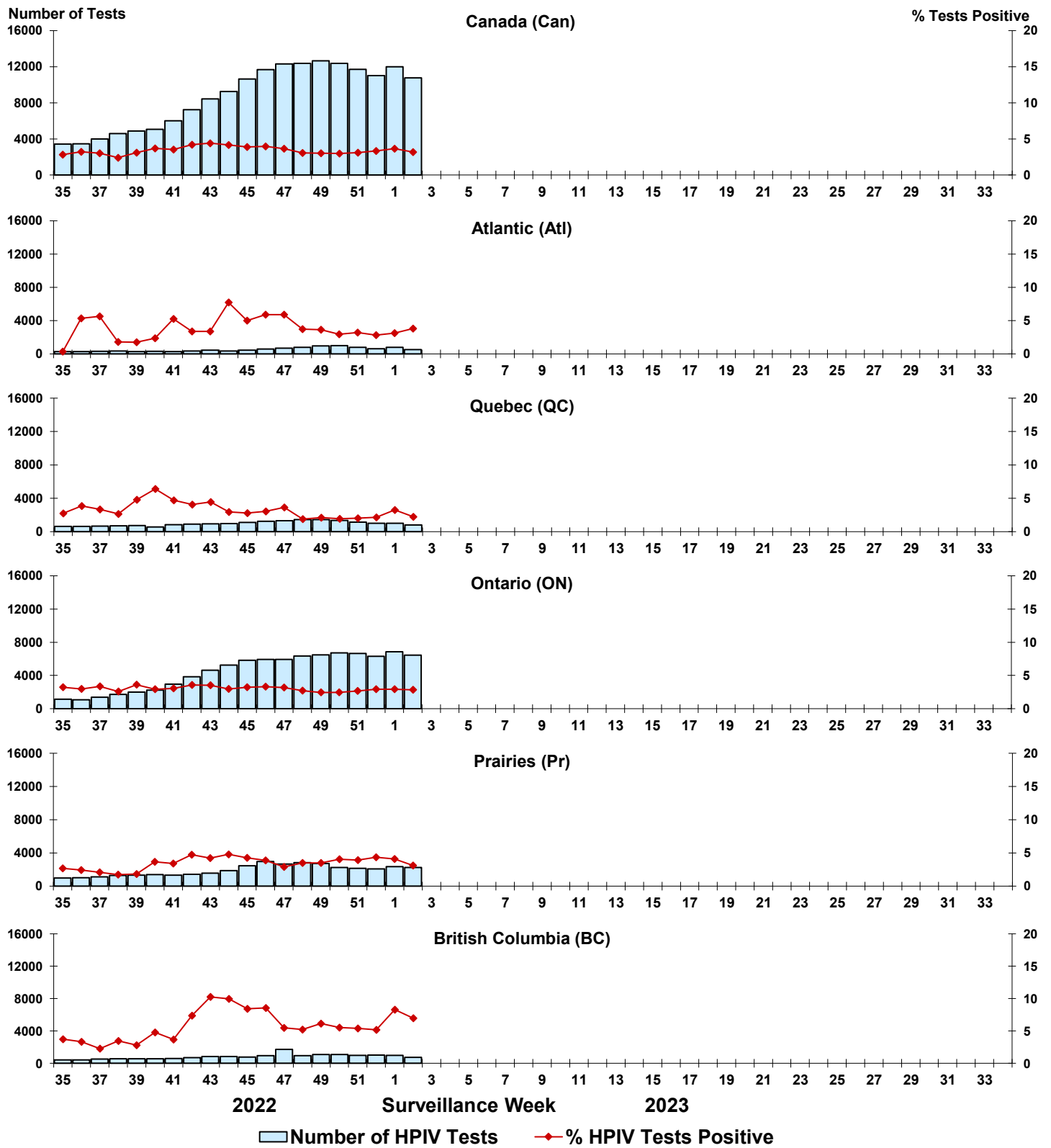


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

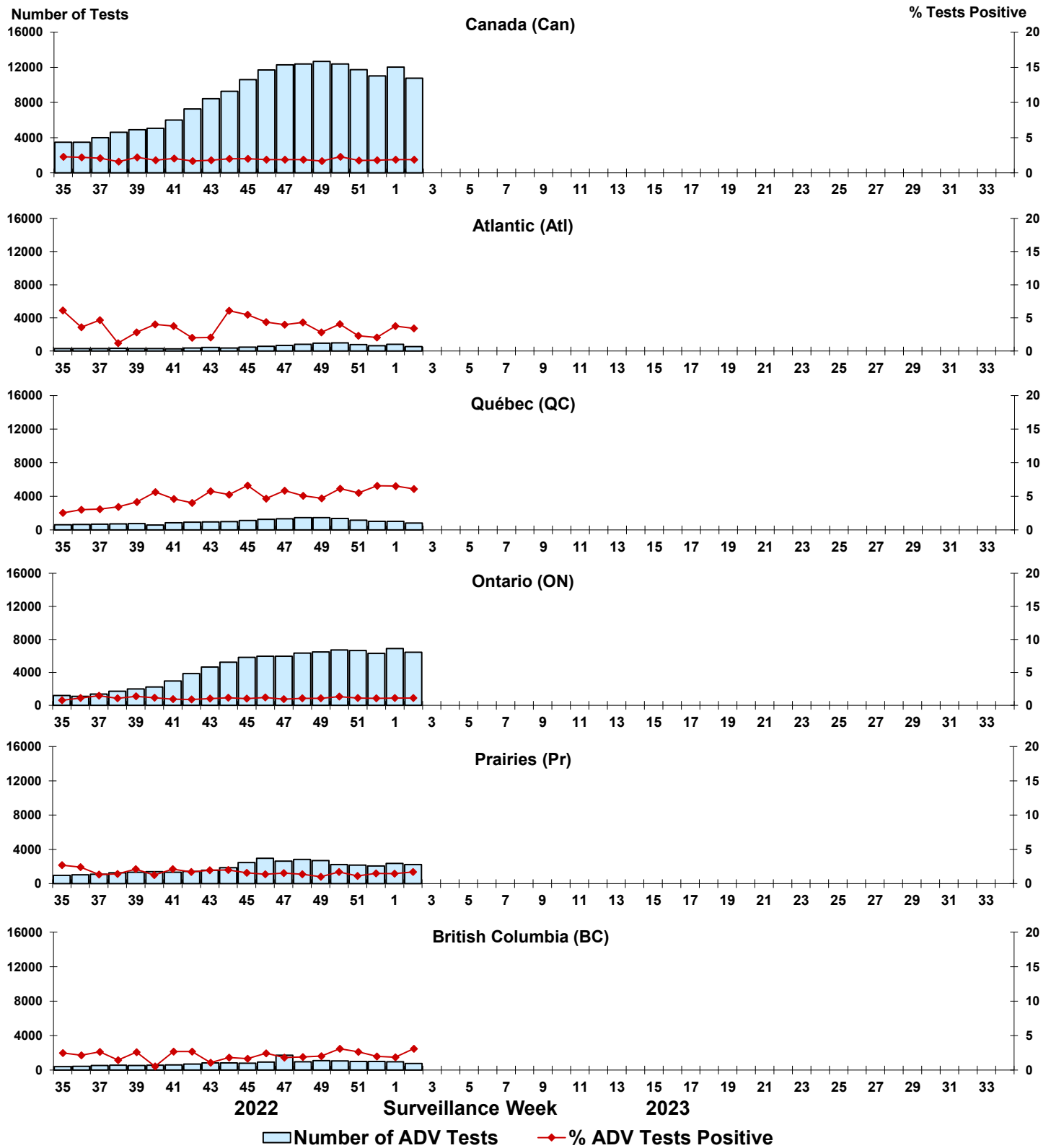


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

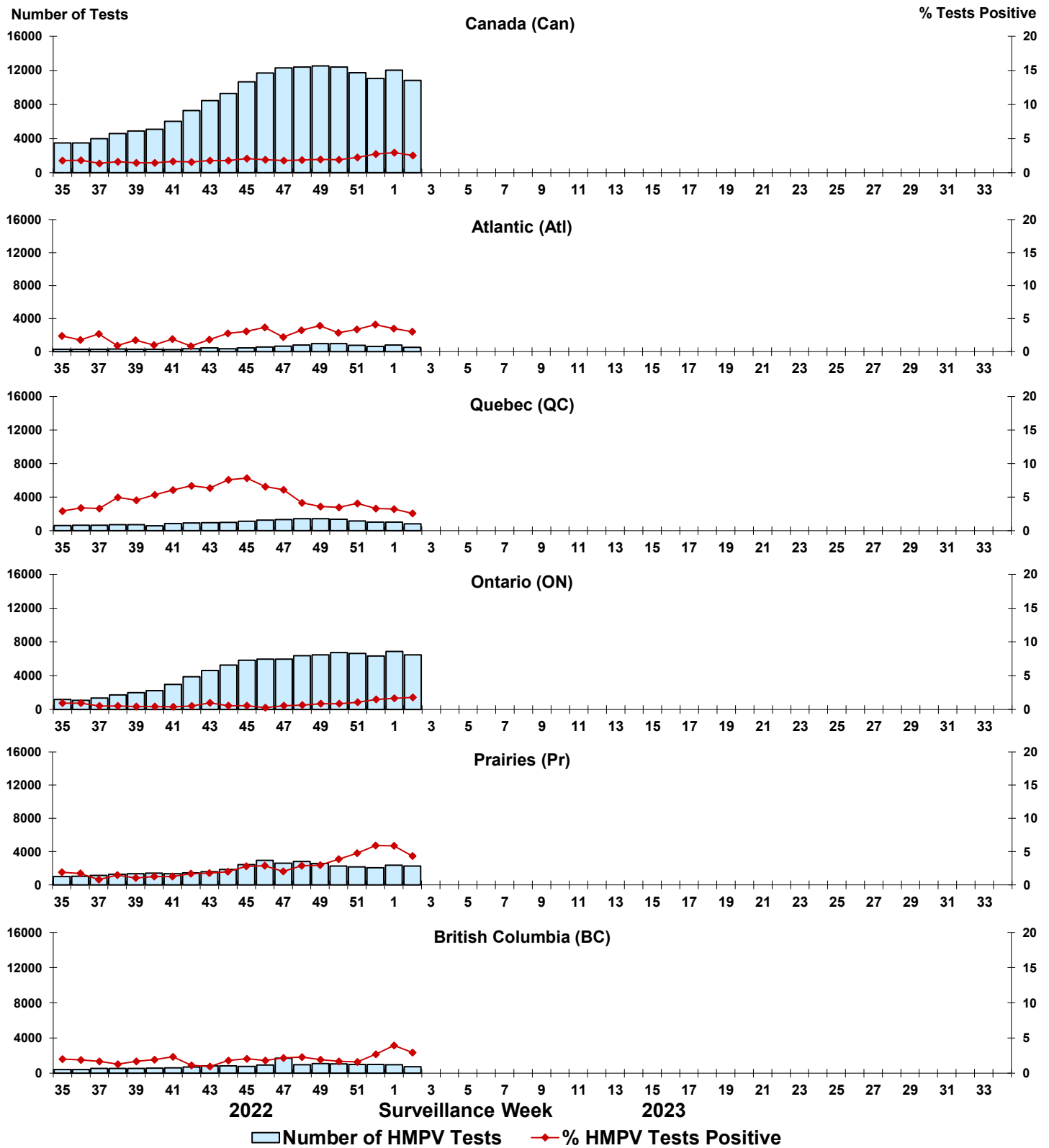


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

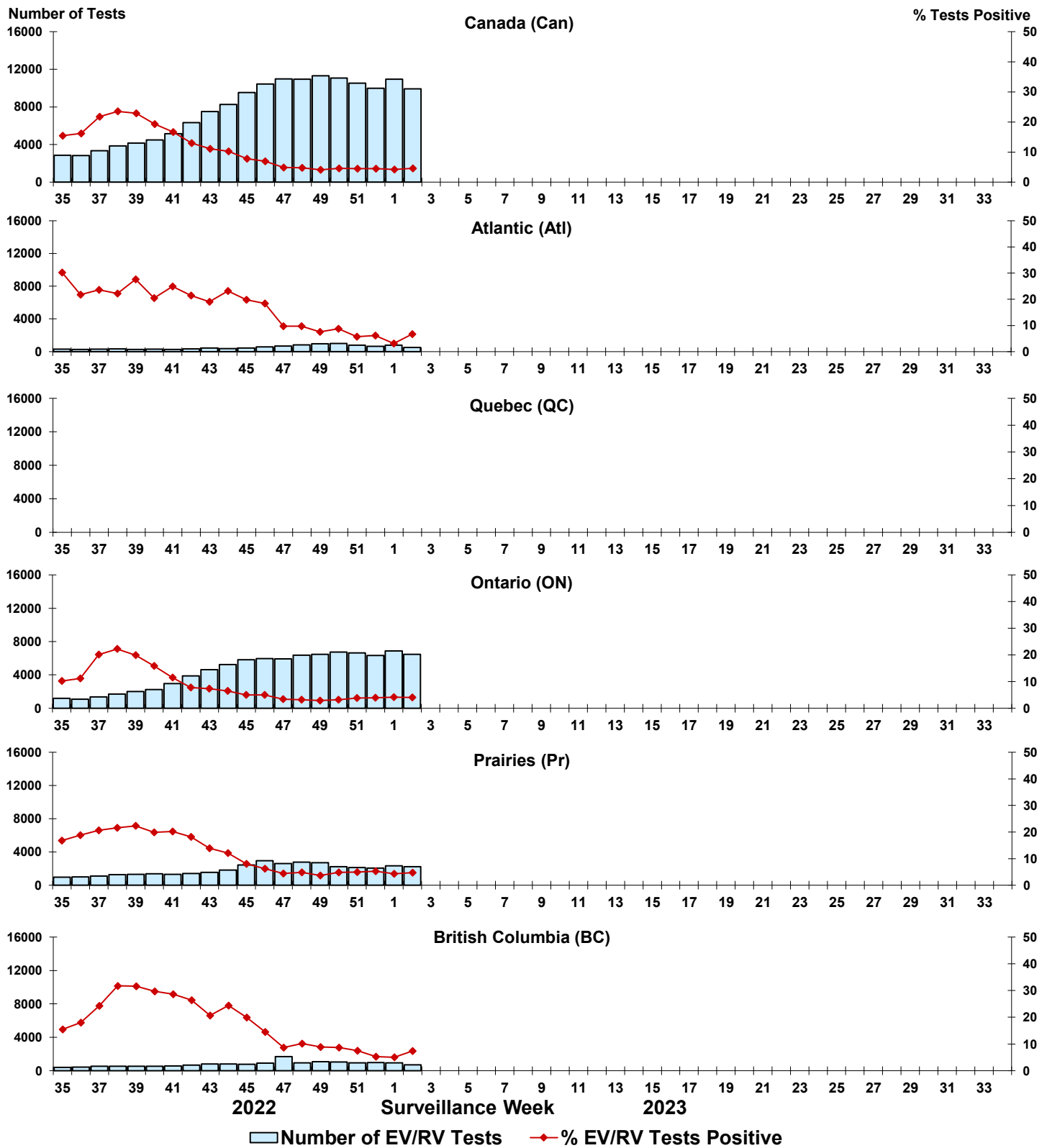


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

