

RESPIRATORY VIRUS DETECTION REPORT

December 31, 2023 to January 6, 2024
(Surveillance Week 2024-01)



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 1 (week ending January 6, 2024) in Canada, participating RVDSS laboratories reported 6,901 detections of SARS-CoV-2 from 47,644 tests (14.5% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 10,252 to 41,458 tests), activity of flu is highest, as is expected at this time of year.

- National SARS-CoV-2 percent positivity has decreased over the most recent three surveillance weeks. Trends currently vary by region.
- Activity of influenza decreased in week 1, but is within expected levels for this time of year (6,148 detections; 14.8% positive).
- Activity of RSV is near expected levels for this time of year (2,567 detections; 7.0% positive).
- Activity of all other non-SARS-CoV-2 respiratory viruses is low and 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

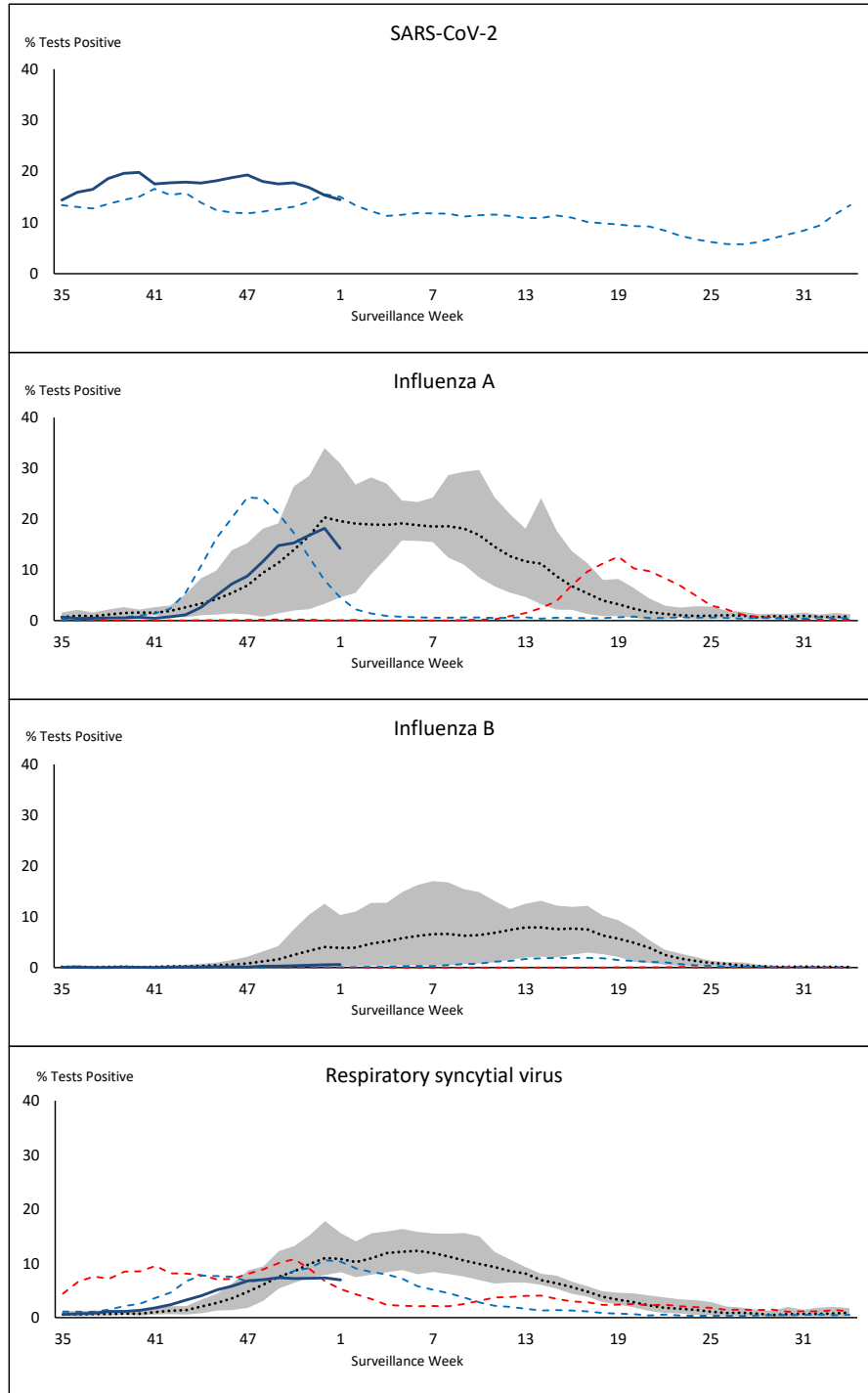
SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2

Terr: Territories of Canada

UHN: University Health Network



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



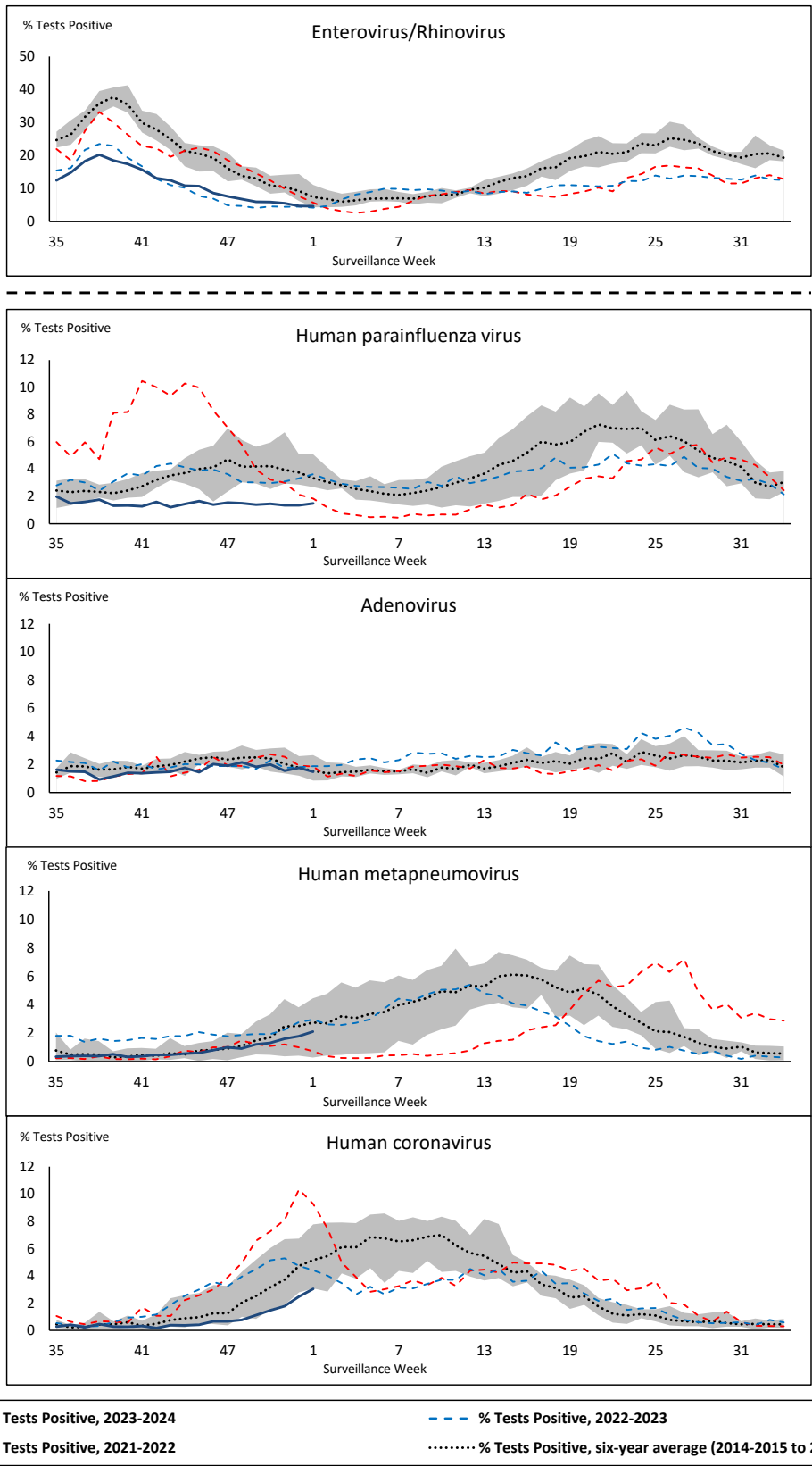
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 January 6, 2024 (surveillance week 2024-01)

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	743	106	654	0	0	88	88	5	654	64	654	0	5	1	7	0	654	4	654	10	654	21	654	18
Prince Edward Island	372	26	320	0	0	103	103	0	320	18	16	0	0	0	0	0	16	0	16	0	16	5	16	0
Nova Scotia	1732	273	1523	0	0	190	190	6	1053	126	28	0	0	0	1	0	28	3	28	1	28	6	28	0
New Brunswick	1624	162	1635	92	2	265	359	4	1603	123	114	0	0	0	0	0	114	2	114	4	114	4	114	6
Atlantic	4471	567	4132	92	2	646	740	15	3630	331	812	0	5	1	8	0	812	9	812	15	812	36	812	24
Région Nord-Est	2537	316	2423	0	0	575	575	4	1142	70	104	0	0	2	0	0	104	2	104	1	N.C.	N.C.	104	3
Québec-Chaudière-Appalaches	2431	407	2454	0	0	564	564	2	2378	231	877	0	0	0	0	0	878	22	877	14	N.C.	N.C.	681	10
Centre-du-Québec	3153	588	781	0	0	110	110	0	775	45	24	0	0	1	0	0	24	1	24	1	N.C.	N.C.	24	1
Montréal-Laval	3524	629	4014	0	0	514	514	12	2130	147	1001	3	0	7	0	0	1001	18	1003	26	N.C.	N.C.	1001	22
Ouest du Québec	2055	417	1205	0	0	197	197	8	1194	77	22	0	0	0	0	0	22	0	22	1	N.C.	N.C.	22	2
Montérégie	1899	393	2059	0	0	283	283	5	2024	121	3	0	0	0	0	0	3	0	3	0	N.C.	N.C.	3	0
Province of Québec	15599	2750	12936	0	0	2243	2243	31	9643	691	2031	3	0	10	0	0	2032	43	2033	43	N.C.	N.C.	1835	38
P.H.O.L. - Ottawa	321	112	266	36	1	11	37	0	266	6	202	0	0	0	0	3	202	0	202	4	202	10	202	6
EORLA	1299	169	761	0	0	126	126	9	761	28	59	0	0	1	1	0	59	0	59	2	59	10	59	4
P.H.O.L. - Kingston	223	56	149	20	1	11	22	1	149	9	106	0	0	0	0	2	106	0	106	0	106	3	106	4
UHN / Mount Sinai Hospital	1178	152	875	0	4	49	53	3	875	12	24	0	0	1	0	0	24	0	24	0	24	0	24	1
P.H.O.L. - Toronto	938	321	1626	132	192	21	173	8	1626	86	1467	0	0	0	0	45	1467	14	1467	26	1467	70	1467	71
Sick Kids Hospital - Toronto	129	14	110	7	6	0	13	1	110	12	110	0	1	1	0	0	110	2	110	2	110	10	110	2
Shared Hospital Laboratory	2279	208	1840	69	52	55	176	6	1843	39	1829	0	0	0	0	13	0	0	1831	9	1831	28	1831	43
P.H.O.L. - Sault Ste. Marie	45	13	59	14	0	7	17	0	59	7	41	0	0	0	0	0	41	0	41	0	41	1	41	0
P.H.O.L. - Timmins	27	7	37	2	1	3	5	0	37	8	32	0	0	0	0	0	32	0	32	1	32	0	32	0
St. Joseph's - London	1188	193	855	0	0	100	100	7	855	52	53	0	0	0	0	0	53	2	53	1	53	5	53	1
P.H.O.L. - London	635	195	406	52	20	5	55	1	406	25	320	0	0	0	0	5	320	0	320	5	320	16	320	13
P.H.O.L. - Orillia	39	9	78	16	1	3	20	0	78	4	78	0	0	0	0	4	78	2	78	1	78	6	78	2
P.H.O.L. - Thunder Bay	82	10	55	9	0	1	3	0	55	4	40	0	0	0	0	2	40	0	40	1	40	0	40	0
P.H.O.L. - Sudbury	20	1	25	4	0	0	4	0	25	0	23	0	0	0	0	1	23	0	23	0	23	1	23	0
P.H.O.L. - Hamilton	229	89	175	18	6	0	16	1	175	11	132	0	0	0	0	2	132	2	132	1	132	5	132	9
P.H.O.L. - Peterborough	89	25	98	66	62	0	10	2	98	6	84	0	0	0	0	3	84	3	84	3	84	5	84	3
St. Joseph's - Hamilton	2600	343	2290	0	0	308	308	14	2290	70	2290	0	0	26	0	0	2290	11	2290	19	2290	85	0	0
Sault Area Hospital	226	25	168	12	0	7	19	0	168	19	168	1	0	1	0	0	119	3	119	0	119	9	119	0
Province of Ontario	11547	1942	9873	457	346	707	1157	53	9876	398	7058	1	1	30	1	80	5180	39	7011	75	7011	264	4721	159
Manitoba	1943	194	1335	1	9	167	177	11	1335	100	133	0	0	0	0	0	133	4	156	6	133	13	156	4
Saskatchewan	2357	254	1819	0	0	124	124	36	1548	84	498	1	2	3	3	0	498	4	498	69	498	41	498	15
Alberta	6203	676	5855	561	41	36	638	80	5526	437	1317	3	1	12	0	0	1317	17	1277	0	1300	49	1317	36
Prairies	10503	1124	9009	562	50	327	939	127	8409	621	1948	4	3	15	3	0	1948	25	1931	75	1931	103	1971	55
British Columbia	5308	500	5337	245	20	2	778	21	5107	504	945	4	7	9	6	0	945	46	945	59	913	93	913	36
Yukon	64	15	52	3	0	0	10	0	52	6	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.R.	N.R.	N.C.	N.C.
Nunavut	152	3	119	0	1	33	34	0	119	16	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	216	18	171	3	1	33	44	0	171	22	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.
CANADA	47644	6901	41458	1359	419	3958	5901	247	36836	2567	12794	12	16	65	18	80	10917	162	12732	267	10667	496	10252	312

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 January 6, 2024 (surveillance weeks 2023-35 to 2024-01)

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	11217	2082	7910	0	0	585	585	17	7910	336	7910	7	38	10	80	0	7910	136	7910	77	7910	903	7910	53	
Prince Edward Island	4311	598	1930	0	0	218	218	0	1930	71	248	0	0	0	8	0	247	12	237	0	247	84	231	1	
Nova Scotia	28222	6680	15908	0	0	696	696	34	13735	844	657	15	2	1	10	0	657	33	650	3	657	183	656	0	
New Brunswick	20077	2838	17483	521	7	1394	1922	8	17145	661	1506	7	4	0	22	0	1506	45	1506	10	1506	323	1506	26	
Atlantic	63827	12198	43231	521	7	2893	3421	59	40720	1912	10321	29	44	11	120	0	10320	226	10303	90	10320	1493	10303	80	
Région Nord-Est	33850	6007	27272	4	0	2302	2306	12	9653	654	1412	14	11	9	16	0	1412	66	1387	38	N.C.	N.C.	1412	15	
Québec-Chaudière-Appalaches	42306	8032	18797	0	0	1612	1612	22	18504	1564	7963	18	9	5	10	0	8230	336	7963	160	N.C.	N.C.	7020	63	
Centre-du-Québec	48475	10352	13428	0	0	744	744	10	10544	959	749	15	8	11	6	0	749	37	749	24	N.C.	N.C.	771	11	
Montréal-Laval	63580	11879	36596	1	1	2176	2178	30	27085	1940	14719	89	36	72	22	0	14719	299	14768	242	N.C.	N.C.	14719	184	
Ouest du Québec	34635	8596	12292	4	0	942	946	30	12208	793	397	10	3	2	6	0	397	30	397	7	N.C.	N.C.	397	7	
Montréal	32278	6614	21255	0	0	1269	1269	26	20259	1083	116	1	0	0	1	0	116	3	116	1	N.C.	N.C.	116	0	
Province of Québec	255124	51480	129640	9	1	9045	9055	130	98253	6993	25356	147	67	99	61	0	25623	771	25380	472	N.C.	N.C.	24435	280	
P.H.O.L. - Ottawa	7171	2780	4565	182	33	39	166	2	4563	102	2729	0	0	0	0	35	2729	3	2727	25	2729	356	2727	35	
EOURLA	26578	3554	11126	0	0	878	878	37	11126	974	679	2	3	4	4	0	654	7	679	5	679	148	679	10	
P.H.O.L. - Kingston	5191	1778	2691	53	8	14	61	1	2691	126	1957	0	0	0	0	37	1957	9	1957	0	1957	295	1957	5	
UHN / Mount Sinai Hospital	21678	2305	12691	40	8	261	309	28	12691	147	474	0	0	5	1	0	474	1	474	0	474	18	474	4	
P.H.O.L. - Toronto	12838	4419	20658	720	622	71	927	45	20657	760	18743	0	0	0	0	541	18749	214	18728	156	18743	2309	18728	247	
Sick Kids Hospital - Toronto	2527	209	2194	77	68	20	165	3	2194	281	2194	14	12	23	16	0	2194	57	2194	27	2194	402	2194	28	
Shared Hospital Laboratory	31593	3653	27562	467	326	121	914	36	27564	1155	27429	0	0	0	0	162	22886	229	27451	55	27496	1126	27473	148	
P.H.O.L. - Sault Ste. Marie	262	170	258	19	0	7	21	0	258	15	173	0	0	0	0	1	173	1	173	0	173	18	173	0	
P.H.O.L. - Timmins	661	210	572	26	5	4	26	0	572	50	471	0	0	0	0	14	471	4	471	1	471	42	471	0	
St. Joseph's - London	17069	2764	6810	0	0	440	440	21	6810	585	1328	0	0	0	0	15	1345	20	1345	5	1345	175	1345	6	
P.H.O.L. - London	9866	3384	6777	271	84	30	242	6	6775	365	5337	0	0	0	0	121	5337	30	5335	16	5337	600	5335	30	
P.H.O.L. - Orillia	367	117	923	36	10	3	49	0	920	67	884	0	0	0	0	23	884	15	884	5	884	136	884	3	
P.H.O.L. - Thunder Bay	1169	376	623	44	0	2	21	0	623	7	514	0	0	0	0	24	514	5	514	5	514	48	514	1	
P.H.O.L. - Sudbury	426	202	465	10	0	0	10	0	463	9	320	0	0	0	0	6	321	1	320	0	320	40	320	1	
P.H.O.L. - Hamilton	4860	1670	3773	68	37	13	86	4	3773	152	2790	0	0	0	0	77	2790	50	2789	28	2790	417	2789	35	
P.H.O.L. - Peterborough	1547	591	1489	146	119	1	56	6	1489	202	1252	0	0	0	0	38	1252	28	1252	9	1252	233	1252	13	
St. Joseph's - Hamilton	36981	4508	31891	0	0	1661	1661	93	31891	1483	31891	0	0	149	0	0	31891	214	31891	129	31891	2093	0	0	
Sault Area Hospital	3480	495	2318	129	3	31	163	0	2311	91	1793	20	0	7	15	0	1744	27	1744	0	1744	199	1754	2	
Province of Ontario	184264	33185	137386	2288	1323	3596	6189	282	137371	6571	100958	36	15	188	36	1094	96365	915	100928	466	100993	8655	69069	568	
Manitoba	32280	5498	24266	6	111	1620	1737	48	24266	503	1752	0	6	6	40	0	1752	91	2331	43	1752	406	2331	25	
Saskatchewan	43371	5583	28516	84	5	5164	5253	143	26113	559	8637	19	8	8	17	0	8637	191	8637	298	8637	977	8637	50	
Alberta	109484	14909	89643	10737	470	517	11724	467	83259	3331	24831	92	72	108	3	0	24826	302	24404	11	24420	2543	24830	255	
Prairies	185135	25990	142425	10827	586	7301	18714	658	133638	4393	35220	111	86	122	60	0	35215	584	35372	352	34809	3926	35798	330	
British Columbia	70593	10449	68998	2863	371	71	5059	98	68073	3172	15790	97	126	72	134	0	15794	473	15679	323	15124	2749	15101	196	
Yukon	1074	131	678	20	6	0	34	0	674	35	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	441	43	383	87	4	0	91	0	383	15	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	383	72	N.C.	N.C.
Nunavut	2476	255	1643	0	24	420	444	0	1643	110	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	3991	429	2704	107	34	420	569	0	2700	160	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	383	72	N.C.	N.C.	
CANADA	762934	133731	524384	16615	2322	23326	43007	1227	480755	23201	187645	420	338	492	411	1094	183501	2982	187846	1705	161629	16895	154706	1454	

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.

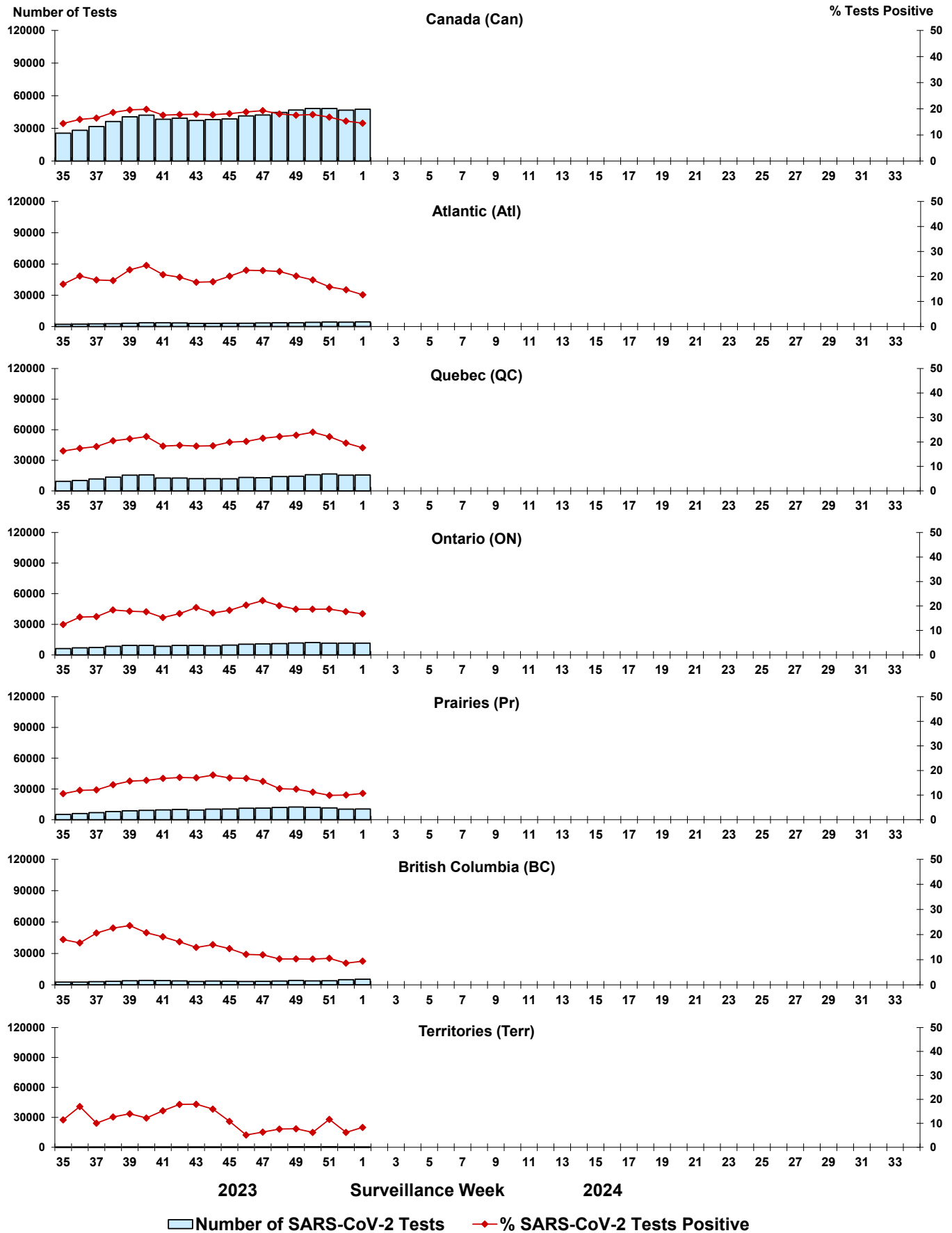
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Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests positive.

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

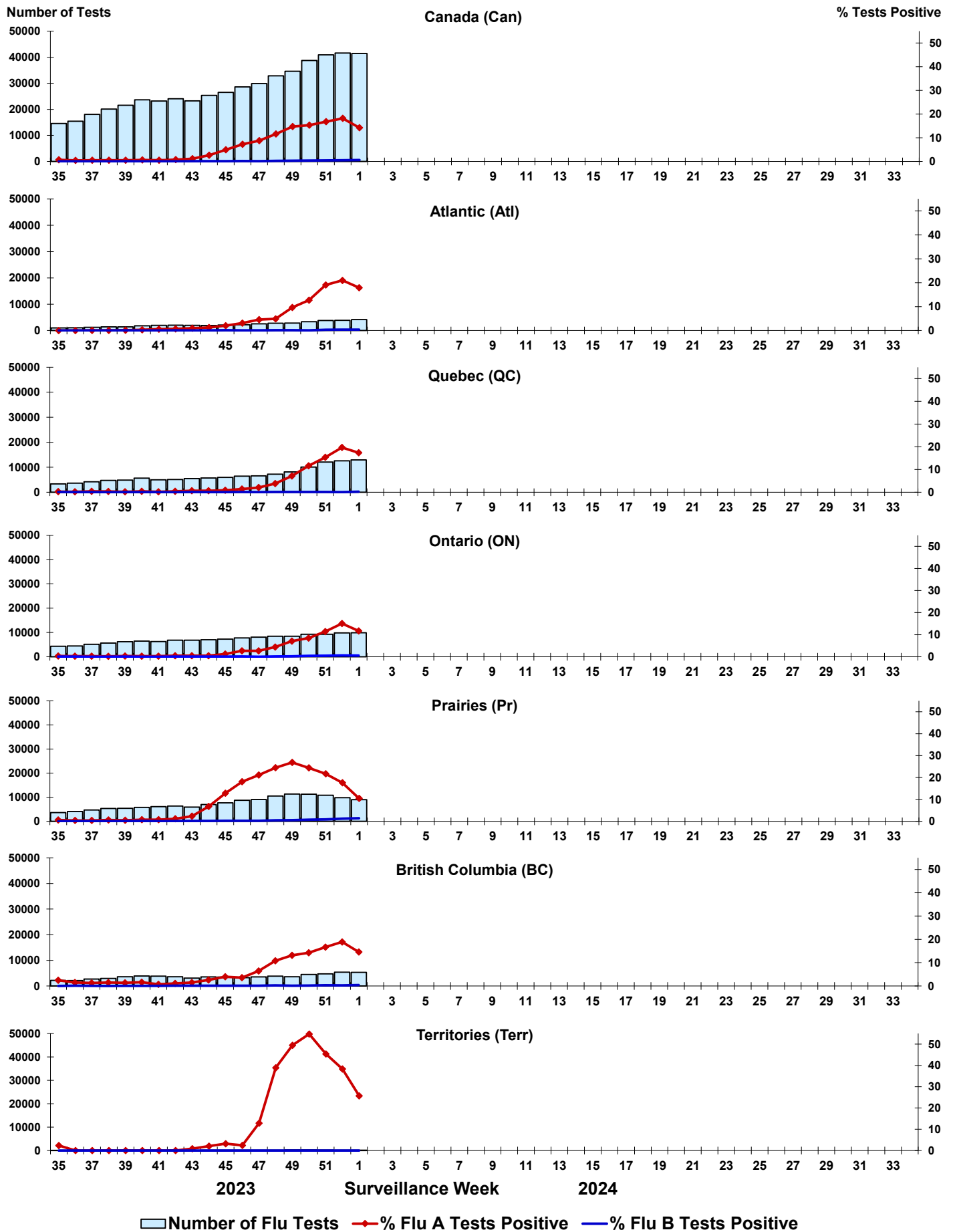
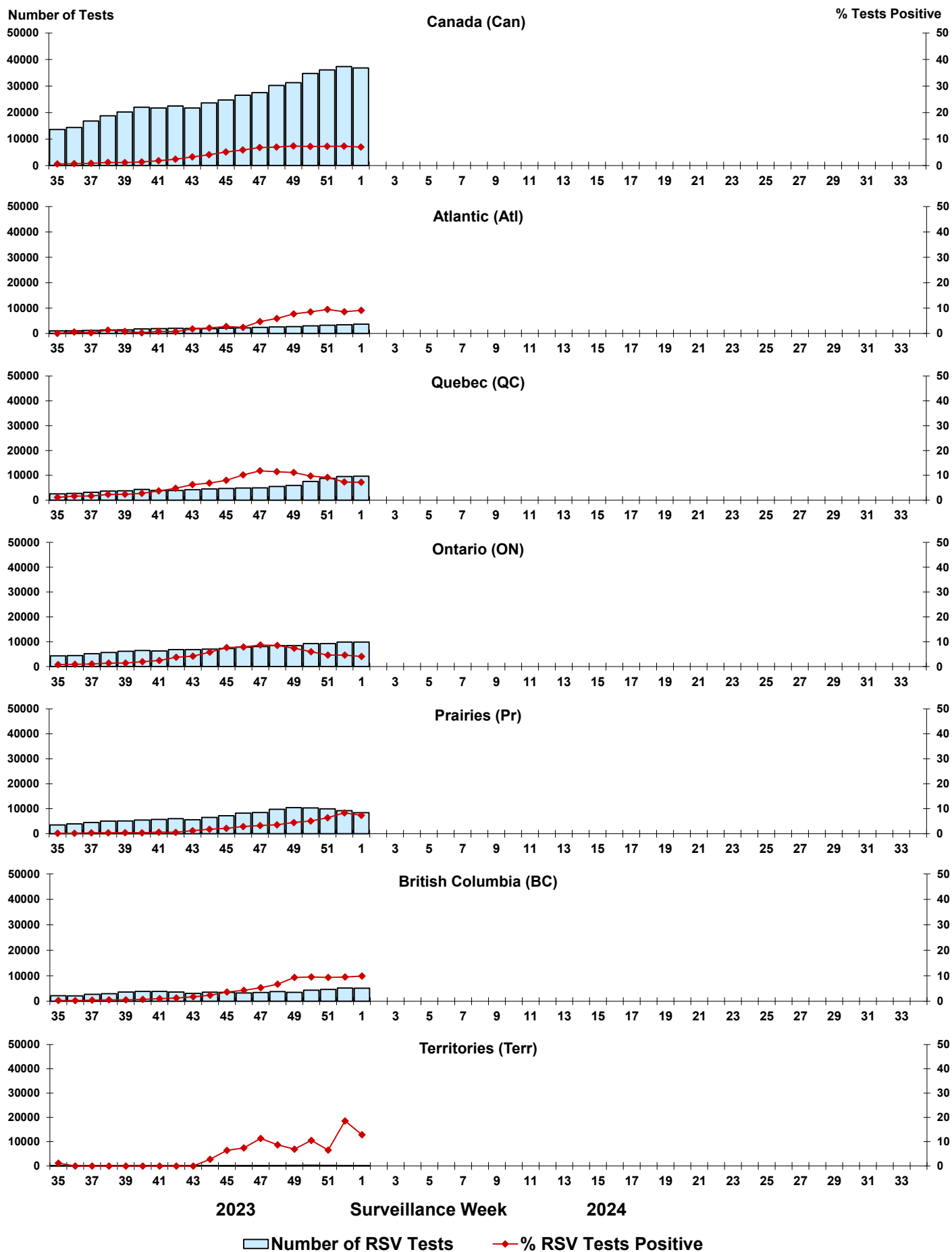


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week



Legend: █ Number of RSV Tests ◆ % RSV Tests Positive

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

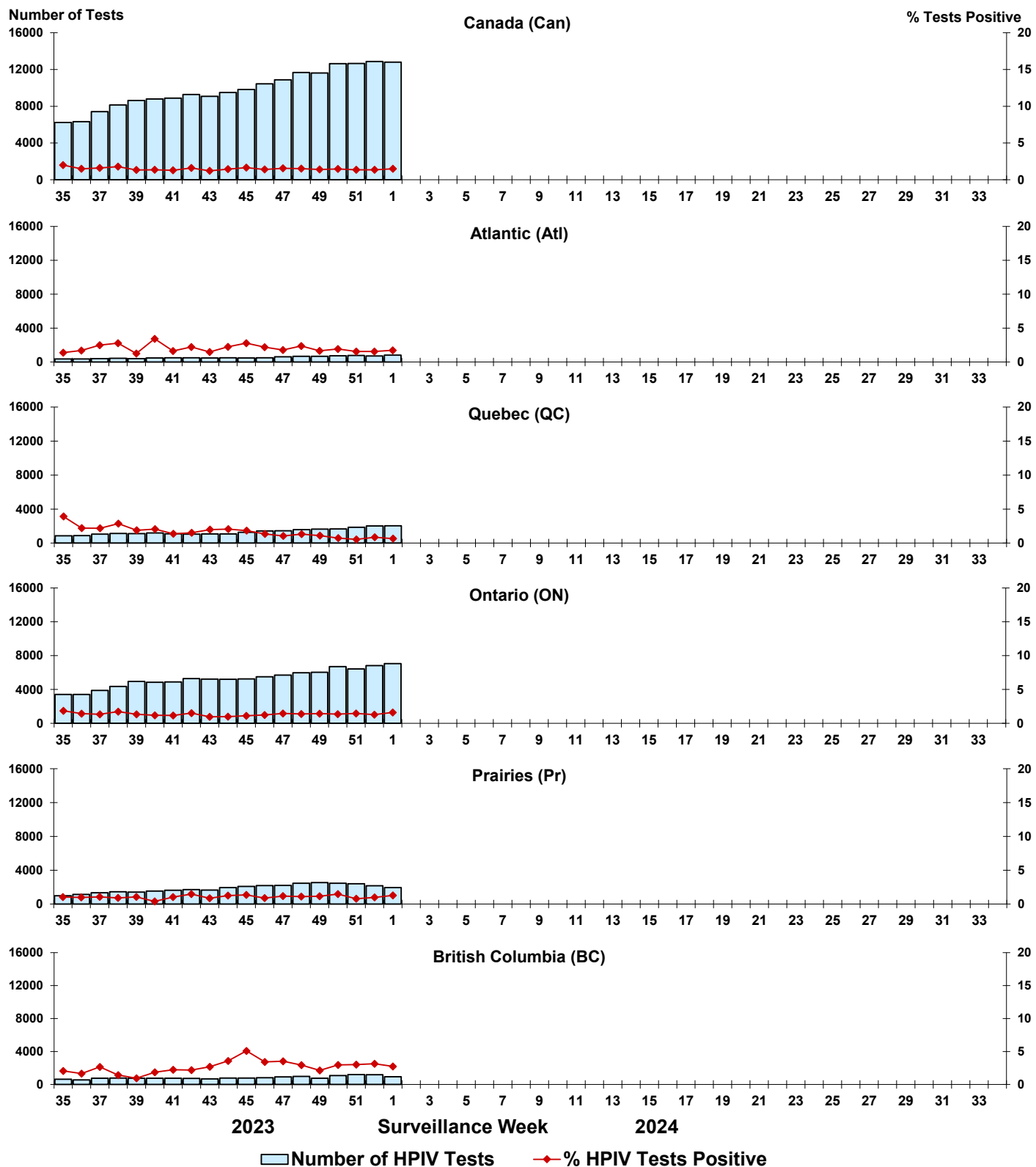


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

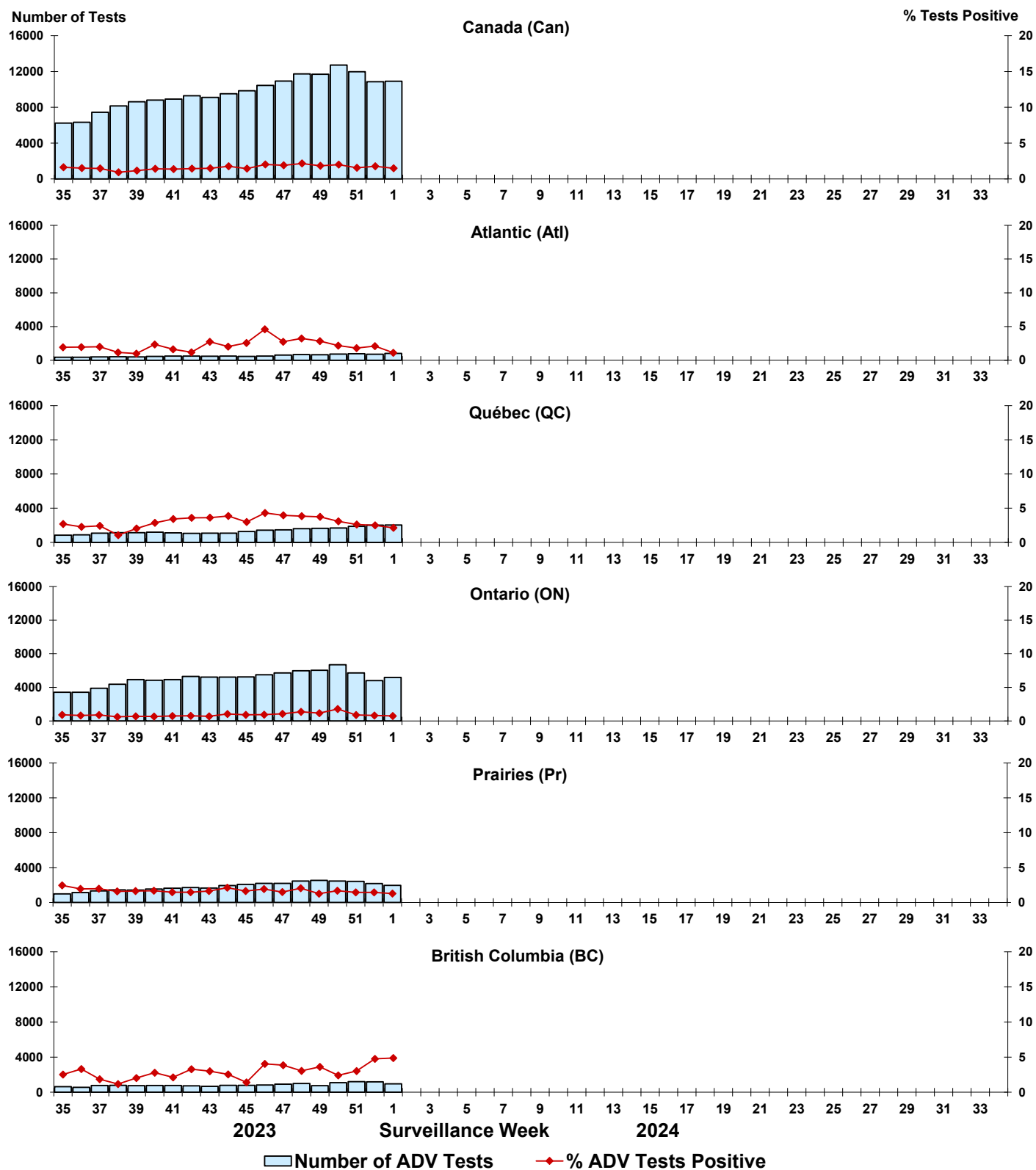


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

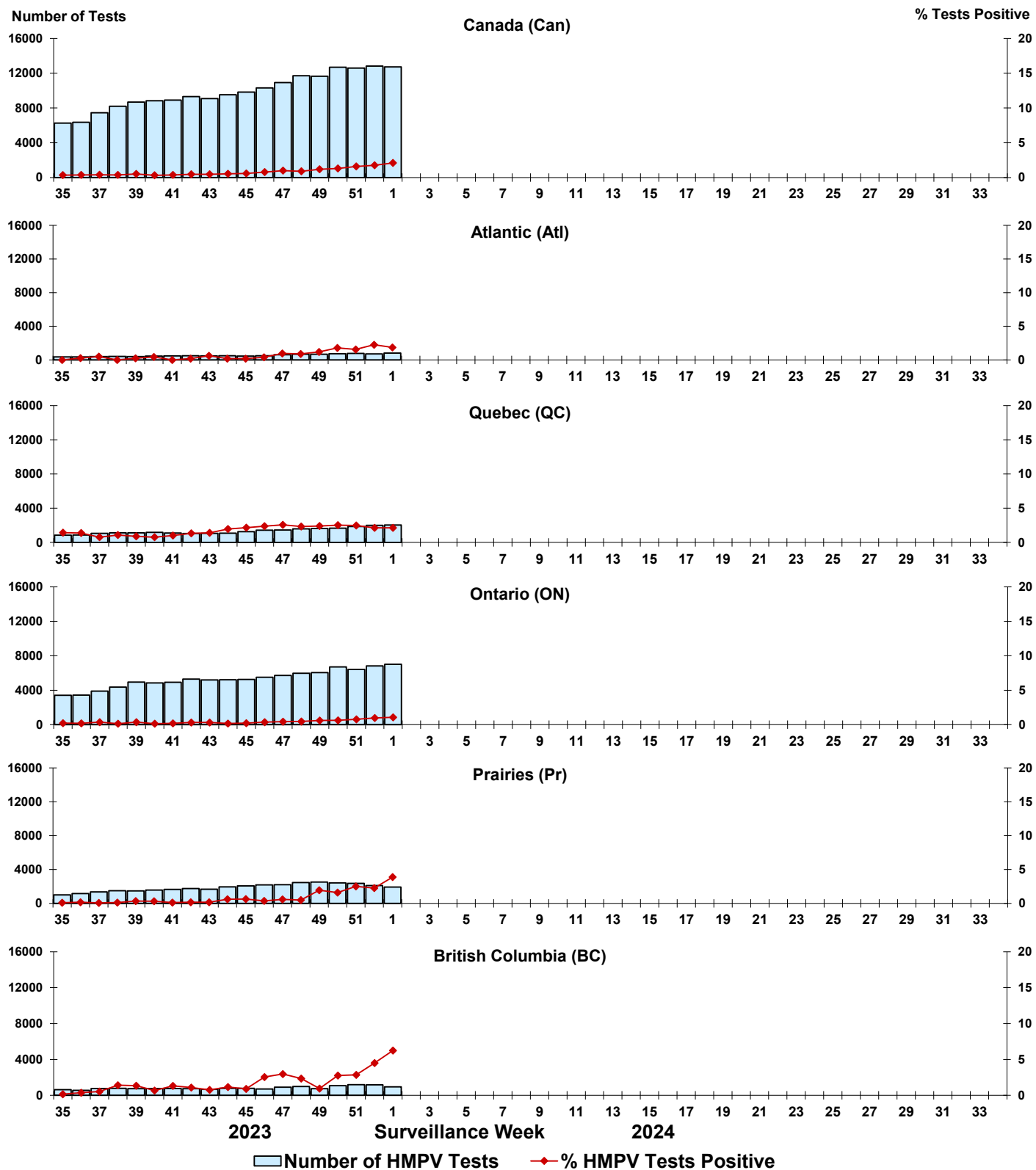


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

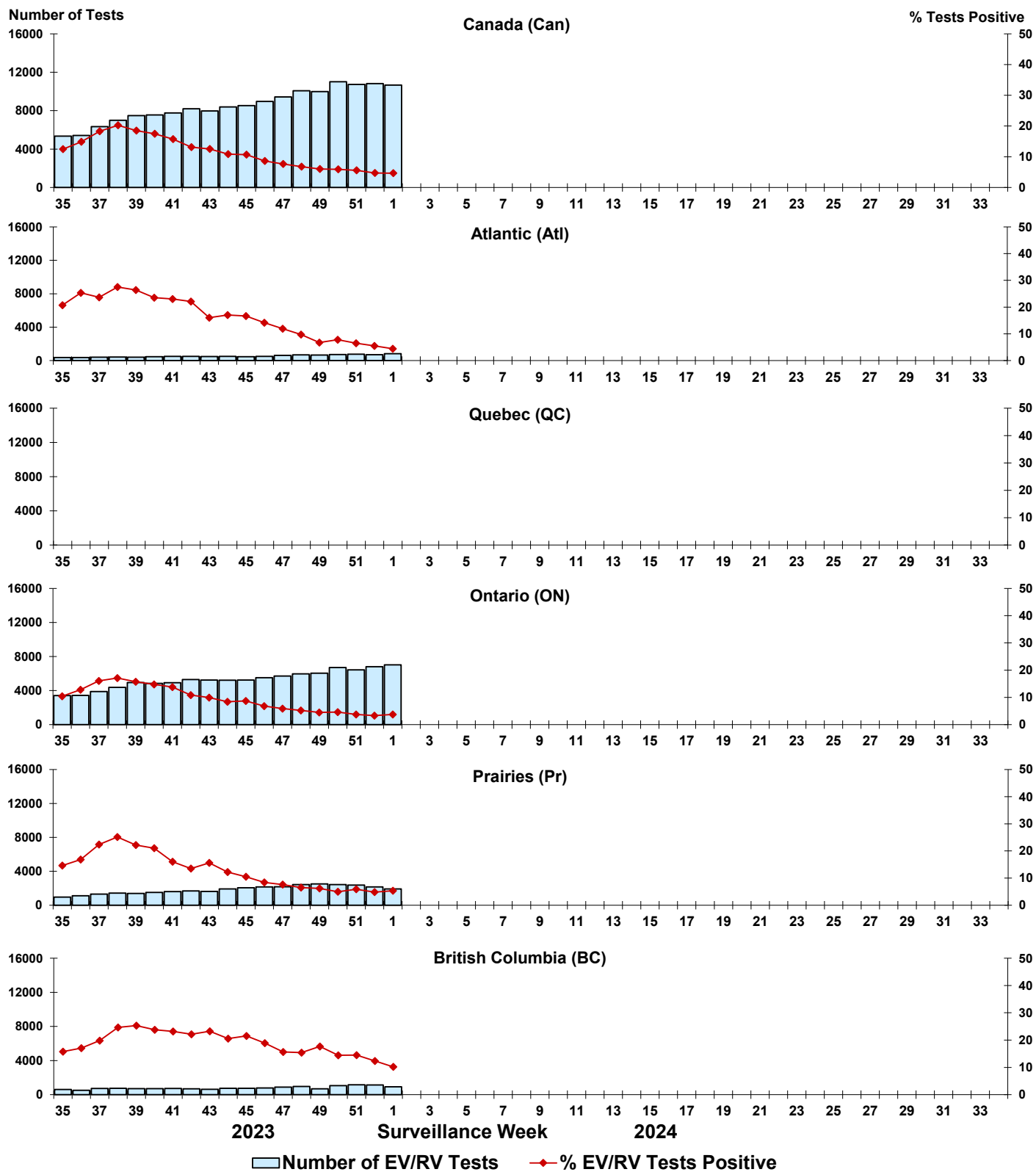


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

