

RESPIRATORY VIRUS DETECTION REPORT

January 22 to January 28, 2023
(Surveillance Week 2023-04)



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 4 (week ending January 28, 2023) in Canada, participating RVDSS laboratories reported 6,791 detections of SARS-CoV-2 from 59,990 tests (11.3% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 7,711 to 28,217 tests), activity of nearly all viruses is stable or decreasing.

- Activity of influenza continues to decrease and remains at inter-seasonal levels. Influenza A accounts for nearly all influenza detections in Canada (249 detections; 0.9% positive).
- Compared to pre-pandemic seasons, RSV activity remains within expected levels typical of this time of year (1,885 detections; 7.9% 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

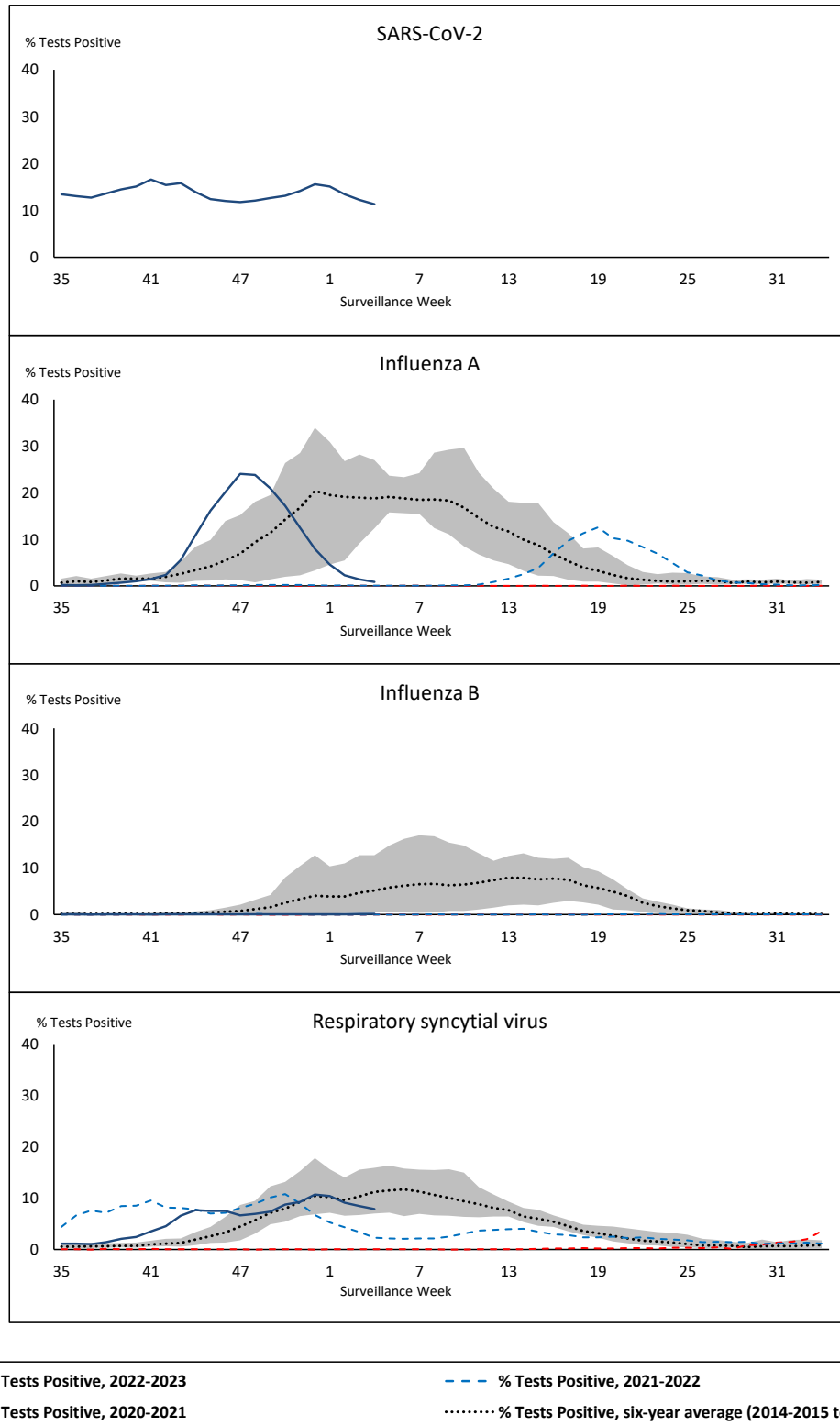
SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2

Terr: Territories of Canada

UHN: University Health Network



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



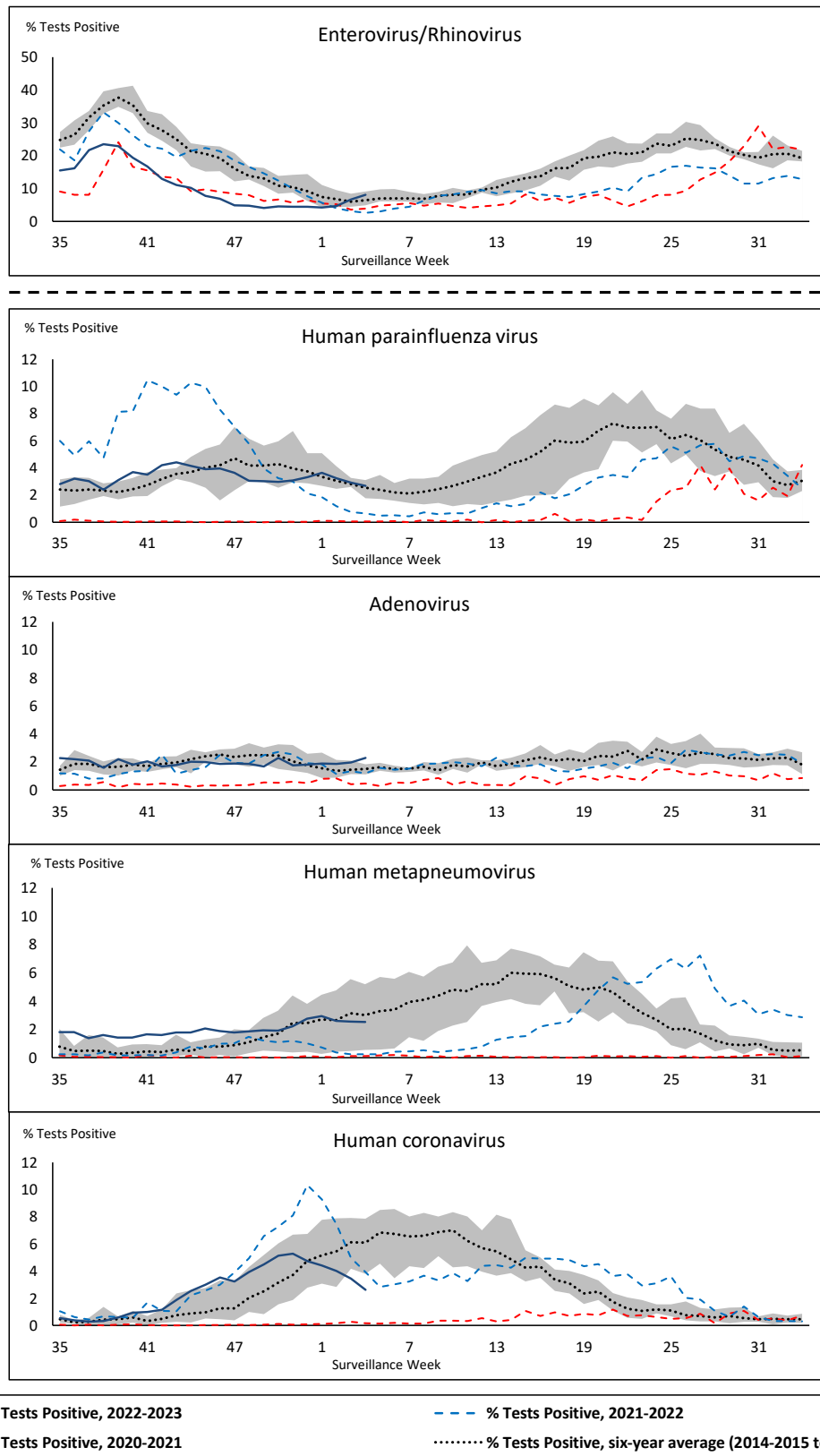
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 28, 2023 (surveillance week 2023-04)

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	703	73	277	0	0	0	0	0	277	20	277	3	0	7	0	0	277	6	277	6	277	14	277	11	
Prince Edward Island	645	71	124	0	2	2	4	0	124	31	17	0	0	0	0	0	17	1	17	0	17	4	17	3	
Nova Scotia	3109	765	1433	0	0	3	3	0	1433	98	31	0	0	0	0	0	31	0	31	1	31	6	31	1	
New Brunswick	2199	280	1350	0	0	7	7	1	1203	86	88	1	0	1	0	0	88	2	88	2	88	22	88	2	
Atlantic	6656	1189	3184	0	2	12	14	1	3037	235	413	4	0	8	0	0	413	9	413	9	413	46	413	17	
Région Nord-Est	1987	136	1689	0	0	22	22	1	416	56	42	0	0	3	0	0	42	4	42	5	N.C.	N.C.	42	4	
Québec-Chaudière-Appalaches	4074	290	745	0	0	11	11	0	720	50	202	1	0	0	0	0	209	21	202	12	N.C.	N.C.	202	2	
Centre-du-Québec	3445	367	427	0	0	9	9	1	335	9	22	0	0	2	0	0	22	4	22	0	N.C.	N.C.	22	1	
Montréal-Laval	4072	443	3266	0	0	39	39	11	1350	45	509	0	0	12	0	0	509	32	509	9	N.C.	N.C.	509	28	
Ouest du Québec	2592	273	807	0	0	4	4	0	776	51	26	0	0	1	0	0	26	7	26	1	N.C.	N.C.	26	4	
Montréal	3295	338	652	0	0	12	12	0	630	33	1	0	0	0	0	0	1	0	1	0	N.C.	N.C.	1	1	
Province of Québec	19465	1847	7586	0	0	97	97	13	4227	244	802	1	0	18	0	0	809	68	802	27	N.C.	N.C.	802	40	
P.H.O.L. - Ottawa	548	119	179	2	2	0	4	0	179	32	112	0	0	0	0	5	112	1	112	0	112	10	112	8	
EOURLA	2184	207	521	0	0	5	5	0	521	32	30	0	0	3	0	0	30	0	30	0	30	4	30	5	
P.H.O.L. - Kingston	692	121	88	0	0	0	0	0	88	10	57	0	0	0	0	0	57	0	57	0	57	1	57	1	
UHN / Mount Sinai Hospital	2464	189	738	0	0	6	6	1	738	11	83	0	0	0	0	0	83	2	83	0	83	3	83	0	
P.H.O.L. - Toronto	951	219	821	4	10	0	4	0	821	51	692	0	0	0	0	27	692	26	692	20	692	72	692	38	
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	2376	176	2376	3	7	4	14	2	2376	52	2354	0	0	0	0	32	2354	28	2389	31	2389	115	2388	13	
P.H.O.L. - Sault Ste. Marie	39	10	29	0	0	1	1	0	29	1	29	0	0	0	0	2	29	0	29	2	29	0	29	3	
P.H.O.L. - Timmins	186	10	21	0	0	0	0	0	21	3	21	0	0	0	0	1	21	0	21	1	21	1	21	2	
St. Joseph's - London	2893	384	761	0	0	1	1	4	761	33	62	0	0	0	0	1	62	1	62	1	62	11	62	0	
P.H.O.L. - London	815	169	386	0	1	1	1	1	386	48	258	0	0	0	0	14	258	0	258	6	258	15	258	3	
P.H.O.L. - Orillia	19	11	58	0	0	0	0	0	58	3	58	0	0	0	0	1	58	1	58	1	58	15	58	2	
P.H.O.L. - Thunder Bay	195	29	33	0	0	0	0	0	33	6	29	0	0	0	0	2	29	0	29	0	29	0	29	0	
P.H.O.L. - Sudbury	26	2	20	0	0	0	0	0	20	3	19	0	0	0	0	0	19	0	19	1	19	5	19	0	
P.H.O.L. - Hamilton	692	215	369	2	1	0	3	2	369	32	258	0	0	0	0	17	258	7	258	4	258	24	258	2	
P.H.O.L. - Peterborough	142	13	37	0	0	0	0	0	37	3	26	0	0	0	0	1	26	0	26	5	26	3	26	0	
St. Joseph's - Hamilton	2723	340	1473	0	0	7	7	2	1473	46	1473	0	0	34	0	0	1473	12	1473	22	1473	94	0	0	
Sault Area Hospital	256	68	112	0	0	0	0	0	112	5	34	1	0	0	0	0	34	0	34	1	34	3	34	1	
Province of Ontario	17201	2282	8022	11	21	25	46	12	8022	371	5595	1	0	37	0	103	5595	78	5630	95	5630	376	4156	78	
Manitoba	2103	221	1324	0	0	7	7	2	1324	76	109	0	0	3	0	0	109	2	127	8	109	7	127	6	
Saskatchewan	5000	216	1200	0	0	7	7	0	990	157	433	0	0	14	0	0	435	18	435	19	435	38	434	7	
Alberta	5008	629	3322	16	6	17	39	10	2834	349	1108	7	1	21	0	0	1107	15	1107	47	1100	97	1108	19	
Prairies	12111	1066	5846	16	6	31	53	12	5148	582	1650	7	1	38	0	0	1651	35	1669	74	1644	142	1669	32	
British Columbia	4305	391	3486	2	5	1	39	3	3335	443	697	3	0	24	1	0	697	20	697	27	671	110	671	36	
Yukon	130	6	22	0	0	0	0	0	22	3	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	19	1	23	0	0	0	0	0	23	6	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	23	3	N.C.	N.C.
Nunavut	103	9	48	0	0	0	0	0	48	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.	
Territories	252	16	93	0	0	0	0	0	93	10	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	23	3	N.C.	N.C.
CANADA	59990	6791	28217	29	34	166	249	41	23862	1885	9157	16	1	125	1	103	9165	210	9211	232	8381	677	7711	203	

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 28, 2023 (surveillance weeks 2022-35 to 2023-04)

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	13178	2654	7280	1	246	665	912	0	7280	269	7280	7	29	61	18	0	7280	151	7280	261	7280	573	7280	266	
Prince Edward Island	25186	6148	2338	1	119	239	359	0	2338	206	987	15	25	74	6	0	987	59	987	12	987	310	987	30	
Nova Scotia	98432	19885	26021	0	4	3604	3608	1	26011	1947	874	4	16	21	3	0	877	35	867	3	877	169	877	24	
New Brunswick	85266	12039	31575	4	132	4399	4535	6	24879	1538	2202	4	20	121	7	0	2202	157	2202	43	2202	423	2147	140	
Atlantic	222062	40726	67214	6	501	8907	9414	7	60508	3960	11343	30	90	277	34	0	11346	402	11336	319	11346	1475	11291	460	
Région Nord-Est	62523	8361	31381	0	2	3559	3561	8	10665	1071	829	7	3	49	0	0	829	44	821	55	N.C.	N.C.	829	41	
Québec-Chaudière-Appalaches	136128	13428	16900	0	0	2774	2774	12	16569	1686	4658	21	5	40	0	0	4928	317	4658	235	N.C.	N.C.	4658	189	
Centre-du-Québec	107606	15365	11434	0	0	1742	1742	15	9816	833	594	13	0	26	2	0	594	50	594	57	N.C.	N.C.	594	27	
Montréal-Laval	148782	19659	59276	0	9	5904	5913	92	32321	2257	14276	123	13	255	10	0	14285	583	14383	619	N.C.	N.C.	13961	419	
Ouest du Québec	82694	11387	14300	0	7	2140	2147	9	12337	1084	733	20	0	54	1	0	732	136	733	41	N.C.	N.C.	734	32	
Montréal	106129	12595	14941	0	0	1624	1624	12	14330	971	82	0	0	2	0	0	82	1	82	4	N.C.	N.C.	82	2	
Province of Québec	643862	80795	148232	0	18	17743	17761	148	96038	7902	21172	184	21	426	13	0	21450	1131	21271	1011	N.C.	N.C.	20858	710	
P.H.O.L. - Ottawa	22110	5644	3208	13	133	65	206	0	3208	258	2310	0	0	0	0	57	2310	8	2310	31	2310	150	2310	74	
EOURLA	63592	6842	10767	0	0	1374	1374	3	10767	1184	848	8	3	35	16	0	848	42	848	25	848	192	848	59	
P.H.O.L. - Kingston	22379	3796	1814	2	88	38	128	1	1813	153	1509	0	0	0	0	66	1510	21	1510	24	1509	162	1510	53	
UHN / Mount Sinai Hospital	68484	5540	13925	4	43	342	389	15	13925	229	934	0	0	4	0	0	901	4	934	0	934	29	934	42	
P.H.O.L. - Toronto	42522	9060	17392	75	2388	141	1087	1	17363	1025	15061	0	0	0	0	626	15064	233	15061	199	15061	119	15061	627	
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	57754	4384	57757	64	1448	716	2228	22	57756	1979	34979	4	0	16	0	423	34992	315	35184	220	35132	998	35024	574	
P.H.O.L. - Sault Ste. Marie	1367	255	436	1	52	15	58	0	436	11	381	0	0	0	0	37	381	1	381	26	381	14	381	12	
P.H.O.L. - Timmins	6995	754	734	0	161	6	156	0	733	66	712	0	0	0	0	41	712	12	712	11	712	48	712	28	
St. Joseph's - London	91690	12036	11119	0	0	868	868	16	11119	902	1264	0	0	0	0	47	1298	41	1298	7	1298	190	886	60	
P.H.O.L. - London	27214	5949	6947	8	580	61	631	4	6946	723	5758	0	0	0	0	305	5759	69	5759	51	5758	398	5759	221	
P.H.O.L. - Orillia	443	230	1715	6	260	23	289	0	1715	212	1656	0	0	0	0	108	1656	33	1656	36	1656	206	1656	85	
P.H.O.L. - Thunder Bay	6856	1456	721	0	107	3	110	0	720	70	631	0	0	0	0	30	631	15	631	8	631	44	631	14	
P.H.O.L. - Sudbury	1663	248	545	1	65	14	67	0	545	56	446	0	0	0	0	20	446	5	446	16	446	28	446	20	
P.H.O.L. - Hamilton	20312	5374	5893	7	299	91	397	6	5890	473	4247	0	0	0	0	186	4249	51	4247	44	4247	347	4247	161	
P.H.O.L. - Peterborough	3395	606	850	0	64	9	73	0	850	90	724	0	0	0	0	26	724	7	724	23	724	100	724	26	
St. Joseph's - Hamilton	66419	10266	27849	0	0	2671	2671	12	27849	2120	27849	0	0	781	0	0	27849	245	27849	173	27849	1875	0	0	
Sault Area Hospital	9955	1682	6390	1	260	255	516	0	6390	70	1841	34	0	43	2	0	1841	35	1841	86	1841	190	1841	40	
Province of Ontario	513150	74122	168062	182	5948	6692	11248	80	168025	9621	101150	46	3	879	18	1972	101171	1137	101391	980	101337	6122	72970	2096	
Manitoba	49260	8992	24048	16	196	1745	1957	2	24048	1318	3680	2	4	132	6	0	3670	109	3789	154	3680	563	3789	143	
Saskatchewan	128124	10487	28184	0	0	3871	3871	8	21456	1480	9301	29	39	426	8	0	9305	220	9307	499	9305	807	9302	340	
Alberta	167184	27450	82078	854	7262	2681	10797	46	70285	6411	28638	156	62	596	32	0	28627	330	28595	642	28175	2505	28638	856	
Prairies	344568	46929	134310	870	7458	8297	16625	56	115789	9209	41619	187	105	1154	46	0	41602	659	41691	1295	41160	3875	41729	1339	
British Columbia	176501	17371	84056	326	4318	297	8693	47	78217	6065	17885	141	159	644	119	6	17873	397	17873	389	17357	2635	17354	691	
Yukon	4036	276	534	2	136	0	138	0	531	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.	
Northwest Territories	1242	150	1141	2	147	1	150	0	1141	63	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1141	234	N.C.	N.C.
Nunavut	3172	306	1629	3	230	3	236	0	1629	40	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	8450	732	3304	7	513	4	524	0	3301	119	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1141	234	N.C.	N.C.	
CANADA	1908593	260675	605178	1391	18756	41940	64265	338	521878	36876	193169	588	378	3380	230	1978	193442	3726	193562	3994	172341	14341	164202	5296	

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.

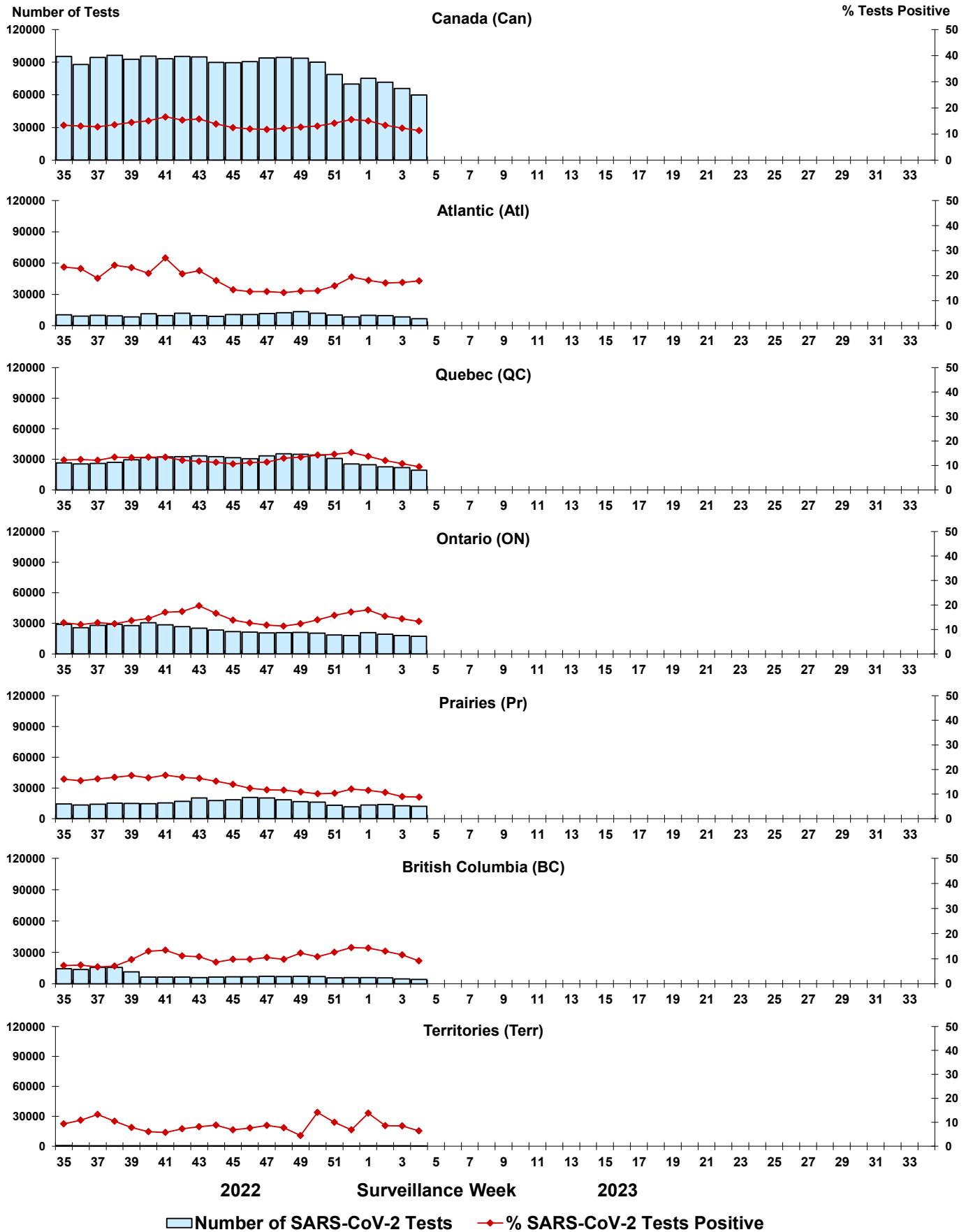
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Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests positive.

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

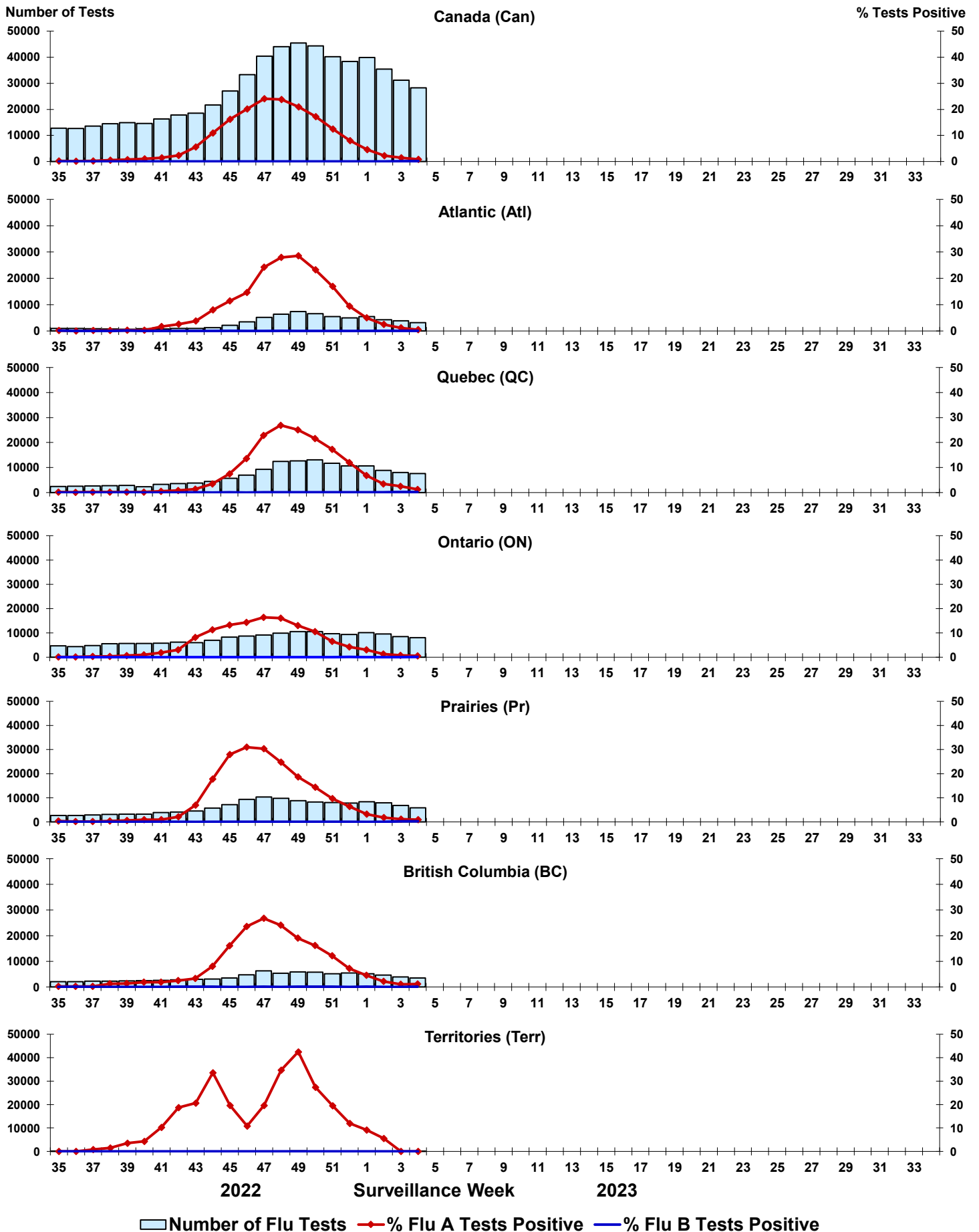


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

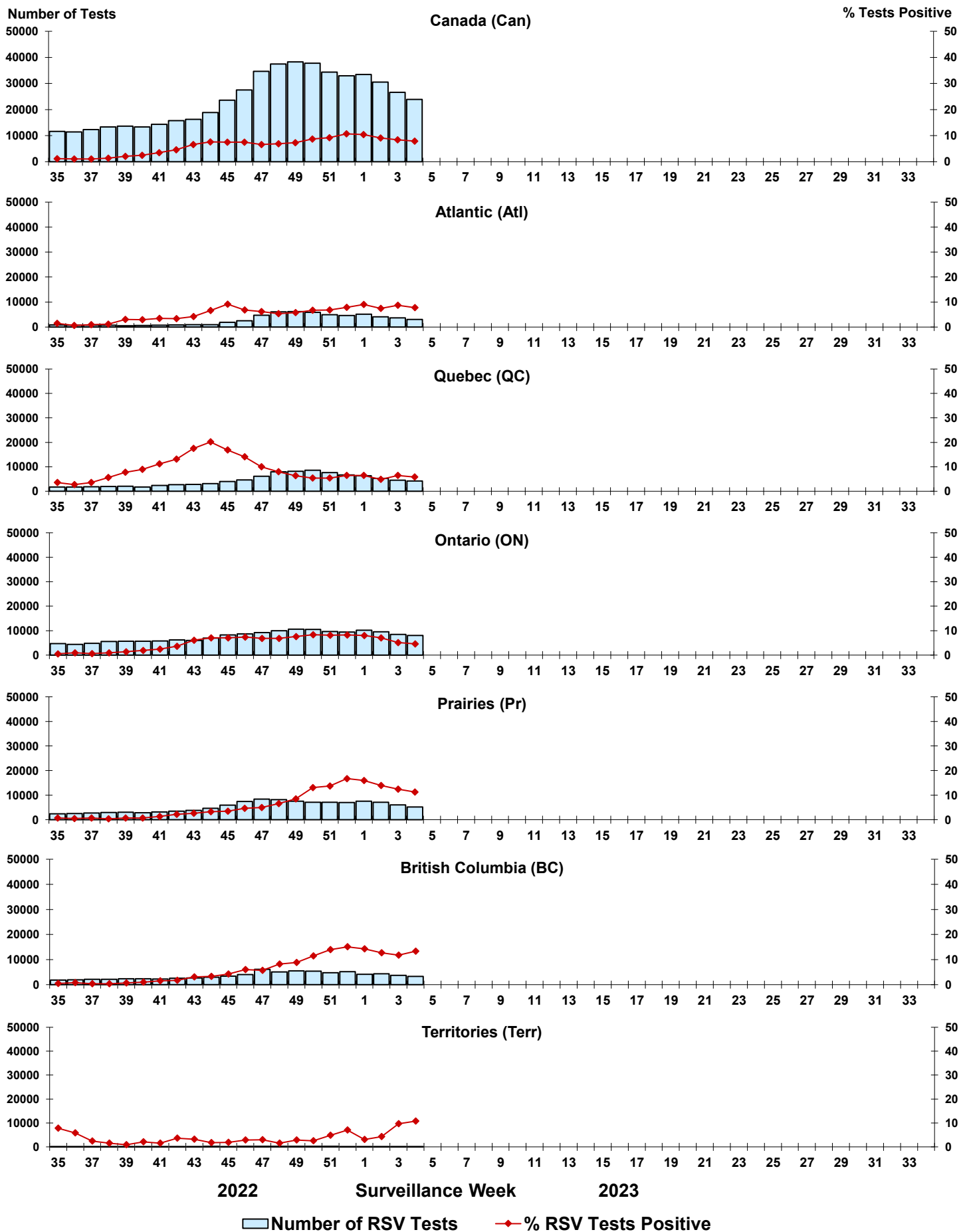


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

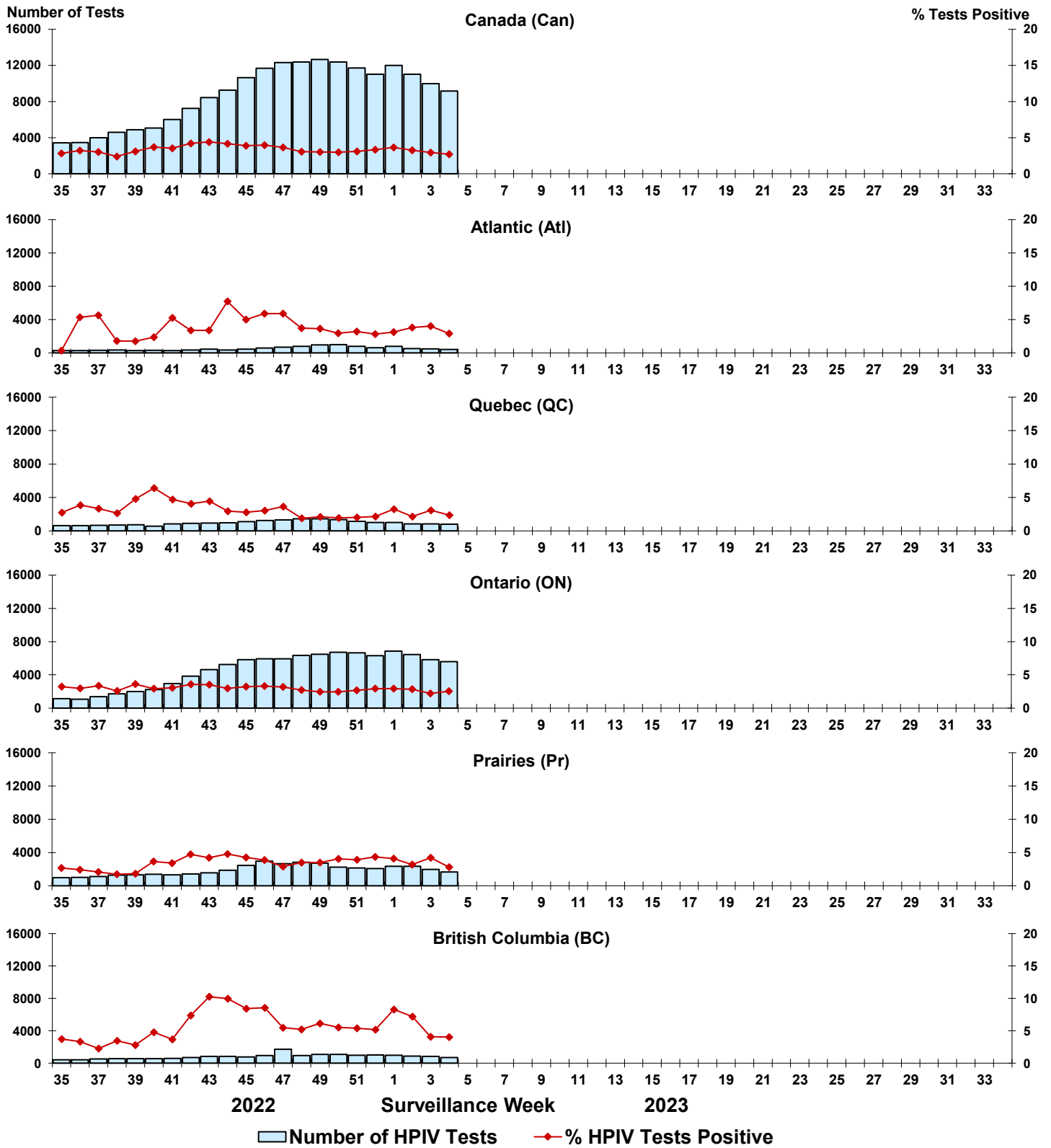


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

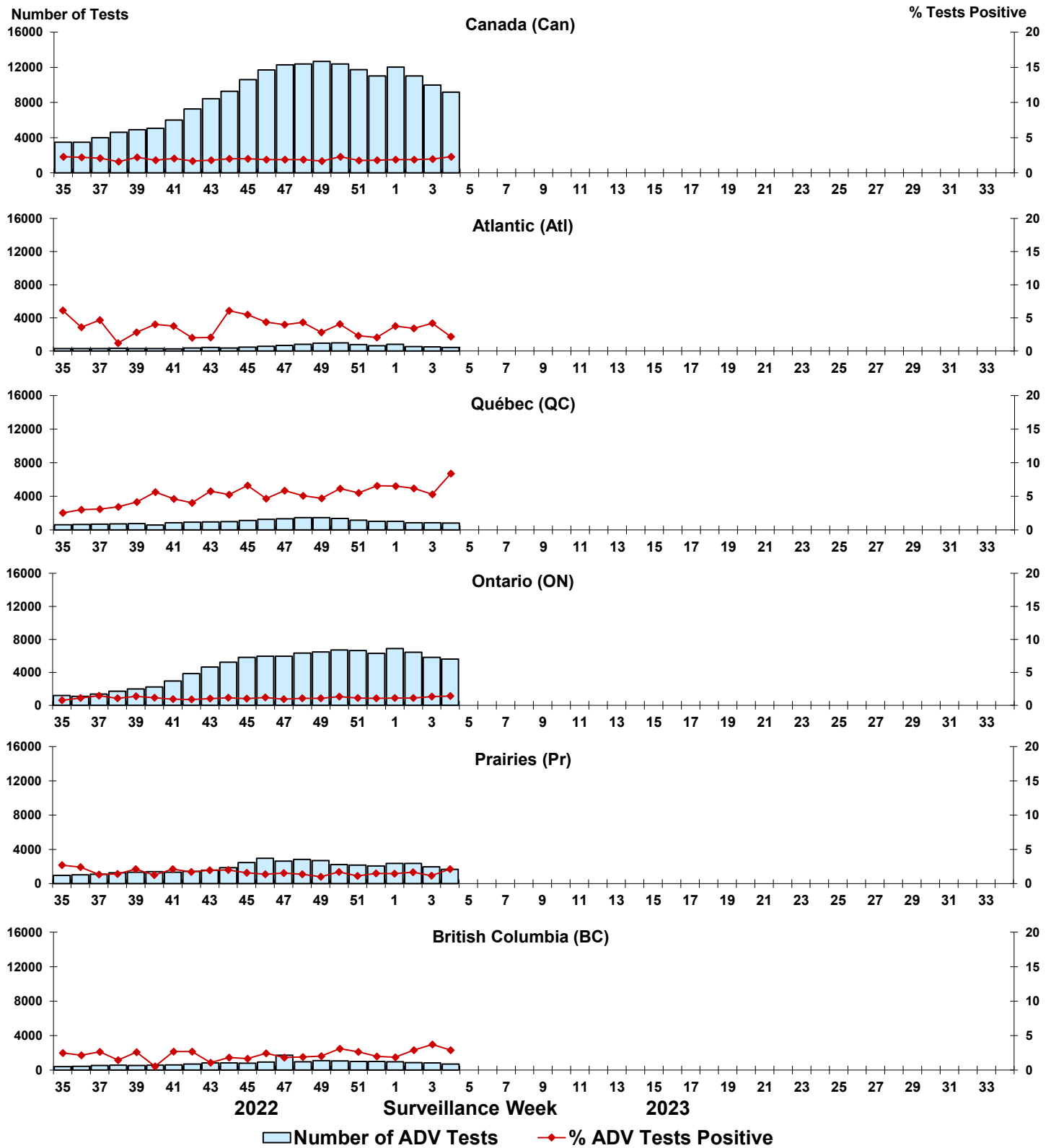


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

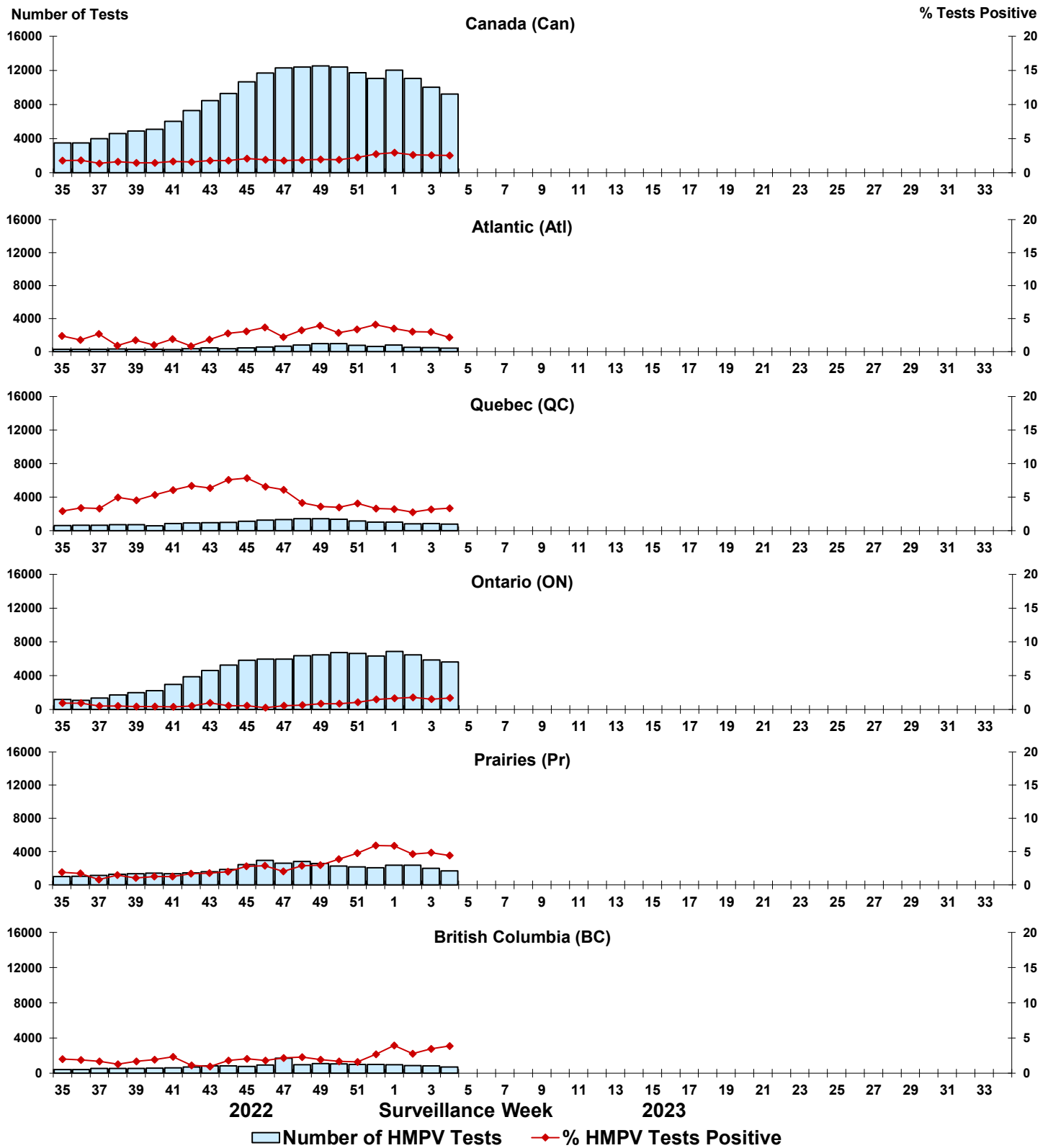


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

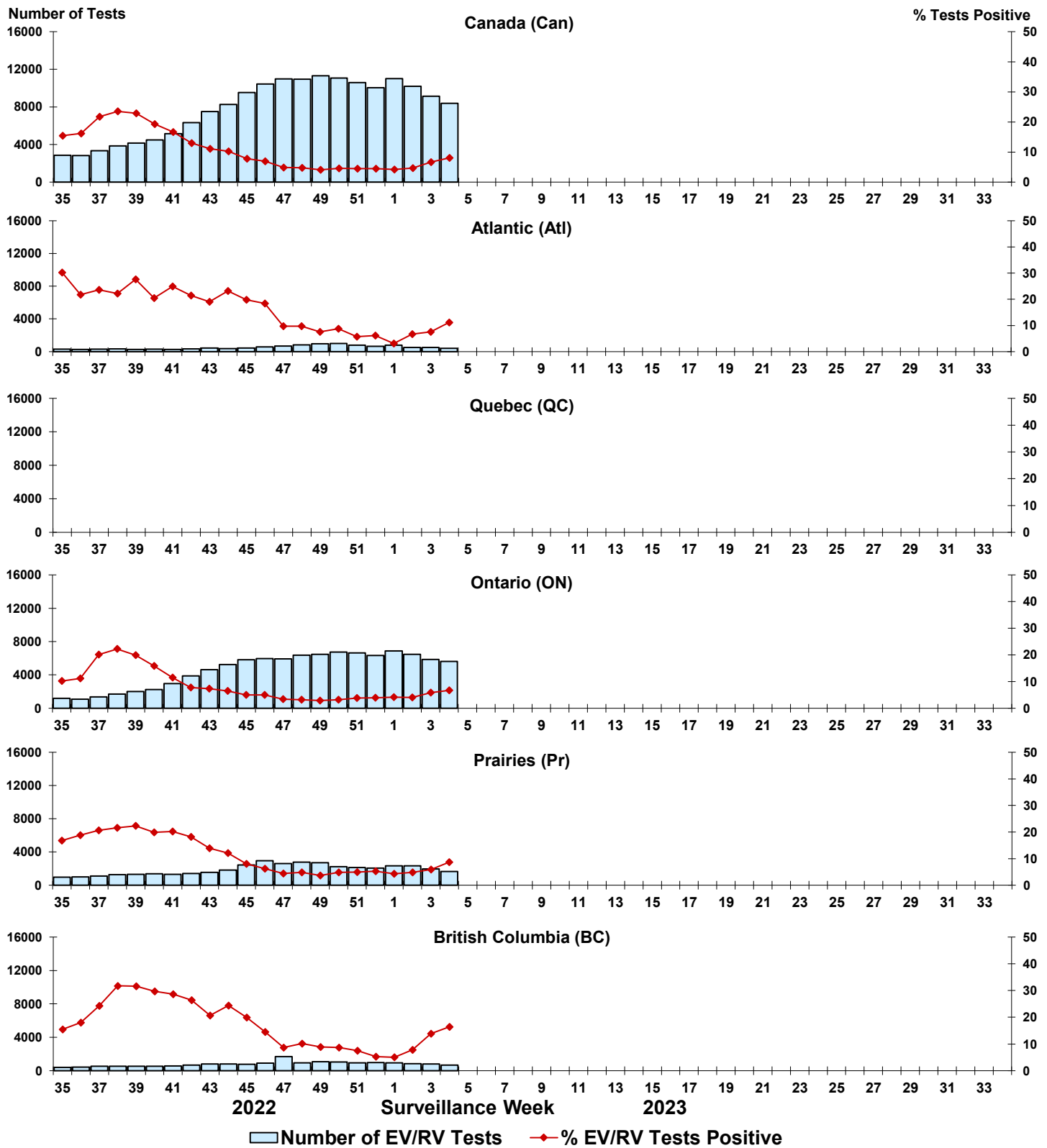


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

