

RESPIRATORY VIRUS DETECTION REPORT

March 26 to April 1, 2023
(Surveillance Week 2023-13)



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 13 (week ending April 1, 2023) in Canada, participating RVDSS laboratories reported 4,862 detections of SARS-CoV-2 from 45,138 tests (10.8% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 6,490 to 20,931 tests), activity of nearly all viruses is within or below expected levels.

- Activity of influenza remains low at inter-seasonal levels.
 - Influenza B activity has increased in recent weeks but remains slightly below expected levels (364 detections; 1.7% positive). Influenza A activity is lower and far below expected levels (146 detections; 0.7% positive).
- Activity of all other non-SARS-CoV-2 respiratory viruses is near or below 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

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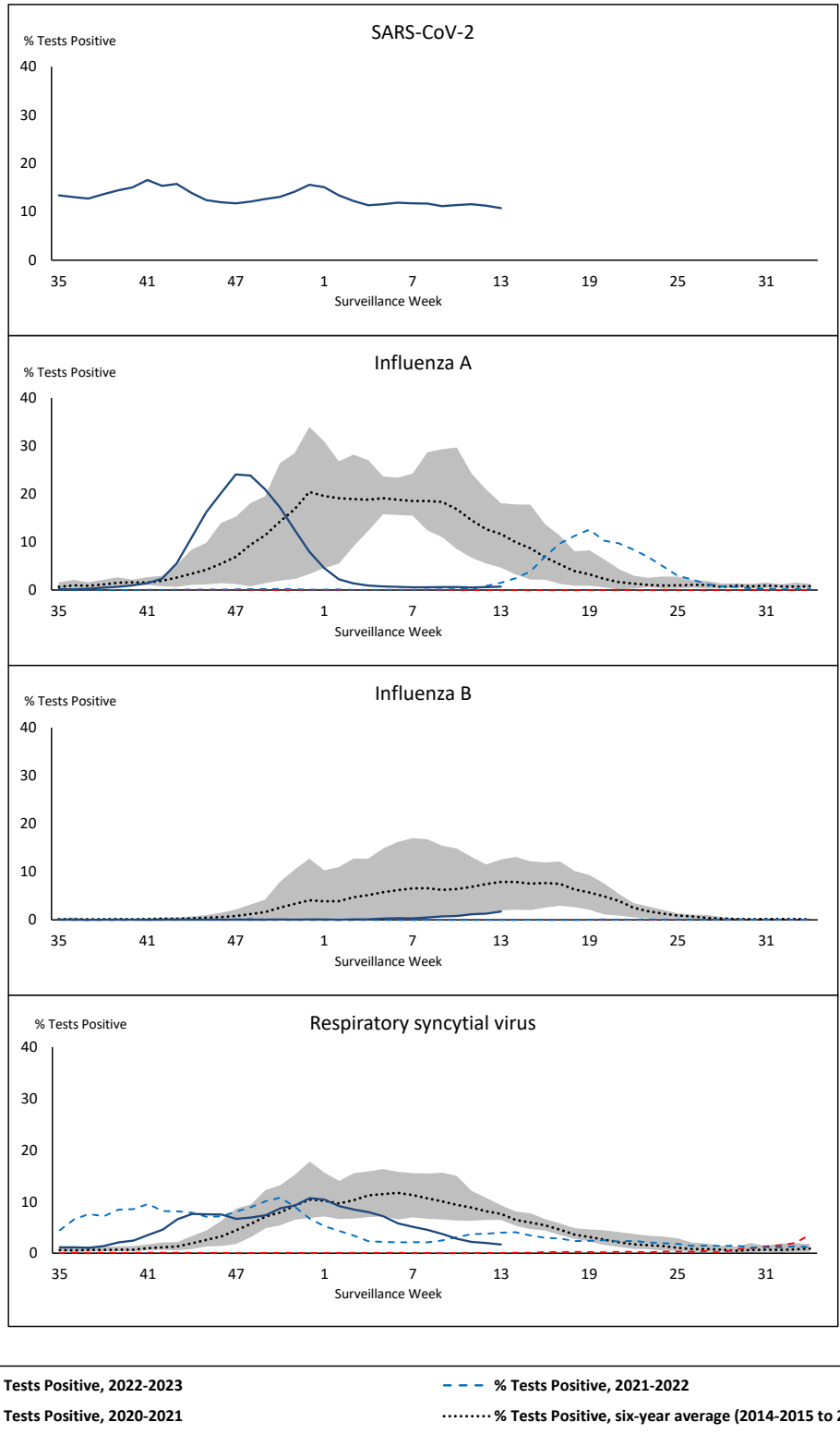


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Figure 1: Positive severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), influenza, and respiratory syncytial virus tests (%) reported by participating laboratories in Canada by surveillance week compared to average and range from 2014-2015 to 2019-2020 season



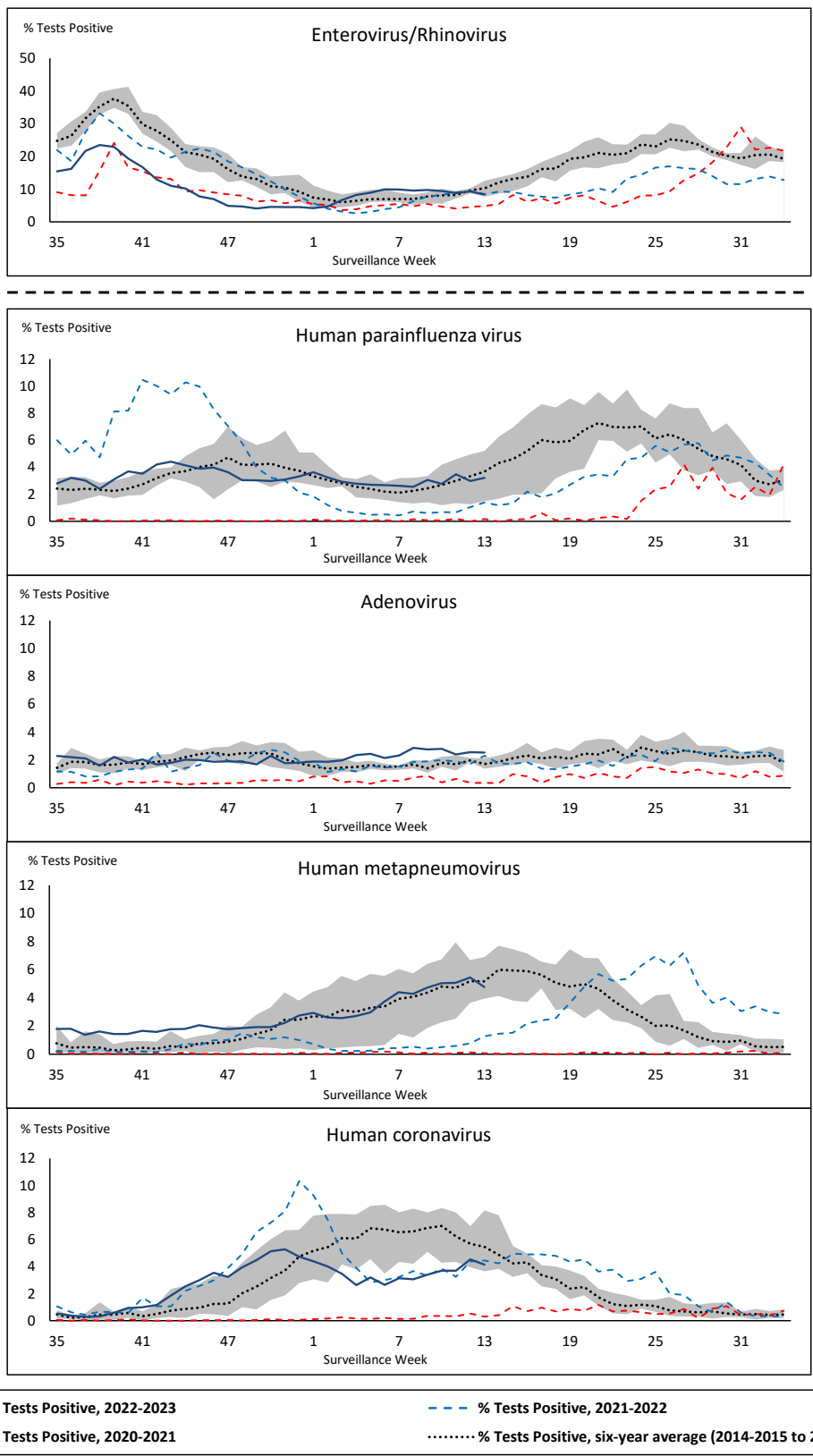
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 April 1, 2023 (surveillance week 2023-13)

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	571	86	348	0	0	1	1	0	348	21	348	3	0	24	7	0	348	6	348	6	348	34	348	12	
Prince Edward Island	679	143	140	0	0	1	1	0	140	8	12	0	0	0	0	0	12	1	12	1	12	3	12	1	
Nova Scotia	1953	325	963	0	0	0	0	1	963	14	26	0	0	0	0	0	26	1	26	2	26	2	26	3	
New Brunswick	1138	161	984	0	0	9	9	4	918	14	81	2	0	1	0	0	81	5	81	5	81	16	81	4	
Atlantic	4341	715	2435	0	0	11	11	5	2369	57	467	5	0	25	7	0	467	13	467	14	467	55	467	20	
Région Nord-Est	2088	214	1136	0	0	27	27	3	361	13	30	1	0	1	0	0	30	7	30	2	N.C.	N.C.	30	6	
Québec-Chaudière-Appalaches	3200	223	593	0	0	4	4	18	567	8	160	0	0	4	0	0	176	26	160	9	N.C.	N.C.	160	16	
Centre-du-Québec	2924	349	59	0	0	1	1	0	58	2	24	0	0	1	0	0	24	3	24	1	N.C.	N.C.	24	2	
Montréal-Laval	4029	355	2160	0	0	10	10	143	1222	18	293	1	0	12	1	0	293	14	298	3	N.C.	N.C.	293	15	
Ouest du Québec	1953	168	539	0	0	1	1	13	527	13	21	0	0	0	1	0	21	3	21	0	N.C.	N.C.	21	3	
Montérégie	2953	305	590	0	0	49	49	11	588	9	4	0	0	0	0	0	4	0	4	0	N.C.	N.C.	4	0	
Province of Québec	17147	1614	5077	0	0	92	92	188	3323	63	532	2	0	18	2	0	548	53	537	15	N.C.	N.C.	532	42	
P.H.O.L. - Ottawa	464	62	171	0	0	0	0	0	171	0	100	0	0	0	0	2	100	1	100	5	100	8	100	12	
EORLA	1696	123	394	0	0	0	0	5	394	6	40	0	0	1	0	0	40	0	40	3	40	8	40	5	
P.H.O.L. - Kingston	480	69	78	0	0	0	0	1	78	0	73	0	0	0	0	0	73	0	73	7	73	15	73	2	
UHN / Mount Sinai Hospital	1795	90	574	0	0	1	1	4	574	2	108	0	0	1	0	0	108	0	108	1	108	7	108	1	
P.H.O.L. - Toronto	493	87	760	0	7	2	5	7	760	15	714	0	0	0	0	23	714	25	714	65	714	82	714	55	
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	1865	95	1865	5	2	1	8	39	1865	4	1870	0	0	0	0	17	1870	20	1871	66	1871	62	1871	30	
P.H.O.L. - Sault Ste. Marie	14	2	15	0	0	0	0	0	15	1	14	0	0	0	0	0	14	0	14	0	14	2	14	3	
P.H.O.L. - Timmins	173	7	17	0	0	0	0	0	17	1	10	0	0	0	0	0	10	0	10	1	10	3	10	0	
St. Joseph's - London	2188	208	687	0	0	1	1	3	687	6	69	0	0	0	0	2	69	5	69	8	69	8	69	4	
P.H.O.L. - London	859	107	266	2	1	1	4	0	266	1	229	0	0	0	0	18	229	3	229	21	229	38	229	8	
P.H.O.L. - Orillia	8	2	42	0	0	0	0	1	42	1	42	0	0	0	0	2	42	3	42	1	42	6	42	4	
P.H.O.L. - Thunder Bay	122	31	31	0	0	0	0	0	31	0	29	0	0	0	0	3	29	0	29	4	29	12	29	3	
P.H.O.L. - Sudbury	28	1	19	0	0	0	0	0	19	3	19	0	0	0	0	0	19	0	19	5	19	1	19	2	
P.H.O.L. - Hamilton	435	135	302	0	0	0	0	2	302	7	221	0	0	0	0	7	221	5	221	25	221	23	221	9	
P.H.O.L. - Peterborough	78	25	27	0	0	0	0	0	27	0	23	0	0	0	0	1	23	0	23	0	23	9	23	0	
St. Joseph's - Hamilton	2216	234	1426	0	0	7	7	29	1426	7	1426	0	0	18	0	0	1426	23	1426	47	1426	68	0	0	
Sault Area Hospital	151	21	151	0	0	0	0	1	151	6	73	0	1	0	0	0	73	1	73	2	73	9	73	4	
Province of Ontario	13065	1299	6825	7	10	13	26	92	6825	60	5060	0	1	20	0	75	5060	86	5061	261	5061	361	3635	142	
Manitoba	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.	
Saskatchewan	2323	243	692	0	0	0	0	5	636	12	264	8	0	5	2	0	264	7	264	6	264	35	264	16	
Alberta	4409	396	2712	5	0	5	10	44	2514	29	1020	9	1	25	7	0	1020	13	1019	37	1012	89	1020	32	
Prairies	6732	639	3404	5	0	5	10	49	3150	41	1284	17	1	30	9	0	1284	20	1283	43	1276	124	1284	48	
British Columbia	3676	583	3071	1	1	1	7	19	2890	84	594	9	3	31	0	0	594	29	594	47	572	74	572	17	
Yukon	53	3	26	0	0	0	0	1	26	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	17	0	17	0	0	0	0	0	17	0	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	17	3	N.C.	N.C.
Nunavut	107	9	76	0	0	0	0	10	76	7	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	177	12	119	0	0	0	0	11	119	8	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	17	3	N.C.	N.C.	
CANADA	45138	4862	20931	13	11	122	146	364	18676	313	7937	33	5	124	18	75	7953	201	7942	380	7393	617	6490	269	

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 April 1, 2023 (surveillance weeks 2022-35 to 2023-13)

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	17936	3370	10147	1	246	671	918	4	10147	451	10147	33	30	267	42	0	10147	204	10147	334	10147	826	10147	380	
Prince Edward Island	30858	6981	3532	1	119	246	366	2	3532	364	1094	16	25	78	6	0	1094	67	1094	36	1094	329	1094	32	
Nova Scotia	118974	23624	36101	0	4	3614	3618	6	36091	2349	1147	5	16	28	3	0	1153	42	1143	36	1153	213	1153	48	
New Brunswick	101058	15022	43493	12	133	4433	4578	14	35552	2016	3085	9	24	140	7	0	3085	218	3085	149	3085	558	3030	191	
Atlantic	268826	48997	93273	14	502	8964	9480	26	85322	5180	15473	63	95	513	58	0	15479	531	15469	555	15479	1926	15424	651	
Région Nord-Est	79962	10002	44602	0	4	3780	3784	38	14259	1335	1198	16	4	72	0	0	1199	94	1190	80	N.C.	N.C.	1199	86	
Québec-Chaudière-Appalaches	171182	16709	22387	0	0	2831	2831	46	21792	1863	6205	22	5	70	2	0	6609	523	6205	313	N.C.	N.C.	6205	302	
Centre-du-Québec	135577	18915	13893	0	0	1758	1758	31	12159	928	856	13	0	39	2	0	856	97	856	66	N.C.	N.C.	856	62	
Montréal-Laval	187932	23834	84674	0	9	6143	6152	710	45481	2600	18629	127	17	391	14	0	18638	829	18762	693	N.C.	N.C.	18314	677	
Ouest du Québec	104273	13769	20349	0	7	2182	2189	65	18161	1282	922	20	0	63	2	0	921	175	922	55	N.C.	N.C.	923	54	
Montérégie	131072	15270	22057	0	0	1729	1729	63	20817	1112	124	0	0	2	0	0	124	4	124	6	N.C.	N.C.	124	3	
Province of Québec	809998	98499	207962	0	20	18423	18443	953	132669	9120	27934	198	26	637	20	0	28347	1722	28059	1213	N.C.	N.C.	27621	1184	
P.H.O.L. - Ottawa	27366	6842	4943	17	136	66	214	1	4943	351	3439	0	0	0	0	73	3439	15	3439	99	3439	308	3439	148	
EOURLA	80099	8182	14335	0	0	1395	1395	14	14335	1276	1167	9	3	47	16	0	1167	51	1167	54	1167	264	1167	79	
P.H.O.L. - Kingston	27775	4635	2577	2	92	38	132	2	2576	177	2094	0	0	0	0	79	2095	27	2095	54	2094	272	2095	69	
UHN / Mount Sinai Hospital	87926	6677	19908	6	43	347	396	33	19908	294	1921	0	2	16	1	0	1888	6	1921	15	1921	65	1921	77	
P.H.O.L. - Toronto	48920	10438	24249	103	2408	146	1116	23	24219	1294	21222	0	0	0	0	820	21226	391	21222	605	21222	1898	21222	973	
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	0
Shared Hospital Laboratory	76015	5470	76016	107	1467	724	2298	162	76017	2184	53254	4	0	16	0	568	53267	515	53522	742	53470	1781	53362	844	
P.H.O.L. - Sault Ste. Marie	1665	327	640	1	52	15	58	0	640	24	571	0	0	0	0	51	571	4	571	30	571	37	571	43	
P.H.O.L. - Timmins	8656	828	949	0	161	6	156	0	947	97	897	0	0	0	0	51	897	12	897	20	897	81	897	37	
St. Joseph's - London	115805	14618	17742	0	0	884	884	41	17742	1005	1846	0	0	0	0	64	1880	67	1880	49	1880	271	1468	84	
P.H.O.L. - London	34633	7417	10045	13	585	63	643	12	10044	873	8003	0	0	0	0	381	8004	103	8004	161	8003	750	8004	279	
P.H.O.L. - Orillia	540	252	2147	6	261	23	290	6	2147	227	2074	0	0	0	0	119	2074	45	2074	66	2074	295	2074	98	
P.H.O.L. - Thunder Bay	8087	1646	970	0	107	3	110	0	969	96	858	0	0	0	0	36	858	17	858	23	858	96	859	30	
P.H.O.L. - Sudbury	1969	298	728	1	65	14	67	0	728	73	618	0	0	0	0	28	618	7	618	38	618	35	618	25	
P.H.O.L. - Hamilton	24305	6545	8263	7	300	92	399	21	8260	537	5986	0	0	0	0	226	5988	105	5986	160	5986	563	5986	237	
P.H.O.L. - Peterborough	4763	937	1260	0	67	11	78	2	1260	113	979	0	0	0	0	32	979	12	979	35	979	140	979	35	
St. Joseph's - Hamilton	88642	12918	40528	0	0	2714	2714	160	40528	2258	40528	0	0	937	0	0	40528	458	40528	672	40528	2691	0	0	
Sault Area Hospital	11820	2065	7736	1	262	258	521	1	7736	151	2408	35	4	59	4	0	2408	41	2408	94	2408	228	2408	69	
Province of Ontario	648986	90095	233036	264	6006	6799	11471	478	232999	11030	147865	48	9	1075	21	2528	147887	1876	148169	2917	148115	9775	107070	3127	
Manitoba	60868	10439	33892	16	202	1773	1991	8	33892	1696	4642	12	11	161	6	0	4632	121	4823	193	4642	665	4823	193	
Saskatchewan	154840	12498	36793	2	41	3860	3903	27	29199	2164	12162	61	54	512	13	0	12165	305	12167	624	12165	1185	12160	432	
Alberta	211255	31449	112323	963	7292	2802	11057	328	98312	7584	39203	267	82	852	57	0	39189	510	39144	1145	38531	3529	39203	1060	
Prairies	426963	54386	183008	981	7535	8435	16951	363	161403	11444	56007	340	147	1525	76	0	55986	936	56134	1962	55338	5379	56186	1685	
British Columbia	212855	21683	114912	380	4351	303	8852	207	107616	7983	24570	180	179	942	149	6	24558	657	24558	887	23794	3693	23791	943	
Yukon	4872	368	781	2	136	0	138	8	779	53	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.
Northwest Territories	1518	180	1376	2	147	1	150	1	1376	97	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1376	278	N.C.	N.C.
Nunavut	4035	376	2103	3	230	3	236	33	2103	86	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	10425	924	4260	7	513	4	524	42	4258	236	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1376	278	N.C.	N.C.
CANADA	2378053	314584	836451	1646	18927	42928	65721	2069	724267	44993	271849	829	456	4692	324	2534	272257	5722	272389	7534	244102	21051	230092	7590	

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.

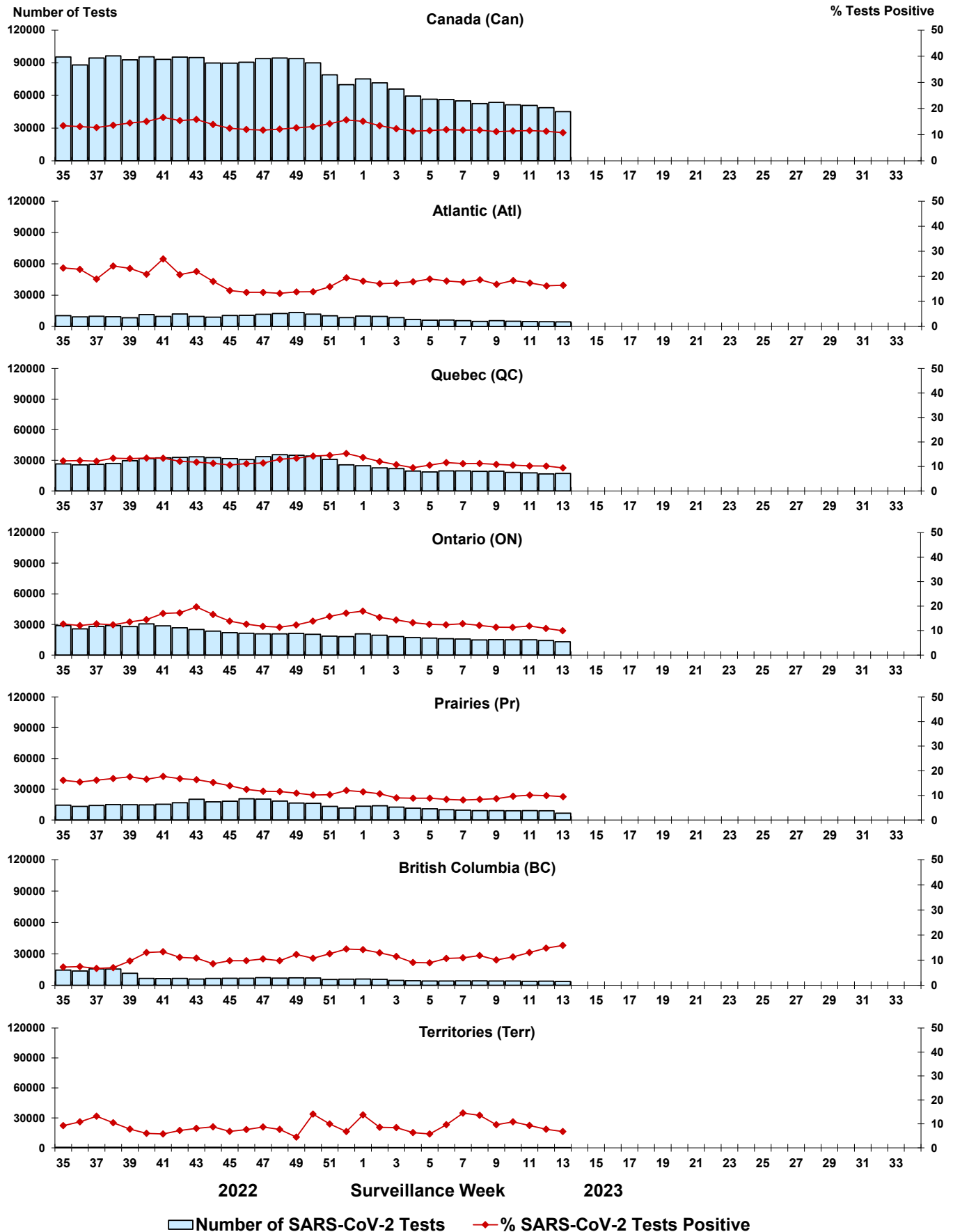
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Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests

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

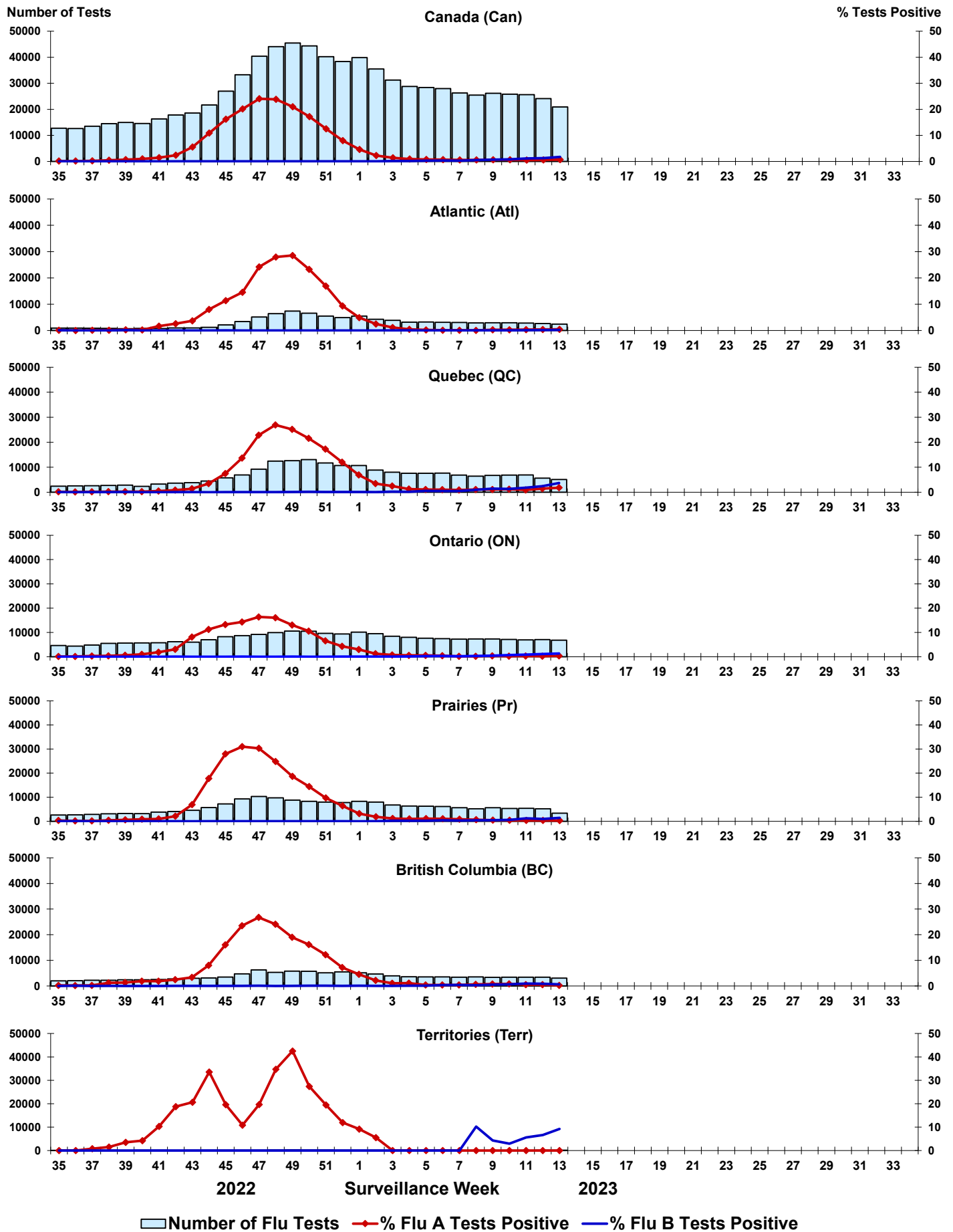


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

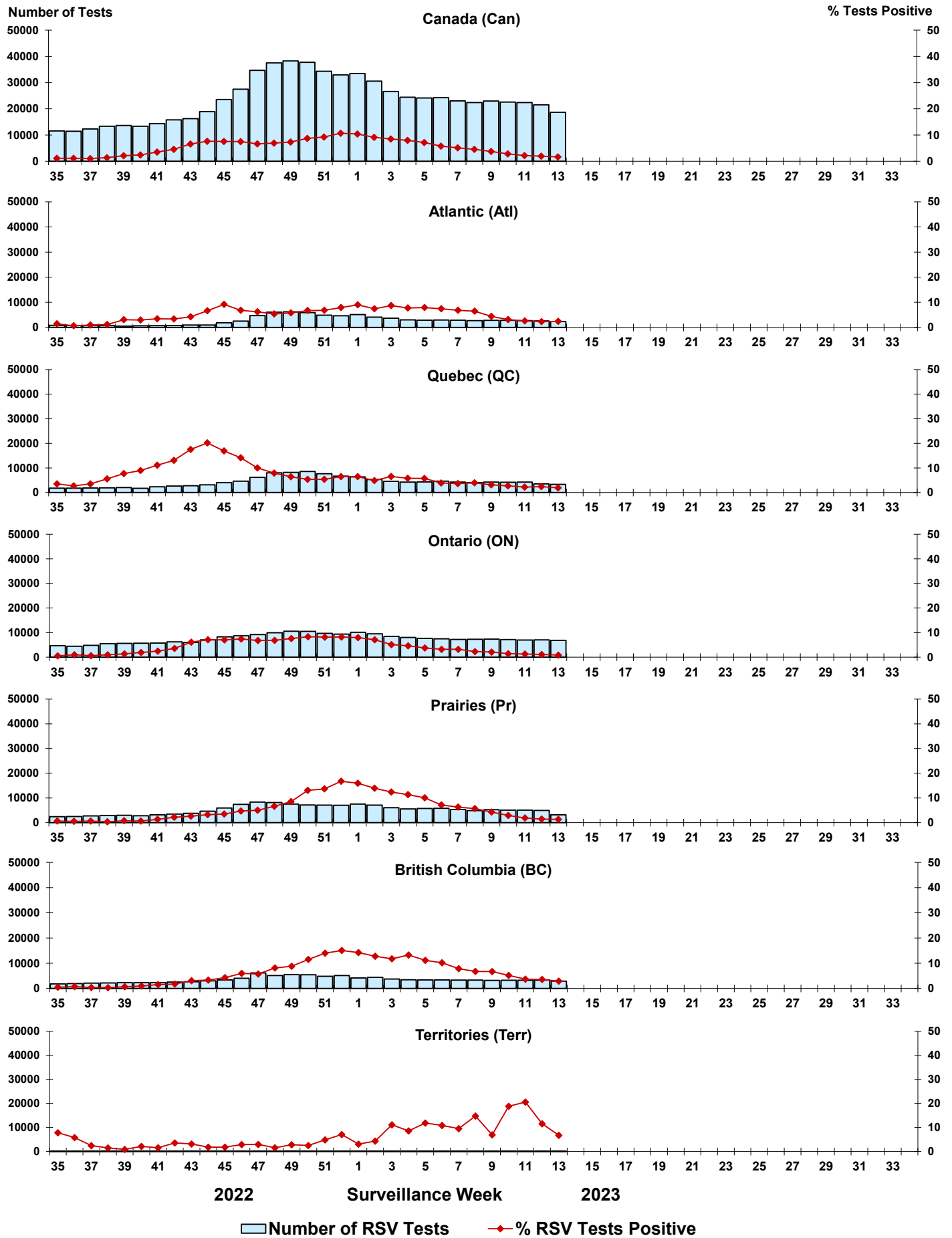


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

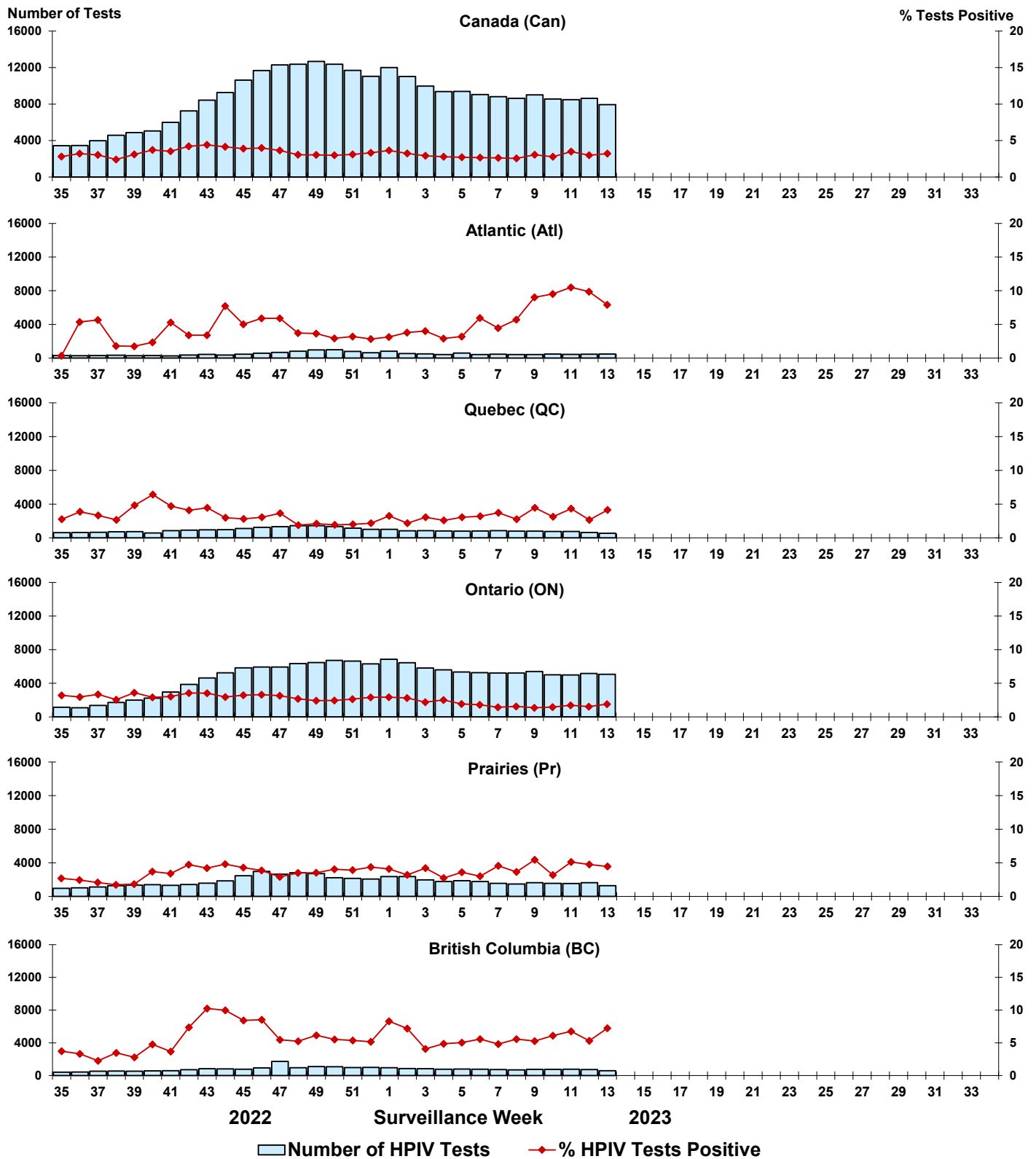


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

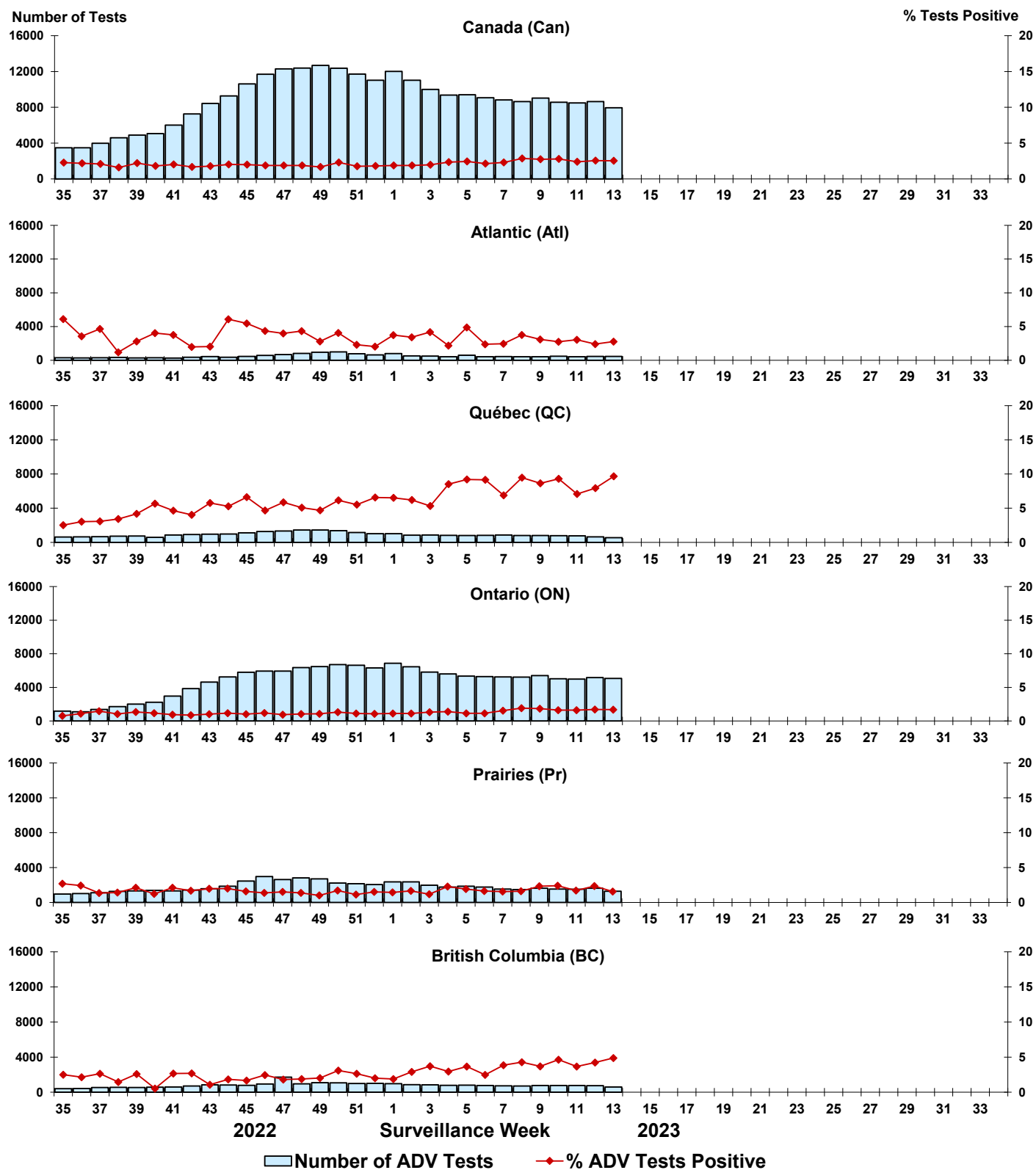


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

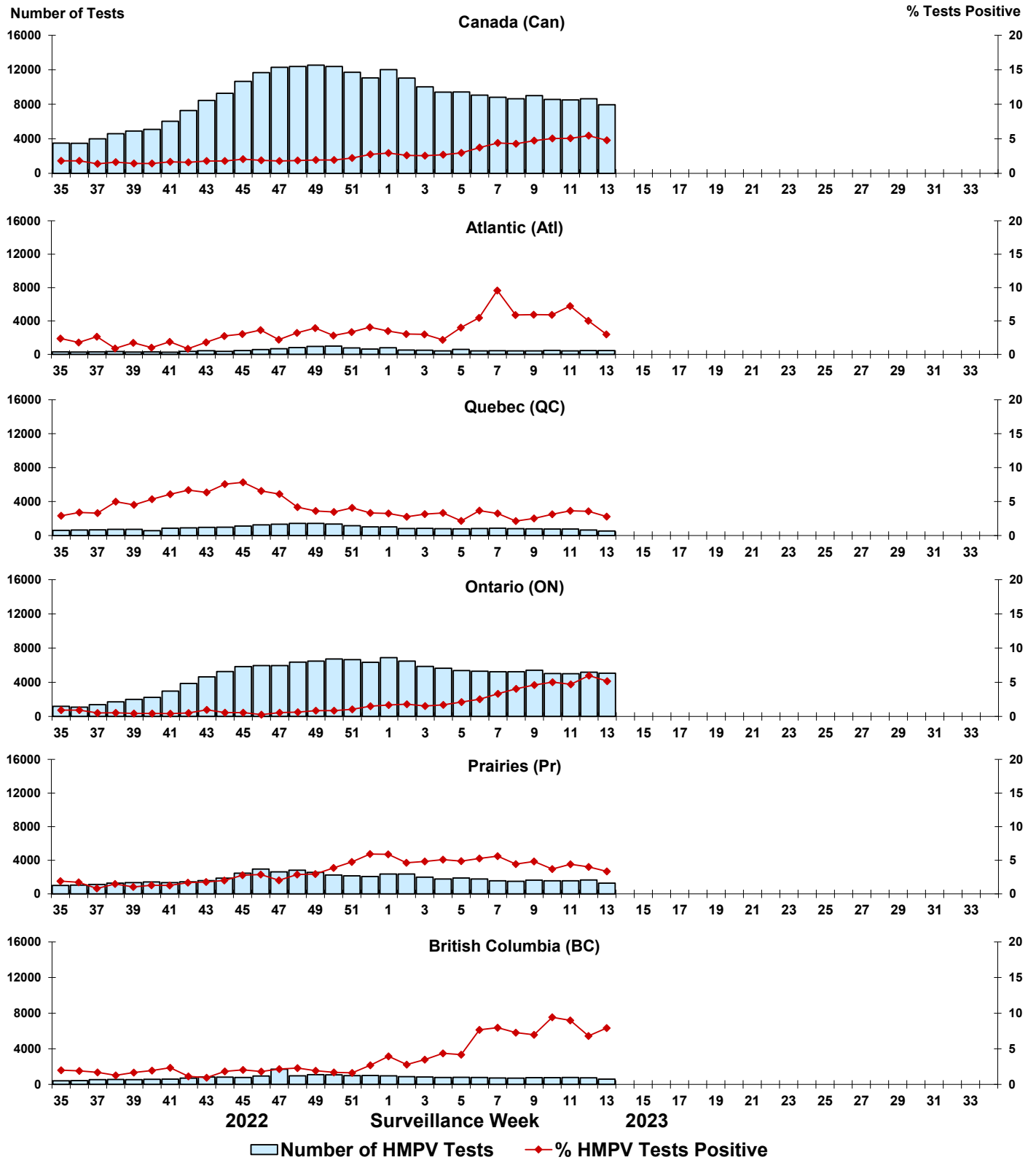


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

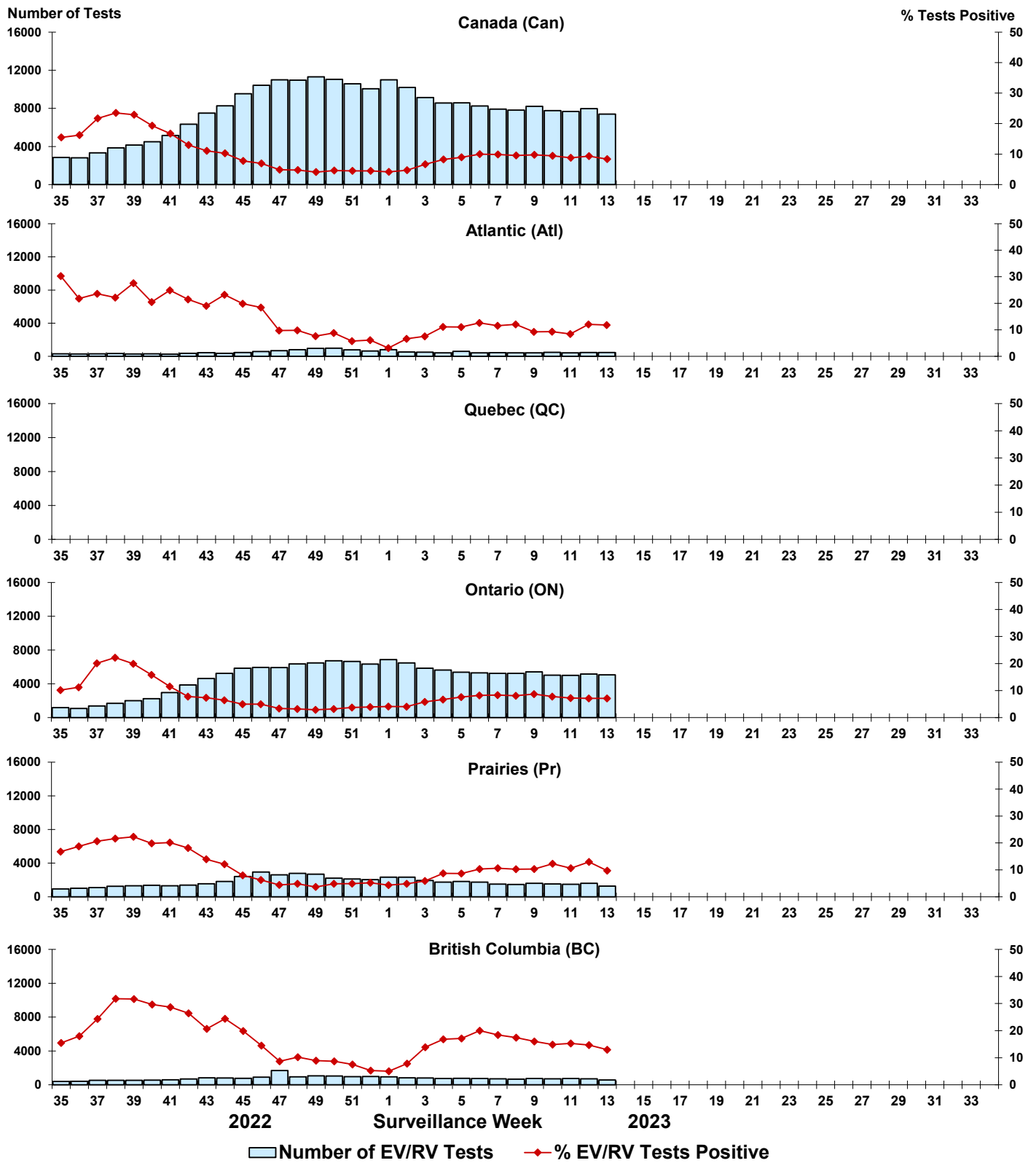


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

