

RESPIRATORY VIRUS DETECTION REPORT

February 26 to March 4, 2023
(Surveillance Week 2023-09)



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 9 (week ending March 4, 2023) in Canada, participating RVDSS laboratories reported 5,955 detections of SARS-CoV-2 from 53,205 tests (11.2% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 7,417 to 25,245 tests), activity of nearly all viruses is within or below expected levels.

- Activity of influenza remains low and stable at inter-seasonal levels. Influenza A and B are circulating at similar levels [influenza A (153 detections; 0.6% positive) and influenza B (173 detections; 0.7% 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

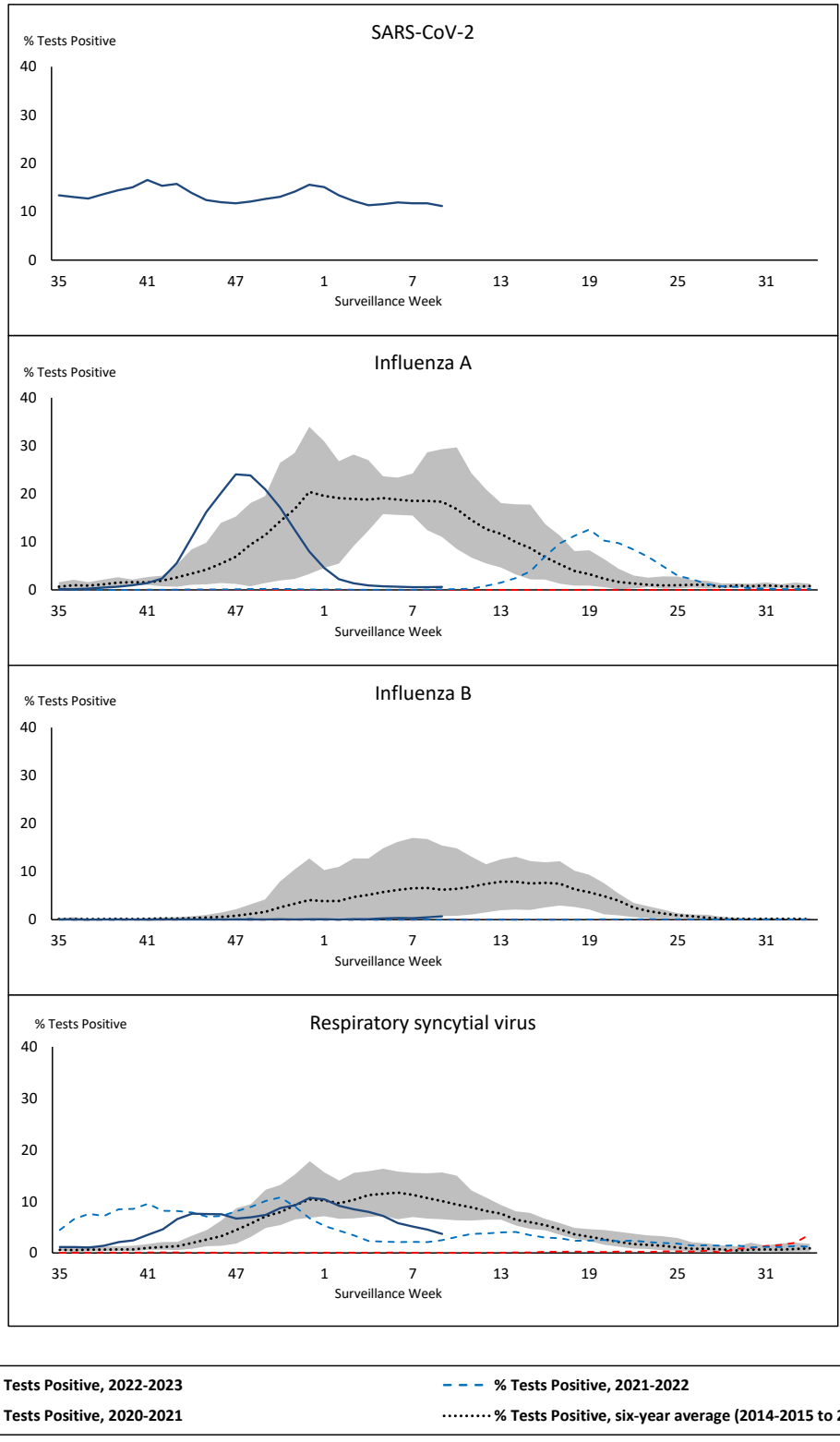
SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2

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



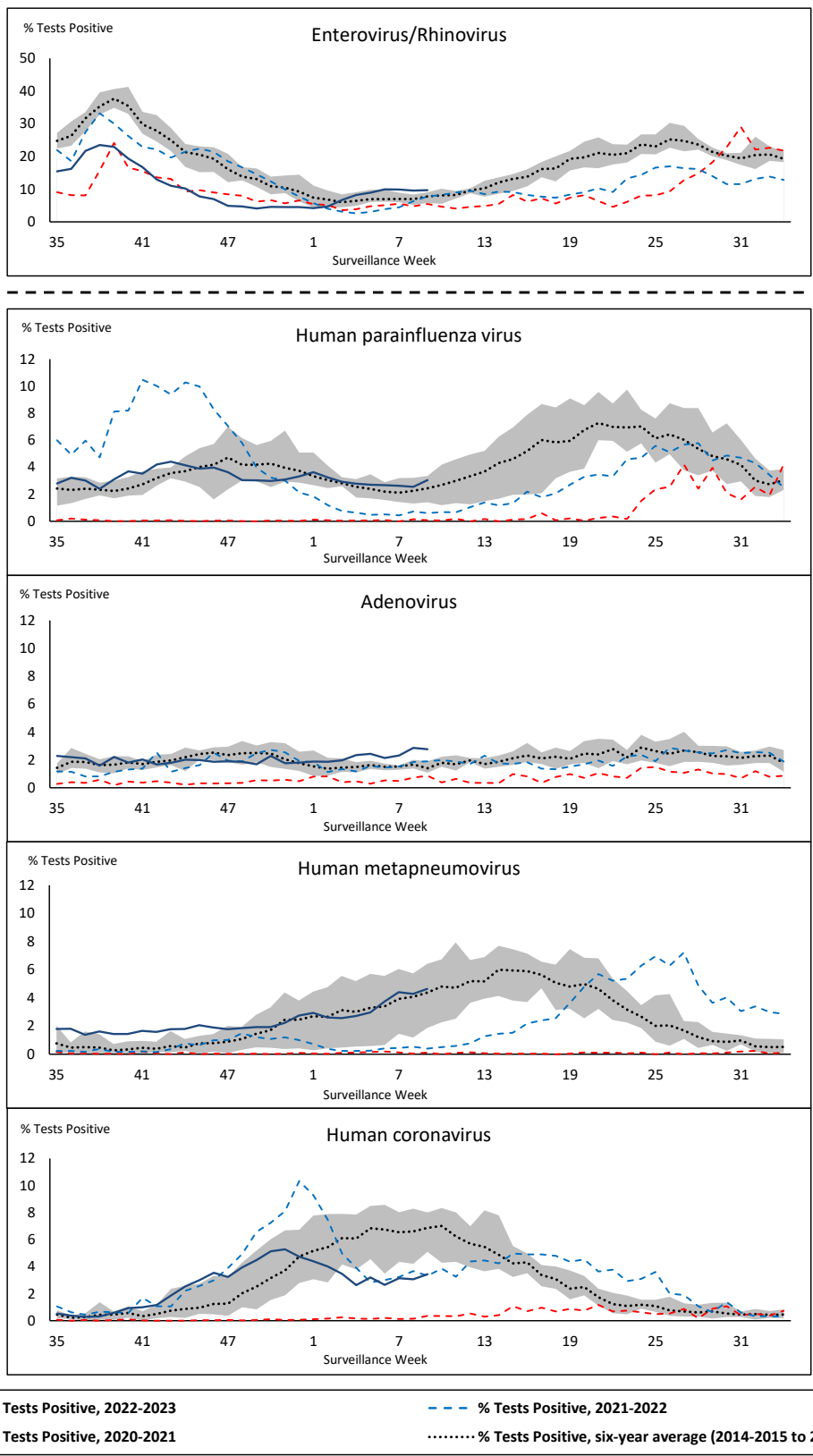
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 March 4, 2023 (surveillance week 2023-09)

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	506	86	303	0	0	2	2	0	303	17	303	5	0	24	4	0	303	7	303	5	303	23	303	19	
Prince Edward Island	588	75	149	0	0	2	2	2	149	21	6	0	0	0	0	0	6	0	6	2	6	1	6	0	
Nova Scotia	2615	396	1011	0	0	2	2	0	1011	22	25	0	0	2	0	0	25	2	25	3	25	3	25	1	
New Brunswick	1841	378	1454	0	0	3	3	0	1337	63	87	0	0	3	0	0	87	4	87	15	87	12	87	2	
Atlantic	5550	935	2917	0	0	9	9	2	2800	123	421	5	0	29	4	0	421	13	421	25	421	39	421	22	
Région Nord-Est	2024	215	1381	0	0	28	28	4	421	31	59	3	0	5	0	0	59	5	58	3	N.C.	N.C.	59	8	
Québec-Chaudière-Appalaches	4623	449	634	0	0	5	5	1	607	13	181	0	0	4	1	0	191	23	181	6	N.C.	N.C.	181	14	
Centre-du-Québec	3025	406	293	0	0	1	1	3	291	12	35	0	0	3	0	0	35	7	35	0	N.C.	N.C.	35	7	
Montréal-Laval	4566	471	2777	0	0	22	22	78	1379	38	491	2	0	14	1	0	491	31	495	7	N.C.	N.C.	491	32	
Ouest du Québec	2450	237	667	0	0	5	5	7	648	12	18	0	0	2	0	0	18	3	18	3	N.C.	N.C.	18	2	
Montérégie	2641	313	575	0	0	5	5	2	575	8	2	0	0	0	0	0	2	0	2	1	N.C.	N.C.	2	0	
Province of Québec	19329	2091	6327	0	0	66	66	95	3921	114	786	5	0	28	2	0	796	69	789	20	N.C.	N.C.	786	63	
P.H.O.L. - Ottawa	545	119	174	0	1	0	1	0	174	9	144	0	0	0	0	2	144	1	144	8	144	28	144	10	
EOURLA	1739	147	392	0	0	3	3	0	392	12	41	0	0	1	0	0	41	2	41	7	41	13	41	1	
P.H.O.L. - Kingston	538	81	84	0	0	0	0	0	84	0	59	0	0	0	0	0	59	1	59	2	59	19	59	0	
UHN / Mount Sinai Hospital	2390	97	671	0	0	1	1	2	671	13	116	0	0	3	1	0	116	1	116	4	116	2	116	3	
P.H.O.L. - Toronto	781	190	863	2	3	0	2	1	863	29	744	0	0	0	0	27	744	15	744	64	744	101	744	37	
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	2098	102	2098	11	5	2	18	15	2098	16	2102	0	0	0	0	11	2102	30	2101	59	2101	87	2101	30	
P.H.O.L. - Sault Ste. Marie	19	1	20	0	0	0	0	0	20	2	20	0	0	0	0	0	20	0	20	0	20	1	20	5	
P.H.O.L. - Timmins	152	4	28	0	0	0	0	0	28	2	24	0	0	0	0	1	24	0	24	1	24	2	24	0	
St. Joseph's - London	2438	261	624	0	0	0	0	4	624	5	73	0	0	0	0	1	73	2	73	6	73	16	73	2	
P.H.O.L. - London	944	155	401	1	0	0	1	0	401	22	281	0	0	0	0	4	281	8	281	22	281	52	281	8	
P.H.O.L. - Orillia	24	2	59	0	0	0	0	0	59	0	54	0	0	0	0	0	54	0	54	6	54	14	54	0	
P.H.O.L. - Thunder Bay	138	9	25	0	0	0	0	0	25	2	16	0	0	0	0	0	16	1	16	1	16	1	16	0	
P.H.O.L. - Sudbury	38	9	27	0	0	0	0	0	27	2	20	0	0	0	0	2	20	1	20	0	20	0	20	0	
P.H.O.L. - Hamilton	431	115	221	0	0	0	0	2	221	11	157	0	0	0	0	4	157	8	157	6	157	15	157	9	
P.H.O.L. - Peterborough	232	69	86	0	0	0	0	0	86	3	30	0	0	0	0	0	30	0	30	0	30	11	30	1	
St. Joseph's - Hamilton	2482	324	1446	0	0	2	2	11	1446	11	1446	0	0	14	0	0	1446	29	1446	62	1446	100	0	0	
Sault Area Hospital	231	49	129	0	0	0	0	0	129	15	74	0	0	3	0	0	74	1	74	1	74	4	74	2	
Province of Ontario	15220	1734	7348	14	9	8	28	35	7348	154	5401	0	0	21	1	52	5401	100	5400	249	5400	466	3954	108	
Manitoba	1437	196	1211	0	1	6	7	4	1211	44	138	2	0	3	0	0	138	1	152	6	138	13	152	4	
Saskatchewan	2724	191	968	0	0	4	4	0	879	78	343	4	3	7	1	0	343	9	343	23	343	39	342	18	
Alberta	4648	377	3040	5	3	7	15	17	2795	88	1078	16	3	44	2	0	1078	27	1078	43	1061	108	1078	22	
Prairies	8809	764	5219	5	4	17	26	21	4885	210	1559	22	6	54	3	0	1559	37	1573	72	1542	160	1572	44	
British Columbia	4048	407	3318	6	2	0	24	16	3149	212	709	3	1	34	0	0	709	26	709	47	684	108	684	18	
Yukon	106	11	30	0	0	0	0	1	30	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	43	6	32	0	0	0	0	0	32	4	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	32	9	N.C.	
Nunavut	100	7	54	0	0	0	0	3	54	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.	
Territories	249	24	116	0	0	0	0	4	116	8	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	32	9	N.C.	
CANADA	53205	5955	25245	25	15	100	153	173	22219	821	8876	35	7	166	10	52	8886	245	8892	413	8079	782	7417	255	

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 March 4, 2023 (surveillance weeks 2022-35 to 2023-09)

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	15860	3076	8782	1	246	669	916	0	8782	357	8782	19	30	143	24	0	8782	179	8782	307	8782	708	8782	337	
Prince Edward Island	28343	6515	3001	1	119	244	364	2	3001	330	1053	16	25	76	6	0	1053	62	1053	26	1053	321	1053	31	
Nova Scotia	110617	22290	31861	0	4	3612	3616	2	31851	2278	1035	5	16	27	3	0	1041	39	1031	18	1041	200	1041	36	
New Brunswick	95345	13919	38756	4	132	4407	4543	7	31151	1940	2780	6	23	131	7	0	2780	201	2780	108	2780	507	2725	169	
Atlantic	250165	45800	82400	6	501	8932	9439	11	74785	4905	13650	46	94	377	40	0	13656	481	13646	459	13656	1736	13601	573	
Région Nord-Est	72212	9216	39377	0	4	3671	3675	16	12850	1265	1048	10	3	65	0	0	1048	72	1039	71	N.C.	N.C.	1048	64	
Québec-Chaudière-Appalaches	156802	15512	20232	0	0	2809	2809	15	19757	1831	5557	21	5	59	1	0	5899	439	5557	272	N.C.	N.C.	5557	233	
Centre-du-Québec	124233	17467	13104	0	0	1750	1750	27	11377	900	745	13	0	33	2	0	745	75	745	63	N.C.	N.C.	745	45	
Montréal-Laval	171129	22242	74290	0	9	6048	6057	305	39854	2490	16929	125	13	339	13	0	16938	741	17048	660	N.C.	N.C.	16614	581	
Ouest du Québec	95869	12922	17994	0	7	2168	2175	30	15881	1231	844	20	0	60	1	0	843	160	844	51	N.C.	N.C.	845	43	
Montérégie	120018	14103	18052	0	0	1651	1651	18	17437	1036	106	0	0	2	0	0	106	2	106	6	N.C.	N.C.	106	3	
Province of Québec	740263	91462	183049	0	20	18097	18117	411	117156	8753	25229	189	21	558	17	0	25579	1489	25339	1123	N.C.	N.C.	24915	969	
P.H.O.L. - Ottawa	25004	6255	4152	17	135	66	213	0	4152	332	2929	0	0	0	0	68	2929	11	2929	53	2929	252	2929	110	
EOURLA	72713	7588	12797	0	0	1390	1390	5	12797	1251	1020	9	3	44	16	0	1020	47	1020	42	1020	230	1020	64	
P.H.O.L. - Kingston	25767	4366	2231	2	92	38	132	1	2230	172	1836	0	0	0	0	70	1837	27	1837	36	1836	220	1837	59	
UHN / Mount Sinai Hospital	79839	6252	17406	4	43	346	393	20	17406	276	1483	0	0	12	1	0	1450	5	1483	10	1483	43	1483	62	
P.H.O.L. - Toronto	46614	10012	21401	87	2399	143	1098	13	21371	1231	18556	0	0	0	0	747	18560	312	18556	348	18556	1569	18556	784	
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	68251	5017	68253	89	1461	721	2271	62	68253	2143	45472	4	0	16	0	495	45485	429	45727	456	45675	1504	45567	715	
P.H.O.L. - Sault Ste. Marie	1532	296	556	1	52	15	58	0	556	21	491	0	0	0	0	46	491	4	491	30	491	20	491	32	
P.H.O.L. - Timmins	7931	797	863	0	161	6	156	0	862	95	834	0	0	0	0	49	834	12	834	14	834	61	834	35	
St. Joseph's - London	105370	13613	14829	0	0	874	874	24	14829	970	1579	0	0	0	0	56	1613	50	1613	23	1613	239	1201	72	
P.H.O.L. - London	31591	6831	8873	11	584	62	639	8	8872	865	7119	0	0	0	0	347	7120	88	7120	106	7119	617	7120	251	
P.H.O.L. - Orillia	513	242	1992	6	260	23	289	0	1992	224	1922	0	0	0	0	111	1922	37	1922	59	1922	267	1922	91	
P.H.O.L. - Thunder Bay	7580	1558	857	0	107	3	110	0	856	93	755	0	0	0	0	32	755	17	755	14	755	50	755	19	
P.H.O.L. - Sudbury	1836	286	647	1	65	14	67	0	647	63	537	0	0	0	0	24	537	7	537	26	537	34	537	20	
P.H.O.L. - Hamilton	22667	6064	7190	7	300	92	399	13	7187	519	5148	0	0	0	0	209	5150	84	5148	85	5148	476	5148	182	
P.H.O.L. - Peterborough	4077	769	1114	0	67	11	78	0	1114	108	870	0	0	0	0	29	870	10	870	29	870	120	870	29	
St. Joseph's - Hamilton	79300	11879	34924	0	0	2698	2698	48	34924	2221	34924	0	0	869	0	0	34924	361	34924	438	34924	2382	0	0	
Sault Area Hospital	11059	1930	6975	1	262	257	520	0	6975	116	2150	35	0	51	3	0	2150	38	2150	91	2150	206	2150	52	
Province of Ontario	591644	83755	205060	226	5988	6759	11385	194	205023	10700	127625	48	3	992	20	2283	127647	1539	127916	1860	127862	8290	92420	2577	
Manitoba	55908	9732	30026	16	201	1766	1983	8	30026	1618	4245	9	4	155	6	0	4235	116	4393	179	4245	610	4393	173	
Saskatchewan	143014	11449	33478	2	41	3849	3892	13	26147	2044	11034	42	46	495	9	0	11037	266	11039	589	11037	1009	11032	383	
Alberta	192488	29750	99772	933	7286	2787	11006	136	86638	7409	34672	205	66	748	38	0	34659	432	34618	953	34080	3075	34672	953	
Prairies	391410	50931	163276	951	7528	8402	16881	157	142811	11071	49951	256	116	1398	53	0	49931	814	50050	1721	49362	4694	50097	1509	
British Columbia	197283	19553	101513	358	4343	301	8780	102	94831	7490	21668	162	166	801	139	6	21656	532	21656	644	21006	3286	21003	838	
Yukon	4576	341	681	2	136	0	138	2	679	38	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	1420	174	1286	2	147	1	150	0	1286	85	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1286	261	N.C.	N.C.
Nunavut	3635	339	1845	3	230	3	236	9	1845	49	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	9631	854	3812	7	513	4	524	11	3810	172	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1286	261	N.C.	N.C.	
CANADA	2180396	292355	739110	1548	18893	42495	65126	886	638416	43091	238123	701	400	4126	269	2289	238469	4855	238607	5807	213172	18267	202036	6466	

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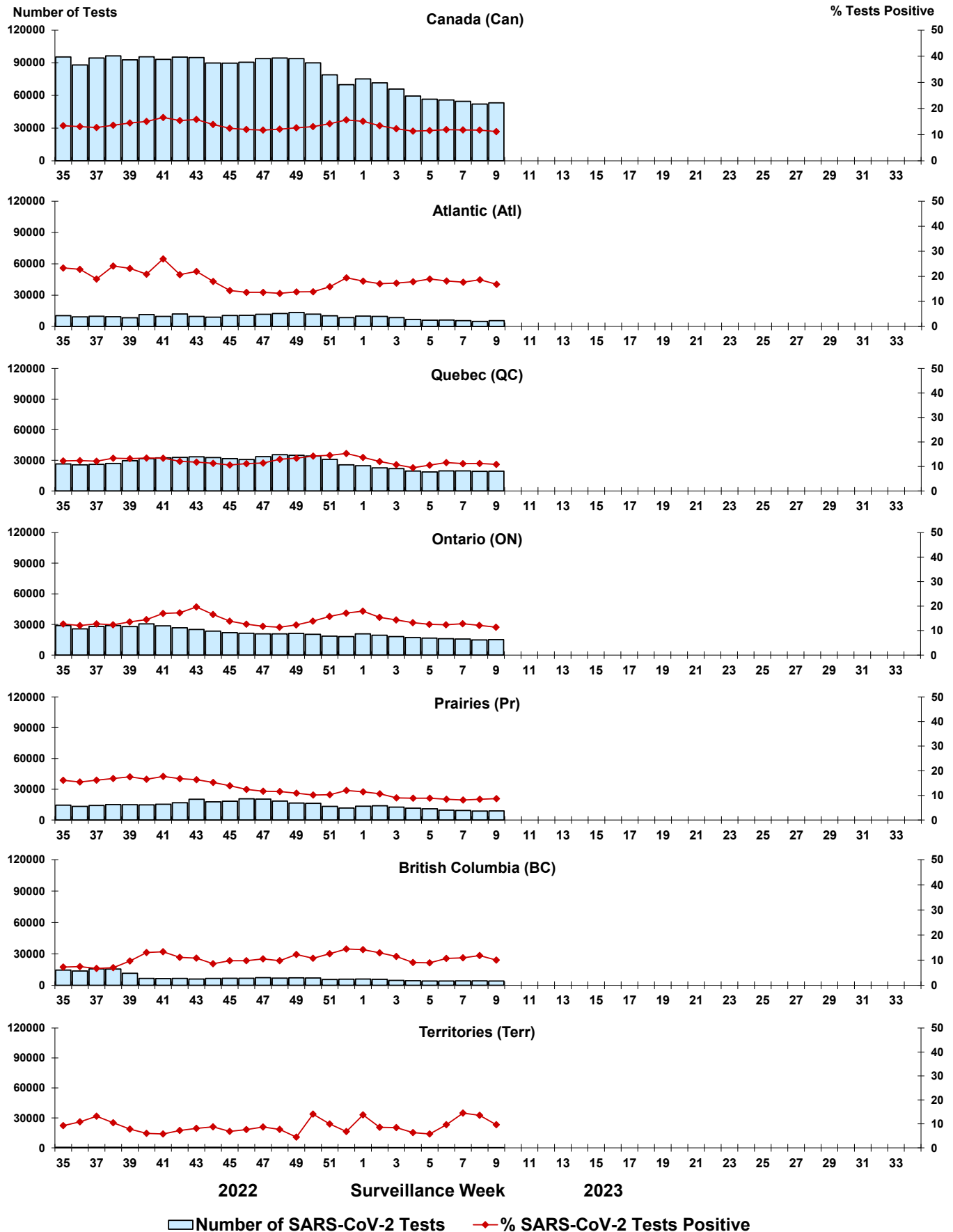
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Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests

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

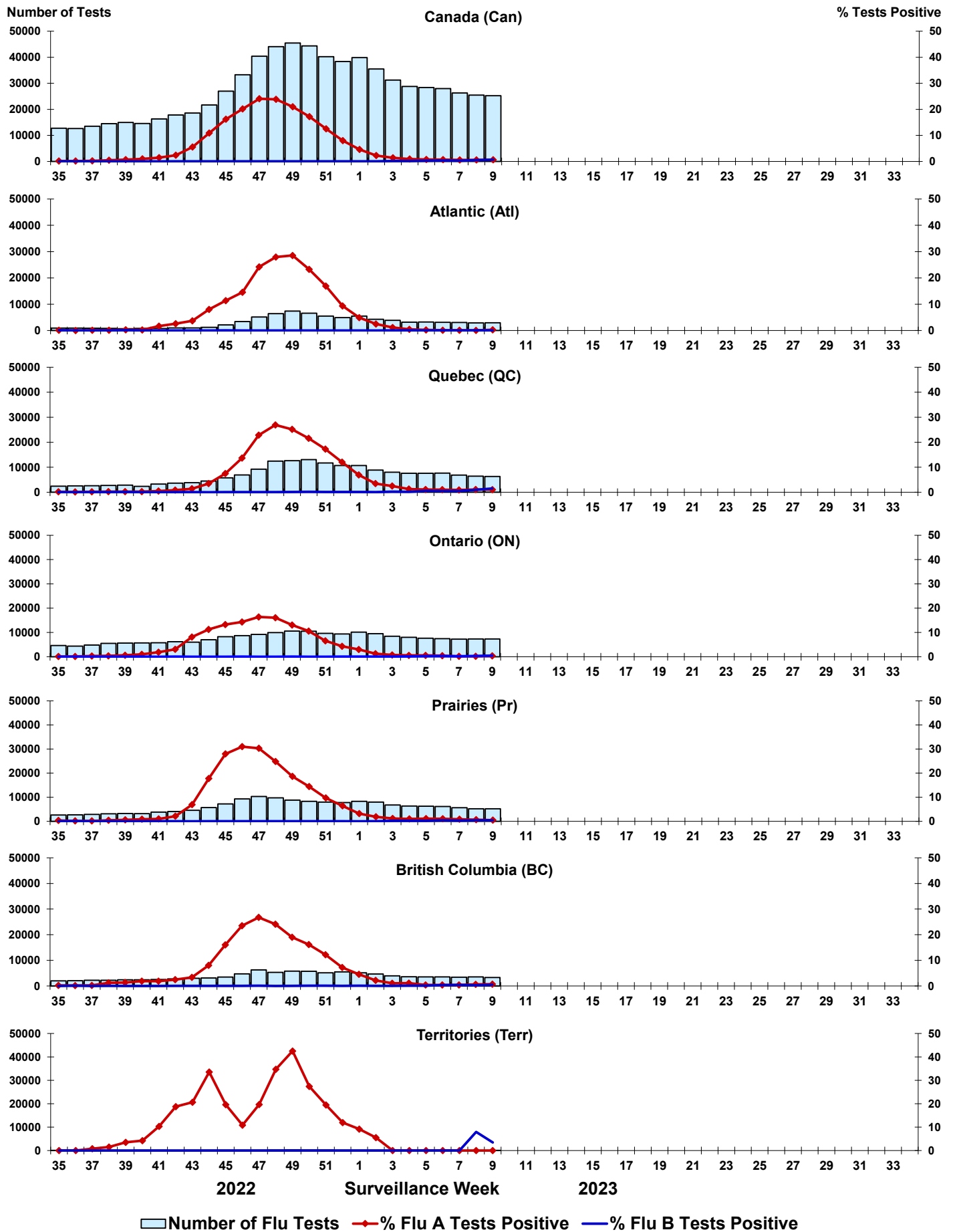


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

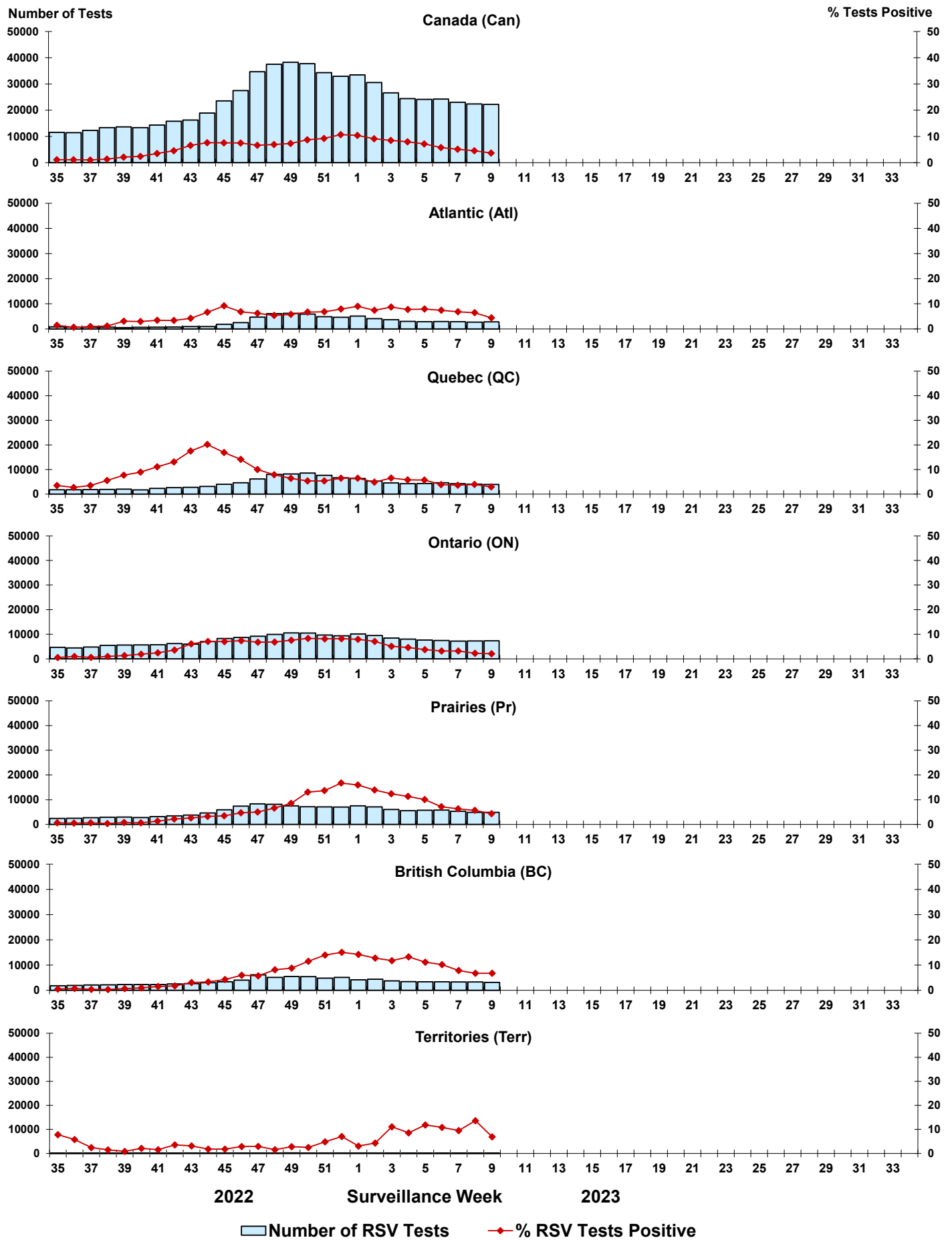


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

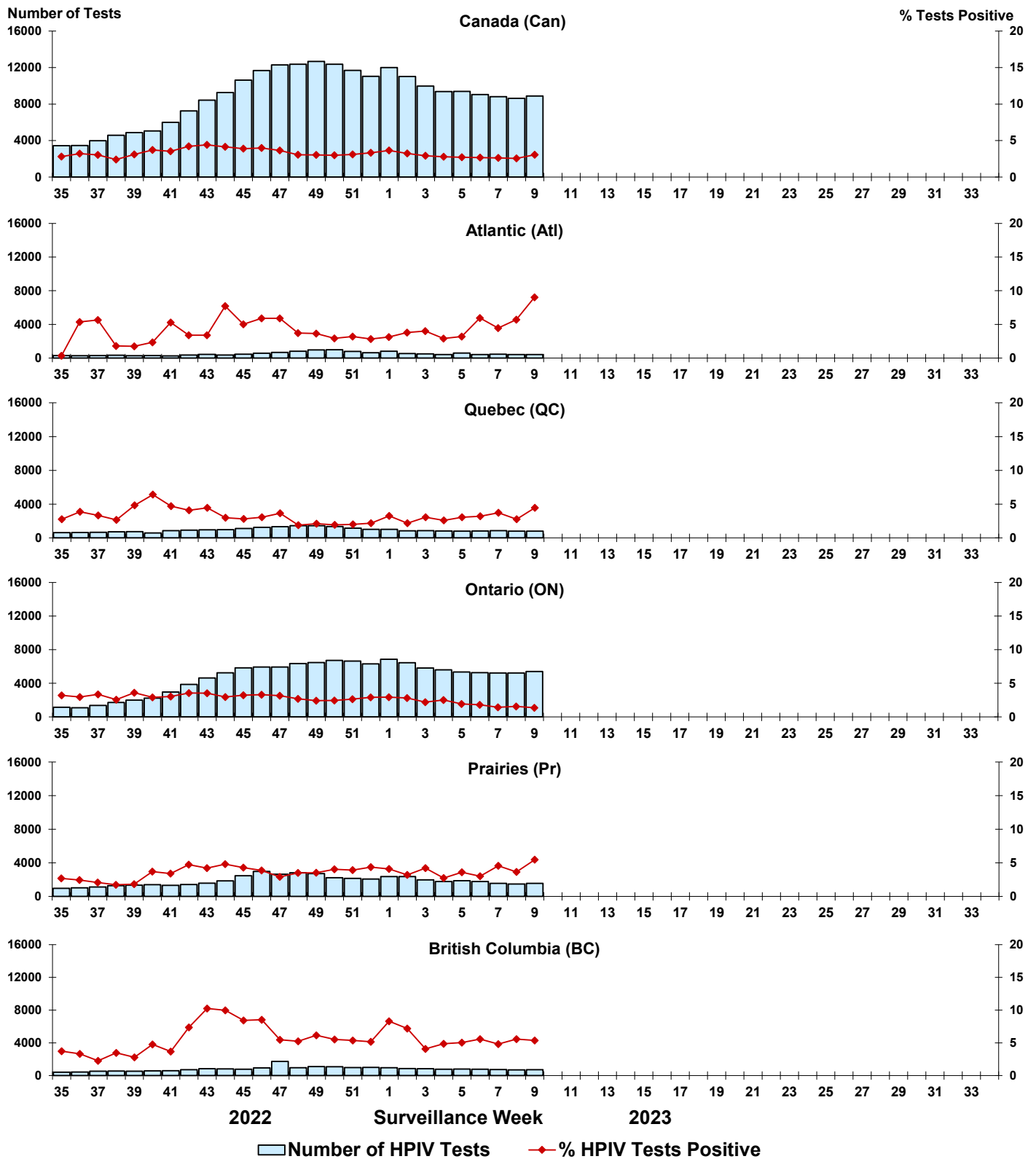


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

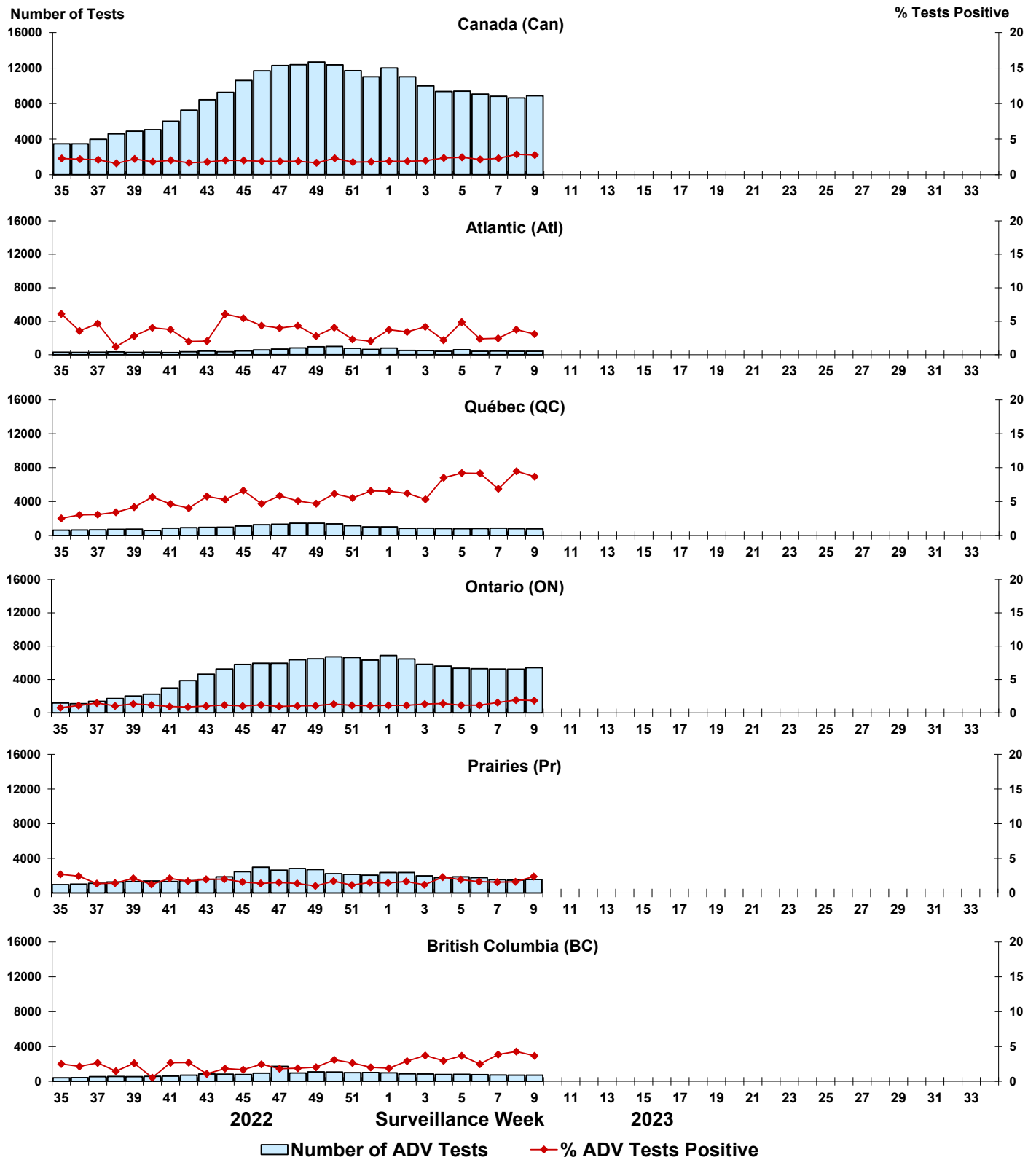


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

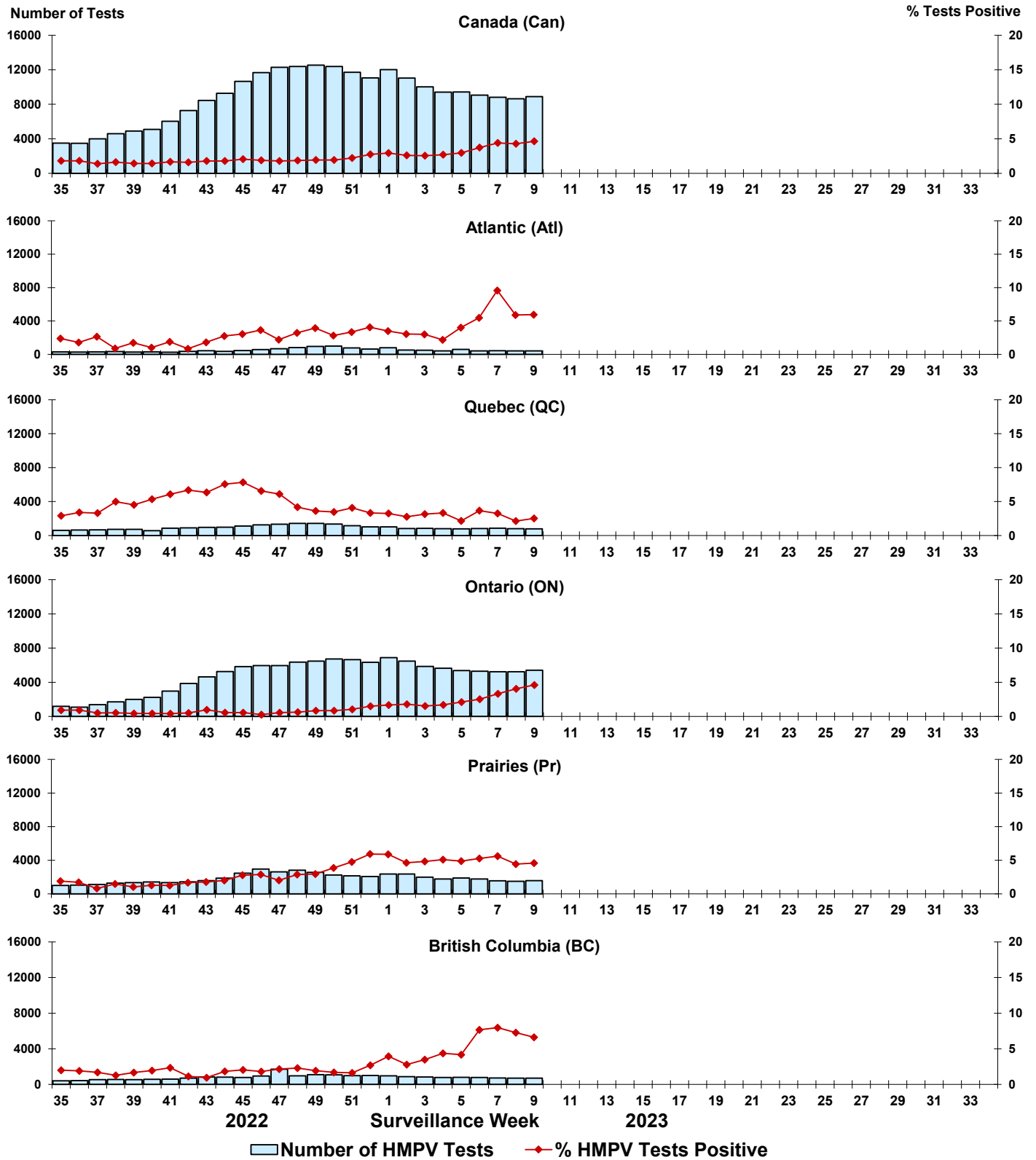


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

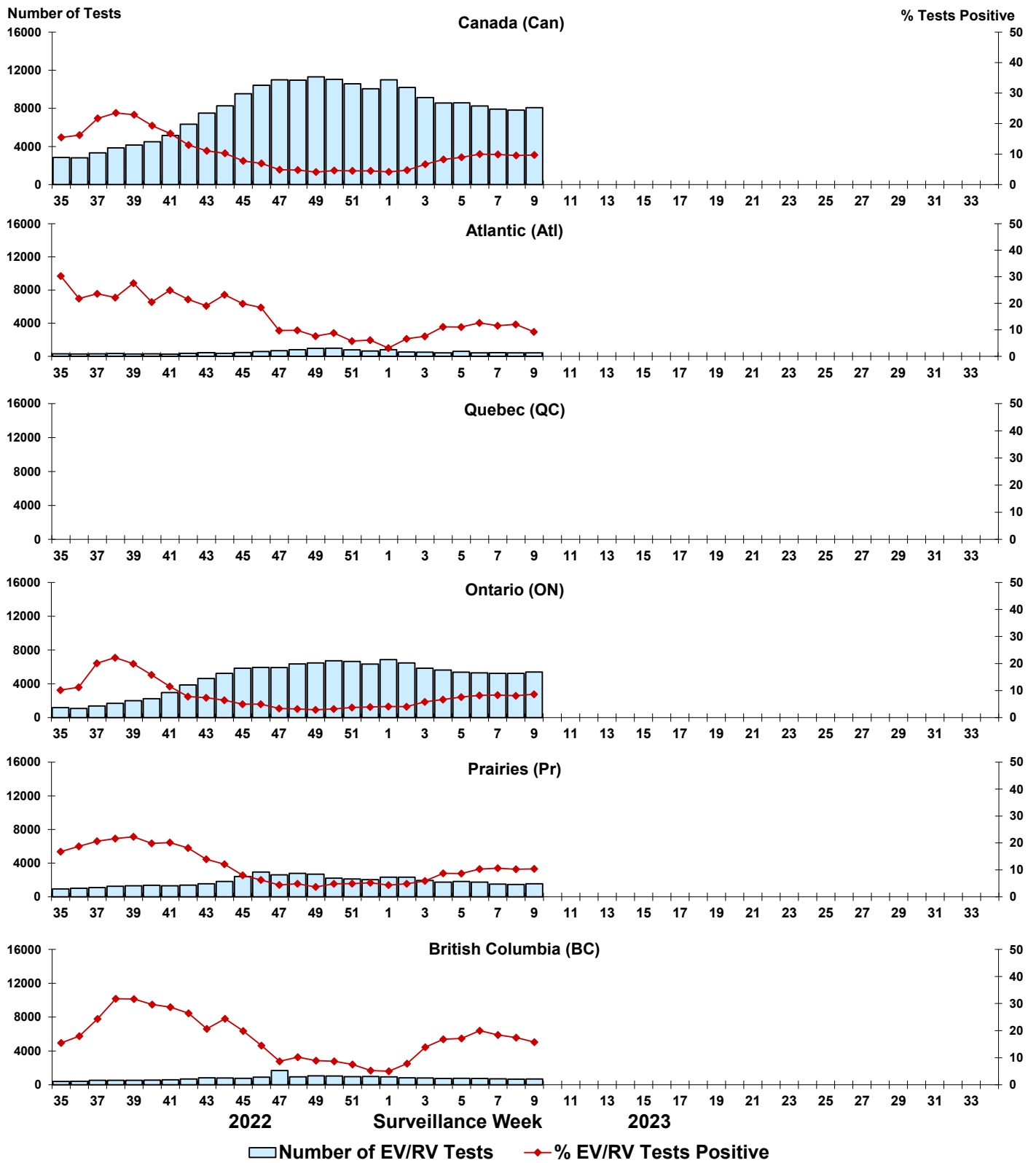


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

