

RESPIRATORY VIRUS DETECTION REPORT

April 16 to April 22, 2023
(Surveillance Week 2023-16)



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 16 (week ending April 22, 2023) in Canada, participating RVDSS laboratories reported 4,376 detections of SARS-CoV-2 from 40,181 tests (10.9% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 6,225 to 21,077 tests), activity of nearly all viruses is within or below expected levels.

- Activity of influenza remains low at inter-seasonal levels.
 - Influenza B activity remains slightly below expected levels (479 detections; 1.8% positive). Influenza A activity is lower and far below expected levels (111 detections; 0.5% positive).
- Activity of all other non-SARS-CoV-2 respiratory viruses is near or below 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

© His Majesty the King in Right of Canada, as represented by the Minister of Health, 2021

ISSN: 2564-2359 | Cat.: HP38-7E-PDF | Pub.: 210284

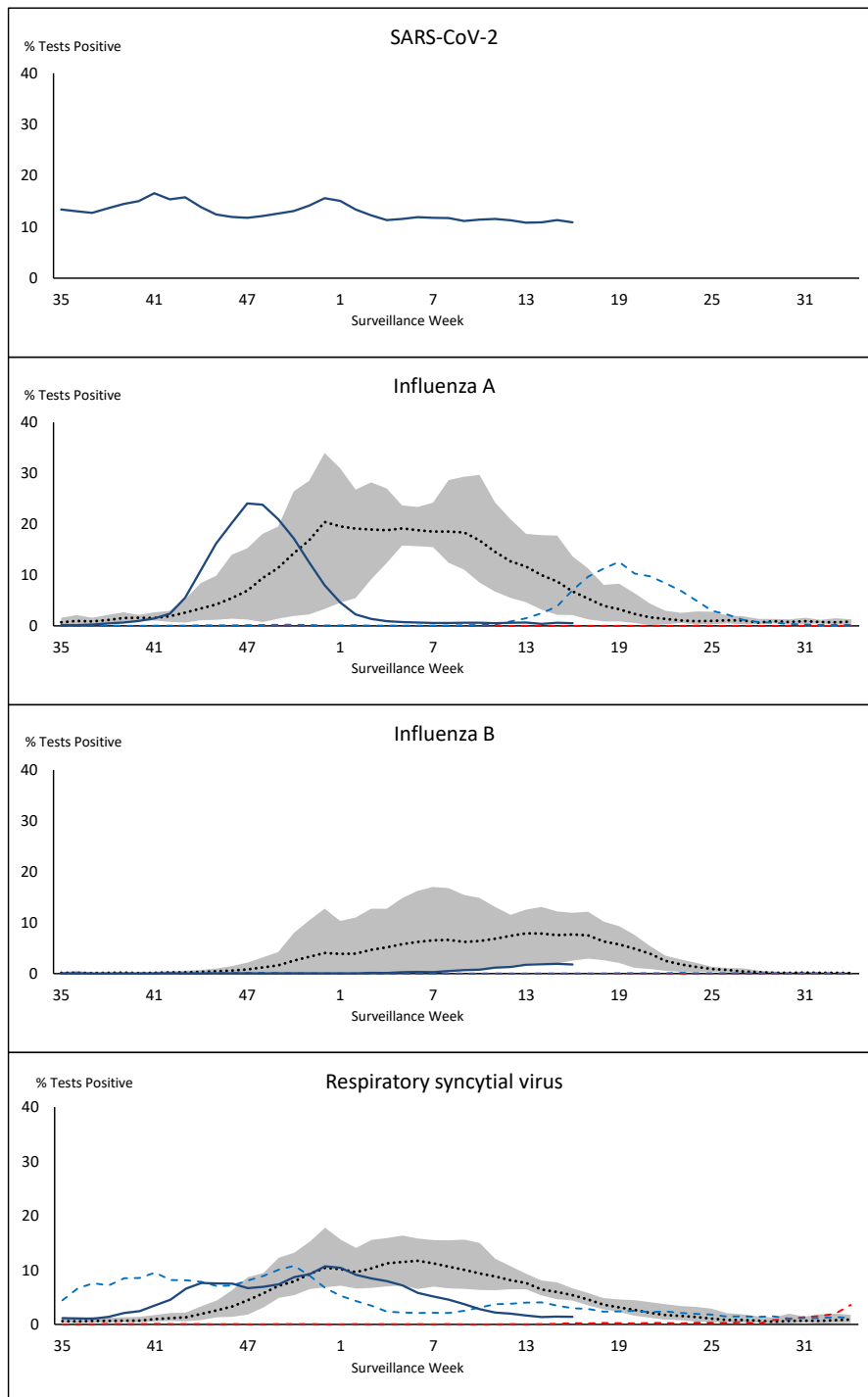


Public Health
Agency of Canada

Agence de la santé
publique du Canada

Canada

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



— % Tests Positive, 2022-2023 - - - % Tests Positive, 2021-2022
- - - % Tests Positive, 2020-2021 % Tests Positive, six-year average (2014-2015 to 2019-2020)

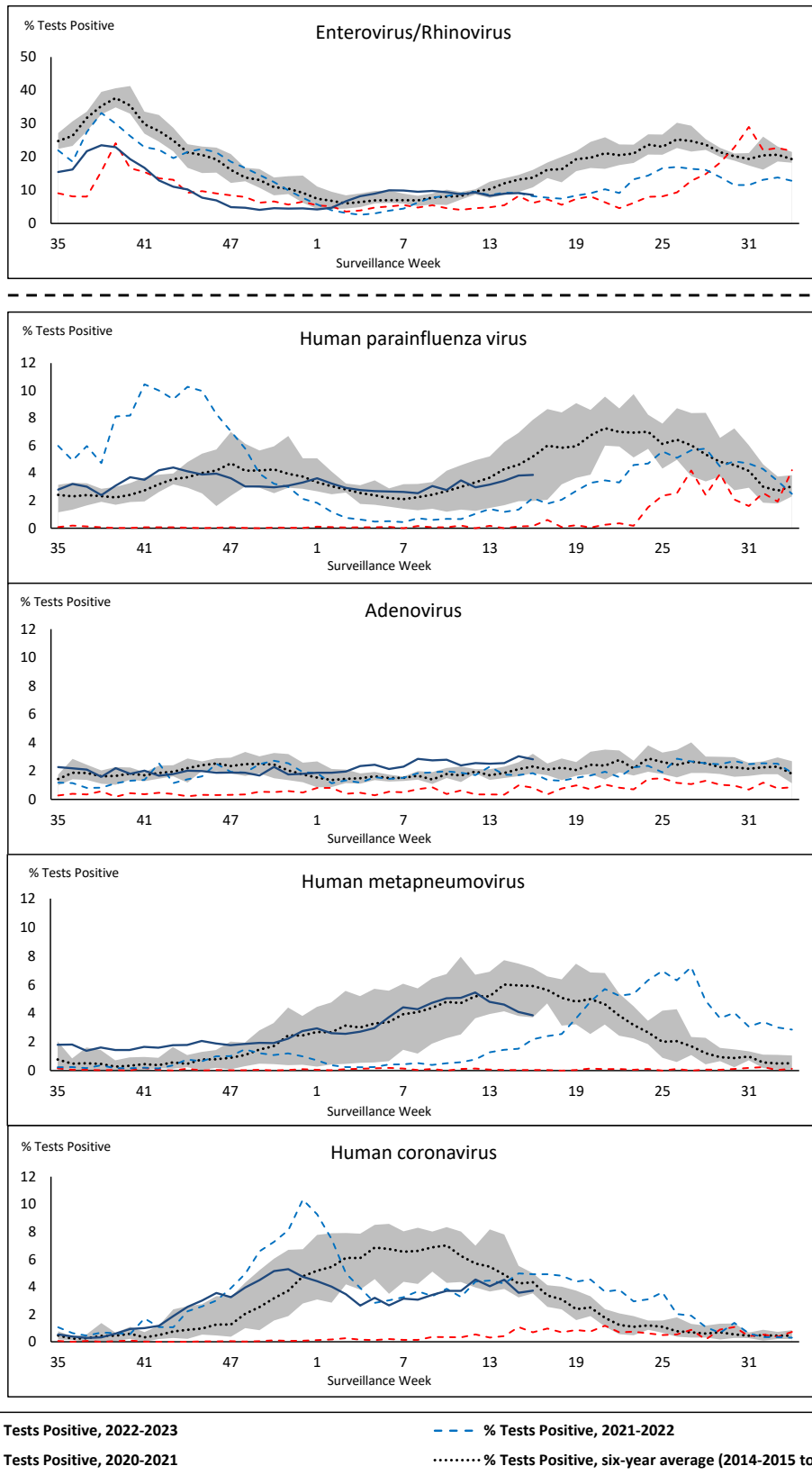
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 22, 2023 (surveillance week 2023-16)

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	539	60	338	0	0	1	1	0	338	23	338	2	0	13	6	0	338	4	338	6	338	29	338	9	
Prince Edward Island	450	40	88	0	0	0	0	0	88	2	7	1	1	0	0	0	7	1	7	1	7	0	7	0	
Nova Scotia	1616	251	800	0	0	18	18	1	800	16	28	0	0	0	1	0	28	0	28	2	28	3	28	1	
New Brunswick	807	101	702	1	0	1	2	1	716	9	77	5	0	2	1	0	77	4	77	13	77	10	77	8	
Atlantic	3412	452	1928	1	0	20	21	2	1942	50	450	8	1	15	8	0	450	9	450	22	450	42	450	18	
Région Nord-Est	1874	164	1398	0	0	8	8	10	343	6	72	1	1	1	0	0	72	6	72	3	N.C.	N.C.	72	3	
Québec-Chaudière-Appalaches	3134	244	573	0	0	14	14	11	554	12	158	0	0	3	2	0	174	16	158	3	N.C.	N.C.	158	3	
Centre-du-Québec	3071	350	271	0	0	5	5	6	270	5	32	0	0	3	1	0	32	1	32	0	N.C.	N.C.	32	3	
Montréal-Laval	3157	320	2534	0	0	12	12	121	1387	24	527	3	0	16	1	0	527	28	531	7	N.C.	N.C.	527	15	
Ouest du Québec	1943	188	575	0	0	2	2	19	549	8	26	0	0	0	0	0	26	5	26	2	N.C.	N.C.	26	4	
Montérégie	2939	294	1062	0	0	11	11	27	816	14	3	0	0	0	0	0	3	0	3	0	N.C.	N.C.	3	0	
Province of Québec	16118	1560	6413	0	0	52	52	194	3919	69	818	4	1	23	4	0	834	56	822	15	N.C.	N.C.	818	28	
P.H.O.L. - Ottawa	321	117	131	0	0	0	0	0	131	1	107	0	0	0	0	9	107	0	107	0	107	10	107	4	
EOURLA	1507	89	333	0	0	7	7	7	333	5	24	0	0	1	0	0	24	0	24	1	24	5	24	2	
P.H.O.L. - Kingston	327	21	64	3	0	0	3	0	64	1	59	0	0	0	0	0	59	1	59	7	59	7	59	5	
UHN / Mount Sinai Hospital	1725	236	537	0	0	1	1	3	537	1	42	0	0	4	0	0	42	1	42	0	42	1	42	3	
P.H.O.L. - Toronto	454	73	745	0	2	0	1	7	745	13	689	0	0	0	0	27	689	20	689	69	689	70	689	53	
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	1580	91	1580	3	0	0	3	12	1580	2	1591	0	0	0	0	21	1591	23	1595	33	1595	51	1595	25	
P.H.O.L. - Sault Ste. Marie	10	1	6	0	0	0	0	0	6	0	6	0	0	0	0	0	6	0	6	0	6	0	6	1	
P.H.O.L. - Timmins	78	5	6	0	0	0	0	0	6	0	6	0	0	0	0	1	6	0	6	0	6	1	6	0	
St. Joseph's - London	1230	68	698	0	0	0	0	5	698	2	49	0	0	0	0	3	49	0	49	3	49	1	49	5	
P.H.O.L. - London	408	33	217	0	0	0	4	217	1	180	0	0	0	0	12	180	3	180	15	180	19	180	4		
P.H.O.L. - Orillia	12	9	42	0	0	0	0	0	42	0	42	0	0	0	0	1	43	1	42	3	42	3	42	2	
P.H.O.L. - Thunder Bay	73	12	17	0	0	0	0	0	17	0	11	0	0	0	0	0	11	0	11	1	11	3	11	1	
P.H.O.L. - Sudbury	35	1	7	0	0	0	0	0	7	1	7	0	0	0	0	0	7	0	7	2	7	1	7	0	
P.H.O.L. - Hamilton	272	40	164	0	1	0	0	2	164	1	132	0	0	0	0	5	132	5	132	16	132	18	132	7	
P.H.O.L. - Peterborough	121	17	42	0	0	0	0	1	42	0	38	0	0	0	0	3	38	0	38	1	38	8	38	2	
St. Joseph's - Hamilton	1542	85	1279	0	2	2	43	1279	5	1279	0	0	0	9	0	0	1279	42	1279	43	1279	85	0	0	
Sault Area Hospital	93	10	93	0	0	0	0	0	93	1	55	0	0	4	0	0	55	0	55	0	55	10	55	2	
Province of Ontario	9788	908	5961	6	3	10	17	84	5961	34	4317	0	0	18	0	82	4318	96	4321	194	4321	293	3042	116	
Manitoba	1373	188	1098	1	0	5	6	5	1098	10	93	4	7	4	0	0	93	1	119	4	93	11	119	3	
Saskatchewan	1826	191	693	0	0	3	3	9	653	8	293	4	8	2	7	0	293	11	293	5	293	41	293	16	
Alberta	3839	407	1635	1	2	2	5	21	1468	12	952	13	5	9	19	0	952	15	952	21	942	105	952	31	
Prairies	7038	786	3426	2	2	10	14	35	3219	30	1338	21	20	15	26	0	1338	27	1364	30	1328	157	1364	50	
British Columbia	3614	661	3170	3	0	0	7	23	3054	56	554	17	1	25	0	0	576	25	576	30	551	78	551	19	
Yukon	28	4	16	0	0	0	0	1	16	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	20	2	20	0	0	0	0	1	20	3	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	20	3	N.C.	N.C.
Nunavut	163	3	143	0	0	0	0	39	143	10	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	211	9	179	0	0	0	0	41	179	14	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	20	3	N.C.	N.C.	
CANADA	40181	4376	21077	12	5	92	111	379	18274	253	7477	50	23	96	38	82	7516	213	7533	291	6670	573	6225	231	

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 28, 2022 to April 22, 2023 (surveillance weeks 2022-35 to 2023-16)

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	19532	3583	11171	1	246	672	919	5	11171	523	11171	40	30	330	59	0	11171	214	11171	360	11171	918	11171	403	
Prince Edward Island	32455	7198	3858	1	119	247	367	3	3858	379	1128	19	27	78	7	0	1128	71	1128	37	1128	334	1128	34	
Nova Scotia	123983	24472	38697	0	4	3634	3638	9	38687	2384	1211	6	16	29	4	0	1217	44	1207	38	1217	219	1217	52	
New Brunswick	103634	15330	45749	18	133	4432	4583	20	37800	2032	3294	17	28	144	8	0	3294	231	3294	170	3294	594	3239	212	
Atlantic	279604	50583	99475	20	502	8985	9507	37	91516	5318	16804	82	101	581	78	0	16810	560	16800	605	16810	2065	16755	701	
Région Nord-Est	85597	10581	49267	0	4	3810	3814	54	15379	1360	1375	21	5	78	0	0	1376	111	1367	89	N.C.	N.C.	1376	98	
Québec-Chaudière-Appalaches	180514	17462	24057	0	0	2869	2869	94	23405	1889	6687	22	5	79	4	0	7135	574	6687	328	N.C.	N.C.	6687	329	
Centre-du-Québec	144454	20036	14901	0	0	1777	1777	64	13163	967	943	13	0	44	5	0	943	111	943	71	N.C.	N.C.	943	69	
Montréal-Laval	197903	24872	93150	0	9	6189	6198	1154	49998	2669	20437	132	19	446	17	0	20446	917	20578	742	N.C.	N.C.	20122	744	
Ouest du Québec	110188	14373	22036	0	7	2188	2195	110	19773	1306	990	20	0	64	2	0	989	187	990	58	N.C.	N.C.	991	62	
Montérégie	139556	16087	26043	0	0	1787	1787	147	23787	1162	133	0	0	2	0	0	133	4	133	6	N.C.	N.C.	133	3	
Province of Québec	858212	103411	229454	0	20	18620	18640	1623	145505	9353	30565	208	29	713	28	0	31022	1904	30698	1294	N.C.	N.C.	30252	1305	
P.H.O.L. - Ottawa	28197	7071	5305	17	136	66	214	2	5305	353	3708	0	0	0	0	88	3708	16	3708	107	3708	338	3708	169	
EOURLA	84736	8457	15345	0	0	1406	1406	29	15345	1289	1250	9	3	53	16	0	1250	51	1250	58	1250	283	1250	86	
P.H.O.L. - Kingston	28948	4740	2789	5	92	38	135	2	2788	180	2281	0	0	0	0	83	2282	28	2282	71	2281	293	2282	80	
UHN / Mount Sinai Hospital	92660	7139	21527	7	43	348	398	48	21527	298	2019	0	2	23	1	0	1986	7	2019	15	2019	66	2019	82	
P.H.O.L. - Toronto	50349	10695	26309	112	2411	148	1128	32	26279	1326	23153	0	0	0	0	891	23157	439	23153	804	23153	2112	23153	1117	
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	81008	5775	81009	114	1468	725	2307	233	81010	2200	58270	4	0	16	0	627	58283	579	58547	860	58495	1951	58387	922	
P.H.O.L. - Sault Ste. Marie	1710	328	667	1	52	15	58	0	667	25	593	0	0	0	0	51	593	4	593	30	593	43	593	44	
P.H.O.L. - Timmins	8873	837	974	0	161	6	156	0	972	98	922	0	0	0	0	53	922	14	922	23	922	83	922	37	
St. Joseph's - London	120017	14920	19738	0	0	886	886	59	19738	1013	2020	0	0	0	0	74	2054	71	2054	56	2054	297	1642	94	
P.H.O.L. - London	36097	7633	10713	13	585	63	643	19	10712	878	8564	0	0	0	0	411	8565	112	8565	207	8564	820	8565	297	
P.H.O.L. - Orillia	559	261	2262	6	261	23	290	6	2262	230	2189	0	0	0	0	124	2190	56	2189	75	2189	311	2189	103	
P.H.O.L. - Thunder Bay	8321	1696	1024	0	107	3	110	0	1023	96	898	0	0	0	0	36	898	18	898	24	898	100	899	37	
P.H.O.L. - Sudbury	2048	300	754	1	65	14	67	0	754	77	644	0	0	0	0	29	644	7	644	41	644	38	644	25	
P.H.O.L. - Hamilton	25210	6753	8870	7	301	92	399	27	8867	551	6427	0	0	0	0	242	6429	122	6427	212	6427	611	6427	265	
P.H.O.L. - Peterborough	5088	982	1341	0	67	11	78	3	1341	113	1055	0	0	0	0	39	1055	14	1055	37	1055	156	1055	38	
St. Joseph's - Hamilton	93626	13276	44565	0	0	2726	2726	306	44565	2273	44565	0	0	977	0	0	44565	554	44565	814	44565	2982	0	0	
Sault Area Hospital	12114	2090	8030	1	262	258	521	3	8030	161	2563	35	5	64	4	0	2563	42	2563	99	2563	245	2563	78	
Province of Ontario	679561	92953	251222	284	6011	6828	11522	769	251185	11161	161121	48	10	1133	21	2748	161144	2134	161434	3533	161380	10729	116298	3474	
Manitoba	66682	11240	38584	17	202	1786	2005	21	38584	1748	5045	30	24	167	6	0	5035	129	5297	205	5045	714	5297	207	
Saskatchewan	160732	13067	39233	2	41	3868	3911	50	31431	2201	13037	80	71	519	29	0	13040	336	13042	641	13040	1331	13035	472	
Alberta	222915	32577	120090	976	7294	2809	11079	472	105560	7628	42430	311	97	902	102	0	42415	574	42369	1232	41704	3829	42430	1179	
Prairies	450329	56884	197907	995	7537	8463	16995	543	175575	11577	60512	421	192	1588	137	0	60490	1039	60708	2078	59789	5874	60762	1858	
British Columbia	223613	23565	124407	397	4352	303	8881	267	116588	8148	26549	222	185	1025	153	6	26559	750	26559	1025	25723	3968	25720	1018	
Yukon	5002	382	851	2	136	0	138	9	849	58	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	1577	186	1433	2	147	1	150	4	1433	101	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1433	287	
Nunavut	4424	380	2403	3	230	3	236	125	2403	117	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	11003	948	4687	7	513	4	524	138	4685	276	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1433	287	N.C.	N.C.
CANADA	2502322	328344	907152	1703	18935	43203	66069	3377	785054	45833	295551	981	517	5040	417	2754	296025	6387	296199	8535	265135	22923	249787	8356	

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.

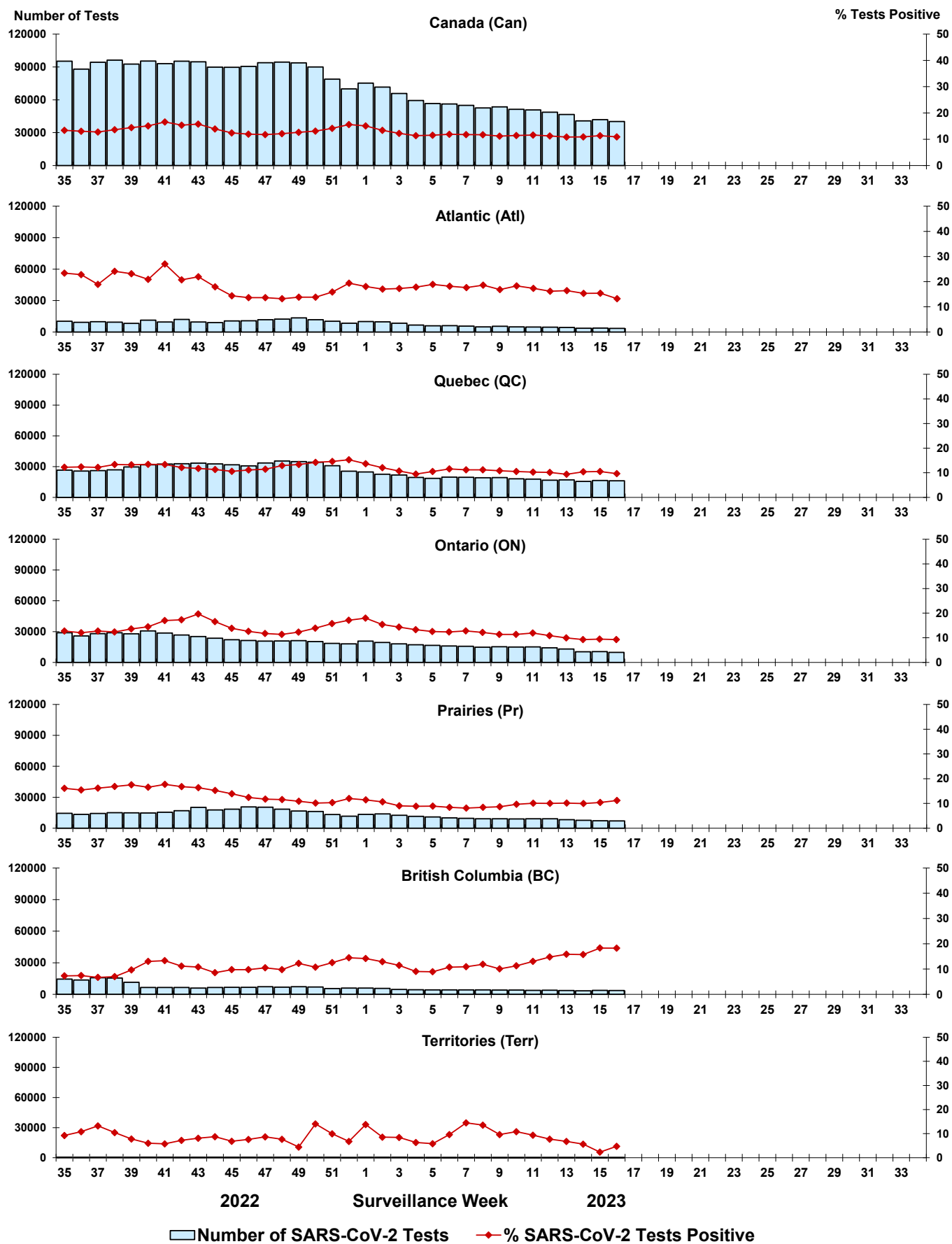
Some specimens from Yukon (YT) are sent to reference laboratories in British Columbia and reported results reflect specimens identified as originating from YT.

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. 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

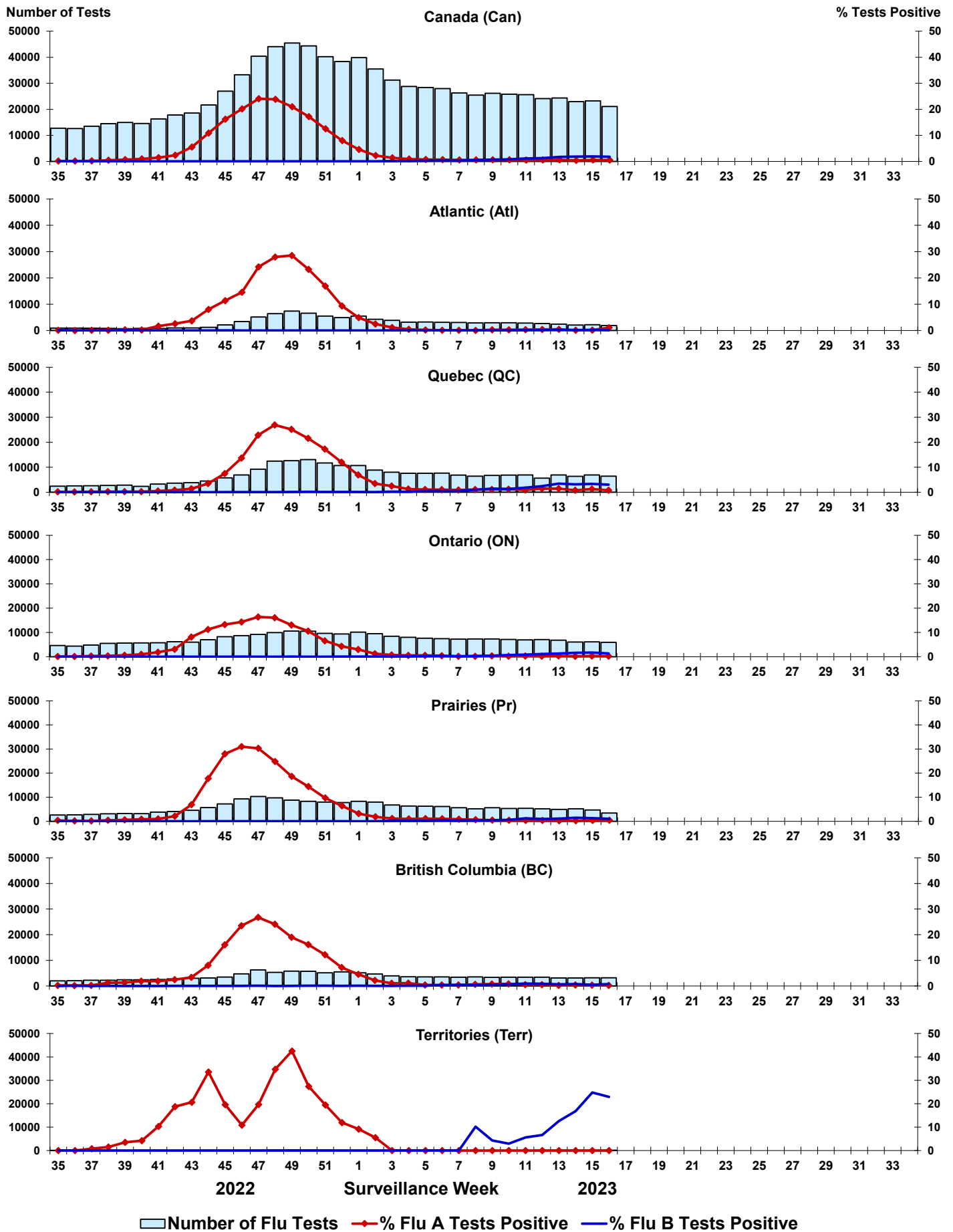


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

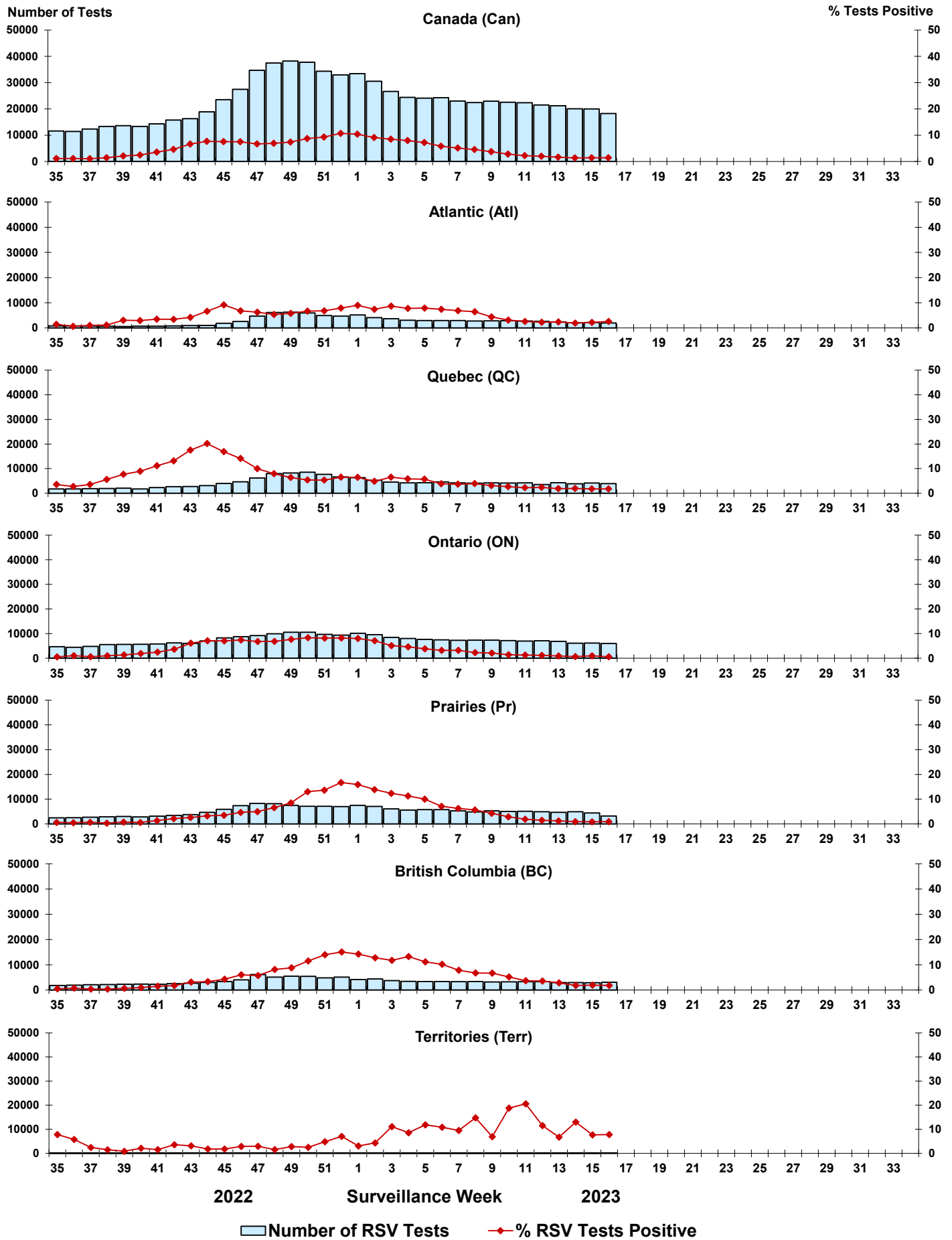


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

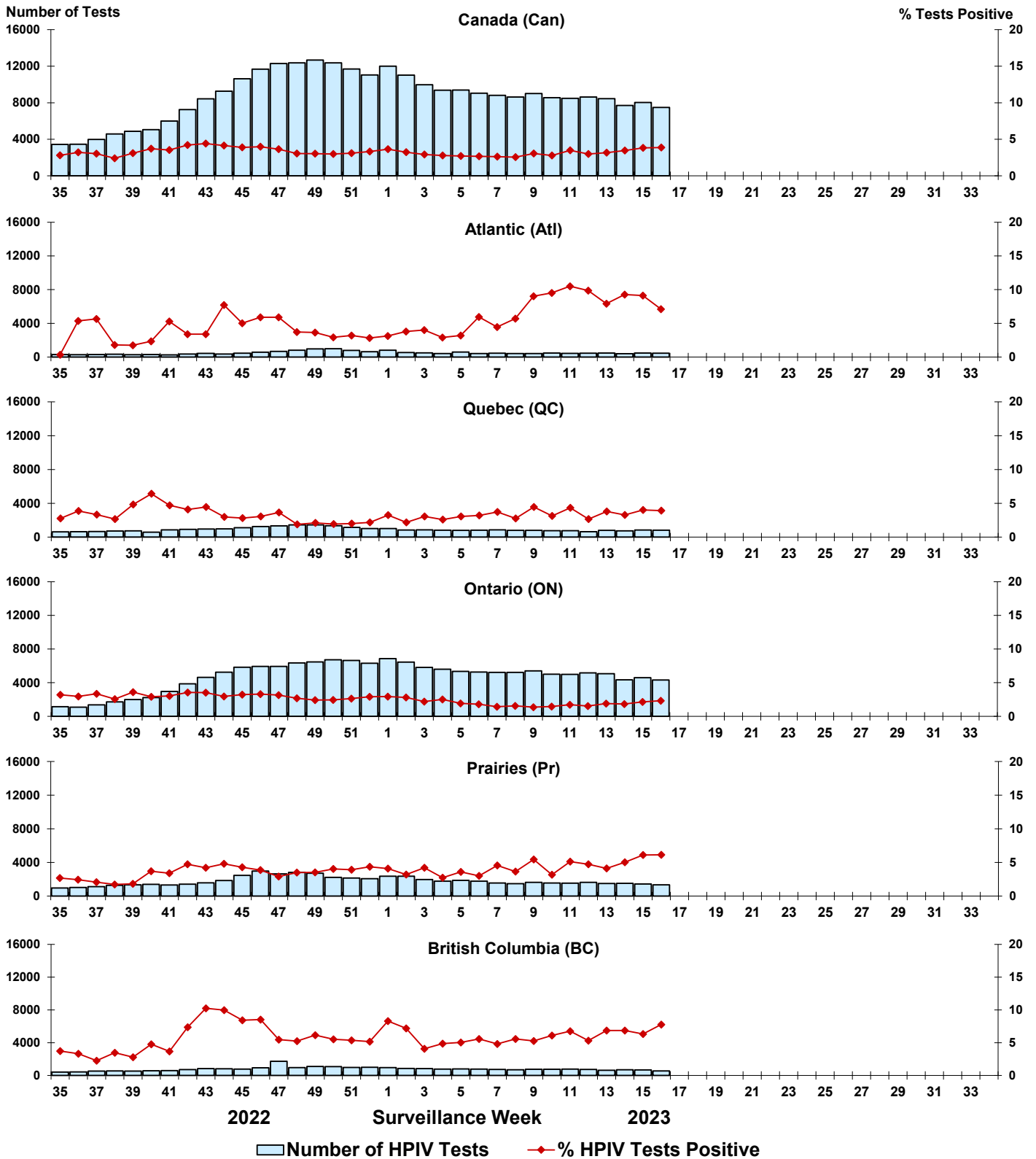


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

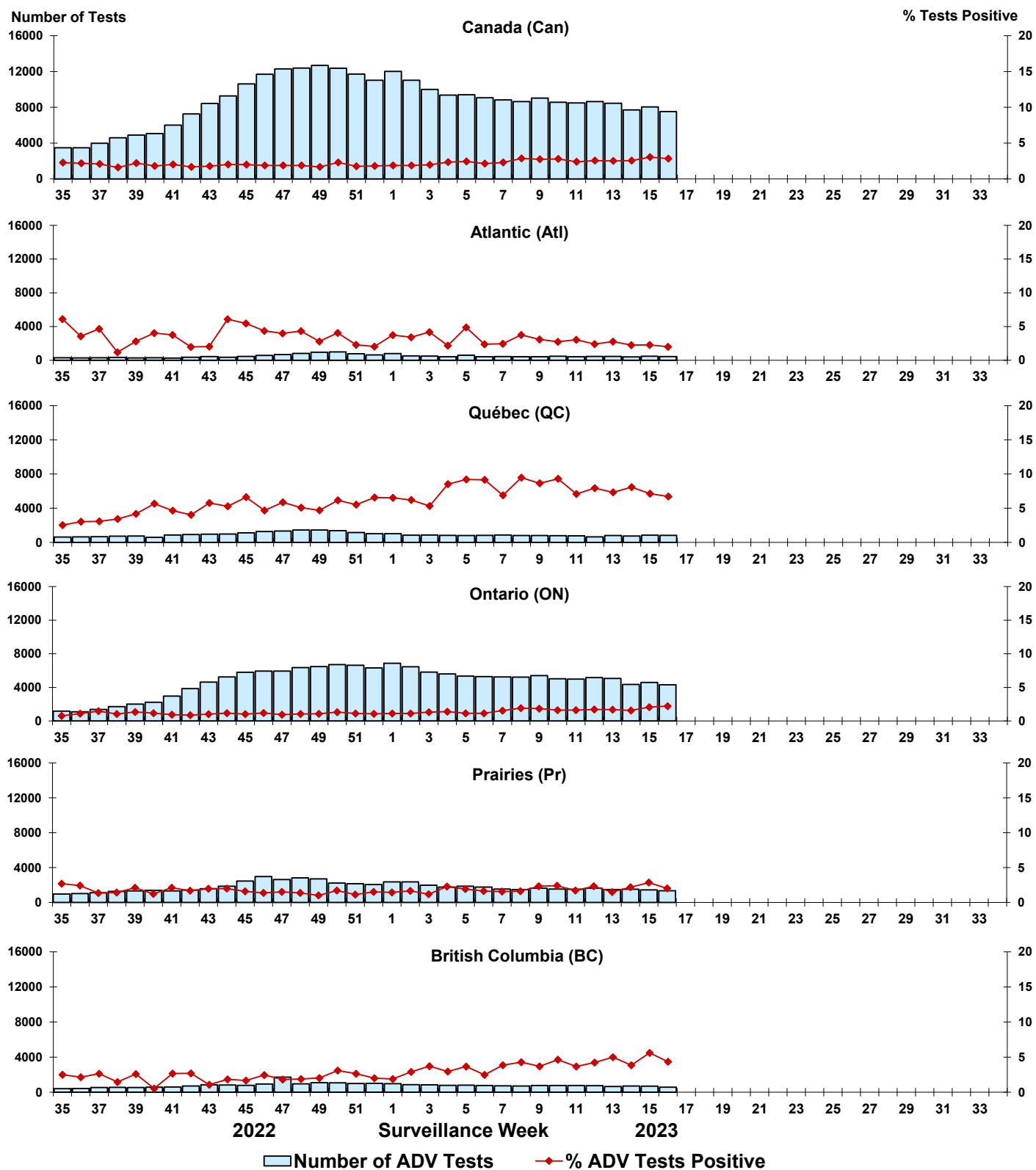


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

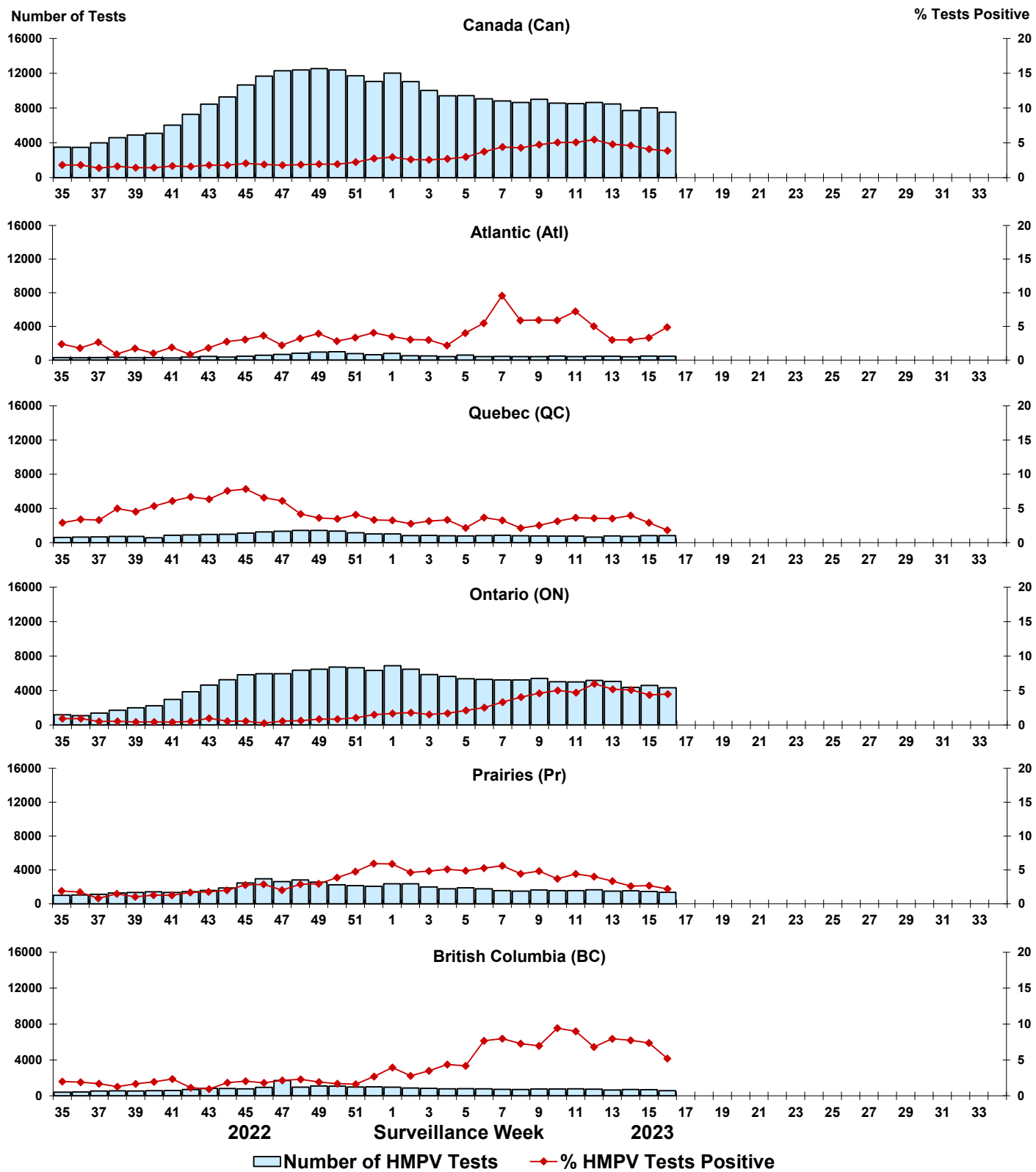


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

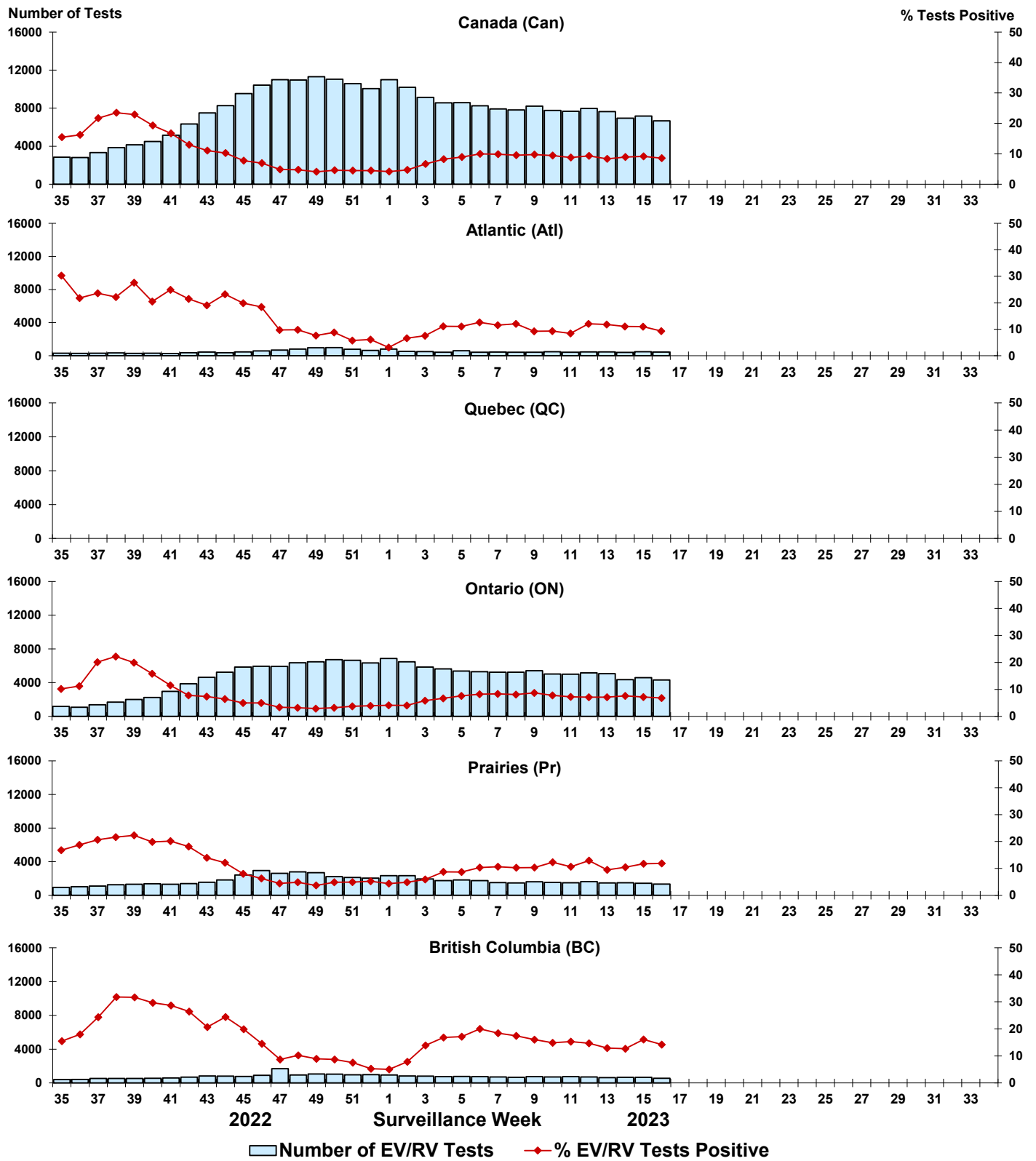


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

