

RESPIRATORY VIRUS DETECTION REPORT

March 12 to March 18, 2023
(Surveillance Week 2023-11)



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 11 (week ending March 18, 2023) in Canada, participating RVDSS laboratories reported 5,796 detections of SARS-CoV-2 from 49,955 tests (11.6% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 6,963 to 24,304 tests), activity of nearly all viruses is within or below expected levels.

- Activity of influenza remains low and stable at inter-seasonal levels. Influenza B (268 detections; 1.1% positive) is circulating at higher levels compared to influenza A (124 detections; 0.5% 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

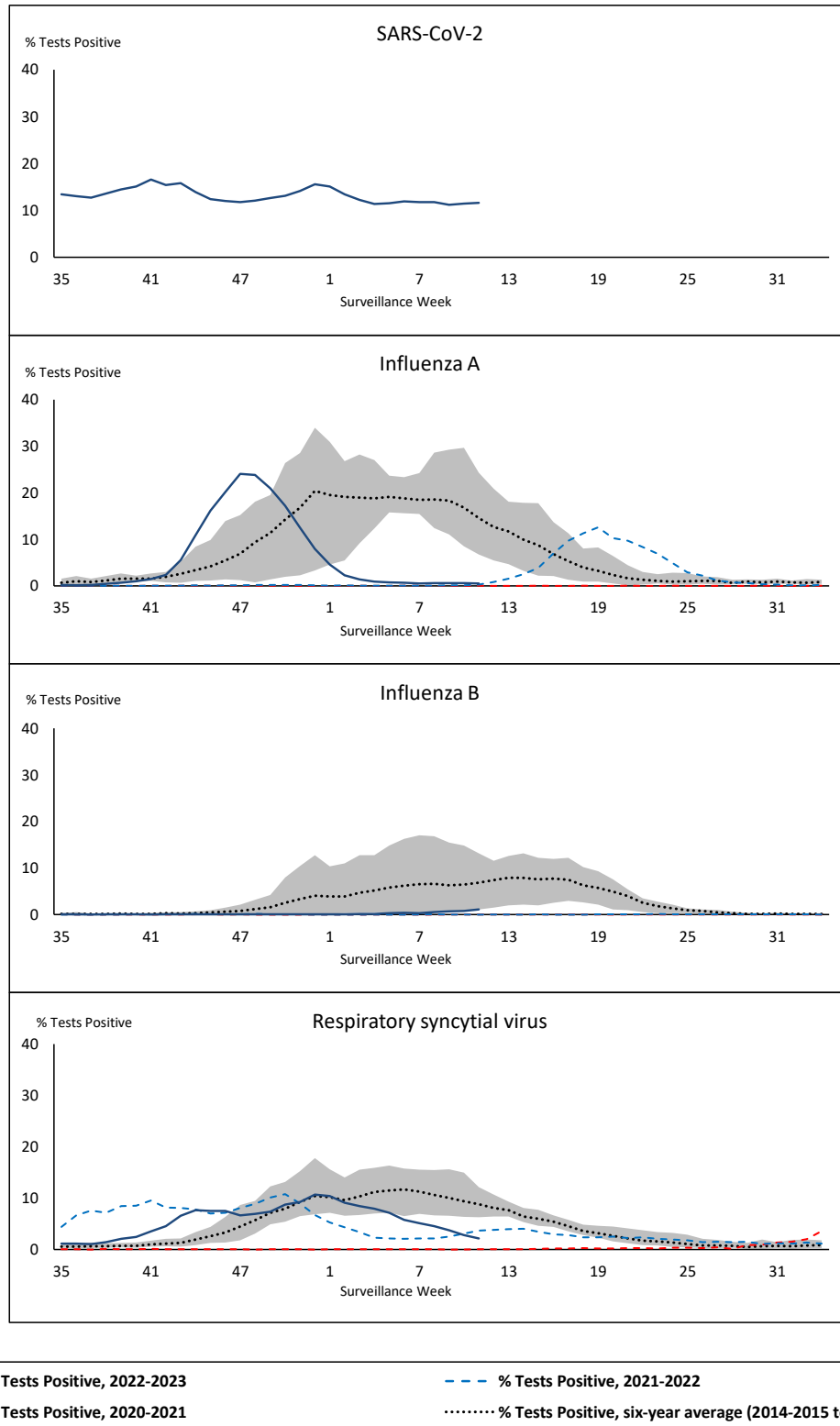
SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2

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



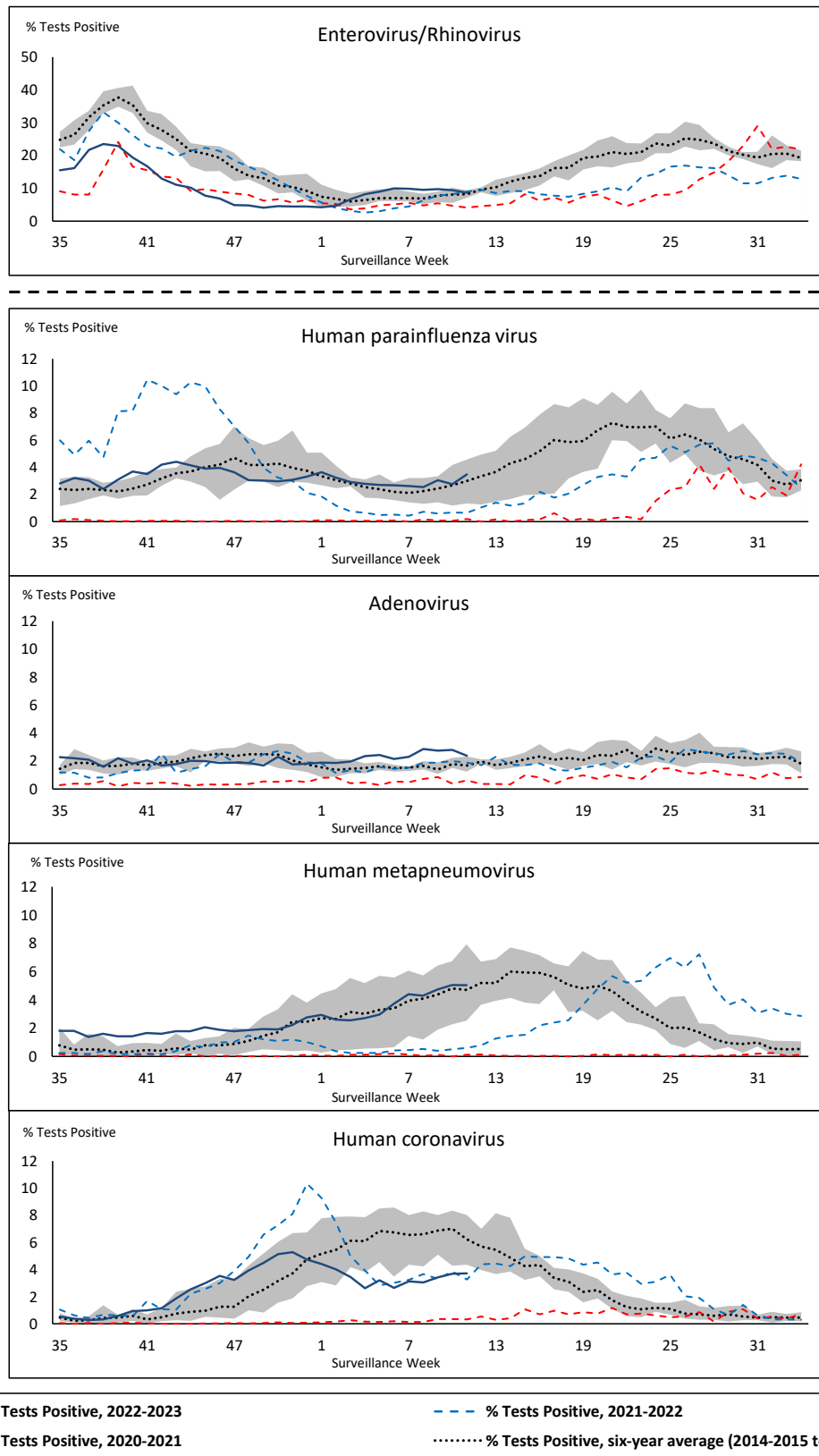
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 18, 2023 (surveillance week 2023-11)

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	491	68	325	0	0	0	0	2	325	31	325	4	0	33	5	0	325	7	325	2	325	24	325	10
Prince Edward Island	595	103	141	0	0	1	1	0	141	8	8	0	0	0	0	0	8	0	8	4	8	0	8	0
Nova Scotia	2145	336	1113	0	0	2	2	1	1113	11	33	0	0	0	0	0	33	2	33	10	33	6	33	5
New Brunswick	1523	319	1245	2	0	5	7	1	1148	20	62	0	0	3	0	0	62	4	62	15	62	6	62	5
Atlantic	4754	826	2824	2	0	8	10	4	2727	70	428	4	0	36	5	0	428	13	428	31	428	36	428	20
Région Nord-Est	1905	214	1447	0	0	24	24	7	367	17	44	1	1	4	0	0	44	2	44	3	N.C.	N.C.	44	3
Québec-Chaudière-Appalaches	3883	331	547	0	0	4	4	5	519	9	163	1	0	3	1	0	175	18	163	8	N.C.	N.C.	163	18
Centre-du-Québec	2728	348	269	0	0	3	3	1	267	10	33	0	0	1	0	0	33	6	33	2	N.C.	N.C.	33	5
Montréal-Laval	4484	455	2893	0	0	24	24	91	1578	33	508	1	2	18	0	0	508	24	515	15	N.C.	N.C.	508	23
Ouest du Québec	2156	215	588	0	0	3	3	10	566	11	12	0	0	0	0	0	12	4	12	0	N.C.	N.C.	12	0
Montréal	2575	249	1137	0	0	4	4	11	900	11	4	0	0	0	0	0	4	1	4	0	N.C.	N.C.	4	0
Province of Québec	17731	1812	6881	0	0	62	62	125	4197	91	764	3	3	26	1	0	776	55	771	28	N.C.	N.C.	764	49
P.H.O.L. - Ottawa	622	180	174	0	0	0	0	0	174	5	123	0	0	0	0	2	123	1	123	13	123	12	123	8
EOCLA	1947	171	379	0	0	0	0	2	379	7	32	0	0	1	0	0	32	0	32	5	32	8	32	2
P.H.O.L. - Kingston	548	95	111	0	0	0	0	0	111	2	69	0	0	0	0	2	69	0	69	3	69	8	69	2
UHN / Mount Sinai Hospital	2105	119	645	2	0	0	2	2	645	6	110	0	1	2	0	0	110	0	110	0	110	3	110	7
P.H.O.L. - Toronto	691	116	678	5	1	0	3	1	678	17	637	0	0	0	0	23	637	24	637	61	637	86	637	45
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	1939	115	1938	7	3	2	12	28	1938	17	1940	0	0	0	0	15	1940	18	1943	60	1943	57	1943	35
P.H.O.L. - Sault Ste. Marie	55	16	28	0	0	0	0	0	28	0	26	0	0	0	0	0	26	0	26	0	26	4	26	3
P.H.O.L. - Timmins	180	9	18	0	0	0	0	0	18	1	18	0	0	0	0	2	18	0	18	2	18	1	18	2
St. Joseph's - London	2917	288	719	0	0	5	5	2	719	10	66	0	0	0	0	1	66	5	66	4	66	10	66	0
P.H.O.L. - London	771	170	317	0	0	0	0	1	317	3	240	0	0	0	0	4	240	2	240	12	240	42	240	5
P.H.O.L. - Orillia	11	4	38	0	0	0	0	1	38	1	36	0	0	0	0	3	36	1	36	1	36	6	36	2
P.H.O.L. - Thunder Bay	119	16	19	0	0	0	0	0	19	1	17	0	0	0	0	0	17	0	17	1	17	17	17	0
P.H.O.L. - Sudbury	34	4	17	0	0	0	0	0	17	4	17	0	0	0	0	1	17	0	17	0	17	0	17	1
P.H.O.L. - Hamilton	387	108	253	0	0	0	0	2	253	3	209	0	0	0	0	4	209	6	209	17	209	24	209	14
P.H.O.L. - Peterborough	125	47	38	0	0	0	0	2	38	1	28	0	0	0	0	0	28	0	28	4	28	4	28	1
St. Joseph's - Hamilton	2394	301	1356	0	0	3	3	19	1356	4	1356	0	0	23	0	0	1356	23	1356	52	1356	73	0	0
Sault Area Hospital	229	35	229	0	0	0	0	0	229	8	67	0	1	2	0	0	67	1	67	0	67	4	67	2
Province of Ontario	15074	1794	6957	14	4	10	25	60	6957	90	4991	0	2	28	0	57	4991	81	4994	235	4994	359	3638	129
Manitoba	1715	262	1345	0	0	1	1	0	1345	25	133	1	2	0	0	0	133	1	156	6	133	16	156	10
Saskatchewan	2226	195	758	0	0	3	3	2	683	25	226	6	1	3	1	0	225	10	225	13	225	29	226	8
Alberta	4421	388	2898	6	2	4	12	58	2683	37	1097	22	3	33	2	0	1097	14	1097	44	1067	105	1097	20
Prairies	8362	845	5001	6	2	8	16	60	4711	87	1456	29	6	36	3	0	1455	25	1478	63	1425	150	1479	38
British Columbia	3828	498	2534	1	2	0	11	16	2400	103	682	4	4	39	3	0	682	25	682	64	654	100	654	23
Yukon	75	8	15	0	0	0	0	1	15	5	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	27	0	24	0	0	0	0	0	24	6	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	24	6	N.C.
Nunavut	104	13	68	0	0	0	0	2	68	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	206	21	107	0	0	0	0	3	107	18	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	24	6	N.C.
CANADA	49955	5796	24304	23	8	88	124	268	21099	459	8321	40	15	165	12	57	8332	199	8353	421	7525	651	6963	259

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 March 18, 2023 (surveillance weeks 2022-35 to 2023-11)

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	16906	3234	9463	1	246	669	916	2	9463	408	9463	24	30	210	32	0	9463	191	9463	318	9463	756	9463	361	
Prince Edward Island	29536	6709	3256	1	119	245	365	2	3256	346	1070	16	25	77	6	0	1070	65	1070	32	1070	323	1070	31	
Nova Scotia	114853	22953	34095	0	4	3614	3618	4	34085	2320	1096	5	16	28	3	0	1102	41	1092	33	1102	210	1102	44	
New Brunswick	98583	14639	41359	6	133	4420	4559	8	33551	1990	2921	7	23	138	7	0	2921	210	2921	135	2921	527	2866	182	
Atlantic	259878	47535	88173	8	502	8948	9458	16	80355	5064	14550	52	94	453	48	0	14556	507	14546	518	14556	1816	14501	618	
Région Nord-Est	76069	9616	42233	0	4	3721	3725	28	13599	1304	1129	13	4	70	0	0	1129	78	1120	76	N.C.	N.C.	1129	72	
Québec-Chaudière-Appalaches	164707	16242	21311	0	0	2817	2817	22	20764	1850	5887	22	5	64	2	0	6262	482	5887	295	N.C.	N.C.	5887	262	
Centre-du-Québec	129952	18215	13679	0	0	1756	1756	29	11950	920	814	13	0	37	2	0	814	88	814	65	N.C.	N.C.	814	56	
Montréal-Laval	179826	23090	80040	0	9	6106	6115	469	42848	2550	17927	126	16	369	13	0	17936	793	18055	680	N.C.	N.C.	17612	637	
Ouest du Québec	100288	13355	19243	0	7	2177	2184	44	17087	1261	886	20	0	63	1	0	885	172	886	53	N.C.	N.C.	887	50	
Montréal	125240	14655	20683	0	0	1672	1672	37	19539	1087	118	0	0	2	0	0	118	4	118	6	N.C.	N.C.	118	3	
Province of Québec	776082	95173	197189	0	20	18249	18269	629	125787	8972	26761	194	25	605	18	0	27144	1617	26880	1175	N.C.	N.C.	26447	1080	
P.H.O.L. - Ottawa	26256	6594	4541	17	136	66	214	0	4541	347	3183	0	0	0	0	71	3183	12	3183	75	3183	284	3183	129	
EOURLA	76740	7921	13612	0	0	1393	1393	7	13612	1267	1086	9	3	46	16	0	1086	48	1086	48	1086	248	1086	68	
P.H.O.L. - Kingston	26856	4528	2430	2	92	38	132	1	2429	176	1967	0	0	0	0	75	1968	27	1968	42	1967	237	1968	61	
UHN / Mount Sinai Hospital	84080	6487	18698	6	43	346	395	23	18698	289	1688	0	1	14	1	0	1655	5	1688	11	1688	52	1688	72	
P.H.O.L. - Toronto	47814	10233	22757	98	2401	144	1107	15	22727	1261	19828	0	0	0	0	781	19832	351	19828	476	19828	1747	19828	862	
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	72153	5239	72154	100	1464	724	2288	105	72155	2169	49382	4	0	16	0	533	49395	467	49644	582	49592	1643	49484	775	
P.H.O.L. - Sault Ste. Marie	1614	319	603	1	52	15	58	0	603	22	536	0	0	0	0	50	536	4	536	30	536	25	536	38	
P.H.O.L. - Timmins	8287	814	905	0	161	6	156	0	904	96	872	0	0	0	0	51	872	12	872	17	872	70	872	37	
St. Joseph's - London	111023	14177	16314	0	0	880	880	32	16314	987	1711	0	0	0	0	58	1745	57	1745	32	1745	255	1333	77	
P.H.O.L. - London	33084	7157	9526	11	584	62	639	12	9525	871	7578	0	0	0	0	355	7579	95	7579	131	7578	685	7579	265	
P.H.O.L. - Orillia	527	246	2072	6	261	23	290	1	2072	226	1999	0	0	0	0	116	1999	41	1999	61	1999	281	1999	94	
P.H.O.L. - Thunder Bay	7830	1590	907	0	107	3	110	0	906	96	798	0	0	0	0	33	798	17	798	15	798	73	798	20	
P.H.O.L. - Sudbury	1900	293	681	1	65	14	67	0	681	68	571	0	0	0	0	26	571	7	571	28	571	34	571	22	
P.H.O.L. - Hamilton	23413	6294	7683	7	300	92	399	15	7680	530	5556	0	0	0	0	215	5558	96	5556	119	5556	516	5556	205	
P.H.O.L. - Peterborough	4513	897	1190	0	67	11	78	2	1190	113	930	0	0	0	0	29	930	12	930	35	930	129	930	33	
St. Joseph's - Hamilton	84154	12456	37688	0	0	2703	2703	91	37688	2238	37688	0	0	908	0	0	37688	411	37688	554	37688	2550	0	0	
Sault Area Hospital	11468	2003	7384	1	262	257	520	0	7384	134	2270	35	2	54	4	0	2270	39	2270	91	2270	215	2270	60	
Province of Ontario	621712	87248	219145	250	5995	6777	11429	304	219109	10890	137643	48	6	1038	21	2393	137665	1701	137941	2347	137887	9044	99681	2818	
Manitoba	59364	10219	32705	16	202	1771	1989	8	32705	1683	4520	11	9	156	6	0	4510	119	4681	189	4520	644	4681	189	
Saskatchewan	147807	11857	35209	2	41	3856	3899	19	27730	2121	11592	51	49	501	10	0	11594	284	11596	614	11594	1094	11590	400	
Alberta	201340	30558	106105	946	7291	2795	11032	227	92522	7518	36910	242	75	799	41	0	36897	474	36854	1045	36264	3300	36910	994	
Prairies	408511	52634	174019	964	7534	8422	16920	254	152957	11322	53022	304	133	1456	57	0	53001	877	53131	1848	52378	5038	53181	1583	
British Columbia	205240	20518	107515	373	4349	302	8814	142	100560	7764	23156	168	173	880	145	6	23144	594	23144	785	22426	3502	22423	891	
Yukon	4749	361	721	2	136	0	138	5	719	47	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	1477	178	1338	2	147	1	150	1	1338	97	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1338	270	N.C.	N.C.
Nunavut	3833	360	1961	3	230	3	236	14	1961	66	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	10059	899	4020	7	513	4	524	20	4018	210	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1338	270	N.C.	N.C.
CANADA	2281482	304007	790061	1602	18913	42702	65414	1365	682786	44222	255132	766	431	4432	289	2399	255510	5296	255642	6673	228585	19670	216233	6990	

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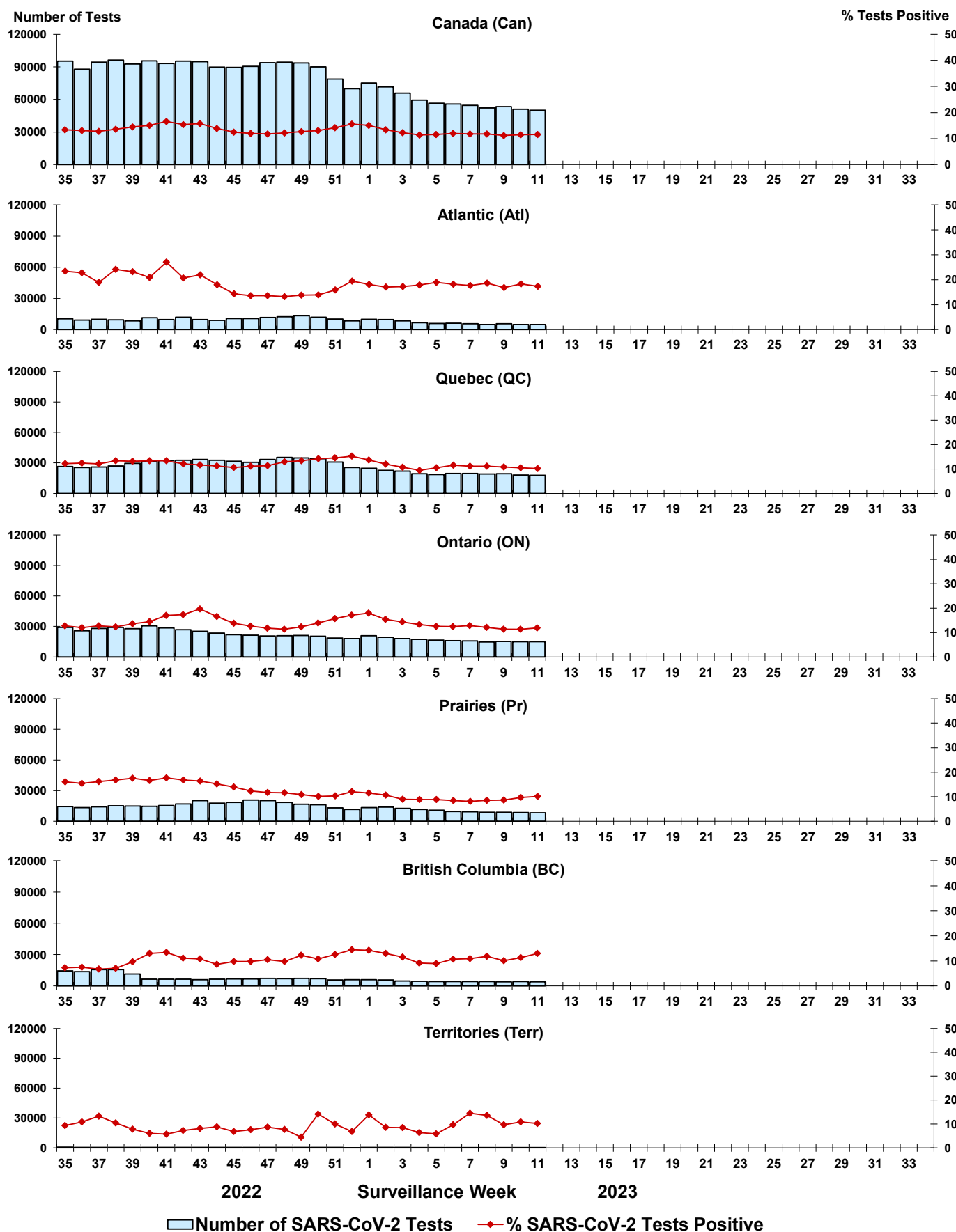
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Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests positive.

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

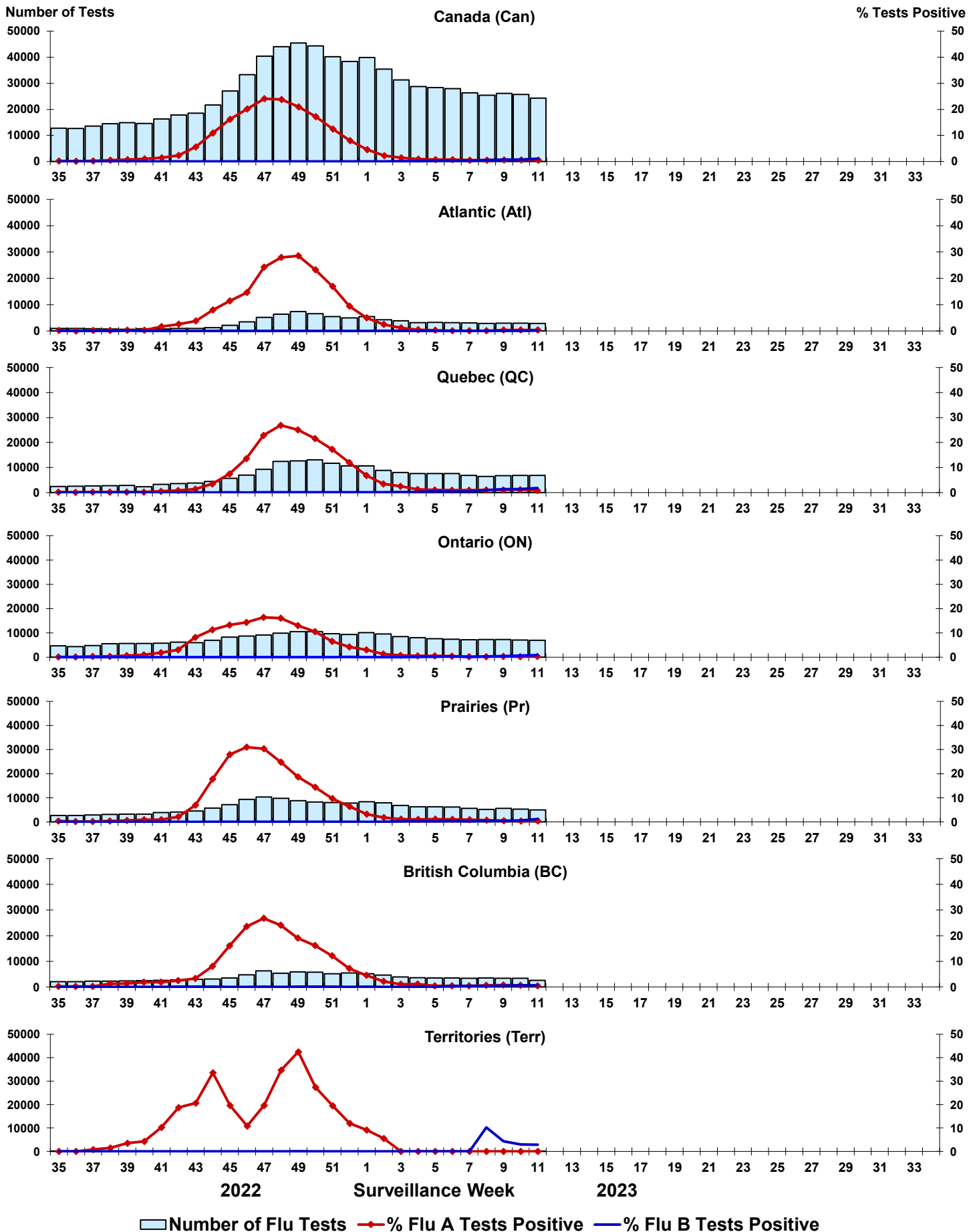


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

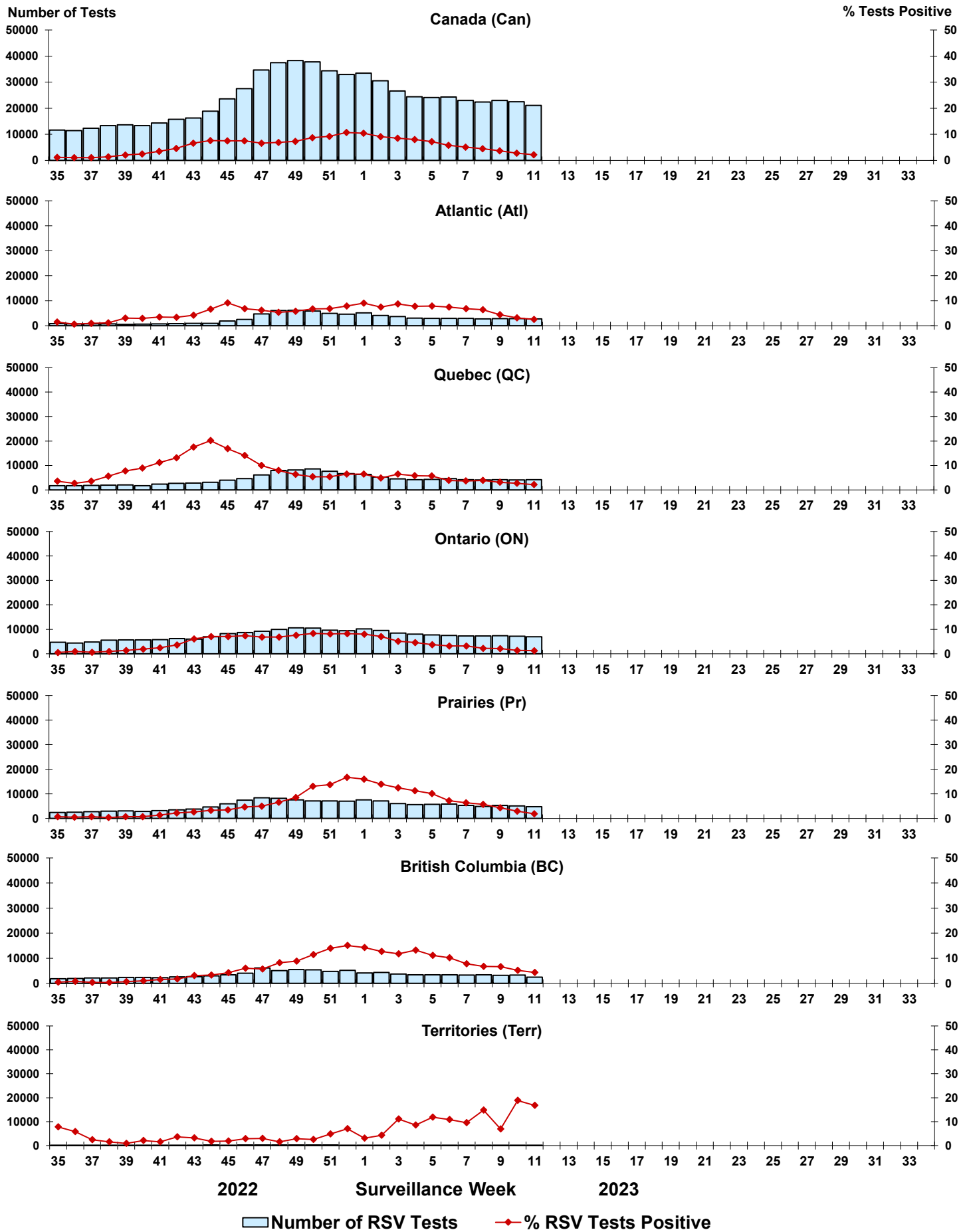


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

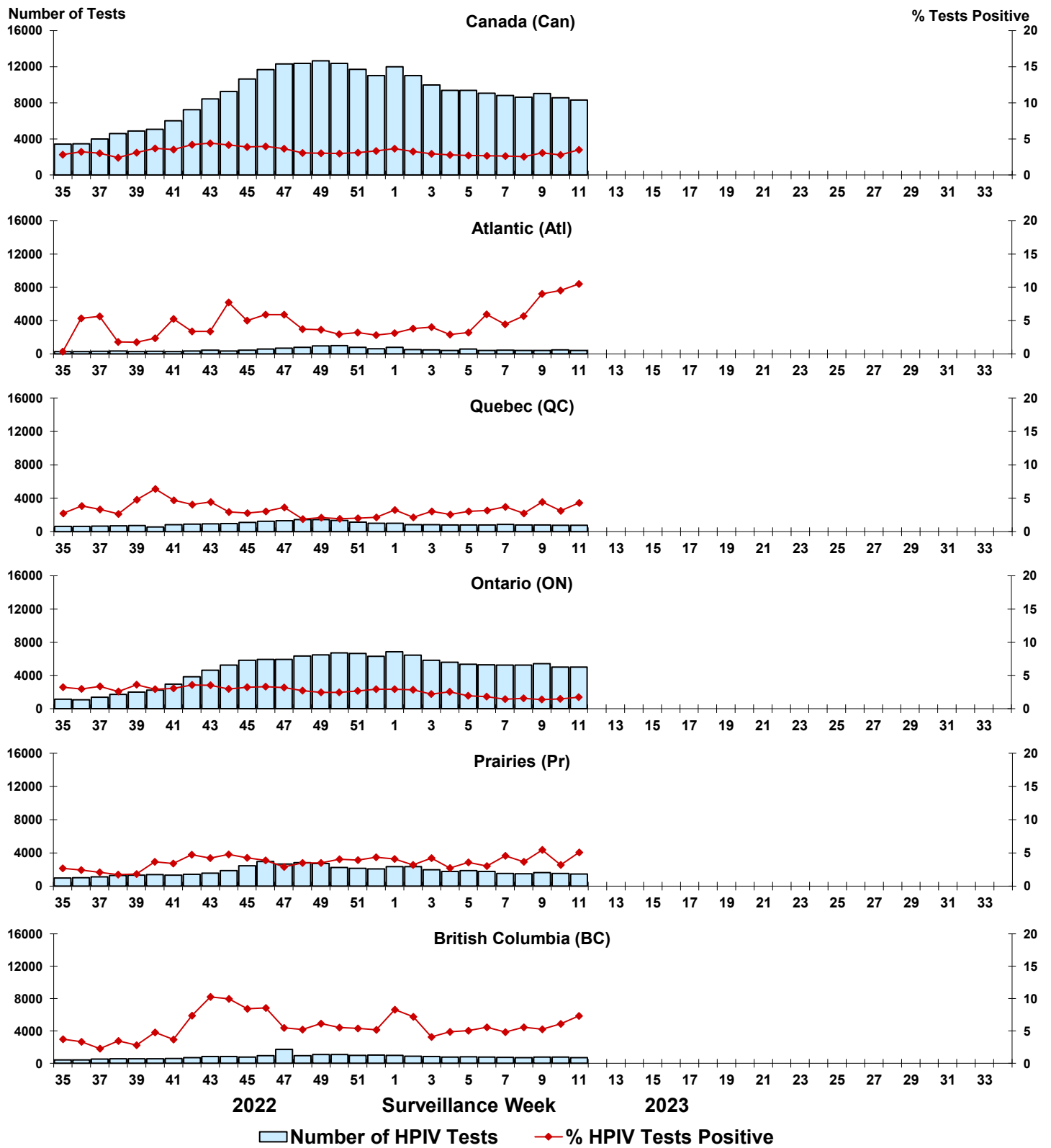


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

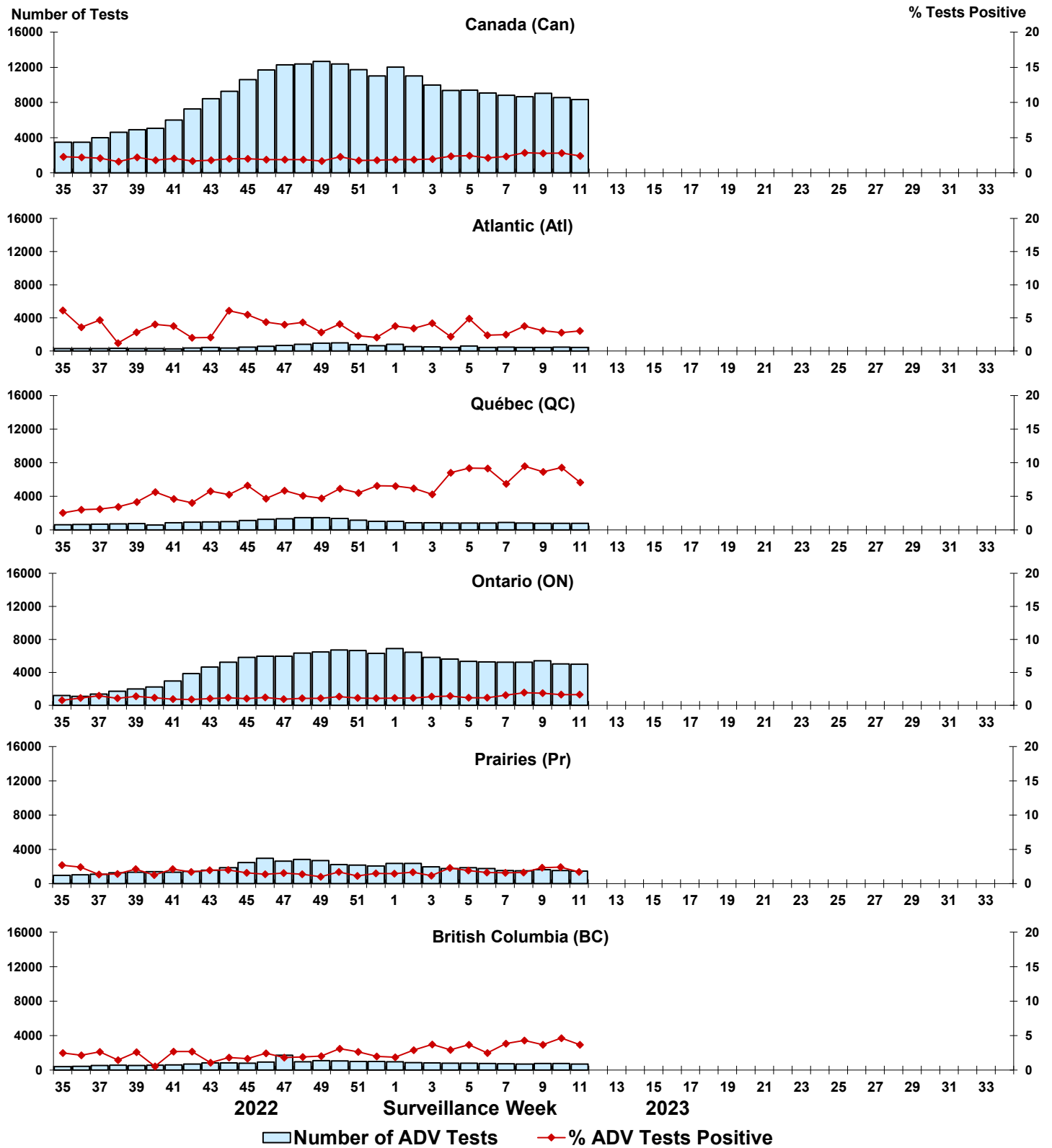


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

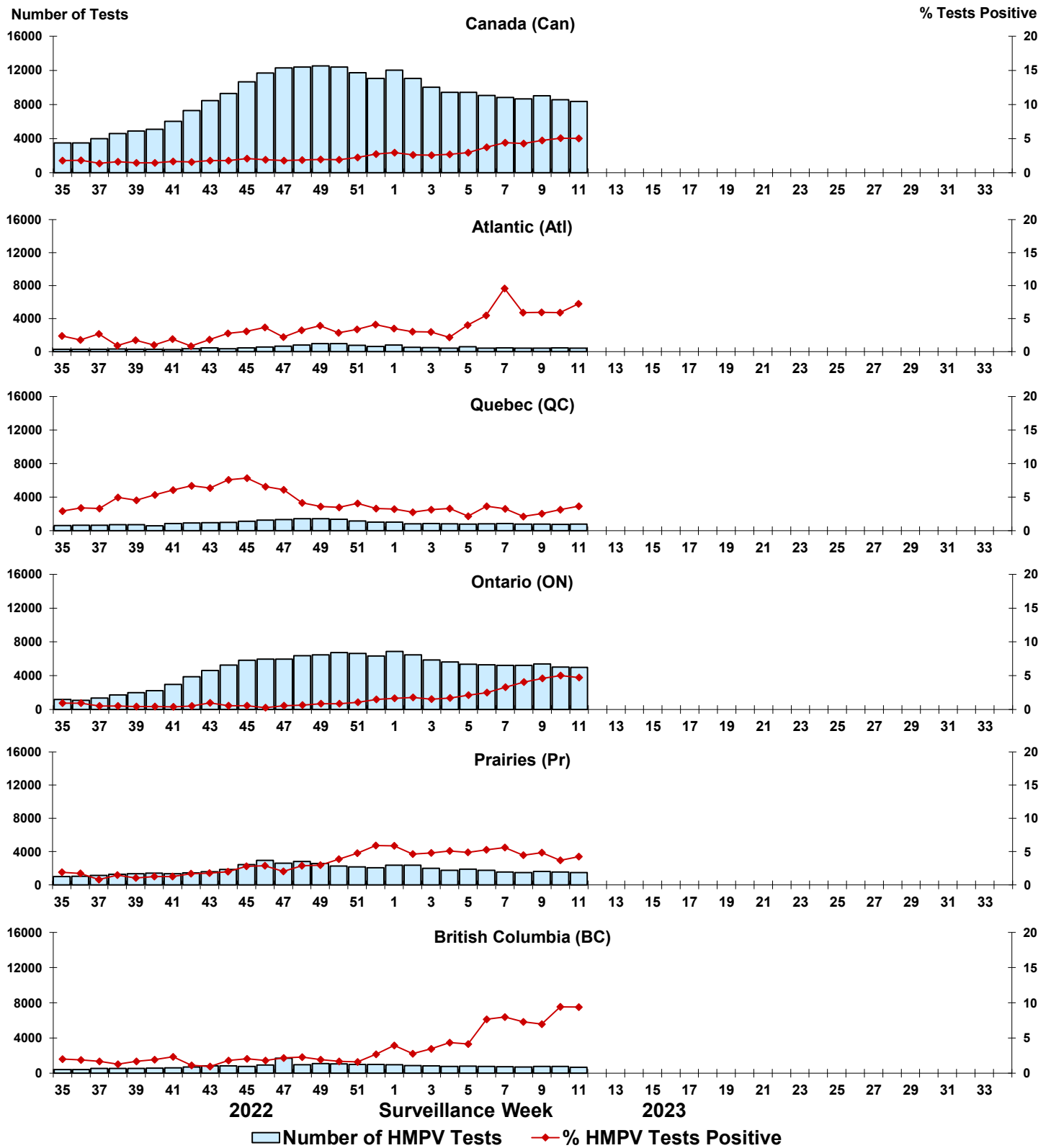


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

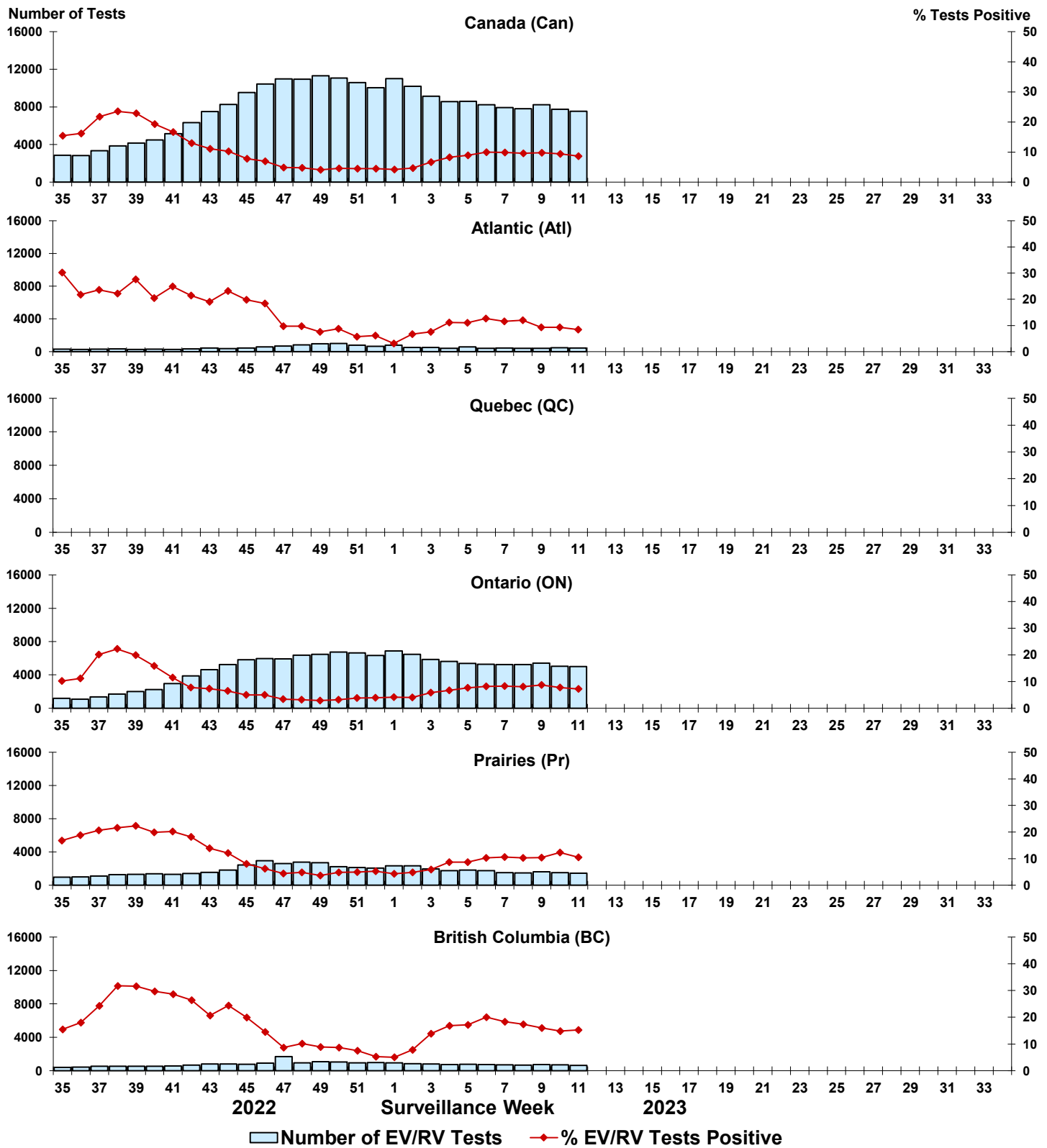


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

