

RESPIRATORY VIRUS DETECTION REPORT

March 5 to March 11, 2023
(Surveillance Week 2023-10)



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 10 (week ending March 11, 2023) in Canada, participating RVDSS laboratories reported 5,801 detections of SARS-CoV-2 from 50,807 tests (11.4% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 7,012 to 24,583 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 (147 detections; 0.6% positive) and influenza B (193 detections; 0.8% 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

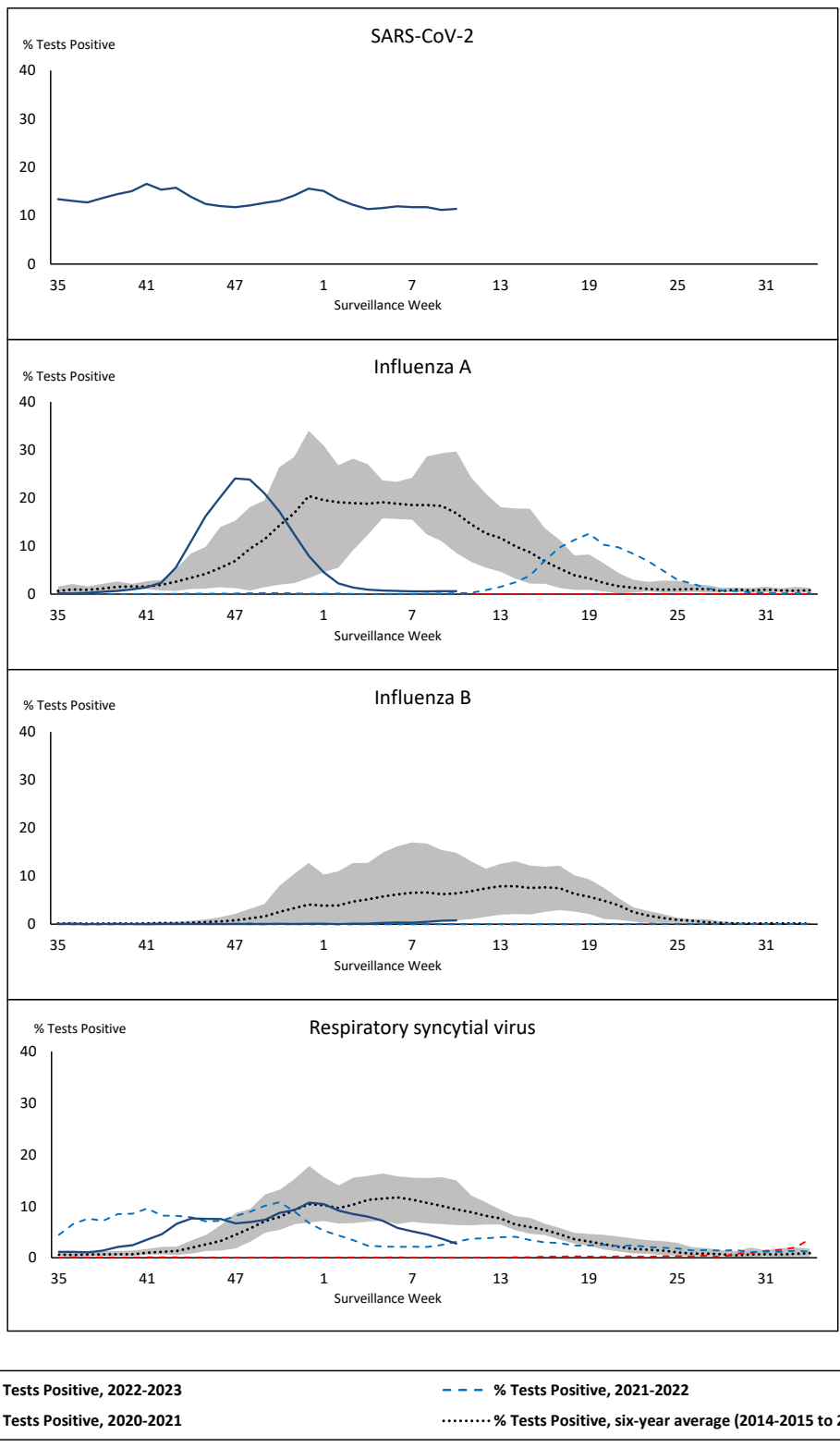
SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2

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



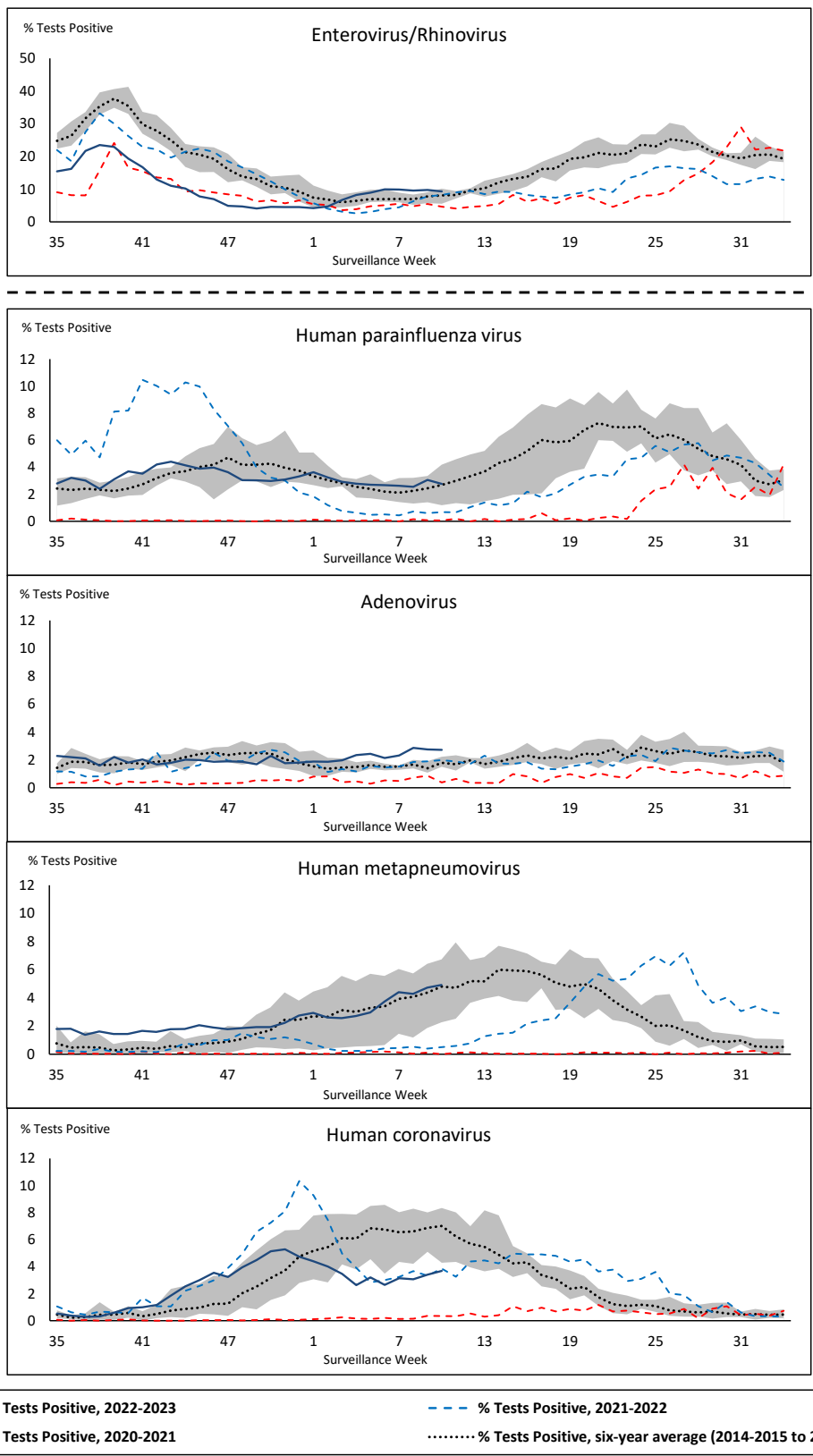
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 11, 2023 (surveillance week 2023-10)

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	555	90	356	0	0	0	0	0	356	20	356	1	0	34	3	0	356	5	356	9	356	24	356	14	
Prince Edward Island	462	63	36	0	0	0	0	0	36	1	8	0	0	1	0	0	8	2	8	1	8	1	8	0	
Nova Scotia	2091	327	1121	0	0	0	0	1	1121	31	28	0	0	1	0	0	28	0	28	5	28	4	28	3	
New Brunswick	1715	401	1358	0	1	8	9	0	1252	30	79	1	0	4	0	0	79	5	79	12	79	14	79	8	
Atlantic	4823	881	2871	0	1	8	9	1	2765	82	471	2	0	40	3	0	471	12	471	27	471	43	471	25	
Région Nord-Est	1953	186	1409	0	0	26	26	5	382	22	37	2	0	1	0	0	37	4	37	2	N.C.	N.C.	37	5	
Québec-Chaudière-Appalaches	4021	397	532	0	0	4	4	2	488	10	167	0	0	2	0	0	180	19	167	15	N.C.	N.C.	167	11	
Centre-du-Québec	2940	400	312	0	0	3	3	1	312	10	36	0	0	3	0	0	36	7	36	0	N.C.	N.C.	36	6	
Montréal-Laval	4203	390	2851	0	0	34	34	73	1410	27	483	0	1	12	0	0	483	27	485	4	N.C.	N.C.	483	32	
Ouest du Québec	2270	219	660	0	0	6	6	4	639	19	30	0	0	3	0	0	30	8	30	2	N.C.	N.C.	30	7	
Montérégie	2645	302	614	0	0	3	3	5	601	6	4	0	0	0	0	0	4	1	4	0	N.C.	N.C.	4	0	
Province of Québec	18032	1894	6378	0	0	76	76	90	3832	94	757	2	1	21	0	0	770	66	759	23	N.C.	N.C.	757	61	
P.H.O.L. - Ottawa	630	159	215	0	1	0	1	0	215	10	131	0	0	0	0	1	131	0	131	9	131	20	131	11	
EOURLA	2080	162	436	0	0	3	3	0	436	9	34	0	0	1	0	0	34	1	34	1	34	10	34	2	
P.H.O.L. - Kingston	541	67	88	0	0	0	0	0	88	2	62	0	0	0	0	3	62	0	62	3	62	9	62	0	
UHN / Mount Sinai Hospital	2136	116	647	0	0	0	0	1	647	7	95	0	0	0	0	0	95	0	95	1	95	6	95	3	
P.H.O.L. - Toronto	510	106	679	7	1	1	7	1	679	13	636	0	0	0	0	11	636	15	636	67	636	92	636	33	
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	1964	107	1964	4	0	2	6	15	1965	9	1971	0	0	0	0	23	1971	20	1975	66	1975	82	1975	25	
P.H.O.L. - Sault Ste. Marie	27	7	19	0	0	0	0	0	19	1	19	0	0	0	0	4	19	0	19	0	19	1	19	3	
P.H.O.L. - Timmins	176	8	24	0	0	0	0	0	24	0	20	0	0	0	0	0	20	0	20	1	20	8	20	0	
St. Joseph's - London	2736	276	766	0	0	1	1	6	766	7	66	0	0	0	0	1	66	2	66	5	66	6	66	5	
P.H.O.L. - London	722	156	336	0	0	0	0	3	336	3	219	0	0	0	0	4	219	5	219	13	219	26	219	9	
P.H.O.L. - Orillia	3	0	42	0	1	0	1	0	42	1	41	0	0	0	0	2	41	3	41	1	41	8	41	1	
P.H.O.L. - Thunder Bay	131	16	31	0	0	0	0	0	31	2	10	0	0	0	0	1	10	0	10	0	10	2	10	1	
P.H.O.L. - Sudbury	30	3	17	0	0	0	0	0	17	1	17	0	0	0	0	1	17	0	17	2	17	0	17	1	
P.H.O.L. - Hamilton	359	122	240	0	0	0	0	0	240	8	199	0	0	0	0	2	199	6	199	17	199	16	199	9	
P.H.O.L. - Peterborough	311	81	38	0	0	0	0	0	38	4	32	0	0	0	0	0	32	2	32	2	32	5	32	3	
St. Joseph's - Hamilton	2460	276	1408	0	0	2	2	24	1408	13	1408	0	0	16	0	0	1408	27	1408	64	1408	95	0	0	
Sault Area Hospital	180	38	180	0	0	0	0	0	180	10	53	0	1	1	1	0	53	0	53	0	53	5	53	6	
Province of Ontario	14996	1700	7130	11	3	9	21	50	7131	100	5013	0	1	18	1	53	5013	81	5017	252	5017	391	3609	112	
Manitoba	1637	217	1315	0	1	4	5	0	1315	40	123	1	3	1	0	0	123	2	198	4	123	18	198	6	
Saskatchewan	2567	213	855	0	0	4	4	3	793	41	332	3	2	3	0	0	332	8	332	12	332	56	332	9	
Alberta	4408	406	2614	6	2	4	12	25	2437	53	1007	12	6	15	1	0	1007	26	1005	38	989	103	1007	17	
Prairies	8612	836	4784	6	3	12	21	28	4545	134	1462	16	11	19	1	0	1462	36	1535	54	1444	177	1537	32	
British Columbia	4122	465	3319	4	1	0	20	21	3180	165	678	2	3	34	3	0	678	33	678	60	638	95	638	29	
Yukon	98	13	25	0	0	0	0	2	25	4	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	30	4	28	0	0	0	0	1	28	6	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	28	3	N.C.	N.C.
Nunavut	94	8	48	0	0	0	0	0	48	6	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	222	25	101	0	0	0	0	3	101	16	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	28	3	N.C.	N.C.	
CANADA	50807	5801	24583	21	8	105	147	193	21554	591	8381	22	16	132	8	53	8394	228	8460	416	7598	709	7012	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

Delays in the reporting of data may cause data to change retrospectively.

Table 2: Cumulative respiratory virus detections from August 28, 2022 to March 11, 2023 (surveillance weeks 2022-35 to 2023-10)

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	16415	3166	9138	1	246	669	916	0	9138	377	9138	20	30	177	27	0	9138	184	9138	316	9138	732	9138	351	
Prince Edward Island	28805	6578	3037	1	119	244	364	2	3037	331	1061	16	25	77	6	0	1061	64	1061	27	1061	322	1061	31	
Nova Scotia	112708	22617	32982	0	4	3612	3616	3	32972	2309	1063	5	16	28	3	0	1069	39	1059	23	1069	204	1069	39	
New Brunswick	97060	14320	40114	4	133	4415	4552	7	32403	1970	2859	5	23	135	7	0	2859	206	2859	120	2859	521	2804	177	
Atlantic	254988	46681	85271	6	502	8940	9448	12	77550	4987	14121	48	94	417	43	0	14127	493	14117	486	14127	1779	14072	598	
Région Nord-Est	74165	9402	40786	0	4	3697	3701	21	13232	1287	1085	12	3	66	0	0	1085	76	1076	73	N.C.	N.C.	1085	69	
Québec-Chaudière-Appalaches	160823	15909	20764	0	0	2813	2813	17	20245	1841	5724	21	5	61	1	0	6080	458	5724	287	N.C.	N.C.	5724	244	
Centre-du-Québec	127173	17865	13412	0	0	1753	1753	28	11685	910	781	13	0	36	2	0	781	82	781	63	N.C.	N.C.	781	51	
Montréal-Laval	175343	22635	77140	0	9	6082	6091	378	41264	2517	17412	125	14	351	13	0	17421	768	17533	664	N.C.	N.C.	17097	613	
Ouest du Québec	98134	13140	18653	0	7	2174	2181	34	16519	1250	874	20	0	63	1	0	873	168	874	53	N.C.	N.C.	875	50	
Montérégie	122664	14405	18666	0	0	1654	1654	23	18038	1042	110	0	0	2	0	0	110	3	110	6	N.C.	N.C.	110	3	
Province of Québec	758302	93356	189421	0	20	18173	18193	501	120983	8847	25986	191	22	579	17	0	26350	1555	26098	1146	N.C.	N.C.	25672	1030	
P.H.O.L. - Ottawa	25634	6414	4367	17	136	66	214	0	4367	342	3060	0	0	0	0	69	3060	11	3060	62	3060	272	3060	121	
EOURLA	74793	7750	13233	0	0	1393	1393	5	13233	1260	1054	9	3	45	16	0	1054	48	1054	43	1054	240	1054	66	
P.H.O.L. - Kingston	26308	4433	2319	2	92	38	132	1	2318	174	1898	0	0	0	0	73	1899	27	1899	39	1898	229	1899	59	
UHN / Mount Sinai Hospital	81975	6368	18053	4	43	346	393	21	18053	283	1578	0	0	12	1	0	1545	5	1578	11	1578	49	1578	65	
P.H.O.L. - Toronto	47123	10117	22079	93	2400	144	1104	14	22049	1244	19191	0	0	0	0	758	19195	327	19191	415	19191	1661	19191	817	
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	70215	5124	70217	93	1461	723	2277	77	70218	2152	47443	4	0	16	0	518	47456	449	47702	522	47650	1586	47542	740	
P.H.O.L. - Sault Ste. Marie	1569	303	575	1	52	15	58	0	575	22	510	0	0	0	0	50	510	4	510	30	510	21	510	35	
P.H.O.L. - Timmins	8107	805	887	0	161	6	156	0	886	95	854	0	0	0	0	49	854	12	854	15	854	69	854	35	
St. Joseph's - London	108106	13889	15595	0	0	875	875	30	15595	977	1645	0	0	0	0	57	1679	52	1679	28	1679	245	1267	77	
P.H.O.L. - London	32313	6987	9209	11	584	62	639	11	9208	868	7338	0	0	0	0	351	7339	93	7339	119	7338	643	7339	260	
P.H.O.L. - Orillia	516	242	2034	6	261	23	290	0	2034	225	1963	0	0	0	0	113	1963	40	1963	60	1963	275	1963	92	
P.H.O.L. - Thunder Bay	7711	1574	888	0	107	3	110	0	887	95	774	0	0	0	0	33	774	17	774	14	774	56	774	20	
P.H.O.L. - Sudbury	1866	289	664	1	65	14	67	0	664	64	554	0	0	0	0	25	554	7	554	28	554	34	554	21	
P.H.O.L. - Hamilton	23026	6186	7430	7	300	92	399	13	7427	527	5347	0	0	0	0	211	5349	90	5347	102	5347	492	5347	191	
P.H.O.L. - Peterborough	4388	850	1152	0	67	11	78	0	1152	112	902	0	0	0	0	29	902	12	902	31	902	125	902	32	
St. Joseph's - Hamilton	81760	12155	36332	0	0	2700	2700	72	36332	2234	36332	0	0	885	0	0	36332	388	36332	502	36332	2477	0	0	
Sault Area Hospital	11239	1968	7155	1	262	257	520	0	7155	126	2203	35	1	52	4	0	2203	38	2203	91	2203	211	2203	58	
Province of Ontario	606639	85454	212189	236	5991	6768	11405	244	212153	10800	132646	48	4	1010	21	2336	132668	1620	132941	2112	132887	8685	96037	2689	
Manitoba	57649	9957	31358	16	202	1770	1988	8	31358	1658	4385	10	7	156	6	0	4375	118	4591	183	4385	628	4591	179	
Saskatchewan	145581	11662	34396	2	41	3853	3896	16	26999	2092	11366	45	48	498	9	0	11369	274	11371	601	11369	1065	11364	392	
Alberta	196909	30165	102707	939	7288	2792	11019	166	89381	7471	35739	219	72	765	39	0	35726	459	35683	998	35126	3185	35739	971	
Prairies	400139	51784	168461	957	7531	8415	16903	190	147738	11221	51490	274	127	1419	54	0	51470	851	51645	1782	50880	4878	51694	1542	
British Columbia	201412	20020	104887	367	4347	301	8802	125	98066	7657	22398	164	169	837	142	6	22386	567	22386	710	21696	3391	21693	868	
Yukon	4674	354	706	2	136	0	138	4	704	42	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	1450	178	1314	2	147	1	150	1	1314	91	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1314	264	N.C.	N.C.
Nunavut	3729	347	1893	3	230	3	236	12	1893	56	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	9853	879	3913	7	513	4	524	17	3911	189	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1314	264	N.C.	N.C.	
CANADA	2231333	298174	764142	1573	18904	42601	65275	1089	660401	43701	246641	725	416	4262	277	2342	247001	5086	247187	6236	220904	18997	209168	6727	

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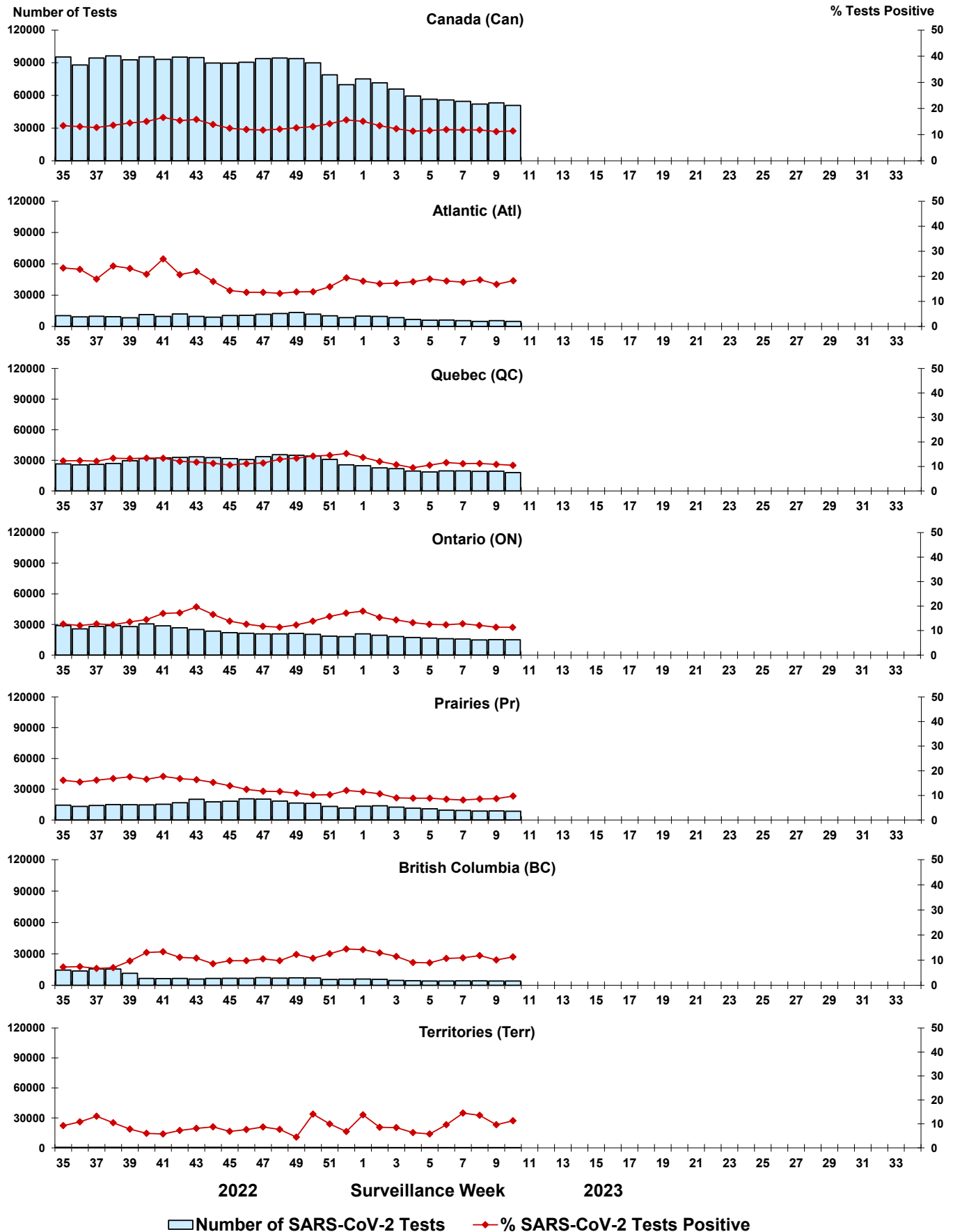
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Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests

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

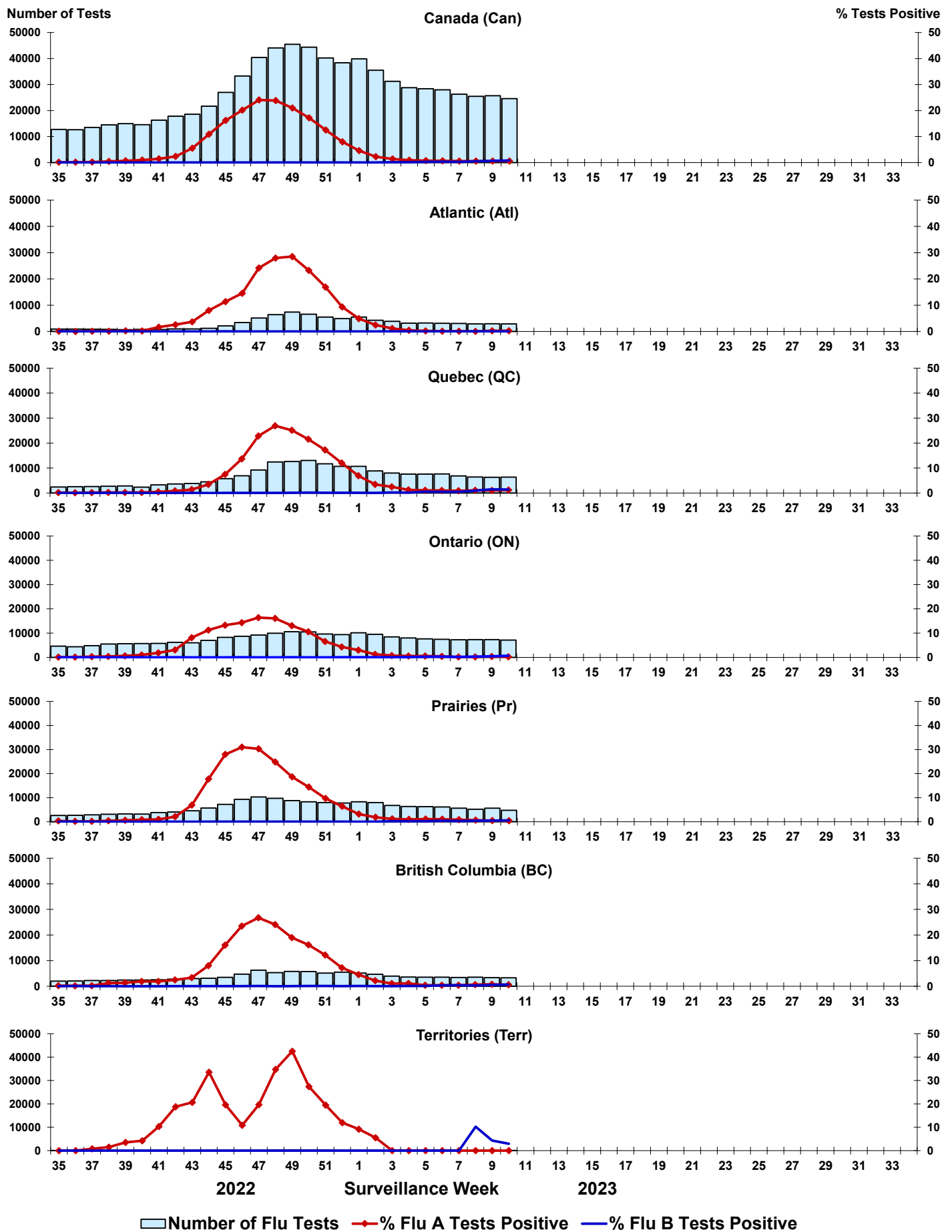


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

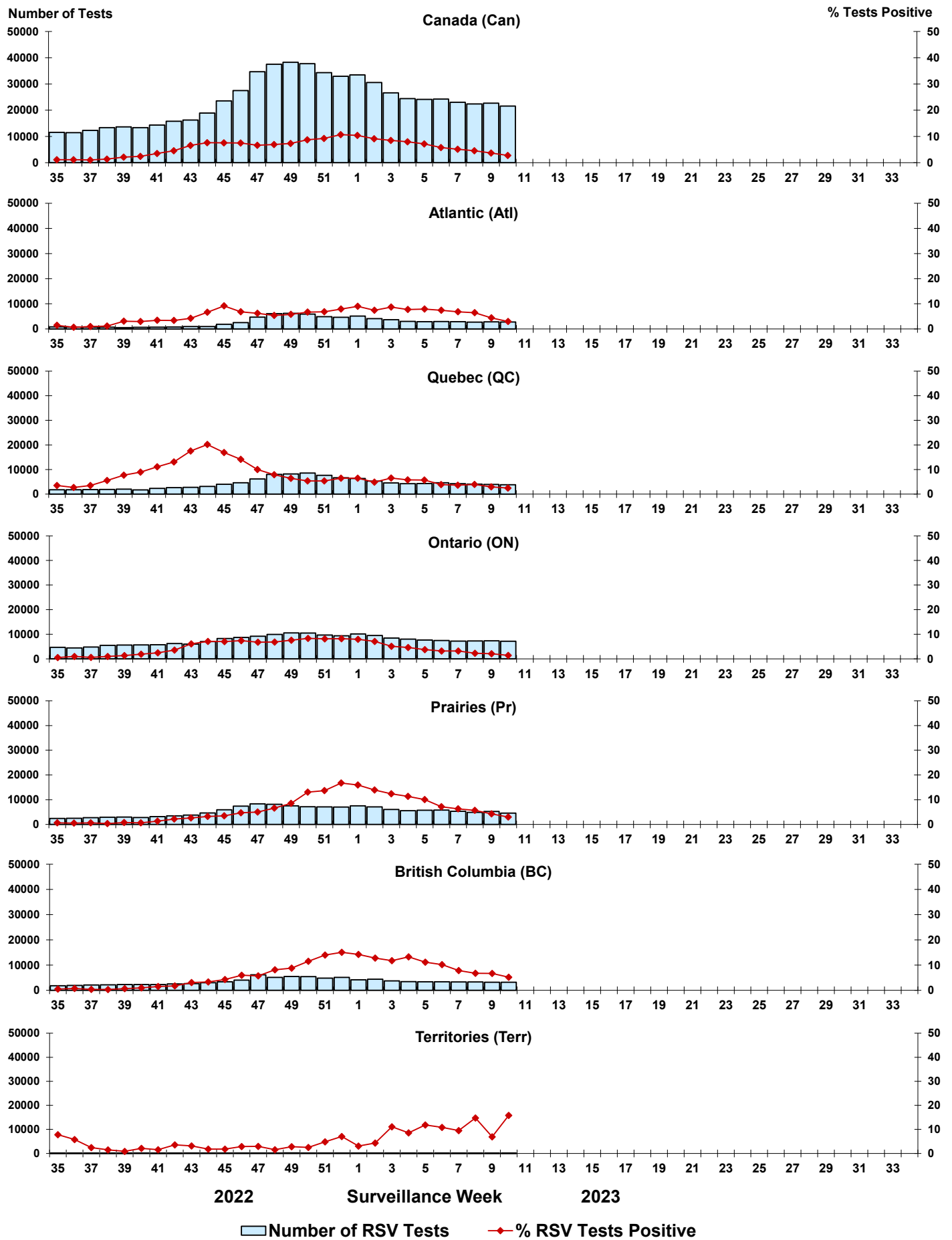


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

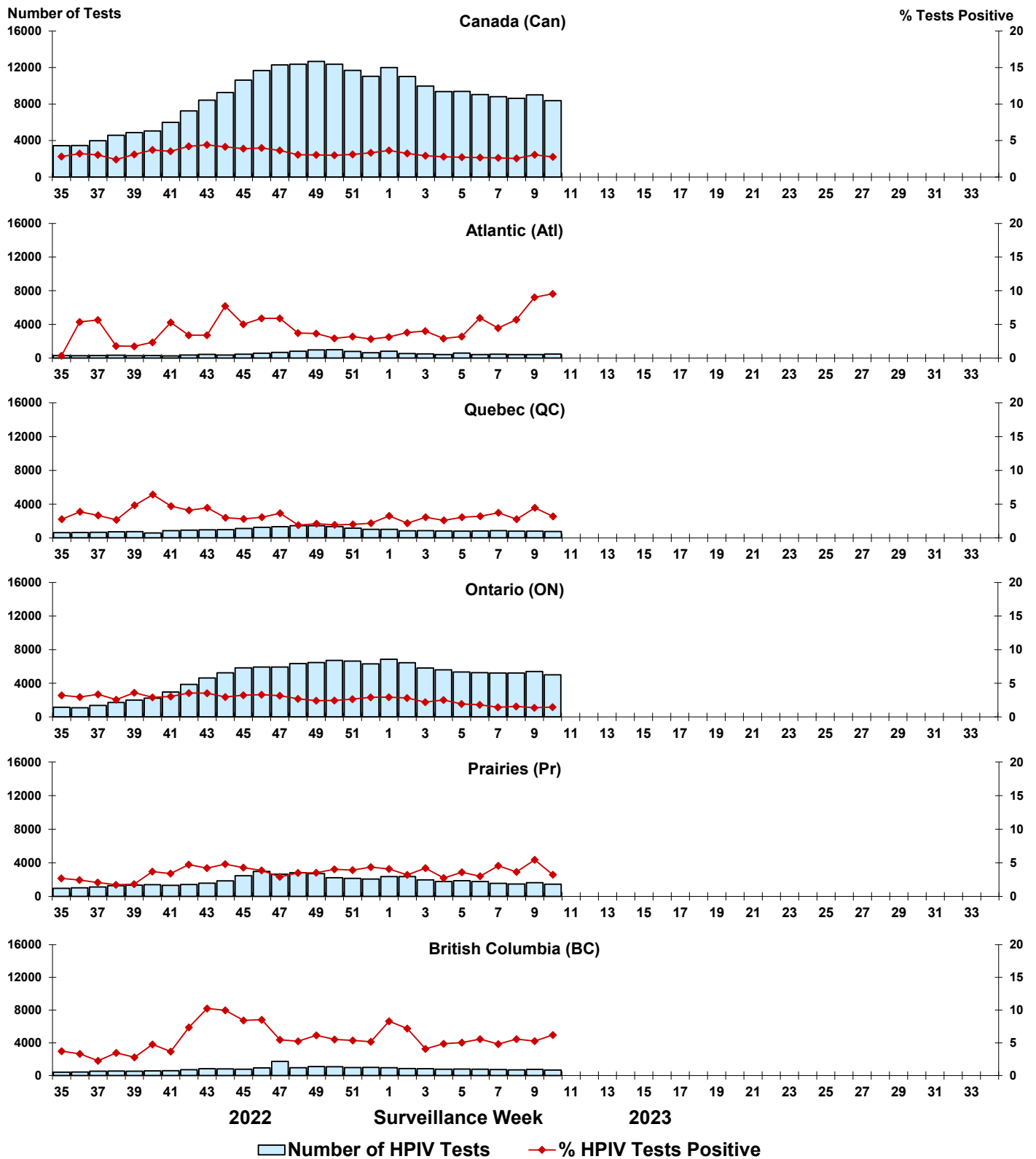


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

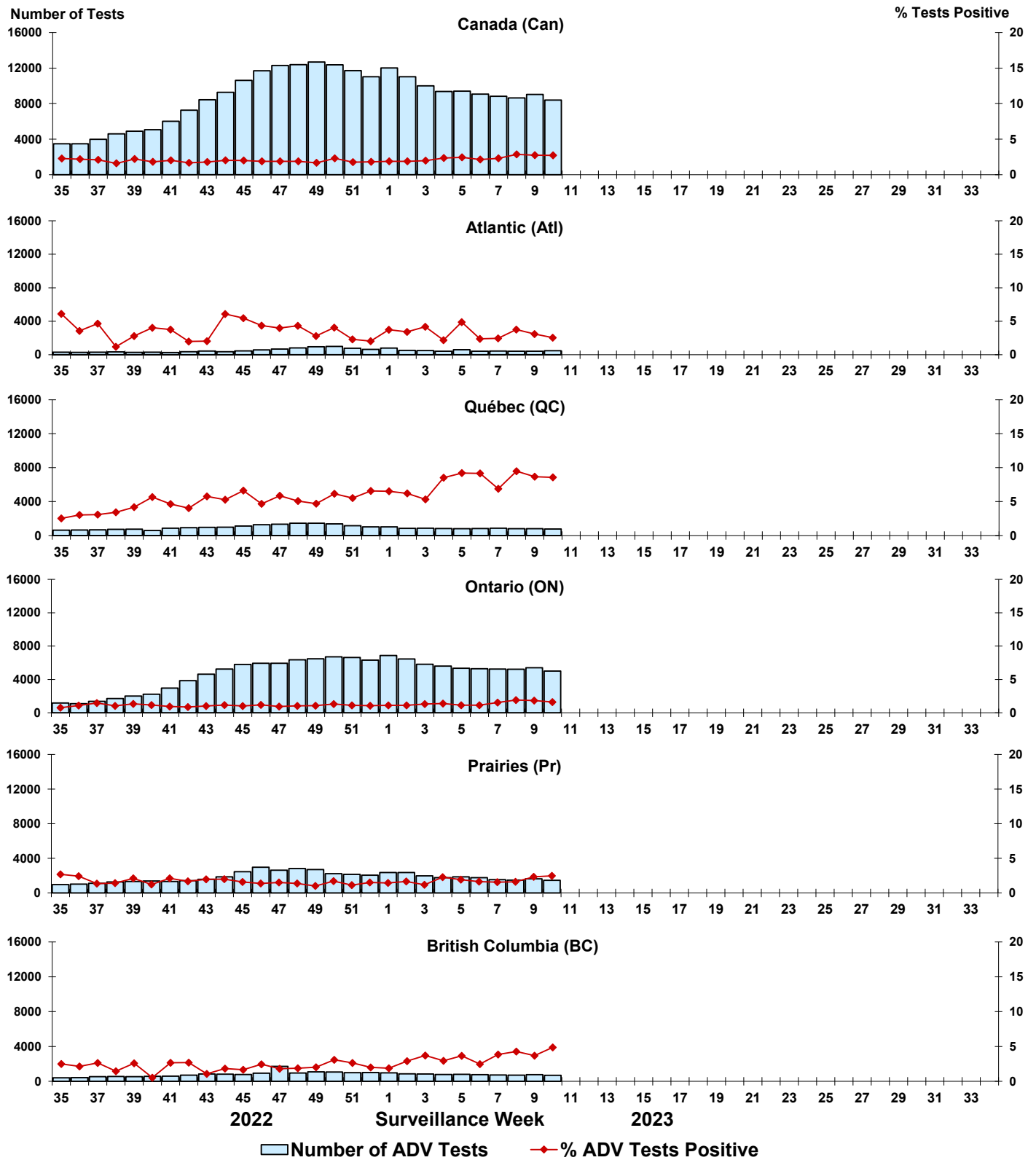


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

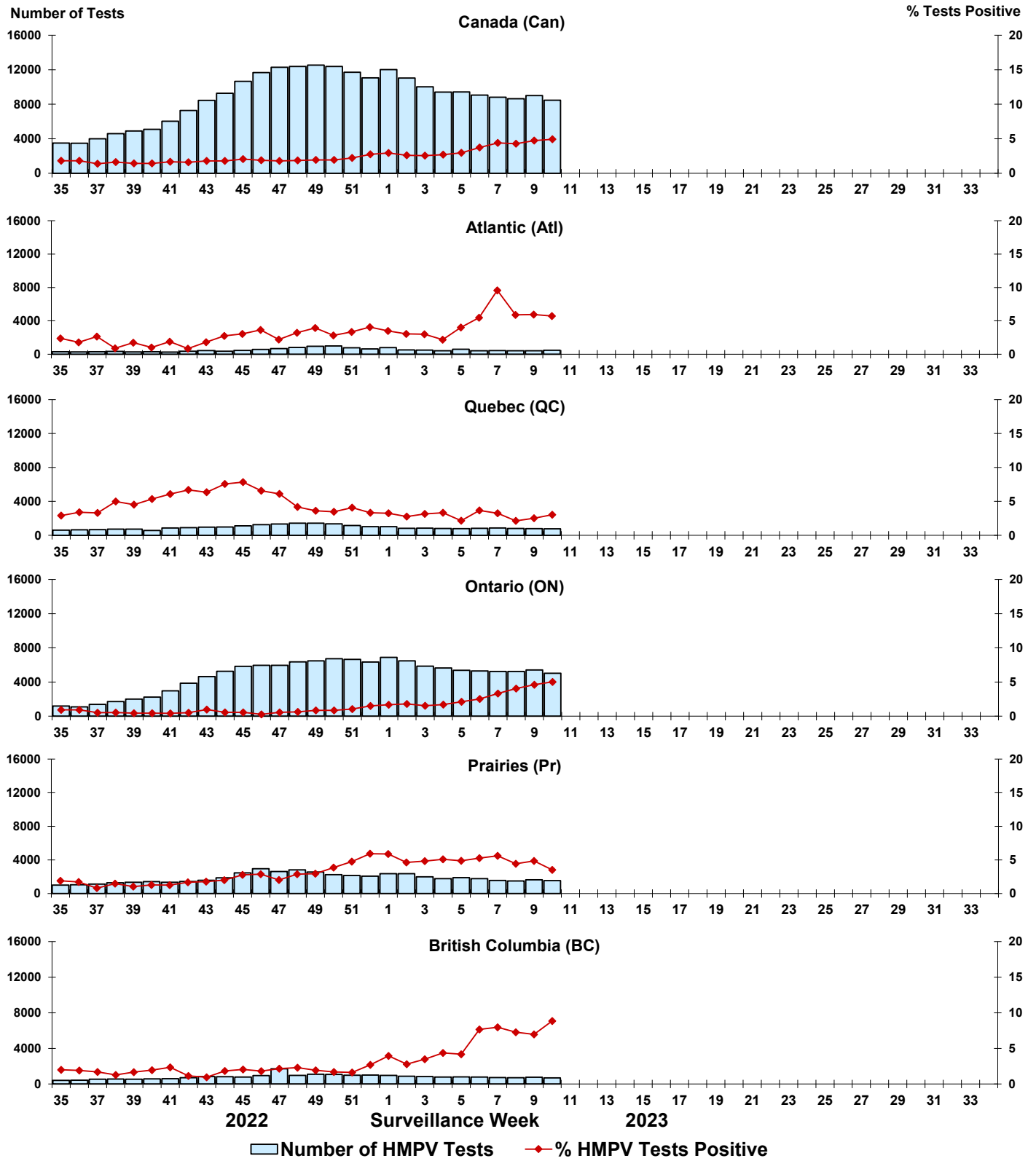


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

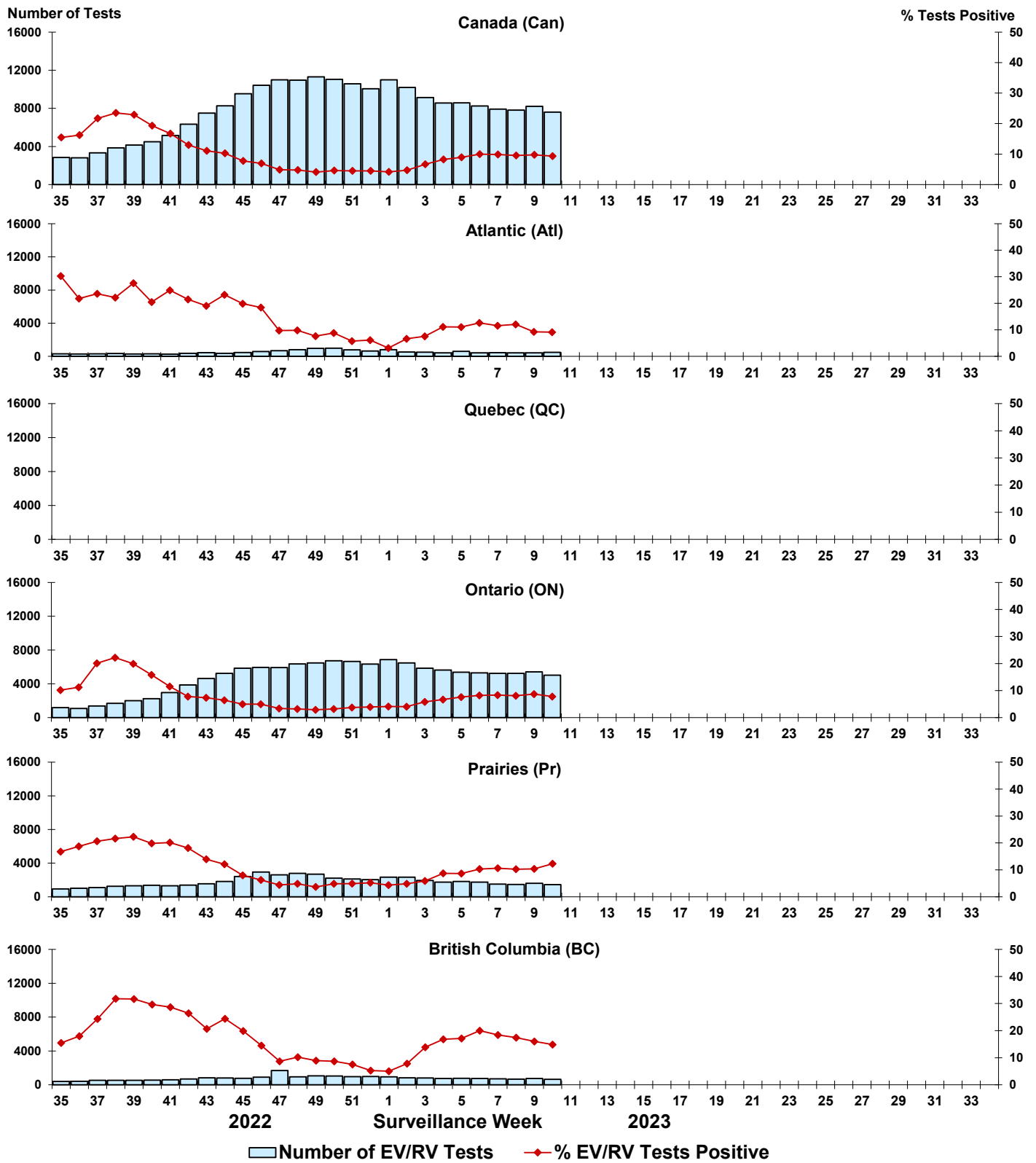


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

