

RESPIRATORY VIRUS DETECTION REPORT

May 14 to May 20, 2023
(Surveillance Week 2023-20)



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 20 (week ending May 20, 2023) in Canada, participating RVDSS laboratories reported 2,709 detections of SARS-CoV-2 from 29,063 tests (9.3% positive). Among non-SARS-CoV-2 respiratory viruses, where test volumes are lower (range of 5,048 to 16,441 tests), activity of all viruses is within or below expected levels.

- Activity of influenza remains low at inter-seasonal levels. Both influenza A (132 detections; 0.8% positive) and influenza B (213 detections; 1.3% positive) are within expected levels typical of this time of year.
- Activity of all other non-SARS-CoV-2 respiratory viruses is within 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

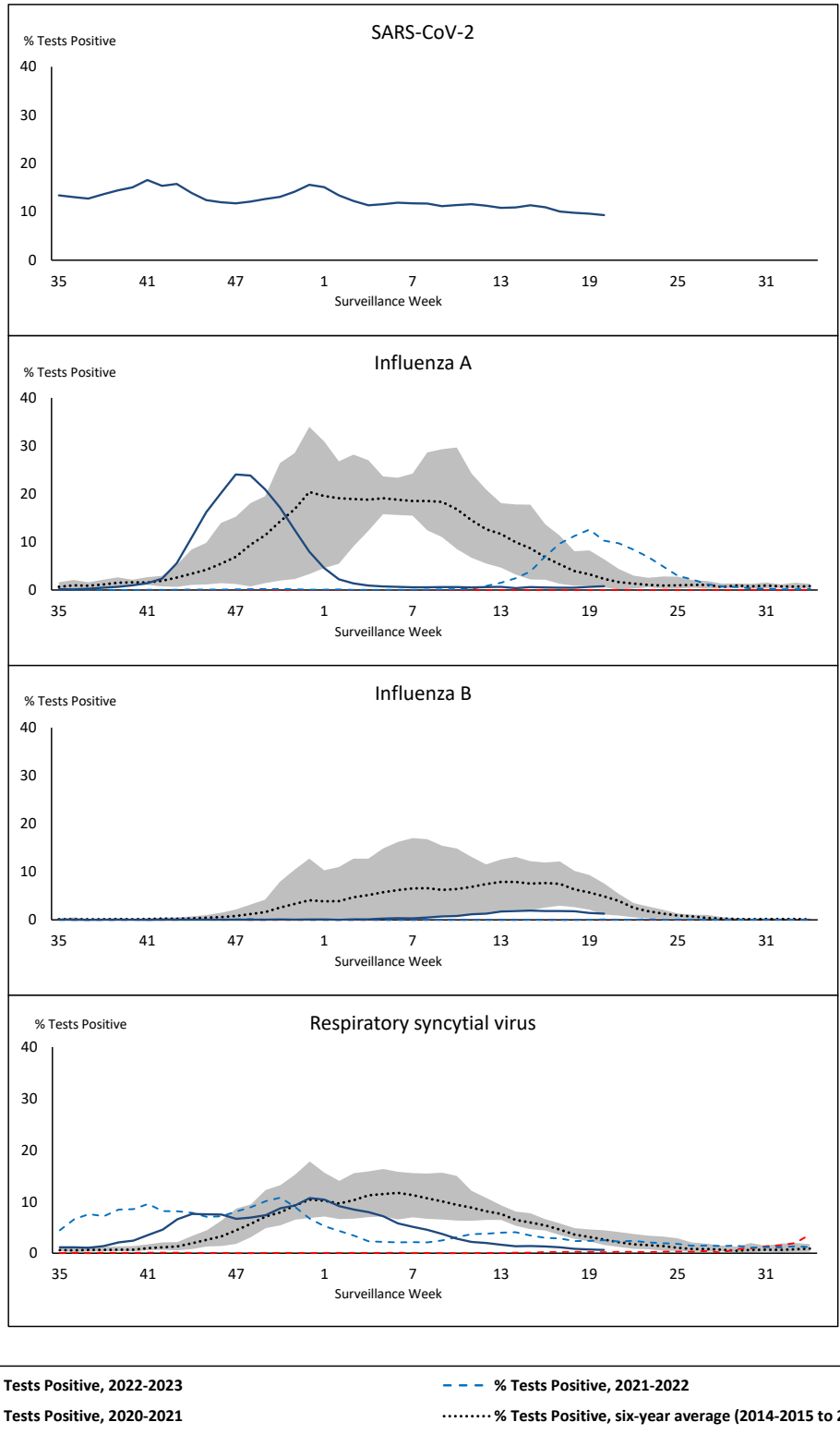
SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2

Terr: Territories of Canada

UHN: University Health Network



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



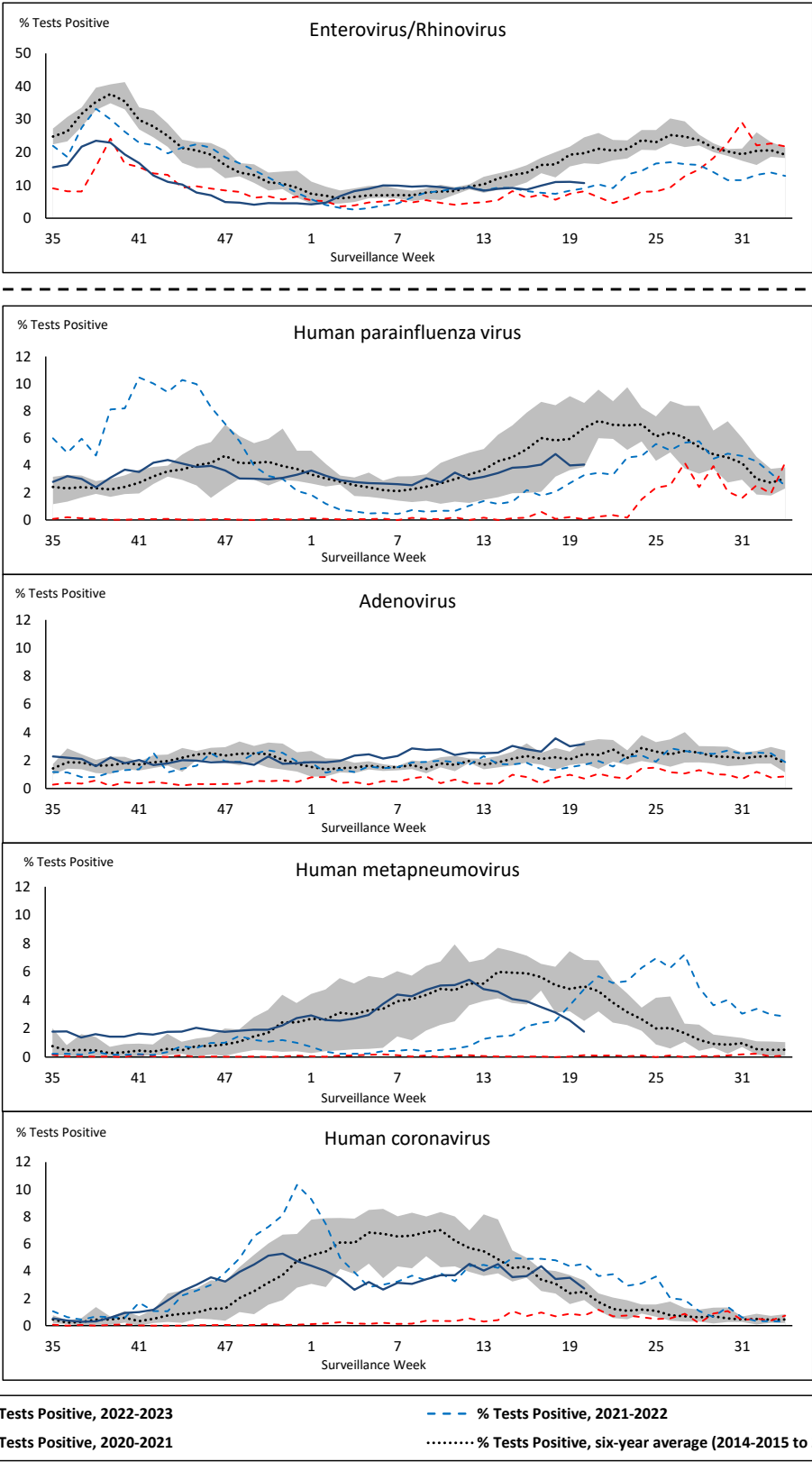
Shaded area represents the maximum and minimum % of respiratory virus tests positive reported by week from seasons 2014-2015 to 2019-2020

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 May 20, 2023 (surveillance week 2023-20)

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	392	36	257	0	0	6	6	1	257	9	257	1	0	6	7	0	257	4	257	1	257	30	257	16	
Prince Edward Island	104	4	11	0	0	0	0	0	11	0	2	0	0	0	0	0	2	0	2	0	2	0	2	0	
Nova Scotia	1352	260	756	0	0	1	1	1	756	4	19	0	0	0	0	0	19	1	19	0	19	3	19	1	
New Brunswick	615	85	599	3	0	0	3	1	593	5	89	0	0	7	0	0	89	5	89	0	89	11	89	8	
Atlantic	2463	385	1623	3	0	7	10	3	1617	18	367	1	0	13	7	0	367	10	367	1	367	44	367	25	
Région Nord-Est	1472	123	1041	0	0	26	26	6	199	4	43	1	0	2	0	0	43	4	43	1	N.C.	N.C.	43	1	
Québec-Chaudière-Appalaches	1995	103	426	0	0	7	7	9	423	2	167	2	0	2	0	0	186	19	167	5	N.C.	N.C.	167	2	
Centre-du-Québec	1661	180	187	0	0	0	0	3	187	3	25	0	0	1	0	0	25	1	25	0	N.C.	N.C.	25	1	
Montréal-Laval	3097	232	2244	0	0	13	13	56	1201	12	463	0	0	20	7	0	463	11	467	9	N.C.	N.C.	463	8	
Ouest du Québec	1375	157	353	0	0	3	3	8	351	4	11	0	0	0	1	0	11	2	11	1	N.C.	N.C.	11	0	
Montréal	1821	158	1020	0	0	1	1	13	885	5	7	0	0	0	0	0	7	0	7	0	N.C.	N.C.	7	2	
Province of Québec	11421	953	5271	0	0	50	50	95	3246	30	716	3	0	25	8	0	735	37	720	16	N.C.	N.C.	716	14	
P.H.O.L. - Ottawa	178	60	94	1	0	0	0	0	94	0	57	0	0	0	0	3	57	1	57	0	57	8	57	3	
EORLA	750	33	239	0	0	3	3	3	239	0	21	0	1	1	1	0	21	0	21	0	21	3	21	1	
P.H.O.L. - Kingston	341	39	80	0	0	0	0	1	80	0	46	0	0	0	0	6	46	0	46	5	46	3	46	3	
UHN / Mount Sinai Hospital	1099	58	577	0	0	0	0	1	577	10	26	0	0	2	1	0	26	0	26	0	26	2	26	1	
P.H.O.L. - Toronto	418	84	661	7	0	2	8	6	661	3	592	0	0	0	0	32	592	21	592	28	592	91	592	25	
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	1073	62	1073	2	0	0	2	21	1073	3	1077	0	0	0	0	18	1077	11	1076	11	1076	41	1076	17	
P.H.O.L. - Sault Ste. Marie	40	7	14	0	0	0	0	0	14	0	6	0	0	0	0	1	6	0	6	0	6	0	6	0	
P.H.O.L. - Timmins	103	20	29	0	0	0	0	0	29	0	23	0	0	0	0	0	23	0	23	0	23	0	23	2	
St. Joseph's - London	810	46	113	0	0	0	0	2	113	0	21	0	0	0	0	1	21	0	21	0	21	6	21	0	
P.H.O.L. - London	304	61	168	0	0	0	0	2	168	1	150	0	0	0	0	14	150	3	150	4	150	21	150	3	
P.H.O.L. - Orillia	7	3	25	0	0	0	0	1	25	0	25	0	0	0	0	0	25	1	25	0	25	9	25	0	
P.H.O.L. - Thunder Bay	44	5	16	0	0	0	0	0	16	0	14	0	0	0	0	0	14	0	14	1	14	3	14	0	
P.H.O.L. - Sudbury	13	0	12	0	0	0	0	0	12	0	12	0	0	0	0	0	12	0	12	0	12	1	12	0	
P.H.O.L. - Hamilton	192	40	170	7	0	0	6	1	170	0	166	0	0	0	0	15	166	9	166	8	166	21	166	6	
P.H.O.L. - Peterborough	61	4	47	0	0	0	0	2	47	0	47	0	0	0	0	1	47	4	47	2	47	10	47	2	
St. Joseph's - Hamilton	1413	61	1212	0	0	4	4	25	1212	7	1212	0	0	12	0	0	1212	41	1212	12	1212	66	0	0	
Sault Area Hospital	89	7	89	0	0	0	0	2	89	1	49	0	1	3	0	0	49	1	49	0	49	8	49	0	
Province of Ontario	6935	590	4619	17	0	9	23	67	4619	25	3544	0	2	18	2	91	3544	92	3543	71	3543	293	2331	63	
Manitoba	1104	102	933	1	0	2	3	10	933	1	86	0	1	1	0	0	86	2	94	1	86	14	94	1	
Saskatchewan	1507	93	613	0	0	23	23	4	557	2	239	6	2	0	6	0	239	9	239	4	239	49	239	6	
Alberta	2979	239	1968	3	0	13	16	25	1893	5	719	10	6	5	1	0	719	13	719	0	719	96	719	16	
Prairies	5590	434	3514	4	0	38	42	39	3383	8	1044	16	9	6	7	0	1044	24	1052	5	1044	159	1052	23	
British Columbia	2498	338	1328	1	0	2	5	0	1328	6	597	20	1	17	9	0	597	36	597	20	582	95	582	13	
Yukon	60	4	11	0	0	0	0	0	11	0	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	14	1	12	2	0	0	2	1	12	1	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	12	1	N.C.	N.C.
Nunavut	82	4	63	0	0	0	0	8	63	2	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	156	9	86	2	0	0	2	9	86	3	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	12	1	N.C.	N.C.	
CANADA	29063	2709	16441	27	0	106	132	213	14279	90	6268	40	12	79	33	91	6287	199	6279	113	5548	592	5048	138	

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 May 20, 2023 (surveillance weeks 2022-35 to 2023-20)

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/RSV Tested	EV/RSV Positive	HCoV Tested	HCoV Positive
Newfoundland	21286	3779	12288	1	246	679	926	9	12288	587	12288	57	30	372	79	0	12288	236	12288	375	12288	1042	12288	469
Prince Edward Island	32978	7255	4015	1	119	248	368	3	4015	384	1143	19	27	78	7	0	1143	72	1143	37	1143	338	1143	35
Nova Scotia	129472	25435	41708	0	4	3643	3647	13	41698	2409	1313	7	16	31	4	0	1319	51	1309	44	1319	244	1319	58
New Brunswick	106331	15668	48312	23	133	4433	4589	27	40294	2047	3602	21	30	159	8	0	3602	258	3602	179	3602	659	3547	229
Atlantic	290067	52137	106323	25	502	9003	9530	52	98295	5427	18346	104	103	640	98	0	18352	617	18342	635	18352	2283	18297	791
Région Nord-Est	91946	11195	54122	0	4	3853	3857	71	16328	1378	1590	28	5	89	0	0	1591	133	1582	96	N.C.	N.C.	1591	111
Québec-Chaudière-Appalaches	190022	18023	25945	0	0	2896	2896	152	25255	1923	7388	25	5	93	7	0	7913	648	7388	345	N.C.	N.C.	7388	339
Centre-du-Québec	154601	21161	15910	0	0	1781	1781	97	14163	989	1044	13	1	51	10	0	1044	119	1044	74	N.C.	N.C.	1044	72
Montréal-Laval	211393	26033	102533	0	9	6254	6263	1460	55472	2738	22461	136	21	505	33	0	22470	997	22614	795	N.C.	N.C.	22146	777
Ouest du Québec	116474	14940	23839	0	7	2197	2204	167	21542	1321	1058	21	0	66	3	0	1057	193	1058	60	N.C.	N.C.	1059	63
Montérégie	147956	16738	30502	0	0	1798	1798	232	27556	1198	153	0	0	2	0	0	153	4	153	6	N.C.	N.C.	153	5
Province of Québec	912392	108090	252851	0	20	18779	18799	2179	160316	9547	33694	223	32	806	53	0	34228	2094	33839	1376	N.C.	N.C.	33381	1367
P.H.O.L. - Ottawa	29019	7297	5697	18	136	66	214	2	5697	355	4001	0	0	0	0	120	4001	18	4001	115	4001	370	4001	203
EOURLA	89401	8677	16589	0	0	1414	1414	45	16589	1297	1332	11	4	56	17	0	1332	51	1332	60	1332	295	1332	97
P.H.O.L. - Kingston	30399	4908	3094	5	92	38	135	3	3093	180	2489	0	0	0	0	113	2490	28	2490	81	2489	314	2490	99
UHN / Mount Sinai Hospital	97256	7401	23562	7	44	352	403	54	23562	319	2134	2	2	34	2	0	2101	7	2134	15	2134	72	2134	87
P.H.O.L. - Toronto	51974	11004	28936	131	2415	150	1141	50	28906	1345	25585	0	0	0	0	1034	25589	512	25585	1000	25585	2438	25585	1279
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	86156	6056	86157	121	1471	727	2319	319	86158	2213	63443	4	0	16	0	715	63456	646	63728	939	63676	2202	63568	1024
P.H.O.L. - Sault Ste. Marie	1815	344	695	1	52	15	58	0	695	25	613	0	0	0	0	54	613	4	613	30	613	44	613	44
P.H.O.L. - Timmins	9249	883	1051	0	161	6	156	0	1049	98	983	0	0	0	0	54	983	14	983	28	983	84	983	44
St. Joseph's - London	123902	15153	20934	0	0	886	886	69	20934	1016	2210	0	0	0	0	81	2244	74	2244	68	2244	324	1832	105
P.H.O.L. - London	37670	7982	11416	13	585	63	643	24	11415	888	9163	0	0	0	0	452	9164	126	9164	235	9163	903	9164	311
P.H.O.L. - Orillia	577	264	2373	6	261	23	290	10	2373	230	2298	0	0	0	0	129	2299	66	2298	78	2298	338	2298	104
P.H.O.L. - Thunder Bay	8550	1717	1089	0	107	3	110	0	1088	96	962	0	0	0	0	38	962	18	962	28	962	113	963	38
P.H.O.L. - Sudbury	2109	302	803	1	65	14	67	0	803	79	682	0	0	0	0	30	682	8	682	45	682	39	682	25
P.H.O.L. - Hamilton	26090	6905	9516	16	301	92	407	35	9513	554	7037	0	0	0	0	282	7039	152	7037	249	7037	701	7037	288
P.H.O.L. - Peterborough	5328	1022	1529	0	67	11	78	12	1529	115	1233	0	0	0	0	47	1233	22	1233	44	1233	194	1233	46
St. Joseph's - Hamilton	99330	13568	49417	0	0	2737	2737	461	49417	2283	49417	0	0	1033	0	0	49417	701	49417	901	49417	3284	0	0
Sault Area Hospital	12439	2115	8355	1	262	258	521	7	8355	168	2762	35	7	70	4	0	2762	48	2762	100	2762	278	2762	80
Province of Ontario	711264	95598	271213	320	6019	6855	11579	1091	271176	11261	176344	52	13	1209	23	3149	176367	2495	176665	4016	176611	11993	126677	3874
Manitoba	71687	11786	42732	18	202	1797	2017	60	42732	1778	5446	39	35	173	6	0	5436	138	5755	218	5446	812	5755	216
Saskatchewan	167375	13591	42018	2	41	3947	3990	74	33946	2216	14047	118	101	527	53	0	14049	363	14050	660	14050	1500	14045	510
Alberta	236830	33844	131203	1002	7299	2865	11166	701	116227	7652	45811	348	115	941	132	0	45796	636	45749	1262	45056	4226	45811	1280
Prairies	475892	59221	215953	1022	7542	8609	17173	835	192905	11646	65304	505	251	1641	191	0	65281	1137	65554	2140	64552	6538	65611	2006
British Columbia	235764	25466	134287	410	4355	306	8920	295	126208	8228	29168	301	198	1103	172	6	29178	887	29178	1145	28267	4378	28264	1109
Yukon	5188	393	918	2	136	0	138	9	916	59	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	1646	189	1494	4	147	1	152	5	1494	107	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1494	297	N.C.
Nunavut	4888	391	2763	4	230	3	237	204	2763	144	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	11722	973	5175	10	513	4	527	218	5173	310	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	1494	297	N.C.	N.C.
CANADA	2637101	341485	985802	1787	18951	43556	66528	4670	854073	46419	322856	1185	597	5399	537	3155	323406	7230	323578	9312	289276	25489	272230	9147

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.

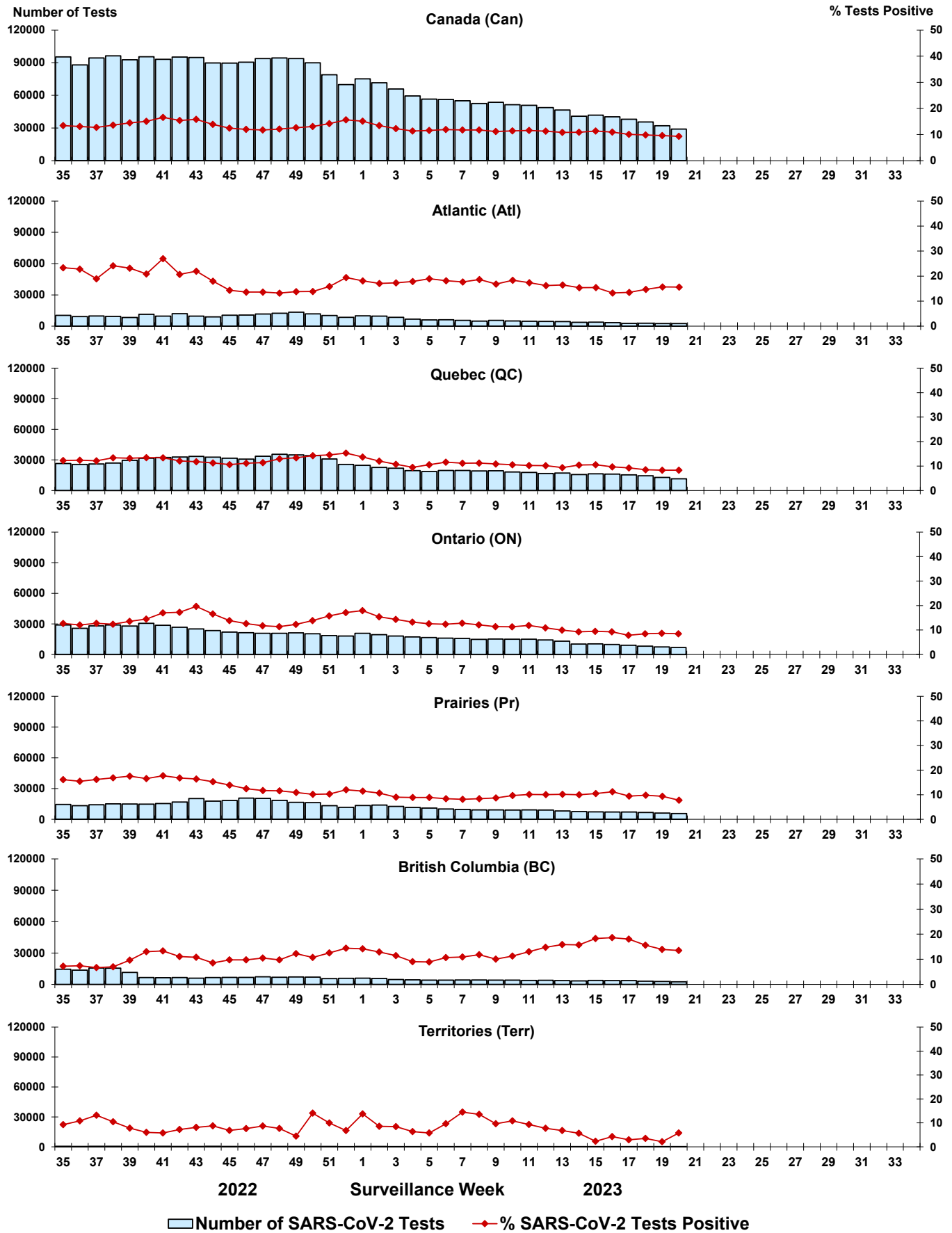
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Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts. Total influenza A and B positive counts are used to calculate percentage of tests

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

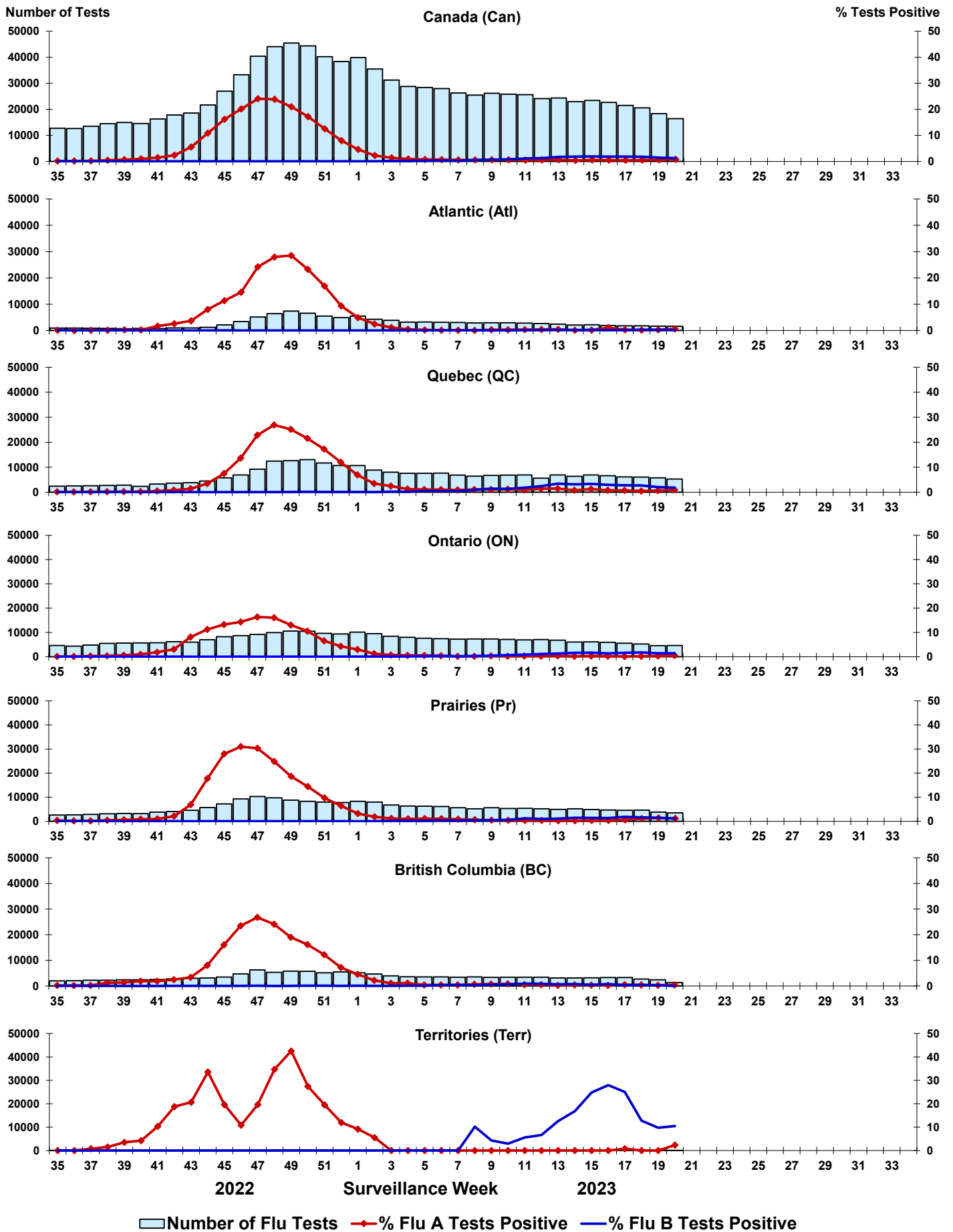


Figure 5: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

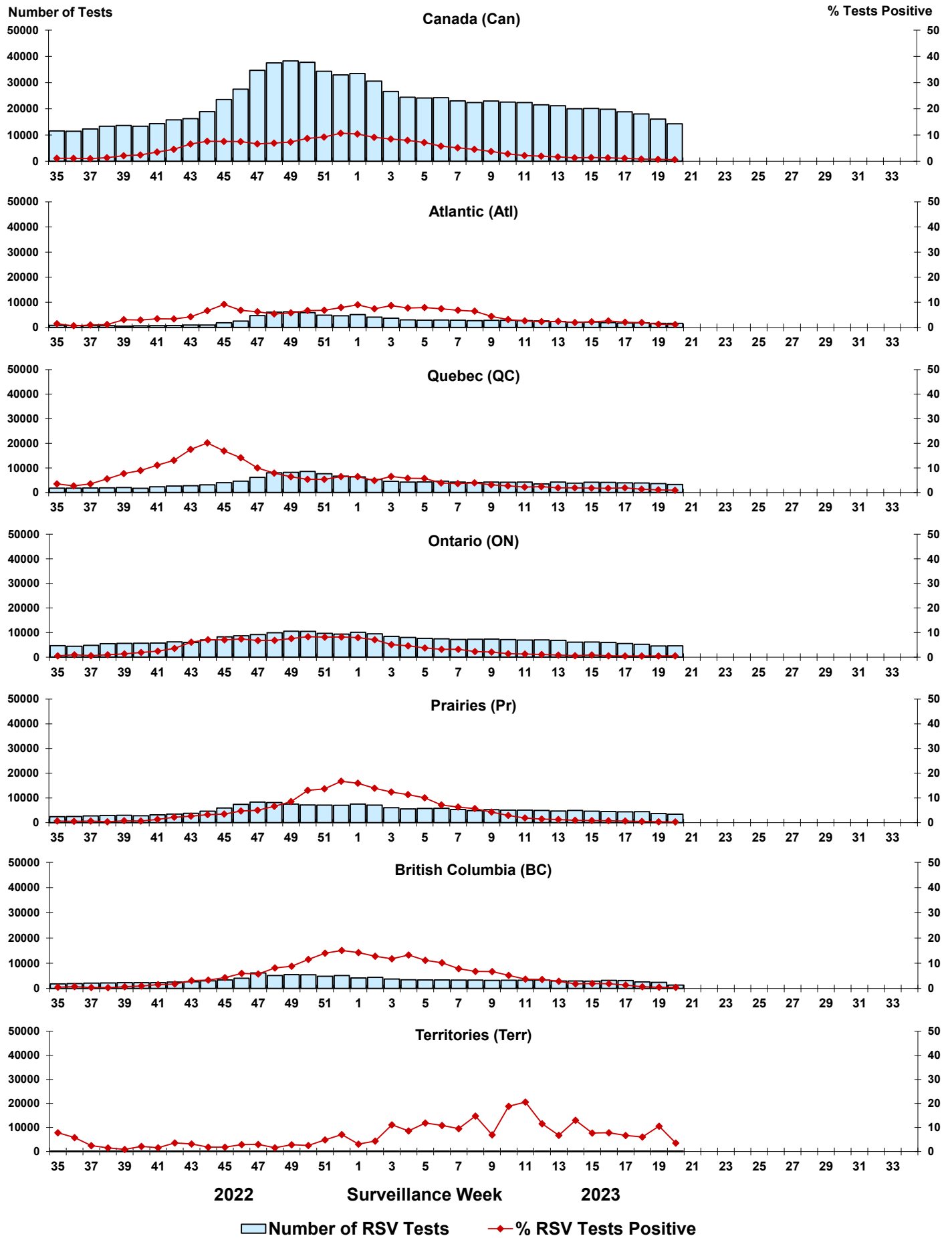


Figure 6: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

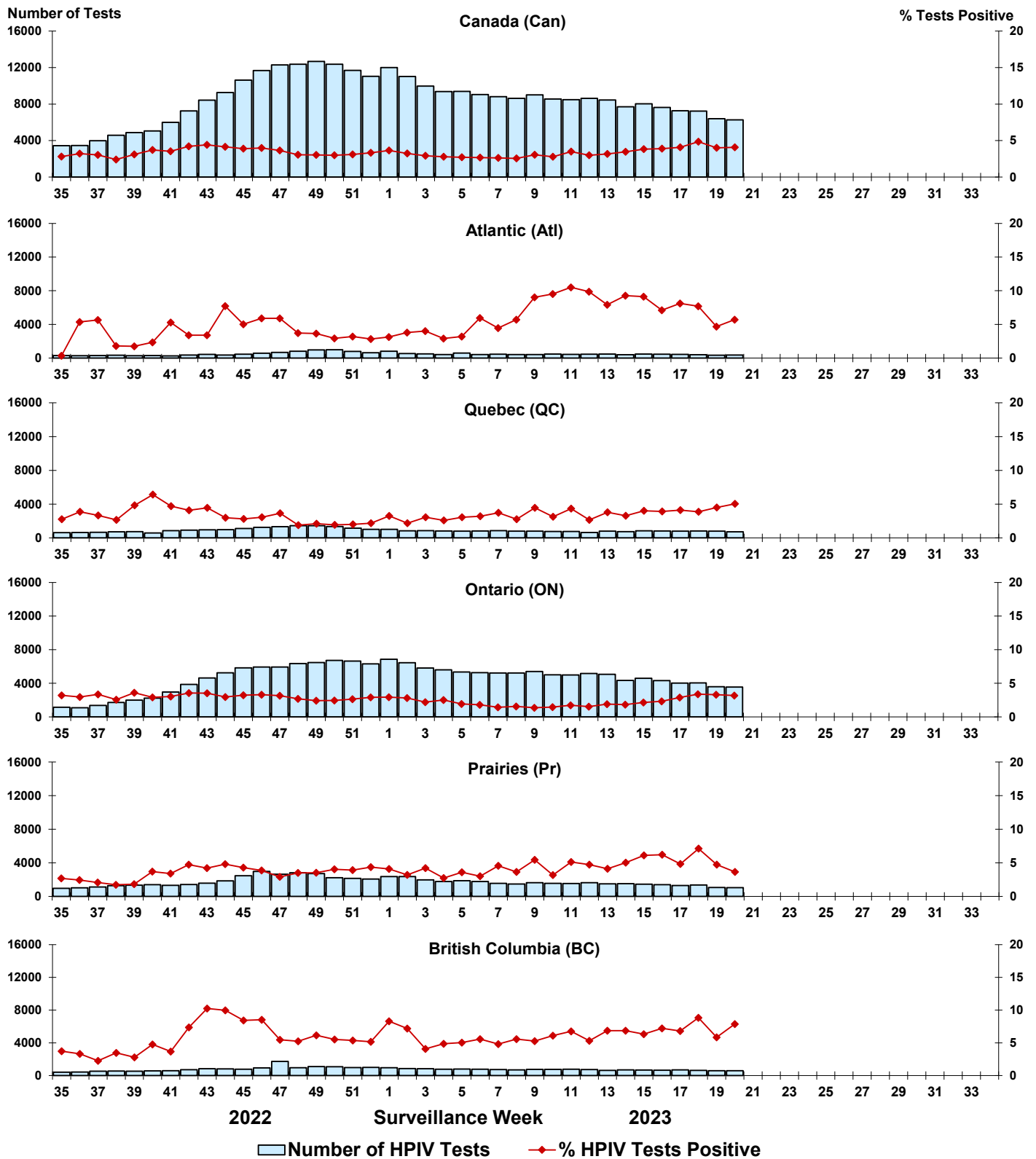


Figure 7: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

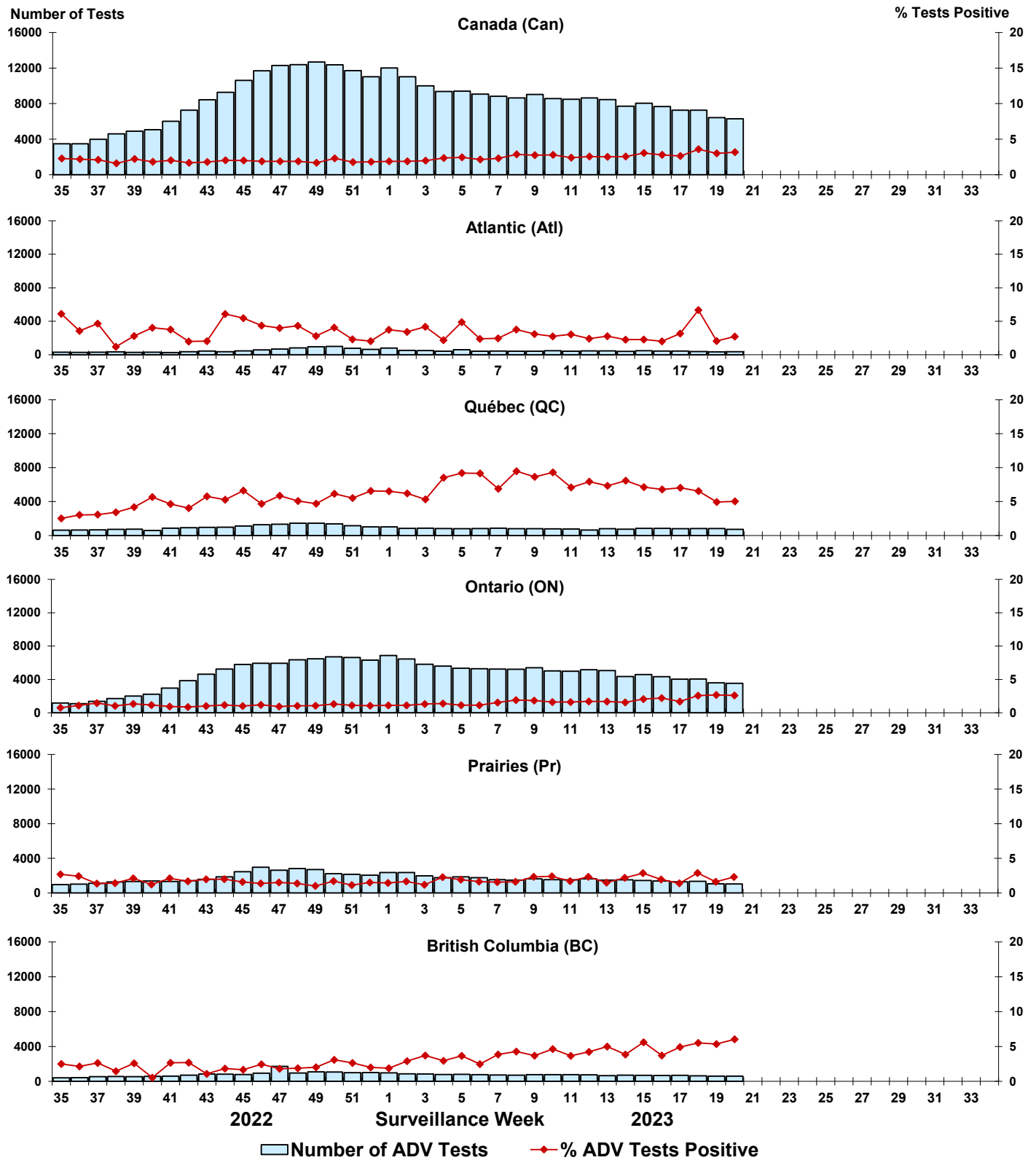


Figure 8: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

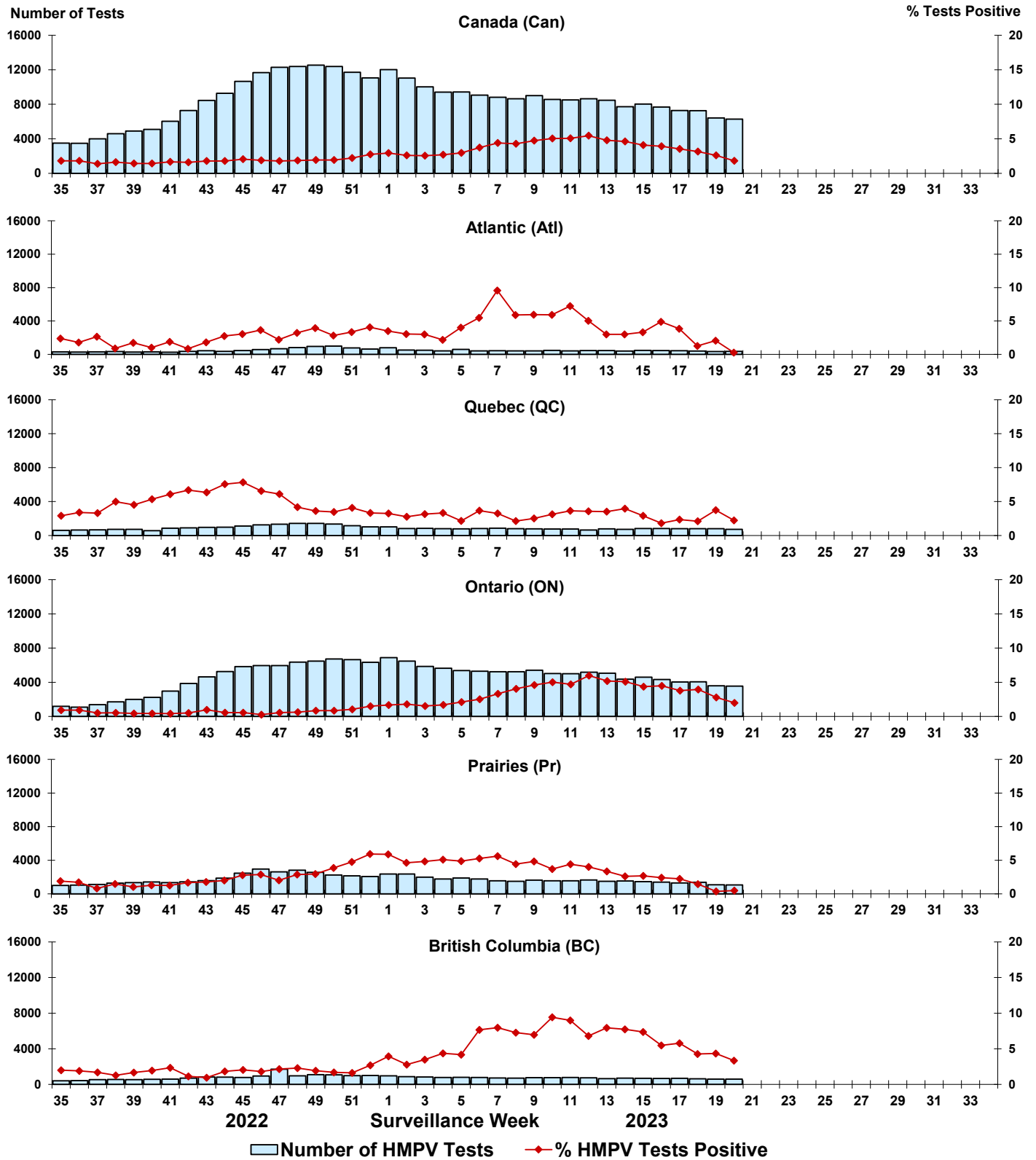


Figure 9: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

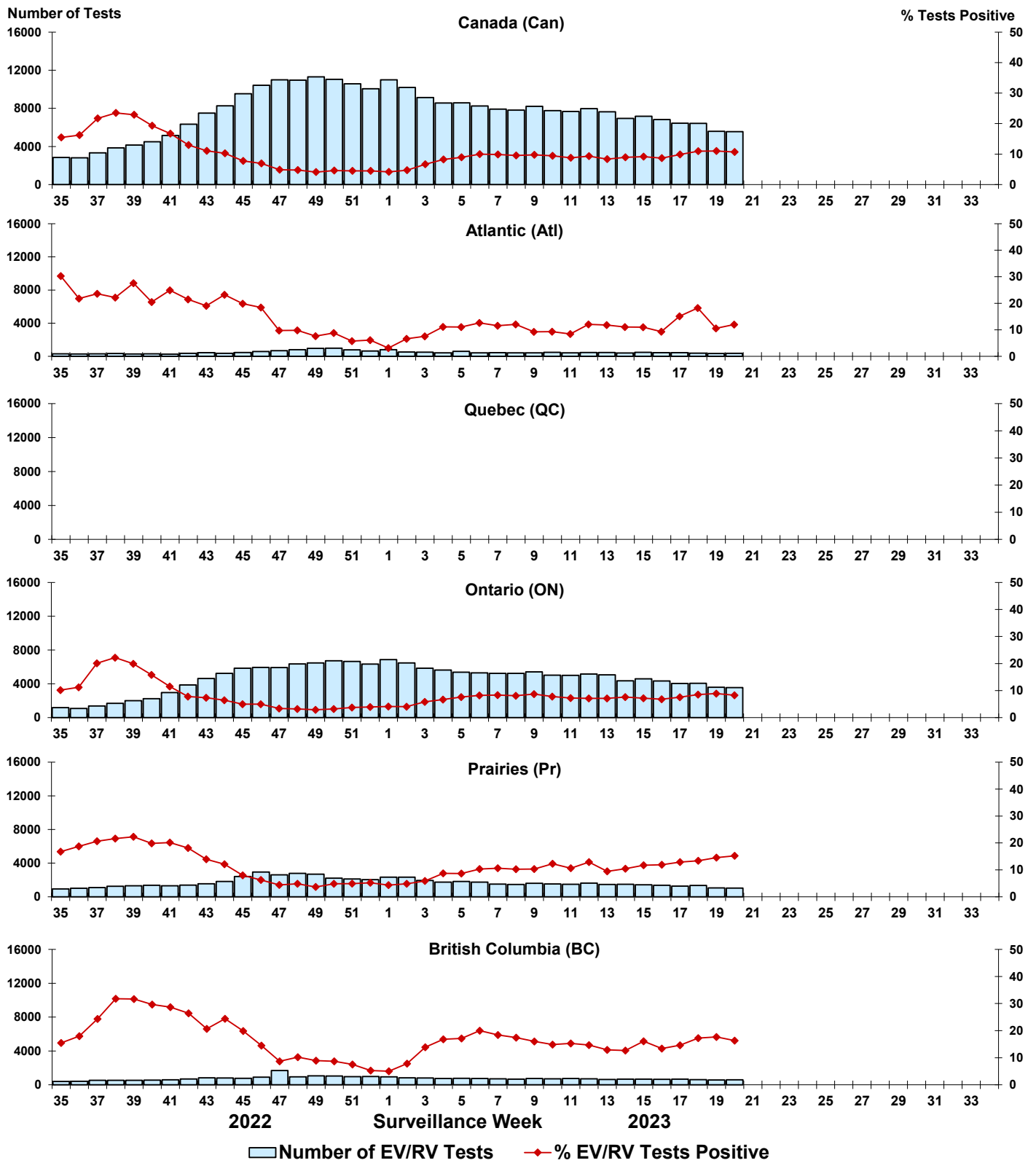


Figure 10: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week

