RESPIRATORY VIRUS DETECTION REPORT

April 24 to April 30, 2022
(Surveillance Week 2022-17)

In this Respiratory Virus Report, the number of detections of coronavirus reflects only seasonal human coronaviruses, not the novel pandemic coronavirus (SARS-CoV-2) that causes COVID-19. For information on COVID-19, see the Coronavirus disease (COVID-19): Outbreak update.

Overall Summary

Detections of seasonal respiratory viruses have increased since February 2022, with influenza accounting for most of the increase in recent weeks. Activity of most respiratory viruses is within or below expected levels for this time of year.

- Influenza is the most common seasonal respiratory virus detected in Canada. Influenza activity was above the seasonal threshold of 5% positivity in week 17, indicating the beginning of the influenza season at the national level.
  - A total of 1,639 influenza detections were reported (1,637 influenza A, 2 influenza B).
  - Activity of influenza A (9.6% positive) continues to increase, and is above average levels for this time of year.
- Activity of other respiratory viruses is low; however, activity of seasonal human coronavirus (177 detections; 4.9% positive) has increased in recent weeks and is slightly above expected levels.
- The number of tests performed for all viruses were above expected levels.
- 31/34 sentinel laboratories reported surveillance data.

Abbreviations

Flu: Influenza
Flu A(H1N1)pdm09: Influenza A(H1N1)pdm09
Flu A(H3): Influenza A(H3N2)
Flu A (UnS): Influenza A(Unsubtyped)
RSV: Respiratory syncytial virus
HPIV: Human parainfluenza virus
HMPV: Human metapneumovirus
ADV: Adenovirus
EV/RV: Enterovirus/Rhinovirus
HCoV: Human coronavirus

Atl: Atlantic Canada
BC: British Columbia
Can: Canada
EORLA: Eastern Ontario Regional Laboratory Association
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
Terr: Territories of Canada
UHN: University Health Network

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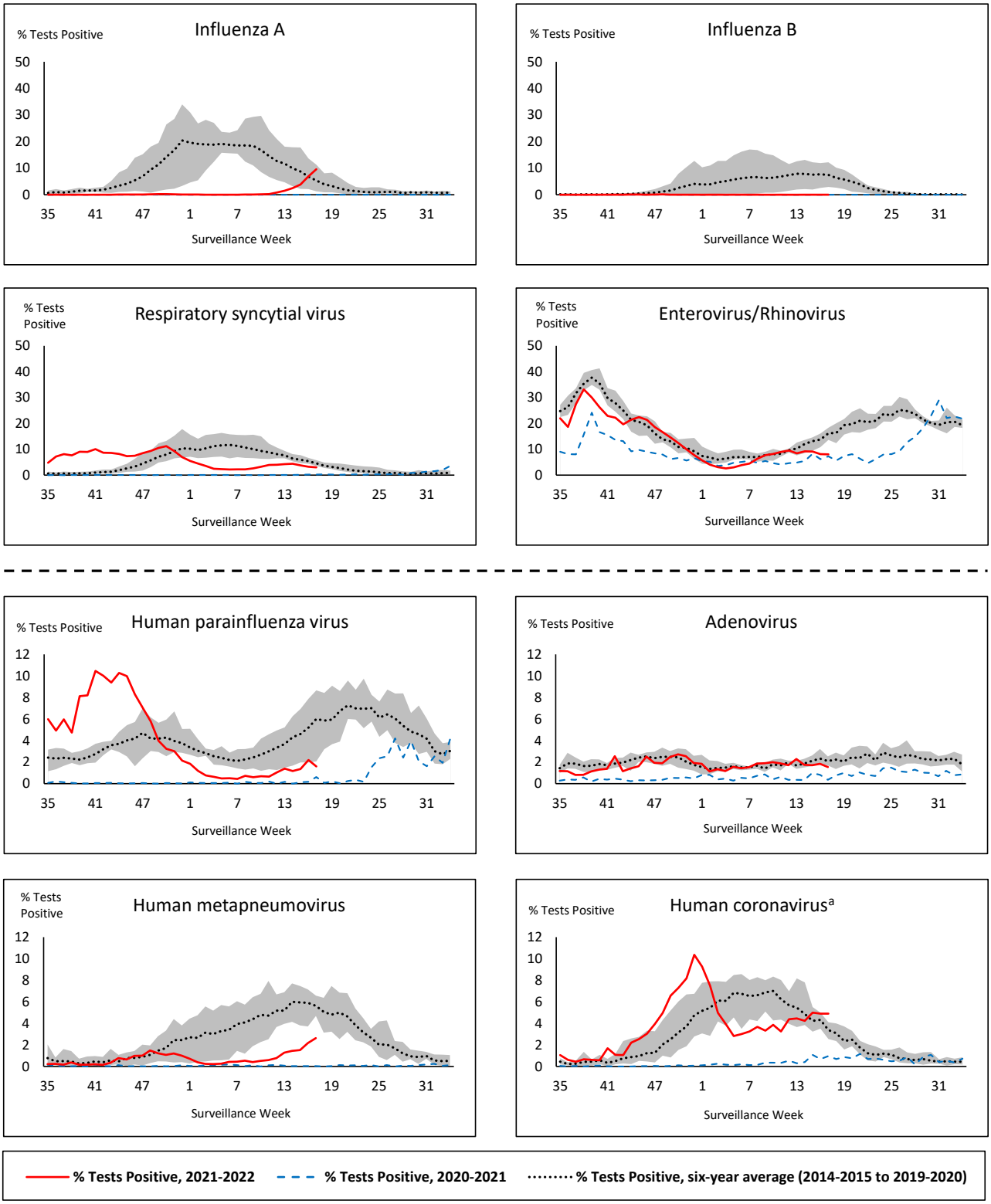
Canada

Figure 1: Positive respiratory 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: 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

[a] Human coronavirus excludes human coronaviruses SARS-CoV, MERS-CoV and SARS-CoV-2; Includes seasonal human coronaviruses HCoV-229E, HCoV-OC43, HCoV-NL63, HCoV-HKU1.

Table 1: Respiratory virus detections for the week ending April 30, 2022 (surveillance week 2022-17)

Reporting Laboratory	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	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.C.	N.C.
Prince Edward Island	50	0	3	4	7	0	50	9	50	0	0	2	0	0	50	1	50	13	50	11	50	4
Nova Scotia	586	0	0	17	17	1	592	0	26	0	0	0	1	0	26	0	26	1	26	3	26	1
New Brunswick	355	0	1	3	4	0	268	3	26	0	0	0	1	0	26	1	26	4	26	2	26	0
Atlantic	**991**	**0**	**4**	**24**	**28**	**1**	**910**	**12**	**102**	**0**	**0**	**2**	**2**	**0**	**102**	**2**	**102**	**18**	**102**	**16**	**102**	**5**
Région Nord-Est	1486	10	0	295	305	0	860	4	3	0	0	0	0	0	3	0	9	3	N.C.	N.C.	9	2
Québec-Chaudière-Appalaches	740	0	0	208	208	0	747	4	28	0	0	0	0	0	250	10	249	6	N.C.	N.C.	115	16
Centre-du-Québec	649	0	2	145	147	1	520	1	291	0	0	0	0	0	291	2	291	1	N.C.	N.C.	291	0
Montréal-Laval	1179	0	0	199	199	0	1161	1	292	1	6	1	0	0	292	11	292	3	N.C.	N.C.	292	20
Ouest du Québec	330	0	1	83	84	0	330	0	16	0	0	0	0	0	16	1	16	2	N.C.	N.C.	16	0
Montérégie	307	0	0	18	18	0	120	0	0	0	0	0	0	0	0	0	0	0	N.C.	N.C.	0	0
Province of Québec	**4691**	**10**	**3**	**948**	**961**	**1**	**3738**	**10**	**630**	**1**	**6**	**1**	**0**	**0**	**852**	**24**	**857**	**15**	**N.C.**	**N.C.**	**723**	**38**
P.H.O.L. - Ottawa	75	0	14	0	14	0	75	0	75	0	0	0	0	0	75	0	75	0	75	8	75	3
EORLA	206	0	0	20	20	0	206	3	39	0	0	0	1	0	39	0	39	0	39	1	39	1
P.H.O.L. - Kingston	36	0	0	0	0	0	36	2	36	0	0	0	0	1	36	0	36	0	36	4	36	1
UHN / Mount Sinai Hospital	509	0	0	1	1	0	509	3	13	0	0	0	0	0	13	0	13	0	13	1	13	1
P.H.O.L. - Toronto	304	0	8	0	8	0	304	1	304	0	0	0	0	4	304	4	304	3	304	24	304	16
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.
Sunnybrook & Women's College HSC	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.
P.H.O.L. - Sault Ste. Marie	8	0	0	0	0	0	8	3	8	0	0	0	0	0	8	0	8	0	8	0	8	1
P.H.O.L. - Timmins	22	0	2	0	2	0	22	0	22	0	0	0	0	0	22	0	22	0	22	0	22	0
St. Joseph's - London	79	0	0	2	2	0	79	4	79	0	0	0	0	0	79	2	79	8	79	11	6	0
P.H.O.L. - London	104	0	9	4	13	0	104	1	104	0	0	0	0	3	104	0	104	6	104	8	104	9
P.H.O.L. - Orillia	20	0	0	0	0	0	20	5	20	0	0	0	0	1	20	0	20	0	20	3	20	0
P.H.O.L. - Thunder Bay	11	0	0	0	0	0	11	1	11	0	0	0	0	3	11	0	11	0	11	2	11	2
P.H.O.L. - Sudbury	9	0	0	0	0	0	9	0	9	0	0	0	0	0	9	0	9	0	9	0	9	0
P.H.O.L. - Hamilton	66	0	2	1	3	0	66	0	66	0	0	0	0	0	66	0	66	1	66	6	66	6
P.H.O.L. - Peterborough	7	0	0	0	0	0	7	0	7	0	0	0	0	1	7	0	7	0	7	1	7	2
St. Joseph's - Hamilton	703	0	0	24	24	0	703	8	703	0	0	1	0	0	703	6	703	10	703	43	0	0
Province of Ontario	**2159**	**0**	**35**	**52**	**87**	**0**	**2159**	**31**	**1496**	**0**	**0**	**1**	**1**	**13**	**1496**	**12**	**1496**	**28**	**1496**	**112**	**720**	**42**
Province of Manitoba	1249	0	2	79	81	0	1249	55	121	0	1	0	3	0	121	2	175	1	121	11	175	1
Province of Saskatchewan	749	0	5	92	97	0	749	153	215	1	2	1	5	0	216	1	216	4	216	19	215	14
Province of Alberta	2592	0	55	172	227	0	1021	90	1021	1	5	4	5	0	1021	13	1021	38	1021	73	1021	23
Prairies	**4590**	**0**	**62**	**343**	**405**	**0**	**3019**	**298**	**1357**	**2**	**8**	**5**	**13**	**0**	**1358**	**16**	**1412**	**43**	**1358**	**103**	**1411**	**38**
British Columbia	**4410**	**0**	**35**	**1**	**114**	**0**	**4206**	**62**	**658**	**0**	**3**	**2**	**6**	**2**	**658**	**14**	**658**	**15**	**646**	**55**	**646**	**54**
Yukon	60	0	0	0	0	0	60	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	95	0	22	0	22	0	93	9	3	0	0	0	0	0	3	0	3	0	93	10	3	0
Nunavut	65	0	20	0	20	0	64	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	**220**	**0**	**42**	**0**	**42**	**0**	**217**	**13**	**4**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**4**	**0**	**94**	**11**	**4**	**0**
CANADA	**17061**	**10**	**181**	**1368**	**1637**	**2**	**14249**	**426**	**4247**	**3**	**17**	**11**	**22**	**15**	**4470**	**69**	**4529**	**119**	**3696**	**297**	**3606**	**177**

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.

The reporting laboratory previously listed as CHEO - Ottawa is now listed as EORLA to better reflect data submitted by this provider.

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: BC Children's and Women's Hospital, Children's and Women's Hospital Laboratory, Fraser Health Medical Microbiology Laboratory, Island Health, Providence Health Care, Powell River Hospital , St. Paul's Hospital , Vancouver General Hospital, Victoria General Hospital, BCCDC Public Health Laboratory, Interior Health Authority sites and Northern Health Authority sites.

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

For British Columbia, only data from subtyped influenza A specimens are included in the weekly number of influenza detections. The sum of A(H1N1)pdm09, A(H3), and A(UnS) positive results may not equal the sum of total Flu A positive results.

Table 2: Cumulative respiratory virus detections from August 29, 2021 to April 30, 2022 (surveillance week 2021-35 to 2022-17)

Reporting Laboratory	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	8547	0	0	1	1	0	8546	102	8549	1	7	116	0	154	8556	30	8543	33	8550	1757	N.C.	N.C.
Prince Edward Island	2187	0	4	4	8	0	2187	233	2142	0	0	156	0	0	2187	59	2187	43	2187	521	2187	118
Nova Scotia	17970	0	2	79	81	6	17975	317	1489	0	2	39	14	0	1503	13	1503	7	1503	117	1503	38
New Brunswick	15014	0	1	14	15	0	9534	275	2910	0	0	23	5	0	2903	18	2910	10	2910	54	2819	7
Atlantic	**43718**	**0**	**7**	**98**	**105**	**6**	**38242**	**927**	**15090**	**1**	**9**	**334**	**19**	**154**	**15149**	**120**	**15143**	**93**	**15150**	**2449**	**6509**	**163**
Région Nord-Est	20308	15	0	567	582	3	8972	1443	795	0	0	9	1	0	894	17	403	11	N.C.	N.C.	1239	23
Québec-Chaudière-Appalaches	6334	0	0	371	371	4	6932	999	1499	0	10	7	10	0	1996	85	1905	77	N.C.	N.C.	1593	64
Centre-du-Québec	7211	0	2	295	297	5	7147	1082	893	0	3	22	1	0	893	33	901	21	N.C.	N.C.	886	16
Montréal-Laval	21124	0	3	507	510	6	21058	2451	7140	8	33	28	5	0	7139	415	7137	343	N.C.	N.C.	7136	136
Ouest du Québec	5431	0	5	197	202	0	5373	930	127	0	3	3	4	0	120	8	116	3	N.C.	N.C.	116	3
Montérégie	3318	0	0	55	55	0	3060	387	0	0	0	0	0	0	0	0	0	0	N.C.	N.C.	0	0
Province of Québec	**63726**	**15**	**10**	**1992**	**2017**	**18**	**52542**	**7292**	**10454**	**8**	**49**	**69**	**21**	**0**	**11042**	**558**	**10462**	**455**	**N.C.**	**N.C.**	**10970**	**242**
P.H.O.L. - Ottawa	6703	2	25	0	27	0	6703	1439	6703	0	0	0	0	733	6703	311	6701	40	6703	2235	6701	273
EORLA	6129	0	0	36	36	0	6104	611	892	0	2	19	2	0	892	15	573	4	892	149	550	20
P.H.O.L. - Kingston	1330	0	4	0	4	0	1336	127	1335	0	0	0	0	130	1335	19	1321	2	1335	302	1321	89
UHN / Mount Sinai Hospital	16370	0	0	25	25	3	16370	102	517	0	0	0	0	0	517	0	517	1	517	14	517	6
P.H.O.L. - Toronto	8650	2	21	1	24	0	8638	276	8638	0	0	0	0	289	8641	120	8635	25	8638	1009	8636	283
Sick Kids Hospital - Toronto	839	0	0	0	0	0	0	0	839	0	2	68	1	0	839	12	839	1	839	233	839	10
Sunnybrook & Women's College HSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P.H.O.L. - Sault Ste. Marie	308	0	2	1	3	0	307	8	307	0	0	0	0	7	307	3	307	1	307	50	307	19
P.H.O.L. - Timmins	407	0	2	0	2	0	407	25	407	0	0	0	0	18	407	1	407	0	407	31	407	26
St. Joseph's - London	12532	0	0	42	42	0	12535	770	10978	0	0	7	0	87	10978	137	10978	39	10932	569	525	2
P.H.O.L. - London	3296	0	17	5	22	0	3295	453	3295	0	0	0	0	162	3295	75	3294	20	3295	452	3294	258
P.H.O.L. - Orillia	821	0	1	0	1	0	821	116	821	0	0	0	0	44	821	26	818	7	821	208	818	59
P.H.O.L. - Thunder Bay	297	0	1	0	1	0	297	19	297	0	0	0	0	24	297	1	297	0	297	57	297	37
P.H.O.L. - Sudbury	312	0	2	0	2	0	312	11	312	0	0	0	0	9	312	1	312	2	312	31	312	9
P.H.O.L. - Hamilton	1629	0	7	1	8	0	1624	68	1624	0	0	0	0	45	1625	13	1624	13	1624	220	1624	98
P.H.O.L. - Peterborough	580	0	0	0	0	0	580	45	573	0	0	0	0	12	573	1	571	1	573	91	571	45
St. Joseph's - Hamilton	20891	0	4	64	68	1	20885	1633	20885	2	0	652	0	0	20885	202	20885	64	20885	1882	0	0
Province of Ontario	**81094**	**4**	**86**	**175**	**265**	**4**	**80214**	**5703**	**58423**	**2**	**4**	**746**	**3**	**1560**	**58427**	**937**	**58079**	**220**	**58377**	**7533**	**26719**	**1234**
Manitoba	51033	1	45	138	184	0	51033	1154	2445	2	9	74	6	0	2445	39	3745	9	2445	281	3551	78
Province of Saskatchewan	25098	2	125	208	335	0	25067	1357	4423	1	4	197	47	0	4423	77	4423	22	4423	611	4419	252
Province of Alberta	71768	1	209	527	737	2	28848	3095	28848	2	51	671	187	0	28848	299	28848	198	28848	3360	28848	1417
Prairies	**147899**	**4**	**379**	**873**	**1256**	**2**	**104948**	**5606**	**35716**	**5**	**64**	**942**	**240**	**0**	**35716**	**415**	**37016**	**229**	**35716**	**4252**	**36818**	**1747**
British Columbia	**174877**	**5**	**214**	**6**	**496**	**87**	**170959**	**8962**	**21319**	**6**	**12**	**1062**	**214**	**159**	**21319**	**412**	**21315**	**119**	**20871**	**3307**	**20919**	**716**
Yukon	5342	1	2	2	7	7	5352	301	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	1197	0	55	1	56	0	1135	116	92	0	1	1	0	0	92	2	92	0	1134	131	92	1
Nunavut	15260	0	48	0	48	0	15244	23	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	**21799**	**1**	**105**	**3**	**111**	**7**	**21731**	**440**	**119**	**0**	**1**	**2**	**0**	**0**	**119**	**4**	**119**	**0**	**1161**	**141**	**116**	**1**
CANADA	**533113**	**29**	**801**	**3147**	**4250**	**124**	**468636**	**28930**	**141121**	**22**	**139**	**3155**	**497**	**1873**	**141772**	**2446**	**142134**	**1116**	**131275**	**17682**	**102051**	**4103**

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.

Note: Included in the cumulative detections this season are 11 co-infections of influenza A and B (total of 22 detections) that are suspected to be associated with recent live attenuated influenza vaccine (LAIV) receipt. Co-infections known or reported to be associated with recent LAIV are removed by the submitting laboratory or by PHAC beginning in week 44 as they do not represent community transmission of seasonal influenza viruses.

The reporting laboratory previously listed as CHEO - Ottawa is now listed as EORLA to better reflect data submitted by this provider.

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: BC Children's and Women's Hospital, Children's and Women's Hospital Laboratory, Fraser Health Medical Microbiology Laboratory, Island Health, Providence Health Care, Powell River Hospital , St. Paul's Hospital , Vancouver General Hospital, Victoria General Hospital, BCCDC Public Health Laboratory, Interior Health Authority sites and Northern Health Authority sites.

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.

For British Columbia, only data from subtyped influenza A specimens are included in the weekly number of influenza detections. The sum of A(H1N1)pdm09, A(H3), and A(UnS) positive results may not equal the sum of total Flu A positive results.

Figure 2: Number of positive respiratory virus tests reported by participating laboratories in Canada by surveillance week

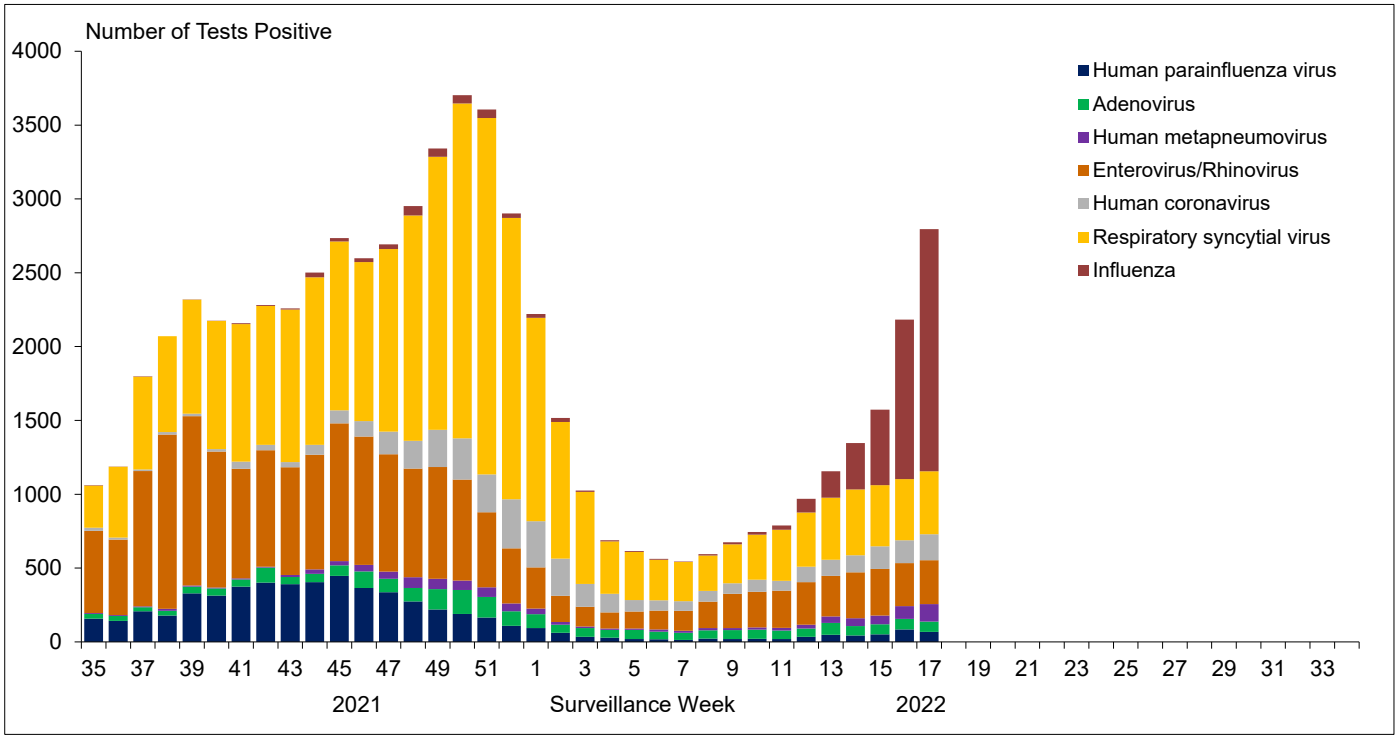


Figure 3: Positive Influenza (Flu) tests (%) in Canada by region by surveillance week

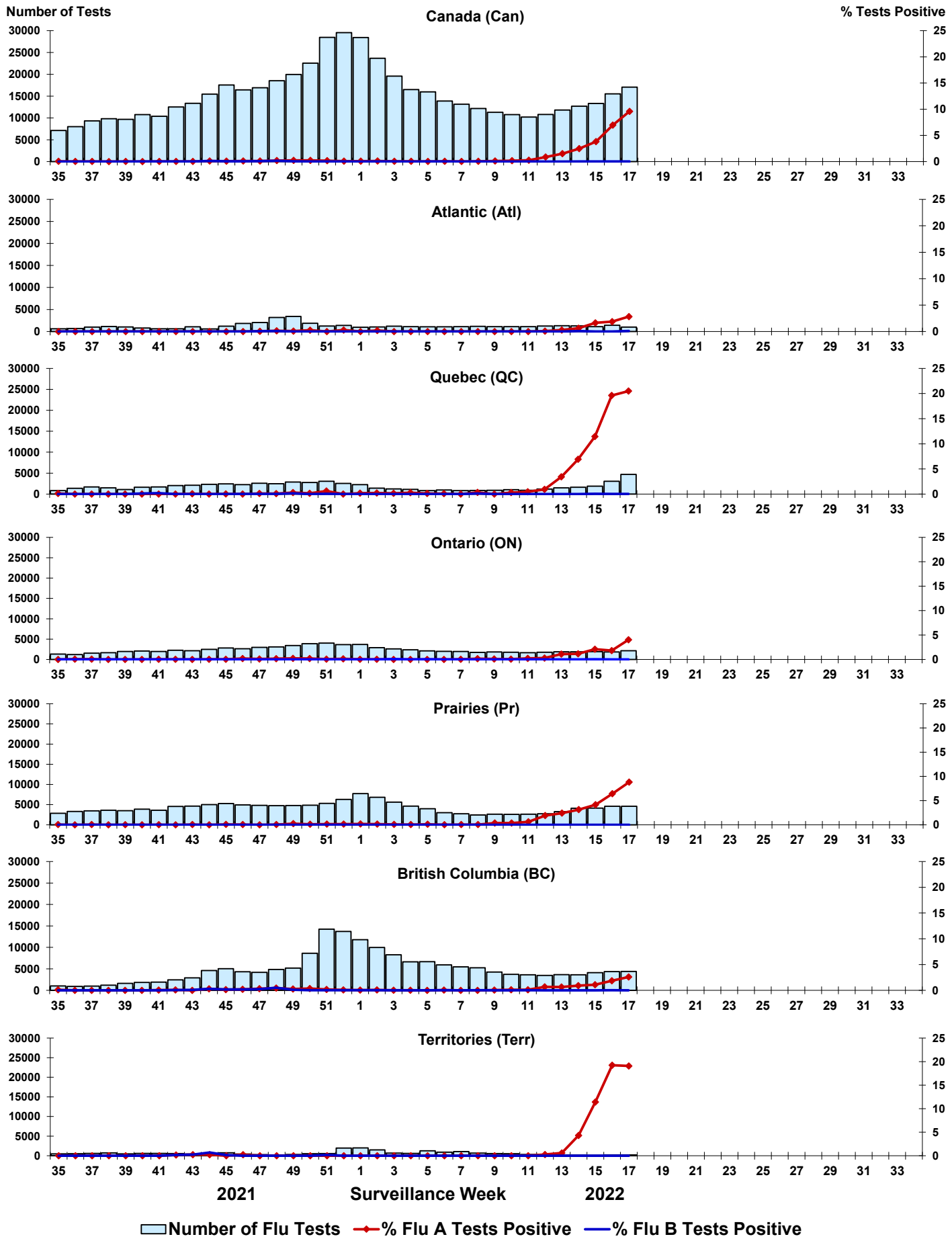


Figure 4: Positive Respiratory syncytial virus (RSV) tests (%) in Canada by region by surveillance week

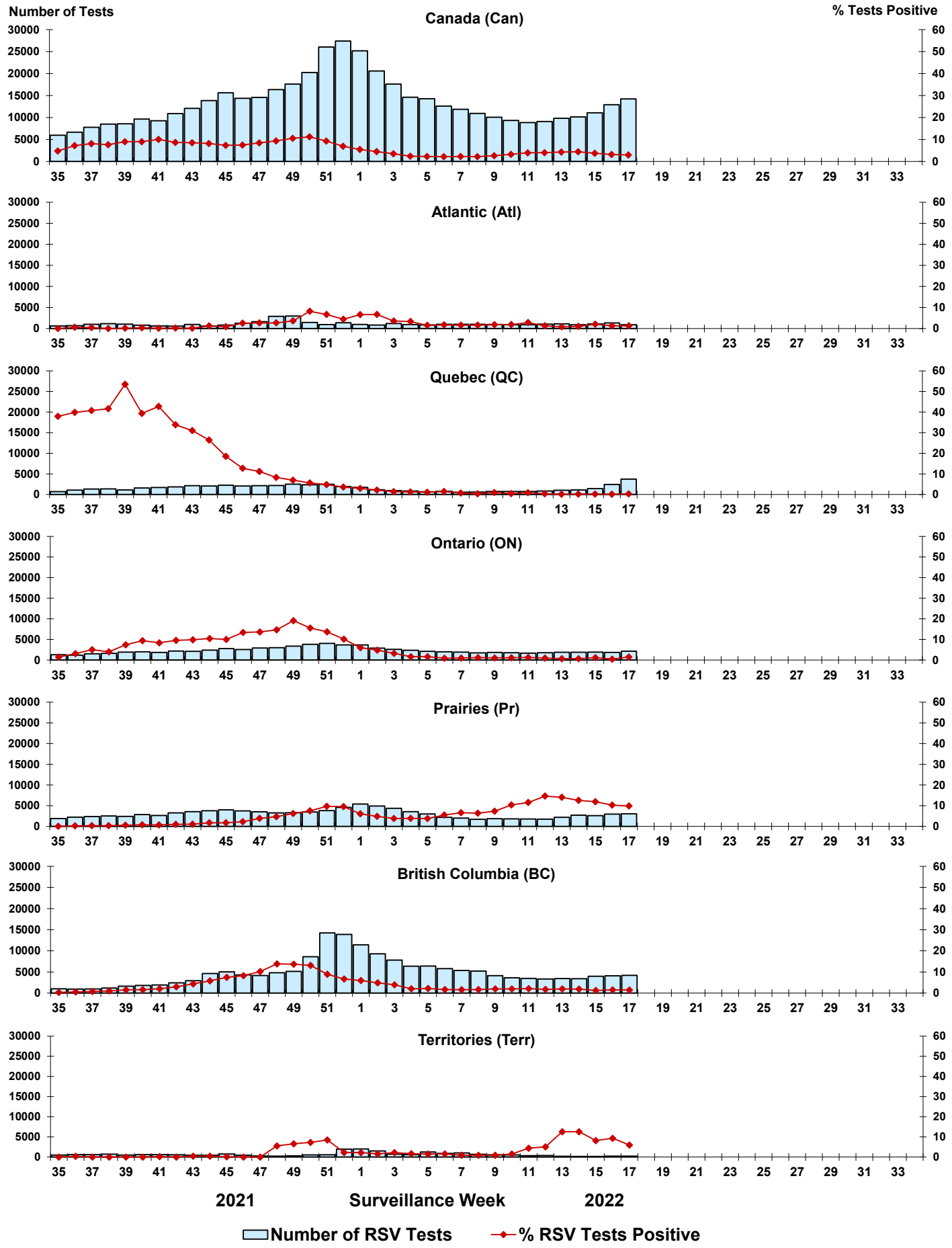


Figure 5: Positive Human parainfluenza virus (HPIV) tests (%) in Canada by region by surveillance week

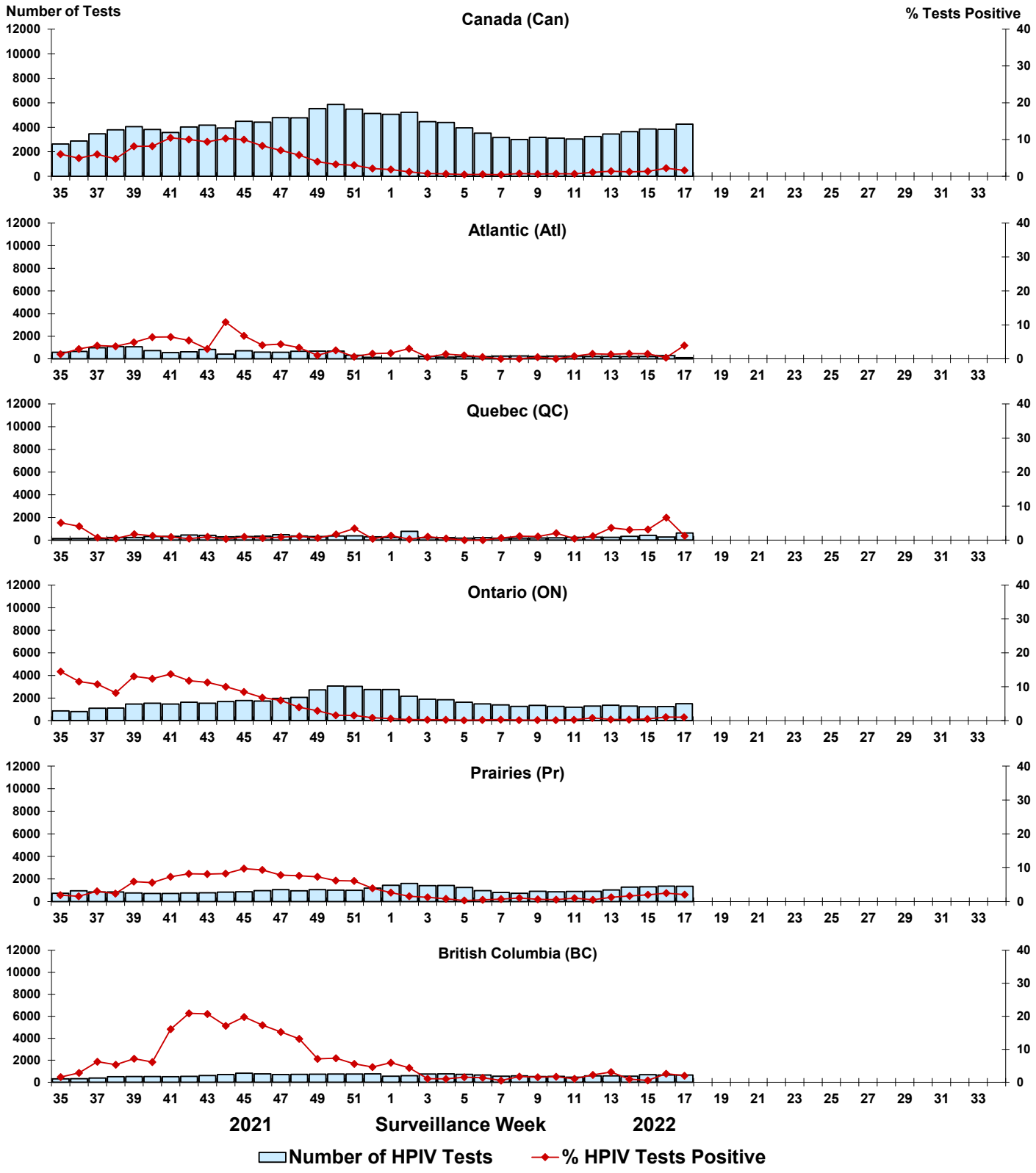


Figure 6: Positive Adenovirus (ADV) tests (%) in Canada by region by surveillance week

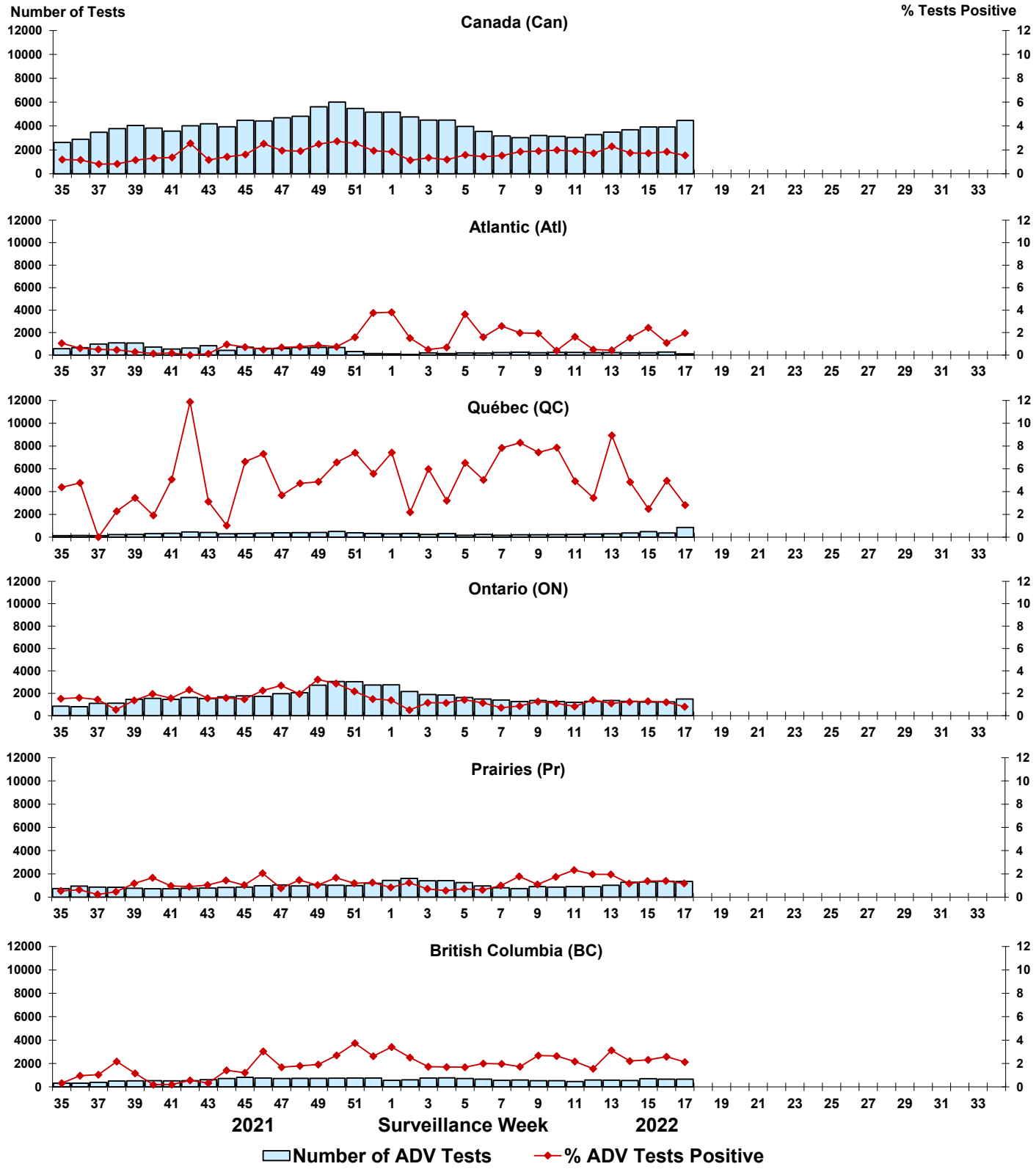


Figure 7: Positive Human metapneumovirus (HMPV) tests (%) in Canada by region by surveillance week

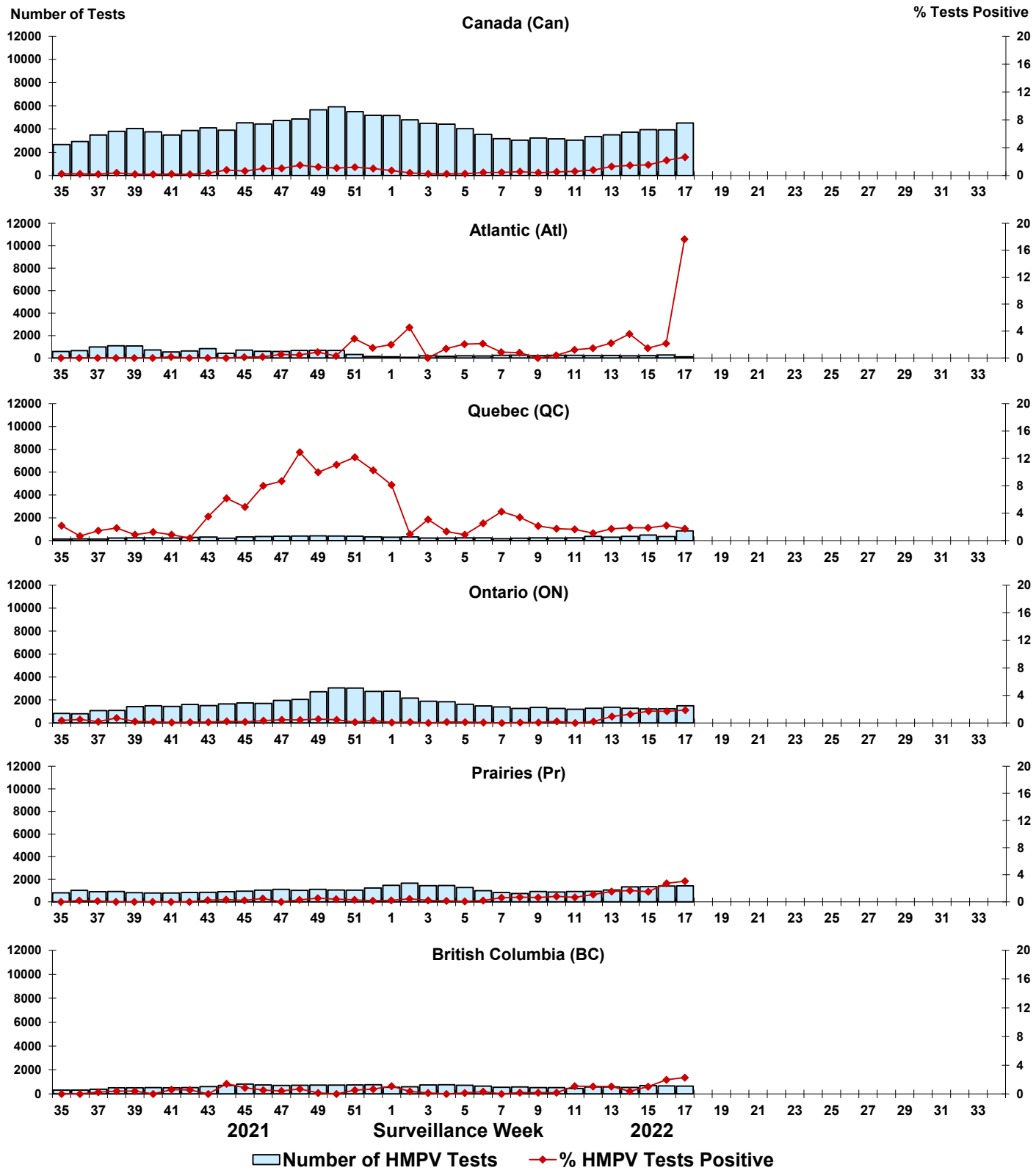


Figure 8: Positive Enterovirus/Rhinovirus (EV/RV) tests (%) in Canada by region by surveillance week

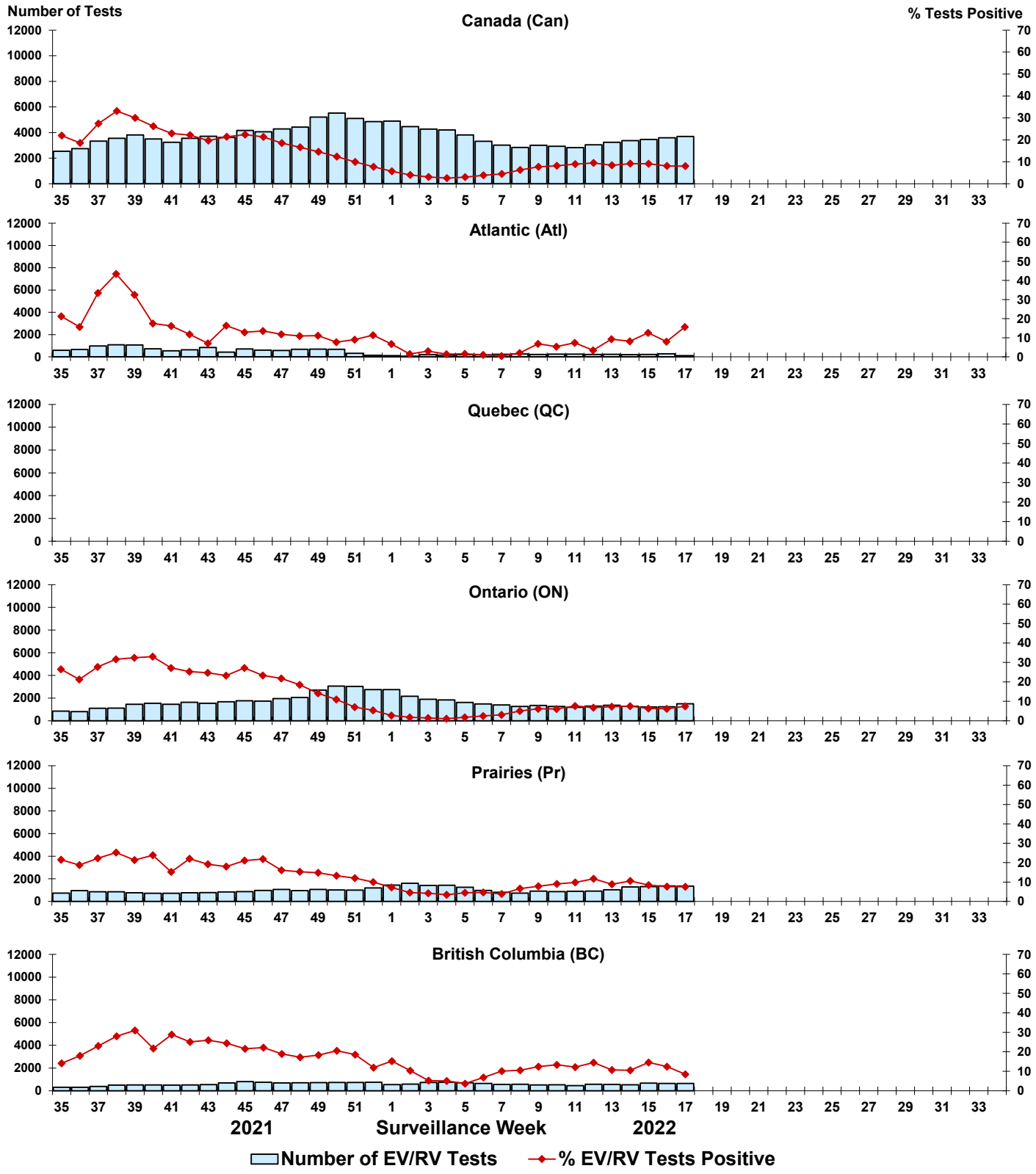
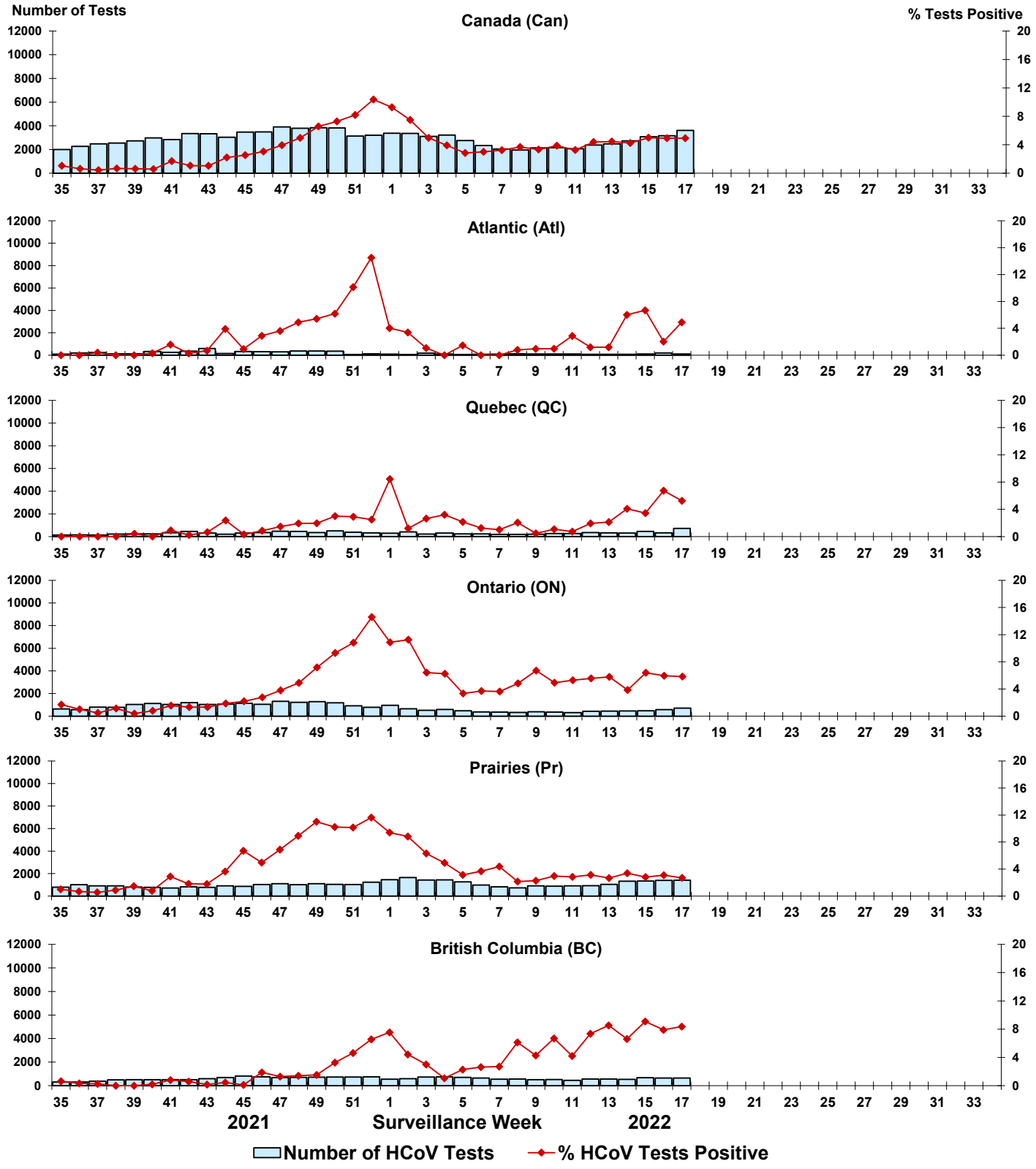



Figure 9: Positive Human coronavirus (HCoV) tests (%) in Canada by region by surveillance week