

British Columbia (BC) Influenza Surveillance Bulletin

2021-22 Influenza Season

Week 14: April 3 to 9, 2022

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Sporadic detection of influenza viruses has increased in BC and elsewhere in recent weeks

Since our last bulletin for week 10, 82 influenza viruses were detected in BC among 14,198 specimens tested (0.6% positivity) between weeks 11-14 (March 13 to April 9). This influenza virus detection is higher than the same period of 2021 (0/10,578 tested) but still below the same period of 2020 (1,762/30,957; 6%) or the 5-year (pre-COVID-19 pandemic) average for weeks 11-14 (1,048/8,349; 13%). Of the 82 viruses detected in weeks 11-14 of 2022, all but one were influenza A and among those subtyped, all but one were H3N2 (n=37/38).

The first laboratory-confirmed influenza outbreak in BC since March 2020 was reported in week 13 of 2022 – an A(H3N2) outbreak in a long-term care facility (LTCF) (now declared over). By contrast, 15 LTCF influenza outbreaks were reported during weeks 11-14 of 2020 with a 5-year historical (pre-COVID-19 pandemic) average of 16 LTCF influenza outbreaks reported between weeks 11-14.

Most seasonal respiratory virus detections overall in BC during weeks 11-14 of 2022 were non-influenza viruses with RSV (253/737; 34%) and entero-/rhinoviruses (250/737; 34%) most commonly detected. Their detections, however, remain within or below expected levels. Note that pandemic SARS-CoV-2 activity is summarized elsewhere (see: <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/data-trends>).

Recent increase in sporadic influenza virus detections has also been observed during weeks 11-14 in other provinces: Nova Scotia (n=12), New Brunswick (n=2), Quebec (n=180), Ontario (n=177), Manitoba (n=13), Saskatchewan (n=82), Alberta (n=175), Yukon (n=1), and Northwest Territories (n=7).

Prepared by BCCDC Influenza & Emerging Respiratory Pathogens Team

Report Disseminated: April 13, 2022

A. Laboratory Surveillance

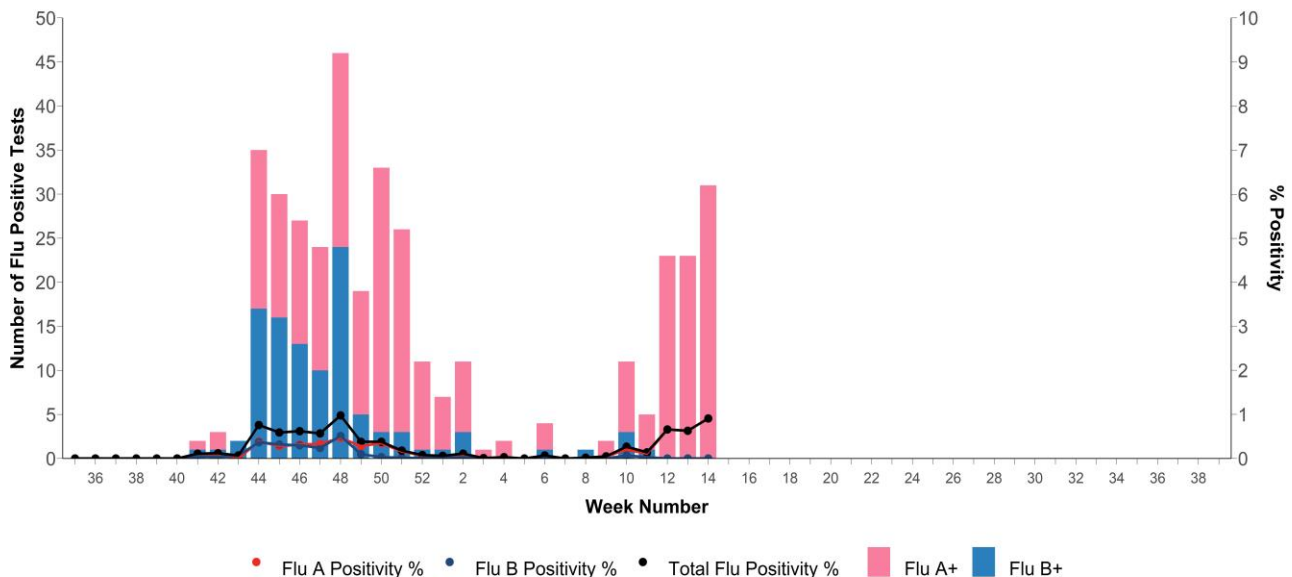
Since the beginning of the 2021-22 season, commencing October 3, 2021 (week 40), 382 (0.2%) influenza viruses have been detected among the 157,435 specimens tested in BC (Figure 1, Table 1). Of these, 82 detections were reported during weeks 11 (n=5), 12 (n=23), 13 (n=23), and 14 (n=31) (spanning March 13, 2022 – April 9, 2022), representing 0.6% of the 14,198 specimens tested in weeks 11-14. All but one of these detections were influenza A (81/82) and among those subtyped, all but one was influenza A(H3N2) (37/38). Among 25 of 82 detections during weeks 11-14 with known age, three were 0-8 years old, seven were 9-19 years old, 12 were 20-49 years old and three were 65+ years old.

Influenza virus detection in weeks 11-14 of 2022 was higher than the same period of 2021 (0/10,578 specimens tested) but still below the same period of 2020 (1,762/30,957 specimens tested; 6%) or the 5-year (pre-COVID-19 pandemic) average for weeks 11-14 (1,048/8,349; 13%) (Figure 2).

The BCCDC PHL and some local health authority (HA) laboratories also conduct testing for other non-influenza respiratory viruses (NIRV), including RSV and other pathogens beyond SARS-CoV-2 which is not addressed in this report. RSV percent positivity has declined since peaking in week 48 and has been steadily below the 5-year historical average in weeks 11-14. EV/RV positivity has slightly decreased in weeks 11-14 but remained within or close to expected levels (Figure 2).

Among specimens additionally subjected to multiplex testing between weeks 11-14, RSV, entero/rhinoviruses (EV/RV) and seasonal coronavirus were the first (253/737; 34%), second (250/737; 34%) and third (127/737; 17%) most commonly detected NIRVs, respectively. In weeks 11-14, 253 RSV positive specimens were identified among 13,488 tested (2%) compared to 1 detection among 10,578 specimens tested (0.01%) during the same weeks of the 2020-21 season and 788 detections out of 30,931 tested (3%) during the 2019-20 season. EV/RV and coronavirus were found in 12% (250/2,068) and 6% (127/2,067) of specimens tested, respectively. Most NIRV detections (at the BCCDC PHL) were among children under the age of 9 years. (Figures 2, 3, 4, 5; Table 1).

Figure 1. Influenza virus positivity among respiratory specimens tested^a across BC, 2021-2022^{a,b,c}

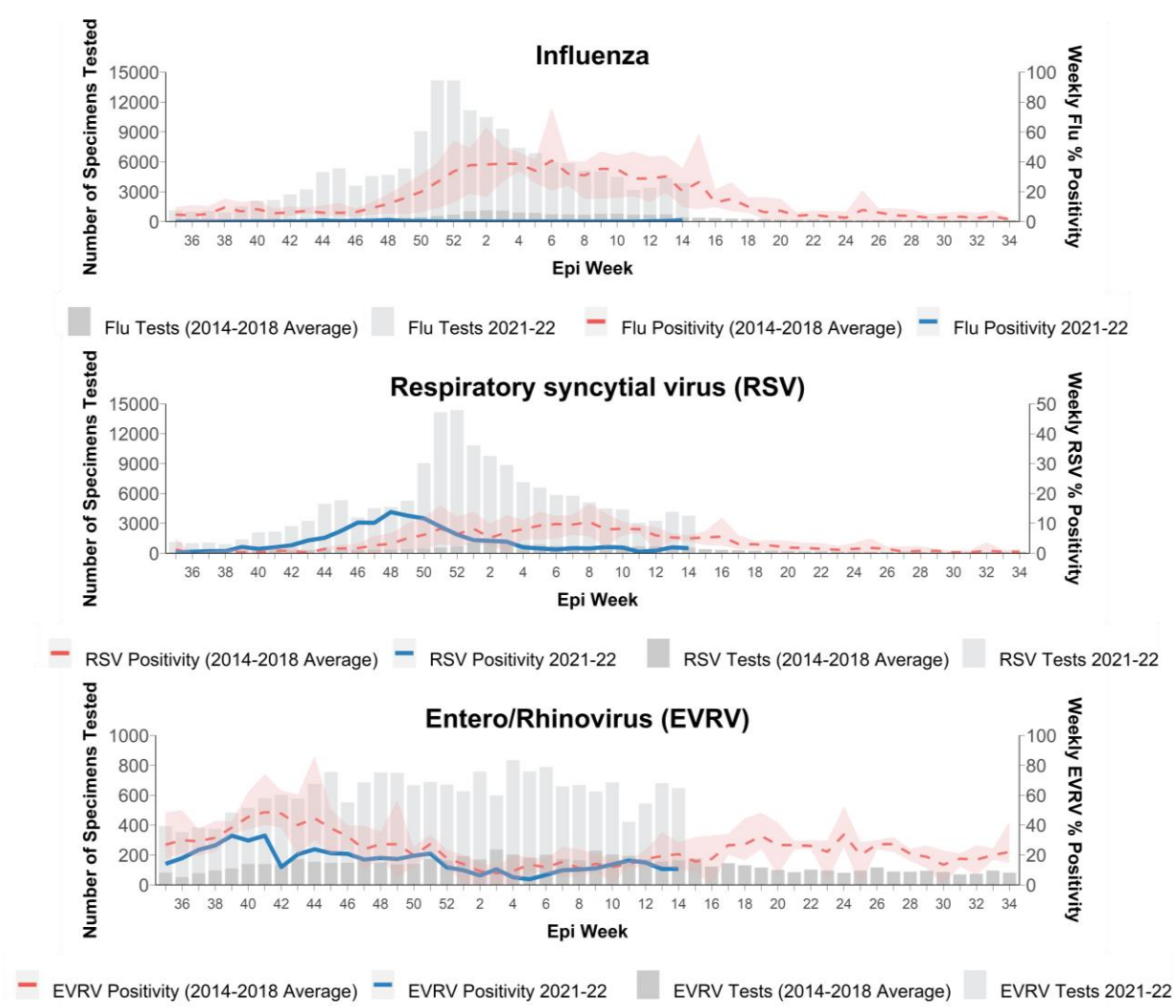


a. The percentage influenza positivity is presented by influenza type based on primary specimens submitted for influenza testing at the BCCDC Public Health Laboratory (PHL) and other external sites that share complete testing data with the BCCDC PHL. Reporting sites include: BC Children’s and Women’s 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 PHL, Interior Health Authority sites, and Northern Health Authority (NHA data missing for week 14).

b. Rates are subject to change with subsequent data reconciliation.

c. Week of sample based on the sample collection date.

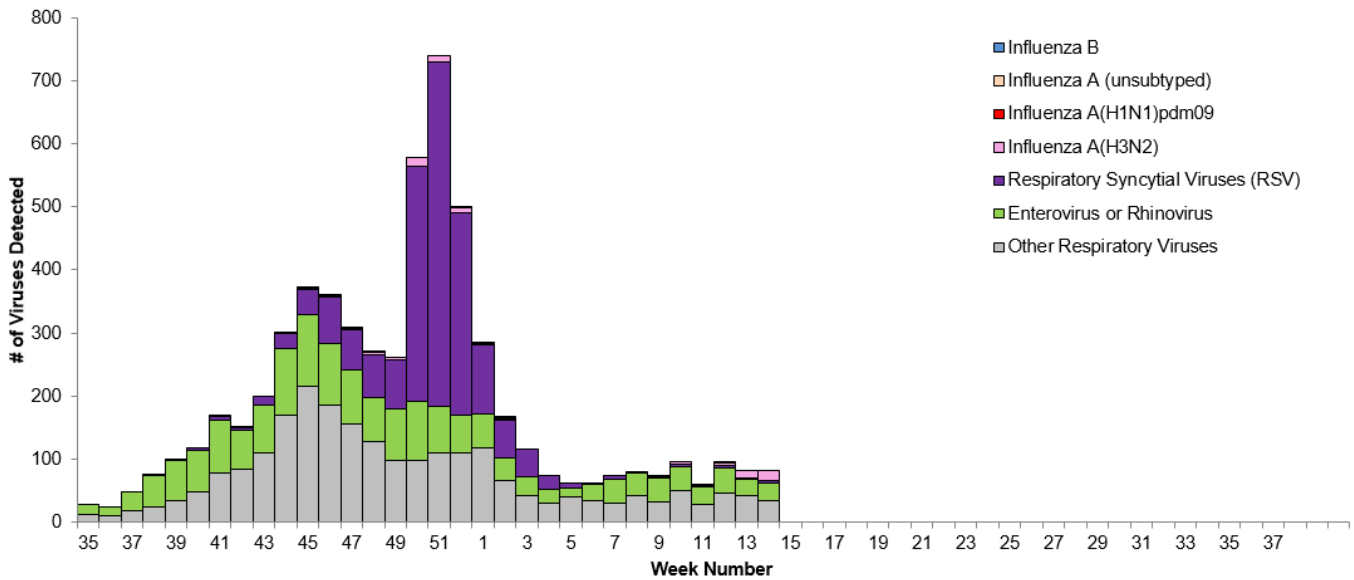
Figure 2. Laboratory influenza and other respiratory virus detections across BC with 5-season historical data*



* The shaded area (red) represents the maximum and minimum percentage of influenza positivity reported by week from seasons 2014-2015 to 2018-2019.

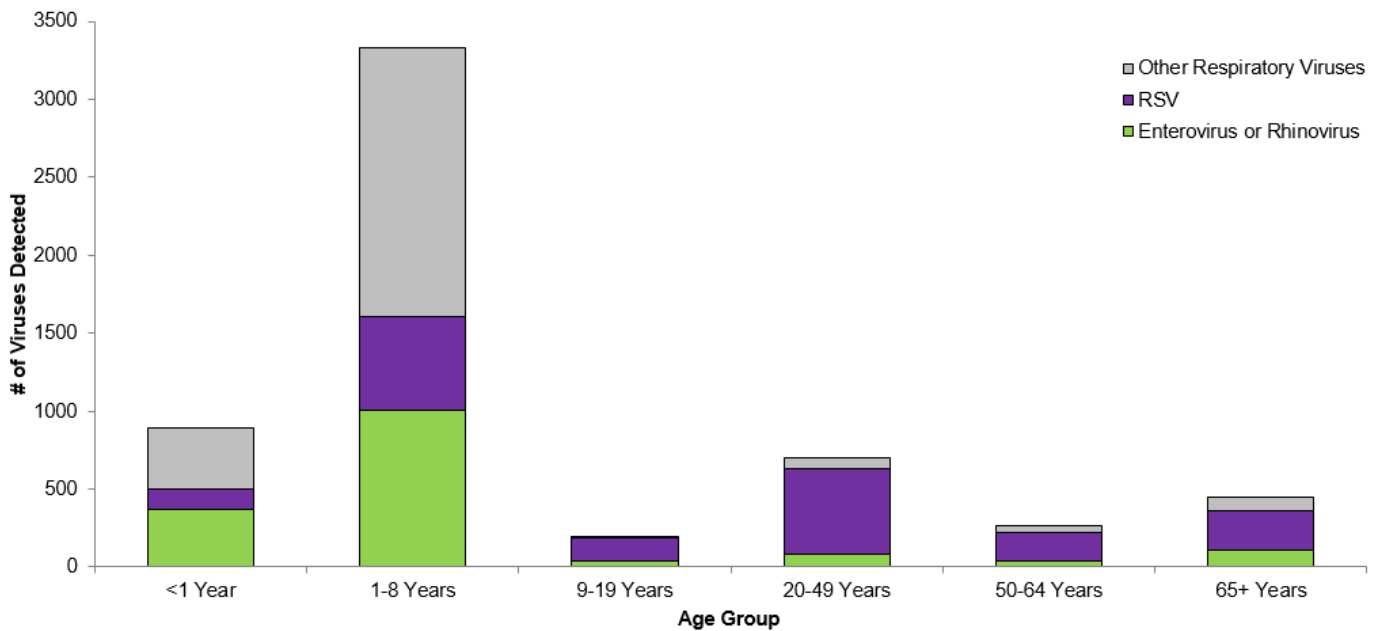
Source: Respiratory Virus Detections Surveillance System (RVDSS) weekly report; data includes seasons 2014-15, 2015-16, 2016-17, 2017-18, 2018-19, 2021-22 (2019-20 & 2020-21 are excluded from the historical average calculations due to the COVID-19 pandemic).

Figure 3. Influenza and non-influenza respiratory virus (NIRV) detections among specimens submitted to BCCDC Public Health Laboratory and Island Health Laboratories, 2021-2022*



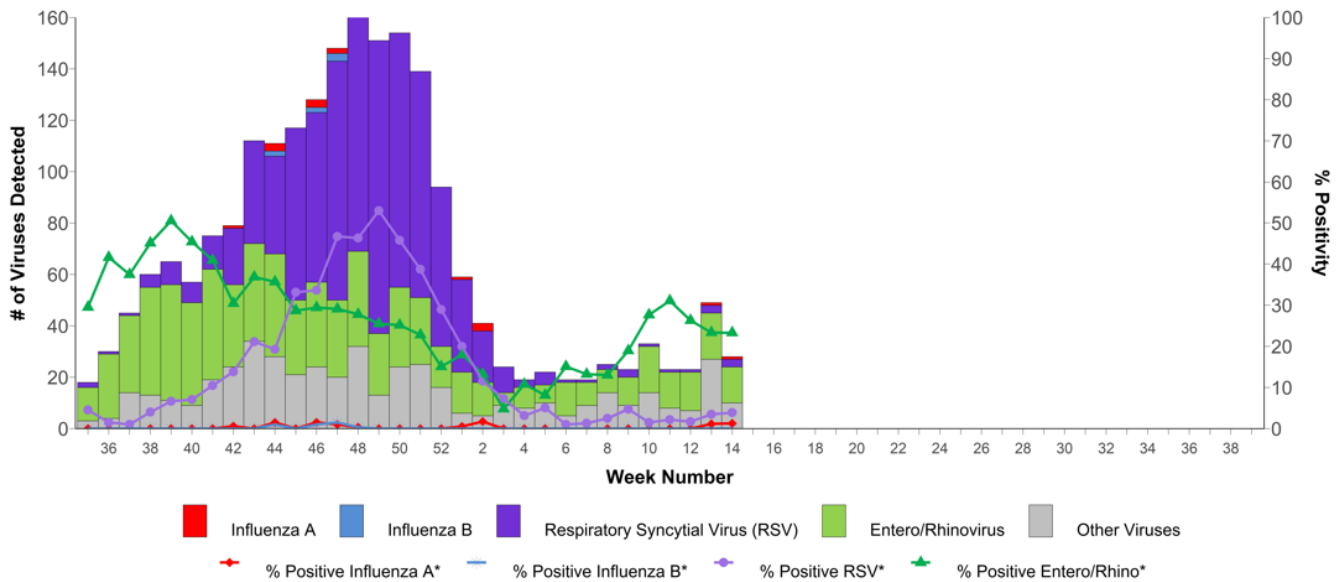
* The BCCDC Public Health Laboratory (PHL) conducts the majority of influenza subtype characterization for the province, including for primary specimens submitted directly to the BCCDC PHL for influenza diagnosis, as well as for specimens that have tested positive for influenza at other external sites and for which secondary subtyping was requested. Influenza A(H1N1)pdm09 and influenza A(subtype unknown) weekly case counts as directly typed/subtyped on primary specimens by Island Health Authority are also incorporated into the influenza counts in the graph and narrative summary above.

Figure 4. Cumulative number (since week 35) of non-influenza respiratory virus detections (NIRV) by type and age group, BCCDC Public Health Laboratory, 2021-22



Source: BCCDC Public Health Laboratory (PHDRW); Data are current to April 13, 2022; figure includes cumulative influenza detections for specimens collected from weeks 35-14.

Figure 5. Influenza and NIRV detections among respiratory specimens submitted to BC Children’s and Women’s Health Centre Laboratory, 2021-2022^{a,b,c}



- a. Positive rates were calculated using aggregate data. The denominators for each rate represent the total number of tests; multiple tests may be performed for a single specimen and/or patient.
- b. Week of sample based on the sample collection date.
- c. From week 35 to week 14 (August 29, 2021 – April 9, 2022), 4,326 specimens were submitted for influenza virus testing at the BC Children’s and Women’s Health Centre laboratory. Amongst detected viruses, the most common viruses were RSV (946/2,189; 43%), entero/rhinoviruses (744/2,189; 33%) and parainfluenza (291/2,189; 13%).

Table 1. Influenza and non-influenza respiratory viruses (NIRV) detected among primary patient specimens by health authority of test site

Count (% positive from total screened)	Health authority ^{a,b} where specimen tested ^c , BC Cases							Total
	FHA	IHA	VIHA	NHA*	VCHA	BCCDC	CW	
Current report Week 14 [April 3 - 9, 2022]								
Influenza, Total ^d	5/907 (1)	11/872 (1)	4/523 (1)	NR	4/809 (<1)	6/234 (3)	1/77 (1)	31/3422 (1)
Influenza A total	5 (1)	11 (1)	4 (1)	NR	4 (<1)	6 (3)	1 (1)	31 (1)
A(H3N2) ^e	5	10	6	NR	3	---	---	24
A(H1N1)pdm09 ^e	0	0	0	NR	0	---	---	0
Influenza B total	0	0	0	NR	0	0	0	0
NIRV, Total ^c	5	64	8	NR	6	31	27	141
RSV	5/907 (1)	36/872 (4)	6/523 (1)	NR	4/605 (1)	0/234	3/77 (4)	54/3218 (2)
Enterovirus/Rhinovirus	--- ^f	9/160 (6)	2/20 (10)	--- ^f	2/51 (4) ^g	25/191 (13)	14/60 (23)	---
Other ^h	--- ^f	19/160 (12)	0/20	--- ^f	0/65 (16) ^g	6/191 (3)	10/60 (17)	---
Cumulative total to date, Week 40 to 14 [October 3, 2021 – April 9, 2022]								
Influenza Total ^d	50/30690 (<1)	41/28130 (<1)	20/18580 (<1)	23/8731 (<1)	170/29250 (1)	54/38194 (<1)	24/3860 (1)	382/157435 (<1)
Influenza A total	39 (<1)	39 (<1)	14 (<1)	14 (<1)	107 (<1)	47 (<1)	16 (<1)	276 (<1)
A(H3N2) ^e	23	34	13	0	36	---	---	106
A(H1N1)pdm09 ^e	0	0	1	0	0	---	---	1
Influenza B total	11 (<1)	2 (<1)	6 (<1)	9 (<1)	63 (<1)	7 (<1)	8 (<1)	106 (<1)
NIRV, Total ^c	2147	1991	1016	562	1495	4648	1947	13806
RSV	2147/30690 (7)	1375/28130 (5)	889/18880 (5)	562/8731 (6)	1293/25635 (5)	1752/38182 (5)	928/3860 (24)	8946/154108 (6)
Enterovirus/Rhinovirus	--- ^f	302/2812 (11)	80/947 (8)	--- ^f	115/1981 (6) ^g	1503/8823 (17)	589/2435 (24)	---
Other ^h	--- ^f	314/2812 (11)	47/947 (5)	--- ^f	87/2305 (4) ^g	1393/8823 (16)	430/2435 (18)	---

- FHA=Fraser Health Authority; IHA=Interior Health Authority; VIHA= Vancouver Island Health Authority; NHA=Northern Health Authority; VCHA=Vancouver Coastal Health Authority; BCCDC= primary patient specimens screened at BCCDC Public Health Laboratory; CW=Children’s and Women’s Health Centre Laboratory
- The HA associated with each subtyped sample is based on patient’s health authority. If patient health authority information is missing, the ordering physician’s health authority is used.
- The number of influenza A, influenza B, RSV, Enterovirus/Rhinovirus, and other non-influenza respiratory viruses (NIRV) detected are based on specimens submitted for influenza screening/testing to various labs across FHA, VCHA (including Providence Health), VIHA, IHA and NHA. Samples sent to Children’s & Women’s Laboratory (CW) and BCCDC Public Health Laboratory for primary diagnostic purposes are displayed separately here (i.e. excluding those already screened at another site and submitted for secondary testing or characterization).
- Influenza co-infections (influenza A and B virus positive) not accounted for in data source (PLOVER).
- The BCCDC PHL conducts the majority of influenza subtype characterization for the province, including for primary specimens submitted directly to the BCCDC PHL for influenza diagnosis, as well as for specimens that have tested positive for influenza at other external sites and for which secondary subtyping was requested. Influenza A(H1N1)pdm09 and influenza A(H3N2) are directly typed/subtyped on primary specimens by IHA and are also incorporated into the influenza A subtype counts above.
- Not tested by Fraser Health Microbiology Laboratories and Northern Health laboratory sites.
- Enterovirus/Rhinovirus and Coronavirus not tested by Providence Health.
- Other non-influenza respiratory viruses (NIRV) included on multiplex panels are parainfluenza, adenovirus, human metapneumovirus (HMPV), and seasonal coronaviruses (does not include SARS-CoV-2).

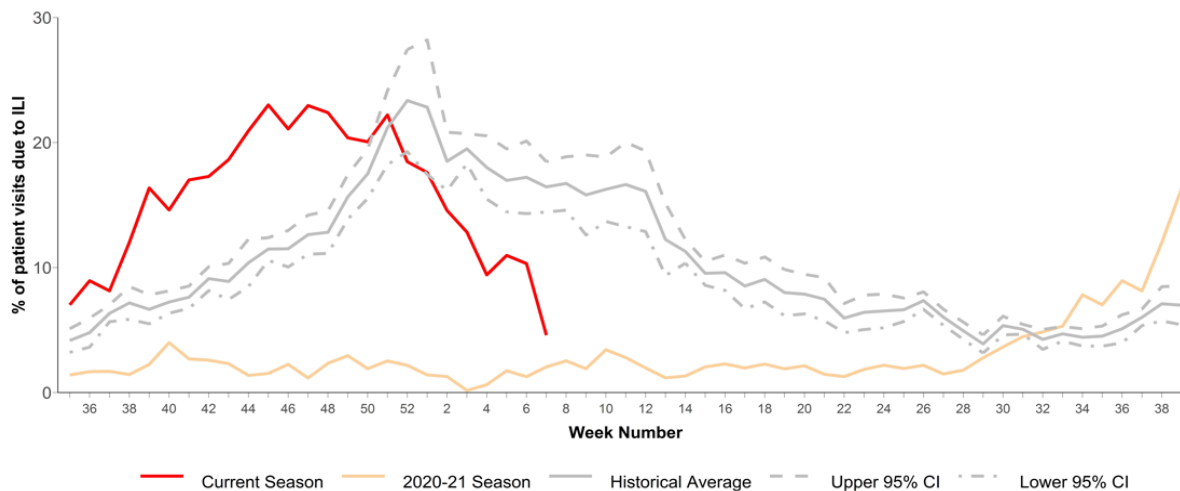
NR = Not Reported
*Week 14 data missing

B. Clinical Indicators

BC Children’s Hospital Emergency Room

The proportion of visits to BC Children’s Hospital Emergency Room (ER) attributed to ILI that had been trending above the historical average earlier in the season started to decline in week 51 and was below expected levels in week 7 ([Figure 6](#)). Due to system updates, reporting of this indicator has paused since week 7.

Figure 6. Percent of patients presenting to BC Children’s Hospital ER

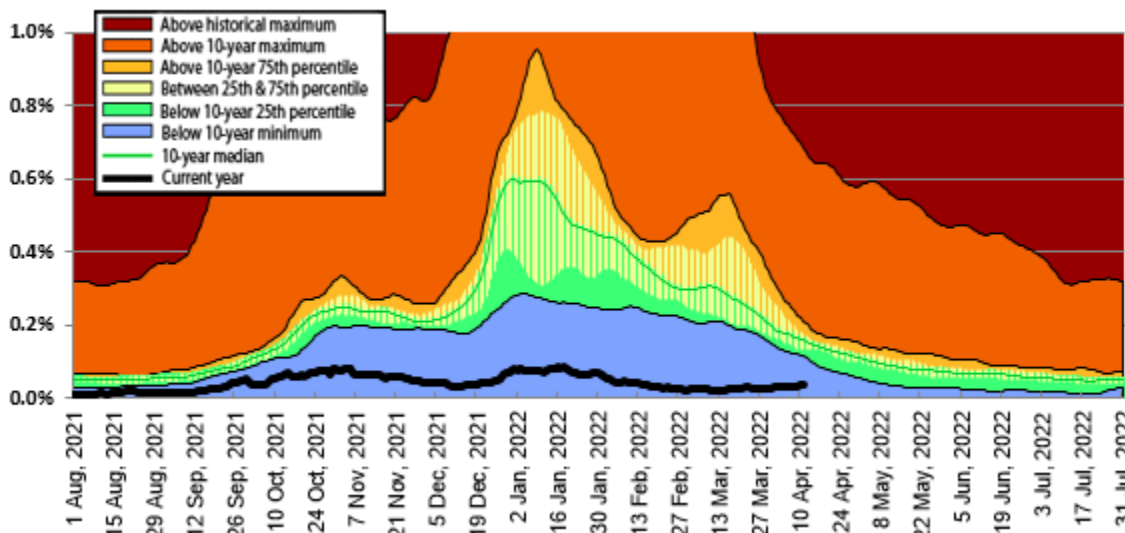


Source: BCCH Admitting, Discharge, Transfer database (ADT). Data includes records with a triage chief complaint of "flu" or "influenza" or "fever/cough."
*5-year historical average for 2021-22 season based on 2014-15 to 2018-19 seasons (excluded 2019-20 & 2020-21 seasons); CI=confidence interval.

Medical Service Plan

As shown in [Figure 7](#) and [Figure 8](#), between weeks 5 and 10 (spanning January 30 to March 12, 2022), BC Medical Service Plan (MSP) general practitioner claims for influenza illness (weekly counts) remained below the 10-year historical minimum overall in the province and in all five health authorities.

Figure 7. Service claims submitted to MSP for influenza illness*, British Columbia, 2021-2022 season



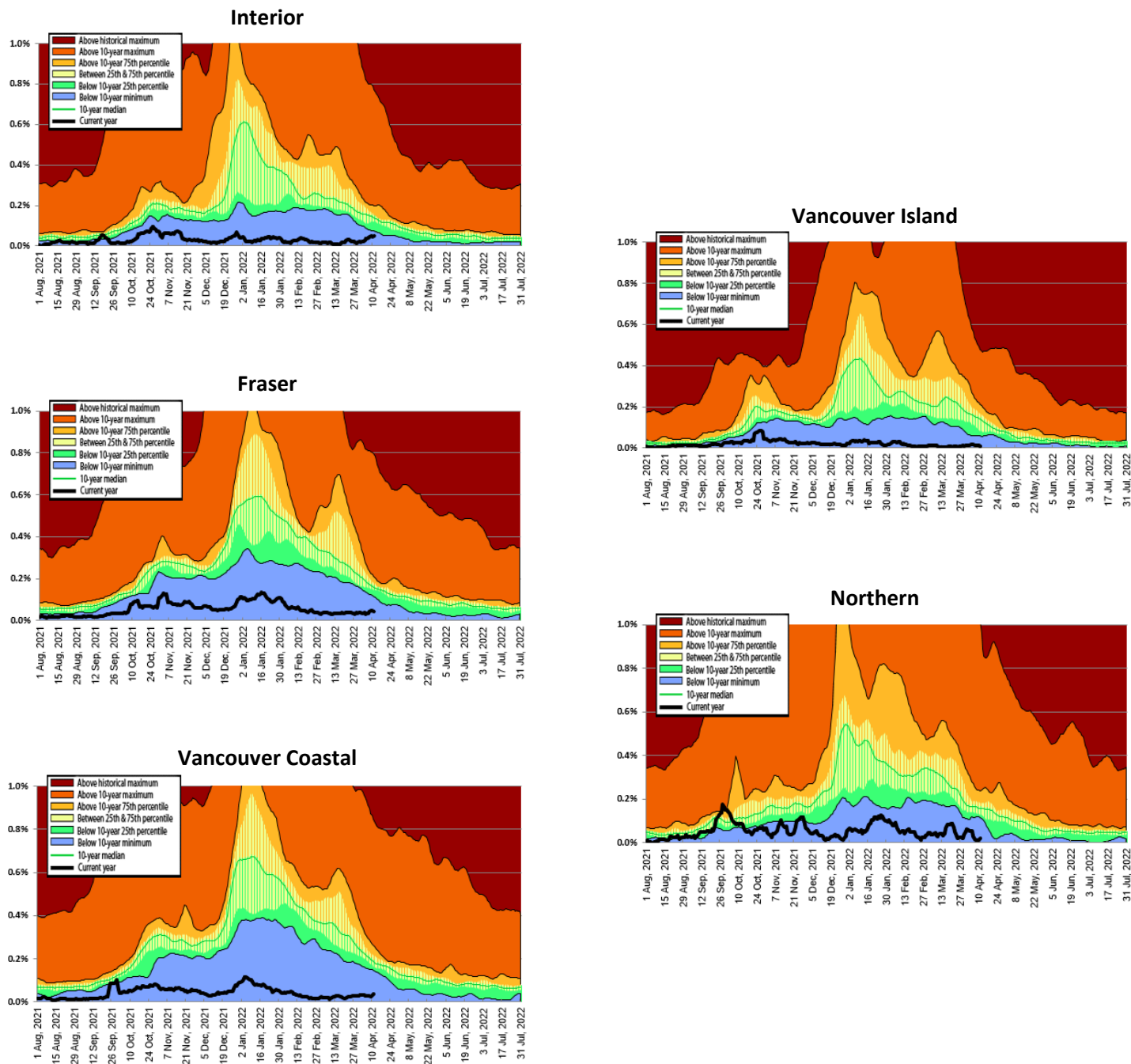
† Data provided by Population Health Surveillance and Epidemiology, BC Ministry of Health Services. Influenza illness (II) is tracked as the weekly count of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).

* 10-year historical data was derived from the seasons 2008-09, 2010-11, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17, 2017-18, and 2018-19.

Seasons 2019-20 and 2020-21 were excluded due to the COVID-19 pandemic.

MSP data beginning August 1, 2021 corresponds to sentinel ILI week 31; data are current to April 11, 2022.

Figure 8.



† Data provided by Population Health Surveillance and Epidemiology, BC Ministry of Health Services. Influenza illness (II) is tracked as the weekly count of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).

* 10-year historical data was derived from the seasons 2008-09, 2010-11, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17, 2017-18, and 2018-19. Seasons 2019-20 and 2020-21 were excluded due to the COVID-19 pandemic.

MSP data beginning August 1, 2021 corresponds to sentinel ILI week 31; data are current to April 11, 2022.

C. Influenza outbreak reports

In week 13 of 2022, the first LTCF influenza outbreak since March 2020 in BC was reported from Vancouver Island Health Authority (Figure 9). Among approximately 150 residents within this LTCF, three were identified with laboratory-confirmed influenza A(H3N2) virus (Figure 10). SARS-CoV-2 was also detected among several residents. Further influenza virus characterization (e.g. genetic sequencing) is being pursued to understand vaccine relatedness. Antiviral prophylaxis was initiated to control the outbreak which was declared over on April 13, 2022 (week 15). No associated hospitalizations or deaths were reported.

By way of comparison, 15 LTCF influenza outbreaks were reported during weeks 11-14 of 2020 with a 5-year historical (pre-COVID-19 pandemic) average of 16 LTCF influenza outbreaks reported between weeks 11-14.

Across weeks 40-14, the tally of LTCF influenza outbreaks for the 2019-20 season was 73 and the 5-year historical (pre-COVID-19 pandemic) average number of reported outbreaks was ~130.

Figure 9. Number of influenza-like illness (ILI) outbreaks reported, British Columbia 2021-22

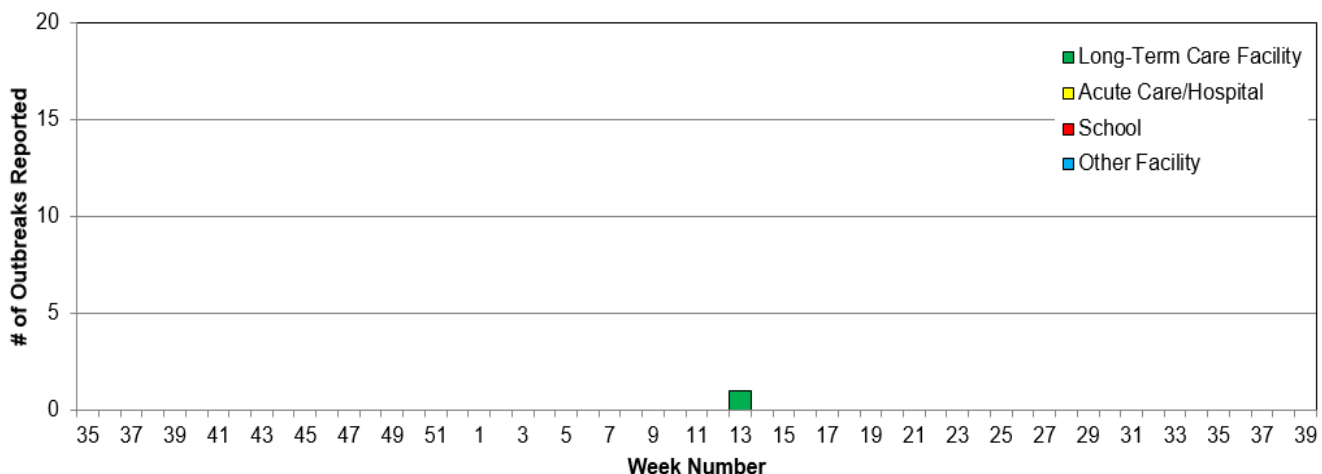
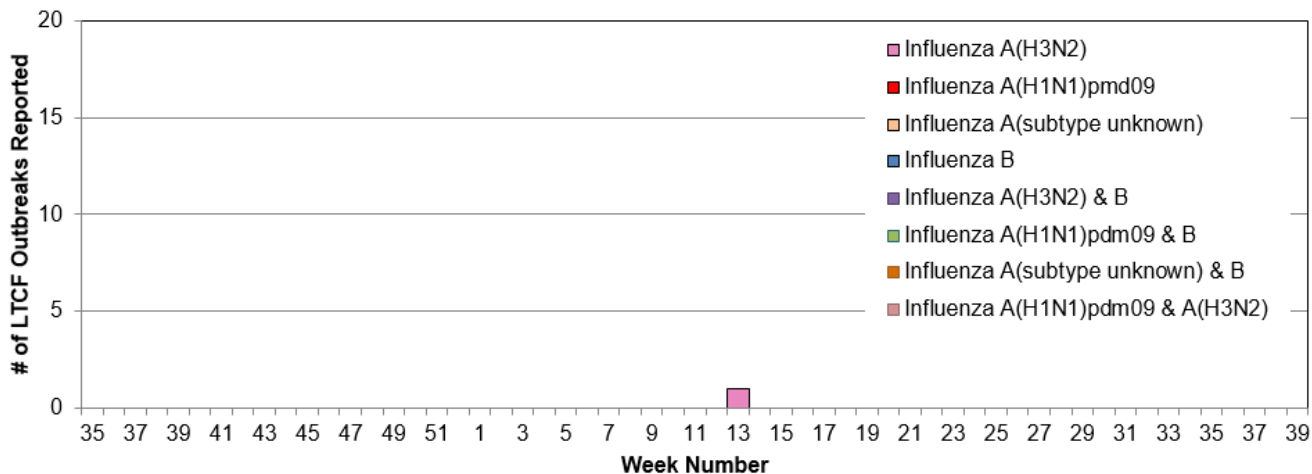


Figure 10. Number of influenza-like illness (ILI) outbreaks by type/subtype in long-term care facilities (LTCF), British Columbia 2021-22



D. National

FluWatch (week 10, March 6 to March 12, 2022)

In week 10, influenza activity across Canada remains low for this time of year and low numbers of sporadic detections of influenza continued to be reported. There has been no evidence of community circulation in the 2021-22 season to date. In week 10, a total of 17 influenza detections (17 influenza A and 0 influenza B) were reported. In week 10, 10,612 tests for influenza were performed at reporting laboratories and the percentage of tests positive for influenza was 0.1%. In the past six pre-pandemic seasons (2014-2015 to 2019-2020), an average of 11,084 tests were performed, with an average 23% of tests positive for influenza. To date this season, 551 influenza detections (435 influenza A and 116 influenza B) have been reported, which is lower than what we have seen historically in the past six pre-pandemic seasons, where an average of 38,193 influenza detections were reported at this point in the season. Among subtyped influenza A detections (n=126), influenza A(H3N2) has accounted for 91% of detections in 2021-22. In week 10, no ILI outbreaks were reported. From August 29, 2021 to March 12, 2022, 18 ILI outbreaks and no laboratory-confirmed influenza outbreaks have been reported. The most recent laboratory-confirmed influenza outbreak occurred in week 24 (week ending June 13, 2020) of the 2019-2020 season. The percentage visits to healthcare professionals for influenza-like illness (ILI) was 1% in week 10. The percentage of participants reporting symptoms of fever and cough to FluWatchers was at 0.7% in week 10.

FluWatch report is available at:

<https://www.canada.ca/en/public-health/services/diseases/flu-influenza/influenza-surveillance/weekly-influenza-reports.html>

National Microbiology Laboratory (NML)

Strain Characterization:

From September 1, 2021 to April 13, 2022, the National Microbiology Laboratory (NML) has characterized 47 influenza viruses (45 H3N2 and 2 H1N1) received from Canadian laboratories.

Influenza A(H3N2):

Genetic characterization

Sequence analysis of the HA gene of these viruses showed that the 45 H3N2 viruses belonged to genetic group 3C.2a1b.2a2. A/Cambodia/e0826360/2020 (H3N2)-like virus is the influenza A/H3N2 component of the 2021-22 Northern Hemisphere influenza vaccine and belongs instead to genetic group 3C.2a1b.2a1. A/Darwyn/6/2021 (H3N2)-like virus is the influenza A/H3N2 component of the 2022 southern hemisphere influenza vaccine and belongs to the genetic group 3C.2a1b.2a2.

Antigenic characterization

45 influenza A (H3N2) viruses were antigenically characterized as A/Cambodia/e0826360/2020 (H3N2)-like virus: 8 viruses were antigenically similar to A/Cambodia/e0826360/2020 (H3N2)-like virus and 37 showed reduced titers with antisera raised against egg-grown A/Cambodia/e0826360/2020 (H3N2)-like virus. A/Cambodia/e0826360/2020 (H3N2) is the influenza A/H3N2 component of the 2021-22 Northern Hemisphere influenza vaccine.

Influenza A(H1N1)pdm09:

Antigenic characterization

Two H1N1 viruses were characterized with one antigenically similar to A/Wisconsin/588/2019, and one virus showed reduced titer with ferret antisera produced against cell-propagated A/Wisconsin/588/2019. A/Wisconsin/588/2019 is the influenza A/H1N1 component of the 2021-22 Northern Hemisphere influenza vaccine.

Antiviral Resistance:

The NML conducted drug susceptibility testing on 47 influenza A (45 H3N2 and 2 H1N1) viruses received.

Oseltamivir: All H1N1 influenza viruses were sensitive to oseltamivir.

Zanamivir: All H1N1 influenza viruses were sensitive to zanamivir.

E. International

USA (week 13, March 27 to April 2, 2022)

In week 13, influenza activity increased nationally in the US. Influenza activity was highest in the central and south-central regions of the country and increasing in the northeastern regions. Most influenza viruses detected were A(H3N2), most of which were genetically related to the vaccine virus but antigenic data shows majority of the characterized H3N2 viruses were different from the vaccine reference viruses. The proportion of outpatient visits for ILI was at 1.9% this week, below the national baseline. The proportion of deaths attributed to pneumonia and influenza during week 10 (6%) was below the epidemic threshold of 7%. Two influenza-associated pediatric deaths were reported to CDC in week 13. Both deaths were associated with influenza A viruses for which no subtyping was performed. There has been a total of 16 influenza-associated pediatric deaths so far this season. Of the 47,705 samples tested for influenza from clinical laboratories across the US in week 16, 3,942 (8%) samples were positive for influenza. Of these, 3,883 (98.5%) were influenza A and 59 (1.5%) was influenza B positive. The US CDC has posted a summary of influenza activity in the United States and elsewhere, available at: <https://www.cdc.gov/flu/weekly>

The United States Centers for Disease Control and Prevention posted preliminary estimates of influenza [vaccine effectiveness \(VE\) for the 2021-22 season](#) on March 11, 2022. In the context of low-level circulation of predominant A(H3N2) sub-clade 2a.2 viruses, antigenically distinct from the 2021-22 sub-clade 2a.1 vaccine strain, investigators show vaccine did not significantly reduce the (already low) risk of medically-attended influenza A(H3N2) illness. VE for all ages combined was 16% (95% CI = -16% to 39%) against outpatient medically attended ARI associated with influenza A(H3N2) virus infection.

WHO (April 4, 2022, based on data up to March 20, 2022)

The current influenza surveillance data should be interpreted with caution as the ongoing COVID-19 pandemic has influenced to varying extents health seeking behaviors, staffing/routines in sentinel sites, as well as testing priorities and capacities in WHO Member States.

In the temperate zone of the northern hemisphere, influenza activity increased or remained stable with detections of mainly influenza A(H3N2) viruses and B/Victoria lineage viruses reported. In Europe, some countries appeared to be experiencing a late influenza season. European countries including Belgium, Denmark, France, Hungary, Italy, Luxembourg, Netherlands, Serbia, Slovenia, Spain and Switzerland observed influenza positivity of greater than 30% in specimens collected from patients presenting with ILI and ARI at sentinel in the past 2 weeks.

In countries in the temperate zone of the southern hemisphere, as expected at this time of year, influenza activity remained low overall, although detections of influenza A viruses (with A(H3N2) predominant among the subtyped viruses) continued to be reported in some countries in temperate South America and South Africa.

In tropical countries of the Caribbean, Central America and South America, low influenza activity of predominately influenza A(H3N2) were reported. **In tropical Africa,** influenza activity was reported mainly from Eastern Africa with influenza A(H3N2) predominating followed by influenza B/Victoria lineage.

From March 7, 2022 to March 20, 2022, the WHO GISRS laboratories tested more than 377,735 specimens. Of these, 32,703 were positive for influenza viruses, of which 29,030 (89%) were typed as influenza A and 3,673 (11%) as influenza B. Of the sub-typed influenza A viruses, 315 (6.5%) were influenza A(H1N1)pdm09 and 4,504 (93.5%) were influenza A(H3N2). Of the characterized B viruses, 3,440 (100%) belonged to B(Victoria) lineage.

Details are available at: <https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-updates/current-influenza-update>

F. WHO Recommendations for Influenza Vaccines

WHO Recommendations for the 2022-23 Northern Hemisphere Influenza Vaccine

On February 25, 2022, the WHO announced recommended strain components for the 2022-23 northern hemisphere trivalent influenza vaccine (TIV)*:

- an A/Victoria/2570/2019 (H1N1)pdm09-like virus [a clade 6B.1A.5a.2 virus]; †
- an A/Darwin/9/2021 (H3N2)-like virus [a clade 3C.2a1b.2a.2 virus]; ‡
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus [a clade V1A.3a.2 virus]. §

It is recommended that quadrivalent influenza vaccines (QIV) for the 2022-23 northern hemisphere season contain the above three viruses and a B/Phuket/3073/2013-like virus (B/Yamagata lineage) [a clade 3 virus], unchanged since 2015-2016.

* Recommended strains represent a change to two of the three components used in 2021-22, updated for the 2022-2023 northern hemisphere TIV. For quadrivalent influenza vaccine (QIV) two of the four components have been updated from 2021-22 to 2022-23.

† Recommended strain is unchanged from the 2021-2022 season vaccine. Note for cell-based vaccine, the WHO recommends an A/Wisconsin/588/2019 (H1N1)pdm09-like virus [a clade 6B.1A5A virus] for the 2022-23 season, unchanged since 2020-2021 season vaccine which contained an A/Guangdong-Maonan/SWL1536/2019 [a clade 6B.1A5A virus].

‡ Recommended strain represents a change from the 2021-2022 season vaccine which contained an A/Hong Kong/2671/2019 (H3N2)-like virus [a clade 3C.2a1b/T135K virus].

§ Recommended strain represents a change from the 2021-2022 season vaccine which contained a B/Washington/02/2019 (B/Victoria lineage)-like virus [a clade V1A.3, Δ3 virus].

For further details: <https://www.who.int/teams/global-influenza-programme/vaccines/who-recommendations/candidate-vaccine-viruses>

WHO Recommendations for 2022 Southern Hemisphere Influenza Vaccine

On September 24, 2021, the WHO announced the recommended strain components for the 2022 southern hemisphere trivalent influenza vaccine (TIV)*:

- an A/Victoria/2570/2019 (H1N1)pdm09-like virus [a clade 6B.1A5A virus]; †
- an A/Darwin/9/2021 (H3N2)-like virus [a clade 3C.2a1b/T131K-A virus]; ‡
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus [a clade V1A.3, Δ3 virus]. §

It is recommended that quadrivalent influenza vaccines (QIV) for the 2022 southern hemisphere season contain the above three viruses and a B/Phuket/3073/2013-like virus (B/Yamagata lineage) [a clade 3 virus], unchanged from 2021.

* Recommended strains represent a change for two of the three components used for the 2021 southern hemisphere TIV

† Note for cell-based vaccine, the WHO recommends A/Wisconsin/588/2019 (H1N1)pdm09-like virus [also a 6B.1A5A virus] for the 2022 season. Both the cell based and egg based vaccine components have not been changed from the 2021 season vaccine.

‡ Note for cell-based vaccine, the WHO recommends an A/Darwin/6/2021 (H3N2)-like virus [also a 3C.2a1b/T131K virus] for the 2022 season. Recommended strain represents a change from the 2021 season vaccine which contained an A/Hong Kong/2671/2019 (H3N2)-like virus [a clade 3C.2a1b/T135K]

§ Note for cell-based vaccine, the WHO recommends a B/Austria/1359417/2021 (B/Victoria lineage)-like virus [a clade V1A.3, Δ3 virus] for the 2022 season. Recommended strain represents a change from the 2021 season vaccine which contained an a B/Washington/02/2019 (B/Victoria lineage)-like virus [a clade V1A.3, Δ3 virus]

For further details: <https://www.who.int/publications/m/item/recommended-composition-of-influenza-virus-vaccines-for-use-in-the-2022-southern-hemisphere-influenza-season>

G. Additional Information

Explanatory Note:

The surveillance period for the 2021-22 influenza season is defined starting in week 40. Weeks 35-39 of the 2020-21 season are shown on graphs for comparison purposes.

List of Acronyms:

ACF: Acute Care Facility	LTCF: Long-Term Care Facility
EV/RV: Enteroviruses/Rhinoviruses	MSP: BC Medical Services Plan
FHA: Fraser Health Authority	NHA: Northern Health Authority
HA: Health authority	NML: National Microbiological Laboratory
HBoV: Human bocavirus	PHL: Public Health Laboratory
HMPV: Human metapneumovirus	RSV: Respiratory syncytial virus
HSDA: Health Service Delivery Area	VCHA: Vancouver Coastal Health Authority
IHA: Interior Health Authority	VIHA: Vancouver Island Health Authority
ILI: Influenza-Like Illness	WHO: World Health Organization

Web Sites:

BCCDC Emerging Respiratory Pathogen Updates:

www.bccdc.ca/health-professionals/data-reports/emerging-respiratory-virus-updates

Influenza Web Sites

Canada – Influenza surveillance (FluWatch): <https://www.canada.ca/en/public-health/services/diseases/flu-influenza/influenza-surveillance.html>

Canada – Human Emerging Respiratory Pathogens Bulletins: <https://www.canada.ca/en/public-health/services/surveillance/human-emerging-respiratory-pathogens-bulletin.html>

Washington State Flu Updates: <http://www.doh.wa.gov/portals/1/documents/5100/420-100-fluupdate.pdf>

USA Weekly Surveillance Reports: www.cdc.gov/flu/weekly/

Joint ECDC – WHO/Europe weekly influenza update (Flu News Europe): flunewseurope.org

WHO – Influenza Updates: https://www.who.int/influenza/surveillance_monitoring/updates/en/

WHO – Weekly Epidemiological Record: www.who.int/wer/en/

WHO Collaborating Centre for Reference and Research on Influenza (Australia): www.influenzacentre.org/

Australian Influenza Report:

www.health.gov.au/internet/main/publishing.nsf/content/cda-surveil-ozflu-flucurr.htm

New Zealand Influenza Surveillance Reports: www.surv.esr.cri.nz/virology/influenza_weekly_update.php

Avian Influenza Web Sites

WHO – Influenza at the Human-Animal Interface: www.who.int/csr/disease/avian_influenza/en/

World Organization for Animal Health: www.oie.int/eng/en_index.htm

Contact Us:

Tel: (604) 707-2510

Fax: (604) 707-2516

Email: InfluenzaFieldEpi@bccdc.ca

Communicable Diseases & Immunization Service (CDIS)

BC Centre for Disease Control, 655 West 12th Ave, Vancouver BC V5Z 4R4

Online: www.bccdc.ca/health-professionals/data-reports/influenza-surveillance-reports

Link to fillable Facility Outbreak Report Form: http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Forms/Epid/Influenza%20and%20Respiratory/OutbreakReportForm_2018.pdf