

British Columbia (BC) Influenza Surveillance Bulletin

2021-22 Influenza Season

Week 4: January 23 to 29, 2022

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Influenza and non-influenza respiratory virus (NIRV) detections remain low in BC

Since our last bulletin for week 1, 14 influenza viruses were reported in BC among 24,922 specimens tested (0.04%) in weeks 2-4. In the current 2021-22 season, influenza virus testing is higher but the detection rate is far below the 5-year (pre-COVID-19 pandemic) average for weeks 2-4 (1,286 (41%) of 3,143 tests on average). During weeks 2-4, most detections were non-influenza respiratory viruses (NIRVs) including RSV (891/1,180; 76%), followed by entero-/rhinoviruses (EV/RV, 136/1,180; 12%). Most NIRV detections were among children <9 years of age. RSV percent positivity, which had ranged above pre-pandemic historical averages earlier in the season, has been declining since week 48 and fell below historically expected levels in week 4.

Visits to BC Children's Hospital Emergency Room for influenza-like illness (ILI) as a percentage of all visits, also previously exceeding 5-year historical averages, fell below expected levels in weeks 2-4.

BC Medical Service Plan (MSP) general practitioner claims for influenza illness (weekly counts) remained below the 10-year historical minimum.

Elsewhere in Canada, influenza virus detection during weeks 2-4 was also low: Nova Scotia (n=2), Quebec (n=8), Ontario (n=3), Manitoba (n=4), Saskatchewan (n=11), and Alberta (n=3). To week 3 of the current season, influenza A(H3N2) has accounted for most (92%) of subtyped influenza A viruses (n=106) in Canada.

With recent updates to SARS-CoV-2 testing guidelines, trends in influenza and NIRV detection may also be affected: <http://www.bccdc.ca/health-professionals/clinical-resources/covid-19-care/covid-19-testing/viral-testing>

Prepared by BCCDC Influenza & Emerging Respiratory Pathogens Team

Report Disseminated: February 3, 2022

A. Laboratory Surveillance

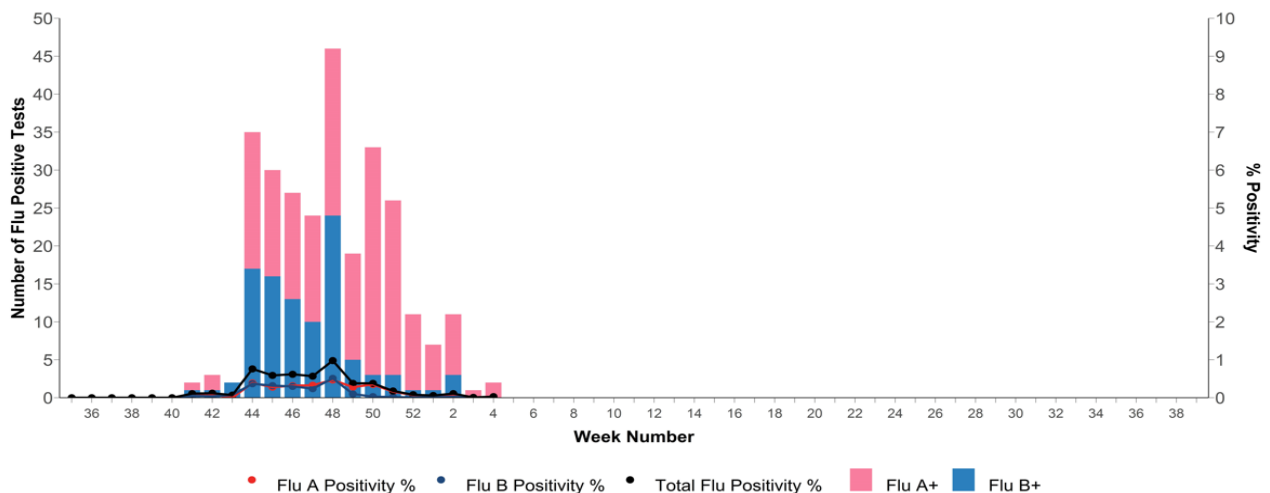
Since the beginning of the 2021-22 season, commencing October 3, 2021 (week 40), 279 (0.3%) influenza viruses have been detected among the 110,912 specimens tested in BC (Figure 1). Of these, 14 detections were reported during weeks 2 (n=11), 3 (n=1), and 4 (n=2) (spanning January 9, 2022 – January 29, 2022), representing 0.04% of the 24,922 specimens tested in weeks 2-4. These 14 detections exclude those considered by the BCCDC Public Health Laboratory (PHL) as likely to have been associated with live attenuated influenza vaccine (LAIV). Among 9 detections with known patient age information, three were under the age of 7 (range 1-6), two were young adults (25 and 33 years old) and four were mature adults (range 53-91).

By way of comparison for the same period (weeks 2-4) of the 2020-21 season, there were no influenza detections among 8,346 specimens tested, and 970 detections among 4,394 tested during the 2019-20 season (22% positivity). In the current 2021-22 season, influenza virus testing is higher but detection is far below the 5-year historical (pre-pandemic) average (Figure 2). In the historical seasons prior to the COVID-19 pandemic, an average of 3,143 influenza tests were conducted between weeks 2 to 4, with 1,286 (41%) influenza virus detections (range 98 to 968 detections per week) reported (source: RVDSS Report).

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, which had been ranging above the 5-year historical average (2014-15 to 2018-2019) earlier in the season, started to decline in week 48 and is slightly below the historical average in week 4. EV/RV positivity remained within expected levels for weeks 2-4 (Figure 2).

Among specimens additionally subjected to multiplex testing between weeks 2-4, RSV, entero/rhinoviruses (EV/RV) and seasonal coronavirus were the first (891/1,180; 76%), second (136/1,180; 12%) and third (63/1,180; 5%) most commonly detected NIRVs, respectively. In weeks 2-4, 891 RSV positive specimens were identified among 23,489 tested (4%) compared to 0 detection among 8,254 specimens tested during the same weeks of the 2020-21 season and 438 detections out of 4,350 tested (10%) during the 2019-20 season. EV/RV and coronavirus were found in 7% (136/2,055) and 3% (63/2,055) 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}

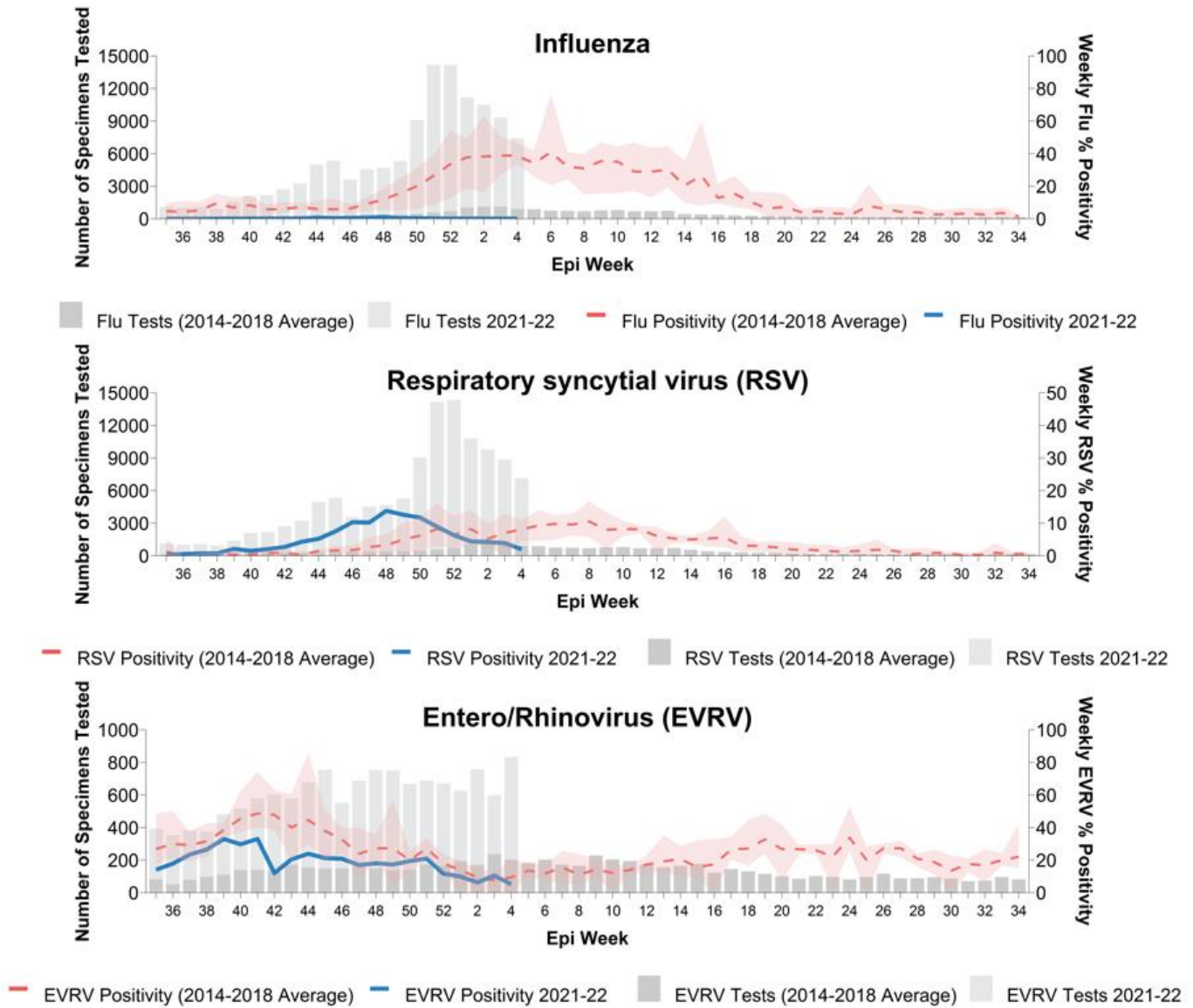


a. The percentage influenza positivity is presented by influenza type based on primary specimens submitted for influenza testing at the BCCDC Public Health Laboratory (PHL) and other external sites that share complete testing data with the BCCDC PHL. Reporting sites include: BC Children’s and Women’s 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 4).

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

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

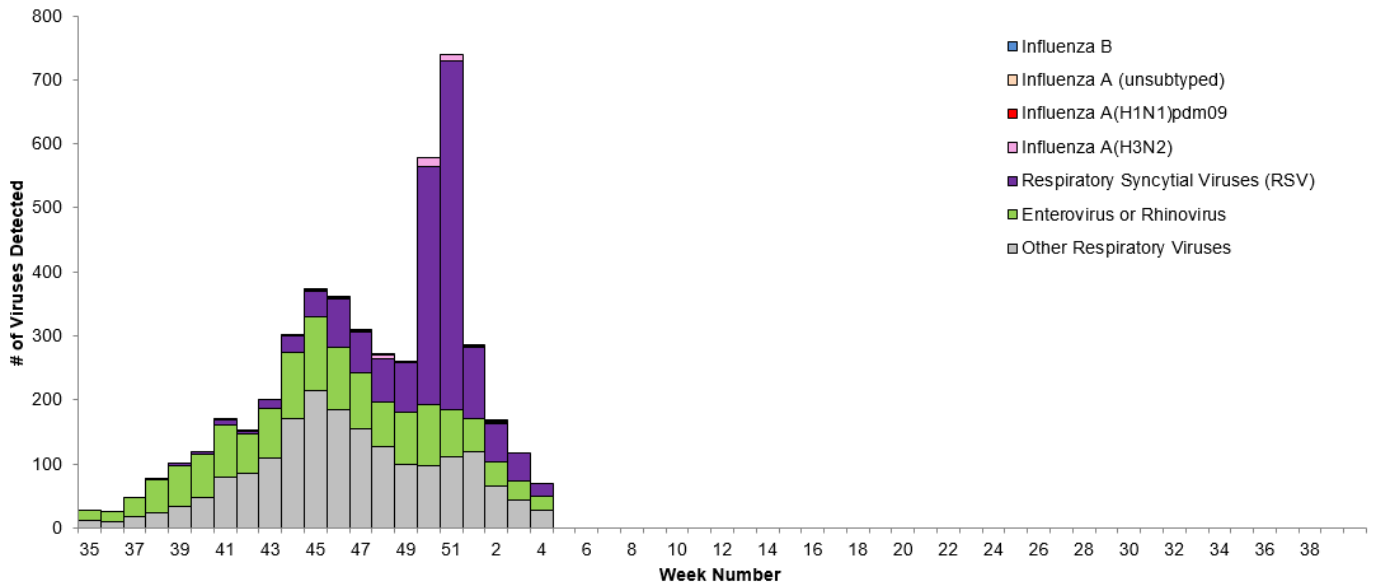
Figure 2. Laboratory influenza and other respiratory virus detections across BC with 5-season historical data*



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

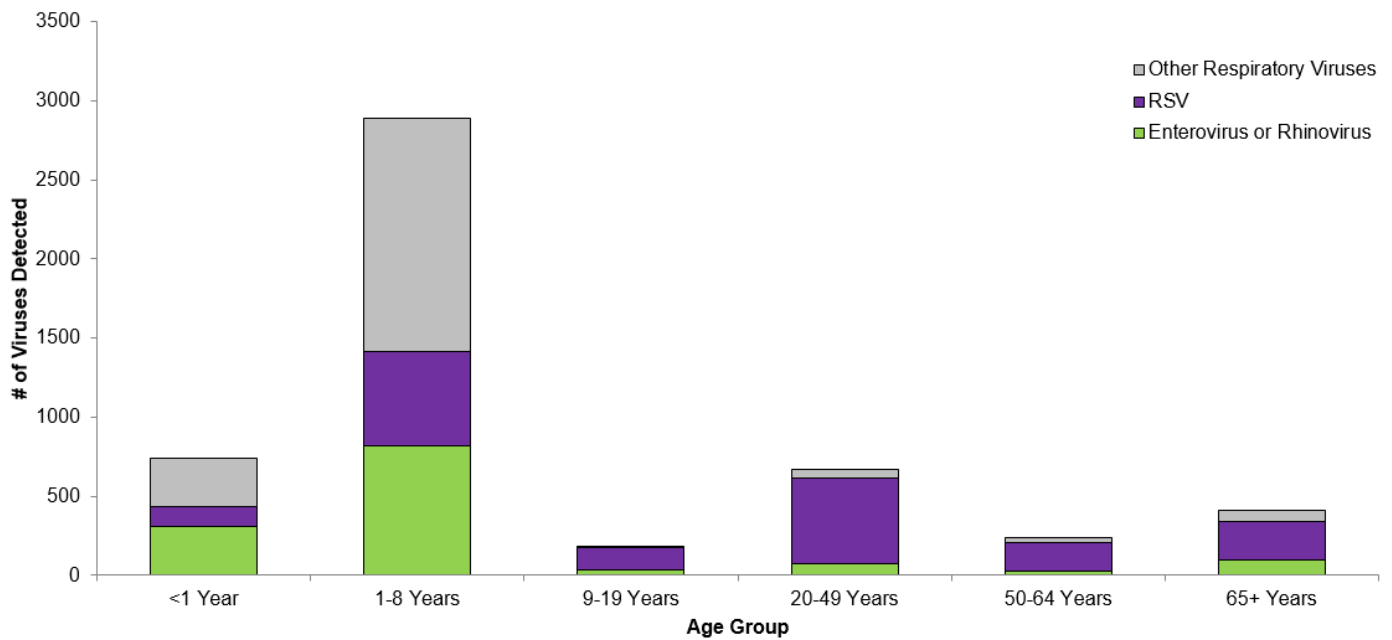
Source: Respiratory Virus Detections Surveillance System (RVDSS) weekly report; data includes seasons 2014-2015, 2015-16, 2016-17, 2017-18, 2018-19, 2021-2022 (2019-20 & 2020-21 are excluded from the historical average calculations due to the COVID-19 pandemic).

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



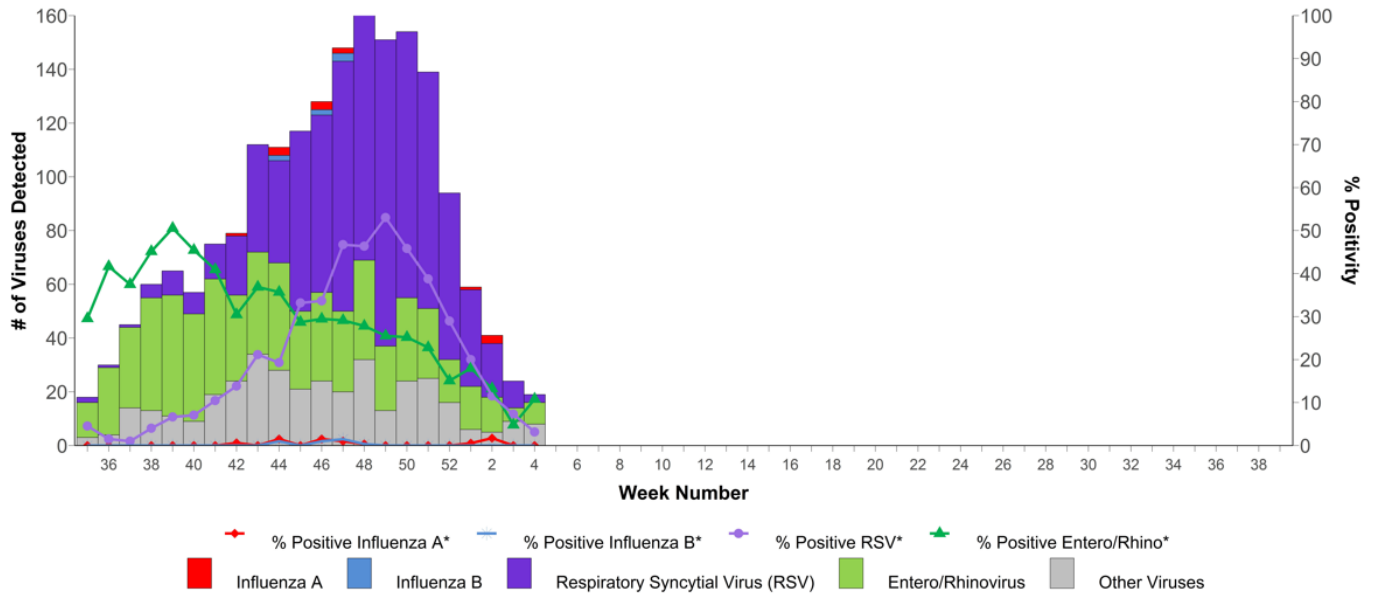
* The BCCDC Public Health Laboratory (PHL) conducts the majority of influenza subtype characterization for the province, including for primary specimens submitted directly to the BCCDC PHL for influenza diagnosis, as well as for specimens that have tested positive for influenza at other external sites 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 February 3, 2022; figure includes cumulative influenza detections for specimens collected from weeks 35-4.

Figure 5. Influenza and NIRV detections among respiratory specimens submitted to BC Children’s and Women’s Health Centre Laboratory, 2020-2021^{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 4 (August 29, 2021 – January 29, 2022), 3,578 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 (925/1,925; 48%), enterovirus/rhinoviruses (616/1,925; 32%) and parainfluenza (269/1,925; 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 4 [January 23 - 29, 2022]								
Influenza, Total ^d	1/1372	1/1680	0/1107	NR	0/1645	0/615	0/95	2/6514 (<1)
Influenza A total	1 (<1)	1 (<1)	0	NR	0	0	0	2
A(H3N2) ^e	0	0	0	NR	0	---	---	0
A(H1N1)pdm09 ^e	0	0	0	NR	0	---	---	0
Influenza B total	0	0	0	NR	0	0	0	0
NIRV, Total ^c	28	68	23	NR	19	33	19	190
RSV	28/1372 (2)	58/1680 (3)	21/1107 (2)	NR	13/1363 (1)	4/615 (1)	3/95 (3)	127/6232 (2)
Enterovirus/Rhinovirus	--- ^f	5/177 (3)	2/35 (6)	--- ^f	1/81 (1) ^g	16/264 (6)	8/74 (11)	---
Other ^h	--- ^f	5/177 (3)	0/35	--- ^f	5/94 (5) ^g	13/264 (5)	8/74 (11)	---
Cumulative total to date, Week 40 to 4 [October 3, 2021 – January 29, 2022]								
Influenza Total ^d	33/19909 (<1)	13/17320 (<1)	11/12531 (<1)	10/4296 (<1)	161/20228 (1)	29/33516 (<1)	22/3112 (1)	279/110912 (<1)
Influenza A total	22 (<1)	11 (<1)	5 (<1)	6 (<1)	99 (<1)	22 (<1)	14 (<1)	179 (<1)
A(H3N2) ^e	10	14	1	0	27	---	---	52
A(H1N1)pdm09 ^e	0	0	0	0	0	---	---	0
Influenza B total	11 (<1)	2 (<1)	6 (<1)	4 (<1)	62 (<1)	7 (<1)	8 (<1)	100 (<1)
NIRV, Total ^c	2077	1410	936	313	1392	4032	1685	11845
RSV	2077/19909 (10)	986/17320 (6)	837/12831 (7)	313/4296 (7)	1227/18098 (7)	1716/33504 (5)	907/3112 (29)	8063/109070 (7)
Enterovirus/Rhinovirus	--- ^f	202/1529 (13)	66/675 (10)	--- ^f	99/1289 (8) ^g	1185/6045 (20)	461/1764 (26)	---
Other ^h	--- ^f	222/1529 (15)	33/675 (5)	--- ^f	66/1518 (4) ^g	1131/6045 (19)	317/1764 (18)	---

- a. 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
- b. 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.
- c. 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).
- d. Influenza co-infections (influenza A and B virus positive) not accounted for in data source (PLOVER).
- e. 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.
- f. Not tested by Fraser Health Microbiology Laboratories and Northern Health laboratory sites.
- g. Enterovirus/Rhinovirus and Coronavirus not tested by Providence Health.
- h. 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).

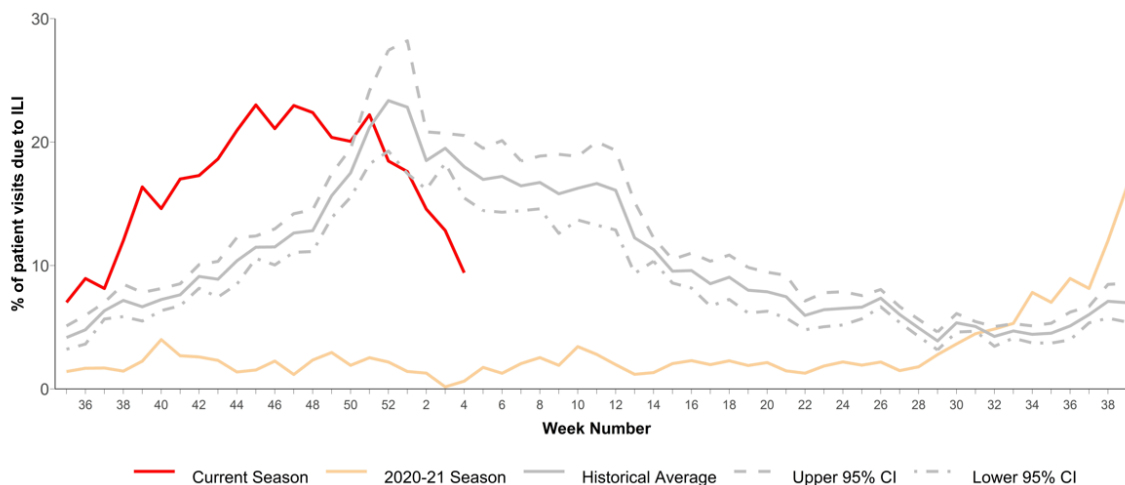
NR = Not Reported
*Week 4 data missing

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 previously been trending above the 5-year historical average since the beginning of the season started to decline in week 51 and is below expected levels in weeks 2-4 (Figure 6). Acknowledging the ongoing COVID-19 pandemic and associated control measures, changes in healthcare seeking behaviours and other respiratory virus activity likely contribute to ILI trends (Figure 5).

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

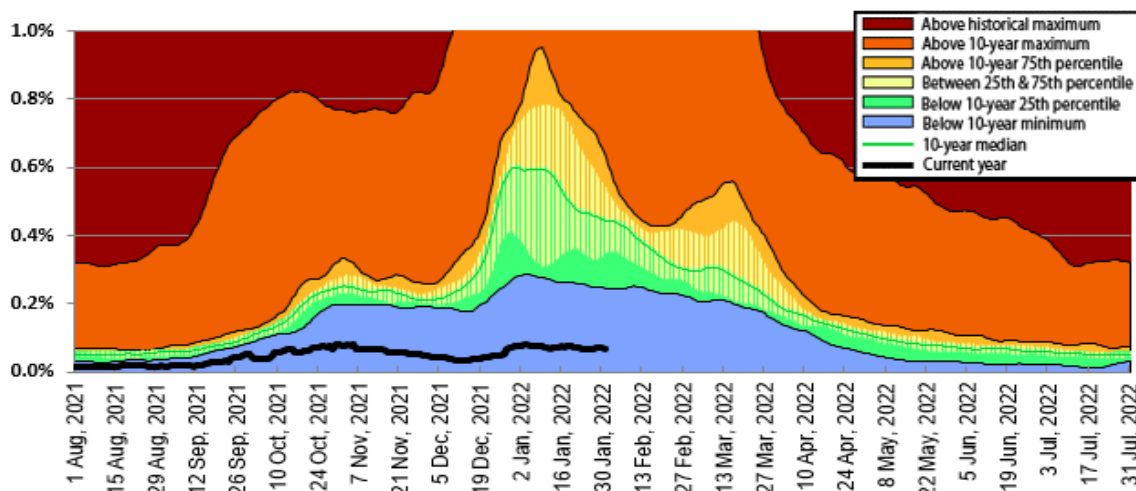


Source: BCCH Admitting, Discharge, Transfer database (ADT). Data includes records with a triage chief complaint of "flu" or "influenza" or "fever/cough." *5-year historical average for 2021-22 season based on 2014-15 to 2018-19 seasons (excluded 2019-20 & 2020-21 seasons); CI=confidence interval.

Medical Service Plan

As shown in Figure 7 and Figure 8, between weeks 2 and 4 (spanning January 9 to January 29, 2021), 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

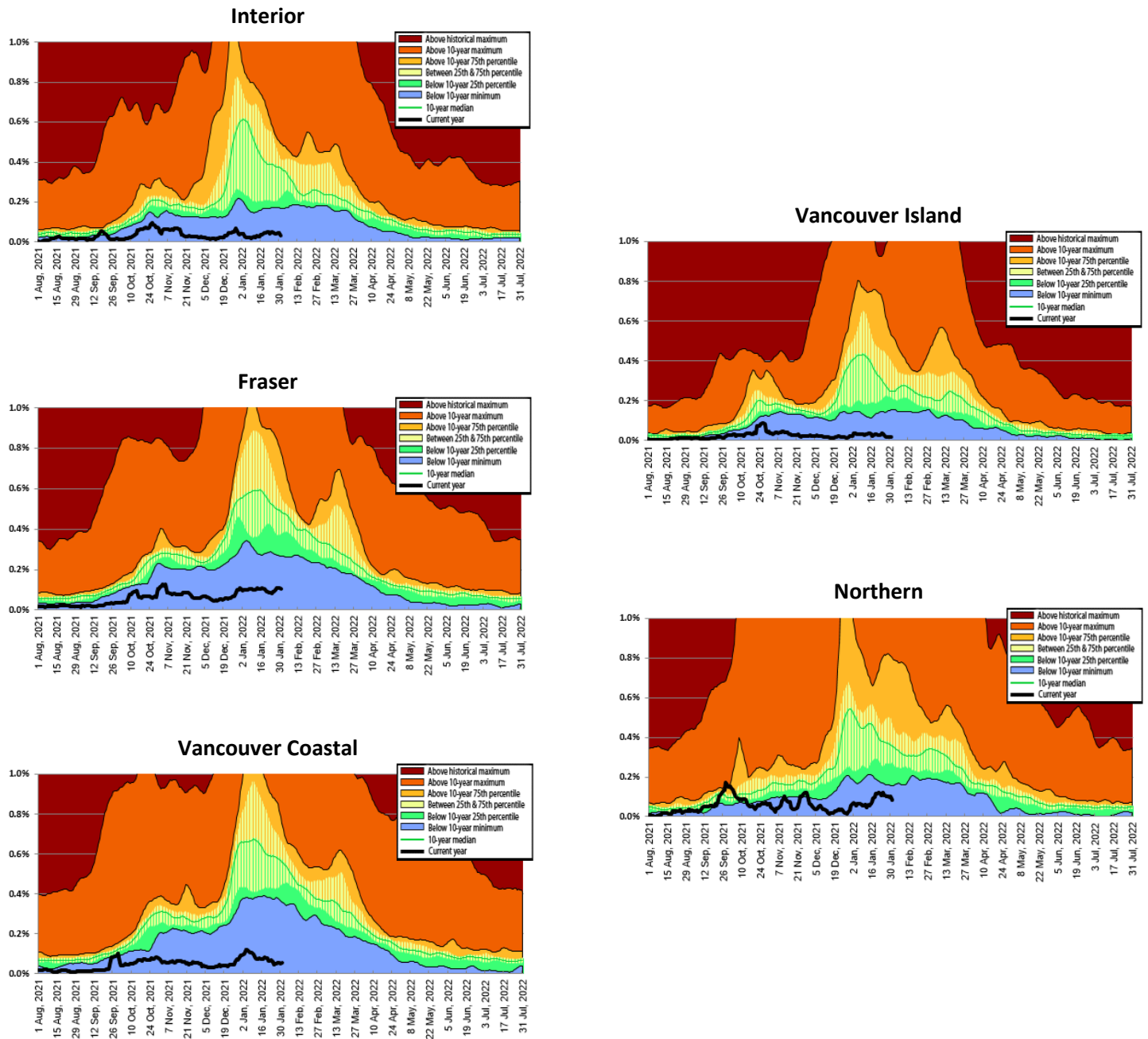


† Data provided by Population Health Surveillance and Epidemiology, BC Ministry of Health Services. Influenza illness (II) is tracked as the weekly count of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).

* 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 January 31, 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 January 31, 2022.

C. Influenza outbreak reports

The last influenza outbreak in BC was in March 2020 (week 12) with no influenza outbreaks reported to date in the 2021-22 season.

D. National

FluWatch (week 3, December 16, 2022 to January 22, 2022)

In week 3, influenza activity across Canada remained low for this time of year. There continues to be sporadic detections of influenza being reported; however, there remains no evidence of community circulation of influenza. In week 3, a total of 9 influenza detections (7 influenza A and 2 influenza B) were reported. Overall, the percentage of laboratory tests positive for influenza remains at exceptionally low levels, despite the elevated levels of testing. In week 3, 19,150 tests for influenza were performed at reporting laboratories and the percentage of tests positive for influenza was 0.05%. The number of laboratory detections of influenza has decreased in recent weeks but current trends may be influenced by changes in laboratory testing practices. In the past six pre-pandemic seasons (2014-2015 to 2019-2020), an average of 11,820 tests were performed, with an average of 23.6% of tests positive for influenza. To date this season, 486 influenza detections (374 influenza A and 112 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 18,280 influenza detections were reported at this point in the season. Among subtyped influenza A detections (n=106), influenza A(H3N2) accounted for 92% of detections. In week 3, no outbreaks were reported. From August 29, 2021 to January 22, 2022, 15 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 for influenza-like illness (ILI) in recent weeks has been at the highest level seen in the past two seasons and was 1.6% in week 3. The percentage of FluWatchers reporting fever and cough in recent weeks has also been at the highest level seen in the past two seasons and was 0.8% in week 3.

FluWatch report (week 3) is available at:

<https://www.canada.ca/en/public-health/services/publications/diseases-conditions/fluwatch/2021-2022/week-3-january-16-january-22-2022.html>

National Microbiology Laboratory (NML)

Strain Characterization:

Since September 1, 2021, the National Microbiology Laboratory (NML) has characterized 16 influenza viruses (14 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 14 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

14 influenza A (H3N2) viruses were antigenically characterized as A/Cambodia/e0826360/2020 (H3N2)-like virus, 2 viruses were antigenically similar to A/Cambodia/e0826360/2020 (H3N2)-like virus and 12 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 15 influenza A (13 H3N2 and 2 H1N1) viruses received.

Oseltamivir: All H1N1 influenza virus was sensitive to oseltamivir.

Zanamivir: All H1N1 influenza virus was sensitive to zanamivir.

Human Influenza A with swine origin:

A human case of influenza A variant virus (H1N2v) was reported in December, 2021 from Manitoba, Canada. The virus was detected in October after the individual, who had direct exposure to pigs, sought testing for mild influenza-like illness. The test came back negative for COVID-19, but influenza A(H1N2)v was subsequently identified and confirmed by the Centre for Disease control (USA). The A(H1N2)v case appears to be a sporadic one of which there have been a few in North America over the past decade, including one in Alberta in October 2020 and one in Manitoba in April 2021.

For more information see the link below:

<https://www.canada.ca/en/public-health/services/diseases/human-influenza-a-h1n2-v-swine-origin.html>

E. International

USA (week 3, December 16, 2022 to January 22, 2022)

In week 3, the percent of specimens testing positive for influenza remains stable, indicating that influenza virus circulation has remained at similar levels during the past two weeks, even while overall levels of respiratory illness have declined. The majority of influenza viruses detected are A(H3N2). Most of the H3N2 viruses identified so far this season are genetically closely related to the vaccine virus, but there are some antigenic differences that have developed as H3N2 viruses have continued to evolve. The proportion of outpatient visits for ILI is at 3% this week, above the national baseline. The proportion of deaths attributed to pneumonia and influenza during week 3 (16%) is above the epidemic threshold of 7%. No influenza-associated pediatric deaths were reported to CDC during week 3. Of the 79,667 samples tested for influenza from clinical laboratories across the US in week 3, 1,543 (2%) samples were positive for influenza. Of these, 1,503 (97%) were influenza A and 40 (3%) 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/index.htm>

WHO (January 24, 2022, based on data up to January 9, 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. Various hygiene and physical distancing measures implemented to reduce SARS-CoV-2 virus transmission have likely played a role in reducing influenza virus transmission.

In the temperate zone of the northern hemisphere, influenza activity is still low overall but appeared to increase in some countries with detections of mainly influenza A(H3N2). In Europe, influenza transmission is continuing with most countries reporting baseline or low intensity. In Western Asia, increased influenza activity was reported in most countries throughout the subregion. The vast majority of detections were influenza A(H3N2) followed by influenza A(H1N1)pdm09 and influenza B detections (Victoria lineage where determined). In East Asia, influenza activity continued on an increasing trend, mainly driven by the activity reported from China. In China, influenza B (Victoria lineage) detections continued to increase in both northern and southern provinces and the positivity rate was at levels similar to pre-COVID-19 periods for this time of the year.

In countries in the temperate zone of the southern hemisphere, influenza activity remained low overall but influenza detections, predominantly A(H3N2), were reported in temperate South America in recent weeks. In Oceania, influenza was detected at very low levels. In South Africa, detections of influenza virus continued in all surveillance systems but transmission was below threshold and impact was low.

In tropical countries of Asia, Central America, the Caribbean and South America, influenza activity of predominately influenza A(H3N2) was reported. ***In tropical Africa***, influenza activity continued on a decreasing trend, though at higher levels compared to 2020 and 2021.

From December 27, 2021 to January 9, 2022, the WHO GISRS laboratories tested more than 317,198 specimens. Of these, 16,862 were positive for influenza viruses, of which 10,744 (64%) were typed as influenza A and 6,118 (36%) as influenza B. Of the sub-typed influenza A viruses, 224 (4%) were influenza A(H1N1)pdm09 and 4,930 (96%) were influenza A(H3N2). Of the characterized B viruses, all 5,959 (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 2021-22 Northern Hemisphere Influenza Vaccine

On February 26, 2021, the WHO announced recommended strain components for the 2021-22 northern hemisphere trivalent influenza vaccine (TIV)*:

- an A/Victoria/2570/2019 (H1N1)pdm09-like virus [a clade 6B.1A5A virus]; †
- an A/Cambodia/e0826360/2020 (H3N2)-like virus [a clade 3C.2a1b/T131K virus]; ‡
- a B/Washington/02/2019-like (B/Victoria lineage) virus [a clade V1A.3, Δ3 virus]. §

It is recommended that quadrivalent influenza vaccines (QIV) for the 2021-22 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 for two of the three components used for the 2020-2021 northern hemisphere TIV.

† Note for cell-based vaccine, the WHO recommends an A/Wisconsin/588/2019 (H1N1)pdm09-like virus [a clade 6B.1A5A virus] for the 2021-22 season. Recommended strains represent a change from the 2020-2021 season vaccine which contained an A/Guangdong-Maonan/SWL1536/2019 [a clade 6B.1A5A virus] for the egg-based vaccine and an A/Hawaii/70/2019 (H1N1)pdm09-like virus [also clade 6B.1A5A] for the cell-based vaccine.

‡ Recommended strain represents a change from the 2020-2021 season vaccine which contained an A/Hong Kong/2671/2019 (H3N2)-like virus [a clade 3C.2a1b/T135K virus].

§ Recommended strain is unchanged from the 2020-2021 season vaccine.

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:

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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

http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Forms/Epid/Influenza%20and%20Respiratory/OutbreakReportForm_2018.pdf