

British Columbia (BC) Influenza Surveillance Bulletin

2021-22 Influenza Season

Week 16: April 17 to 23, 2022

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Influenza virus detection increasing in BC and elsewhere nationally

In weeks 15 and 16 (April 10-23), 124/8,463 (1%) specimens tested in BC were positive for influenza virus. Week 15-16 detections remain below the 5-year (pre-COVID-19 pandemic) average (186/783; 24%) but are higher than in 2021 (1/4,129; 0.1%) or 2020 (7/6,523; 0.1%). Weekly influenza positivity shows increase through April from 0.6% in week 13 to 0.9%, 1.1% and 1.8% in weeks 14-16 whereas decreasing trend is more expected this time of year.

Of the 124 viruses detected in weeks 15-16 in BC, all but one were influenza A and among those subtyped, all (36/36) were H3N2. The 2nd and 3rd laboratory-confirmed influenza outbreaks of 2021-22 were reported in BC in week 16 – both A(H3N2) outbreaks in long-term care facilities (LTCF). The 5-year historical (pre-COVID-19 pandemic) average is 3 LTCF influenza outbreaks in weeks 15-16.

Nationally, 1,527/28,324 (5%) specimens tested positive for influenza in weeks 15-16 of which all but four were influenza A. Of 199 influenza A viruses subtyped, all but four were H3N2. Week 15-16 detections nationally remain below the 5-year (pre-COVID-19 pandemic) average (1,889/11,923; 16%), but also with atypical weekly increase through April from 2.0% in week 13 to 2.9%, 3.8% and 6.8% in weeks 14, 15 and 16.

Of the H3N2 viruses genetically characterized in BC and elsewhere in Canada to date in 2021-22, all have been the 2a.2 sub-clade. The 2021-22 influenza vaccine instead includes the antigenically-distinct 2a.1 sub-clade. In March, the US CDC published interim estimates of 2021-22 [influenza vaccine effectiveness against H3N2](#). The WHO has recommended that the H3N2 component of the [2022-23 vaccine be updated](#) to include a representative 2a.2 strain.

Prepared by BCCDC Influenza & Emerging Respiratory Pathogens Team

Report Disseminated: April 28, 2022

A. Laboratory Surveillance

Since the beginning of the 2021-22 season, commencing October 3, 2021 (week 40), 505 (0.3%) influenza viruses have been detected among the 166,096 specimens tested in BC (Figure 1, Table 1). Of these, 124 detections were reported during weeks 15 (45/4,116 specimens tested; 1% positivity), and 16 (n=79/4,347 specimens tested; 2% positivity) (spanning April 10, 2022 – April 23, 2022), representing a steady increase in percent positivity since week 11 (5/3,617 specimens tested; 0.1% positivity) (Figure 1). All but one of the detections in weeks 15-16 were influenza A (123/124) and among those subtyped, all were influenza A(H3N2) (36/36). Among 53 of 124 detections during weeks 15-16 with known age information, four were 0-8 years old, nine were 9-19 years old, 16 were 20-49 years old, four were 50-64 years old and 20 were 65+ years old.

Influenza virus detection in weeks 15-16 of 2022 was higher than the same period of 2021 (1/4,129 specimens tested; <0.1%) and the same period of 2020 (7/6,523 specimens tested; 0.1%) but below the 5-year (pre-COVID-19 pandemic) average for weeks 15-16 (186/783 specimens tested; 24%*) (Figure 2).

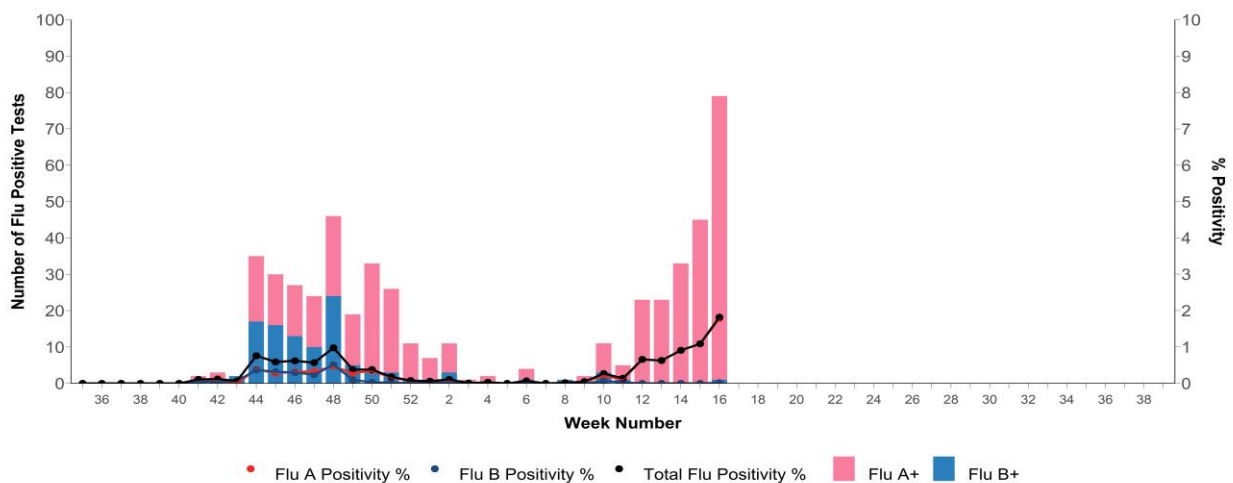
Thirty-nine influenza A viruses collected during weeks 10-15 were genetically sequenced including 36 A(H3N2) and 3 A(H1N1). All influenza A(H3N2) viruses were characterized as genetic clade 3C.2a1b sub-clade 2a.2, different from the 2021-22 influenza vaccine, instead belonging to genetic clade 3C.2a1b sub-clade 2a.1. Among sequenced influenza A(H1N1) viruses, two belonged to clade 6B.1A.5a.2, the same genetic group contained within the 2021-22 influenza vaccine and the other belonged to clade 6B.1A.5a.1, which was included in the 2020-21 vaccine.

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 remains below the 5-year historical average in weeks 15-16. EV/RV positivity was stable in weeks 15-16 and remained within expected levels (Figure 2).

Among specimens additionally subjected to multiplex testing during weeks 15-16, entero/rhinoviruses (EV/RV), RSV and seasonal coronavirus were the first (179/468; 38%), second (109/468; 23%) and third (109/468; 23%) most commonly detected NIRVs, respectively. EV/RV, RSV, and coronavirus were found in 13% (179/1,327), 1% (109/8,057) and 8% (109/1,327) of specimens tested, respectively, in weeks 15-16. Most NIRV detections (at the BCCDC PHL) were among children under the age of 9 years. (Figures 2, 3, 4, 5; Table 1).

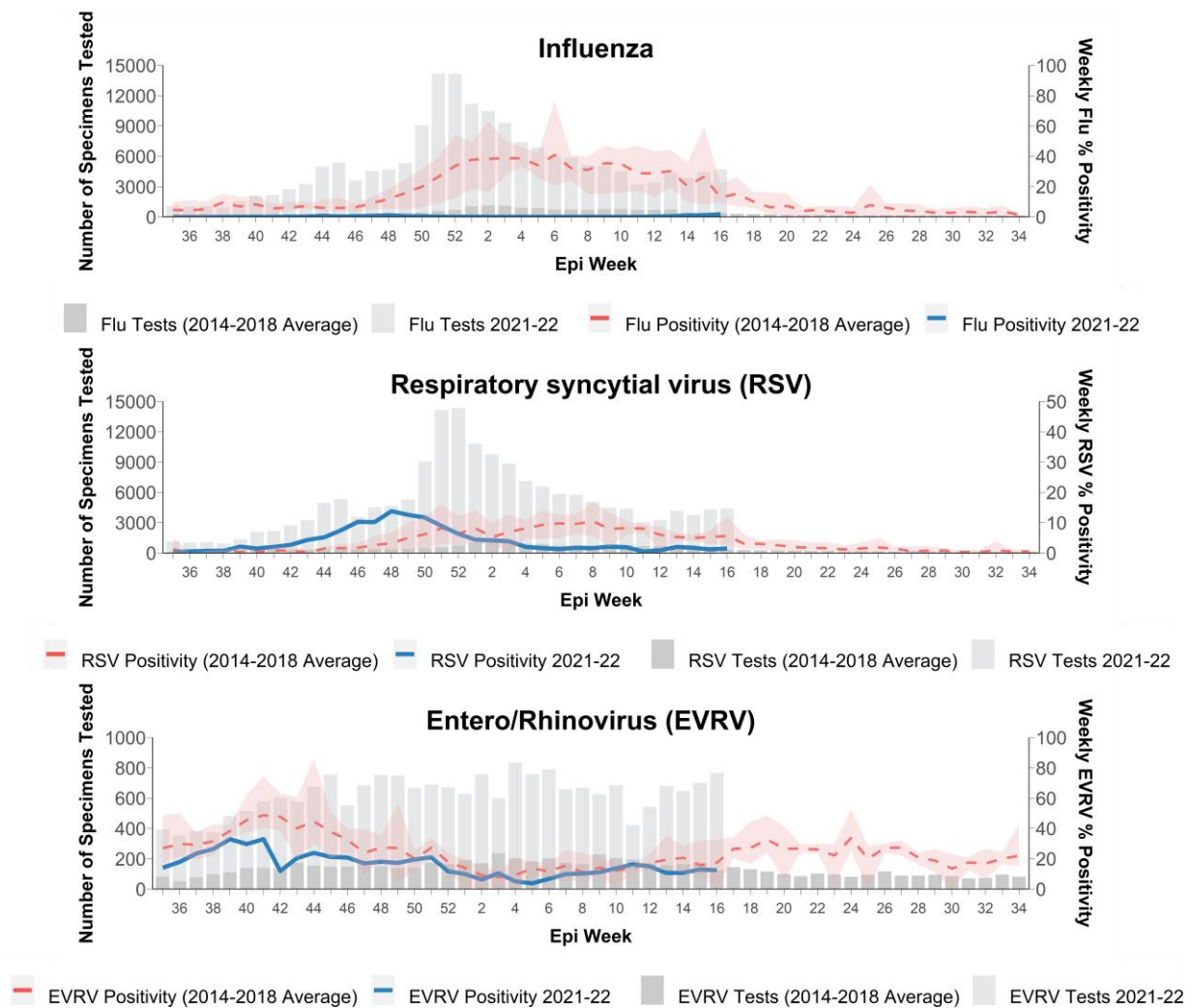
*In prior 2021-22 influenza bulletins, the pre-COVID-19 pandemic average erroneously included a pandemic season, corrected here.

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



- 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.
- Rates are subject to change with subsequent data reconciliation.
- Week of sample based on the sample collection date.

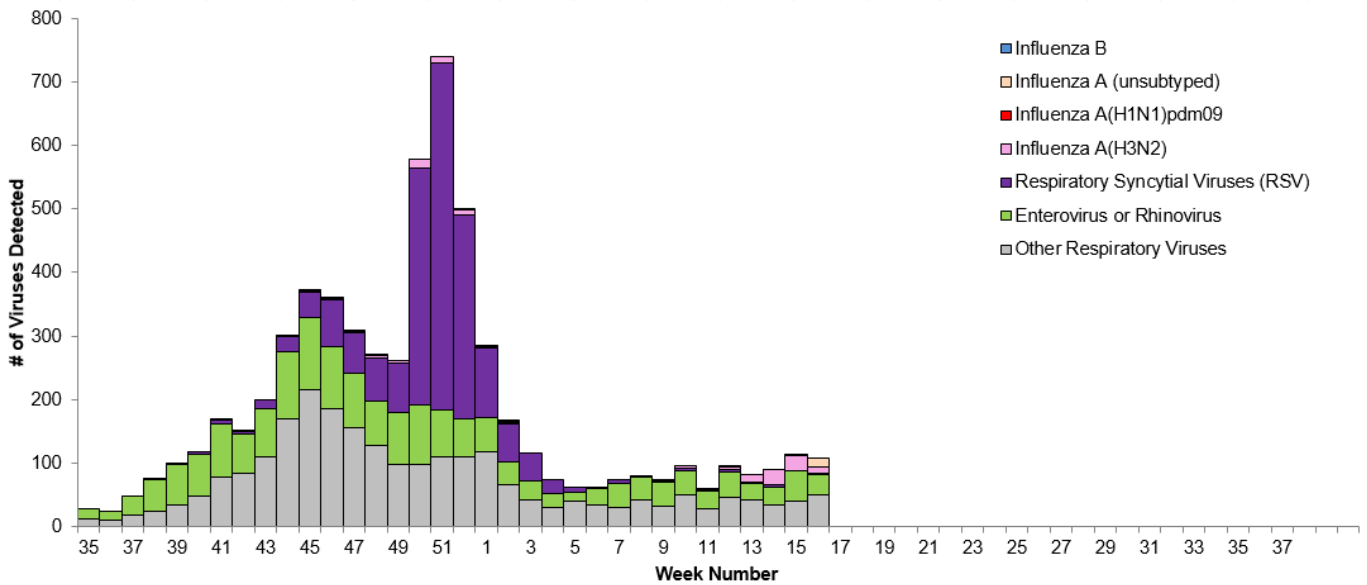
Figure 2. Laboratory influenza and other respiratory virus detections across BC with 5-season historical data*



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

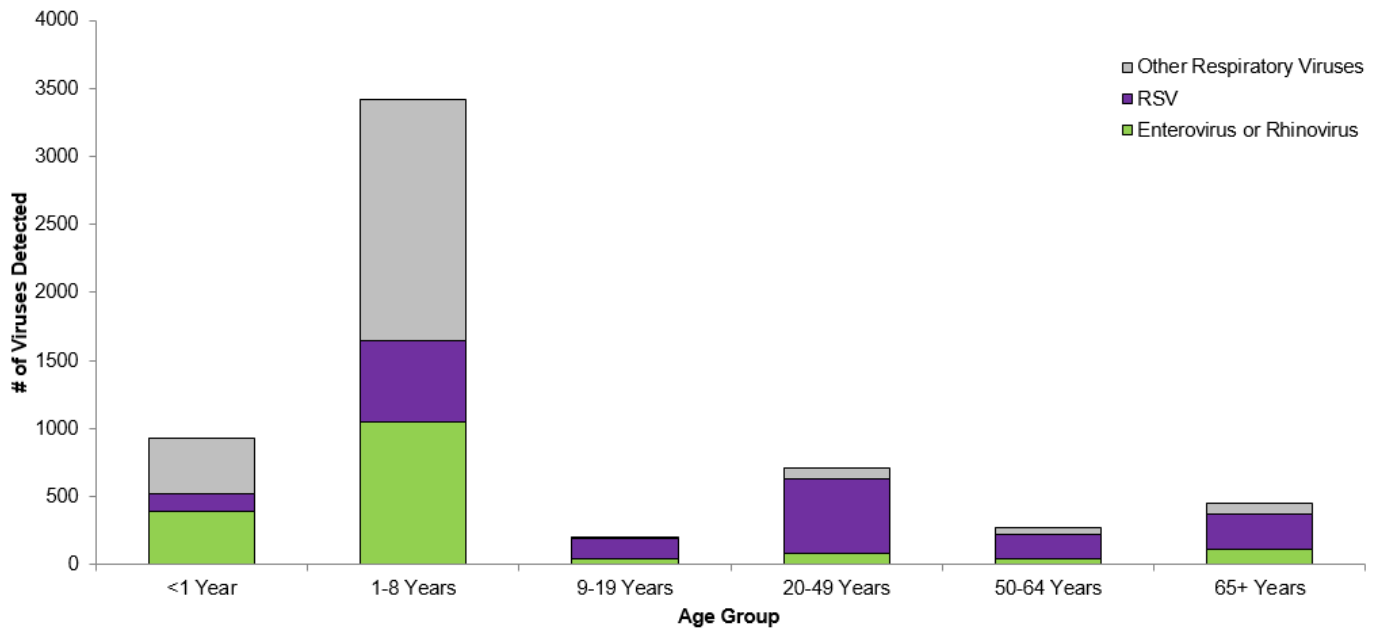
Source: Respiratory Virus Detections Surveillance System (RVDSS) weekly report; data includes seasons 2014-15, 2015-16, 2016-17, 2017-18, 2018-19, 2021-22 (2019-20 & 2020-21 are excluded from the historical average calculations due to the COVID-19 pandemic).

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



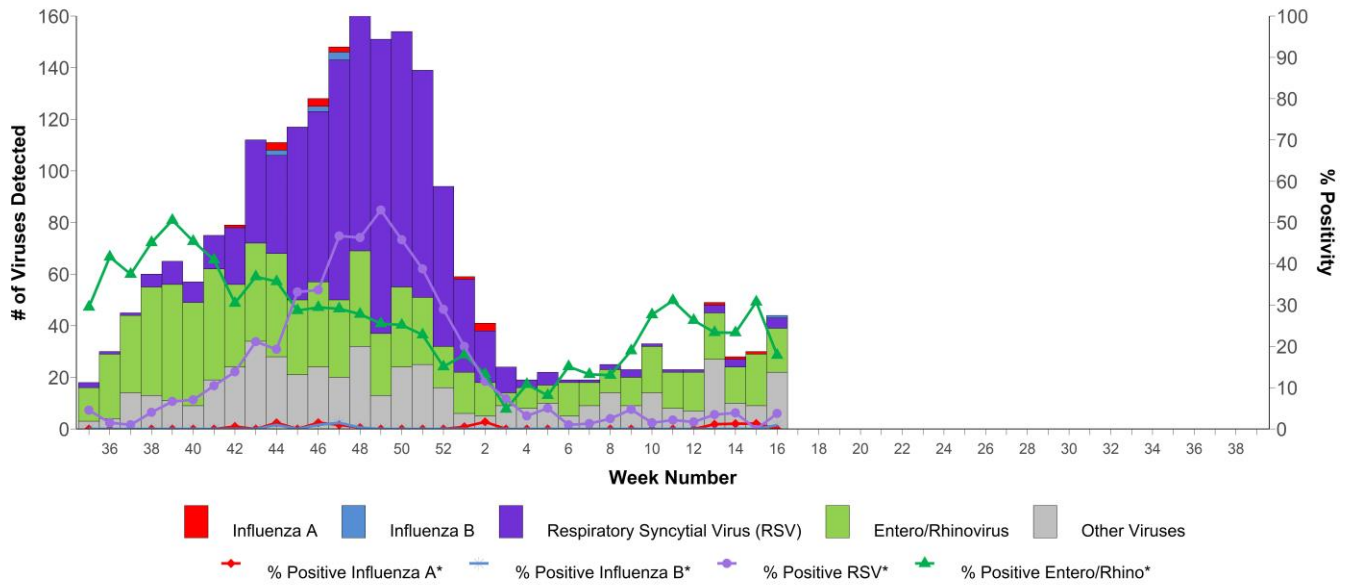
* The BCCDC Public Health Laboratory (PHL) conducts the majority of influenza subtype characterization for the province, including for primary specimens submitted directly to the BCCDC PHL for influenza diagnosis, as well as for specimens that have tested positive for influenza at other external sites 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 27, 2022; figure includes cumulative influenza detections for specimens collected from weeks 35-16.

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 16 (August 29, 2021 – April 23, 2022), 4,506 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 (950/2,263; 42%), enterovirus/rhinoviruses (781/2,263; 35%) and parainfluenza (296/2,263; 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 16 [April 17 - 23, 2022]								
Influenza, Total ^d	17/1033 (2)	42/1090 (4)	2/616 (<1)	3/240 (1)	10/884 (1)	4/379 (1)	1/105 (1)	79/4347 (2)
Influenza A total	17 (2)	42 (4)	2 (<1)	3 (1)	10 (1)	4 (1)	0 (0)	78 (2)
A(H3N2) ^e	9	1	2	0	0	---	---	12
A(H1N1)pdm09 ^e	0	0	0	0	0	---	---	0
Influenza B total	0	0	0	0	0	0	1 (1)	1 (<1)
NIRV, Total ^c	4	63	14	31	11	66	43	232
RSV	4/1033 (<1)	29/1090 (3)	8/616 (1)	11/240 (5)	4/633 (1)	1/379 (<1)	4/106 (4)	61/4097 (1)
Enterovirus/Rhinovirus	--- ^f	18/219 (8)	2/28 (7)	--- ^f	3/52 (6) ^g	28/186 (15)	17/95 (18)	---
Other ^h	--- ^f	16/219 (7)	4/28 (14)	--- ^f	4/67 (6) ^g	37/186 (20)	22/95 (23)	---
Cumulative total to date, Week 40 to 16 [October 3, 2021 – April 23, 2022]								
Influenza Total ^d	75/32714 (<1)	104/30327 (<1)	23/19865 (<1)	29/9365 (<1)	193/30996 (1)	55/38789 (<1)	26/4040 (1)	505/166096 (<1)
Influenza A total	64 (<1)	102 (<1)	17 (<1)	20 (<1)	130 (<1)	48 (<1)	17 (<1)	398 (<1)
A(H3N2) ^e	40	43	16	2	44	---	---	145
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)	9 (<1)	107 (<1)
NIRV, Total ^c	2154	2146	1043	612	1515	4819	2019	14308
RSV	2154/32714 (7)	1433/30327 (5)	902/20165 (4)	592/9365 (6)	1300/26974 (5)	1753/38777 (5)	932/4041 (23)	9066/162363 (6)
Enterovirus/Rhinovirus	--- ^f	345/3301 (10)	86/1001 (9)	--- ^f	121/2086 (6) ^g	1582/9325 (17)	626/2595 (24)	---
Other ^h	--- ^f	368/3301 (11)	55/1001 (5)	--- ^f	94/2437 (4) ^g	1484/9325 (16)	461/2595 (18)	---

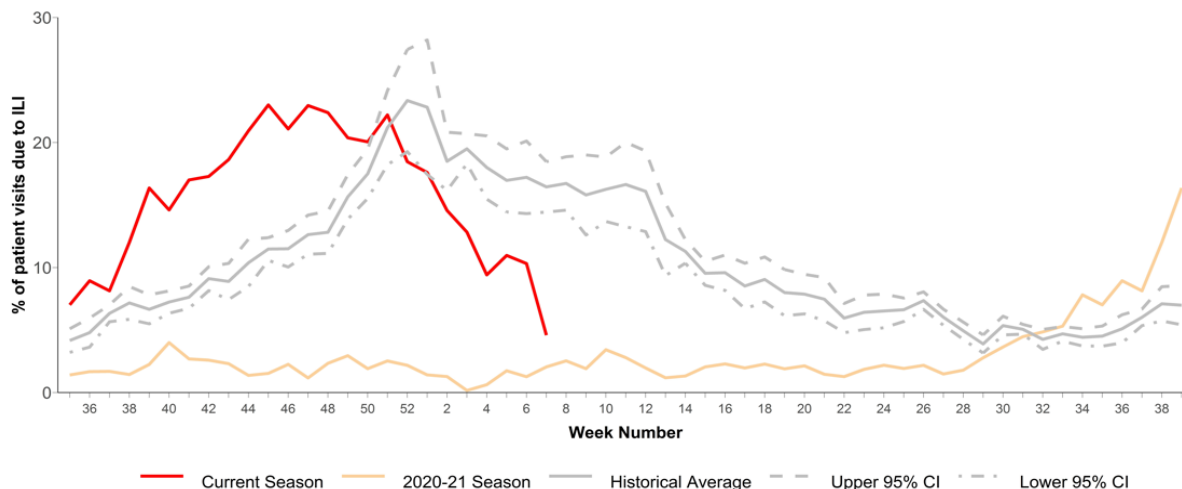
- FHA=Fraser Health Authority; IHA=Interior Health Authority; VIHA= Vancouver Island Health Authority; NHA=Northern Health Authority; VCHA=Vancouver Coastal Health Authority; BCCDC= primary patient specimens screened at BCCDC Public Health Laboratory; CW=Children’s and Women’s Health Centre Laboratory
- 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).

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

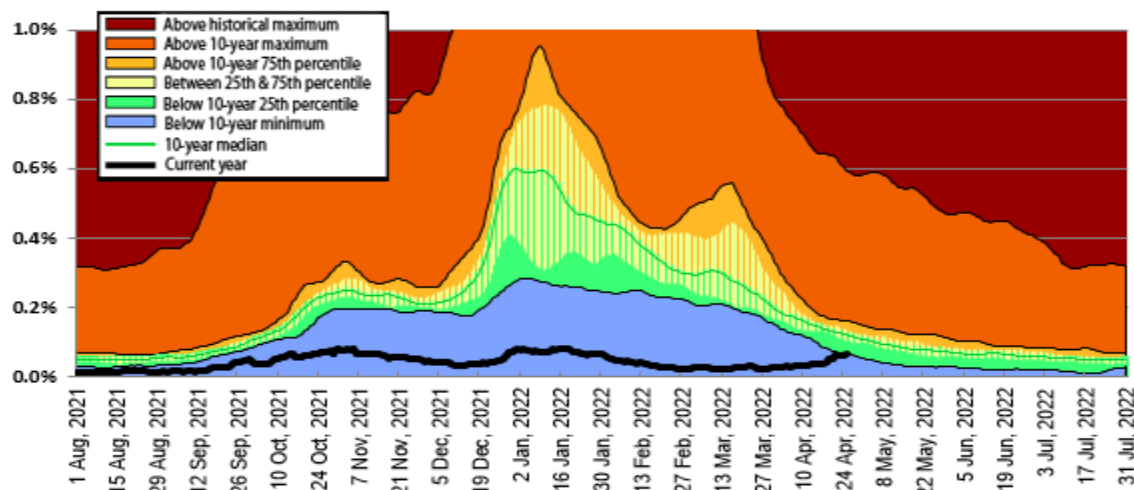


Source: BCCH Admitting, Discharge, Transfer database (ADT). Data includes records with a triage chief complaint of "flu" or "influenza" or "fever/cough." *5-year historical average for 2021-22 season based on 2014-15 to 2018-19 seasons (excluded 2019-20 & 2020-21 seasons); CI=confidence interval.

Medical Service Plan

In BC, during weeks 15 and 16 (spanning April 10 to 23, 2022), counts of BC Medical Service Plan (MSP) general practitioner claims for influenza illness remained low overall but showed a slight increase from prior weeks ([Figure 7](#)), most driven by Fraser Health Authority ([Figure 8](#)).

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

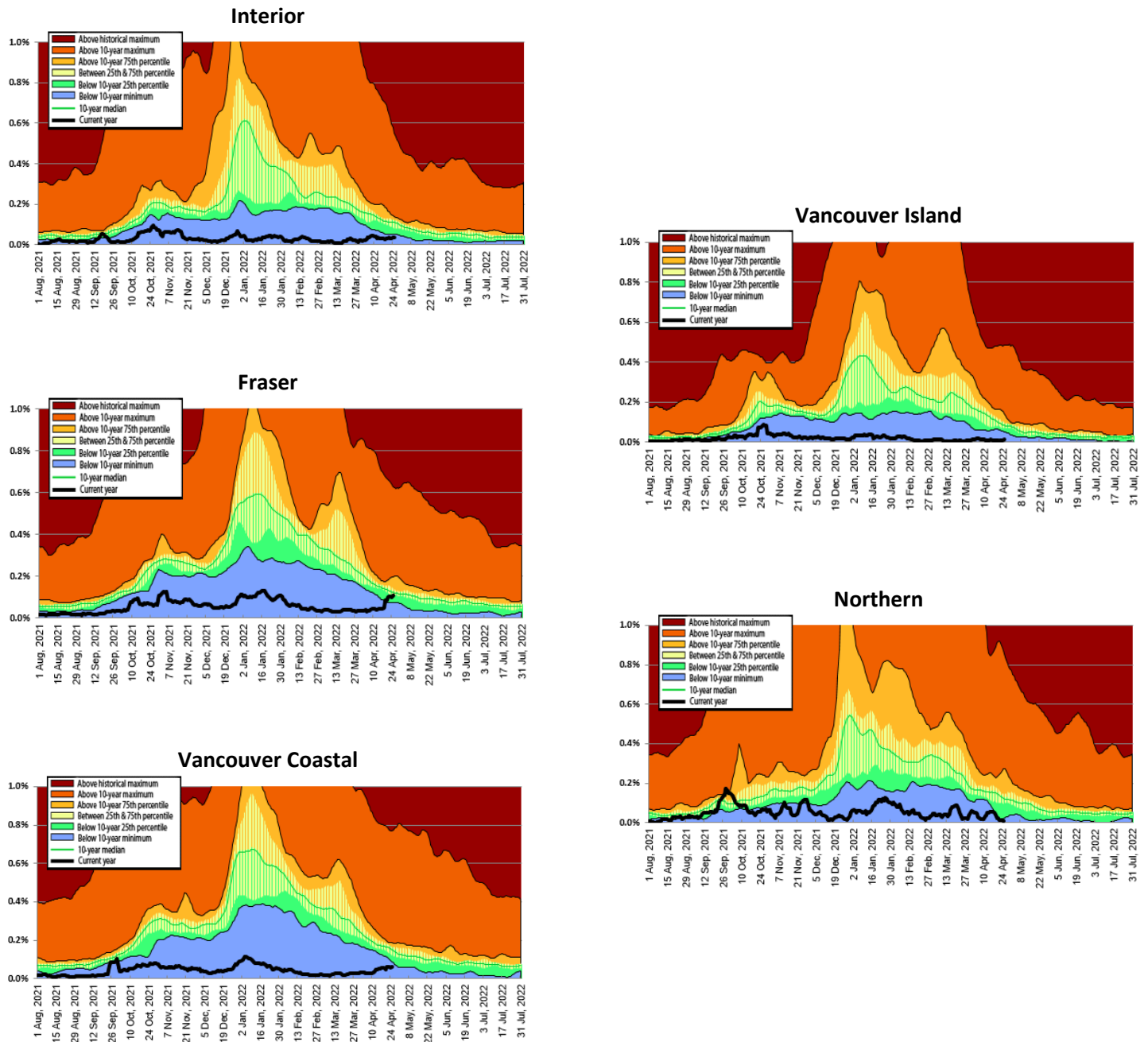


† Data provided by Population Health Surveillance and Epidemiology, BC Ministry of Health Services. Influenza illness (ILI) is tracked as the weekly count of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).

* 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 25, 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 25, 2022.

C. Influenza outbreak reports

In week 16 of 2022, two laboratory-confirmed influenza A(H3N2) outbreaks were reported from long-term care facilities (LTCF) in Fraser Health Authority ([Figure 9](#), [Figure 10](#)). These outbreaks are the second and third influenza outbreaks of 2021-22 season in BC. Antiviral prophylaxis was initiated for outbreak control in both LTCFs. Further influenza virus characterization (e.g. genetic sequencing) is being pursued to understand vaccine relatedness. Virus sequencing from the first LTCF influenza outbreak in week 13 ([Figure 10](#)) showed genetic clade 3C.2a1b sub-clade 2a2, reflecting community predominance of that variant.

By way of comparison, zero LTCF influenza outbreaks were reported during weeks 15-16 of 2020 with a 5-year historical (pre-COVID-19 pandemic) average of around 3 LTCF influenza outbreaks reported between weeks 15-16.

Across weeks 40-16, 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 ~134.

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

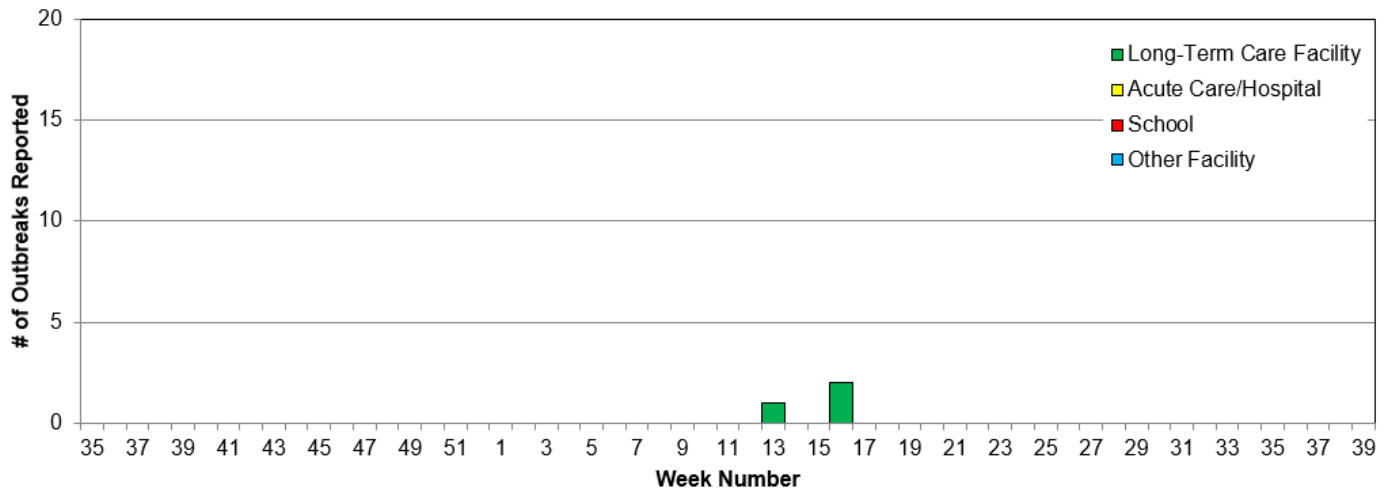
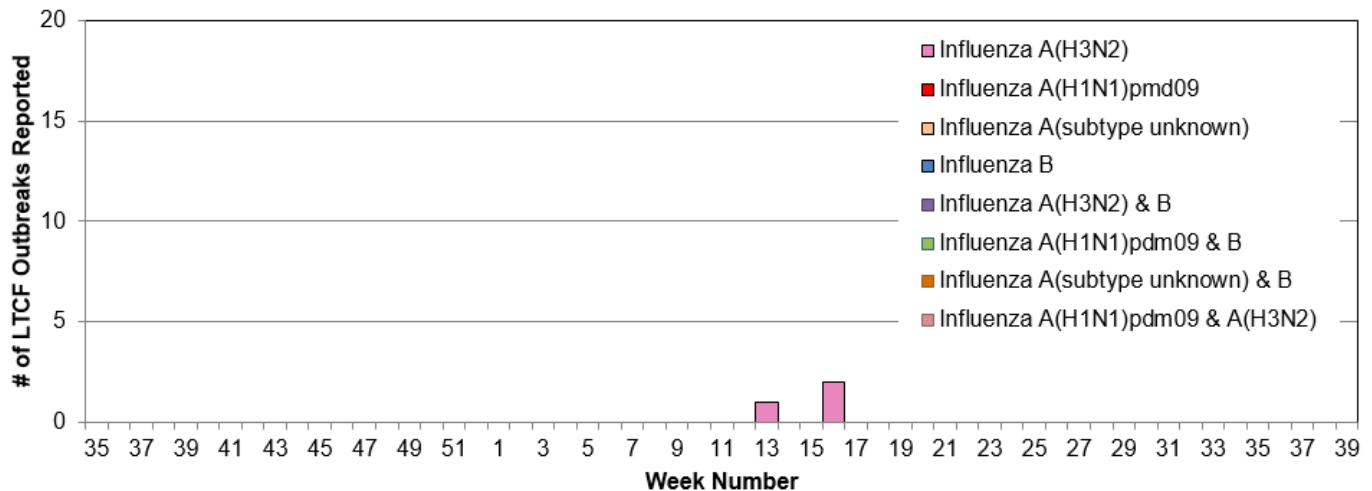


Figure 10. Number of influenza-like illness (ILI) outbreaks by type/subtype in long-term care facilities (LTCF), British Columbia 2021-22



D. National

FluWatch (weeks 11-15, March 13 to April 16, 2022)

Since the beginning of April, detections of influenza have sharply increased. All indicators of influenza activity have increased in recent weeks. Influenza activity is now approaching seasonal thresholds. In weeks 11 to 15, 1,287 laboratory detections (1,283 influenza A and 4 influenza B) were reported. In week 11-15, 58,544 tests for influenza were performed at reporting laboratories and the percentage of tests positive for influenza in week 15 was 3.8%. In the past six pre-pandemic seasons (2014-2015 to 2019-2020), an average of 38,685 tests were performed, with an average 16% of tests positive for influenza for week 15. To date this season, 1,842 influenza detections (1,722 influenza A and 120 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 43,627 influenza detections were reported at this point in the season. Among subtyped influenza A detections (n=564), influenza A(H3N2) has accounted for 97% of detections in 2021-22. Among detections with detailed age information, the majority of detections were in individuals under the age of 45 years. In weeks 11-15, the first 12 laboratory-confirmed influenza outbreaks of the season have been reported and to date this season (August 29, 2021 to April 16, 2022), 55 ILI outbreaks have been reported. Among the 12 laboratory-confirmed influenza outbreaks, six were in long-term care facilities, 5 in facilities categorized as 'other' and one in an acute care facility. All ILI outbreaks have been reported in schools and/or daycares. The percentage visits to healthcare professionals for influenza-like illness (ILI) was 1% in week 15. The percentage of participants reporting symptoms of fever and cough to FluWatchers was at 2% in week 15; an increasing trend in recent weeks.

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 28, 2022, the National Microbiology Laboratory (NML) has characterized 56 influenza viruses (54 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 54 H3N2 viruses belonged to genetic group 3C.2a1b.2a.2. 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.2a.1. 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.2a.2.

Antigenic characterization

54 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 46 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 56 influenza A (54 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 15, April 10 to 16, 2022)

In week 15, activity varies by region. Activity is highest in the northeast, south-central and mountain regions of the country. Most influenza viruses detected were A(H3N2), most of which were genetically related to the vaccine virus but antigenic data shows a majority of the characterized H3N2 viruses were different from the vaccine reference viruses. The proportion of outpatient visits for ILI was at 2% in week 15, and although this percentage is below the national baseline, ILI has been increasing steadily since mid-February. The proportion of deaths attributed to pneumonia and influenza during week 15 (5%) was below the epidemic threshold of 7%. Three influenza-associated pediatric deaths were reported to CDC in week 15. One death was associated with influenza A virus for which no subtyping was performed and occurred during week 3. The two other deaths were associated with influenza A(H3) and occurred during weeks 8 and 11. There has been a total of 22 influenza-associated pediatric deaths so far this season. Of the 45,179 samples tested for influenza from clinical laboratories across the US in week 15, 4,014 (9%) samples were positive for influenza. Of these, 3,995 (99.5%) were influenza A and 19 (0.5%) 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>

WHO (April 18, 2022, based on data up to April 3, 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 continued to increase in recent weeks but remained lower than pre-COVID-19 pandemic levels at this time of the year and was predominantly due to influenza A viruses, with A(H3N2) predominant among the subtyped viruses. In Europe, overall influenza activity appeared to stabilize over the reporting period, with a similar number of countries reporting widespread activity/medium intensity compared to the previous 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 21, 2022 to April 3, 2022, the WHO GISRS laboratories tested more than 351,420 specimens. Of these, 36,312 were positive for influenza viruses, of which 35,040 (96.5%) were typed as influenza A and 1,272 (3.5%) as influenza B. Of the sub-typed influenza A viruses, 275 (3.5%) were influenza A(H1N1)pdm09 and 4,682 (94.5%) were influenza A(H3N2). Of the characterized B viruses, 1 (0.1%) belonged to B(Yamagata) lineage and 1,005 (99.9%) 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/publications/m/item/recommended-composition-of-influenza-virus-vaccines-for-use-in-the-2022-2023-northern-hemisphere-influenza-season>

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/

WHO – Influenza vaccine recommendations: <https://www.who.int/teams/global-influenza-programme/vaccines/who-recommendations>

Australian Influenza Report:

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

New Zealand Influenza Surveillance and Intelligence Reporting: <https://www.esr.cri.nz/our-services/consultancy/flu-surveillance-and-research>

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