As 2021 begins, influenza virus circulation remains remarkably absent in BC

Approximately 30,000 tests for influenza virus have been conducted in BC since the start of the 2020-21 season in week 40 (September 27, 2020) through to the end of the first week of 2021 (January 3-9, 2021). So far, just 12 influenza viruses (7 influenza A and 5 influenza B) have been identified from among 7 individuals. However, each had recently received the live attenuated influenza vaccine (LAIV), suggesting vaccine-type rather than wild-type virus. Overall, there remains no indication of influenza virus circulation in BC. Elsewhere in the northern hemisphere, influenza virus detection also remains exceptionally low.

By contrast, for the same week 40 to week 1 period of the past 5 (2015-2019) seasons, there were on average 7,059 tests conducted and 1,005 influenza detections per season (range 285-1820). Average week 1 influenza positivity for the past 5 seasons was 32% (compared to zero percent positivity in week 1 of 2020-21).

No long-term care facility influenza outbreaks have been reported in 2020-21. Conversely, during the 2019-20 season, 19 long-term care facility outbreaks were reported between week 40 and week 1.

Among nearly 30,000 specimens also tested for RSV, just one has tested RSV positive this season. Entero-/rhinoviruses (EV/RV) are the most common non-influenza respiratory virus (NIRV) so far in 2020-21, representing 881/967 (91%) of NIRV detections (excluding SARS-CoV-2). Compared to previous seasons, however, EV/RV positivity is also below the 5-year historical average (week 1: 5.3% vs. 17.3%).
A. Laboratory Surveillance

Since the last influenza bulletin issued in week 50 (December 6-12, 2020), there have been no influenza viruses detected among the 8,764 specimens tested between week 51 (beginning December 13, 2020) and week 1 (ending January 9, 2021) (Figure 1). During the most recent week 1 (January 3-9, 2021) of the 2020-21 season, there were no influenza detections among 2,418 specimens tested by laboratories across BC (none positive); by contrast, in week 1 of the prior 2019-20 season there were 254 influenza virus detections among 1,519 tests conducted. Compared to prior seasons, the influenza positivity rate (0%) is well below the 5-year historical average for week 1 (31.6%) (Figure 2). Since the start of the 2020-21 influenza season in week 40 (beginning September 27, 2020) to the end of the current reporting week 1, nearly 30,000 influenza tests having been conducted across BC laboratories (Table 1). During this period, a total of 12 influenza viruses (7 influenza A and 5 influenza B) were detected between weeks 44-49 (October 25, 2020-December 5, 2020), from among 7 individuals each of whom had recently received the live attenuated influenza vaccine (LAIV). Such detection following LAIV receipt is not unexpected and these detections likely represent vaccine-type rather than wild-type virus circulation.

By way of contrast, during the same period of 2019-20, there were 11,671 influenza tests conducted with 861 (7%) influenza viruses detected (additionally noting that LAIV was not administered as part of the publicly-funded influenza immunization program in 2019-20). During the same week 40-1 period of the past 5 (2015-2019) seasons an average of 7,059 influenza tests and 1005 (14%) influenza detections (range 285 to 1820 detections) were reported (source: RVDSS Report).

Overall, and quite remarkably compared to prior seasons, there remains no indication of influenza virus circulation in BC so far this 2020-21 season.

Figure 1. Influenza virus positivity among respiratory specimens tested across BC, 2020-2021

![Figure 1](https://example.com/figure1.png)

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, Vancouver Coastal Health, BCCDC PHL, Interior Health Authority sites, and Northern Health Authority.

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

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

d. The positive influenza A and influenza B viruses detected in weeks 44, 47, 48, and 49 are all associated with live attenuated influenza vaccine (LAIV) receipt in 7 individuals, and likely represent vaccine-type virus rather than community circulation of seasonal influenza.
The BCCDC Public Health Laboratory (PHL) and some local health authority laboratories also conduct testing for other non-influenza respiratory viruses (NIRV), including RSV +/- other multiplex testing (beyond SARS-CoV-2 which is not addressed in this report). Weekly RSV and EV/RV positivity rates have been below the 5-year historical average (2015-16 to 2019-2020) and in most weeks, remain below respective 5-year minimum values (Figure 2).

Of 2,418 respiratory specimens that were tested for RSV in week 1, none were positive with just 1 RSV detection (involving an adult age 60-69 years) overall this season among 29,768 specimens tested. Of week 1 specimens additionally subjected to multiplex testing, entero/rhinoviruses (EV/RV) were found in 5.3% (19/356) and were the most commonly detected NIRV (19/23; 83%). Cumulatively this season, EV/RV were detected in 881/8259 (11%) specimens tested, which is still lower than 864/3659 (24%) from the 2019-2020 season. In 2020-21 EV/RV represent 881/967 (91%) of NIRV detections with most EV/RV detections being among young children with median age of 3 years. (Figures 2, 3, 4, 5; Table 1).

**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 2015-2016 to 2019-2020.

**Source:** Respiratory Virus Detections Surveillance System (RVDSS) weekly report; data includes seasons 2015-16, 2016-17, 2017-18, 2019-20, 2020-21.

**Historical average data for week 53 is calculated by taking the average of week 52 and week 1 data from the past 5 influenza seasons.**
Figure 3. Influenza and non-influenza respiratory virus (NIRV) detections among specimens submitted to BCCDC Public Health Laboratory and Island Health Laboratories, 2020-2021*

* 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.

** The positive influenza A pdm09(H1N1), influenza A(H3N2), and influenza B viruses detected in weeks 44, 47, 48, and 49 are all associated with live attenuated influenza vaccine (LAIV) receipt in 5 individuals. These detections have already been reported by local health authority laboratories (Figure 1, Figure 5, and Table 1) and were sent to BCCDC PHL for further subtyping and analysis.

Figure 4. Cumulative number (since week 36) of non-influenza respiratory virus detections (NIRV) by type and age group, BCCDC Public Health Laboratory, 2020-21

Source: BCCDC Public Health Laboratory (PHDRW); Data are current to January 14, 2020; figure includes cumulative influenza detections for specimens collected from weeks 36-1.
Figure 5. Influenza and NIRV detections among respiratory specimens submitted to BC Children’s and Women’s Health Centre Laboratory, 2020-2021

- 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.
- Week of sample based on the sample collection date.
- From week 36 (August 30-September 5, 2020) to week 1 (January 3-9, 2021), among the 791 specimens submitted for influenza virus testing at the BC Children’s and Women’s Health Centre laboratory, most that were found positive for non-influenza respiratory viruses were entero/rhinoviruses (148/161 = 92%). No specimen was positive for RSV.
- The positive influenza A and influenza B viruses detected in week 44 and 47 are associated with live attenuated influenza vaccine (LAIV) receipt in 2 individuals, and likely represent vaccine-type virus rather than community circulation of seasonal influenza viruses.
Table 1. Influenza and non-influenza respiratory viruses (NIRV) detected among primary patient specimens by health authority of test site

<table>
<thead>
<tr>
<th>Count (% positive from total screened)</th>
<th>Health authority&lt;sup&gt;a,b&lt;/sup&gt; where specimen tested&lt;sup&gt;c&lt;/sup&gt;, BC Cases</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FHA</td>
<td>IHA</td>
</tr>
<tr>
<td>Current report Week 1 [January 3, 2021 – January 9, 2021]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influenza, Total&lt;sup&gt;f&lt;/sup&gt;</td>
<td>0/1220 (0)</td>
<td>0/184 (0)</td>
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<tr>
<td>Influenza A total</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>A(H3N2)&lt;sup&gt;e&lt;/sup&gt;</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>A(H1N1)pdm09&lt;sup&gt;e&lt;/sup&gt;</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Influenza B total</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>NIRV, Total&lt;sup&gt;f&lt;/sup&gt;</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>RSV</td>
<td>0/1220 (0)</td>
<td>0/184 (0)</td>
</tr>
<tr>
<td>Entero/Rhinovirus</td>
<td>---&lt;sup&gt;f&lt;/sup&gt;</td>
<td>4/127 (3.1)</td>
</tr>
<tr>
<td>Other&lt;sup&gt;h&lt;/sup&gt;</td>
<td>---&lt;sup&gt;f&lt;/sup&gt;</td>
<td>2/127 (1.6)</td>
</tr>
<tr>
<td>2020-21 Season: Cumulative total to date, Week 40 to 1 [September 27, 2020 – January 9, 2021]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influenza Total&lt;sup&gt;f&lt;/sup&gt;</td>
<td>0/5394 (0)</td>
<td>5/5615 (0.1)&lt;sup&gt;j&lt;/sup&gt;</td>
</tr>
<tr>
<td>Influenza A total</td>
<td>0 (0)</td>
<td>3 (0.1)</td>
</tr>
<tr>
<td>A(H3N2)&lt;sup&gt;e&lt;/sup&gt;</td>
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<td>1</td>
</tr>
<tr>
<td>A(H1N1)pdm09&lt;sup&gt;e&lt;/sup&gt;</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Influenza B total</td>
<td>0 (0)</td>
<td>2 (&lt;0.1)</td>
</tr>
<tr>
<td>Cumulative influenza incidence (/100,000)&lt;sup&gt;j&lt;/sup&gt;</td>
<td>0</td>
<td>0.6</td>
</tr>
<tr>
<td>NIRV, Total&lt;sup&gt;f&lt;/sup&gt;</td>
<td>0</td>
<td>454</td>
</tr>
<tr>
<td>RSV</td>
<td>0/5394 (0)</td>
<td>0/5615 (0)</td>
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<tr>
<td>Entero/Rhinovirus</td>
<td>---&lt;sup&gt;f&lt;/sup&gt;</td>
<td>439/4144 (10.6)</td>
</tr>
<tr>
<td>Other&lt;sup&gt;h&lt;/sup&gt;</td>
<td>---&lt;sup&gt;f&lt;/sup&gt;</td>
<td>15/3678 (0.4)</td>
</tr>
</tbody>
</table>

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, Entero/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. Entero/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).

i. Since the start of the season (week 40), there has been 7 laboratory reported cases known to be associated with recent live attenuated influenza vaccine (LAIV) receipts. The reported LAIV cases correspond with all the influenza A and B virus detections between weeks 44-49; majority of these cases have dual influenza A and B virus detections.

j. Cumulative incidence of influenza is calculated from dividing total influenza cases (starting week 40) by the total population size of each health authority and BC (PEOPLE2020 population estimates).
B. Clinical Indicators

BC Children’s Hospital Emergency Room
Continuing a pattern since week 13 of the 2019-20 season, the proportion of visits to BC Children’s Hospital Emergency Room (BCCH ER) in week 50 of the 2020-21 season attributed to ILI (1.4%) remains substantially below the 5-year historical average (22.8%) (Figure 6). Of note, the overall number of ER registrations at BCCH in week 1 is substantially lower than the similar period last year. This may be due to changes in health seeking behaviour and social distancing during the COVID-19 epidemic.

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

*5-year historical average for 2020-21 season based on 2014-15 to 2018-19 seasons (excluded 2019-20 season); CI=confidence interval.

Medical Service Plan
As shown in Figure 7 and Figure 8, in all weeks between week 51 (beginning December 13, 2020) and week 1 (beginning January 3, 2021), BC Medical Service Plan (MSP) general practitioner claims for influenza illness (weekly counts) were within the expected range in BC and in all 5 health authorities. For earlier weeks that exceeded the expected range, note that there are many non-influenza virus causes of similar clinical influenza-like illness. The clinical diagnosis of "influenza illness" as represented in administrative MSP billing data is non-specific and in the absence of laboratory-confirmed influenza detections in the province for many months more likely reflects these other non-influenza respiratory pathogens such as SARS-CoV-2 or enteroviruses. See laboratory findings.

Figure 7. Service claims submitted to MSP for influenza illness†, British Columbia, 2020-2021 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). MSP data beginning August 2, 2020 corresponds to sentinel ILI week 32; data are current to January 9, 2021.
Figure 8.

Interior

Fraser

Vancouver Coastal

Vancouver Island

Northern

Legend:
- Normal: count within expected range
- Unusual: count above 95th percentile of expected range
- Rare: count above 99th percentile of expected range
- Very rare: count above 99.9th percentile of expected range
- Expected counts from PHIDO algorithm
C. Influenza outbreak reports

The last influenza outbreak in BC was in March 2020 (week 12) with no influenza outbreaks reported thus far during the 2020-2021 season (since week 40, starting September 27, 2020). By way of comparison, during the same period spanning weeks 40 (from September 29, 2019) to 1 (to January 4, 2020) of 2019/2020 season, there were 19 long-term care facility (LTCF) influenza outbreaks reported.
D. National

FluWatch (week 51-53, December 13, 2020 to January 2, 2021)
Since the start of the 2020-21 influenza season, all indicators of influenza activity have remained exceptionally low, despite continued monitoring for influenza across Canada. Between weeks 50 to 53, 12,502 participants reported to FluWatchers and 15 (0.14%) participants reported cough and fever, which remains low compared to previous seasons. In weeks 51 to 53, 36,902 tests for influenza were performed at reporting laboratories, which was still higher than the average for this time of the year over the past six seasons. The percentage of tests positive for influenza in week 51-53 was 0.01%, compared to 22.8% during the past six seasons.

To date this season, 51 influenza detections have been reported, which is significantly lower than the past six seasons where an average of 8,784 influenza detections were reported between weeks 35-53. Twenty-seven of the 51 influenza detections are known to be associated with live attenuated influenza vaccine (LAIV) receipt and do not represent community circulation of influenza viruses.

Ninety-two influenza-like-illness (ILI) outbreaks have been reported since the start of the season; all outbreaks were in schools and/or daycares. Note outbreaks of ILI are not specific to any one respiratory pathogen and can be due to influenza or other respiratory viruses, including rhinovirus and even COVID-19. For more information on the respiratory viruses currently circulating in Canada, please refer to the Respiratory Virus Detections in Canada Report.


National Microbiology Laboratory (NML): Strain Characterization
The National Microbiology Laboratory has not yet reported influenza strain characterization results for influenza viruses collected during the 2020-21 season.

National Microbiology Laboratory (NML): Antiviral Resistance
The National Microbiology Laboratory has not yet reported antiviral resistance results for influenza viruses collected during the 2020-21 season.
E. International

USA (week 53, December 27, 2020 to January 2, 2021)
In week 53, influenza activity remained low in the US. The proportion of outpatient visits for ILI was 1.6% that week, which is still below the national baseline (2.6%). Of the 10,335 specimens tested by public health laboratories in week 53, 15 (0.15%) influenza A (subtype unknown) and 1 (0.01%) influenza B viruses were detected. Cumulatively since week 40, a total of 219,841 specimens were tested and 97 (0.04%) were influenza A and 62 (0.03%) were influenza B positive. In clinical laboratories across the US, 21,013 samples were tested for influenza in week 53, 12 (0.06%) were influenza A and 16 (0.08%) were influenza B positive. Influenza virus characterization and influenza-associated hospitalization indicators will be available later this season. The proportion of deaths attributed to pneumonia, influenza, and COVID-19 during week 53 (14.5%) were above the epidemic threshold of 6.9%. No influenza-associated pediatric death has been reported to the US CDC in the current reporting week.


WHO (January 4, 2021, based on data up to December 20, 2020)
In the temperate zone of the northern hemisphere, influenza activity remained below inter-seasonal levels, though sporadic detections of influenza A and B viruses were reported in some countries. Despite increased laboratory testing, influenza percent test positivity remained at very low levels in the United States and Canada. In Europe, influenza activity remained at inter-seasonal levels though sporadic detections of influenza A and B viruses were reported across reporting countries. Respiratory illness indicators slightly increased in some reporting European countries, likely related to SARS-CoV-2 circulation. Central Asia and Northern Africa reported no influenza detections during the current reporting period. Western and East Asia reported inter-seasonal levels with low influenza activity.

In countries in the temperate zone of the southern hemisphere, influenza activity remained at inter-seasonal level. In Oceania, ILI and other influenza activity indicators remained very low, despite continued testing. Respiratory syncytial virus (RSV) continued to circulate at high level in parts of Australia. No influenza virus detections were reported in South Africa and temperate South America.

In countries in the tropical zone, low but increased influenza detection across multiple regions and countries. During this reporting period, the Caribbean and Central America, tropical countries of South America, Middle Africa, and Eastern Africa regions reported no influenza detections. Western Africa and Southern and South East Asia regions reported sporadic influenza detections. These detections include influenza A(H1N1), influenza A(H3N2), and influenza B.

From December 7 to December 20, 2020, the WHO GISRS laboratories tested more than 188,383 specimens. Of these, 379 were positive for influenza viruses including 141 (37.2%) typed as influenza A and 238 (62.8%) as influenza B. Of subtyped influenza A viruses, 8 (13.6%) were influenza A(H1N1)pdm09 and 51 (86.4%) were influenza A(H3N2). Of the characterized B viruses, 1 (1.5%) belonged to the B(Yamagata) lineage and 64 (98.5%) to the B(Victoria) lineage.

Details are available at: https://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/.
F. WHO Recommendations for Influenza Vaccines

WHO Recommendations for the 2020-21 Northern Hemisphere Influenza Vaccine

On February 28, 2020, the WHO announced recommended strain components for the 2020-21 northern hemisphere trivalent influenza vaccine (TIV):*

- an A/Guangdong-Maonan/SWL1536/2019 (H1N1)pdm09-like virus [a clade 6B.1A5A virus]; †
- an A/Hong Kong/2671/2019 (H3N2)-like virus [a clade 3C.2a1b/T135K 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 2020-21 northern hemisphere season contain the above three viruses and a B/Phuket/3073/2013-like virus (B/Yamagata lineage) [a clade 3 virus], unchanged from 2019-2020.

* Recommended strains represent a change for three of the three components used for the 2019-2020 northern hemisphere TIV.
† Note for cell-based vaccine, the WHO recommends A/Hawaii/70/2019 (H1N1)pdm09-like virus [also clade 6B.1A5A] for the 2020-21 season. Recommended strains represents a change from the 2019-2020 season vaccine which contained an A/Brisbane/02/2018 (H1N1)pdm09-like virus [a clade 6B.1A1 virus].
‡ Recommended strain represents a change from the 2019-2020 season vaccine which contained an A/Kansas/14/2017 (H3N2)-like virus [a clade 3C.3a virus]
§ Recommended strain represents a change from the 2019-2020 season vaccine which contained a B/Colorado/06/2017-like virus (B/Victoria/2/87 lineage) [a clade V1A.1, Δ2 virus]

For further details: https://www.who.int/influenza/vaccines/virus/recommendations/2020-21_north/en/

WHO Recommendations for 2021 Southern Hemisphere Influenza Vaccine

On September 25, 2020, the WHO announced the recommended strain components for the 2021 southern hemisphere trivalent influenza vaccine (TIV)*:

- an A/Victoria/2570/2019 (H1N1)pdm09-like virus [a clade 6B.1A5A virus]; †
- an A/Hong Kong/2671/2019 (H3N2)-like virus [a clade 3C.2a1b/T135K virus];‡
- a B/Washington/02/2019 (B/Victoria lineage)-like virus [a clade V1A.3, Δ3 virus].

It is recommended that quadrivalent influenza vaccines (QIV) for the 2021 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 2020.

* Recommended strains represent a change for three of the three components used for the 2020 southern hemisphere TIV
† Note for cell-based vaccine, the WHO recommends A/Wisconsin/588/2019 (H1N1)pdm09-like virus [also a clade 6B.1A5A virus] for the 2020-21 season. Recommended strain represents a change from the 2020 season vaccine which contained an A/Brisbane/02/2018 (H1N1)pdm09-like virus [a clade 6B.1A1 virus]
‡ Note for cell-based vaccine, the WHO recommends an A/Hong Kong/45/2019 (H3N2)-like virus [also clade 3C.2a1b/T135K virus] for the 2020-21 season. Recommended strain represents a change from the 2020 season vaccine which contained an A/South Australia/34/2019 (H3N2)-like virus [a clade 3C.2a1b/T131K virus]

For further details: https://www.who.int/influenza/vaccines/virus/recommendations/2021_south/en/
G. Additional Information

Explanatory Note:
The surveillance period for the 2020-21 influenza season is defined starting in week 40. Weeks 36-39 of the 2019-20 season are shown on graphs for comparison purposes.

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

Avian Influenza Web Sites
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