BC Centre for Disease Control
An agency of the Provincial Health Services Authority

British Columbia Influenza Surveillance Bulletin

Influenza Season 2018-19, Number 19, Week 14
March 31 to April 6, 2019

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Passed the late-season A(H3N2) epidemic peak, but activity levels still above historic norms for this time of year

Most surveillance indicators suggest that BC has likely passed the late-season influenza A(H3N2) epidemic peak. However, clinical activity levels remain elevated above historical averages for this time of the year, requiring ongoing monitoring.

Virtually all influenza viruses this season have been influenza A, with just over 60% subtyped as A(H1N1)pdm09 overall. Since week 7, however, A(H3N2) viruses have comprised the majority of influenza A detections, now accounting for 77% of subtyped influenza A viruses in week 14.

There were 5 laboratory-confirmed long-term care facility influenza outbreaks reported in week 14 (all influenza A, subtype pending), a decrease from week 13 (n=8) and the peak number in week 12 (n=11).

Additional vaccine effectiveness (VE) estimates released by the Canadian Sentinel Practitioner Surveillance Network (SPSN) suggest the 2018-19 northern hemisphere influenza vaccine has provided little or no protection against A(H3N2) viruses. These findings (enclosed) reinforce the importance of adjunct protective measures, regardless of influenza vaccine status, while the late-season A(H3N2) epidemic is ongoing.

Published today in *Eurosurveillance*, SPSN investigators also report that children under 10 years of age were more affected during the primary 2018-19 influenza A(H1N1)pdm09 epidemic compared to prior seasonal epidemics in Canada. The full report, which also explores potential reasons for this surveillance observation, can be read here.

Prepared by BCCDC Influenza & Emerging Respiratory Pathogens Team

Report Disseminated: April 12, 2019

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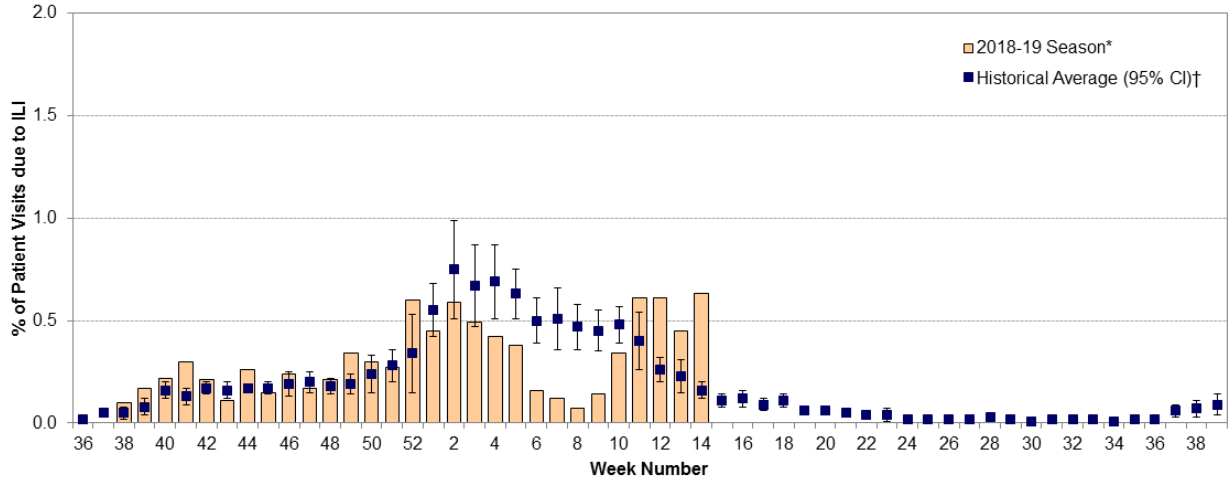
British Columbia

Sentinel Physicians

In week 14, the rate of influenza-like illness (ILI) among patients presenting to sentinel sites remained well above expected levels for this time of the season (at 0.6%), consistent with a secondary wave of ILI observed since week 10. Ten (38%) sentinel sites reported data for week 14; rates are subject to change as reporting becomes more complete (**Figure 1**).

Figure 1: Percent of patient visits to sentinel physicians due to influenza-like illness (ILI) compared to historical average, British Columbia, 2018-19

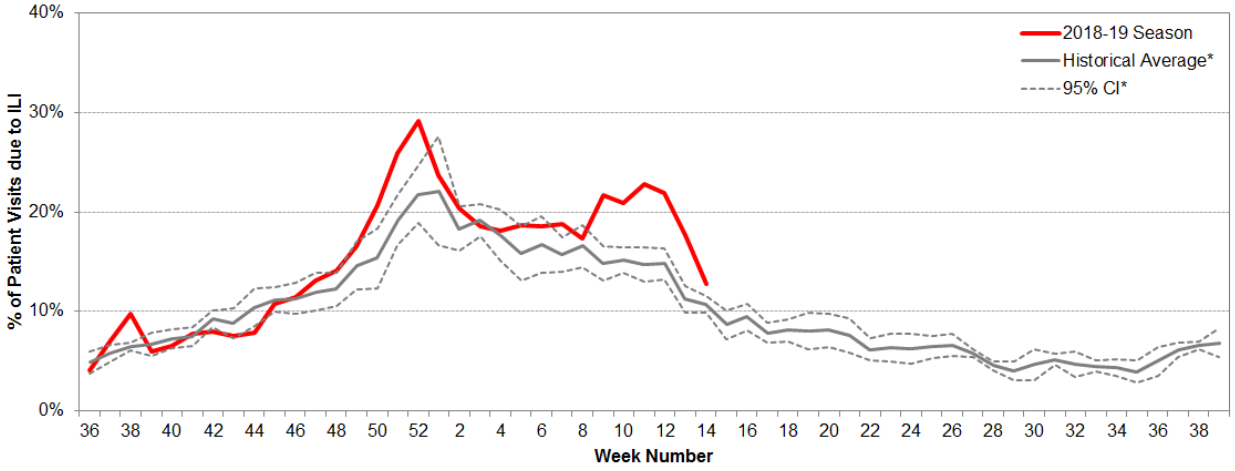


* Data are subject to change as reporting becomes more complete.
† 10-year historical average for 2018-19 season based on 2005-06 to 2017-2018 seasons, excluding 2008-09 and 2009-10 due to atypical seasonality; CI=confidence interval.

BC Children's Hospital Emergency Room

Following a peak in week 52 and a secondary wave of activity between weeks 9 and 12, the proportion of visits to BC Children's Hospital Emergency Room (ER) attributed to ILI continued to decrease in week 14 (13%), but still remains above the historical average (and 5-year maximum) for this time of year (**Figure 2**).

Figure 2: Percent of patients presenting to BC Children's Hospital ER attributed to influenza-like illness (ILI), British Columbia, 2018-19

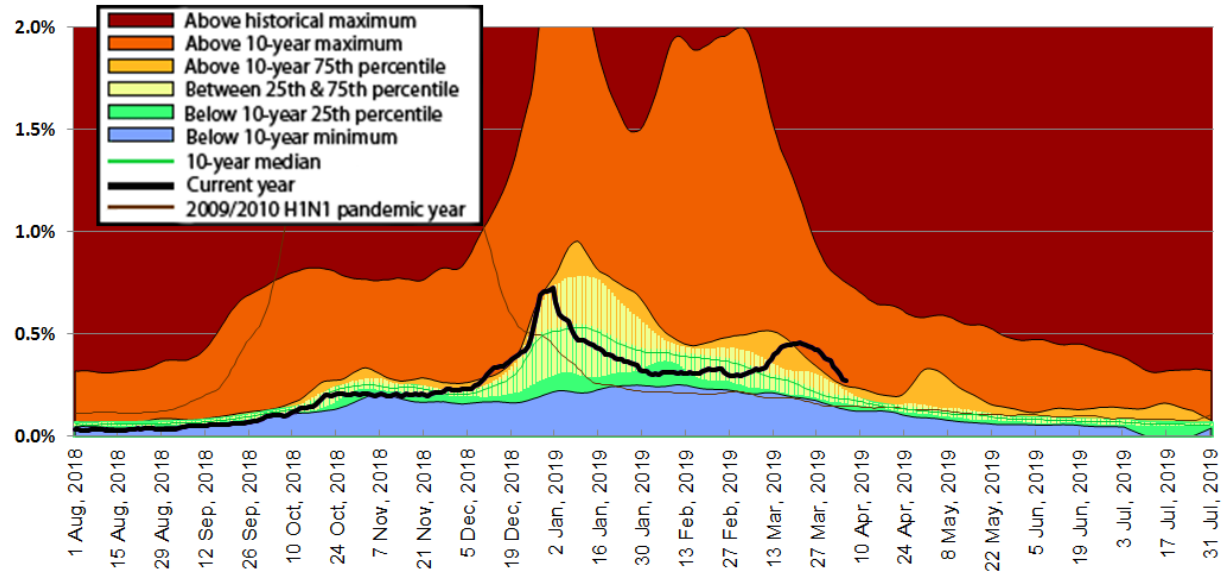


Source: BCCH Admitting, Discharge, Transfer database (ADT). Data includes records with a triage chief complaint of "flu" or "influenza" or "fever/cough."
* 5-year historical average for 2018-19 season based on 2012-13 to 2017-18 seasons; CI=confidence interval.

Medical Services Plan

The Medical Services Plan (MSP) indicator monitors general practitioner claims for influenza illness (II) as a percentage of all submitted MSP claims. Following a provincial peak around week 52 and a secondary peak around week 12, this indicator has continued to decrease in week 14, but still remains above the 10-year maximum overall for this time of year (**Figure 3**), with some regional variation (**Figure 4**).

Figure 3: Service claims submitted to MSP for influenza illness (II)* as a proportion of all submitted general practitioner service claims, British Columbia, 2018-19



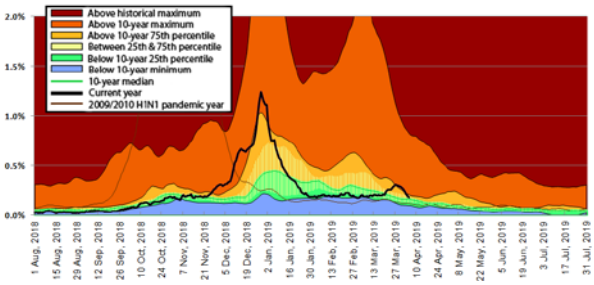
* Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).

Data for the period August 1, 2009 to July 31, 2010 have been excluded from the 10-year median calculation due to atypical seasonality during the 2009/2010 H1N1 pandemic year. MSP data beginning August 1, 2018 corresponds to sentinel ILI week 31; data are current to April 5, 2019.

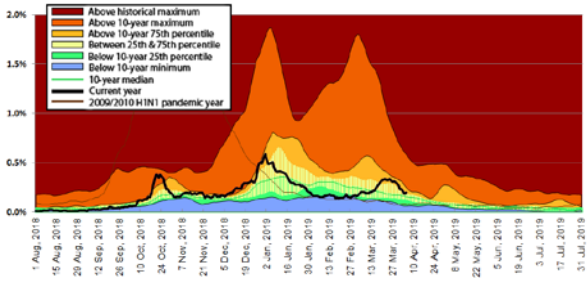
Data provided by Population Health Surveillance and Epidemiology, BC Ministry of Health Services.

Figure 4

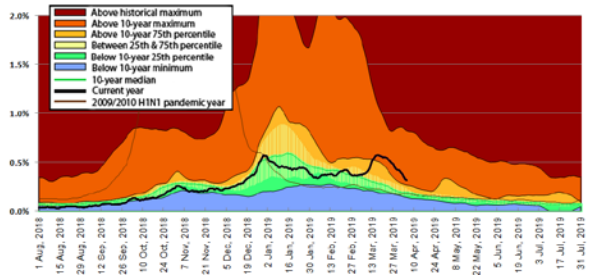
Interior



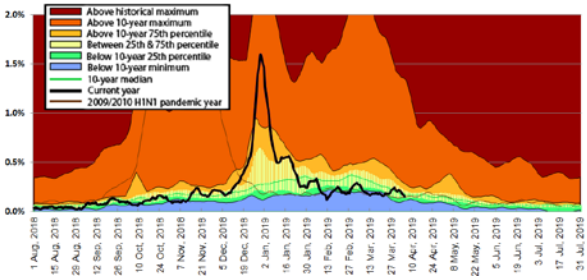
Vancouver Island



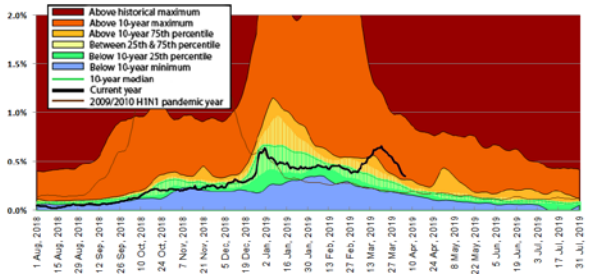
Fraser



Northern



Vancouver Coastal



British Columbia Laboratory Reports

Methodological explanation

With expanded influenza testing by additional laboratories across British Columbia (BC), adjustments to data analysis methods have been required in order to reliably interpret trends in laboratory findings. Derivation of the percentage of respiratory specimens testing influenza positive has been revised to enable more reliable comparison from week to week. The percentage influenza positivity is now 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. It should be recognized that this report does not include data from all influenza testing sites across the province. It should also be noted that real time reporting may be adjusted retrospectively with subsequent data updates and reconciliation.

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 is requested of the BCCDC PHL.

Laboratory surveillance observations

To date (since week 40, starting October 1, 2018), of 14,993 specimens tested for influenza across BC, 3788 (25%) tested positive for influenza A and just 134 (0.9%) tested positive for influenza B. Virtually all (97%) influenza detections have therefore been influenza A so far this season.

In week 14, 209/744 (28%) specimens tested positive for influenza A, which is comparable to the percent positivity observed in week 13 (254/874; 29%). In week 14, influenza B positivity also remained comparable to the prior week (3%; 27/874) at 4% (30/744), maintaining the unusually low levels of influenza B observed this season (**Figure 5**).

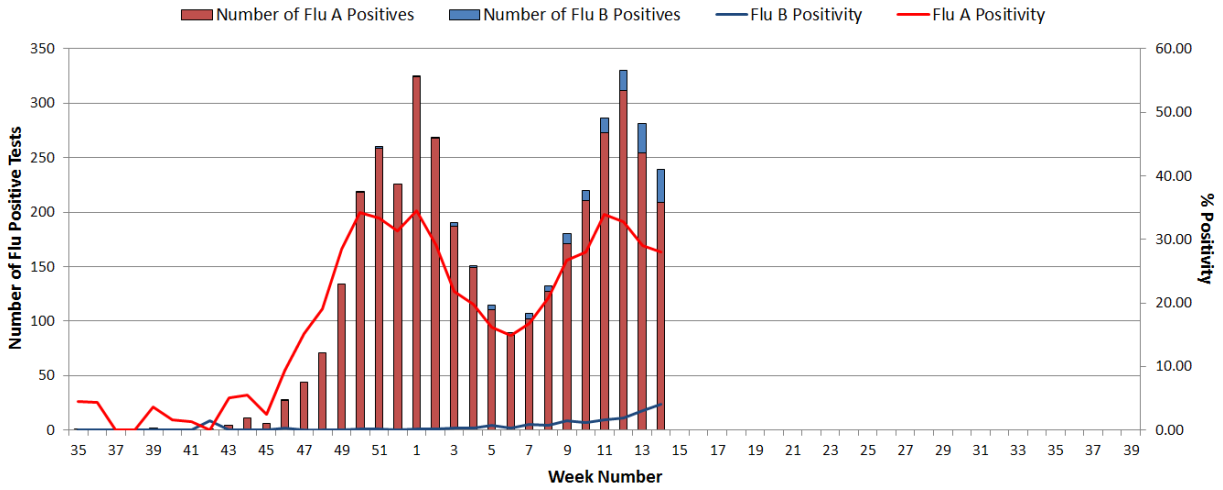
Since week 40, among influenza A viruses successfully subtyped at the BCCDC PHL, 2886/4595 (63%) were A(H1N1)pdm09. Since week 40, 3 influenza A/B co-infections have been detected (1 A(H1N1)pdm09, 1 A(H3N2), and 1 subtype pending). Of the 221 influenza viruses typed in week 14, 193 (87%) were influenza A and 28 (13%) were influenza B, the latter an increase from week 13 (5% of total influenza detections typed as influenza B) In week 14, among the influenza A viruses, 129 (67%) were identified as A(H3N2), 38 (20%) as A(H1N1)pdm09, and for 26 (13%), subtype was still pending. Among subtyped influenza A viruses in week 14, therefore, the majority (129/167; 77%) were A(H3N2), continuing the trend of greater A(H3N2) contribution relative to A(H1N1)pdm09 observed since week 7 (**Figure 6**).

Since week 40, approximately half (52%) of A(H1N1)pdm09 detections were among adults 20-64 years of age (**Figure 8**). Twenty-one percent of A(H1N1)pdm09 detections were observed among children ≤9 years who comprise about 10% of the BC population[1]. Children aged 10-19 years comprised a smaller proportion of cases (5%). Twenty-two percent of A(H1N1)pdm09 detections have been among elderly adults ≥65 years of age. Conversely, the majority (57%) of A(H3N2) detections have been among elderly adults ≥65 years of age, despite comprising about 18% of the population in BC[1].

The BCCDC PHL also conducts testing for other respiratory viruses (ORV) among specimens from select sites across the province. Other external sites perform their own ORV testing and this report does not include data from all sites across the province. Among ORV testing at the BCCDC PHL during week 14, respiratory syncytial viruses (n=35) were the most commonly detected (excluding influenza) (**Figure 6**).

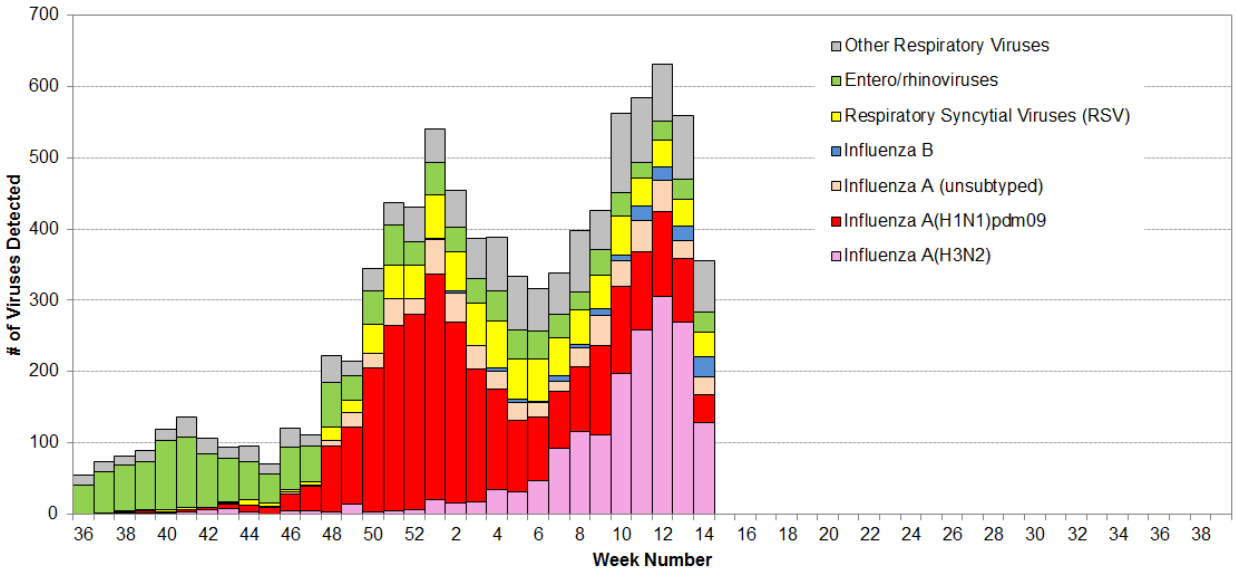
1 Government of British Columbia, BC Stats. Population Estimates 2017. URL: https://www.bcstats.gov.bc.ca/apps/PopulationEstimates.aspx. Date accessed: December 13, 2018.

Figure 5: Flu positivity derived from influenza specimens submitted to participating laboratories across BC, 2018-19*



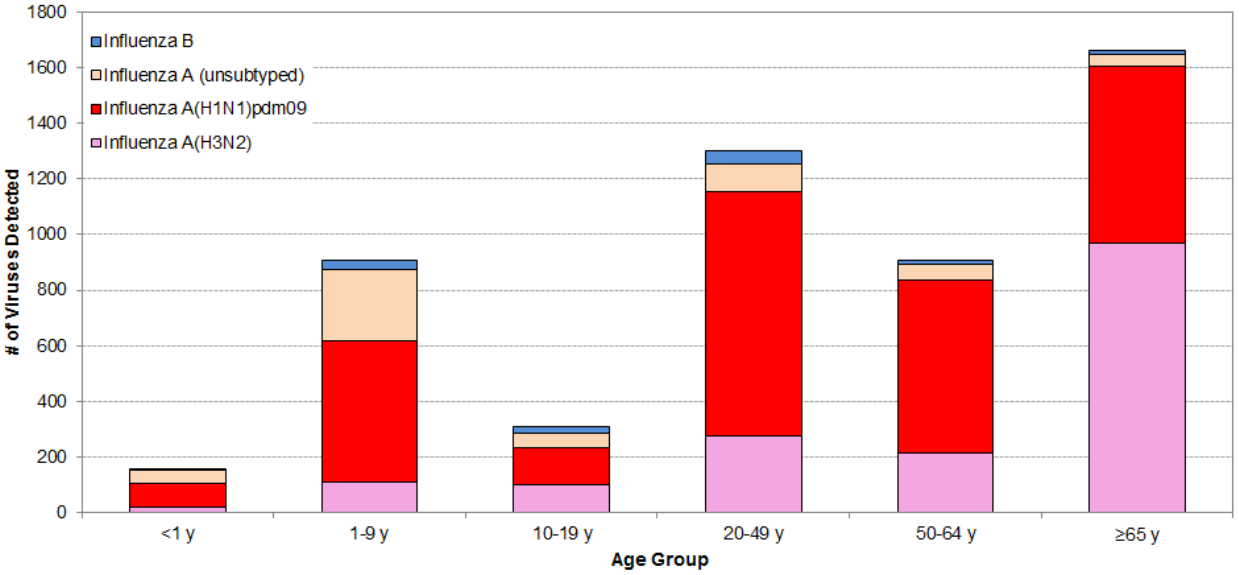
*Note: Rates are subject to change with subsequent data reconciliation. Findings support trend analysis but data do not include all testing sites in British Columbia.
Source: Summary provided by the BCCDC Public Health Laboratory.

Figure 6: Influenza and other virus detections among respiratory specimens submitted to BCCDC Public Health Laboratory, 2018-19*



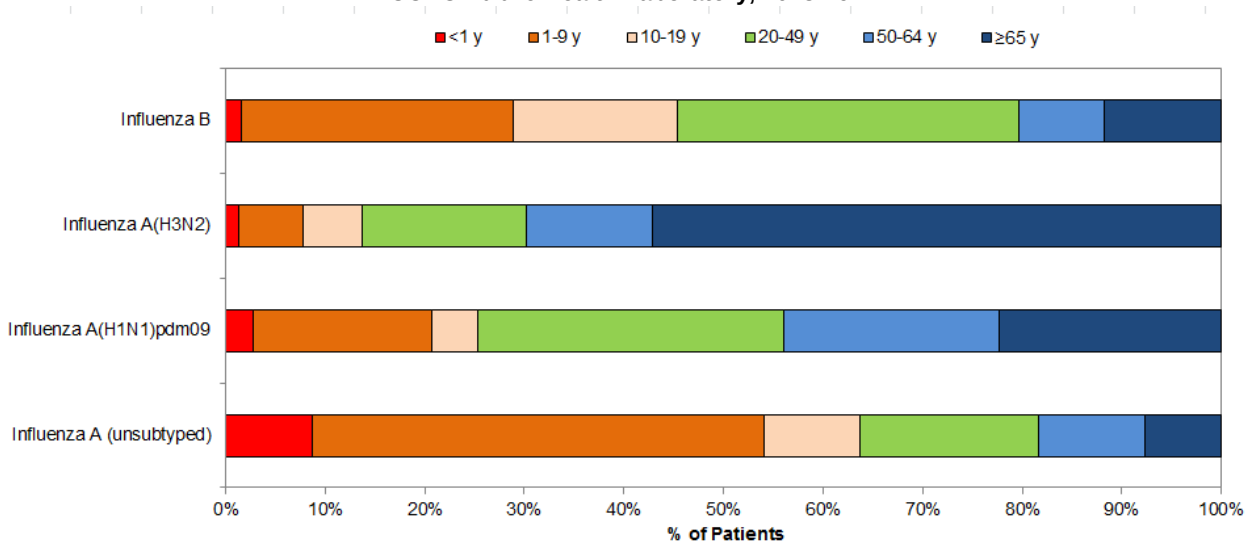
*Results are subject to change as more data become available, particularly for the most recent reporting weeks.
Source: BCCDC Public Health Laboratory (PHDRW); Data are current to April 10, 2019.

Figure 7: Cumulative number (since week 40) of influenza detections by type, subtype, and age group, BCCDC Public Health Laboratory, 2018-19*



*Results are subject to change as more data become available.
Source: BCCDC Public Health Laboratory (PHDRW); Data are current to April 10, 2019; figure includes cumulative influenza detections for specimens collected since week 40.

Figure 8: Age distribution of influenza detections (cumulative since week 40), BCCDC Public Health Laboratory, 2018-19*

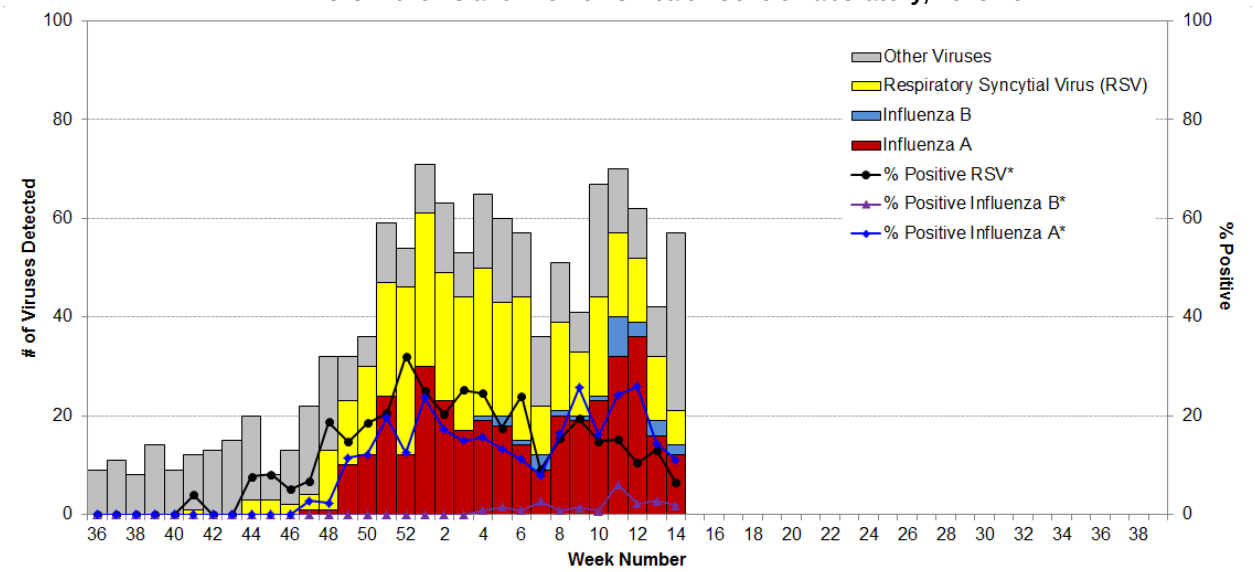


*Results are subject to change as more data become available.
Source: BCCDC Public Health Laboratory (PHDRW); Data are current to April 10, 2019; figure includes cumulative influenza detections for specimens collected since week 40.

BC Children's and Women's Health Centre Laboratory

In week 14, 109 tests for influenza and 109 tests for respiratory syncytial virus (RSV) were conducted at the BC Children's and Women's Health Centre laboratory. Of these, 12 (11%) were positive for influenza A (not subtyped), 2 (2%) were positive for influenza B, and 7 (6%) were positive for RSV. Compared to the prior week 13, both influenza A and RSV test positivity decreased in week 14, while influenza B positivity has remained stable (2% in week 14 vs 3% in week 13) (**Figure 9**).

Figure 9: Influenza and other virus detections among respiratory specimens submitted to BC Children's and Women's Health Centre Laboratory, 2018-19



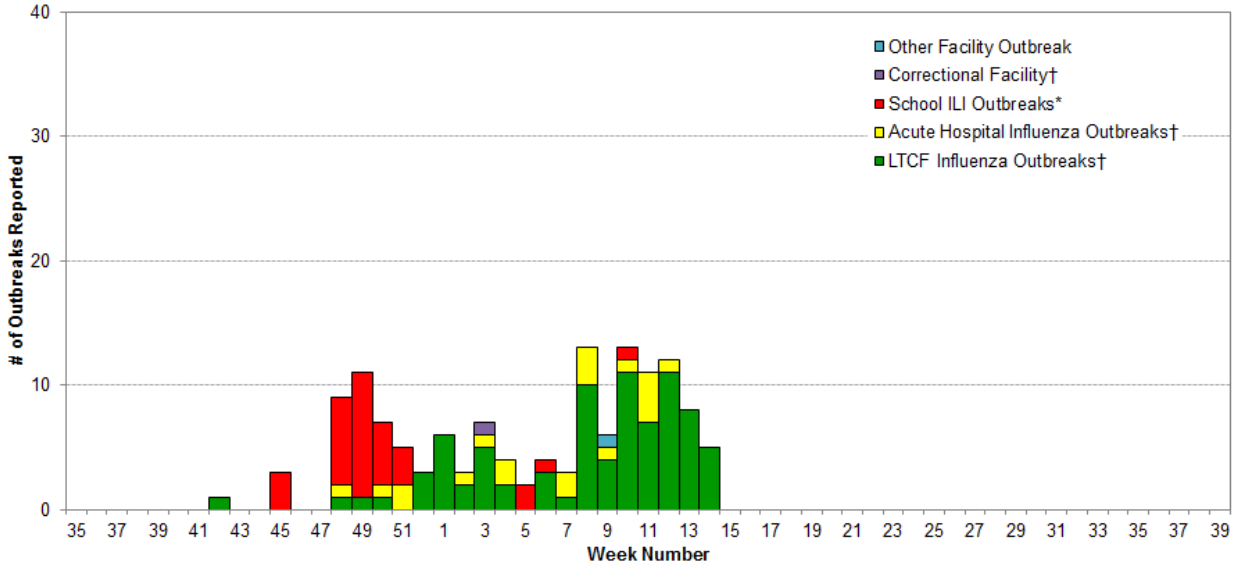
* Positive rates were calculated using aggregate data. The denominators for each rate represent the total number of tests; multiple tests may be performed for a single specimen and/or patient.

Influenza-like Illness (ILI) Outbreaks

There were 5 laboratory-confirmed long-term care facility (LTCF) influenza outbreaks reported in week 14 (all influenza A, subtype pending), a decrease from week 13 (n=8) and the peak number by week in each of weeks 10 and 12 (n=11). Since week 40, a total of 82 LTCF outbreaks (22 A(H3N2), 18 A(H1N1)pdm09, 40 subtype unknown, and 2 B), 20 acute care facility outbreaks, 32 school outbreaks, 1 correctional facility outbreak, and 1 mental health facility outbreak have been reported (**Figures 10 and 11**).

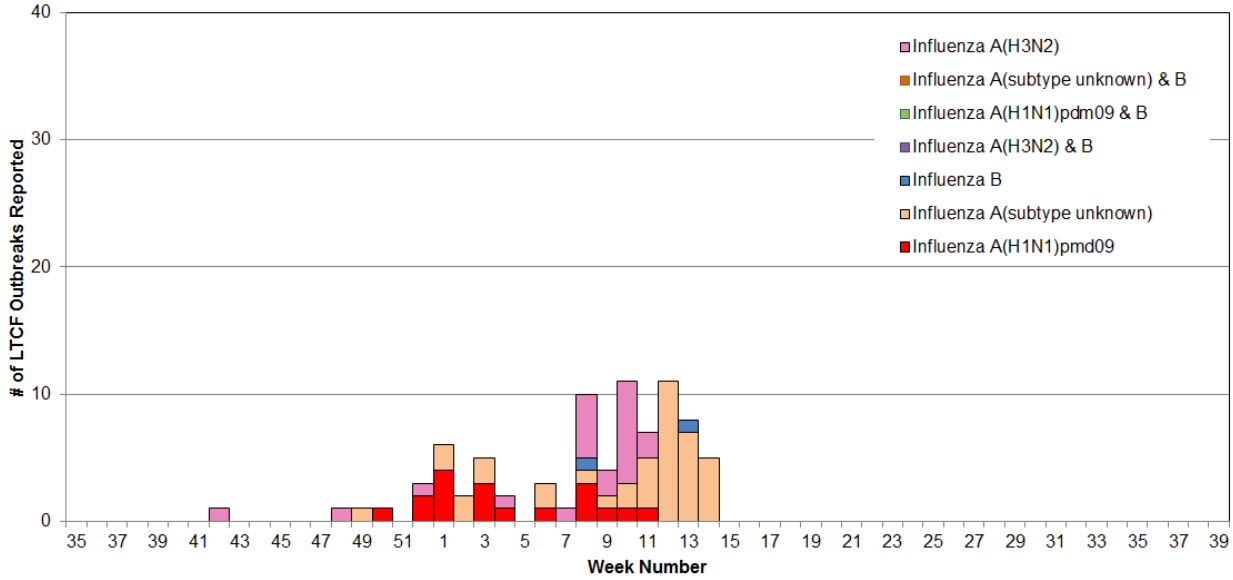
The cumulative tally of LTCF influenza outbreaks to date this A(H1N1)pdm09-dominant season has been far below that of prior A(H3N2)-dominant seasons in 2017-18 and 2016-17 (82, 176, and 195 outbreaks, respectively). However, the number of LTCF outbreaks reported between weeks 8 and 14 represents just under 70% of all LTCF outbreaks reported since the beginning of the season, consistent with a late-season surge in A(H3N2) activity.

Figure 10: Number of influenza-like illness (ILI) outbreaks reported, British Columbia 2018-19



* School-based ILI outbreak defined as >10% absenteeism on any day, most likely due to ILI. Data are subject to change upon retrospective reconciliation of data.
† Facility-based influenza outbreaks defined as 2 or more ILI cases within 7-day period, with at least one laboratory-confirmed case of influenza.

Figure 11: Number of influenza outbreaks by type/subtype in long-term care facilities (LTCF), British Columbia 2018-19†



† Facility-based influenza outbreaks defined as 2 or more ILI cases within 7-day period, with at least one laboratory-confirmed case of influenza. Data are subject to change upon retrospective reconciliation of data.

National

FluWatch (week 13, March 24 to March 30, 2019)

Influenza activity continues to be reported in almost all regions in Canada. In week 13, the proportion of laboratory tests that were positive for influenza remained stable in comparison to week 12 at 22%. To date, influenza A is the most common influenza virus detected in Canada (98%); the vast majority of these viruses are A(H1N1)pdm09 (79% of subtyped influenza A viruses). However, detections of influenza A(H3N2) have been steadily increasing since mid-January and accounted for the majority (76%) of subtyped influenza A detections in week 13. There is currently very little influenza B circulation compared to previous seasons. The majority (83%) of lab-confirmed A(H1N1)pdm09 detections have been reported among individuals under the age of 65. Conversely, the majority (58%) of influenza A(H3N2) detections have been reported among adults 65 years of age and older. Details are 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, 2018, to April 11, 2019, the National Microbiology Laboratory (NML) has characterized 1904 influenza viruses [314 A(H3N2), 1523 A(H1N1)pdm09 and 67 B (23 Yamagata lineage and 44 Victoria lineage)] received from Canadian laboratories.

Influenza A(H3N2): 103 influenza A(H3N2) viruses were considered antigenically similar to A/Singapore/INFIMH-16-0019/2016, the WHO-recommended A(H3N2) component of the 2018-19 northern hemisphere influenza vaccine. However, 53 viruses showed reduced titer with ferret antisera raised against egg-propagated A/Singapore/INFIMH-16-0019/2016.

67 influenza A (H3N2) viruses characterized belonged to genetic group 3C.2a1, 17 belonged to genetic group 3C.2a, and 61 belonged to genetic group 3C.3a. Sequencing is pending for the remaining isolate.

Influenza A(H1N1)pdm09: 1480 A(H1N1)pdm09 viruses antigenically characterized were found to be similar to the A/Michigan/45/2015 virus: the WHO-recommended influenza A(H1N1) component of the 2018-19 northern hemisphere influenza vaccine. However, 43 viruses showed reduced titer with ferret antisera raised against cell culture-propagated A/Michigan/45/2015.

Influenza B: 23 influenza B viruses antigenically characterized were considered similar to the B/Phuket/3073/2013 virus, which belongs to the B Yamagata lineage: the WHO-recommended influenza B component of the 2018-19 northern hemisphere *quadrivalent* influenza vaccine. The WHO-recommended influenza B component of the *trivalent* vaccine is a B/Colorado/06/2017-like virus of the B Victoria lineage. 16 influenza B viruses characterized were antigenically similar to B/Colorado/06/2017. 28 viruses showed reduced titer with ferret antisera raised against cell culture-propagated B/Colorado/06/2017.

National Microbiology Laboratory (NML): Antiviral Resistance

From September 1, 2018, to April 11, 2019, the NML received influenza viruses from Canadian laboratories for drug susceptibility testing.

Amantadine: Of the 416 influenza A viruses [73 A(H3N2), 343 A(H1N1)pdm09] tested against amantadine, all were resistant.

Oseltamivir: Of the 1096 influenza viruses [112 A(H3N2), 933 A(H1N1)pdm09, and 51 B] tested against oseltamivir, 1092 were sensitive, and 4 A(H1N1)pdm09 viruses with an H275Y mutation were resistant.

Zanamivir: Of the 1095 influenza viruses [112 A(H3N2), 932 A(H1N1)pdm09, and 51 B] tested against zanamivir, all were sensitive.

International

USA (week 13, March 24 to March 30, 2019)

In week 13, influenza activity decreased but remained elevated in the United States (US). While influenza A(H1N1)pdm09 predominated from October to mid-February, influenza A(H3N2) has been more frequently reported since mid-February. Very little influenza B activity has been reported throughout the season. The majority of influenza viruses characterized antigenically are considered similar to the cell-grown reference viruses of the 2018-19 northern hemisphere influenza vaccine; however, an increasing proportion of influenza A(H3N2) viruses are antigenically distinguishable from the A(H3N2) component of the 2018-19 northern hemisphere influenza vaccine. All tested viruses showed susceptibility to zanamivir, and greater than 99% of the viruses tested showed susceptibility to oseltamivir and peramivir. In week 13, the proportion of deaths attributed to pneumonia and influenza was at the system-specific epidemic threshold of 7.2%. Five influenza-associated pediatric deaths were reported in week 13. The proportion of outpatient visits for ILI decreased from 3.8% in week 12 to 3.2% in week 13, but remains above the national baseline of 2.2%.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 (April 1, 2019, based on data up to March 17, 2019)

There have been no new WHO global influenza surveillance updates since our last bulletin. The latest report is available at: https://www.who.int/influenza/surveillance_monitoring/updates/en/

2018/19 Vaccine Effectiveness Estimates

Updated Canadian 2018-19 Vaccine Effectiveness Estimates (unpublished)

Given an atypical late-season wave of influenza A(H3N2), the community-based Canadian Sentinel Practitioner Surveillance Network (SPSN) has undertaken additional interim analyses to assess effectiveness of the 2018-19 influenza vaccine against A(H3N2) illness. Vaccine effectiveness (VE) monitoring methods are as described in prior publications, available at the SPSN website alongside historic and current VE findings.

Based on data collected as of March 30th, 2019, including more than 2800 participants, the 2018-19 northern hemisphere vaccine has provided little or no protection against medically-attended outpatient A(H3N2) illness (VE of 23%; 95% CI: -9-46%), including among working age adults 20-64 years-old who comprise the majority of SPSN participants (VE of -16%; 95% CI: -76-23%). Consistent with expected patterns, VE estimates for this delayed A(H3N2) wave are considerably lower than reported earlier by the SPSN for the primary A(H1N1)pmd09 epidemic based on data collected as of January 12th, 2019. In that mid-season analysis, VE against A(H1N1)pdm09 was 72% (95% CI: 60-81%) overall, with substantial protection observed in all age groups[1]. In the most recent analysis spanning March 30th, estimates against A(H1N1)pmd09 have remained stable at approximately 70%.

The SPSN continues to monitor and will further update VE estimates at end-of-season. In the meantime, and while the late-season A(H3N2) epidemic continues, interim VE estimates against influenza A(H3N2) viruses reinforce the importance of adjunct protective measures – such as antiviral medication for high risk or severely ill individuals – regardless of influenza vaccine status.

[1] The SPSN mid-season paper is available as an open-access publication in the online journal *Eurosurveillance*: https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2019.24.4.1900055

Hong Kong Early Season Estimates – 2018/19 Vaccine Effectiveness Against Pediatric Hospitalization

On January 31st, 2019, interim VE estimates for the 2018-19 northern hemisphere influenza vaccine were reported from Hong Kong for the prevention of influenza A(H1N1)pdm09 hospitalization in children. Authors report substantial VE of 92% (95%CI: 82-96%) against A(H1N1)pdm09-attributed hospitalisation in children (aged 6 months-17 years). This estimate is comparable to the VE estimate reported earlier by the Canadian SPSN for the prevention of medically attended outpatient A(H1N1)pdm09 illness in children 1-8 years of age (91%; 95%CI: 67-98%). The full report is available as an open-access publication in the online journal *Eurosurveillance*: https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2019.24.5.1900056

United States (US) Interim Estimates of 2018-19 Seasonal Influenza Vaccine Effectiveness

On February 14th, 2019, mid-season VE estimates for the prevention of laboratory-confirmed influenza associated with medically-attended acute respiratory illness (ARI) were reported from the US CDC. Authors report an overall VE of 46% (95% CI: 30-58%) against influenza A(H1N1)pdm09, which is lower than the recently reported interim VE estimates against A(H1N1)pdm09 of 72% in Canada during the 2018-19 season and 78% in Australia during the 2018 southern hemisphere influenza season (see above). A higher VE of 62% (95% CI: 40-75%) against A(H1N1)pdm09 among those aged 6 months to 17 years was reported in this study. Discrepancies in VE estimates across studies may be attributed to multiple factors including differences in the stage of the influenza epidemic relative to the initiation of the immunization campaign, variation in circulating viruses, as well as methodological differences including contributing sample sizes (and statistical power), participant profiles, and clinical outcomes assessed. The full report is available as an open-access publication in *Morbidity and Mortality Weekly Report:* https://www.cdc.gov/mmwr/volumes/68/wr/mm6806a2.htm?s_cid=mm6806a2_w

European Interim Estimates of 2018-19 Seasonal Influenza Vaccine Effectiveness

On February 21, 2019, mid-season VE estimates were also reported from Europe, where there has been co-circulation of both influenza A(H1N1)pdm09 and A(H3N2) viruses this season. VE estimates were generally higher against A(H1N1)pdm09 than against A(H3N2) for which no vaccine protection was suggested among 3/4 studies in the outpatient setting. The full report is available as an open-access publication in the online journal *Eurosurveillance*: https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2019.24.1900121

WHO Recommendations for Influenza Vaccines

WHO Recommendations for 2018-19 Northern Hemisphere Influenza Vaccine

On February 22, 2018, the WHO announced the recommended strain components for the 2018-19 northern hemisphere trivalent influenza vaccine (TIV)*:

- an A/Michigan/45/2015 (H1N1)pdm09-like virus;
- an A/Singapore/INFIMH-16-0019/2016 (H3N2)-like virus; †
- a B/Colorado/06/2017-like virus (B/Victoria/2/87 lineage) ‡.

It is recommended that quadrivalent influenza vaccines (QIV) containing two influenza B viruses contain the above three viruses and a B/Phuket/3073/2013-like virus (B/Yamagata/16/88 lineage).

* Recommended strains represent a change for two of the three components used for the 2017-18 northern hemisphere TIV

† Recommended strain represents a change from the 2017-18 season vaccine which contained an A/Hong Kong/4801/2014 (H3N2)-like virus

‡ Recommended strain represents a change from the 2017-18 season vaccine which contained a B/Brisbane/60/2008-like virus.

For further details: http://www.who.int/influenza/vaccines/virus/recommendations/2018_19_north/en/

WHO Recommendations for the 2019-20 Northern Hemisphere Influenza Vaccine

On February 20, 2019, the WHO announced the recommended strain components for the 2019-20 northern hemisphere trivalent influenza vaccine (TIV):*

- an A/Brisbane/02/2018 (H1N1)pdm09-like virus; †
- an A/Kansas/14/2017 (H3N2)-like virus; ‡
- a B/Colorado/06/2017-like virus (B/Victoria/2/87 lineage);

It is recommended that quadrivalent influenza vaccines (QIV) containing two influenza B viruses contain the above three viruses and a B/Phuket/3073/2013-like virus (B/Yamagata/16/88 lineage).

* Recommended strains represent a change for at least one of the three components used for the 2018-19 northern hemisphere TIV.

† Recommended strain represents a change from the 2018-19 season vaccine which contained an A/Michigan/45/2015 (H1N1)pdm09-like virus

‡The A(H3N2) component was announced on March 21 2019. The recommended strain represents a change from the 2018-19 season vaccine which contained an A/Singapore/INFIMH-16-0019/2016 (H3N2)-like virus.

For further details:
https://www.who.int/influenza/vaccines/virus/recommendations/201902_recommendation.pdf?ua=1

Additional Information

Explanatory Note:

The surveillance period for the 2018-19 influenza season is defined starting in week 40. Weeks 36-39 of the 2017-18 season are shown on graphs for comparison purposes.

List of Acronyms:

ACF: Acute Care Facility
AI: Avian influenza
FHA: Fraser 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
A(H1N1)pdm09: Pandemic H1N1 influenza (2009)
RSV: Respiratory syncytial virus
VCHA: Vancouver Coastal Health Authority
VIHA: Vancouver Island Health Authority
WHO: World Health Organization

Current AMMI Canada Guidelines on the Use of Antiviral Drugs for Influenza:
www.ammi.ca/?ID=122&Language=ENG

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
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 – 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 Disease Prevention and Control Services (CDPACS)
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

Communicable Diseases & Immunization Service
655 W. 12th Ave. Vancouver BC V5Z 4R4
Phone: (604) 707-2510; Fax: (604) 707-2516

Reset Form

Submit By Email

Version: 30 Jul 2018

Influenza-Like Illness (ILI) Outbreak Summary Report Form

Please complete and email to ilioutbreak@bccdc.ca

Note: This form is for provincial surveillance purposes.
Please notify your local health unit per local guidelines/requirements.

ILI: Acute onset of respiratory illness with fever and cough and with one or more of the following: sore throat, arthralgia, myalgia, or prostration which *could* be due to influenza virus. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.
Schools and work site outbreak: greater than 10% absenteeism on any day, most likely due to ILI.
Residential institutions (facilities) outbreak: two or more cases of ILI within a seven-day period.

A — Reporting Information

Person Reporting: Title:
Contact Phone: Email:
Health Authority: HSDA:
Full Facility Name:

Is this report: ☐ First Notification *(complete section **B** below; section **D** if available)*
☐ Outbreak Over *(complete section **C** and section **D** below)*

Report Date (dd/mm/yyyy):

B — First Notification

Type of facility*: ☐ Long Term Care Facilities, Nursing Homes ☐ Acute Care Facility
☐ Other Setting:

If ward or wing, please specify name/number:

Date of onset of first case of ILI (dd/mm/yyyy):
Date outbreak declared (dd/mm/yyyy):

***Long Term Care Facilities, Nursing Homes:** Facilities that provide living accommodation for people who require on-site delivery of 24 hour, 7 days a week supervised care, including professional health services, personal care and services such as meals, laundry and housekeeping or other residential care facilities where provincial/territorial public health is responsible for outbreak management under provincial legislation; **Acute Care Facility:** Publicly funded facilities providing medical and/or surgical treatment and acute nursing care for sick or injured people, through inpatient services. (i.e. hospitals including inpatient rehabilitation and mental facilities); **Other Setting:** Any locations not otherwise specified here in which outbreaks of influenza or ILI may occur (e.g. retirement homes, assisted living or hospice settings, private hospitals/clinics, correctional facilities, colleges/universities, adult education centres, shelters, group homes, and workplaces).

C — Outbreak Declared Over

Date of onset for last case of ILI (dd/mm/yyyy):
Date outbreak declared over (dd/mm/yyyy):

Numbers to date	Residents
Total	
With ILI	
Hospitalized*	
Died*	

*suspected to be linked to case of ILI

D — Laboratory Information

Specimen(s) submitted? ☐ Yes (location:) ☐ No ☐ Don't know
If yes, organism identified? ☐ Yes ☐ No ☐ Don't know

Please specify organism/subtype: ☐ Influenza A (subtype:) ☐ Influenza B
☐ Parainfluenza ☐ Entero/rhinovirus ☐ Coronavirus ☐ RSV
☐ HMPV ☐ Adenovirus ☐ Other: