

British Columbia Influenza Surveillance Bulletin

Influenza Season 2018-19, Number 14, Week 9

February 24 to March 2, 2019

Table of Contents:

British Columbia:

Sentinel Physicians	Page 2
Children's Hospital ER	Page 3
Medical Services Plan	Page 4
Laboratory Surveillance	Page 6
ILI Outbreaks	Page 10

Canada:

FluWatch Activity Levels	Page 11
NML Strain Characterization	Page 11
NML Antiviral Resistance	Page 11

International:

USA (CDC)	Page 12
WHO	Page 12

2018/19 Vaccine Effectiveness

Estimates:

Canadian Mid-Season	Page 13
Hong Kong Early Season	Page 13
United States Mid-Season	Page 13
European Mid-Season	Page 13

Influenza Vaccine Components (WHO Recommendations)

2018-19 Northern Hemisphere	Page 14
2019-20 Northern Hemisphere	Page 14

Additional Information:

Explanatory Note	Page 15
List of Acronyms	Page 15
Web Sites	Page 15
Outbreak Report Form	Page 16

Ongoing influenza activity in BC; A(H3N2) requires close monitoring

In BC, the majority of surveillance indicators suggest stable or increased influenza activity in week 9 relative to the prior week. A shift in the A(H1N1)pdm09 to A(H3N2) ratio has been observed in recent weeks which will require ongoing monitoring. Influenza B remains at low levels.

Among influenza viruses typed since week 40, virtually all have been influenza A and, among those subtyped at the BCCDC Public Health Laboratory, 83% overall have been A(H1N1)pdm09. While the number of A(H1N1)pdm09 detections has remained relatively stable since week 6, A(H3N2) viruses have comprised a greater share of detections in recent weeks, accounting for 49% of subtyped viruses in week 9.

Children under 10 years of age and non-elderly adults have comprised 75% of all A(H1N1)pdm09 detections to date in BC. Conversely, elderly adults have comprised the majority of A(H3N2) detections thus far in BC: 56% overall to date, despite comprising about 18% of the population in BC.

In week 9, four laboratory-confirmed long term care facility (LTCF) outbreaks of influenza A (1 A(H3N2), 2 A(H1N1)pdm09, and 1 subtype unknown) were reported. The cumulative tally of long-term care facility 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 (34, 148, and 180 outbreaks, respectively). However, the numbers reported in weeks 8 and 9 represent a nearly 50% increase over the cumulative tally since the beginning of the season, consistent with other indicators suggesting a potential increase in A(H3N2) contribution in recent weeks.

Prepared by BCCDC Influenza & Emerging Respiratory Pathogens Team

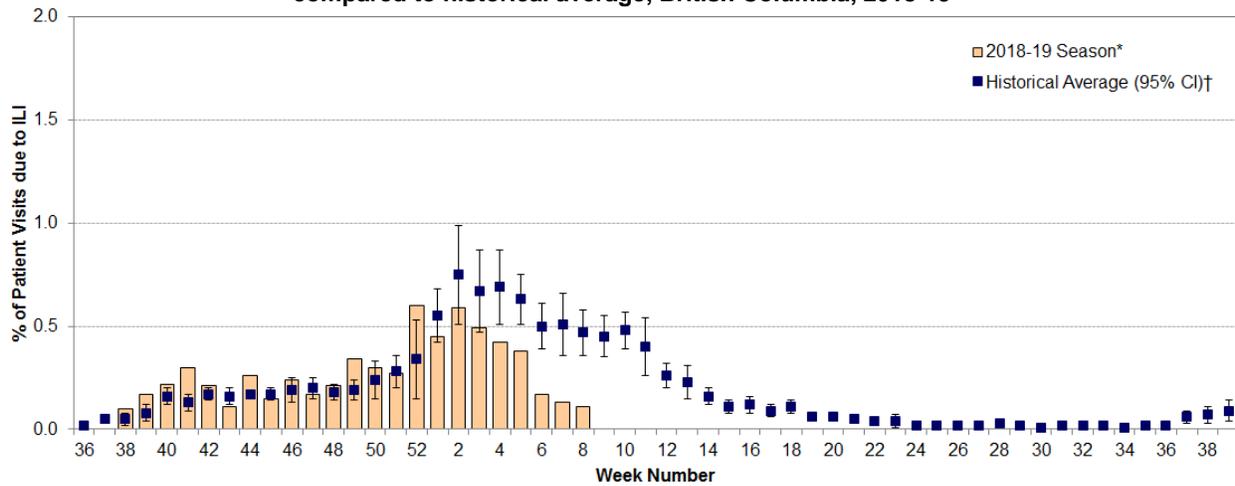
Report Disseminated: March 7, 2019

British Columbia

Sentinel Physicians

Following a peak in week 52, and a decline thereafter, no cases of influenza-like illness (ILI) among patients presenting to sentinel sites was reported in week 9 (**Figure 1**). Seven (26%) sentinel sites reported data for week 9; rates are subject to change as reporting becomes more complete.

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



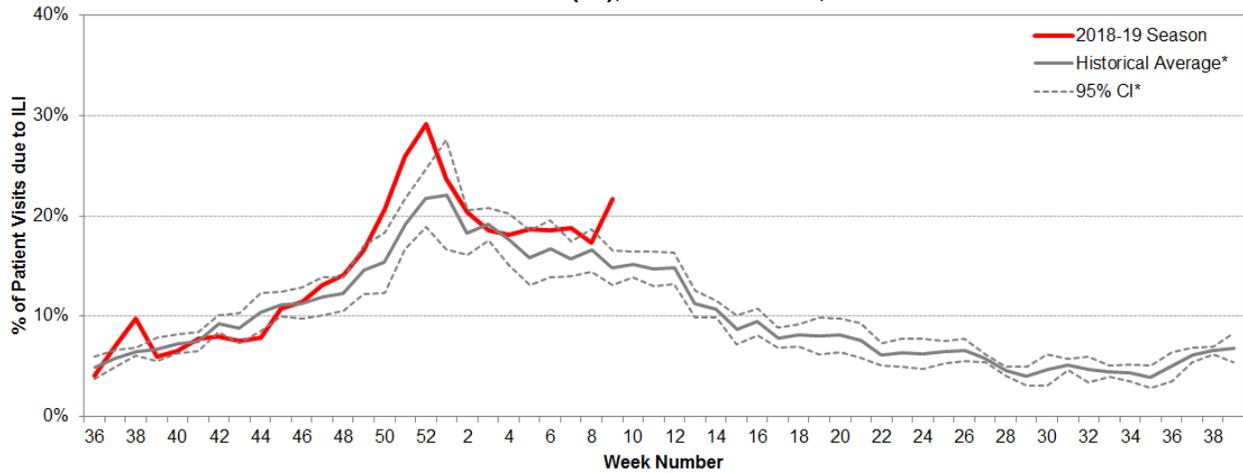
* Data are subject to change as reporting becomes more complete.

† 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 plateau between weeks 3 through 7, the proportion of visits to BC Children’s Hospital Emergency Room (ER) attributed to ILI increased from 17% in week 8 to 22% in week 9, above the historical average (Figure 2). This increase will require ongoing monitoring.

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

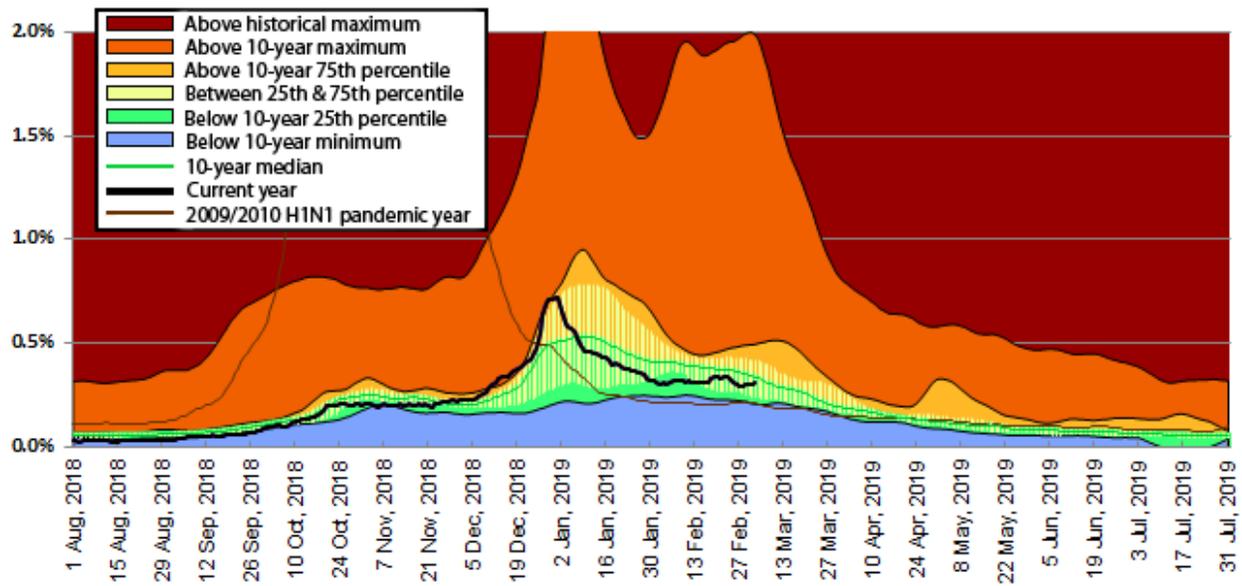


Source: BCCH Admitting, Discharge, Transfer database (ADT). Data includes records with a triage chief complaint of "flu" or "influenza" or "fever/cough."
* 5-year historical average for 2018-19 season based on 2012-13 to 2017-18 seasons; CI=confidence interval.

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 an overall provincial peak around week 52, with gradual decline thereafter, this indicator has remained stable and within expected levels in week 9 (Figure 3).

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

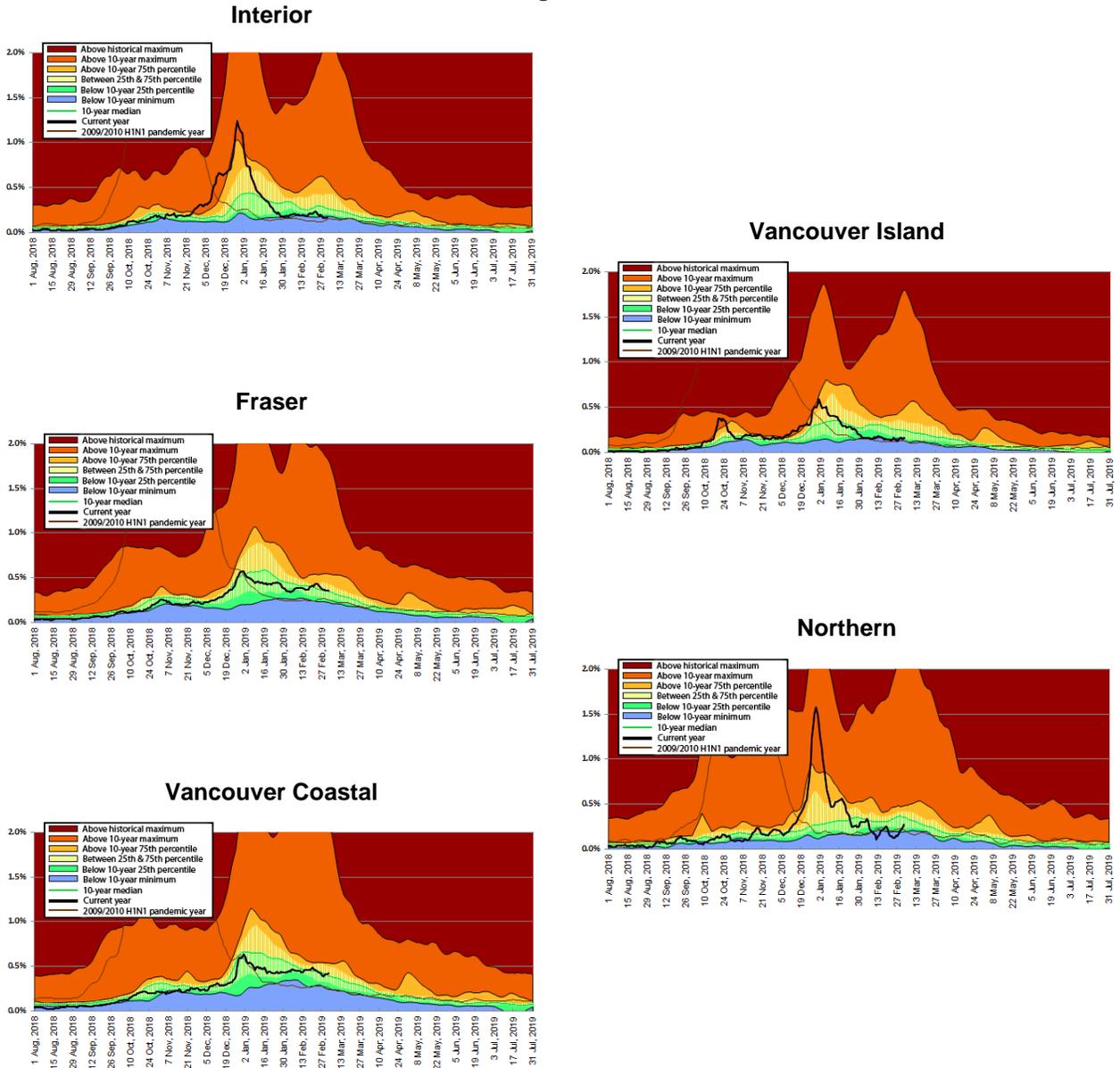


* Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).

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 March 4, 2019.

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

Figure 4



British Columbia Laboratory Reports

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.

With the above specifications, to date 2531/11052 (23%) contributing specimens tested positive for influenza A and 37/11052 (0.3%) tested positive for influenza B since week 40 (starting October 1, 2018). Virtually all (99%) influenza detections have therefore been influenza A. In week 9, 171/639 (27%) specimens tested positive for influenza A, representing an increase over week 8 (127/612; 21%). Conversely, just 9/639 (1%) specimens tested positive for influenza B in week 9, continuing the trend of low influenza B activity observed since season start (**Figure 5**).

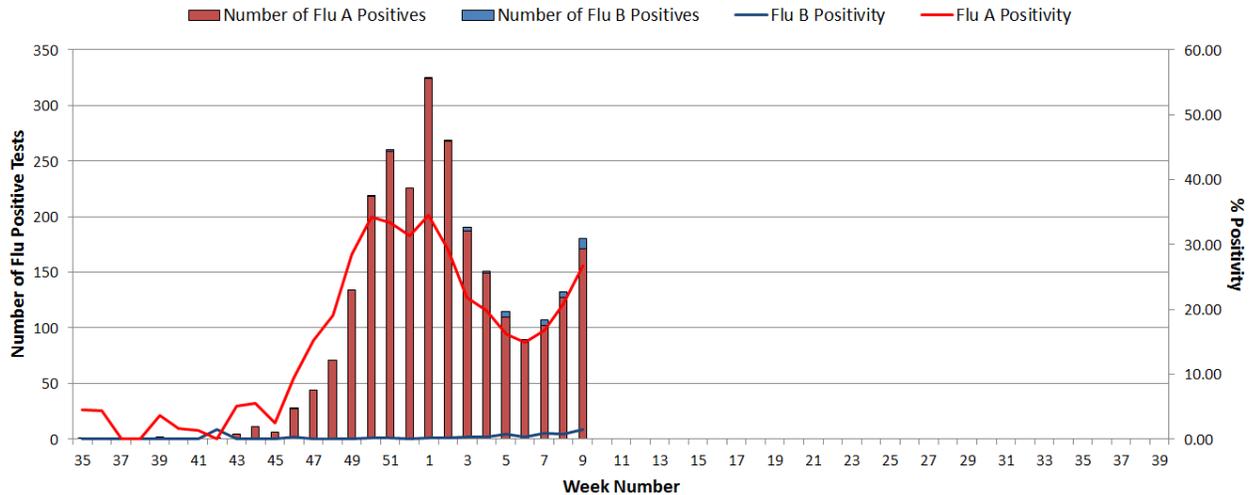
The BCCDC PHL conducts the majority of influenza subtype characterization for the province, including for primary specimens submitted directly to the BCCDC PHL for influenza diagnosis, as well as for specimens that have tested positive for influenza at other external sites and for which secondary subtyping is requested of the BCCDC PHL. Since week 40, among influenza A viruses successfully subtyped at the BCCDC PHL, 2315/2802 (83%) were A(H1N1)pdm09. Of 239 typed influenza viruses in week 9, 230 (96%) were typed as influenza A and 9 (4%) were typed as influenza B, which represents a slight increase over week 8 (when 2% of viruses were typed as influenza B). In week 9, among the influenza A viruses, 82 (36%) were identified as A(H3N2), 87 (38%) as A(H1N1)pdm09, and for 61 (27%) subtype was unknown. Among subtyped influenza A viruses in week 9, therefore, a slim majority (87/169; 52%) were A(H1N1)pdm09, representing an increase from week 8 (83/194; 43%) (**Figure 6**). Conversely influenza A(H3N2) comprised 49% (82/169) of subtyped influenza viruses in week 9, which represents a decrease compared to week 8 (83/194; 57%). A shift in the A(H1N1)pdm09 to A(H3N2) ratio has been observed in recent weeks. While in week 9 this shift is less pronounced, additional influenza A detections for which subtype remains pending (n=61) may clarify the relative preponderance of A(H1N1)pdm09 versus A(H3N2) contribution during this transitional period. The overall increase in A(H3N2) activity in recent weeks requires close monitoring.

Since week 40, approximately half (52%) of A(H1N1)pdm09 detections were among adults 20-64 years of age (**Figure 8**). Twenty-three percent of A(H1N1)pdm09 detections were observed among children ≤ 9 years who comprise about 10% of the BC population¹, suggesting they remain disproportionately affected this season. Children aged 10-19 years comprised a smaller proportion of cases (5%). Twenty one percent of A(H1N1)pdm09 detections have been among elderly adults ≥ 65 years of age. Conversely, the majority (56%) of A(H3N2) detections have been among elderly adults ≥ 65 years of age, despite comprising about 18% of the population in BC¹.

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 9, respiratory syncytial viruses (n=46) were the most commonly detected (excluding influenza) (**Figure 6**).

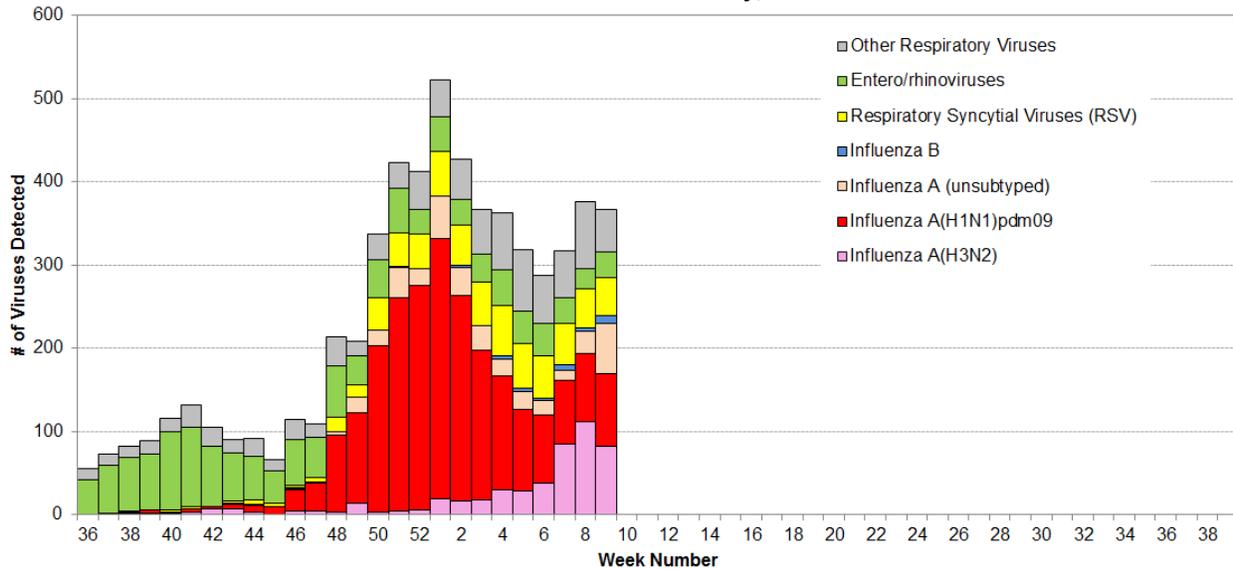
¹ Government of British Columbia, BC Stats. Population Estimates 2017. URL: <https://www.bcstats.gov.bc.ca/apps/PopulationEstimates.aspx>. Date accessed: December 13, 2018.

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



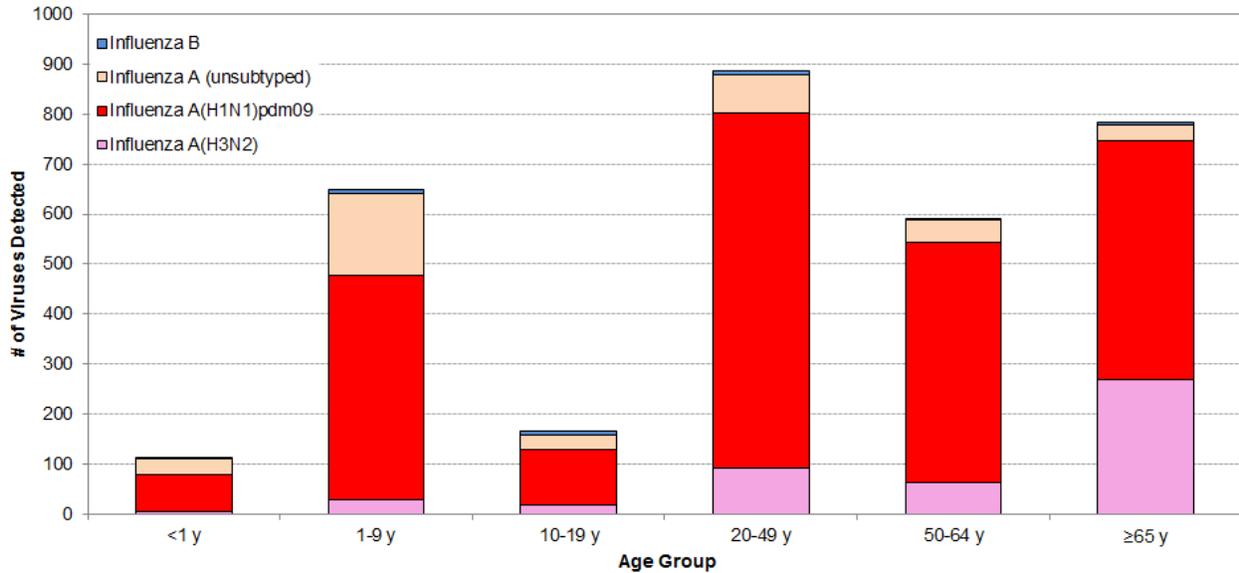
*Note: Rates are subject to change with subsequent data reconciliation. Findings support trend analysis but data do not include all testing sites in British Columbia. Source: Summary provided by the BCCDC Public Health Laboratory.

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 March 6, 2019.

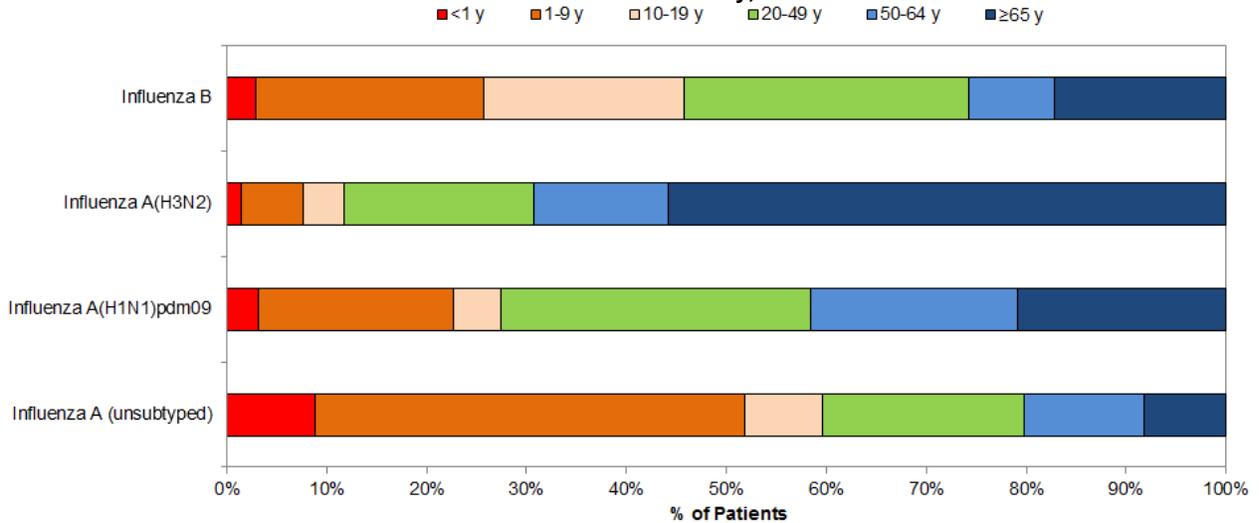
Figure 7: Cumulative number (since week 40) of influenza detections by type, subtype, and age group, BCCDC Public Health Laboratory, 2018-19*



*Results are subject to change as more data become available.

Source: BCCDC Public Health Laboratory (PHDRW); Data are current to March 6, 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*



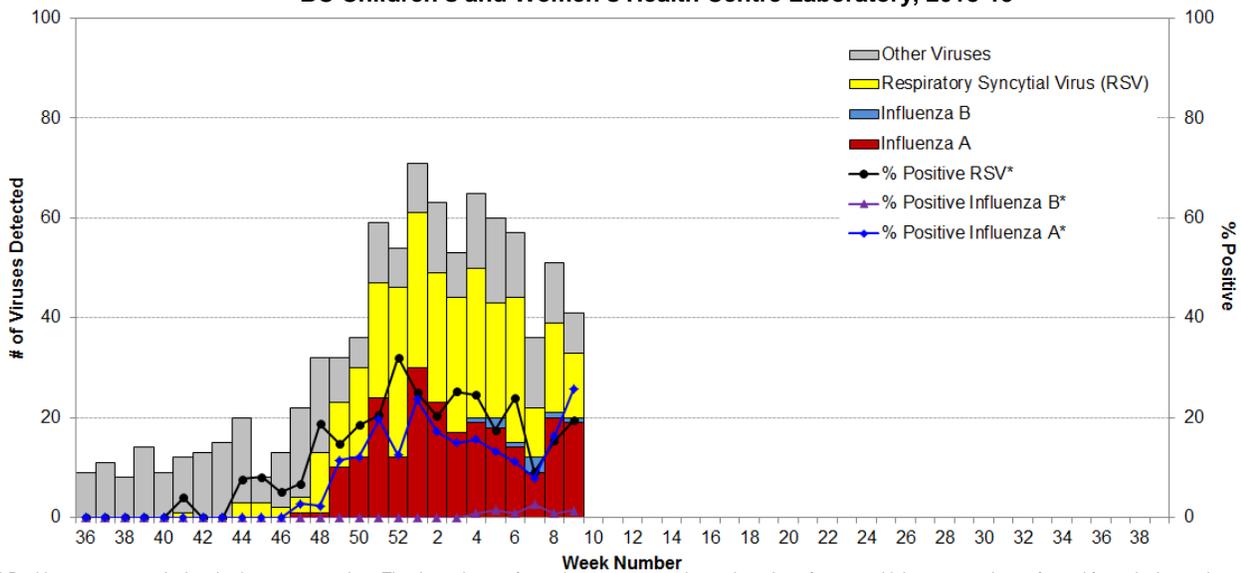
*Results are subject to change as more data become available.

Source: BCCDC Public Health Laboratory (PHDRW); Data are current to March 6, 2019; figure includes cumulative influenza detections for specimens collected since week 40.

BC Children’s and Women’s Health Centre Laboratory

In week 9, 74 tests for influenza and 67 tests for respiratory syncytial virus (RSV) were conducted at the BC Children’s and Women’s Health Centre laboratory. Of these, 19 (26%) were positive for influenza A (not subtyped), 1 (1%) was positive for influenza B, and 13 (19%) were positive for RSV. Influenza A and RSV positivity have both increased since week 8, influenza A more markedly so (26% in week 9 versus 16% in week 8) compared to RSV (19% in week 9 versus 15% in week 8), both warranting ongoing monitoring. Influenza B positivity remains at low levels, between 1 and 3% since week 4 (**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



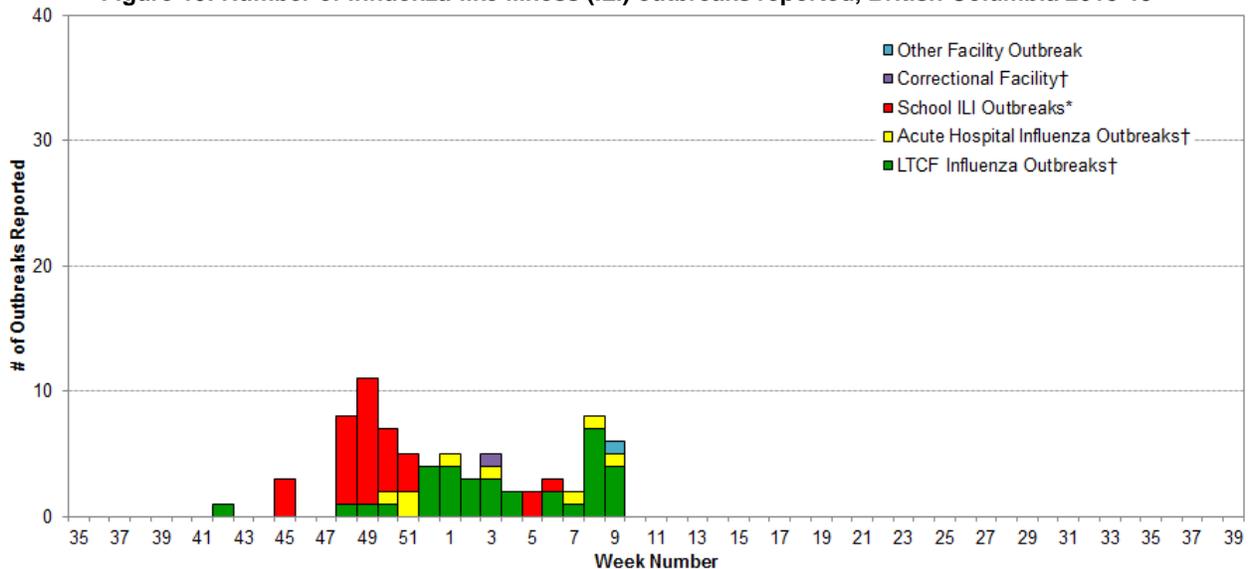
* Positive rates were calculated using aggregate data. The denominators for each rate represent the total number of tests; multiple tests may be performed for a single specimen and/or patient.

Influenza-like Illness (ILI) Outbreaks

Four laboratory-confirmed long-term care facility (LTCF) outbreaks, one acute care facility outbreak, and one mental health facility outbreak of influenza A (2 A(H3N2), 2 A(H1N1)pdm09, and 2 subtype unknown) were reported in week 9. Since week 40, a total of 34 LTCF outbreaks (11 A(H3N2), 17 A(H1N1)pdm09, and 6 subtype unknown), 8 acute care facility outbreaks, 31 school outbreaks, 1 correctional facility outbreak, and 1 mental health facility outbreak have been reported (Figures 10 and 11).

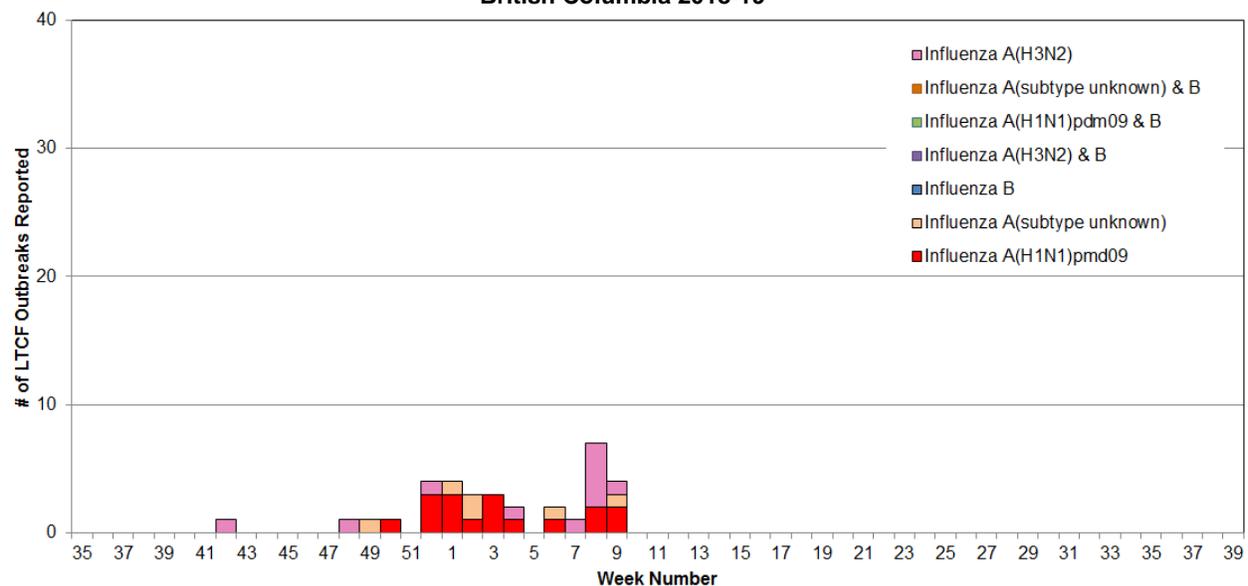
The cumulative tally of LTCF influenza outbreaks to date this A(H1N1)pdm09-dominant season has been far below that of prior A(H3N2)-dominant seasons in 2017-18 and 2016-17 (34, 148, and 180 outbreaks, respectively). However, the numbers reported in weeks 8 and 9 represent a nearly 50% increase over the cumulative tally since the beginning of the season. This is consistent with other surveillance indicators, suggesting a potential increase in A(H3N2) contribution in recent weeks.

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 8, February 17 to February 23, 2019)

Influenza activity in Canada remained stable, or increased slightly, in week 8 compared to week 7. While most western regions have past peak activity, influenza continues to circulate at higher levels in eastern regions. In week 8, the proportion of laboratory tests that were positive for influenza remained at 17.9%. To date, influenza A is the most common influenza virus detected in Canada (99%); the vast majority of these viruses are A(H1N1)pdm09 (89% of subtyped influenza A viruses). There is currently very little influenza B circulation compared to previous seasons. The majority (85%) of lab-confirmed A(H1N1)pdm09 detections have been reported among individuals under the age of 65. Conversely, the majority (61%) 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 March 7, 2019, the National Microbiology Laboratory (NML) has characterized 1495 influenza viruses [174 A(H3N2), 1289 A(H1N1)pdm09 and 32 B (19 Yamagata lineage and 13 Victoria lineage)] received from Canadian laboratories.

Influenza A(H3N2): 65 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, 22 viruses showed reduced titer with ferret antisera raised against egg-propagated A/Singapore/INFIMH-16-0019/2016. 44 influenza A (H3N2) viruses characterized belonged to genetic group 3C.2a1, 16 belonged to genetic group 3C.2a, and 14 belonged to genetic group 3C.3a. Sequencing is pending for the remaining isolate.

Influenza A(H1N1)pdm09: 1253 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, 36 viruses showed reduced titer with ferret antisera raised against cell culture-propagated A/Michigan/45/2015.

Influenza B: 19 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. Nine influenza B viruses characterized were antigenically similar to B/Colorado/06/2017. Four 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 March 7, 2019, the NML received influenza viruses from Canadian laboratories for drug susceptibility testing.

Amantadine: Of the 365 influenza A viruses [55 A(H3N2), 310 A(H1N1)pdm09] tested against amantadine, all were resistant.

Oseltamivir: Of the 891 influenza viruses [81 A(H3N2), 783 A(H1N1)pdm09, and 27 B] tested against oseltamivir, 888 were sensitive, and 3 A(H1N1)pdm09 viruses with an H275Y mutation were resistant.

Zanamivir: Of the 890 influenza viruses [81 A(H3N2), 782 A(H1N1)pdm09, and 27 B] tested against zanamivir, all were sensitive.

International

USA (week 8, February 17 to February 23, 2019)

In week 8, influenza activity remained elevated in the United States (US), with influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continuing to co-circulate. Influenza A(H1N1)pdm09 viruses have predominated in most areas of the country this season; however, influenza A(H3N2) viruses have prevailed in the southeastern US and accounted for the majority (54%) of subtyped influenza A viruses detected nationally during week 8. The majority of influenza viruses characterized antigenically are considered similar to the cell-grown reference viruses 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 8, the proportion of deaths attributed to pneumonia and influenza was below the system-specific epidemic threshold. Fifteen influenza-associated pediatric deaths were reported in week 8. The proportion of outpatient visits for ILI has remained at 5% since week 7, and is 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 (March 4, 2019, based on data up to February 17, 2019)

In the temperate zones of the northern hemisphere, influenza activity has continued to increase overall. Activity increased in the United States and in some countries of Western Asia (peaking in others), and remained elevated in Europe, North Africa, and Southern Asia. Meanwhile, influenza activity appears to have decreased in East Asia, and was generally low in the Caribbean, Central America and tropical countries of South America. In the temperate zones of the southern hemisphere, influenza activity remained at inter-seasonal levels, with the exception of some parts of Australia where influenza circulation remained above inter-seasonal levels. Worldwide, influenza A has accounted for the majority of detections. Influenza A(H1N1)pdm09 has predominated in East Asia and in North America, while both A viruses have circulated in Europe, North Africa, and Western Asia.

From February 4 2019 to February 17 2019, the WHO GISRS laboratories tested more than 220,347 specimens. Of these, 74,302 were positive for influenza viruses, of which 73,225 (98.6%) were typed as influenza A and 1077 (1.4%) as influenza B. Of the subtyped influenza A viruses, 19,600 (65.2%) were influenza A(H1N1)pdm09 and 10,447 (34.8%) were influenza A(H3N2). Of the characterized B viruses, 82 (26.2%) belonged to the B-Yamagata lineage and 231 (73.8%) to the B-Victoria lineage.

The full report is available at: https://www.who.int/influenza/surveillance_monitoring/updates/en/

2018/19 Vaccine Effectiveness Estimates

Canadian Mid-Season 2018-19 Vaccine Effectiveness Estimates

On January 24th, 2019, the Canadian Sentinel Practitioner Surveillance Network (SPSN) published the first mid-season estimates of influenza vaccine effectiveness (VE) for the 2018-19 season in the northern hemisphere. The Canadian SPSN reported substantial VE of 72% (95% confidence interval (CI): 60-81%) against medically-attended outpatient A(H1N1)pdm09 illness. Substantial vaccine protection was observed across all age groups, notably young children, who also appeared to be disproportionately affected by this year's A(H1N1)pdm09-dominant epidemic. The Canadian interim estimate for 2018-19 is comparable to preliminary estimates of VE against A(H1N1)pdm09 using the same vaccine component reported from Australia (78%; 95%CI: 51-91%) for their 2018 season. It is substantially higher than reported for Canada during last year's A(H3N2)-dominant epidemic (for which VE against A(H3N2) viruses was less than 20%). Consistent with global trends, sequencing analysis of viruses collected by the Canadian SPSN showed considerable genetic diversity among circulating clade 6B.1 viruses of A(H1N1)pdm09; however, a dominant drift (immunologic escape) variant was not identified.

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.2019.24.4.1900055>

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; however, wide confidence intervals require cautious interpretation.

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(H3N2) virus to be announced on 21 March 2019; ‡
- 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

‡ In light of recent changes in the proportions of genetically and antigenically diverse A(H3N2) viruses, the recommendation for the A(H3N2) component has been postponed.

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	MSP: BC Medical Services Plan
AI: Avian influenza	NHA: Northern Health Authority
FHA: Fraser Health Authority	NML: National Microbiological Laboratory
HBoV: Human bocavirus	A(H1N1)pdm09: Pandemic H1N1 influenza (2009)
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
LTCF: Long-Term Care Facility	

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

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	<u>Reporting Information</u>	
	Person Reporting:	Title:
	Contact Phone:	Email:
	Health Authority:	HSDA:
	Full Facility Name:	
	Is this report:	First Notification (<i>complete section B below; section D if available</i>) Outbreak Over (<i>complete section C and section D below</i>)
	Report Date (dd/mm/yyyy):	

B	<u>First Notification</u>	
	Type of facility*:	Long Term Care Facilities, Nursing Homes Acute Care Facility Other Setting:
	<i>If ward or wing, please specify name/number:</i>	
	Date of onset of first case of ILI (dd/mm/yyyy):	
	Date outbreak declared (dd/mm/yyyy):	
	<small>*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).</small>	

C	<u>Outbreak Declared Over</u>										
	Date of onset for last case of ILI (dd/mm/yyyy):										
	Date outbreak declared over (dd/mm/yyyy):										
	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="width: 50%;">Numbers to date</th> <th style="width: 50%;">Residents</th> </tr> </thead> <tbody> <tr> <td>Total</td> <td></td> </tr> <tr> <td>With ILI</td> <td></td> </tr> <tr> <td>Hospitalized*</td> <td></td> </tr> <tr> <td>Died*</td> <td></td> </tr> </tbody> </table>		Numbers to date	Residents	Total		With ILI		Hospitalized*		Died*
Numbers to date	Residents										
Total											
With ILI											
Hospitalized*											
Died*											
<small>*suspected to be linked to case of ILI</small>											

D	<u>Laboratory Information</u>			
	Specimen(s) submitted?	<input type="checkbox"/> Yes (location: _____)	No	<input type="checkbox"/> Don't know
	If yes, organism identified?	Yes	No	Don't know
	Please specify organism/subtype:	Influenza A (subtype: _____)	Influenza B	
		Parainfluenza Enterorhinovirus Coronavirus RSV HMPV Adenovirus Other:		