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

British Columbia Influenza Surveillance Bulletin

Influenza Season 2018-19, Number 17, Week 12
March 17 to March 23, 2019

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Late season surge in influenza A(H3N2) continues

The unusual late-season wave of influenza A(H3N2) continues in BC, whereas influenza B remains at unusually low levels for this time of year.

Among influenza viruses typed since week 40, virtually all have been influenza A, with about 70% subtyped as A(H1N1)pdm09 overall since season start. More recently, however, A(H3N2) viruses have comprised a greater share of influenza A detections, accounting for about 70% of subtyped influenza A viruses in week 12.

For this second influenza A wave (due to A(H3N2)), the proportion of respiratory specimens testing positive for influenza A in week 12 (32%) is comparable to that during the peak of the first wave (due to A(H1N1)pdm09) in week 51 (34%). However, it is still too early to determine whether this second influenza A wave has peaked. Ongoing monitoring is needed.

In week 12, ten laboratory-confirmed long-term care facility (LTCF) outbreaks of influenza A (all with subtype still pending) were reported. The cumulative tally of LTCF influenza outbreaks to date this A(H1N1)pdm09-dominant season remains below that of prior A(H3N2)-dominant seasons in 2017-18 and 2016-17 (66, 169, and 192 outbreaks, respectively). However, the number of LTCF outbreaks reported in weeks 8 through 12 represent more than a 60% increase over the cumulative tally of LTCF outbreaks reported since the beginning of the season (week 40 to week 7), consistent with the increase in influenza A(H3N2) contribution in recent weeks.

Prepared by BCCDC Influenza & Emerging Respiratory Pathogens Team

Report Disseminated: March 28, 2019

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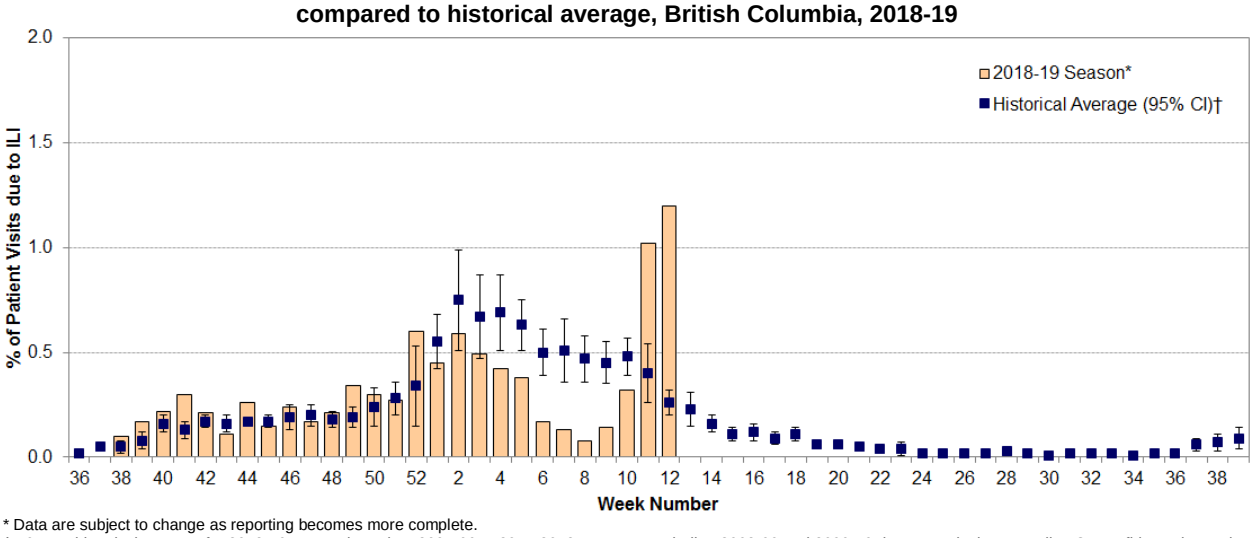
British Columbia

Sentinel Physicians

Following a peak in week 52, and a decline thereafter, the rate of influenza-like illness (ILI) among patients presenting to sentinel sites reported in week 12 increased considerably (1.2%), greatly exceeding historical peak levels; however only ten (38%) sentinel sites reported data for week 12 and 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

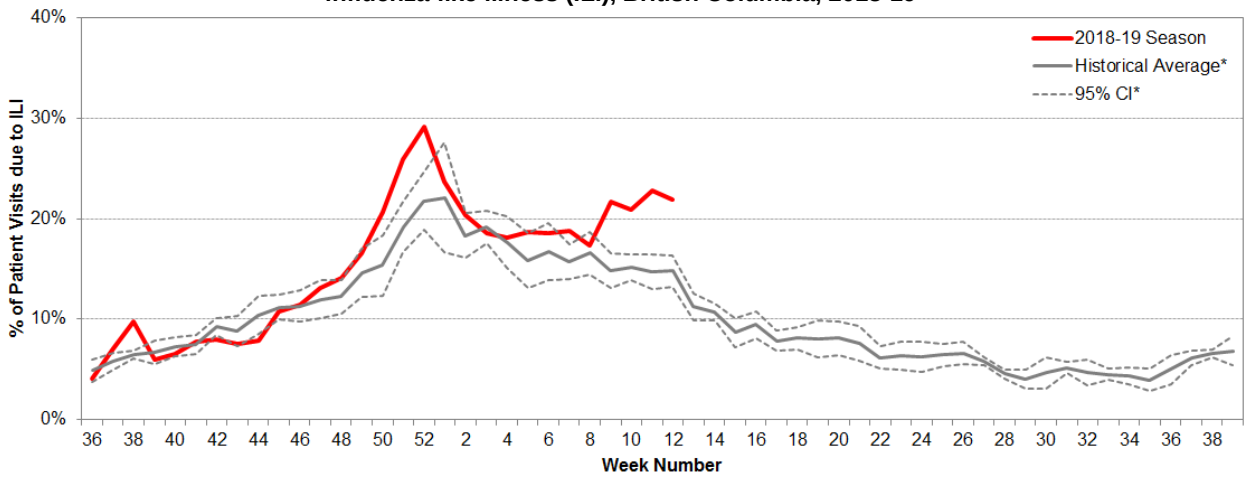


* Data are subject to change as reporting becomes more complete.
† 10-year historical average for 2018-19 season based on 2005-06 to 2017-2018 seasons, excluding 2008-09 and 2009-10 due to atypical seasonality; CI=confidence interval.

BC Children's Hospital Emergency Room

Following a peak in week 52, the proportion of visits to BC Children's Hospital Emergency Room (ER) attributed to ILI has shown a secondary increase beginning from week 9, with levels well above the historical average for this time of year maintained through week 11 (23%) and week 12 (22%) (**Figure 2**).

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

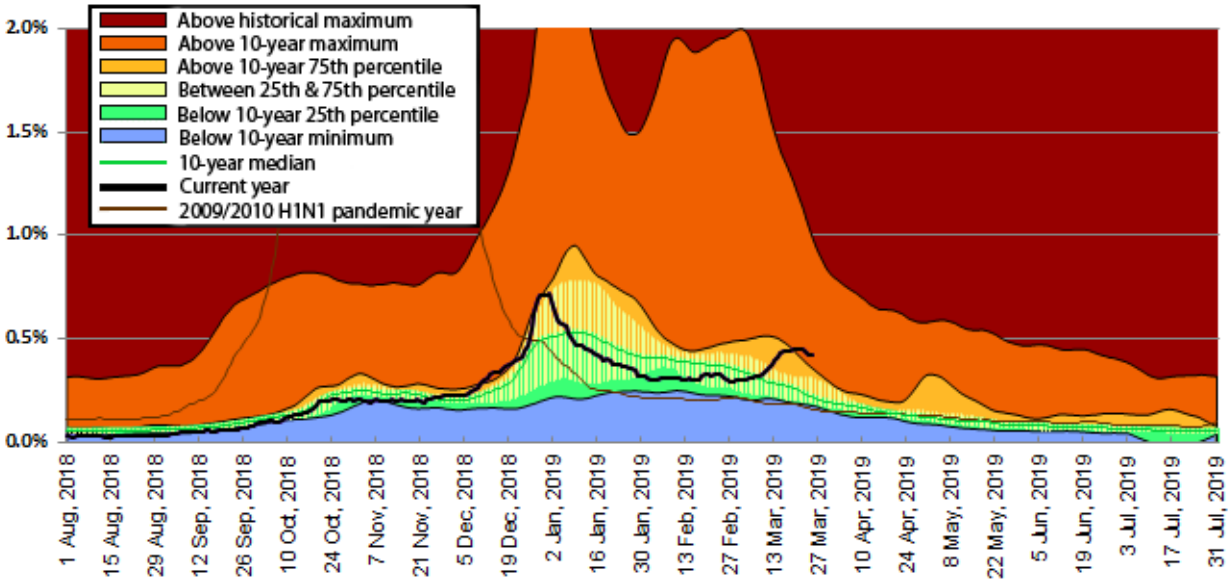


Source: BCCH Admitting, Discharge, Transfer database (ADT). Data includes records with a triage chief complaint of "flu" or "influenza" or "fever/cough."
* 5-year historical average for 2018-19 season based on 2012-13 to 2017-18 seasons; CI=confidence interval.

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 an overall provincial peak around week 52, and a relative plateau between weeks 5 and 10, this indicator increased in week 11 and has remained elevated through week 12, now trending above the 10-year maximum (**Figure 3**). Some regional variation is apparent, with the Vancouver Coastal Health Authority showing a notable increase (**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



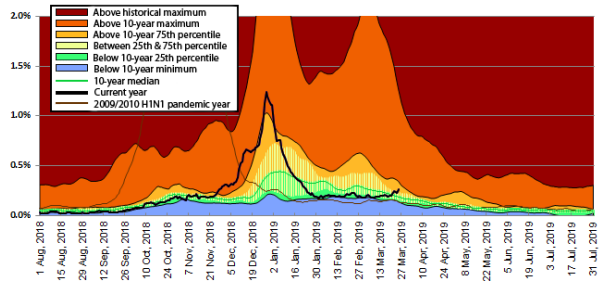
* Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).

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 March 25, 2019.

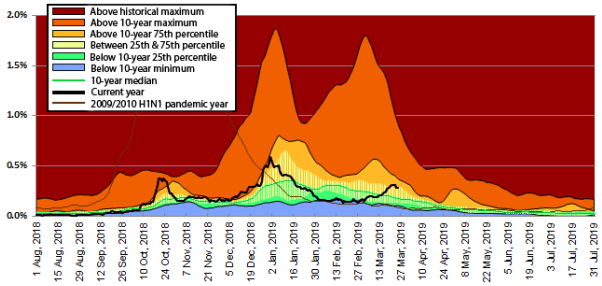
Data provided by Population Health Surveillance and Epidemiology, BC Ministry of Health Services.

Figure 4

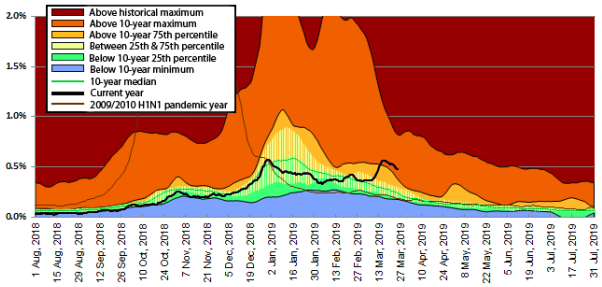
Interior



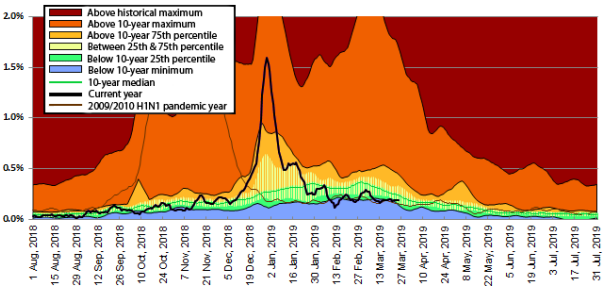
Vancouver Island



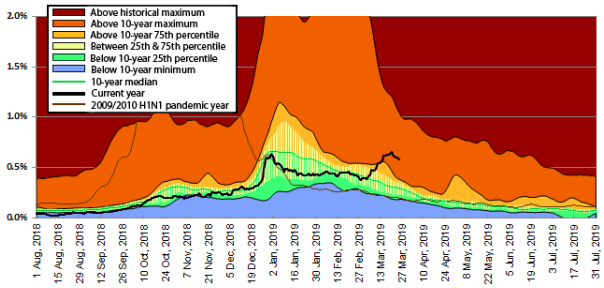
Fraser



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.

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, of 13,559 known specimens tested for influenza across BC, 3322 (25%) tested positive for influenza A and just 77 (0.6%) tested positive for influenza B since week 40 (starting October 1, 2018). Virtually all (98%) influenza detections have therefore been influenza A so far this season.

In week 12, 309/951 (32%) specimens tested positive for influenza A, comparable to week 11 (273/804; 34%) and consistent with an unusual late-season wave of influenza A. In week 12, influenza B positivity remained stable at 2% (18/951), 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, 2631/3634 (72%) were A(H1N1)pdm09, comparable to week 11 (2592/3503; 74%) and consistent with increasing A(H3N2) contribution in recent weeks. Of the 353 influenza viruses typed in week 12, 335 (95%) were influenza A and 18 (5%) were influenza B. In week 12, among the influenza A viruses, 92 (27%) were identified as A(H3N2), 39 (12%) as A(H1N1)pdm09, and for 204 (61%) subtype was still pending. Among subtyped influenza A viruses in week 12, therefore, the majority (92/131; 70%) were A(H3N2), also comparable to week 11 (165/227; 73%) (**Figure 6**). Note that subtype remains pending for over half (61%) of influenza A specimens in week 12; therefore, these proportions may change as subtyping becomes more complete. Nevertheless, these findings continue the trend of greater A(H3N2) contribution relative to A(H1N1)pdm09 observed in recent weeks.

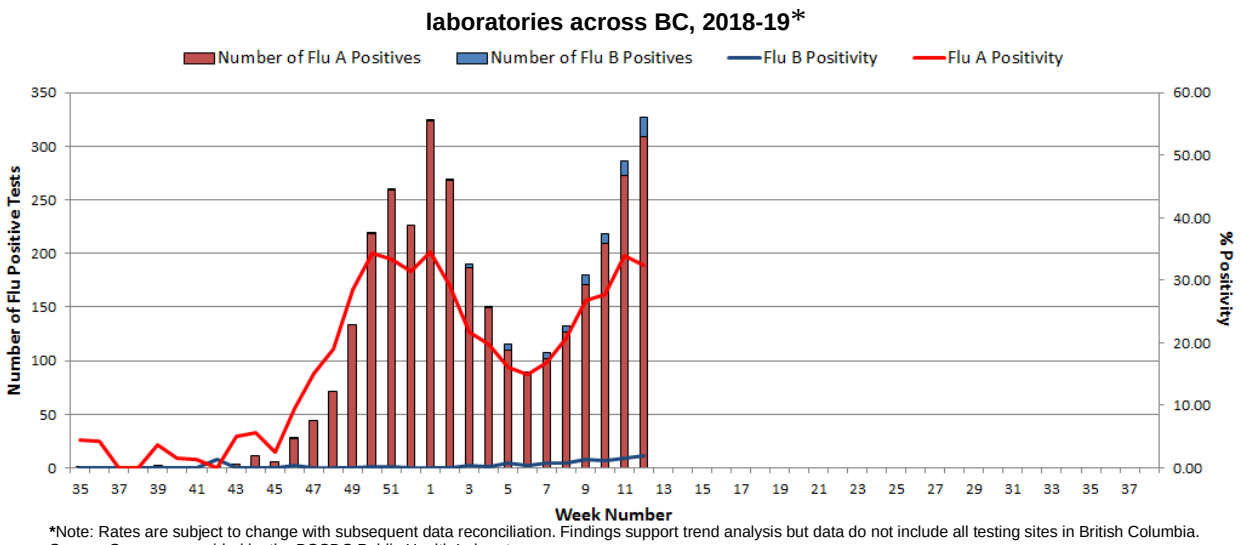
Of note, the proportion of respiratory specimens testing influenza A positive in week 12 (32%) of this second back-to-back influenza A wave (predominantly A(H3N2) subtype) remained comparable to that at the peak of the earlier influenza A wave (predominantly A(H1N1)pdm09 subtype) in week 51 (34%). It is still too early to determine whether this second influenza A wave has peaked. Ongoing monitoring is needed.

Since week 40, approximately half (52%) of A(H1N1)pdm09 detections were among adults 20-64 years of age (**Figure 8**). Twenty-two 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 (55%) 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 12, respiratory syncytial viruses (n=38) were the most commonly detected (excluding influenza) (**Figure 6**).

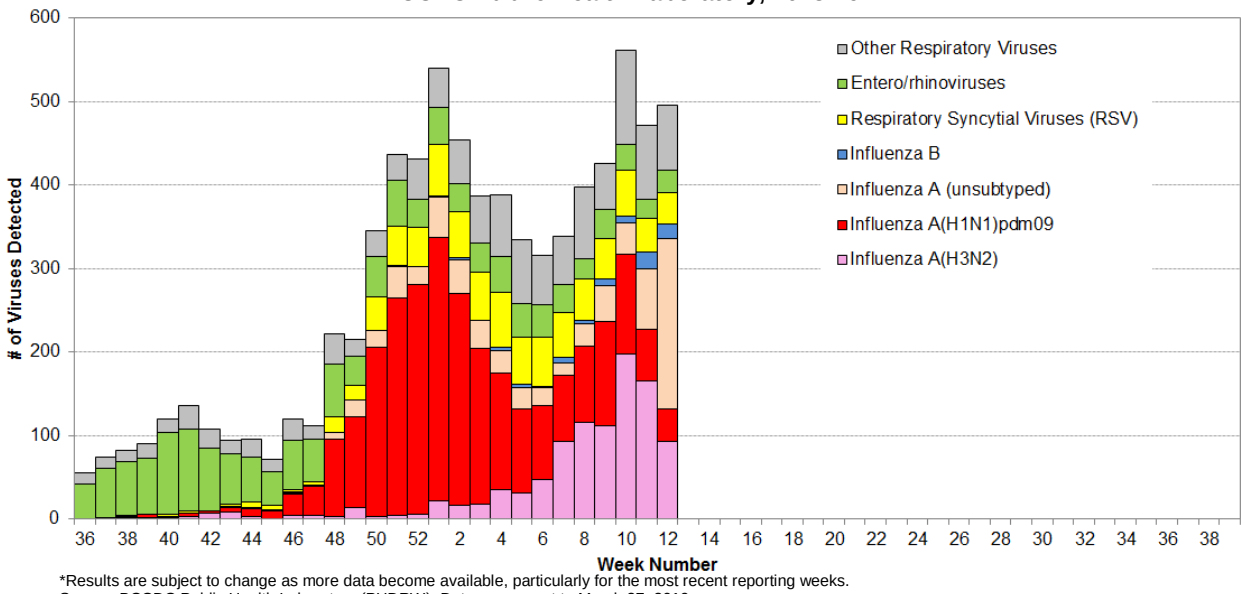
1 Government of British Columbia, BC Stats. Population Estimates 2017. URL: https://www.bcstats.gov.bc.ca/apps/PopulationEstimates.aspx. Date accessed: December 13, 2018.

Figure 5: Flu positivity derived from influenza specimens submitted to participating



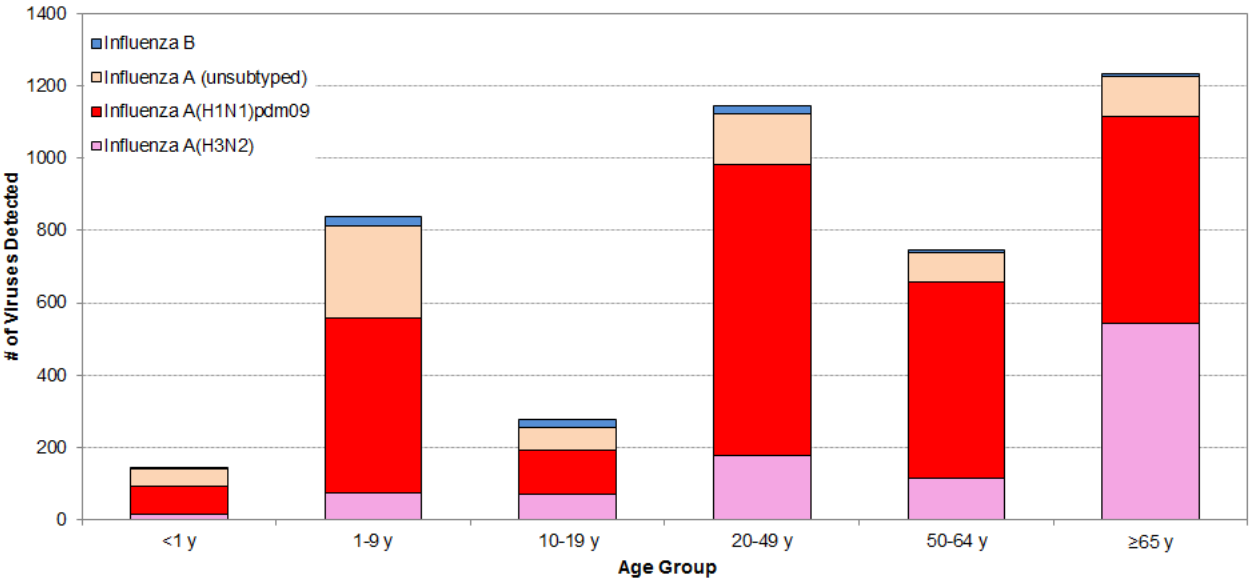
*Note: Rates are subject to change with subsequent data reconciliation. Findings support trend analysis but data do not include all testing sites in British Columbia.
Source: Summary provided by the BCCDC Public Health Laboratory.

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



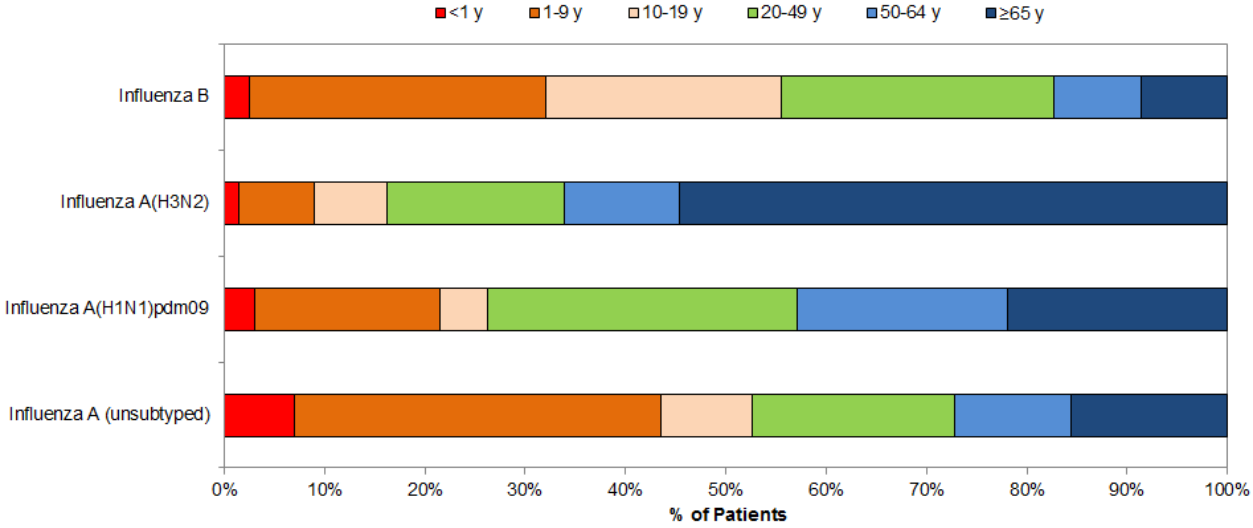
*Results are subject to change as more data become available, particularly for the most recent reporting weeks.
Source: BCCDC Public Health Laboratory (PHDRW); Data are current to March 27, 2019.

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 27, 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*

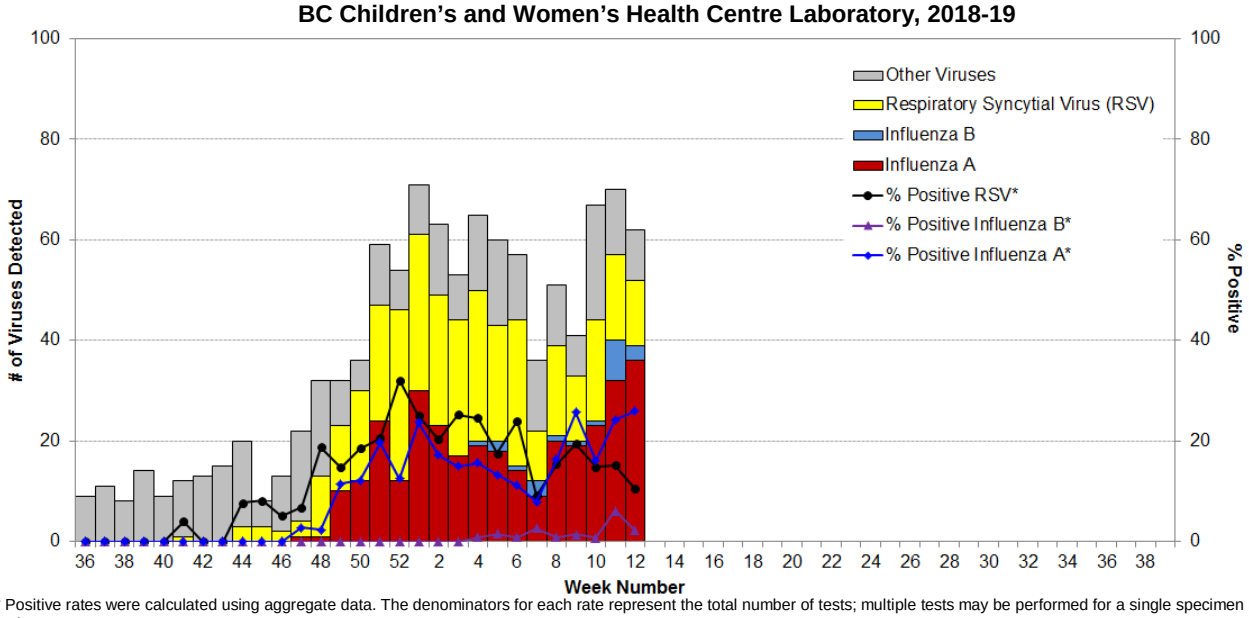


*Results are subject to change as more data become available.
Source: BCCDC Public Health Laboratory (PHDRW); Data are current to March 27, 2019; figure includes cumulative influenza detections for specimens collected since week 40.

BC Children's and Women's Health Centre Laboratory

In week 12, 139 tests for influenza and 124 tests for respiratory syncytial virus (RSV) were conducted at the BC Children's and Women's Health Centre laboratory. Of these, 36 (26%) were positive for influenza A (not subtyped), 3 (2%) were positive for influenza B, and 13 (11%) were positive for RSV. Influenza A positivity remained comparably elevated between weeks 11 and 12 (24% versus 26%, respectively) while influenza B and RSV positivity have both decreased between weeks 11 and 12 (influenza B: 6% versus 2%; RSV: 15% versus 11%, respectively) (**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



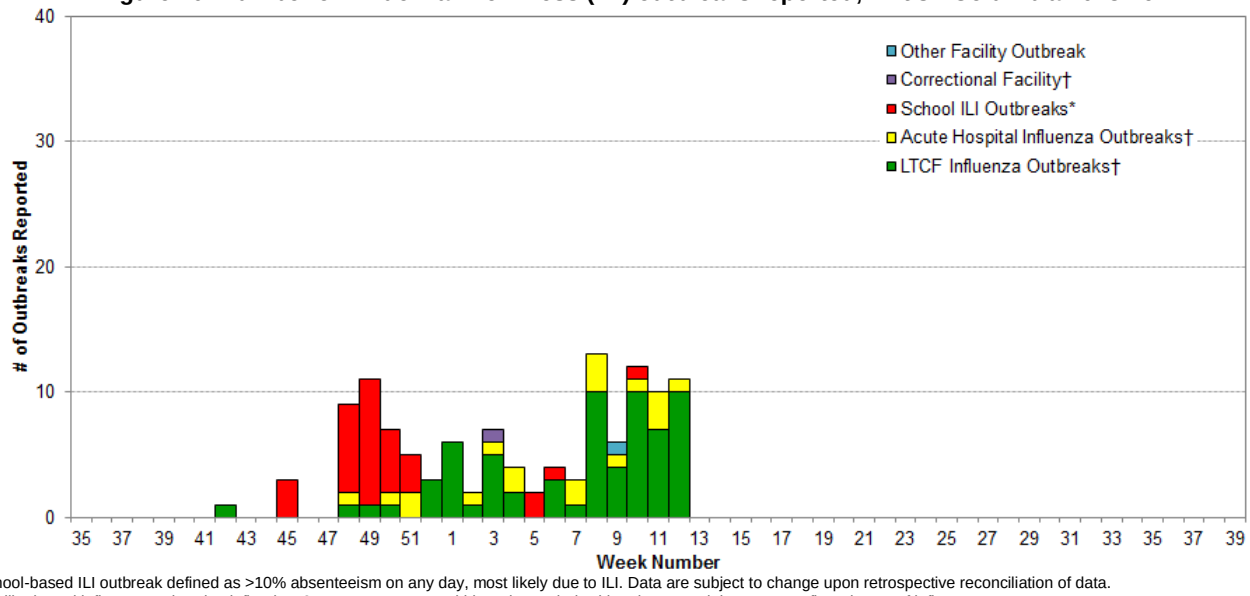
* Positive rates were calculated using aggregate data. The denominators for each rate represent the total number of tests; multiple tests may be performed for a single specimen and/or patient.

Influenza-like Illness (ILI) Outbreaks

One laboratory-confirmed acute care outbreak (influenza A subtype unknown) and 10 laboratory-confirmed long-term care facility (LTCF) outbreaks of influenza A (all subtype unknown) were reported in week 12. Since week 40, a total of 66 LTCF outbreaks (21 A(H3N2), 18 A(H1N1)pdm09, 26 subtype unknown, and 1 B), 19 acute care facility outbreaks, 32 school outbreaks, 1 correctional facility outbreak, and 1 mental health facility outbreak have been reported (**Figures 10 and 11**).

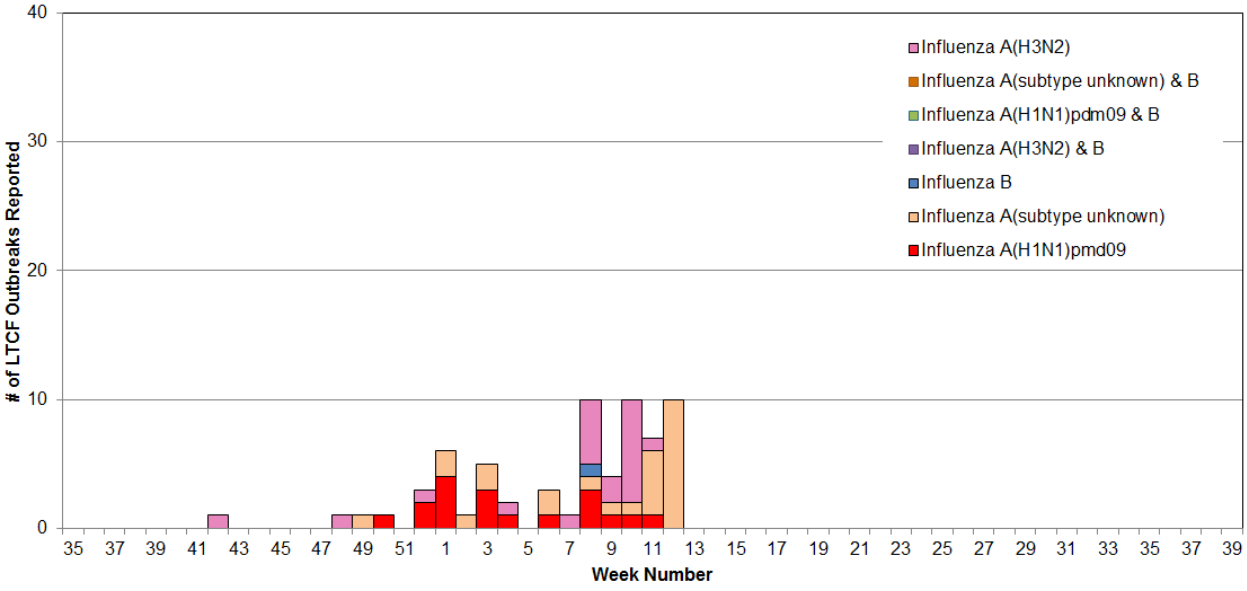
The cumulative tally of LTCF influenza outbreaks to date this A(H1N1)pdm09-dominant season has been far below that of prior A(H3N2)-dominant seasons in 2017-18 and 2016-17 (66, 169, and 192 outbreaks, respectively). However, the number of LTCF outbreaks reported between weeks 8 and 12 represent more than a 60% increase over the cumulative tally of LTCF outbreaks reported since the beginning of the season (week 40 to week 7), consistent with increased 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 11, March 10 to March 16, 2019)

Influenza activity in Canada continues to be reported. While most western regions have past peak activity, influenza continues to circulate at higher levels in eastern regions. In week 11, the proportion of laboratory tests that were positive for influenza remained stable in comparison to week 10 at 21.4%. To date, influenza A is the most common influenza virus detected in Canada (98%); the vast majority of these viruses are A(H1N1)pdm09 (83% of subtyped influenza A viruses). However, detections of influenza A(H3N2) have been steadily increasing since mid-January and accounted for the majority (64%) of subtyped influenza A detections in week 11. There is currently very little influenza B circulation compared to previous seasons. The majority (84%) of lab-confirmed A(H1N1)pdm09 detections have been reported among individuals under the age of 65. Conversely, the majority (59%) 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 28, 2019, the National Microbiology Laboratory (NML) has characterized 1700 influenza viruses [233 A(H3N2), 1415 A(H1N1)pdm09 and 52 B (22 Yamagata lineage and 30 Victoria lineage)] received from Canadian laboratories.

Influenza A(H3N2): 82 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, 27 viruses showed reduced titer with ferret antisera raised against egg-propagated A/Singapore/INFIMH-16-0019/2016. 63 influenza A (H3N2) viruses characterized belonged to genetic group 3C.2a1, 17 belonged to genetic group 3C.2a, and 29 belonged to genetic group 3C.3a.

Influenza A(H1N1)pdm09: 1375 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, 40 viruses showed reduced titer with ferret antisera raised against cell culture-propagated A/Michigan/45/2015.

Influenza B: 22 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. 18 influenza B viruses characterized were antigenically similar to B/Colorado/06/2017. 12 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 28, 2019, the NML received influenza viruses from Canadian laboratories for drug susceptibility testing.

Amantadine: Of the 388 influenza A viruses [64 A(H3N2), 324 A(H1N1)pdm09] tested against amantadine, all were resistant.

Oseltamivir: Of the 1017 influenza viruses [103 A(H3N2), 879 A(H1N1)pdm09, and 35 B] tested against oseltamivir, 1013 were sensitive, and 4 A(H1N1)pdm09 viruses with an H275Y mutation were resistant.

Zanamivir: Of the 1016 influenza viruses [103 A(H3N2), 878 A(H1N1)pdm09, and 35 B] tested against zanamivir, all were sensitive.

International

USA (week 11, March 10 to March 16, 2019)

In week 11, 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(H3N2) viruses have been reported more frequently than A(H1N1)pdm09 viruses in week 11. 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 11, the proportion of deaths attributed to pneumonia and influenza fell below the system-specific epidemic threshold. Eight influenza-associated pediatric deaths were reported in week 11. The proportion of outpatient visits for ILI has remained stable since week 10 at 4.4%, 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

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/

In other news, on 11th March 2019, the WHO released a Global Influenza Strategy for 2019-2030 aimed at protecting people in all countries from the threat of influenza. The strategy aims to reduce the burden of seasonal influenza, minimize the risk and control the spread of zoonotic influenza, and prepare for (and mitigate the impact of) the next influenza pandemic. The new strategy has two overarching goals:

1. To develop better tools to prevent, detect, control and treat influenza, such as more effective vaccines and antiviral treatments, with the goal of making these accessible in all countries; and

2. To strengthen country capacities for influenza surveillance, prevention and control, and preparedness. To achieve this, it calls for every country to develop a tailored influenza programme that contributes to national and global preparedness, response, and health security.

The *Global Influenza Strategy 2019-2030* is available at: https://apps.who.int/iris/bitstream/handle/10665/311184/9789241515320-eng.pdf

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/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: