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

British Columbia Influenza Surveillance Bulletin

Influenza Season 2018-19, Number 20, Week 15
April 7 to April 13, 2019

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Declining influenza activity in BC, but detections remain above historical norms for this time of year

Most surveillance indicators suggest that the late-season wave of influenza A(H3N2) is subsiding, although influenza activity remains elevated above historical averages for this time of the year.

Among influenza viruses typed since week 40, virtually all have been influenza A. Influenza A(H1N1)pdm09 viruses predominated from October to mid-February, and have accounted for just over 60% of subtyped A viruses since season start. However, since week 7, A(H3N2) viruses have comprised a greater share of influenza A detections, accounting for 80% of subtyped A viruses in week 15.

Two laboratory-confirmed long-term care facility (LTCF) outbreaks of influenza A(H3N2) were reported in week 15, a decrease from week 14 (n=7) and in comparison to the peak number observed in weeks 10 and 12 (n=11).

Updated vaccine effectiveness (VE) estimates from 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, particularly among working-age adults. These findings reinforce the importance of adjunct protective measures while the A(H3N2) epidemic is ongoing.

Published last week 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 explores the potential reasons for this surveillance signal, can be read here.

Prepared by BCCDC Influenza & Emerging Respiratory Pathogens Team

Report Disseminated: April 18, 2019

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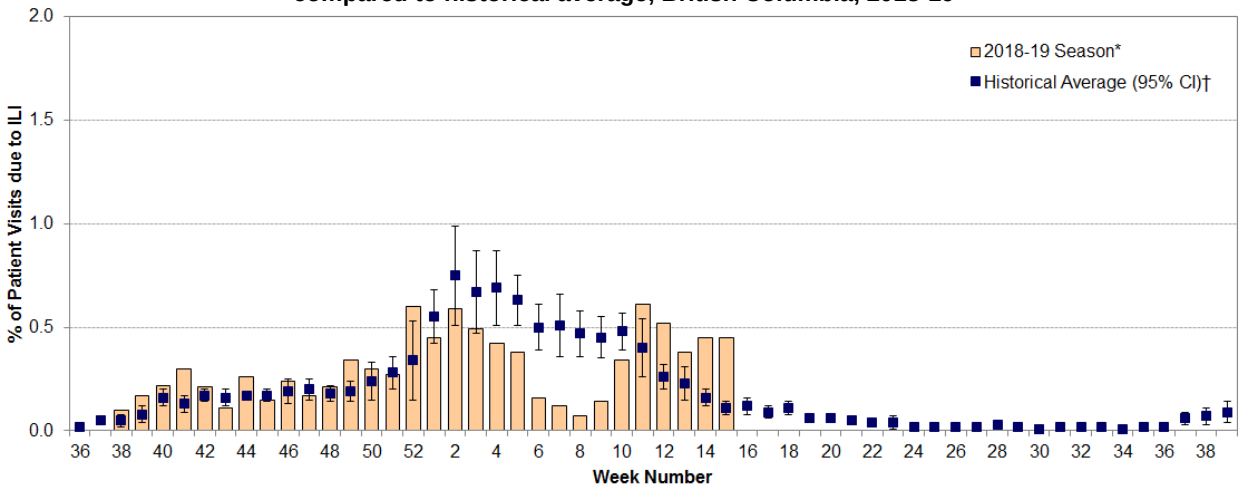
British Columbia

Sentinel Physicians

In week 15, 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 0.5%), consistent with a secondary wave of ILI observed since week 10. Nine (35%) sentinel sites reported data for week 15; 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

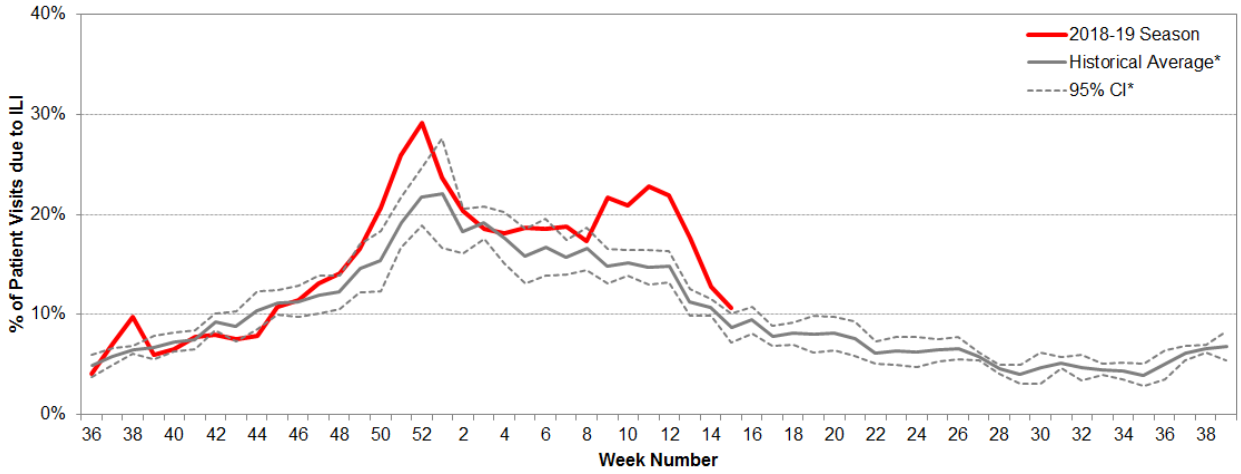


* Data are subject to change as reporting becomes more complete.
† 10-year historical average for 2018-19 season based on 2005-06 to 2017-2018 seasons, excluding 2008-09 and 2009-10 due to atypical seasonality; CI=confidence interval.

BC Children's Hospital Emergency Room

Following a primary peak in week 52 and a secondary peak 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 15 (11%), but still remains above the historical average 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

Due to technical issues, Medical Services Plan data are not available for week 15.

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 (since week 40, starting October 1, 2018), of 15,608 specimens tested for influenza across BC, 3902 (25%) tested positive for influenza A and just 154 (1%) tested positive for influenza B. Virtually all (96%) influenza detections have therefore been influenza A so far this season.

In week 15, 116/617 (19%) specimens tested positive for influenza A, which represents a decrease compared to the percent positivity observed in week 14 (207/742; 28%). Influenza B positivity remained comparable to the prior week (4%; 30/742) at 3% (20/617), maintaining the unusually low levels of influenza B observed this season (**Figure 5**).

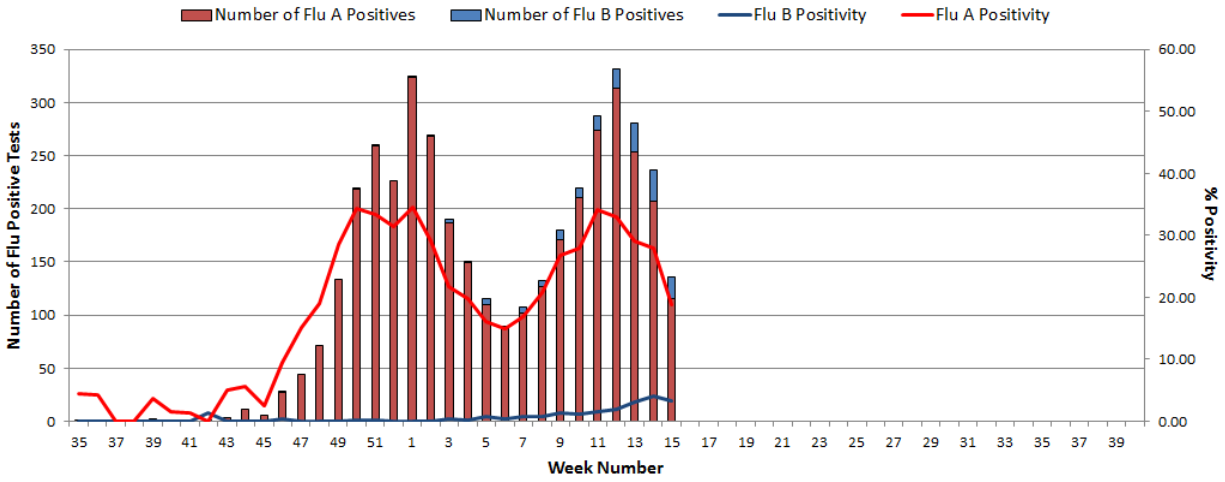
Since week 40, among influenza A viruses successfully subtyped at the BCCDC PHL, 2928/4799 (61%) were A(H1N1)pdm09. Since week 40, 4 influenza A/B co-infections have been detected (2 A(H1N1)pdm09, 1 A(H3N2), and 1 subtype pending). Of the 160 influenza viruses typed in week 15, 150 (94%) were influenza A and 10 (6%) were influenza B. In week 15, among the influenza A viruses, 107 (71%) were identified as A(H3N2), 26 (17%) as A(H1N1)pdm09, and for 17 (11%), subtype was still pending. Among subtyped influenza A viruses in week 15, therefore, the majority (107/133; 80%) 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 (**Figures 7 and 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 15, entero/rhinoviruses (n=26) were the most commonly detected (excluding influenza), making this the first week since week 51 that respiratory syncytial viruses (RSV) were not the most numerous of the other respiratory viruses detected (**Figure 6**).

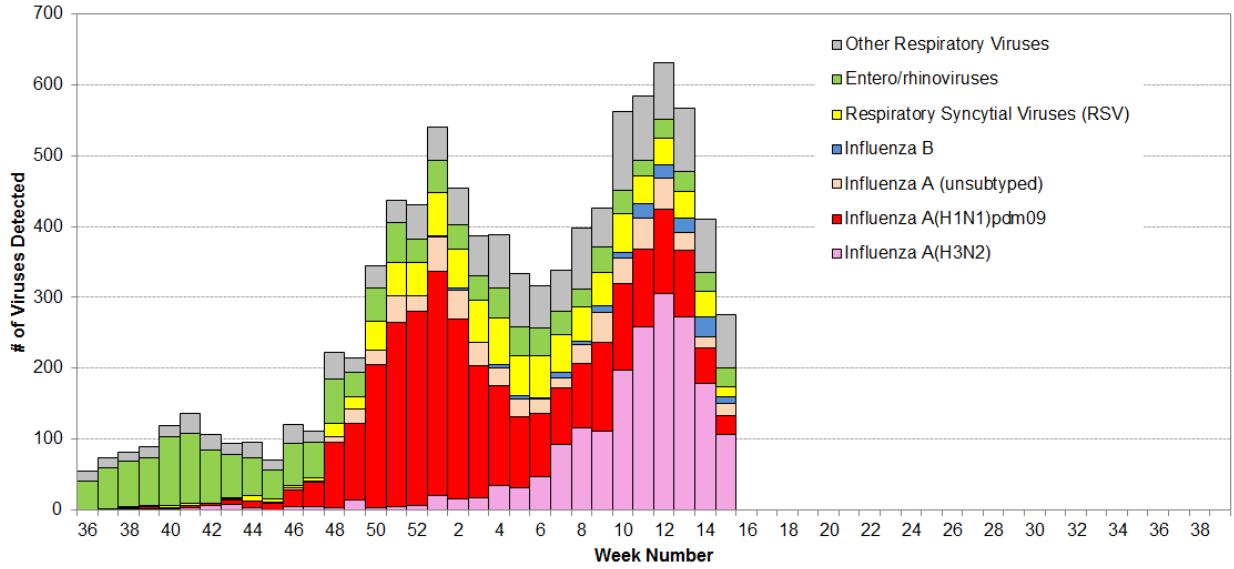
1 Government of British Columbia, BC Stats. Population Estimates 2017. URL: https://www.bcstats.gov.bc.ca/apps/PopulationEstimates.aspx. Date accessed: December 13, 2018.

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



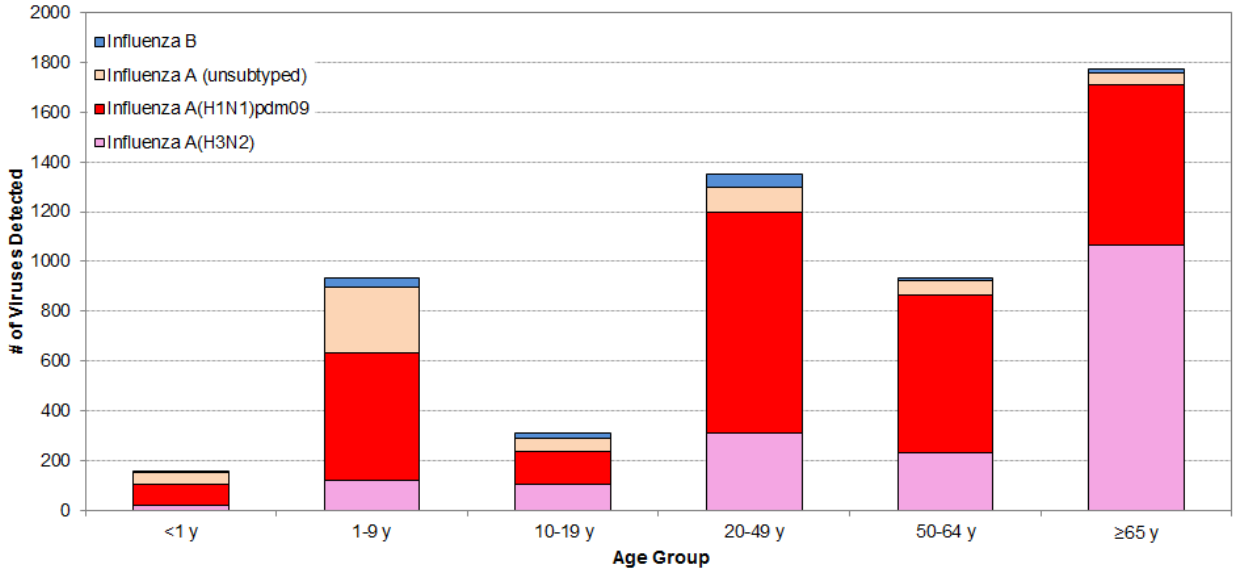
*Note: Rates are subject to change with subsequent data reconciliation. Findings support trend analysis but data do not include all testing sites in British Columbia.
Source: Summary provided by the BCCDC Public Health Laboratory.

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



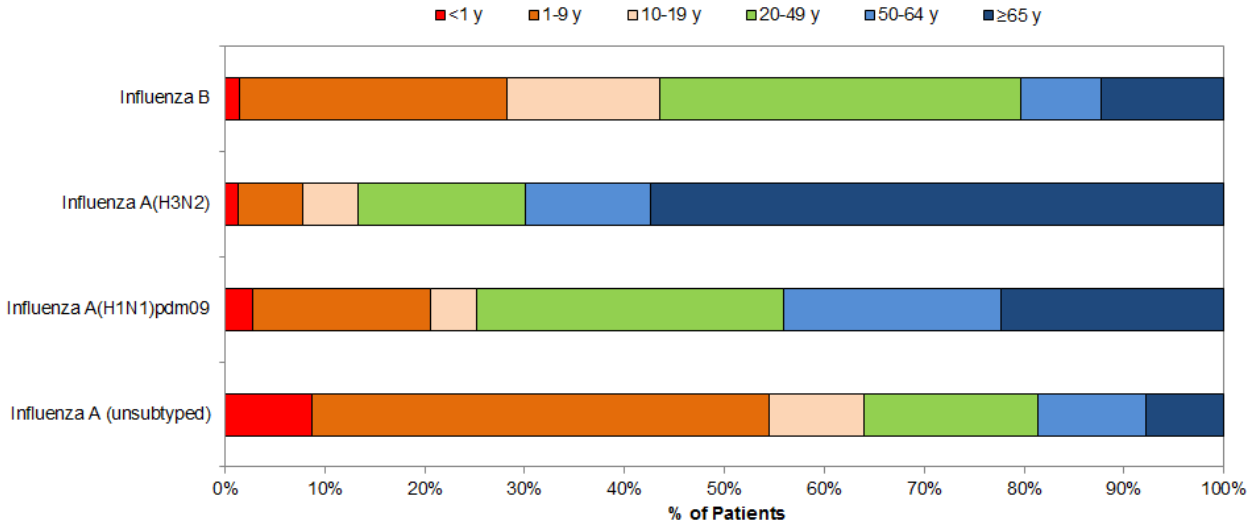
*Results are subject to change as more data become available, particularly for the most recent reporting weeks.
Source: BCCDC Public Health Laboratory (PHDRW); Data are current to April 17, 2019.

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 17, 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*

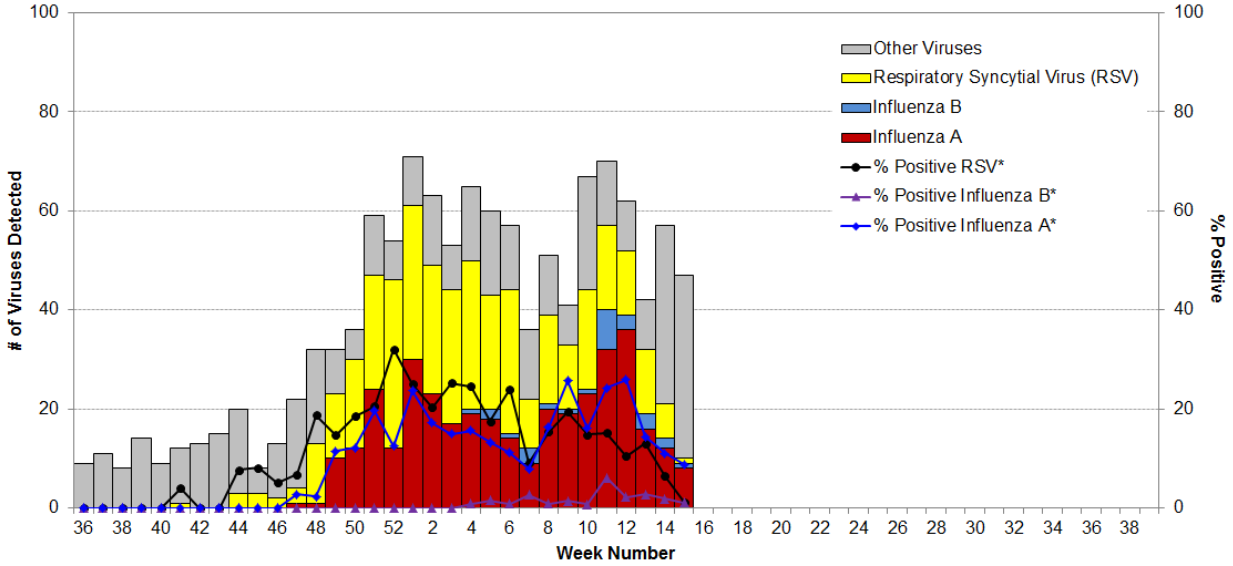


*Results are subject to change as more data become available.
Source: BCCDC Public Health Laboratory (PHDRW); Data are current to April 17, 2019; figure includes cumulative influenza detections for specimens collected since week 40.

BC Children's and Women's Health Centre Laboratory

In week 15, 91 tests for influenza and 87 tests for respiratory syncytial virus (RSV) were conducted at the BC Children's and Women's Health Centre laboratory. Of these, 8 (9%) were positive for influenza A (not subtyped), 1 (1%) was positive for influenza B, and 1 (1%) was positive for RSV. Compared to the prior week, influenza A and RSV test positivity have both decreased in week 15,while influenza B positivity has remained stable (2% in week 14 vs 1% in week 15) (**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



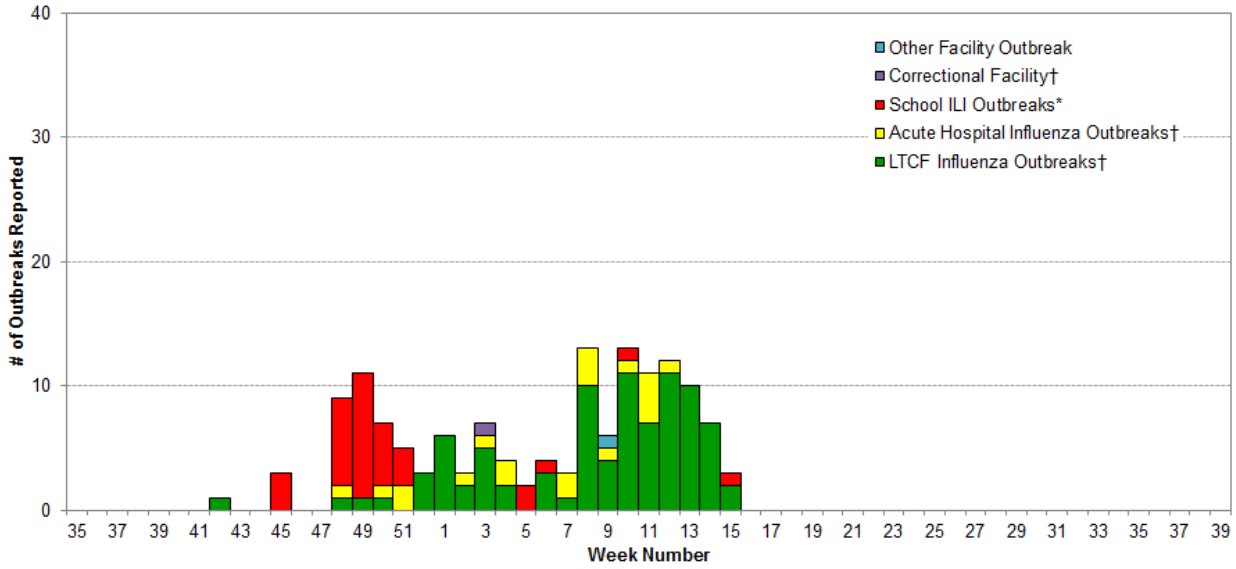
* Positive rates were calculated using aggregate data. The denominators for each rate represent the total number of tests; multiple tests may be performed for a single specimen and/or patient.

Influenza-like Illness (ILI) Outbreaks

Two laboratory-confirmed long-term care facility (LTCF) outbreaks of influenza A(H3N2) were reported in week 15. This represents a decrease in comparison to week 14 (n=7) and the peak number observed in weeks 10 and 12 (n=11). Since week 40, a total of 88 LTCF outbreaks (37 A(H3N2), 18 A(H1N1)pdm09, 31 subtype unknown, and 2 B), 20 acute care facility outbreaks, 33 school outbreaks, 1 correctional facility outbreak, and 1 mental health facility outbreak have been reported (**Figures 10 and 11**).

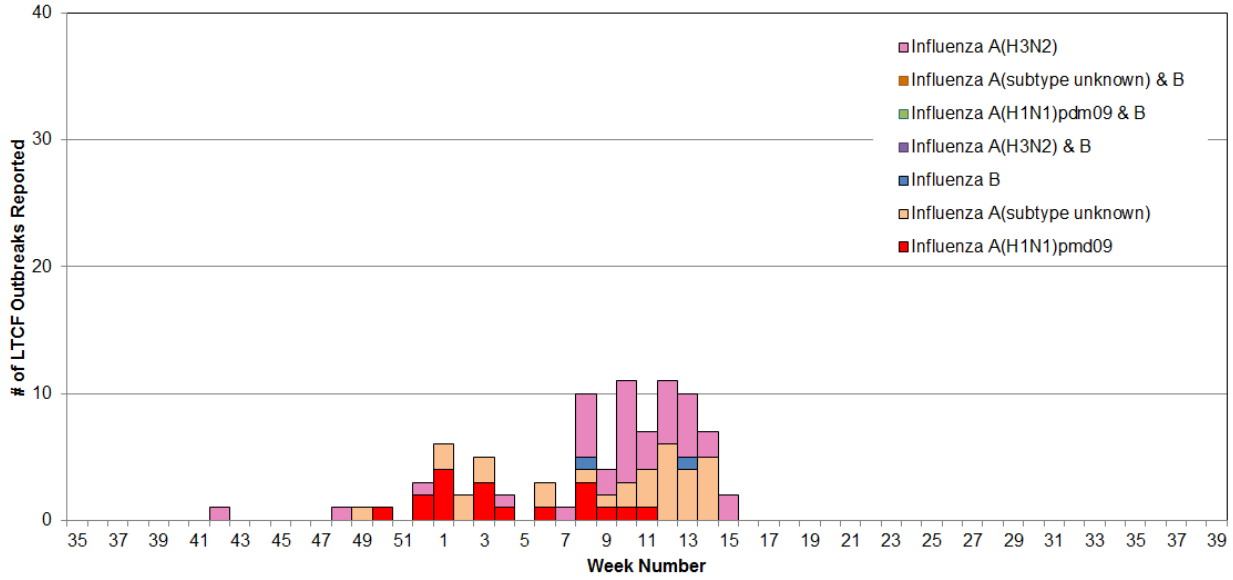
The cumulative tally of LTCF influenza outbreaks to date this A(H1N1)pdm09-dominant season has been far below that of prior A(H3N2)-dominant seasons in 2017-18 and 2016-17 (88, 178, and 196 outbreaks, respectively), although with the secondary wave of A(H3N2) having recently increased the seasonal tally for 2018-19 compared to earlier in the season.

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 14, March 31 to April 6, 2019)

Influenza activity continues to be reported in almost all regions in Canada. In week 14, the proportion of laboratory tests that were positive for influenza remained stable or slightly decreased in comparison to week 13. To date, influenza A is the most common influenza virus detected in Canada (97%); the vast majority of these viruses are A(H1N1)pdm09 (77% of subtyped influenza A viruses). However, detections of influenza A(H3N2) have been steadily increasing since mid-January and accounted for the majority (89%) of subtyped influenza A detections in week 14. 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 (57%) 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 18, 2019, the National Microbiology Laboratory (NML) has characterized 1941 influenza viruses [328 A(H3N2), 1531 A(H1N1)pdm09 and 82 B (23 Yamagata lineage and 59 Victoria lineage)] received from Canadian laboratories.

Influenza A(H3N2): 107 influenza A(H3N2) viruses were considered antigenically similar to egg-propagated A/Singapore/INFIMH-16-0019/2016, the WHO-recommended A(H3N2) component of the 2018-19 northern hemisphere influenza vaccine. However, 60 viruses showed reduced titer with ferret antisera raised against egg-propagated A/Singapore/INFIMH-16-0019/2016.

Of 315 A(H3N2) viruses successfully characterised (either genetically or antigenically), 37 (12%) belonged to genetic group (clade) 3C.2a, 203 belonged to genetic group 3C.2a1 (64%), and 75 (24%) belonged to genetic group 3C.3a. The 2018-19 northern hemisphere influenza vaccine contains a clade 3C.2a1 virus.

Influenza A(H1N1)pdm09: 1488 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. 43 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 18, 2019, the NML received influenza viruses from Canadian laboratories for drug susceptibility testing.

Amantadine: Of the 428 influenza A viruses [77 A(H3N2), 351 A(H1N1)pdm09] tested against amantadine, all were resistant.

Oseltamivir: Of the 1160 influenza viruses [127 A(H3N2), 980 A(H1N1)pdm09, and 53 B] tested against oseltamivir, 1156 were sensitive, and 4 A(H1N1)pdm09 viruses with an H275Y mutation were resistant.

Zanamivir: Of the 1159 influenza viruses [127 A(H3N2), 979 A(H1N1)pdm09, and 53 B] tested against zanamivir, all were sensitive.

International

USA (week 14, March 31 to April 6, 2019)

In week 14, influenza activity continued to decrease 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 late 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 14, the proportion of deaths attributed to pneumonia and influenza was below the system-specific epidemic threshold of 7.1%. Four influenza-associated pediatric deaths were reported in week 14. The proportion of outpatient visits for ILI decreased from 3.2% in week 13 to 2.8% in week 14, 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 15, 2019, based on data up to March 31, 2019)

In the temperate zone of the northern hemisphere, influenza activity decreased overall. In North America, Europe, North Africa, Western Asia (with the exception of Saudi Arabia), East Asia, and Southern Asia, decreased influenza activity has been reported. In general, influenza and RSV detections remained low in the Caribbean, Central American countries, and the 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 has trended above inter-seasonal levels. Worldwide, influenza A has accounted for the majority of detections. Both A viruses have circulated in Europe and influenza A(H1N1)pdm09 has predominated in Southern Asia. In North America, a shift towards A(H3N2) dominance has been observed in recent weeks. In East Asia, influenza B was the most frequently detected virus followed by influenza A(H3N2).

From March 18 2019 to March 31 2019, the WHO GISRS laboratories tested more than 139,623 specimens. Of these, 30,960 were positive for influenza viruses, of which 25,464 (82%) were typed as influenza A and 5,496 (18%) as influenza B. Of the subtyped influenza A viruses, 4,189 (41%) were influenza A(H1N1)pdm09 and 6,139 (59%) were influenza A(H3N2). Of the characterized B viruses, 154 (4%) belonged to the B-Yamagata lineage and 3,919 (96%) to the B-Victoria lineage.

The full WHO 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: