



To view an archived recording of this presentation please click the following link:

<http://pho.adobeconnect.com/pcey3axvggtf/>

Please scroll down this file to view a copy of the slides from the session.

# Helpful tips when viewing the recording:

- The default presentation format includes showing the “event index”. To close the events index, please click on the following icon  and hit “close”
- If you prefer to view the presentation in full screen mode, please click on the following icon  in the top right hand corner of the share screen

# The 2020-21 Influenza Season -Hope for the Best, Plan for the Worst

Dr. Michelle Murti

Dr. Bryna Warshawsky

Dr. Jonathan Gubbay

September 22, 2020

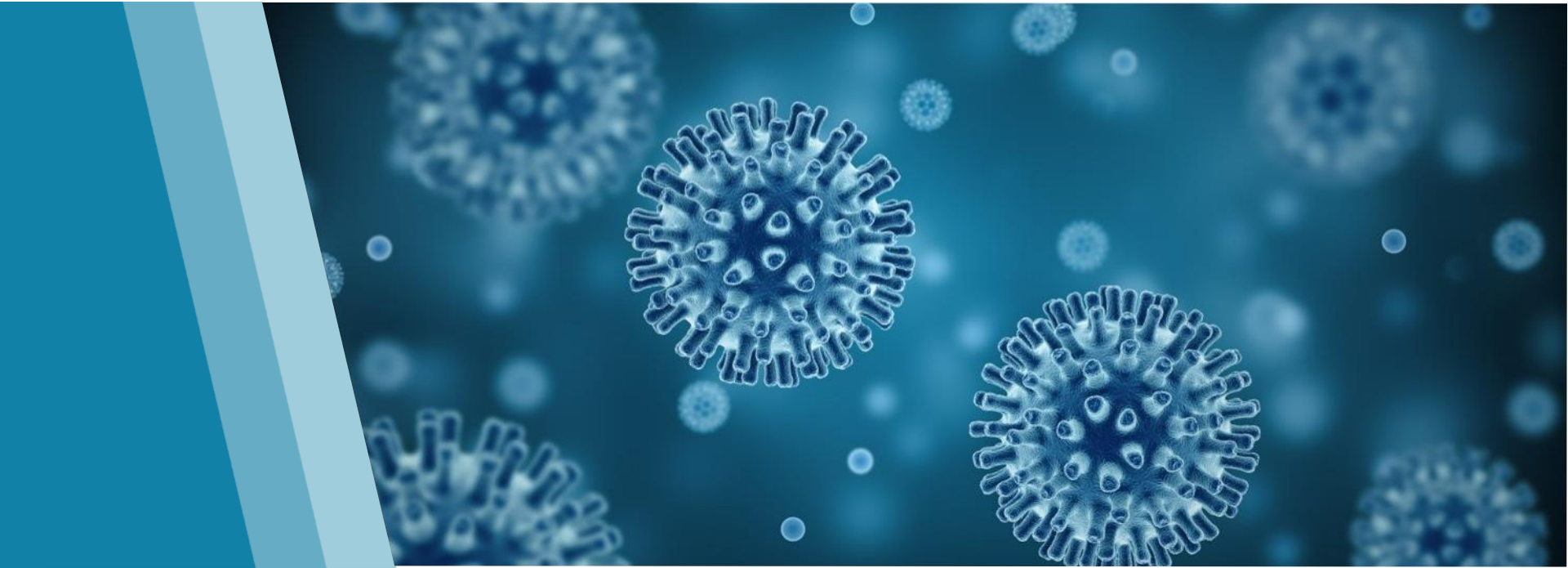
## Disclosure

- None of the presenters at this session have received financial support or in-kind support from a commercial sponsor.
- None of the presenters have potential conflicts of interest to declare.

## Objectives

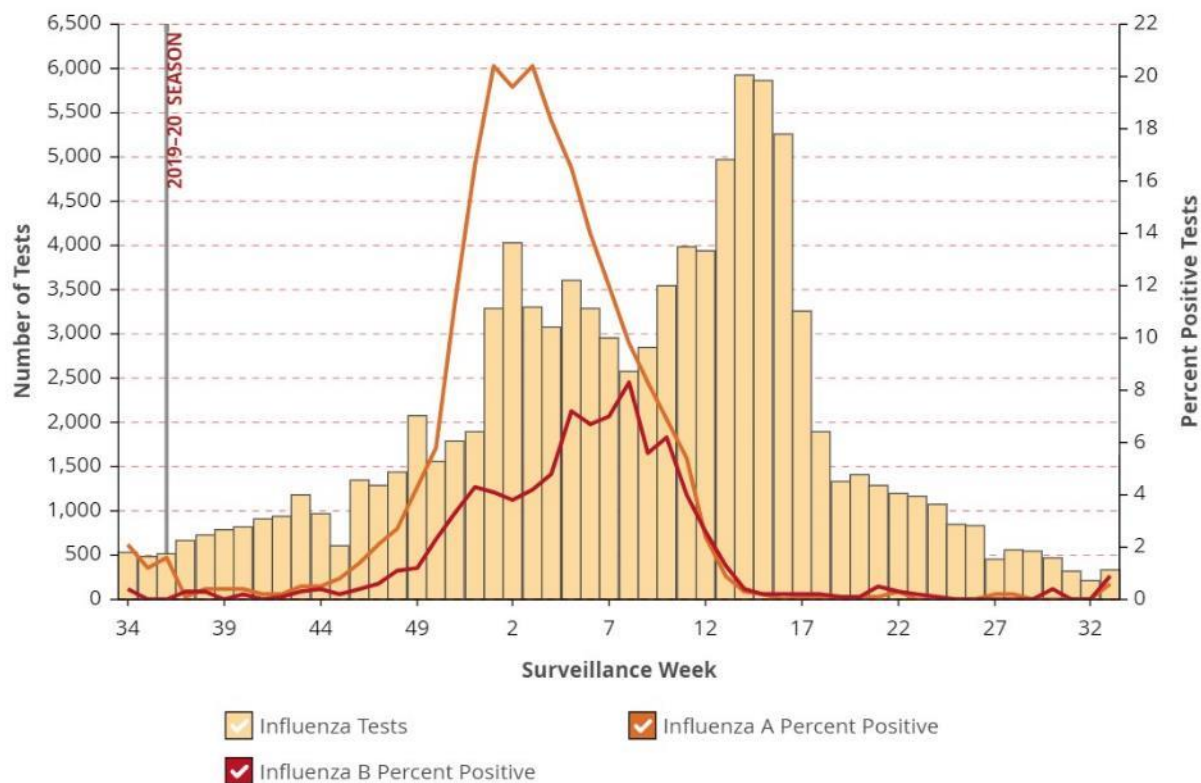
- Describe the key features of the 2020 Southern Hemisphere influenza season, and the possible implications for the 2020-21 Northern Hemisphere season
- Discuss the products available as part of Ontario's 2020-21 Universal Influenza Immunization Program and recommended COVID-19 related precautions for delivering influenza immunizations
- Review influenza treatment and outbreak management in the context of possible co-circulation of influenza, COVID-19 and other respiratory viruses
- Summarize the Public Health Ontario Laboratory influenza, COVID-19 and other respiratory virus laboratory testing algorithm for the 2020-21 season.

# 2019-20 Influenza Season Summary



# Ontario Influenza Season 2019-20

Number of Influenza Tests Performed and Percent Positive for Influenza by Surveillance Week



Caveat notes go here.

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Ontario respiratory pathogen bulletin [Internet]. Toronto, ON: Queen's Printer for Ontario; 2020 [cited 2020 Aug 26]. Available from: <https://www.publichealthontario.ca/en/data-and-analysis/infectious-disease/respiratory-pathogens-weekly>

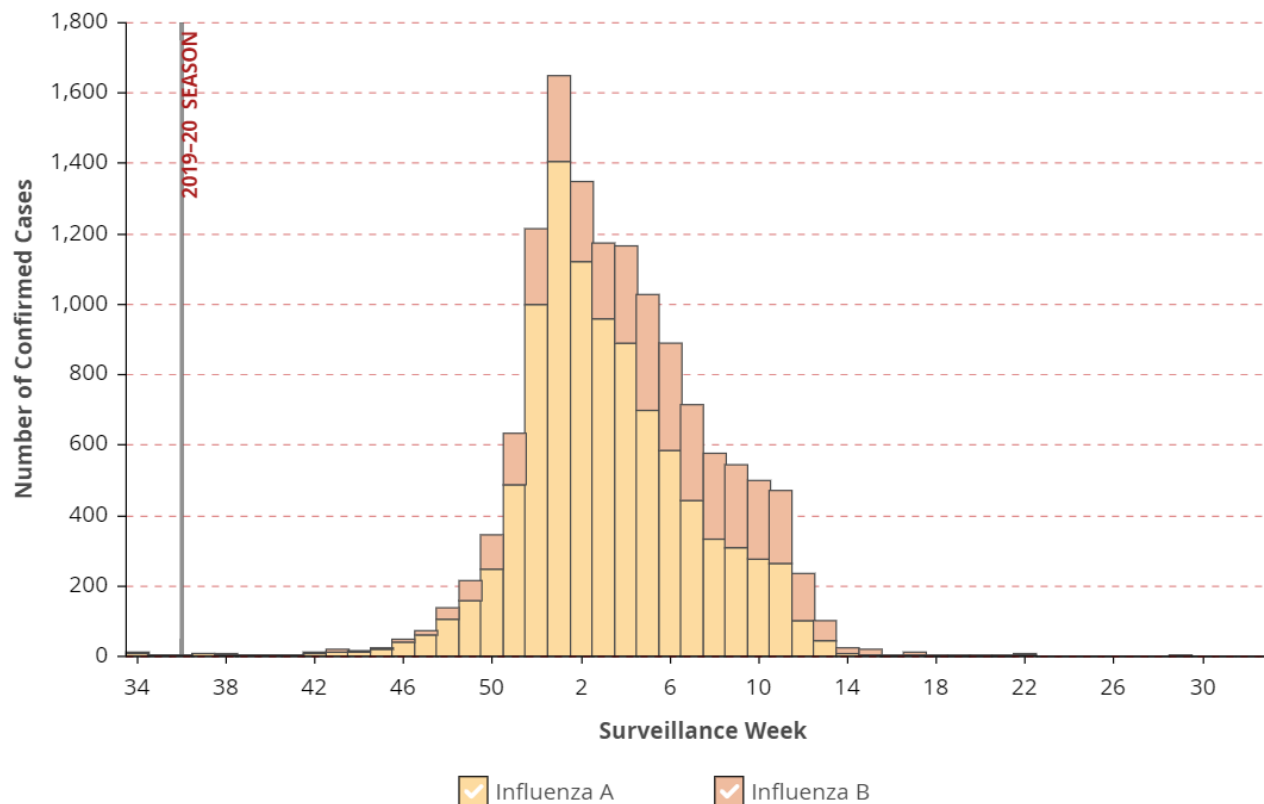
## Ontario Influenza Season Highlights 2019-20

- Between September 1, 2019 and August 15, 2020 there were:
  - 13,279 laboratory-confirmed cases of influenza: 9,641 (73%) A; 3,638 (27%) B
  - 327 influenza outbreaks: 292 (89%) A; 35 (11%) B
  - Zero influenza isolates in Ontario resistant to oseltamivir or zanamivir
- In comparison, there was an average of 13,895 laboratory confirmed cases of influenza a year over the past five years



# A Truncated Influenza Season After Week 11 (ending March 14, 2020)

Number of Reported Laboratory-Confirmed Cases of Influenza by Surveillance Week

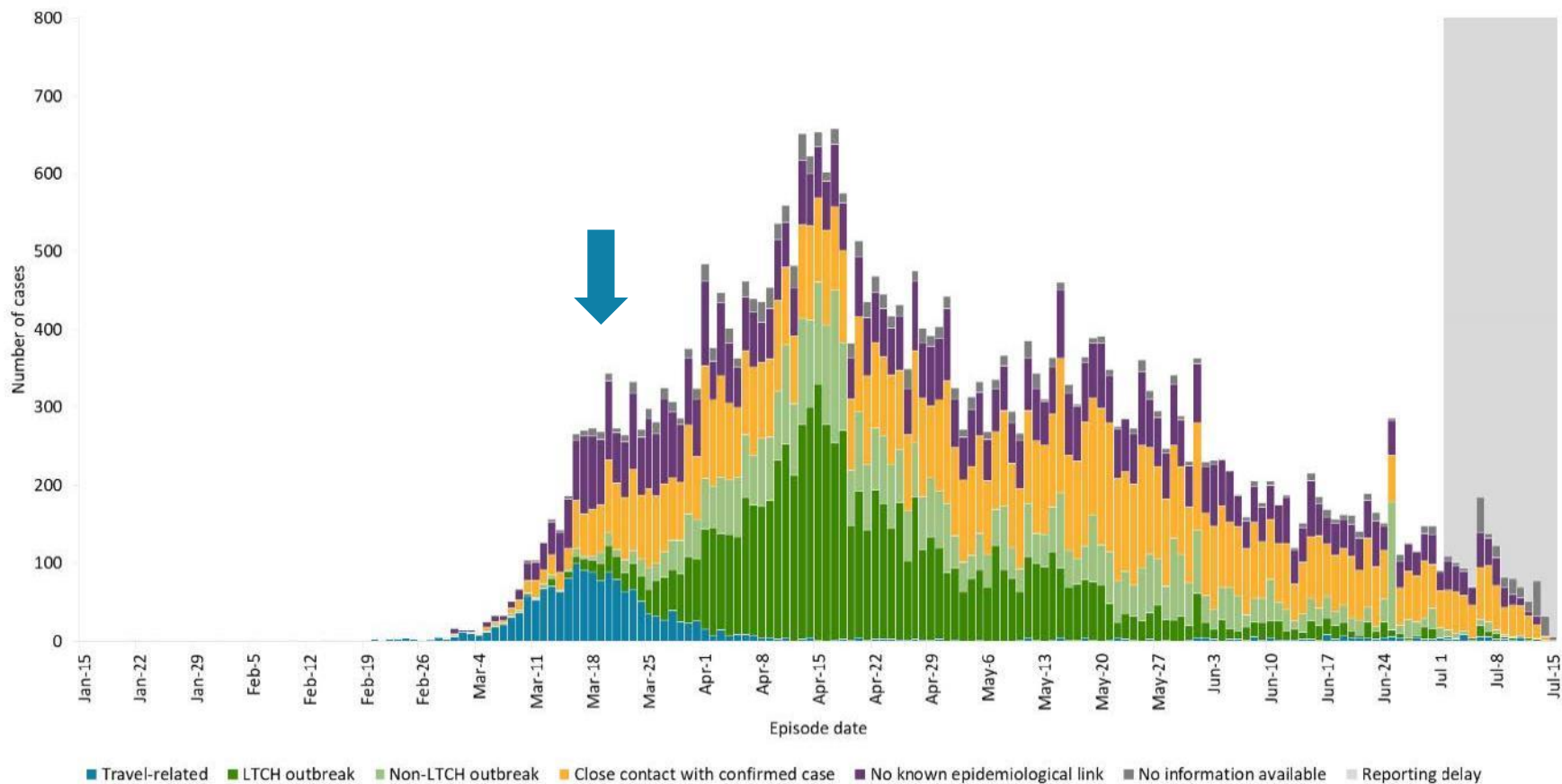


Caveat notes go here.

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Ontario respiratory pathogen bulletin [Internet]. Toronto, ON: Queen's Printer for Ontario; 2020 [cited 2020 Aug 26]. Available from: <https://www.publichealthontario.ca/en/data-and-analysis/infectious-disease/respiratory-pathogens-weekly>

# Implementation of Public Health Measures

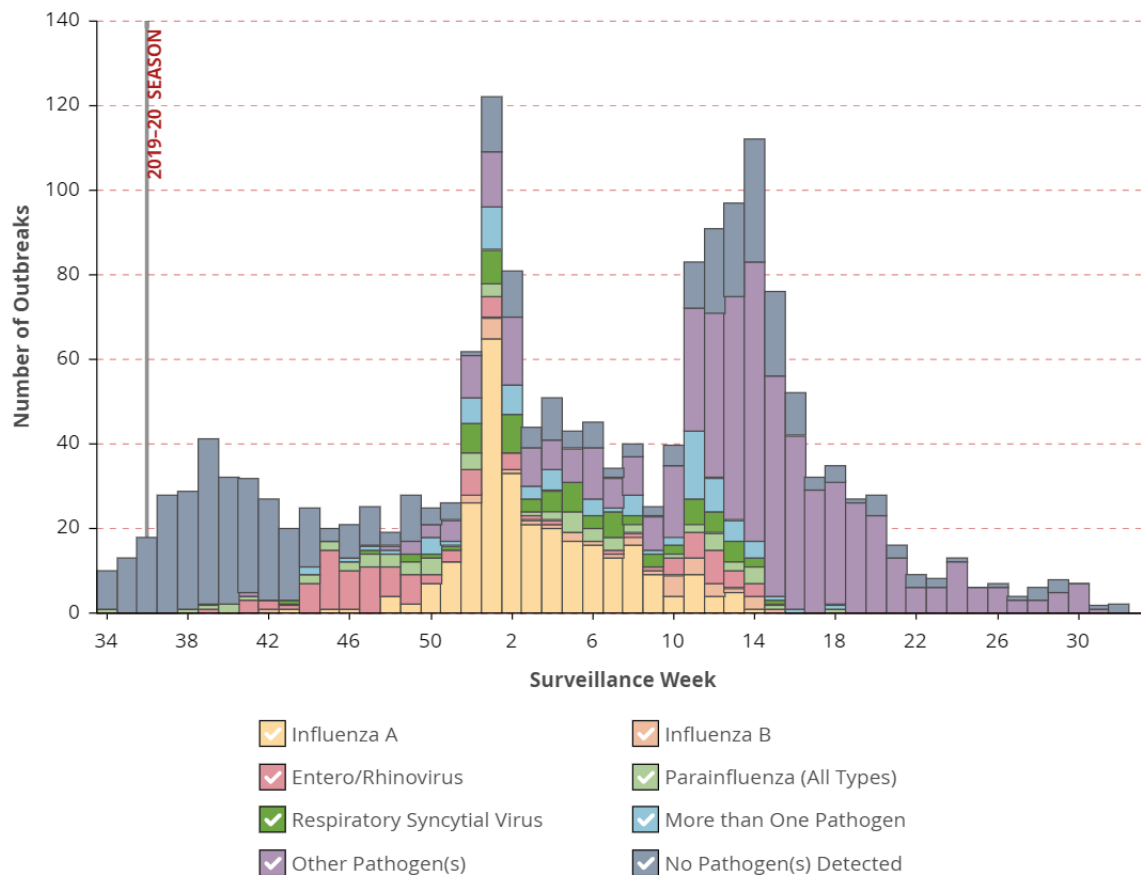
Confirmed cases of COVID-19 by most likely source of acquisition and approximation of symptom onset date: Ontario, January 15, 2020 to July 15, 2020



Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Enhanced epidemiological summary: COVID-19 in Ontario: a summary of wave 1 transmission patterns and case identification [Internet]. Toronto, ON: Queen's Printer for Ontario; 2020 [cited 2020 Aug 26]. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/epi/2020/08/covid-19-wave-1-transmission-patterns-epi-summary.pdf?la=en>

# Ontario Respiratory Outbreaks – Including COVID-19

Number of Institutional Respiratory Infection Outbreaks by Viral Pathogen Detected by Surveillance Week



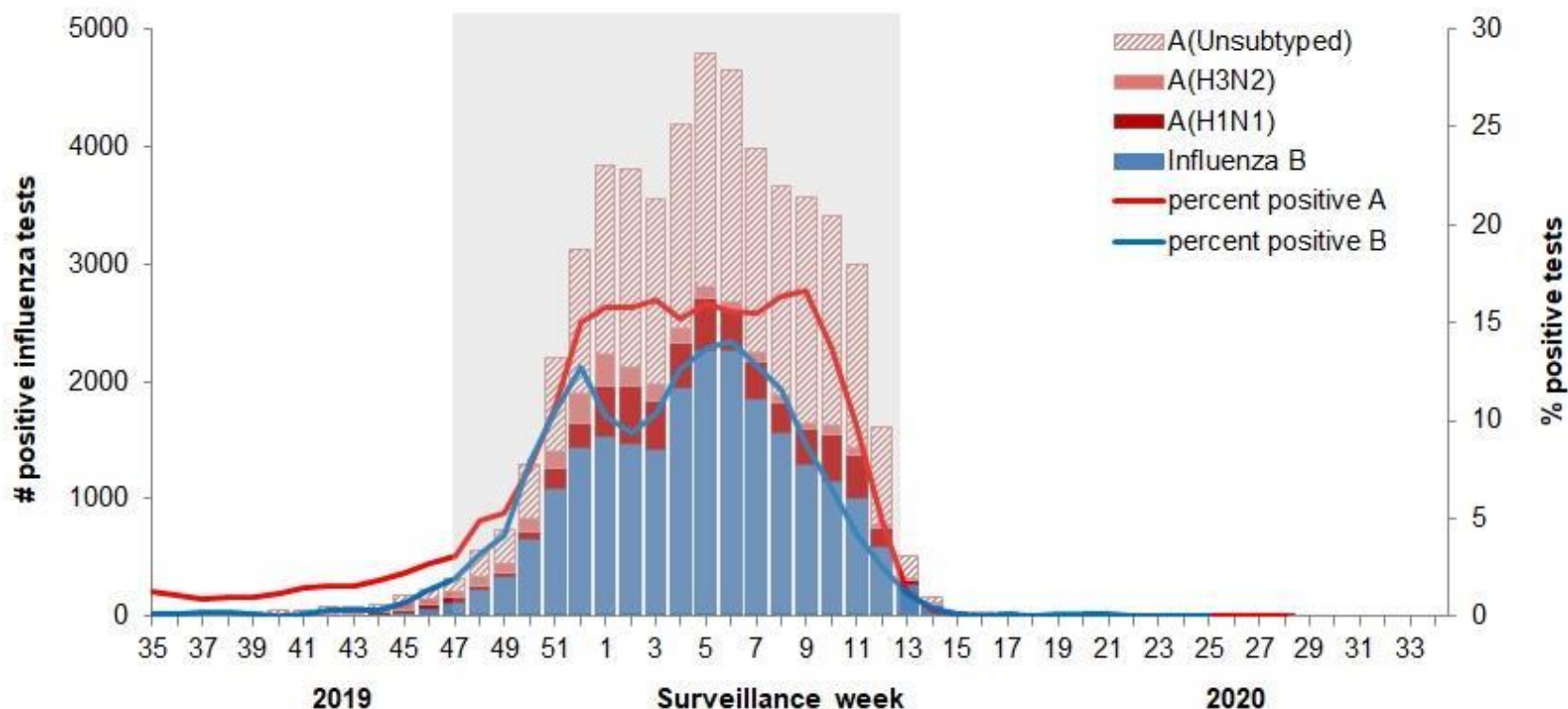
Caveat notes go here.

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Ontario respiratory pathogen bulletin [Internet]. Toronto, ON: Queen’s Printer for Ontario; 2020 [cited 2020 Aug 26]. Available from: <https://www.publichealthontario.ca/en/data-and-analysis/infectious-disease/respiratory-pathogens-weekly>

## Canada – More Influenza B, Similar Truncation

Number of positive influenza tests and percentage of tests positive, by type, subtype and report week, Canada, weeks 2019-35 to 2020-29

- Number of Laboratory reporting in week 29: 32 out of 36



Source: Government of Canada. FluWatch report: June 14, 2020 to July 18, 2020 (weeks 25-29) [Internet]. Ottawa, ON: Government of Canada 2020 [modified 2020 Jul 24; cited 2020 Aug 26]. Available from: <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/fluwatch/2019-2020/weeks-25-29-june-14-july-18-2020.html>

## Canada – Circulating Virus Characterization

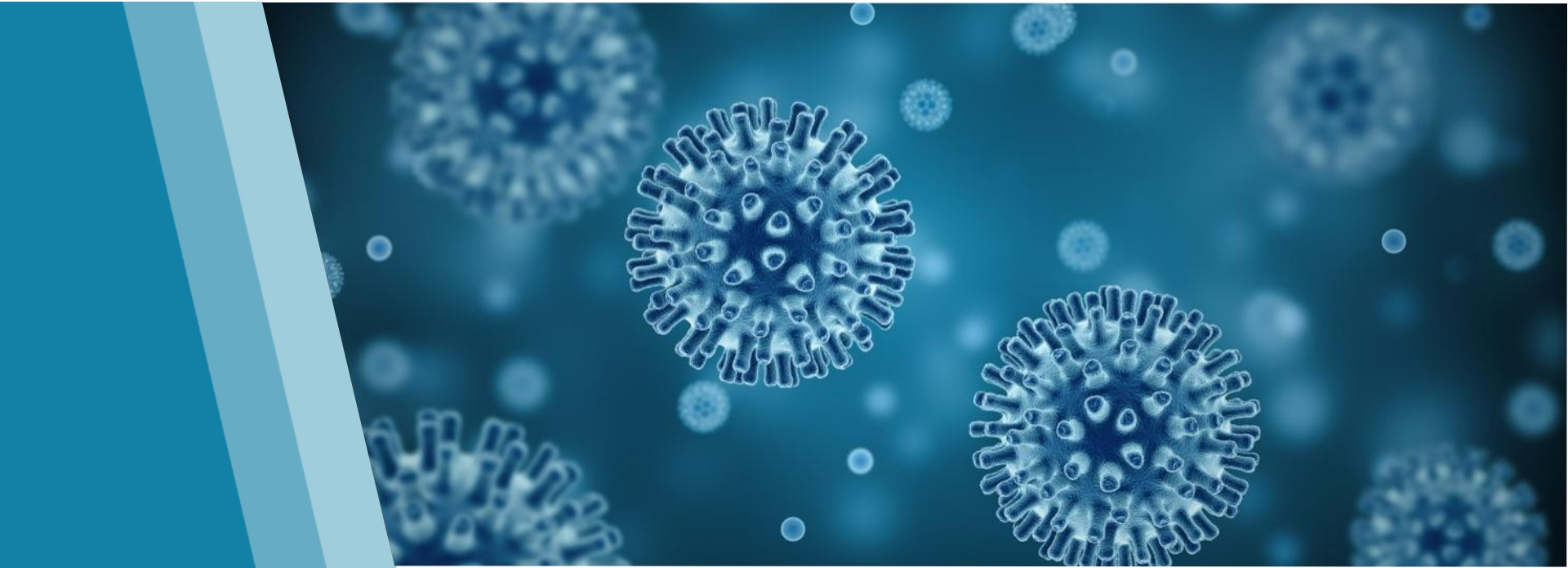
- A(H3N2)
  - Of 109 characterized: 79% had reduced titer to vaccine strain
  - 96% sequenced were 3C.2a1b (vaccine clade 3C.3a)
- A(H1N1) – 760 viruses characterized
  - 50% had reduced titer to vaccine strain
- B – 184 viruses characterized
  - 88% reduced titer to Victoria lineage vaccine strain
  - Only 2% characterized as Yamagata lineage
  - Of 871 viruses sequenced: 100% subclade V1A.3 (3Del)

## Vaccine Effectiveness Estimates, Canada

Season	Any Flu	A	A/H1N1	A/H3N2	B	Dominant A (ON)	Circulating / TIV B (ON)
2014/15	9 (-14,27)	-13 (-45,12)	NA	-17 (-50,9)	45 (18,64)	H3N2	Yamagata / Yamagata
2015/16	46 (32,57)	44 (27,57)	43 (25,57)	NA	50 (31,63)	H1N1	Victoria (66%) / Yamagata
2016/17	45 (31,56)	37 (20,51)	NA	37 (20,51)	73 (52,84)	H3N2	Yamagata / Victoria
2017/18	38 (27,47)	24 (7,38)	58 (30,75)	15 (-6,32)	46 (34,56)	H3N2	Yamagata / Victoria
2018/19	61 (53,69)	61 (52,68)	69 (60,76)	23 (-9,46)	-	H1N1 / H3N2	Victoria / Victoria
2019/20	<b>58</b> <b>(47,66)</b>	<b>49</b> <b>(36,60)</b>	<b>44</b> <b>(26,58)</b>	<b>62</b> <b>(37,77)</b>	<b>69</b> <b>(57,77)</b>	<b>H1N1</b>	<b>Victoria / Victoria</b>

Adapted from: BC Centre for Disease Control. Canadian Sentinel Practitioner Surveillance Network (SPSN) influenza vaccine effectiveness estimates % (95% CI), 2004-05 to 2019-20 seasons [Internet]. Vancouver, BC: British Columbia Provincial Health Services Authority; 2020 [modified 2020 Feb 20; cited 2020 Aug 26]. Available from: [http://www.bccdc.ca/resource-gallery/Documents/Statistics%20and%20Research/Publications/Epid/Influenza%20and%20Respiratory/SPSN\\_VE\\_By\\_Year\\_Table.pdf](http://www.bccdc.ca/resource-gallery/Documents/Statistics%20and%20Research/Publications/Epid/Influenza%20and%20Respiratory/SPSN_VE_By_Year_Table.pdf)

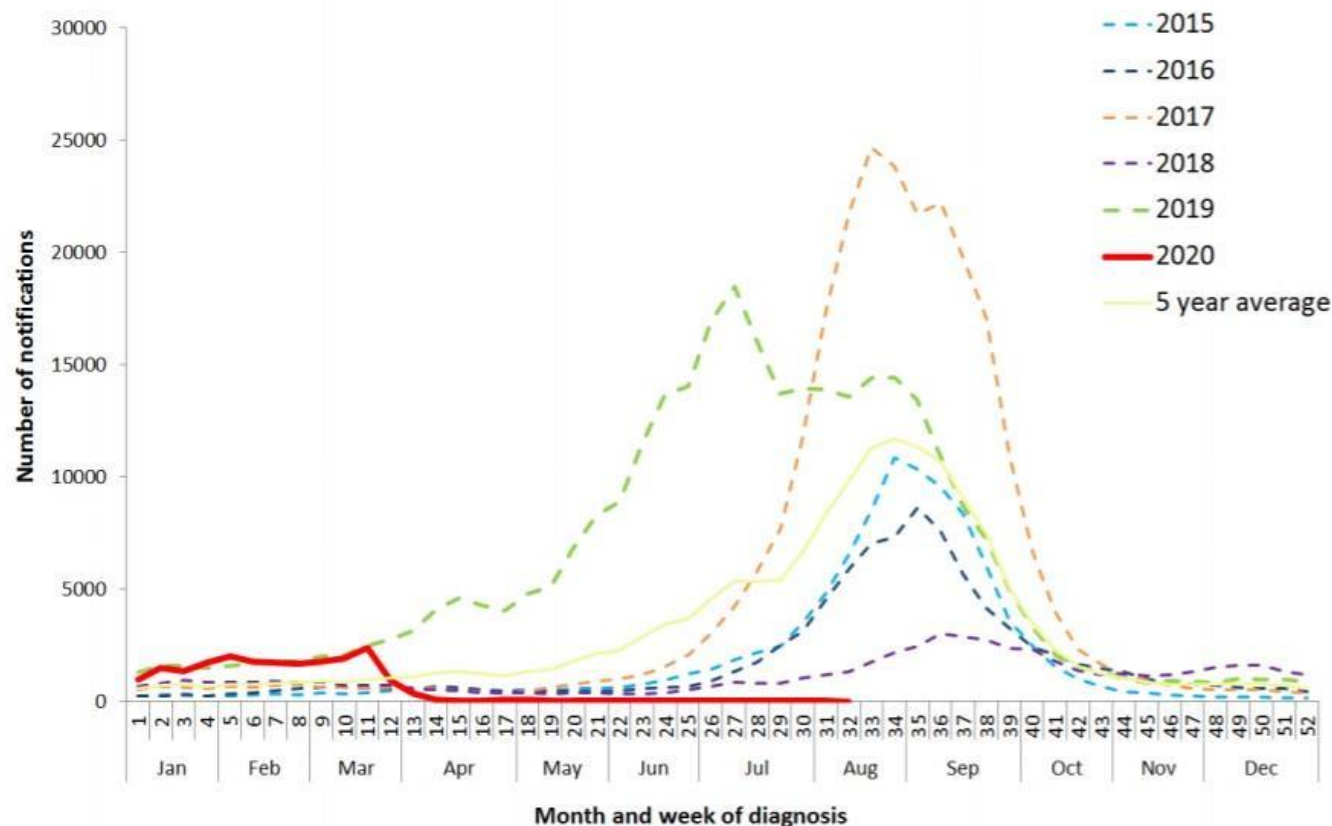
# Southern Hemisphere's 2020 Influenza Season





# Australia Influenza Cases 2020 (Data to August 9, 2020)

Figure 9. Notifications of laboratory confirmed influenza, Australia, 1 January 2013 to 9 August 2020, by month and week of diagnosis\*



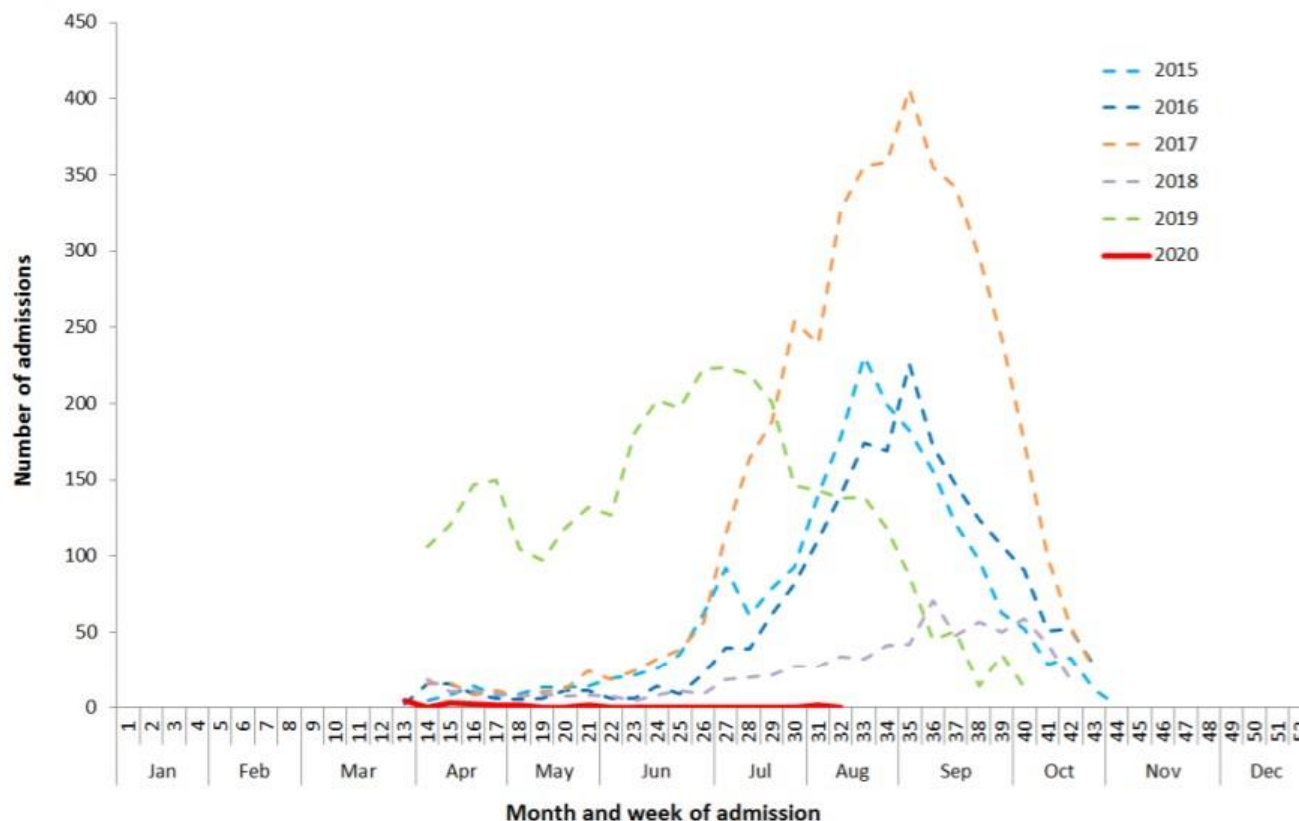
Source: NNDSS

© Commonwealth of Australia. Source: Australian Government. Department of Health. Australian influenza surveillance report: No. 9, 2020 [Internet]. Canberra: Commonwealth of Australia; 2020 [cited 2020 Aug 26]. Available from: [https://www1.health.gov.au/internet/main/publishing.nsf/Content/486F57E248B97BFBCA2585C3007F9378/\\$File/flu-09-2020.pdf](https://www1.health.gov.au/internet/main/publishing.nsf/Content/486F57E248B97BFBCA2585C3007F9378/$File/flu-09-2020.pdf)



# Australia influenza hospitalizations

Figure 7. Number of influenza hospitalisations at sentinel hospitals, between March and October, 2014 to 2020 by month and week\*



Source: FluCAN

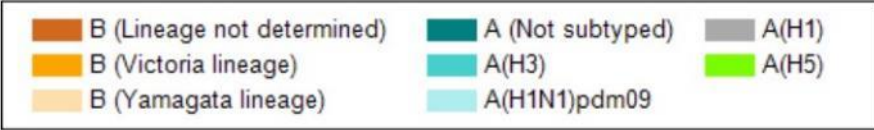
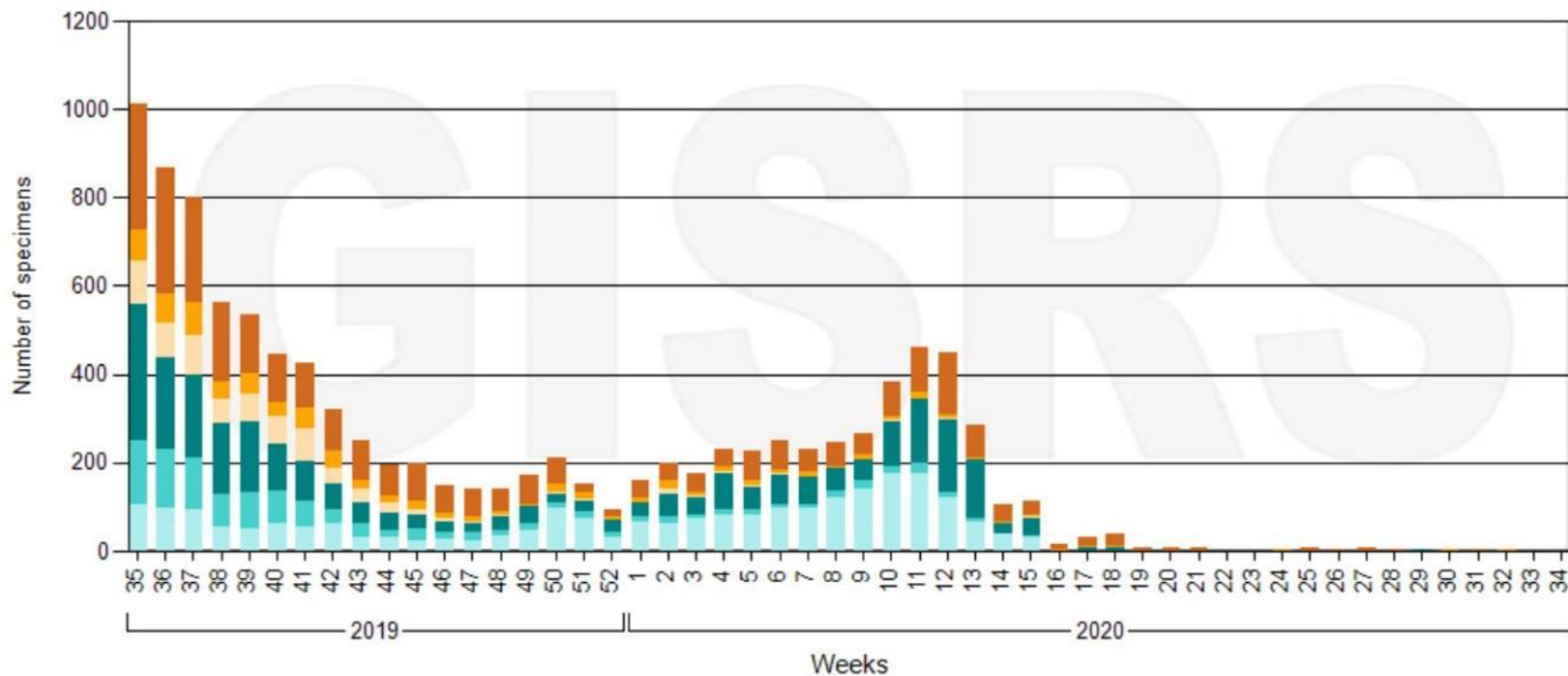
\* All data are preliminary and subject to change as updates are received.

© Commonwealth of Australia. Source: Australian Government. Department of Health. Australian influenza surveillance report: No. 9, 2020 [Internet]. Canberra: Commonwealth of Australia; 2020 [cited 2020 Aug 26]. Available from:

[https://www1.health.gov.au/internet/main/publishing.nsf/Content/486F57E248B97BFBCA2585C3007F9378/\\$File/flu-09-2020.pdf](https://www1.health.gov.au/internet/main/publishing.nsf/Content/486F57E248B97BFBCA2585C3007F9378/$File/flu-09-2020.pdf)

# Southern Hemisphere Influenza Activity - WHO

Number of specimens positive for influenza by subtype



Data from: All sites

Data source: FluNet ( [www.who.int/flunet/](http://www.who.int/flunet/) ), GISRS

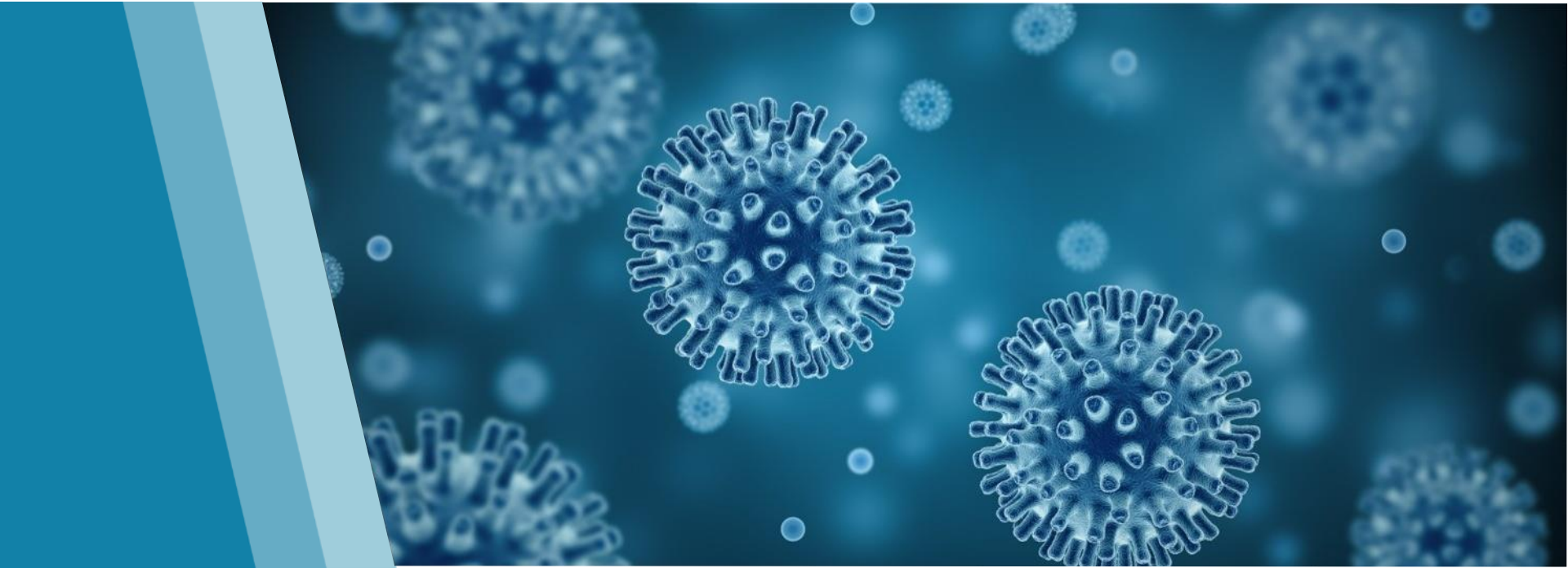
© World Health Organization 2020

Source: World Health Organization. Influenza laboratory surveillance information by the Global Influenza Surveillance and Response System (GISRS) [Internet]. Geneva: World Health Organization; 2020 [cited 2020 Aug 26]. Available from: <https://www.who.int/influenza/vaccines/virus/recommendations/en/>

## Anticipation for 2020-21 Season in Ontario

- Continuation of public health measures for COVID-19 will likely reduce impact from other respiratory viruses over 2020-21 season
- Minimal activity in southern hemisphere limits ability to anticipate strains, and may impact estimates of vaccine effectiveness
- Continued need for surveillance and vaccination even if anticipate lower activity

# Influenza Vaccines for 2020-21



# Influenza Vaccine Composition for Northern Hemisphere

2019-20 Northern Hemisphere	2020-21 Northern Hemisphere Egg-based vaccines	2020-21 Northern Hemisphere Cell-based vaccines
A/Brisbane/02/2018 (H1N1)pdm09-like virus	A/Guangdong-Maonan/SWL1536/2019 (H1N1)pdm09-like virus	A/Hawaii/70/2019 (H1N1)pdm09-like virus
A/Kansas/14/2017 (H3N2)-like virus	A/Hong Kong/2671/2019 (H3N2)-like virus	A/Hong Kong/45/2019 (H3N2)-like virus
B/Colorado/06/2017 (B/Victoria/2/87 lineage)-like virus	B/Washington/02/2019 (B/Victoria lineage)-like virus	B/Washington/02/2019 (B/Victoria lineage)-like virus
B/Phuket/3073/2013 (B/Yamagata/16/88 lineage) - like virus	B/Phuket/3073/2013 (B/Yamagata lineage)-like virus	B/Phuket/3073/2013 (B/Yamagata lineage)-like virus

Adapted from: World Health Organization. Influenza laboratory surveillance information by the Global Influenza Surveillance and Response System (GISRS) [Internet]. Geneva: World Health Organization; 2020 [cited 2020 Aug 26]. Available from: <https://www.who.int/influenza/vaccines/virus/recommendations/en/>

# Recommended UIIP Vaccines for 2020-21

Age	Type of Product	Product Name
6 months up to and including 8 years	Standard-dose quadrivalent (QIV)	<ul style="list-style-type: none"> <li>• FluLaval Tetra</li> <li>• Fluzone® Quadrivalent</li> </ul>
9 years up to and including 64 years	Standard-dose quadrivalent (QIV)	<ul style="list-style-type: none"> <li>• FluLaval Tetra</li> <li>• Fluzone® Quadrivalent</li> <li>• Flucelvax® Quad</li> </ul>
65 years and over	<ul style="list-style-type: none"> <li>• High-dose trivalent (TIV)</li> <li>• Standard-dose quadrivalent (QIV)</li> </ul>	<ul style="list-style-type: none"> <li>• Fluzone® High-Dose</li> <li>• FluLaval Tetra</li> <li>• Fluzone® Quadrivalent</li> <li>• Flucelvax® Quad</li> </ul>

# Mammalian Cell-Culture Based Vaccine

- First non-egg based influenza vaccine available in Canada
  - Authorized in November 2019
- Made in Madin-Darby canine kidney (MDCK) cells
- Cell-culture influenza vaccine available in Europe since 2007 and the United States since 2012
- Quadrivalent product authorized in Canada

Source: Public Health Agency of Canada; National Advisory Committee on Immunization (NACI). Supplemental statement – mammalian cell culture-based influenza vaccines: an Advisory Committee Statement (ACS). Ottawa, ON: Her Majesty the Queen in Right of Canada, as represented by the Minister of Health; 2020. Available from: <https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/mammalian-cell-culture-based-influenza-vaccines.html>

# Benefits of Cell-Culture Based Vaccines

- Growing in MDCK cells means an egg supply is not needed
- Originally candidate vaccine viruses were egg-based; since 2019-20 all strains are cell-based so entire vaccine made without eggs
- Increased scalability, timeliness, sterility and flexibility
- Does not promote egg adaptive mutations
- Similar immunogenicity, effectiveness and safety profile to egg-based vaccines

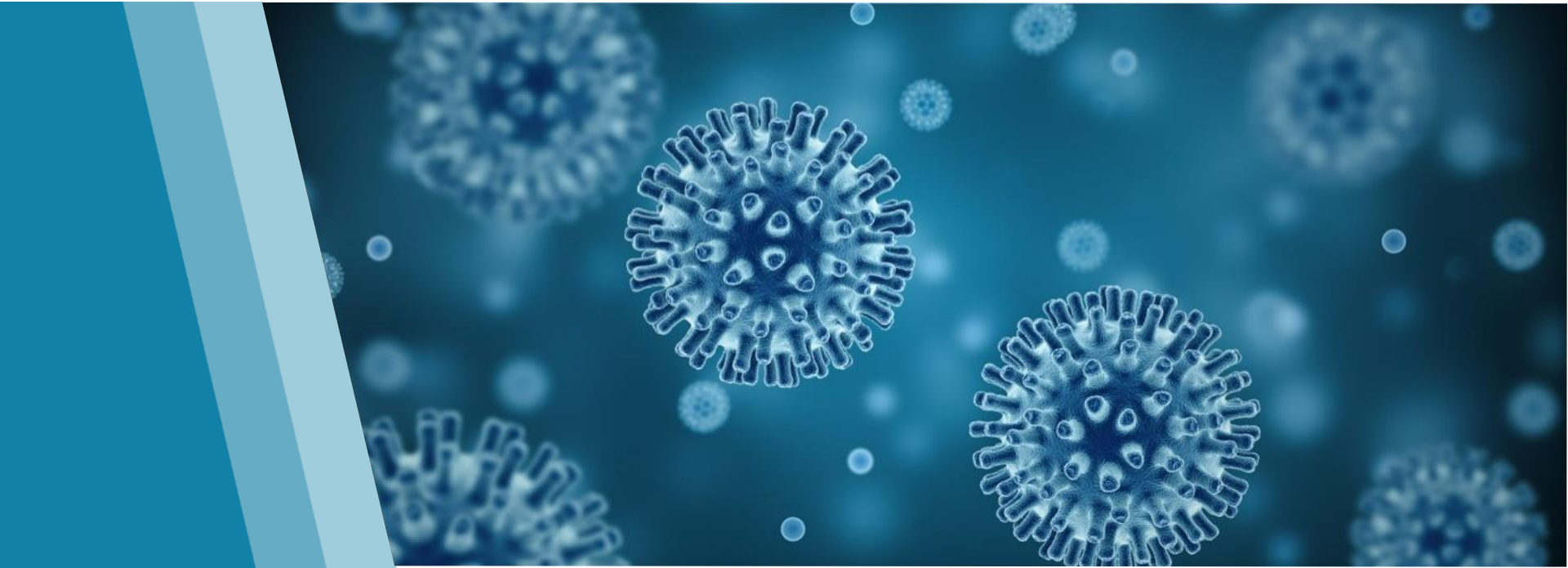
Source: Public Health Agency of Canada; National Advisory Committee on Immunization (NACI). Supplemental statement – mammalian cell culture-based influenza vaccines: an Advisory Committee Statement (ACS). Ottawa, ON: Her Majesty the Queen in Right of Canada, as represented by the Minister of Health; 2020. Available from: <https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/mammalian-cell-culture-based-influenza-vaccines.html>



## Use of Cell-Culture Based Vaccines

- Standard-dose quadrivalent choice for those 9 years of age and over
- No concern about use in people with dog allergies
- Can be given to pregnant women
- Egg allergy not a contraindication to any influenza vaccine
  - So egg allergic people can receive egg-based or cell-culture based vaccines

# Vaccines for Adults 65 Years of Age and Older



# Vaccine for Adults 65 Years of Age and Older

- **Standard-dose quadrivalent** influenza vaccines
  - 2 A (H3N2 and H1N1) and 2 B strains (Victoria and Yamagata lineage)
  - 15 micrograms of hemagglutinin per strain
- **High-dose trivalent** influenza vaccine
  - 2 A (H3N2 and H1N1) and one B strains (Victoria lineage)
  - 60 micrograms of hemagglutinin per strain

## National Advisory Committee on Immunizations (NACI) 2020-21 Recommendations

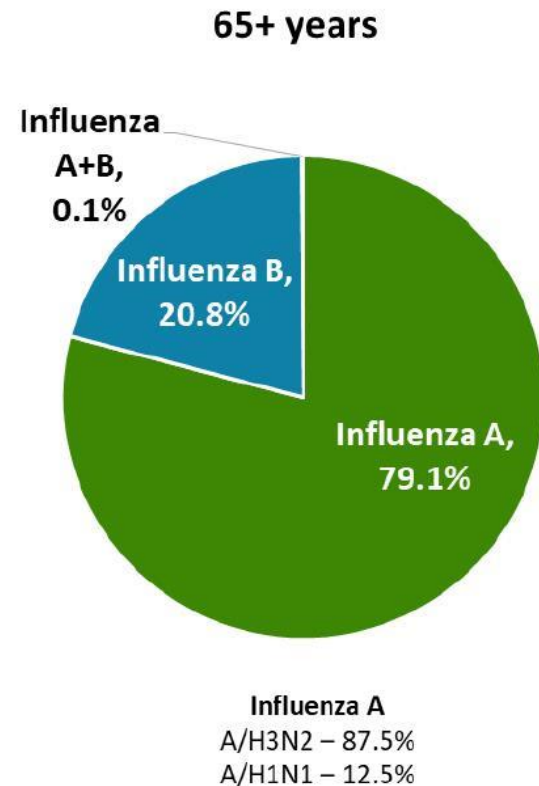
- High-dose TIV should be used over standard-dose TIV
  - Based on the burden of influenza A (H3N2) disease and the good evidence of better protection compared to standard-dose TIV in adults 65 years of age and older.
- Insufficient evidence to recommend the use of high-dose TIV over standard-dose QIV.
  - **Given the increased burden of disease associated with influenza A(H3N2) in older adults, better protection against influenza A(H3N2) may be more important than better protection against influenza B**

Source: Public Health Agency of Canada; National Advisory Committee on Immunization (NACI). Canadian immunization guide chapter on influenza and statement on seasonal influenza vaccine for 2020–2021: an Advisory Committee Statement (ACS). Ottawa, ON: Her Majesty the Queen in Right of Canada, as represented by the Minister of Health; 2020. Available from: <https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/healthy-living/canadian-immunization-guide-statement-seasonal-influenza-vaccine-2020-2021/naci-2020-2021-seasonal-influenza-stmt-eng.pdf>

# Influenza B in Adults 65 Years of Age and Over

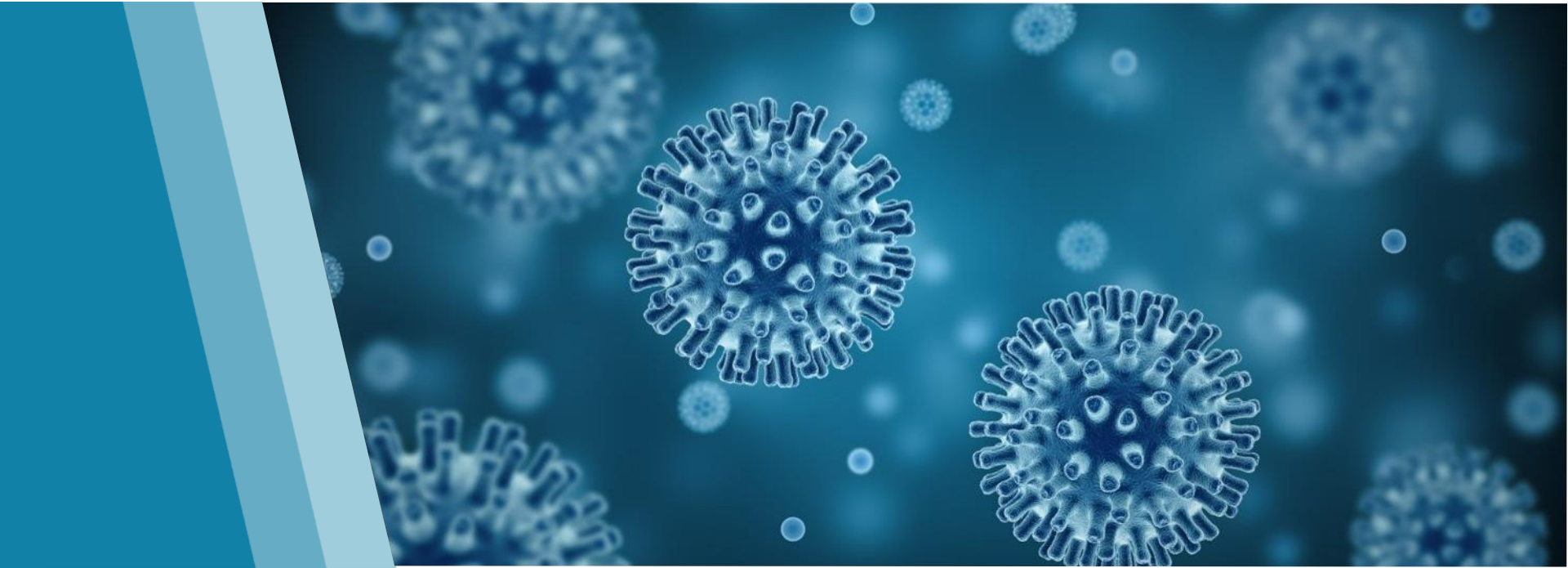
- Influenza A more common than influenza B, particularly influenza A (H3N2)
- May be some cross-protection across B lineages

Figure 1. Proportion of influenza cases by type and subtype for influenza A: Ontario, 2010–11 to 2019–2020 influenza season



Source: Ontario. Ministry of Health and Long-Term Care. Integrated Public Health Information System (iPHIS) [database]. Toronto, ON: Queen's Printer for Ontario; [data extracted 2020 Jul 31].

# Influenza Vaccination in the 2020-21 Influenza Season



## Very Important to be Vaccinated this Season

- Individual protection against influenza
- Decreased burden on the health care system
- Decreased illness that can be confused with COVID-19 and decreased need for COVID-19 testing
- Decreased chance of co-infection in individuals (influenza and COVID-19) and outbreaks with both viruses
  
- NOTE: There is no evidence that influenza vaccination impacts chance of acquiring COVID-19 or severity of COVID-19

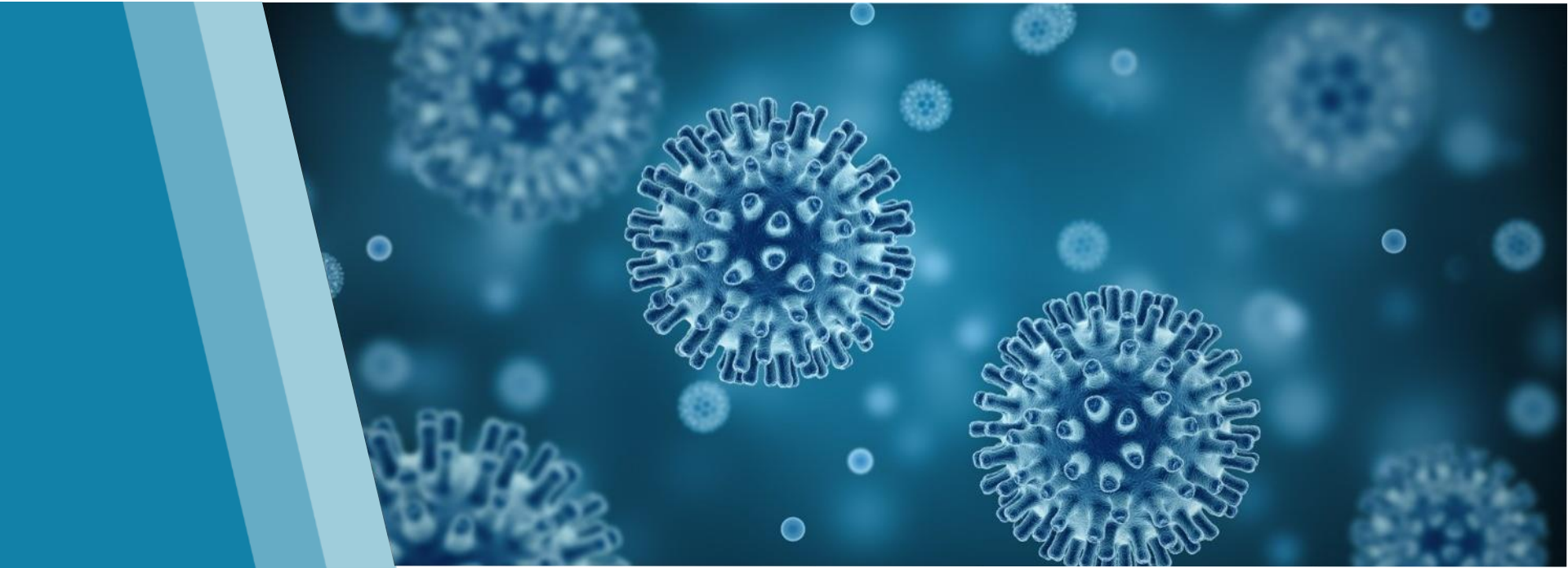
# Offering Vaccines in the Context of COVID-19

- Guidance available from the [National Advisory Committee on Immunization](#) and Ministry of Health
- Consider space and timing of clinics to avoid crowding
- Screen patients
  - Anyone with symptoms compatible with COVID-19 should defer vaccination
- Use physical barriers as much as possible
- Staff to wear a medical mask and if near clients without a barrier, add a face shield
- Gloves only needed for intranasal and oral vaccines, or if skin is not intact in vaccinator
- Clean hand between clients
- Clients to wear a non-medical mask if at all possible (2 years of age and over)
- Reminder to report adverse events following immunization to your local public health unit

Source: Government of Canada. Guidance for influenza vaccine delivery in the presence of COVID-19 [Internet]. Ottawa, ON: Government of Canada; 2020 [modified 2020 Aug 05; cited 2020 Sep 09]. Available from: <https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/guidance-influenza-vaccine-delivery-covid-19.html>



# Influenza Antiviral Medications



# Antiviral Medications

- Neuraminidase inhibitors
- Blocks exit of the virus from respiratory cells
- Prevents further replication of the virus
- Used for treatment and in outbreaks, also for prevention
- Use as soon as possible
  - Do not wait for laboratory confirmation when influenza is circulating

# Antiviral Medications Used in Canada

Product	Administration	Use	Age
Oseltamivir	Orally	Treatment and prevention	All ages (case-by-case basis in infants)
Zanamivir	Inhalation	Treatment and prevention	7 years and over
Peramivir	Intravenous	Treatment	18 years of age and over

## Indication for Treating Influenza

1. Is influenza circulating in your community?
2. Does your patient have symptoms compatible with influenza?
3. Is your patient at high risk for the complications of influenza?

*OR*

Does your patient have moderate, progressive, severe or complicated influenza, such as individuals who are hospitalized with influenza?

# Those at High-risk for Influenza Complications

- Adults 65 years of age and over
- Pregnant women and women up to four weeks post-partum
- Those with underlying medical conditions
- Long term care home residents

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Antiviral medications for seasonal influenza: information for health care providers, 2019 [Internet]. Toronto, ON: Queen's Printer for Ontario; 2019 [cited 2020 Sep 09]. Available from: <https://www.publichealthontario.ca/-/media/documents/Q/2019/qa-antiviral-medication-influenza.pdf?la=en>

# Unique Outbreak Features this Respiratory Virus Season

- May detect influenza and other respiratory virus outbreaks in other types of facilities, such as group home, shelters
- Management of respiratory viruses generally similar for all viruses except:
  - **Influenza**
    - Use antiviral medications for treatment and prevention
  - **COVID-19**
    - Resident cohorting used more commonly
    - Testing of all symptomatic and some/all asymptomatic residents and staff
- May have outbreaks with COVID-19 and another respiratory virus
  - Outbreaks with more than one pathogen treated as two separate outbreaks

# Resources on Preparing for Respiratory Virus Season

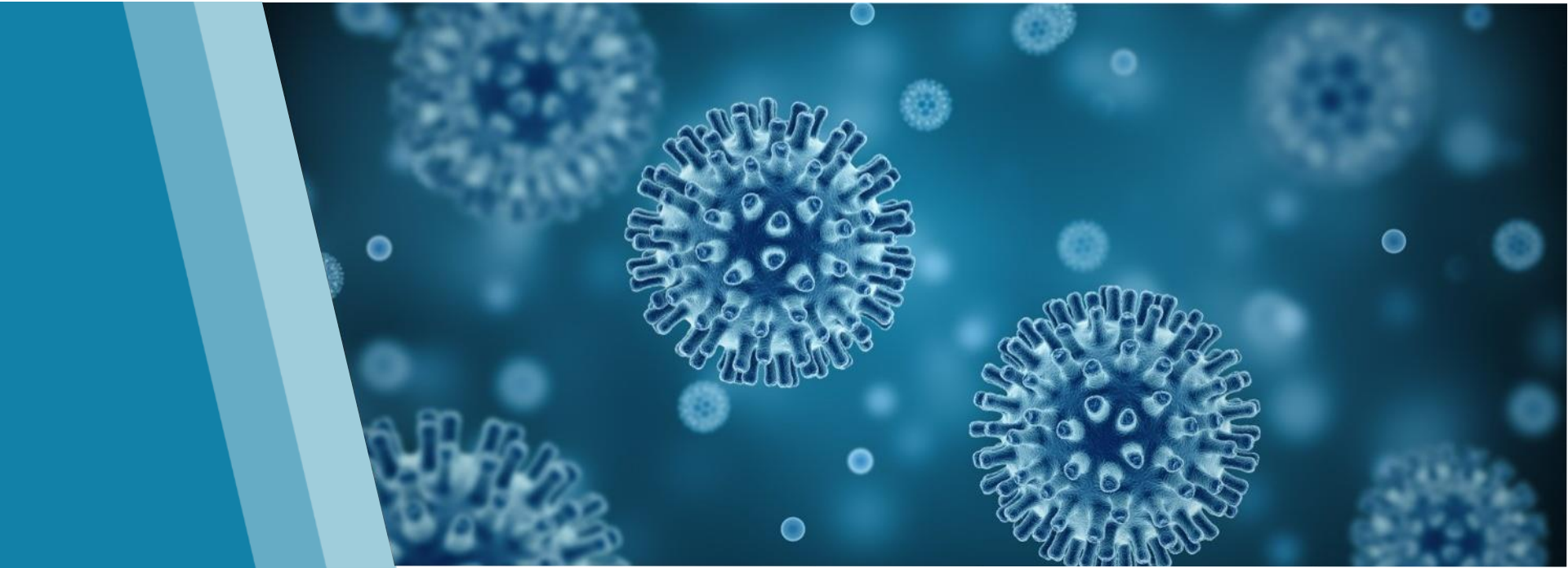
- **Influenza Vaccines for the 2020-2021 influenza season**
  - Overview of the publicly-funded influenza vaccines that are available in Ontario as part of the Universal Influenza Immunization Program (UIIP) for the 2020–2021 influenza season. Additional information on influenza vaccines is available on [the Ministry of Health website](#).
- **Respiratory Virus Outbreaks During the 2020-21 Season: Considerations for Public Health Planning**
  - For public health units to assist with preparing for the upcoming respiratory virus season, including guidance on managing outbreaks with more than one virus
- **Planning for Respiratory Virus Outbreaks in Congregate Living Settings**
  - For administrators and staff members of congregate living settings to assist in preparing for respiratory outbreaks. Supplements existing [COVID-19 specific information for congregate living settings](#).
- **Key Features of Influenza, SARS-CoV-2, and Other Common Respiratory Viruses**
  - Reviews some of the key parameters regarding influenza, SARS-CoV-2, respiratory syncytial virus (RSV) and rhinovirus.

# Antiviral Medication Resources

- **[Antiviral Medication for Seasonal Influenza: Information for Health Care providers, 2019](#)**
  - Detailed information on the use of influenza antiviral medication for treatment and prevention, including a review of the evidence.
- **Influenza Antiviral Treatment**
  - Information on treatment of influenza-like illness with antiviral medications.
- **Antiviral Medication Use During an Influenza Outbreak: Congregate Living Settings**
  - Information for administrators and staff members of congregate living settings when influenza antiviral medications are being used in an influenza outbreak.



# Influenza and Respiratory Virus Testing



# Respiratory Virus Testing Available at PHO Laboratory as of November 2 2020 (1 of 3)

**Table 1. Eligibility criteria for respiratory virus testing available at PHO Laboratory by patient setting and outbreak status**

Symptomatic Patients: Testing dictated by patient setting and outbreak status	Testing
<p>ICU/CCU inpatients</p> <p>Institutions (non-outbreak) (e.g., long-term care homes, retirement homes, correctional facilities, congregate living settings)</p> <p>Remote communities</p>	<ul style="list-style-type: none"> <li>• FLUVID followed by MRVP <i>OR</i></li> <li>• SARS-CoV-2 and MRVP</li> </ul> <p>(Both combinations will provide testing for the same viruses)</p>
<p>Institutional and other public health unit declared respiratory infection outbreaks (including school outbreaks)</p>	<p>Up to 4 outbreak specimens:</p> <ul style="list-style-type: none"> <li>• Influenza rapid testing (all sites)</li> <li>• FLUVID followed by MRVP <i>OR</i></li> <li>• SARS-CoV-2 and MRVP</li> <li>• Additional specimens will be tested for SARS-CoV-2 only.</li> </ul>

- ICU - Intensive Care Unit; CCU - Critical Care Unit.
- FLUVID detects: influenza A, influenza B, SARS-CoV-2 (COVID-19), and respiratory syncytial virus (RSV A + B).
- MRVP detects: influenza A, influenza A H3 subtype, influenza A H1 (pdm09) subtype, influenza B, respiratory syncytial virus (RSV A/B), parainfluenza (1 – 4), adenovirus, enterovirus, seasonal human coronavirus (OC43, 229E, NL63, HKU1), rhinovirus and human metapneumovirus. It does not detect or cross-react with SARS-CoV-2.

## Respiratory Virus Testing Available at PHO Laboratory as of November 2 2020 (2 of 3)

Table 1 continued. Eligibility criteria for respiratory virus testing available at PHO Laboratory by patient setting and outbreak status

Symptomatic Patients: Testing dictated by patient setting and outbreak status	Testing
Ward	FLUVID
Emergency room patients	SARS-CoV-2
Ambulatory/outpatient settings, assessment centres, including ambulatory influenza high risk patients	SARS-CoV-2
Not specified on requisition	SARS-CoV-2

- FLUVID detects: influenza A, influenza B, SARS-CoV-2 (COVID-19), and respiratory syncytial virus (RSV A + B).
- MRVP detects: influenza A, influenza A H3 subtype, influenza A H1 (pdm09) subtype, influenza B, respiratory syncytial virus (RSV A/B), parainfluenza (1 – 4), adenovirus, enterovirus, seasonal human coronavirus (OC43, 229E, NL63, HKU1), rhinovirus and human metapneumovirus. It does not detect or cross-react with SARS-CoV-2.
- Caution: influenza rapid testing can only be performed if specimen is received in suitable media.

## Respiratory Virus Testing Available at PHO Laboratory as of November 2 2020 (3 of 3)

Table 1 continued. Eligibility criteria for respiratory virus testing available at PHO Laboratory by patient setting and outbreak status

Only SARS-CoV-2 testing will be performed on asymptomatic patients, regardless of patient setting

Asymptomatic patients	Testing
All patient settings	SARS-CoV-2

## Testing conducted at PHO Laboratory sites

Table 2. Testing conducted at PHO Laboratory sites

PHO Laboratory Sites	Testing Capacity	Management of specimens
Toronto, London, Ottawa, Timmins	SARS-CoV-2, FLUVID, MRVP	No need to transfer specimens
Hamilton, Kingston, Thunder Bay	SARS-CoV-2, FLUVID	Specimens transferred to Toronto, London, Ottawa or Timmins if MRVP needed
Orillia, Peterborough, Sudbury	Do not perform molecular tests	Specimens transferred to one of the above laboratory sites

- Some specimens will be tested for SARS-CoV-2, influenza and RSV twice in order to facilitate rapid TAT for both SARS and influenza testing at the initial testing site.

## Some key points to ensure appropriate test assignment (1 of 5):

### COVID-19 Virus Test Requisition

<b>1 - Submitter Lab Number (if applicable):</b>	
Ordering Clinician (required)	
Surname, First Name:	
OHIP/CPSO/Prof. License No:	
Address:	
Postal code:	
<b>2 - Patient Information</b>	
Health Card No.:	Medical Record No.:
Last Name:	
First Name:	
Date of Birth: yyyy / mm / dd	Sex: <input type="radio"/> M <input type="radio"/> F
Address:	

The COVID-19 requisition is preferred over the General Test Requisition

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). COVID-19 virus test requisition [Internet]. Toronto, ON: Queen's Printer for Ontario; 2019 [cited 2020 Sep 09]. Available from: <https://www.publichealthontario.ca/-/media/documents/lab/2019-ncov-test-requisition.pdf?la=en>

## Some key points to ensure appropriate test assignment (2 of 5):

7 - Patient Setting / Type		
<input type="checkbox"/> Assessment Centre	<input type="checkbox"/> Family doctor / clinic	<input type="checkbox"/> Outpatient / ER not admitted
Only if applicable, indicate the group:		
<input type="checkbox"/> Healthcare worker	<input type="checkbox"/> Institution / all group living settings	
<input type="checkbox"/> Inpatient (hospitalized)	<input type="checkbox"/> Confirmation (for use <b>ONLY</b> by a COVID testing lab). Enter your result (NEG/POS/ or IND)	
<input type="checkbox"/> Inpatient (ICU / CCU)		
<input type="checkbox"/> First Nations / Inuit		
<input type="checkbox"/> Unhoused / shelter	<input type="checkbox"/> For clearance of disease	
<input type="checkbox"/> ER - to be hospitalized	<input type="checkbox"/> Other (Specify):	
<input type="checkbox"/> Deceased / Autopsy		

Patient setting must be indicated to help with appropriate test assignment and triaging of specimens. If patient setting is not provided, the specimen will only be tested for SARS-CoV-2.

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). COVID-19 virus test requisition [Internet]. Toronto, ON: Queen's Printer for Ontario; 2019 [cited 2020 Sep 09]. Available from: <https://www.publichealthontario.ca/-/media/documents/lab/2019-ncov-test-requisition.pdf?la=en>

## Some key points to ensure appropriate test assignment (3 of 5):

8 - Clinical Information	
<input type="checkbox"/> Asymptomatic	<input type="checkbox"/> Symptomatic
Date of symptom onset: yyyy / mm / dd	
<input type="checkbox"/> Fever / temperature, if known: _____	<input type="checkbox"/> Pneumonia
<input type="checkbox"/> Pregnant / also check if in labour: <input type="checkbox"/>	<input type="checkbox"/> Cough
	<input type="checkbox"/> Sore Throat
<input type="checkbox"/> Other (specify): _____	

- Clinical information (in particular symptom status) must be provided.
  - Asymptomatic patients will only be tested with SARS-CoV-2 PCR.

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). COVID-19 virus test requisition [Internet]. Toronto, ON: Queen's Printer for Ontario; 2019 [cited 2020 Sep 09]. Available from: <https://www.publichealthontario.ca/-/media/documents/lab/2019-ncov-test-requisition.pdf?la=en>

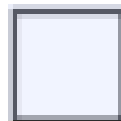


## Some key points to ensure appropriate test assignment (4 of 5):

### 5 - Test(s) Requested



COVID-19 Virus



Respiratory viruses check **ONLY**  
if required for hospitalized  
patient or those in group setting)

- Order the individual tests required on the patient.

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). COVID-19 virus test requisition [Internet]. Toronto, ON: Queen's Printer for Ontario; 2019 [cited 2020 Sep 09]. Available from: <https://www.publichealthontario.ca/-/media/documents/lab/2019-ncov-test-requisition.pdf?la=en>

## Some key points to ensure appropriate test assignment (5 of 5):

**ALL Sections of this form must be completed at every visit**

<b>2 - Patient Information</b>	
Health Card No.:	Medical Record No.:
Last Name:	
First Name:	
Date of Birth: yyyy / mm / dd	Sex: <input type="radio"/> M <input type="radio"/> F
Address:	
Postal Code:	Patient Phone No.: (###) ###-####
Investigation / Outbreak No.:	

For outbreaks or investigations, the requisition must include the assigned outbreak or investigational number.

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). COVID-19 virus test requisition [Internet]. Toronto, ON: Queen's Printer for Ontario; 2019 [cited 2020 Sep 09]. Available from: <https://www.publichealthontario.ca/-/media/documents/lab/2019-ncov-test-requisition.pdf?la=en>

## Testing Outside the Standard PHO Laboratory Algorithm

- PHO Laboratory can be consulted if considering additional testing, e.g. additional MRVP or FLUVID beyond the first 4 specimens on symptomatic patients in an outbreak.
- Use the General Test Requisition if only ordering non-COVID tests
  - <https://www.publichealthontario.ca/-/media/documents/lab/general-test-requisition.pdf?la=en>
- For requests for additional testing in outbreak settings, contact PHO Laboratory's Customer Service Centre at 416-235-6556 or 1-877-604-4567 (toll-free).

## Keep on Top of What Viruses are Circulating

- Health care providers are reminded to regularly review PHO's Ontario Respiratory Pathogen Bulletin (ORPB). The ORPB is updated weekly and provides an overview of influenza and other respiratory viruses.
- Data on influenza positivity is also presented at the local public health unit level to provide jurisdiction-specific information.
  - <https://www.publichealthontario.ca/ORPB>
- Laboratory-Based Respiratory Pathogen Surveillance Report summarizes all respiratory pathogen testing done at PHO Laboratory
  - <https://www.publichealthontario.ca/en/data-and-analysis/infectious-disease/laboratory-respiratory-pathogen-surveillance>

## COVID-19 Ontario Data

- Ontario COVID-19 Data tool:
  - <https://www.publichealthontario.ca/en/data-and-analysis/infectious-disease/covid-19-data-surveillance/covid-19-data-tool>
- COVID-19 Weekly Epidemiologic Summary
  - <https://www.publichealthontario.ca/-/media/documents/ncov/epi/covid-19-weekly-epi-summary-report.pdf?la=en>
- COVID-19 Daily Epidemiologic Summary
  - <https://www.publichealthontario.ca/-/media/documents/ncov/epi/2020/covid-19-daily-epi-summary-report.pdf?la=en>

## PHO Continues to Provide Testing For:

- Novel Influenzas
- Antiviral resistance in influenza
- Middle East Respiratory Syndrome Coronavirus (MERS-CoV)
- Enterovirus D68

Coming Soon...



 LABSTRACT – September 2020

## Respiratory Virus Testing Update

## Acknowledgements

- Sarah Wilson
- Emily Karas
- Karin Hohenadel
- Erik Kristjanson
- Sandya Menon
- Romy Olsha
- Adriana Peci
- Michael Whelan
- Andrea Saunders
- Elizabeth Brown
- Joanne Kearon
- Tara Harris
- Ministry of Health
- Public health units
- Public Health Ontario
  - Knowledge Services
  - Communications
  - Library
  - Jessica Lee
  - Lucia Zdeb



**For More Information About This Presentation, Contact:**

[CDEPR@oahpp.ca](mailto:CDEPR@oahpp.ca)

Public Health Ontario keeps Ontarians safe and healthy. Find out more at  
**PublicHealthOntario.ca**