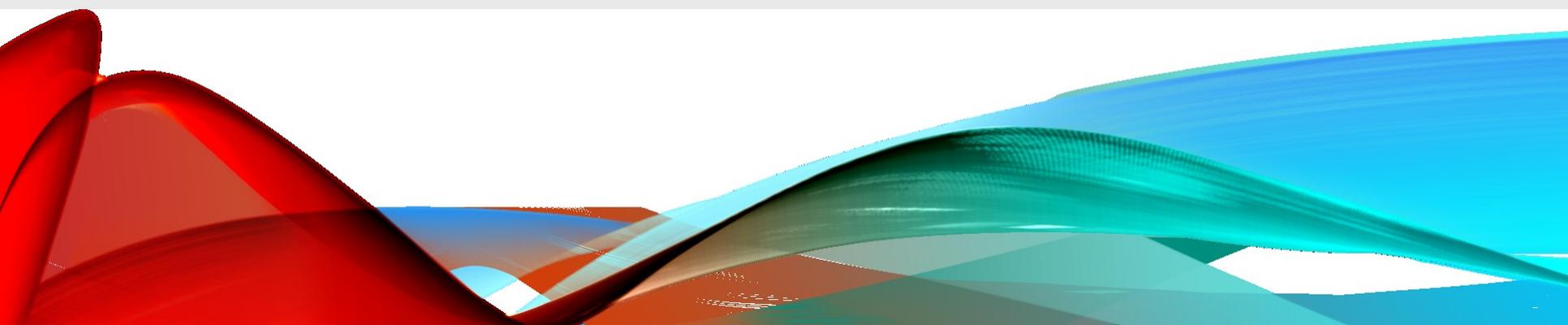




**GUIDANCE ON SEASONAL INFLUENZA
VACCINATION AND ANTIVIRAL DRUG USE IN
CANADA FOR THE 2020–2021 INFLUENZA SEASON
IN THE CONTEXT OF COVID-19**



OBJECTIVES

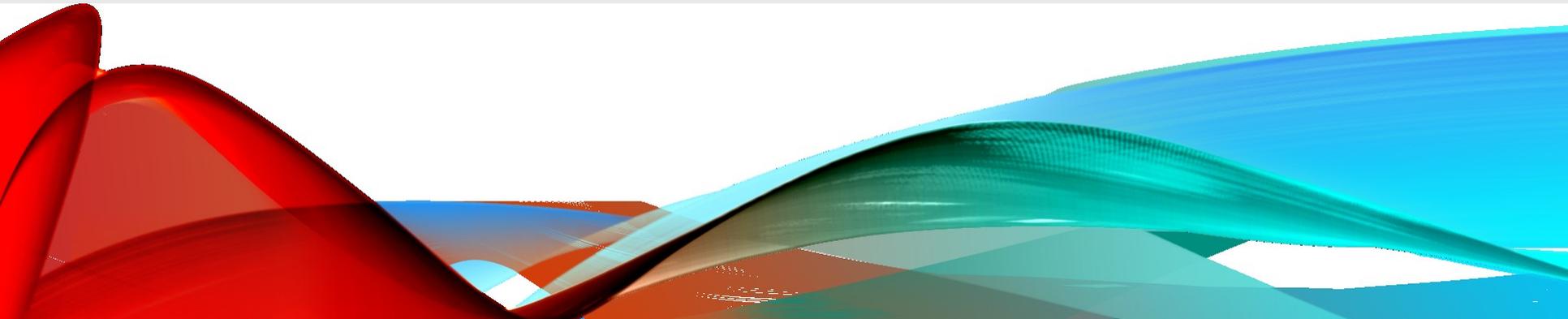
1. To provide an overview of the burden of seasonal influenza last year in Canada and recent epidemiological trends nationally and internationally in the context of the COVID-19 pandemic
2. To highlight key National Advisory Committee on Immunization (NACI) recommendations on seasonal influenza vaccine use for the 2020–2021 season
3. To relay recent recommendations on the delivery of influenza vaccine during the COVID-19 pandemic
4. To summarize the Association of Medical Microbiology and Infectious Disease (AMMI) Canada guidance on the use of antiviral drugs for seasonal influenza
5. To share key messages and resources about seasonal influenza prevention
6. To provide an opportunity to pose questions to infectious disease experts about seasonal influenza and antiviral use during COVID-19 pandemic.

PRESENTATION OUTLINE

1. Burden of seasonal influenza in Canada
 - Presented by Dr. Gerald Evans
2. NACI recommendations on seasonal influenza vaccine use and vaccine availability for the 2019–2020 season
 - Presented by Dr. Ian Gemmill
3. Recommendations on delivery of influenza vaccine during COVID-19 pandemic
 - Presented by Dr. Robyn Harrison
4. AMMI Canada guidance on the use of antiviral drugs for seasonal influenza
 - Presented by Dr. Gerald Evans
5. Key messages and resources about seasonal influenza prevention and control
 - Presented by Dr. Ian Gemmill

BURDEN OF SEASONAL INFLUENZA IN CANADA

Dr. Gerald Evans



INFLUENZA INFECTION AND ILLNESS

- In a typical year, there are an estimated 12,200 hospitalizations and 3,500 deaths attributable to influenza in Canada each year.
 - The expected burden for 2020-2021 is more unpredictable than usual due to COVID-19
- Increased susceptibility of high risk groups to influenza illness may be due to a number of individual characteristics, living or working in certain environments that present higher risk of influenza transmission, or both
- Groups at greater risk for developing serious complications as a result of influenza infection include:
 1. Infants and young children (< 5 years of age)
 2. Pregnant women
 3. Adults and children with certain chronic health conditions e.g. diabetes
 4. People of any age residing in nursing homes and other chronic care facilities
 5. Adults > 65 years of age

INFLUENZA INFECTION AND ILLNESS

- High risk chronic health conditions include:
 - Cardiac or pulmonary disorders (including bronchopulmonary dysplasia, cystic fibrosis and asthma)
 - Diabetes mellitus and other metabolic diseases
 - Cancer or immune compromising conditions, due to underlying disease, therapy or both
 - Renal disease
 - Anemia or hemoglobinopathy
 - Neurologic or neurodevelopment conditions
 - Morbid obesity (BMI of 40 and over)
 - Children 6 months – 18 years of age undergoing chronic treatment with ASA, because of the potential increase in Reye's syndrome associated with influenza

INFLUENZA AND COVID-19

High risk groups for influenza and COVID-19 largely overlap. Many of the individual characteristics and living & working environments that make a person more susceptible to severe or complicated influenza can also make a person more susceptible to severe COVID-19

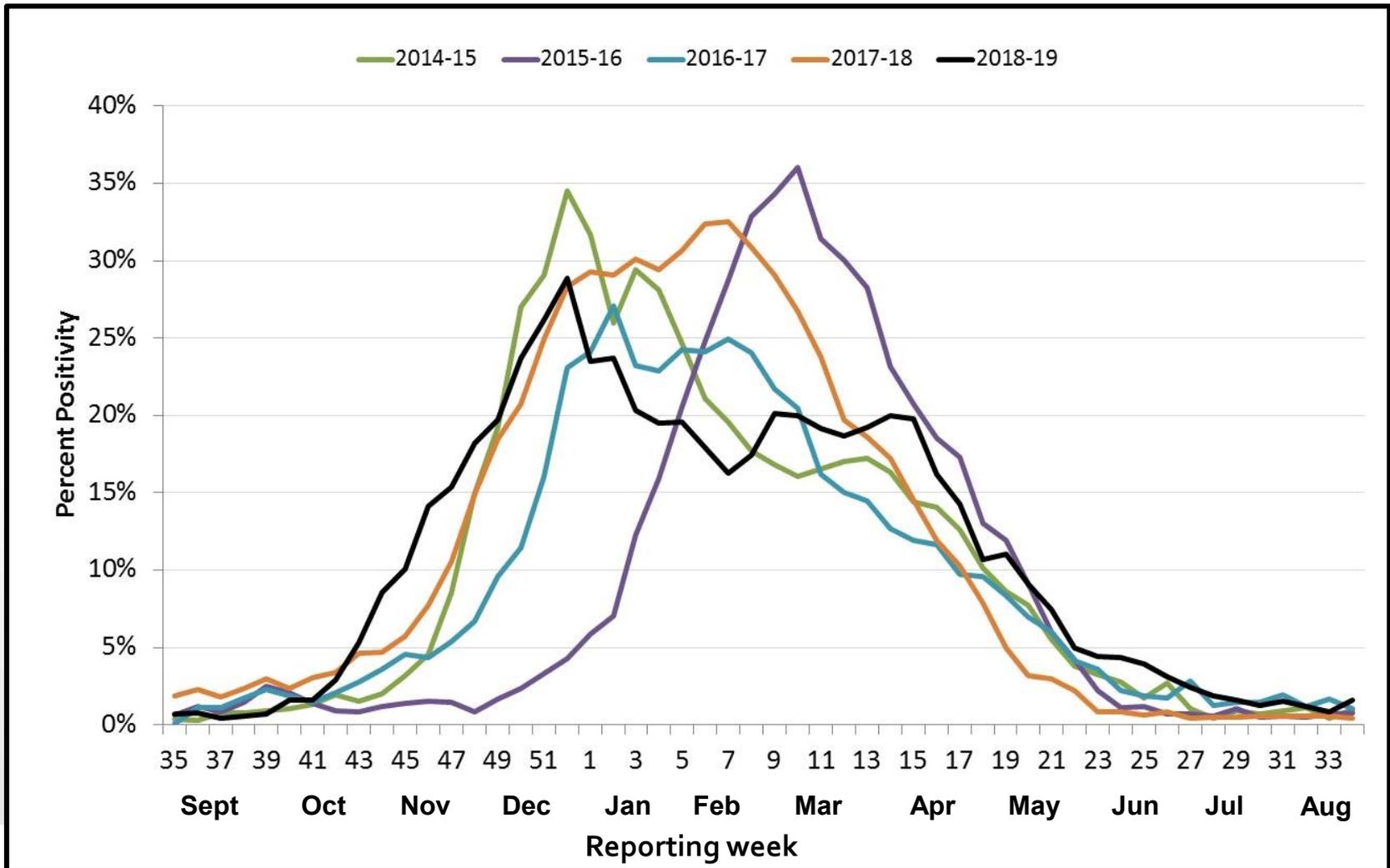
There are a few exceptions:

- Young children do not appear to be at higher risk of severe COVID-19 infection
- Pregnant women may not be at higher risk of COVID-19 infection

COVID-19 and influenza are expected to co-circulate this fall/winter.

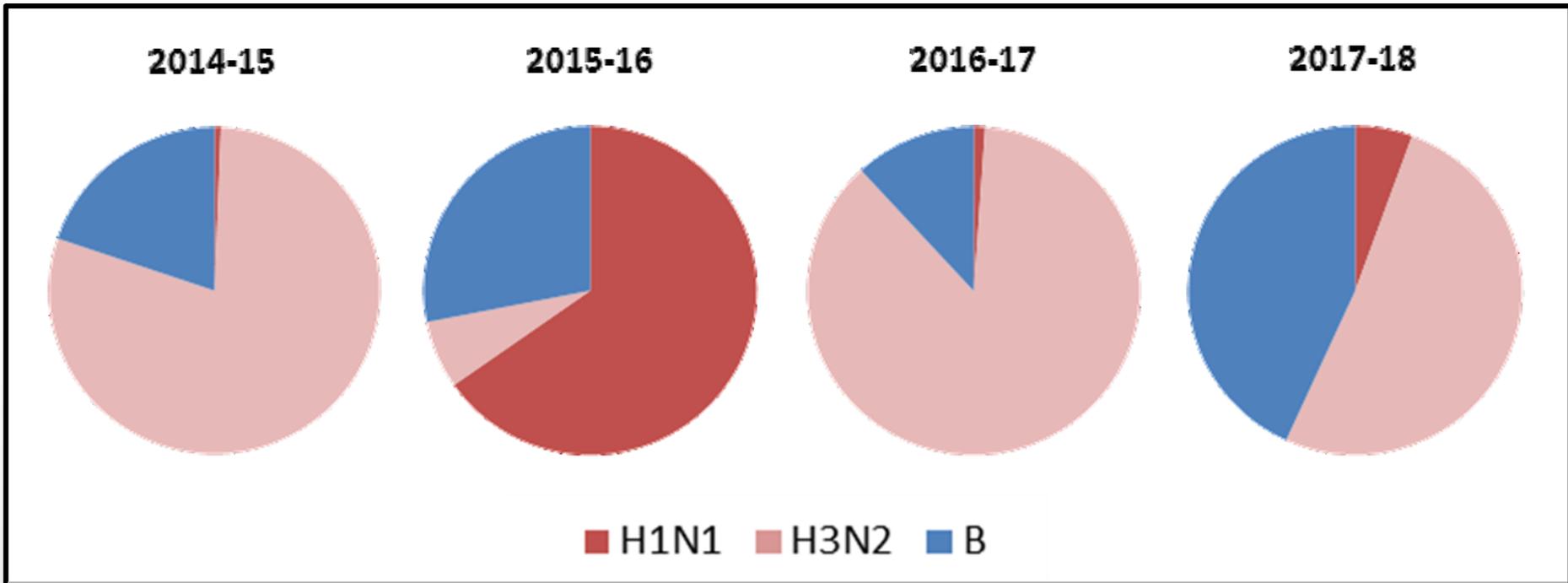
- The risk of co-infection with influenza and COVID-19 are unknown at this time, but could greatly impact people who are at high risk of both diseases

PEAK INFLUENZA SEASON ACTIVITY IN A TYPICAL YEAR



Source: FluWatch Program, Public Health Agency of Canada. Data were provided by 37 sentinel laboratories (Newfoundland (1), Prince Edward Island (1), Nova Scotia (1), New Brunswick (1), Quebec (6), Ontario (16), Manitoba (1), Saskatchewan (2), Alberta (1), and British Columbia (7)) participating in the FluWatch Respiratory Virus Detection Surveillance System (RVDSS).

PROPORTION OF LAB DETECTIONS IN CANADA BY INFLUENZA TYPE AND SUBTYPE



Source: FluWatch Program, Public Health Agency of Canada. Data were provided by 37 sentinel laboratories (Newfoundland (1), Prince Edward Island (1), Nova Scotia (1), New Brunswick (1), Quebec (6), Ontario (16), Manitoba (1), Saskatchewan (2), Alberta (1), and British Columbia (7)) participating in the FluWatch Respiratory Virus Detection Surveillance System (RVDSS).

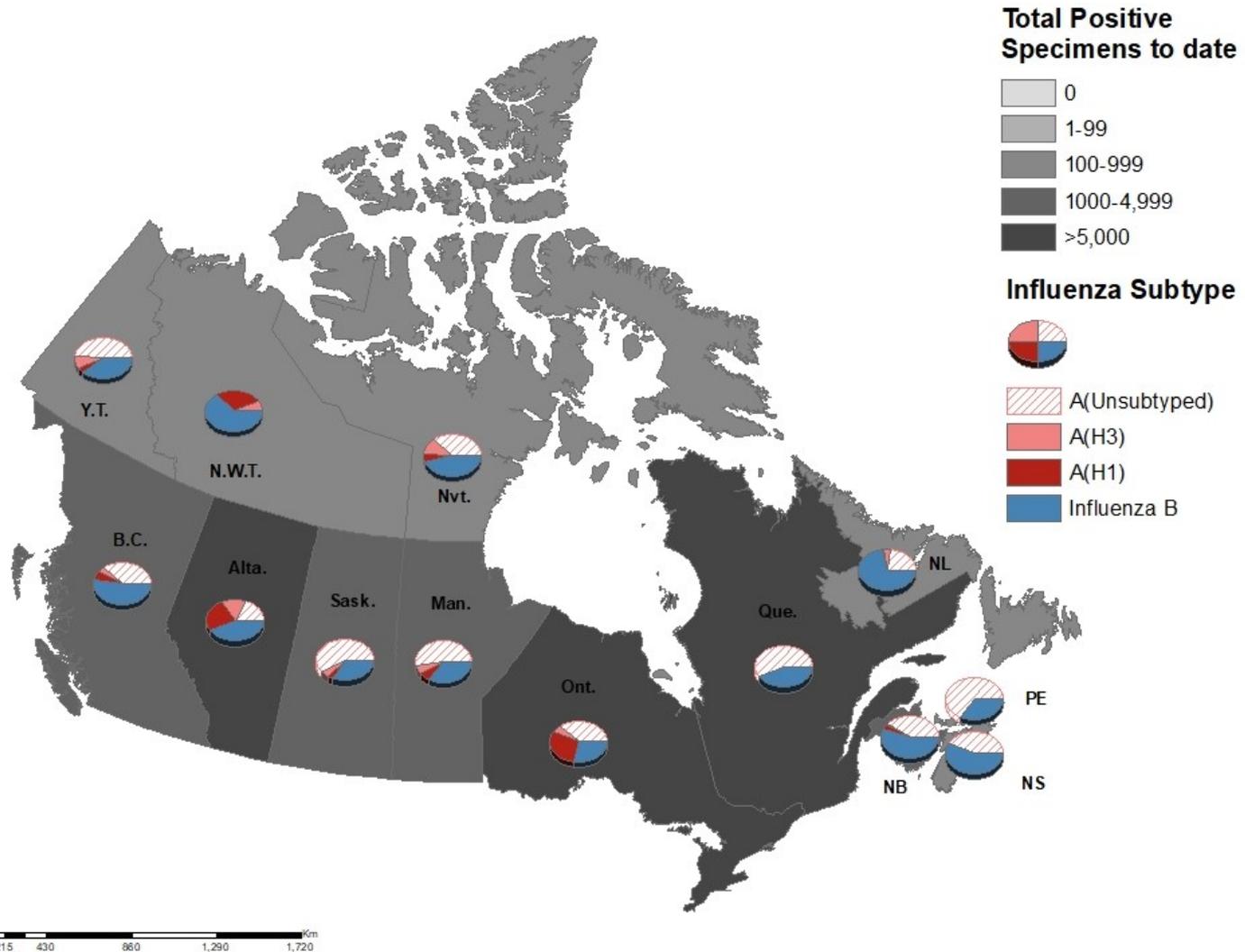
2019–2020 CANADIAN INFLUENZA SEASON

- The FluWatch program collects and analyses data from Provincial and Territorial ministries of health, Provincial public health and hospital laboratories, sentinel primary care practitioners, sentinel hospital and vaccine effectiveness networks, and individual Canadians.
- For the most up-to-date information, refer to the Weekly FluWatch influenza surveillance reports on the FluWatch webpage
- COVID-19 has affected how influenza surveillance data can be interpreted, and indicators may be influenced by:
 - Changes to healthcare-seeking behaviour
 - Implementation of public health measures
 - Influenza testing capacity

2019–2020 CANADIAN INFLUENZA SEASON

- Influenza A was the predominant circulating virus last season (59%)* and A(H1N1) was the predominant influenza A subtype (68%). However, A(H1N1), A(H3N2) and B strains were all co-circulating to varying degrees across the country.
- Influenza activity plateaued between January and February, before dropping off rapidly in March likely due to social distancing associated with the COVID-19 pandemic
- Influenza activity has been at a record low in Canada for the later part of the typical season, with the percentage of tests positive for influenza the lowest recorded for the past 9 seasons

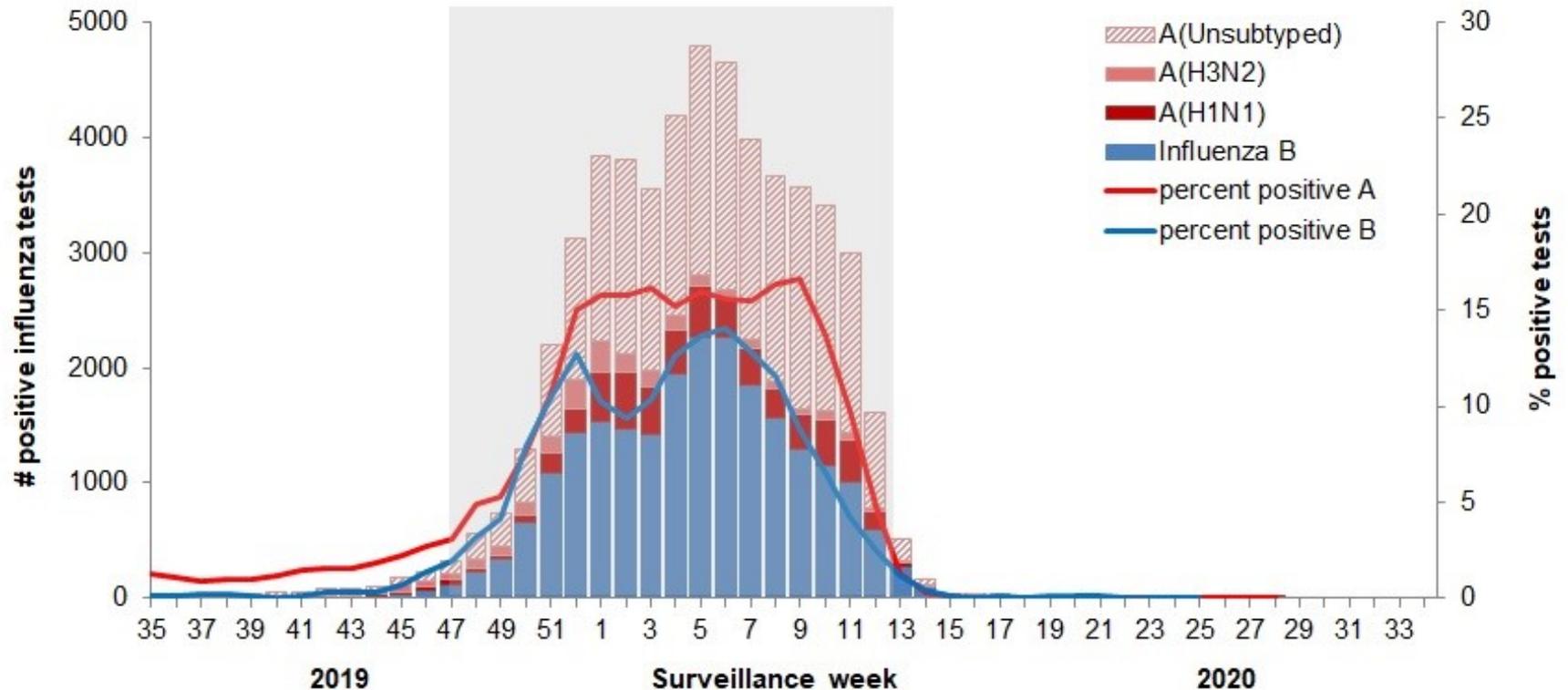
NUMBER OF LABORATORY DETECTIONS OF INFLUENZA IN CANADA, 2019–2020



Source: FluWatch Program, Public Health Agency of Canada. Data were provided by 37 sentinel laboratories (Newfoundland (1), Prince Edward Island (1), Nova Scotia (1), New Brunswick (1), Quebec (6), Ontario (16), Manitoba (1), Saskatchewan (2), Alberta (1), and British Columbia (7)) participating in the FluWatch Respiratory Virus Detection Surveillance System (RVDSS).

LABORATORY-CONFIRMED INFLUENZA CASES REPORTED

Number of positive influenza tests and percentage of tests positive, by type, subtype and report week, Canada

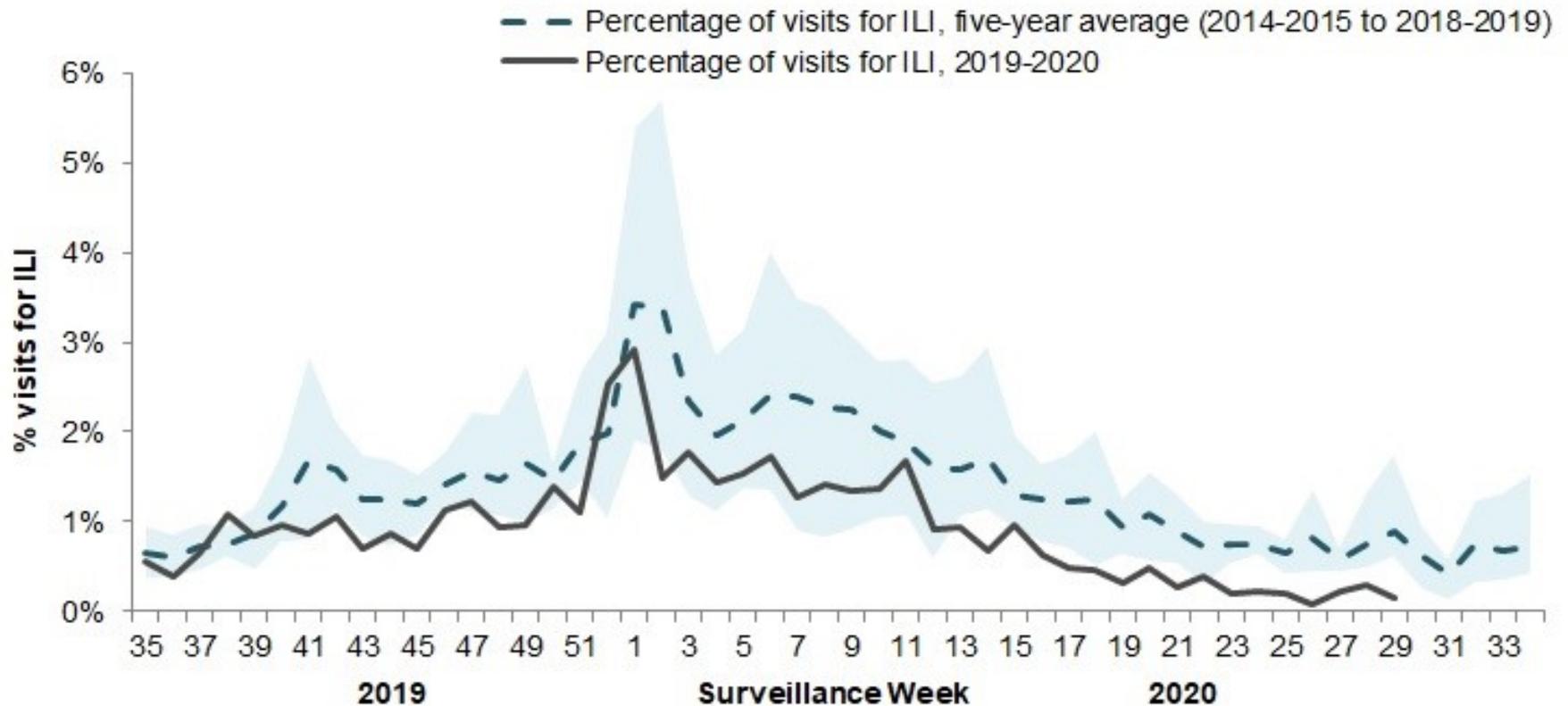


The shaded area indicates weeks where the positivity rate was at least 5% and a minimum of 15 positive tests were observed, signalling the period of [seasonal influenza activity](#).

Source: FluWatch Program, Public Health Agency of Canada. Data were provided by 37 sentinel laboratories (Newfoundland (1), Prince Edward Island (1), Nova Scotia (1), New Brunswick (1), Quebec (6), Ontario (16), Manitoba (1), Saskatchewan (2), Alberta (1), and British Columbia (7)) participating in the FluWatch Respiratory Virus Detection Surveillance System (RVDSS).

VISITS TO HEALTH CARE PROFESSIONALS FOR INFLUENZA-LIKE ILLNESS

Figure 4 – Percentage of visits for ILI reported by sentinels by report week, Canada



The shaded area represents the maximum and minimum percentage of visits to health care professionals for influenza-like illness (ILI) reported by health care providers from 2014–2015 to 2018–2019. Source: FluWatch Program, Public Health Agency of Canada. Data were provided by an average 106 sentinel healthcare providers.

2019–2020 CANADIAN VACCINE EFFECTIVENESS

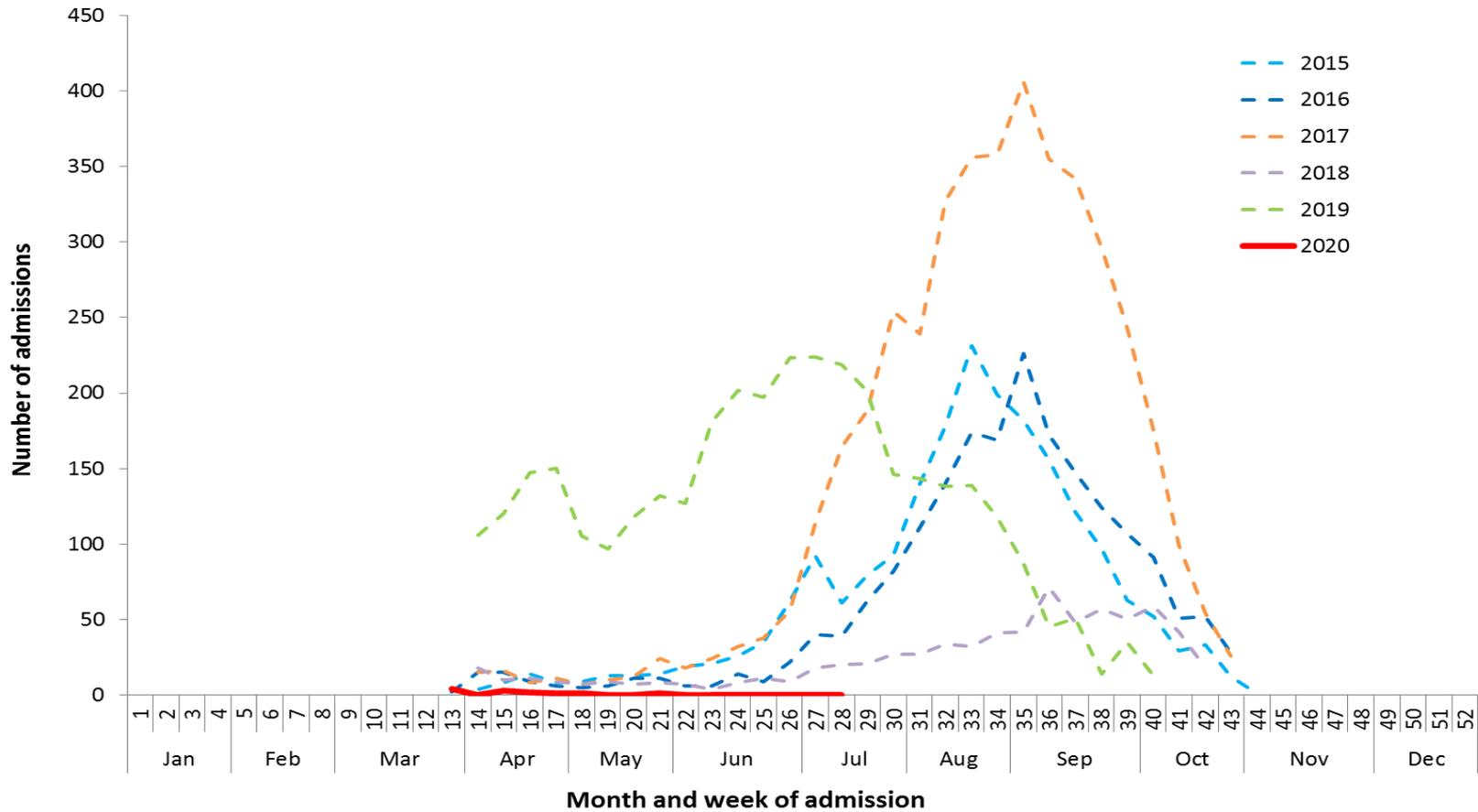
- Interim VE estimates from the Canadian Sentinel Practitioner Surveillance Network (SPSN) show the vaccine was 58% effective overall.
- The vaccine provided substantial protection against all strains last season:
 - A(H1N1)pdm09: 44%
 - A(H3N2): 62%
 - B: 69%
- Interim VE estimates from SPSN are typically released in late winter each year.

2020 SOUTHERN HEMISPHERE INFLUENZA SEASON

- The Southern Hemisphere influenza season is of interest, but does not necessarily predict what will happen in Canada.
- Australia's flu season typically starts in June but likely due to ongoing public health measures and COVID-19 precautions globally, there has been very low influenza activity in the Southern Hemisphere this season
- Additional contributing factors:
 - Composition of their seasonal vaccine along with increase vaccine uptake
 - Although influenza activity has been low, demand for the influenza vaccine has been very high with some states reporting 200% increase compared with 2019
 - Viral interference from SARS-CoV-2
- Implementation of intense public health measures was done much closer to the start of Southern Hemisphere's season
- Canada is in a very different place this fall than southern hemisphere countries were in April, at the start of the COVID-19 pandemic

AUSTRALIA 2020: NUMBER OF LABORATORY-CONFIRMED CASES

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



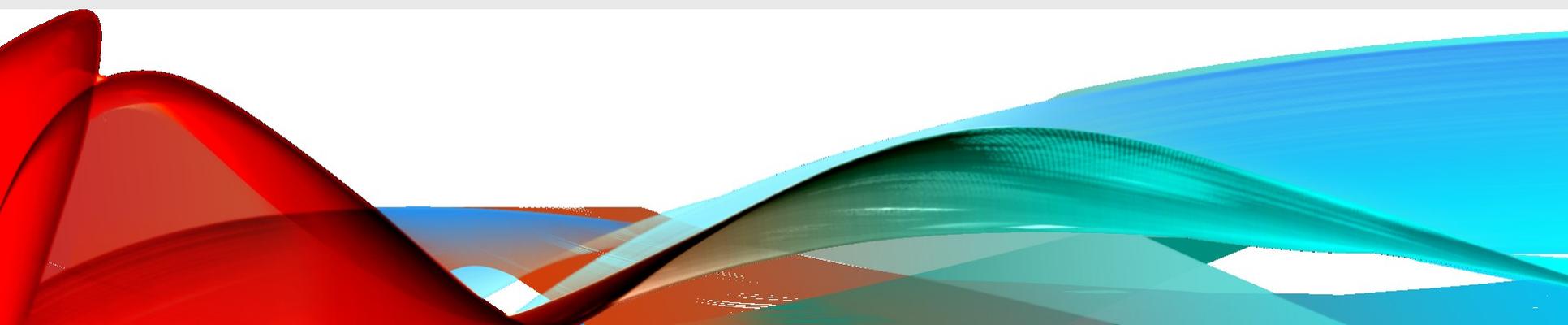
Source: FluCAN

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



RECOMMENDATIONS ON SEASONAL INFLUENZA VACCINE USE AND VACCINE AVAILABILITY FOR THE 2020–2021 SEASON

Dr. Ian Gemmill



NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION (NACI)

NACI is an external advisory body to the Public Health Agency of Canada that makes recommendations on the optimal use of vaccines to protect Canadians.

NACI makes recommendations for the vaccination of individuals and more broadly for vaccine programs.

- Recommendations on the use of vaccines are based on NACI's evidence-based process.

Every year, NACI issues a Statement on Seasonal Influenza Vaccine that informs health care providers on the optimal use of influenza vaccines available for use in Canada, based on the most up to date data available

This year, NACI is also leading or collaborating on the development of additional influenza vaccine recommendations and guidance in the context of COVID-19

INFLUENZA VACCINE COMPOSITION FOR 2020–2021

The influenza vaccines for use in Canada for the 2020–2021 season contain the strains recommended by the World Health Organization (WHO) for the Northern Hemisphere:

- Trivalent vaccines:
 - A/Guangdong-Maonan/SWL1536/2019 (H1N1)pdm09-like virus*
 - A/Hawaii/70/2019 (H1N1)pdm09-like virus in cell-based vaccines
 - A/Hong Kong/2671/2019 (H3N2)-like virus*
 - B/Washington/02/2019 (B/Victoria lineage)-like virus*
- Quadrivalent vaccines:
 - Strains included in the trivalent vaccine, plus B/Phuket/3073/2013-like virus (B/Yamagata/16/88 lineage)

Slightly different strains have been chosen for cell-based vaccines due to their growth properties.

* different from the 2019–2020 influenza vaccine composition

INFLUENZA VACCINES AVAILABLE IN CANADA FOR 2020-2021

Generic name	Brand name	Age indication
Quadrivalent inactivated influenza vaccine (IIV ₄)	<ul style="list-style-type: none"> Flulaval[®] Tetra Fluzone[®] Quadrivalent 	6 months and older
	<ul style="list-style-type: none"> Influvac[®] Tetra Afluria[®] Tetra 	3 years and older
	<ul style="list-style-type: none"> Flucelvax[®] Quad* (cell culture-based) 	5 years and older
Live-attenuated influenza vaccine (LAIV)	<ul style="list-style-type: none"> FluMist[®] Quadrivalent 	9 years and older
Trivalent inactivated influenza vaccine (IIV ₃)	<ul style="list-style-type: none"> Agriflu[®] Fluviral[®] 	2–59 years
Adjuvanted IIV ₃	<ul style="list-style-type: none"> Fluad Pediatric[®] 	6 months and older
	<ul style="list-style-type: none"> Fluad[®] 	6–23 months
High-dose IIV ₃	<ul style="list-style-type: none"> Fluzone[®] High-Dose 	65 years and older

* New product for this season

CHOICE OF SEASONAL INFLUENZA VACCINE

Group	Recommendation for persons without a contraindication to the vaccine
6–23 months	IIV ₄ should be used. If IIV ₄ is not available, either unadjuvanted or adjuvanted IIV ₃ should be used. LAIV is not licenced for children < 24 months of age.
2–17 years	<p>IIV₄ or LAIV₄ should be used. If IIV₄ is not available, IIV₃ should be used.</p> <p>LAIV is contraindicated for children currently receiving aspirin or aspirin-containing therapy, but may be given to:</p> <ul style="list-style-type: none"> - children with stable HIV infection, if the child is currently being treated with HAART and has adequate immune function. - children with cystic fibrosis who are not treated with immunosuppressive drugs (e.g., prolonged systemic corticosteroids). - children with stable, non-severe asthma.
18–59 years	<p>IIV₃, IIV₄ or LAIV₄ should be used.</p> <p>LAIV is contraindicated for adults with any of the high-risk chronic health conditions listed above.</p>
60–64 years	IIV ₃ or IIV ₄ should be used.
65 years and older	IIV ₃ high dose should be used over IIV ₃ standard dose. IIV ₃ adjuvanted and IIV ₄ standard dose may also be used.
Pregnant women	IIV ₃ or IIV ₄ should be used. LAIV is contraindicated.
Healthcare workers	IIV ₃ or IIV ₄ should be used. LAIV is not recommended.

RECOMMENDED DOSAGE AND ROUTE BY AGE

Age group	Influenza vaccine type (route of administration)				Number of doses required
	IIV ₃ or IIV ₄ (IM)	IIV ₃ adjuvanted (IM)	IIV ₃ high dose (IM)	LAIV (intranasal)	
6–23 months	0.5 mL	0.25 mL	-	-	1 or 2*
2–8 years	0.5 mL	-	-	0.2 mL (0.1 mL per nostril)	1 or 2*
9–17 years	0.5 mL	-	-	0.2 mL (0.1 mL per nostril)	1
18–59 years	0.5 mL	-	-	0.2 mL (0.1 mL per nostril)	1
60–64 years	0.5 mL	-	-	-	1
≥65 years	0.5 mL	0.5 mL	0.5 mL	-	1

* Children 6 months to less than 9 years of age receiving seasonal influenza vaccine for the first time in their life should be given 2 doses of influenza vaccine, with a minimum interval of 4 weeks between doses. Children 6 months to less than 9 years of age who have been properly vaccinated with one or more doses of seasonal influenza vaccine in the past should receive 1 dose of influenza vaccine per season thereafter

NEW IN 2020–2021: MAMMALIAN CELL-BASED INFLUENZA VACCINE

NACI reviewed the evidence on influenza vaccines produced using mammalian cell-culture, as a new vaccine is available in Canada (Flucelvax[®] Quad).

- Mammalian cell culture-based technology is an innovative technique for influenza vaccine manufacturing that may be a valuable alternative to overcome some of the challenges associated with conventional egg-based influenza vaccine production.
- Flucelvax[®] Quad (IIV₄-cc) is the first influenza vaccine authorised in Canada, not made on eggs.
- The vaccine was authorised for use in adults and children 9 years of age and older in 2019.
- NACI has not previously made a recommendation on cell culture-based influenza vaccines in any population.

NEW IN 2020–2021: MAMMALIAN CELL-BASED INFLUENZA VACCINE

NACI recommends that Flucelvax[®] Quad may be considered among the quadrivalent influenza vaccines offered to adults and children ≥ 9 years of age for their annual influenza vaccination.

- Flucelvax[®] Quad is considered effective, immunogenic, and safe in adults and children ≥ 9 years of age, and
- It has a comparable immunogenicity and safety profile to egg-based influenza vaccines already licensed in Canada.

NEW IN 2020–2021: USE OF LAIV IN HIV-INFECTED INDIVIDUALS

Live vaccines are generally contraindicated in persons with immunodeficiency, out of concern that the live virus may cause disease in the host.

- However, criteria exist for the use of live vaccines.

The inclusion of LAIV as an option for some HIV-infected children may improve uptake and acceptability.

NACI reviewed the evidence on the use of LAIV in all HIV-infected individuals to support a new recommendation.

NEW IN 2020–2021: USE OF LAIV IN HIV-INFECTED INDIVIDUALS

LAIV may be considered as an option for annual vaccination of children 2–17 years of age with stable HIV infection on highly active antiretroviral therapy (HAART) and with adequate immune function.

LAIV should be considered only in children with HIV who meet the following criteria:

- Receiving HAART for ≥ 4 months;
- CD₄ count $\geq 500/\mu\text{L}$ if 2–5 years of age, or $\geq 200/\mu\text{L}$ if 6–17 years of age (measured within 100 days before administration of LAIV); and
- HIV plasma RNA $< 10,000$ copies/mL (measured within 100 days before administration of LAIV).

Intramuscular (IM) influenza vaccination is still considered the standard for children living with HIV. However, if IM vaccination is not accepted, LAIV can be used for children meeting the criteria outlined above.

LAIV remains contraindicated for adults with HIV due to insufficient evidence in this population.

NEW IN 2020–2021: REDUCED OBSERVATION PERIOD POST-VACCINATION

Large immunization clinics could contribute to increased COVID-19 transmission if not managed appropriately. Adjustments to regular immunization practices and settings are required this fall. Many public health and additional infection prevention measures are being recommended to reduce this risk.

Reducing the observation time post-vaccination below 15 minutes for healthy individuals could provide an additional option to reduce crowding.

- Would decrease interactions among vaccine recipients and between vaccine recipients and clinic staff.

NACI reviewed the evidence on reducing the observation time post-vaccination to determine if it was safe to do so.

NEW IN 2020–2021: REDUCED OBSERVATION PERIOD POST-VACCINATION

Evidence shows that many anaphylactic reactions occur between 0 to 15 minutes post-vaccination.

- Some but not all anaphylactic reactions will be captured in the first 5 minutes
- Syncope occurred very quickly and seizures often occurred after 15 minutes.

The risk of SARS-CoV-2 transmission in a given immunization setting will vary; therefore a risk assessment would be needed to weigh the risks of not identifying serious adverse events versus the benefits of less interaction between people.

- One important factor in determining this balance will be the level of COVID-19 activity in the community.

NEW IN 2020–2021: REDUCED OBSERVATION PERIOD POST-VACCINATION

A shorter observation period should be considered only if the following conditions are met. The vaccine recipient:

1. has a past history of receipt of influenza vaccine;
2. has no known history of severe allergic reactions to any component of the influenza vaccine being considered for administration*;
3. no history of other immediate post-vaccination reactions (e.g., syncope with or without seizure) after receipt of vaccines;

*Note that novel technology vaccine recipients should be exempt from reduced post-observation eligibility.

NEW IN 2020–2021:

REDUCED OBSERVATION PERIOD POST-VACCINATION

4. will not be operating a motorized vehicle or self-propelled or motorized wheeled transportation (e.g., bicycle, skateboard, rollerblades, scooter), or machinery for a minimum of 15 minutes after vaccination; and
5. is accompanied by a parent/guardian/responsible adult who will act as a chaperone to monitor the vaccine recipient for a minimum of 15 minutes post-vaccination. The vaccine recipient and chaperone:
 - are aware of when and how to seek post-vaccination advice and given instructions on what to do if assistance and medical services are required; and
 - agree to remain in the post-vaccination waiting area for the post-vaccination observation period (5 minutes) and to notify staff if the recipient feels or looks at all unwell before leaving which would necessitate a longer observation period.

WHO SHOULD RECEIVE THE INFLUENZA VACCINE?

NACI recommends influenza vaccination for everyone 6 months of age and older who does not have a contraindication to the vaccine.

NACI also specifically recommends influenza vaccination for the following groups:

- people at high risk of influenza-related complications or hospitalization, including people with certain chronic health conditions, pregnant women, older adults, and young children
- people capable of transmitting influenza to those at high risk, including household contacts of infants under 6 months of age and care providers of young children and those at high risk of influenza complications
- people who provide essential community services
- people in direct contact with poultry infected with avian influenza during culling operations

GROUPS AT HIGH RISK: PEOPLE WITH CHRONIC HEALTH CONDITIONS

A number of chronic health conditions are associated with increased risk of influenza-related complications:

- cardiac or pulmonary disorders (including broncho-pulmonary dysplasia, cystic fibrosis and asthma)
- diabetes mellitus and other metabolic diseases
- cancer, immune compromising conditions (due to underlying disease, therapy or both)
- renal disease
- anaemia or haemoglobinopathy
- neurologic or neurodevelopment conditions
- morbid obesity (BMI ≥ 40)
- children and adolescents undergoing treatment for long periods with acetylsalicylic acid (potential increase of Reye's syndrome associated with influenza)

Influenza infection can also lead to worsening of pre-existing chronic conditions.

WHO SHOULD RECEIVE THE INFLUENZA VACCINE DURING COVID-19 PANDEMIC?

In light of COVID-19, people who fall under these two additional groups are also particularly recommended to receive the vaccine:

- Anyone who is at high risk of COVID-19 related illness
- Anyone who is capable of transmitting influenza to those at high risk of severe and critical illness related to COVID-19

Although there is significant overlap in risk groups for influenza and COVID-19, there are some groups who are not currently listed in the NACI statement.

- Example: people living in group homes or communal housing

VACCINE SCHEDULE

NACI recommends annual influenza vaccination for two reasons:

- as the body's immune response from vaccination diminishes within a year
- and the circulating influenza viruses change frequently, necessitating annual change in vaccine strains

Children 6 months to under 9 years of age receiving seasonal influenza vaccine for the first time in their life should be given two doses, with a minimum interval of 4 weeks between doses.

Children who have been previously immunized with any number of doses of seasonal influenza vaccine and adults should receive 1 dose of influenza vaccine each year.

CONTRAINDICATIONS

All influenza vaccines are contraindicated for:

- People who have had an anaphylactic reaction to a previous dose of influenza vaccine
- People who have had an anaphylactic reaction to any of the vaccine components, with the exception of egg
 - Allergy to egg protein was considered a contraindication on theoretical grounds until 2014, when it was shown that:
 - The amount of egg protein in the vaccine is insufficient to cause a severe allergic reaction
 - Observations of persons with severe allergic reaction to egg protein did not identify an reaction that was severe or life-threatening

CONTRAINDICATIONS

LAIV is not for:

- children less than 24 months of age
- individuals with severe asthma or those with medically attended wheezing in the 7 days prior to the proposed date of immunization
- pregnant women, because it is a live attenuated vaccine and there is a lack of safety data at this time
- people with immune compromising conditions, due to underlying disease, therapy, or both

INFLUENZA VACCINE SAFETY

Safety of influenza vaccines in Canada is continually monitored by the Canadian Adverse Events Following Immunization Surveillance System (CAEFISS)

- Bi-annual and quarterly reports on adverse events can be found on the CAEFISS [webpage](#).

During the COVID-19 pandemic, CAEFISS and other Canadian surveillance networks will be monitoring for any emerging issues related to the safety of influenza vaccine and COVID-19.

WHAT YOU CAN DO AS HEALTHCARE PROVIDERS

As a healthcare provider, patients trust your recommendations the most; you are a key driver for vaccine uptake and confidence.

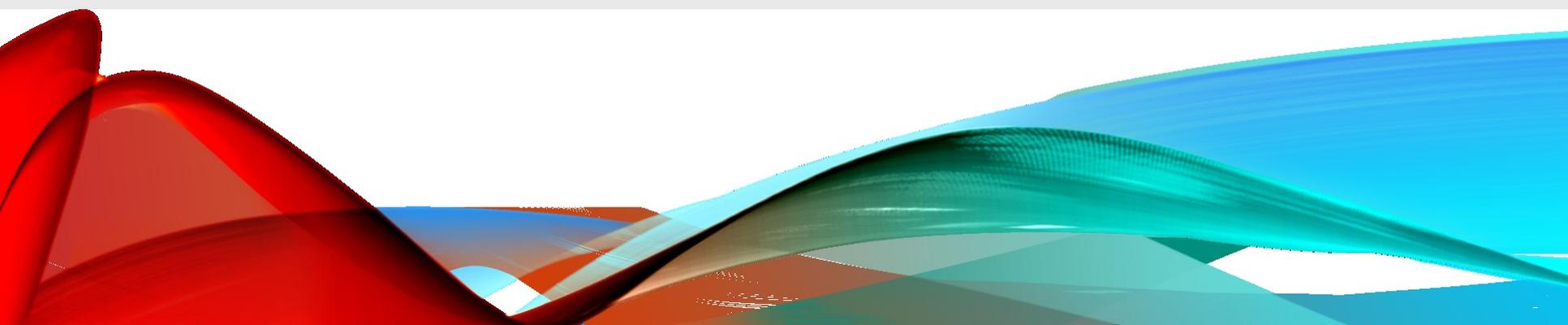
To help to prevent the spread of influenza, it is recommended that healthcare providers:

- receive influenza vaccine themselves to help to prevent transmission of influenza to their patients
- use every opportunity to vaccinate people at risk, even after influenza activity has been documented in the community
- discuss the risks and benefits of the vaccine with patients, as well as the risks of not being vaccinated
- remind patients about influenza prevention practices, including:
 - washing your hands often
 - avoid touching eyes, nose and mouth
 - coughing and sneezing into the bend of one's arm
 - keeping frequently touched surfaces clean
 - staying home while sick



DELIVERY OF INFLUENZA VACCINE AND CONTINUITY OF ANNUAL IMMUNIZATION PROGRAMS DURING THE COVID-19 PANDEMIC

Dr. Robyn Harrison



PROVIDING INFLUENZA VACCINE DURING THE COVID-19 PANDEMIC

Influenza vaccination is an especially important public health activity this fall and winter. However, the COVID-19 pandemic also brings a series of anticipated challenges for the delivery of the seasonal influenza immunization programs.

- Additional infection prevention and public health measures are needed to prevent transmission of SARS-CoV-2 to or amongst staff, volunteers, and vaccine recipients and families
- Suitability and capacity of usual venues for immunization clinics could be affected
- Access to sufficient supplies of personal protective equipment (PPE) could be relevant
- Public fear of exposure to COVID-19 or increased demand for influenza vaccination may be particularly relevant this season
- A healthy workforce and limiting any potentially preventable quarantines will be important for business continuity.

The Public Health Agency of Canada has released guidance on the delivery of influenza vaccine in the presence of COVID-19 to address these challenges: <https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/guidance-influenza-vaccine-delivery-covid-19.html>

PROVIDING INFLUENZA VACCINE DURING COVID-19 PANDEMIC

Adaptations to usual immunization processes are needed. Priority modifications should address:

1. Screening for illness
2. Physical distancing (distance of at least two metres)
3. Added Infection Prevention and Control measures including personal protective equipment (PPE)

Jurisdictions should consider a wide range of strategies to deliver influenza vaccine, with the goal of reducing crowding while maintaining or increasing vaccine uptake.

Alternate models of influenza vaccine delivery can include the use of non-traditional settings as permitted by provincial/territorial legislation (e.g., outdoor clinics) .

If demand is high, potential vaccine supply limitations may affect the decision to use some alternate delivery models.

SCREENING FOR ILLNESS

Everyone attending an immunization clinic/venue should be screened by questionnaire before entry:

- Staff and volunteers should be screened before each shift
- Everyone (including vaccine recipients and accompanying persons) should be passively screened (through signage) and actively screened for illness.
- Options for screening include:
 - Providing or linking to an online screening tool to be used the day of immunization;
 - Pre-screening by telephone or upon arrival but before vaccine recipients enter the clinic (e.g., while still in their car); and
 - Screening in person, preferably before entering the building.

DEFERRAL OF IMMUNIZATION

During the COVID-19 pandemic, individuals with symptoms of acute respiratory infection, should defer influenza immunization until they have recovered.

- Includes non-severe symptoms such as sore throat or runny nose.
- Symptomatic people can pose an unnecessary risk to others and healthcare providers if they have COVID-19.

Individuals with suspected, probable, or confirmed COVID-19 and those who are close contacts of a COVID-19 case should also defer influenza vaccination during their period of isolation or quarantine.

Information on what is presently known about the clinical features of COVID-19 (including presentation, risk factors and the spectrum of disease severity), is available in the “COVID-19 signs, symptoms and severity of disease: A clinician guide” developed by PHAC:

<https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents/signs-symptoms-severity.html>

PHYSICAL DISTANCING

A two-metre distance should be maintained from others whenever possible. To support physical distancing in immunization settings, consider:

- scheduling appointments to avoid crowds;
- asking people to arrive at their assigned time;
- having people wait in cars or safely physically distance outdoors and calling them in when ready (by phone or text);
- using signage, barriers or floor markings for persons who are waiting;
- spacing chairs in waiting areas two metres apart. Increased space should be allotted for people using wheelchairs, walkers or strollers and for families and accompanying persons; and
- monitoring entries and exits, waiting areas and lineups to maintain physical distancing.
- Ensure clinic staff distancing from each other including in any break room.

INFECTION PREVENTION AND CONTROL

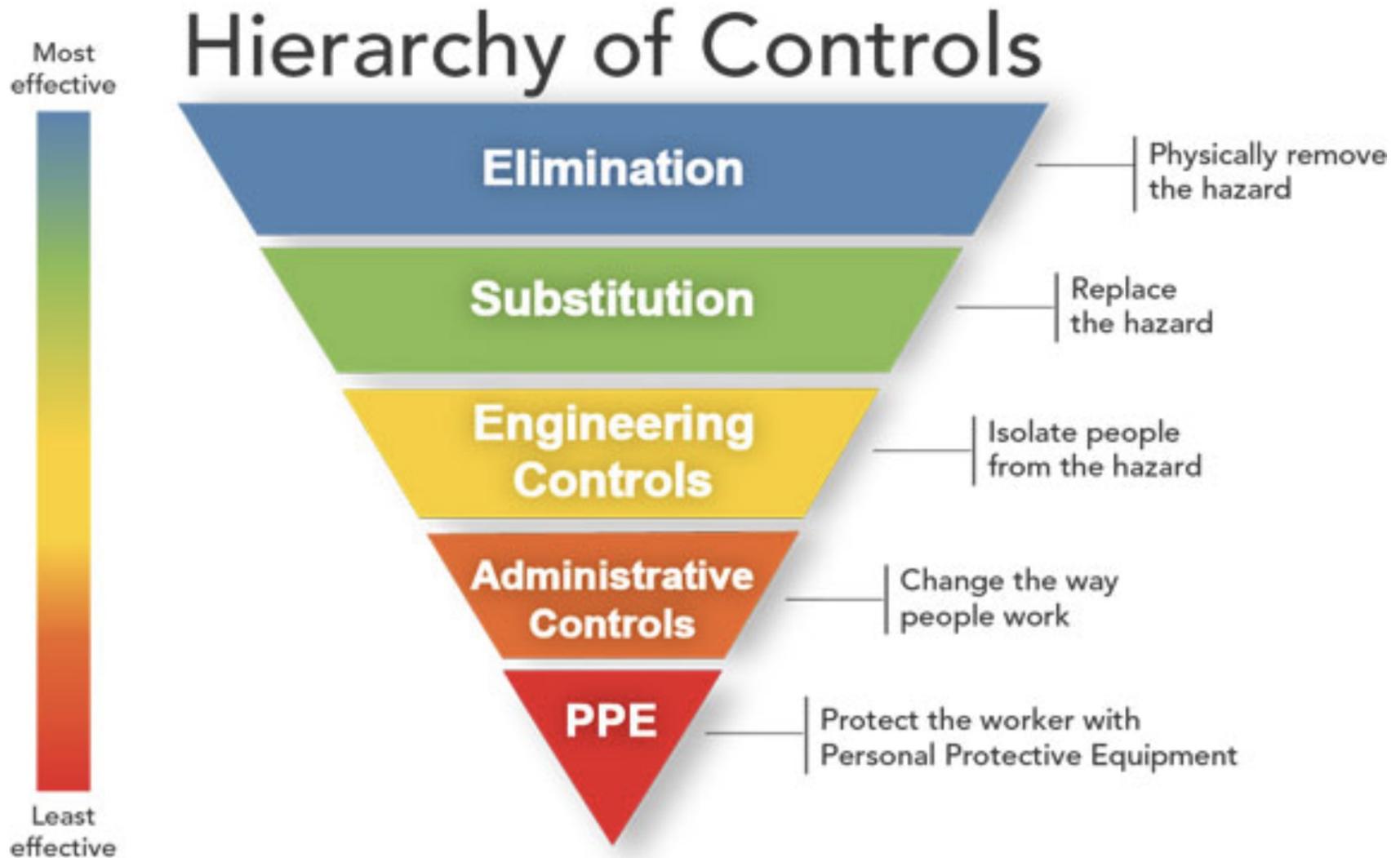


Image source: <https://www.cdc.gov/niosh/topics/hierarchy/default.html>

INFECTION PREVENTION AND CONTROL

IPC measures are needed to prevent transmission of COVID-19 in the immunization setting. These include:

- Requiring ill staff and volunteers to stay at home;
- Screening vaccine recipients as per provincial/territorial advice and not proceeding at the time of illness;
- Implementing engineering controls if feasible, e.g., installing clear plastic barriers at reception areas and between immunization stations in community clinics;
- Implementing administrative controls to maintain physical distancing, including policies, procedures, education, scheduling, and signage;
- Providing hand sanitizer stations throughout the venue, including entry, immunization stations and exit;
- Ensuring that administration, clinical and patient areas, and washrooms are cleaned and disinfected frequently;
- Cleaning and disinfecting immunization stations between clients (e.g., with wipes);
- Carrying out hand hygiene before and after providing immunization; and
- Ensuring that all staff are trained in the use of PPE.

PERSONAL PROTECTIVE EQUIPMENT

The actual delivery of vaccine requires close physical proximity between the vaccinator and vaccine recipient. As a result, temporarily physical distancing will not be maintained.

Staff, volunteers and vaccine recipients should consider PPE (next slides) when there is known or possible community transmission of COVID-19.

- Continue to refer to local, provincial or territorial guidance and organization policies for recommendations specific to your immunization venue and community. These may differ over time based on changing epidemiology.

PERSONAL PROTECTIVE EQUIPMENT

Vaccinators

- Should wear a medical mask and eye protection when administering vaccine.
- Gloves are not needed *except* when administering intranasal influenza vaccine, due to increased likelihood of contact with the vaccine recipient's mucous membrane/bodily fluid.
 - Gloves should be changed between clients and hand hygiene should be performed after gloves are removed
 - Precautions for aerosol-generation procedures are not necessary for the administration of intranasal vaccine

For all staff, PPE may be used for the full duration of a shift, but should be replaced when:

- soiled, wet, or damaged; or
- after a break; or
- if ever there was care provided to a person known or suspected to have COVID-19 infection despite the pre-screening that should have taken place to prevent this.

Refer to local, provincial or territorial guidance and facility policies on specific recommendations for use of masks, eye protection, and other PPE, and PPE conservation strategies.

PERSONAL PROTECTIVE EQUIPMENT

Other staff and volunteers:

- Should wear a medical mask whenever they are not able to maintain a two-metre physical distance from others, including staff and vaccine recipients
 - For example, recovery room monitors and first aid providers
- Staff behind a barrier do not need to use PPE *except* if co-workers are passing by behind the barrier
- Medical mask, eye protection, gown and gloves should be available immediately for all personnel who need to provide first aid or respond to a health emergency

Additional PPE guidance for health professionals:

Ambulatory care: <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents/interim-guidance-outpatient-ambulatory-care-settings.html>

Home care providers: <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/infection-prevention-control-covid-19-interim-guidance-home-care-settings.html>

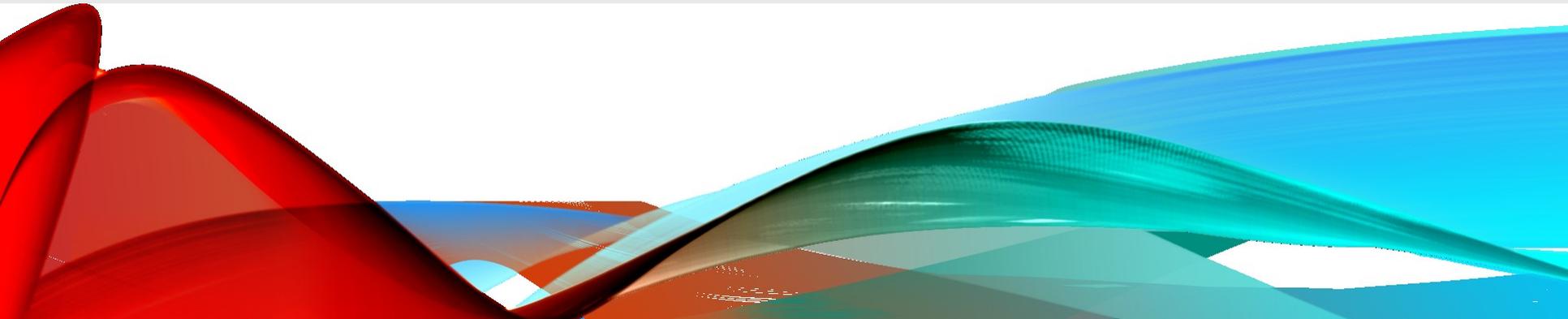
PERSONAL PROTECTIVE EQUIPMENT

Vaccine recipients and accompanying persons:

- Depending on local advice, vaccine recipients and any accompanying persons should be asked to wear a non-medical mask or face covering.
 - This may be waived for young children for whom mask use is problematic
- Non-medical masks or face coverings should not be placed on children under two years of age, anyone who has trouble breathing, or is unable to remove the mask without assistance.

AMMI CANADA GUIDANCE ON THE USE OF ANTIVIRAL DRUGS FOR SEASONAL INFLUENZA

Dr. Gerald Evans



AMMI CANADA GUIDELINE

Use of antiviral drugs for seasonal influenza: Foundation document for practitioners—Update 2019

Fred Y Aoki MD¹, Upton D Allen MBBS^{2,3,4}, Samira Mubareka MD⁵, Jesse Papenburg MD^{6,7}, H Grant Stiver MD⁸, Gerald A Evans MD⁹ 

This document updates the previous AMMI Canada Foundation Guidance (2013) on the use of antiviral therapy for influenza.

KEYWORDS: influenza, guidelines, antivirals

Le présent document est une mise à jour des précédentes directives d'AMMI Canada (2013) sur l'utilisation des antiviraux contre la grippe.

MOTS-CLÉS : grippe, directives, antiviraux

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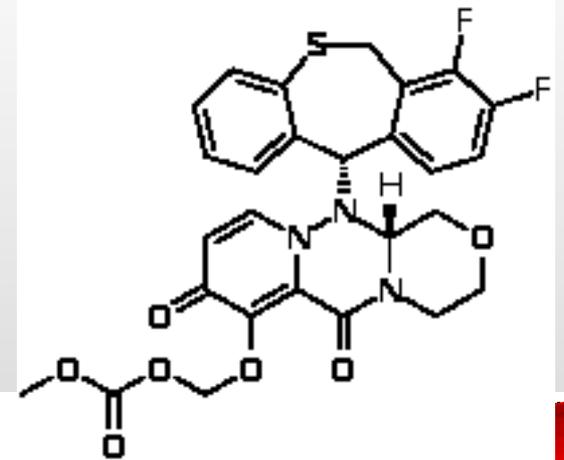
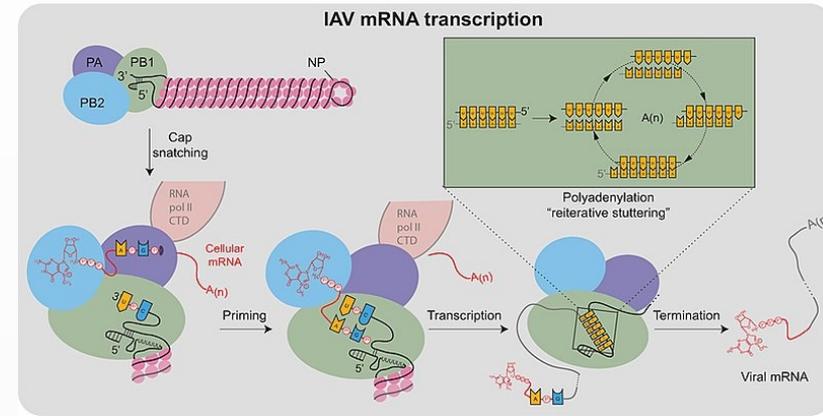
Correspondence: Gerald A Evans, Division of Infectious Diseases, Department of Medicine, Queen's University, Room 3013, Etherington Hall, 98 Stuart Street, Kingston, Ontario K7L 2V6. Telephone: 613-533-6619. E-mail: evansg@queensu.ca

AMMI CANADA 2020-21 SEASONAL INFLUENZA UPDATE – COMING SOON

- Currently under development
- Additions planned
 1. The role for baloxavir marboxil (Xofluza®)
 2. Differentiating Influenza from COVID-19 illness
 - Clinical differences
 - Role of laboratory testing
 3. Effect and implications of vaccine composition differences between southern & northern hemisphere influenza vaccine

BALOXAVIR MARBOXIL

- A prodrug which after metabolism releases the active agent, baloxavir acid (BXA)
- BXA is an enzyme inhibitor targeting the influenza virus cap-dependent endonuclease used in "cap snatching" by the virus polymerase complex
- Effective against both influenza A&B
- Indicated for in persons ages 12 or older within first 48 hours of illness
 - Administered as a single dose of 40-80 mg orally



COMPARISON OF INFLUENZA & COVID-19

Table. Comparison Between Seasonal Influenza and SARS-CoV-2

Characteristics	Seasonal influenza viruses	SARS-CoV-2
Primary route of transmission	Droplet	Droplet (airborne, fomite, and fecal-oral transmission possible but less important)
Overall infectivity	Less contagious	More contagious
	The basic reproduction number (R_0) of both viruses is highly dependent on NPIs effective in decreasing transmission	
Dynamics of infectivity	Patients are most infectious after symptom onset	Patients are most infectious starting 48 h prior to symptom onset ²
	Both viruses capable of asymptomatic transmission, but less than during presymptomatic and symptomatic phases	
Incubation period	1-4 d (median, 2 d)	2-14 d (median, 5 d)
Risk factors for severe disease	<ul style="list-style-type: none"> • Age >65 y and <2 y • Immunosuppression • Pregnancy (through 2 weeks postpartum) • Morbid obesity • Chronic lung disease, cardiac disease, advanced liver disease, chronic kidney disease • Residence in nursing home or long-term care facilities • American Indian/Alaska Native heritage 	<ul style="list-style-type: none"> • Advanced age (risk increases with age) • Male sex • Obesity • Hypertension • Chronic lung disease, cardiac disease, type 2 diabetes, cancer, chronic kidney disease, advanced liver disease • Surgery during incubation period • Residence in nursing home • Structural racism, poverty³
Most common clinical manifestations	Fever, chills, headache, myalgias, cough, nasal congestion, sore throat, fatigue	Fever, chills, headache, myalgias, cough, shortness of breath, fatigue, anosmia
	For both viruses, the majority of infections are either subclinical or mild	
Pediatric disease	<ul style="list-style-type: none"> • Common, especially high risk in children <2 y • Children play a leading role in propagating outbreaks 	<ul style="list-style-type: none"> • Uncommon, with typically mild disease • Multisystem inflammatory syndrome has been observed in children, but is rare • Limited evidence on children as a source of infection
Case-fatality rate	≈0.1%	≈0.25%-3.0% ⁴
Dynamics of symptoms	Symptoms typically peak during first 3-7 d of illness	Symptoms can peak during week 2 or 3 of illness
Vaccine	Multiple approved	No vaccine currently licensed
Clinical diagnostics	Nucleic acid amplification and antigen-based assays from respiratory samples	<ul style="list-style-type: none"> • Nucleic acid amplification and antigen-based assays from respiratory samples • Serologies
Available antiviral agents	<ul style="list-style-type: none"> • Neuraminidase inhibitors • Cap-dependent endonuclease inhibitors • M2 channel blockers 	Nucleoside analogue (remdesivir)

Abbreviations: NPI, nonpharmacologic intervention; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2.

DIFFERENTIATING UNCOMPLICATED FLU AND COVID-19

Clinical feature	Influenza	COVID-19
Anosmia	Uncommon	Common
Infiltrates on CXR with mild illness	Uncommon	Common
Prominent symptoms at initial presentation	Common	Uncommon
Moderate to severe disease in children	Common	Rare

HIGHLIGHTS OF 2019 UPDATE TO THE AMMI CANADA INFLUENZA ANTIVIRAL GUIDANCE

1. General principles
2. Treatment of mild or uncomplicated influenza illness AND moderate, progressive, severe or complicated influenza illness with or without risk factors in:
 - Non-pregnant adults
 - Infants, children and youth
 - Immunocompromised persons
 - Pregnant women
3. The role of chemoprophylaxis
 - Post-exposure prophylaxis (PEP) vs. Early Therapy
 - Role of Pre-exposure prophylaxis (PrEP)

GRADE EVIDENCE QUALITY VS. BENEFIT TO HARM AND RECOMMENDATION GRADING

Quality of Evidence	Preponderance of Benefit or Harm	Balance of Benefit and Harm
A. Well-designed, randomized, controlled studies or diagnostic studies on relevant populations	Strong Recommendation	Option
B. RCTs or diagnostic studies with minor limitations; overwhelmingly consistent evidence from observational studies	Recommendation	Option
C. Observational studies (case control or cohort design)		
D. Expert opinion, case reports, reasoning from first principles	Option	No Recommendation
X. Exceptional situations where validating studies cannot be done and there is a clear preponderance of benefit or harm	Strong Recommendation	Recommendation
	Recommendation	

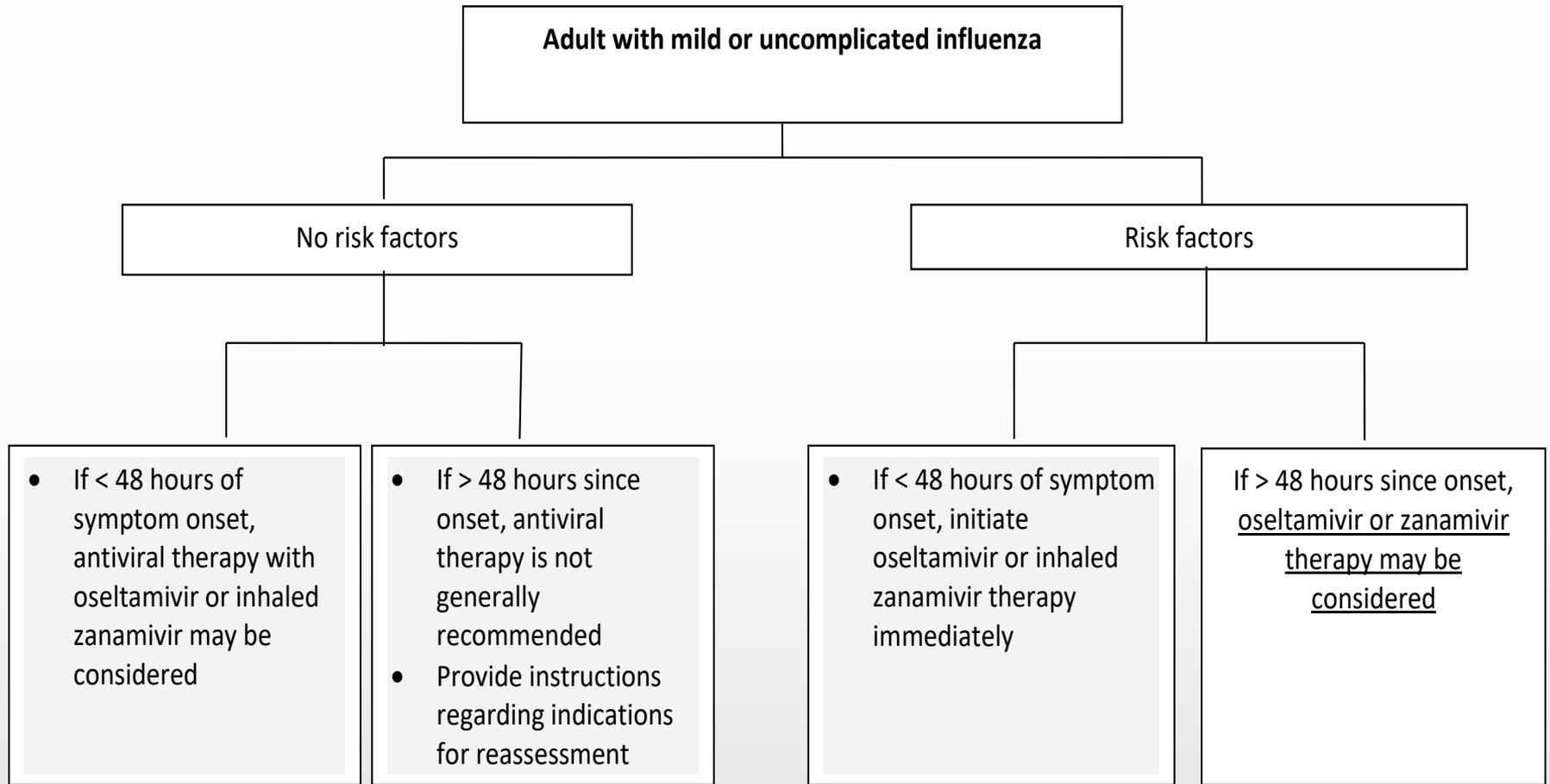
2019 AMMI CANADA INFLUENZA ANTIVIRAL THERAPY – GENERAL PRINCIPLES

- **Antivirals should be initiated as rapidly as possible** after onset of illness as the benefits of treatment are much greater with initiation at < 12 hours than at 48 hours. (**Strong recommendation, Grade B evidence**)
- **Antiviral therapy should be initiated** even if the interval between illness onset and administration of antiviral medication > 48 hours if the illness is:
 - **Severe enough to require hospitalization**
 - **Progressive, severe or complicated**, regardless of previous health status
 - Or the **individual is from a group at high risk** for severe disease (**Strong recommendation, Grade X evidence**)

2019 AMMI CANADA INFLUENZA ANTIVIRAL THERAPY – GENERAL PRINCIPLES

- Otherwise **healthy patients with relatively mild, self-limited influenza are NOT likely to benefit** from NAI therapy initiated > 48 hours after illness onset. (**Option, Grade D evidence**)
- Patients not initially given antiviral therapy should be **advised of symptoms and signs of worsening illness** that might warrant reassessment. (**Recommendation, Grade D evidence**)
- **Treatment duration should routinely be 5 days (Strong Recommendation, Grade A evidence)**, but may be continued longer than 5 days if clinically indicated. (**Option, Grade C evidence**)

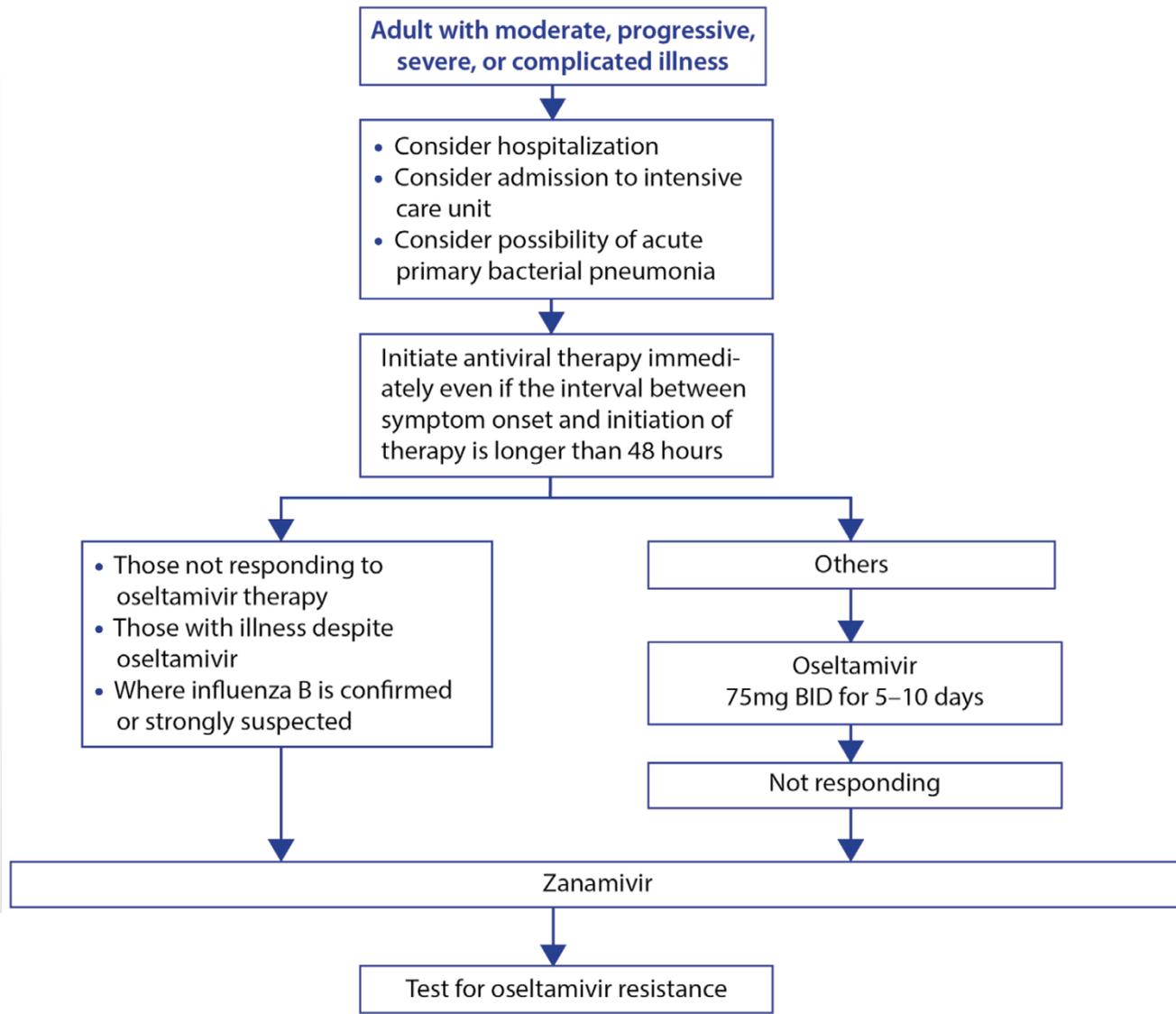
Algorithm for oseltamivir and zanamivir treatment of mild or uncomplicated influenza in adults



2019 AMMI CANADA INFLUENZA ANTIVIRAL THERAPY – NON-PREGNANT ADULTS WITH **MILD OR UNCOMPLICATED** INFLUENZA ILLNESS

- For individuals with mild disease, no risk factors and:
 - Illness of < 48 hours' duration, treatment with oseltamivir or inhaled zanamivir may be considered (**Option, Grade A evidence**)
 - Illness of > 48 hours' duration, antiviral treatment is **NOT** generally recommended (**Recommendation, Grade C evidence**)
- For individuals with mild disease and risk factors:
 - Illness of < 48 hours' duration, initiate antiviral therapy immediately (**Strong Recommendation, Grade X evidence**)
 - Illness of > 48 hours' duration, treatment may be considered (**Option, Grade D evidence**)

ALGORITHM FOR ANTIVIRAL THERAPY IN ADULTS WITH PROGRESSIVE, SEVERE OR COMPLICATED INFLUENZA



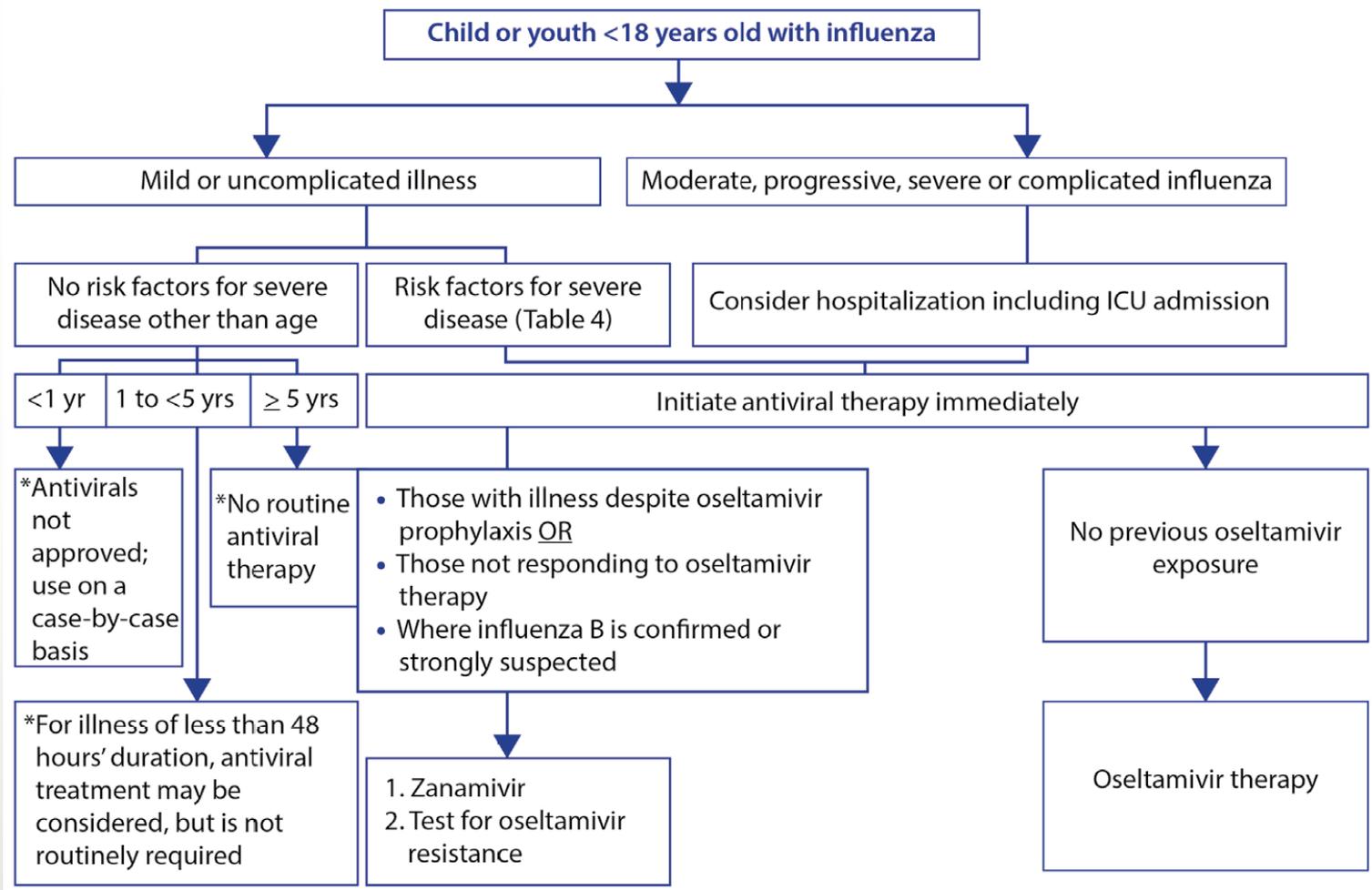
2019 AMMI CANADA INFLUENZA ANTIVIRAL THERAPY – NON-PREGNANT ADULTS WITH **MODERATE, PROGRESSIVE, SEVERE OR COMPLICATED** INFLUENZA ILLNESS WITH OR WITHOUT RISK FACTORS

- **Consider hospitalization** and admission to ICU
(Recommendation, Grade C evidence)
- Oseltamivir 75 mg BID orally or by nasogastric tube should be initiated immediately **(Recommendation, Grade C evidence)**
- Oseltamivir should be started **even if the interval between symptom onset and initial administration of antiviral is > 48 hours**
(Recommendation, Grade C evidence)

RECOMMENDED OSELTAMIVIR REGIMENS FOR PREVENTION AND TREATMENT OF ADULT PATIENTS BASED ON CrCL/eGFR

Creatinine clearance	Treatment for 5 days	Prophylaxis until outbreak is over
>60 ml/min	75 mg twice daily	75 mg once daily
30–60 ml/min	75 mg once daily OR 30 mg suspension twice daily OR 30 mg capsule twice daily	30 mg once daily
10–30 ml/min	30 mg once daily	30 mg on alternate days
<10 ml/min (renal failure)*	Single 75 mg dose for the duration of illness	No data
Dialysis patients*	<p>Low-flux HD: 30 mg at the time of onset of influenza symptoms, then 30 mg after each dialysis session</p> <p>High-flux HD: 75 mg after each dialysis session</p> <p>CAPD dialysis: 30 mg once prior to the start of dialysis</p> <p>CRRT high-flux dialysis: 30 mg daily or 75 mg every second day</p>	<p>30 mg before dialysis, then 30 mg after alternate dialysis sessions</p> <p>No data</p> <p>30 mg before dialysis, then 30 mg once weekly</p> <p>No data</p>
<10 ml/min (renal failure)*	Single 75 mg dose for the duration of illness	No data

ALGORITHM FOR OSELTAMIVIR AND ZANAMIVIR TREATMENT OF INFLUENZA IN CHILDREN AND YOUTH (<18 Y)



** In children of any age with mild or uncomplicated illness, antiviral treatment is not routinely recommended and should not be used if symptoms have been present for more than 48 hours. Treatment with osetamivir or, if appropriate, zanamivir may be considered on a case-by-case basis even if symptoms have been present for more than 48 hours. In Canada, antivirals are not authorized for infants aged younger than 1 year but may be considered on a case-by-case basis. See Table 2, footnote 2*

2019 AMMI CANADA INFLUENZA ANTIVIRAL THERAPY – INFANTS, CHILDREN AND YOUTH WITH **MILD OR UNCOMPLICATED** INFLUENZA ILLNESS

Age

- **< 1 year of age:** Consider use on a case-by-case basis
(Option, Grade D evidence)
- **1-5 years of age:** If otherwise healthy and have mild disease not requiring hospitalization, **do NOT routinely require antiviral therapy (Option, Grade D evidence)**
- **>5 years of age:** If otherwise healthy and have mild disease not requiring hospitalization, **antiviral therapy is not routinely recommended (Option, Grade D evidence)**

2019 AMMI CANADA INFLUENZA ANTIVIRAL THERAPY – INFANTS, CHILDREN AND YOUTH WITH **MODERATE, PROGRESSIVE, SEVERE OR COMPLICATED** INFLUENZA ILLNESS WITH OR WITHOUT RISK FACTORS

- **Consider hospitalization** and admission to ICU. (Recommendation, Grade C evidence)
- **Start treatment immediately with oseltamivir or zanamivir** (if age appropriate) in appropriate doses (Strong recommendation, Grade B evidence)
- Antivirals should be started **even though the interval between symptom onset and initiation of antivirals is > 48 hours.** (Recommendation, Grade C evidence)

INFLUENZA ANTIVIRAL THERAPY IMMUNOCOMPROMISED PATIENTS

- **Treat as soon as possible without regard to the duration of illness (Recommendation, Grade C evidence)**
- **Early initiation of therapy** for symptomatic infection in immunocompromised patients is **preferred over PEP (Option, Grade D evidence)**

INFLUENZA ANTIVIRAL THERAPY PREGNANT WOMEN

- Oseltamivir in standard doses is recommended for treatment of women with influenza during pregnancy and up to 4 weeks post-partum **(Strong recommendation, Grade C evidence)**
 - There is an association between pregnancy and the immediate post-partum period and an increased risk of severe influenza
 - There are data from the 2009 H1N1 pandemic demonstrating the safe use of oseltamivir to treat pregnant patients

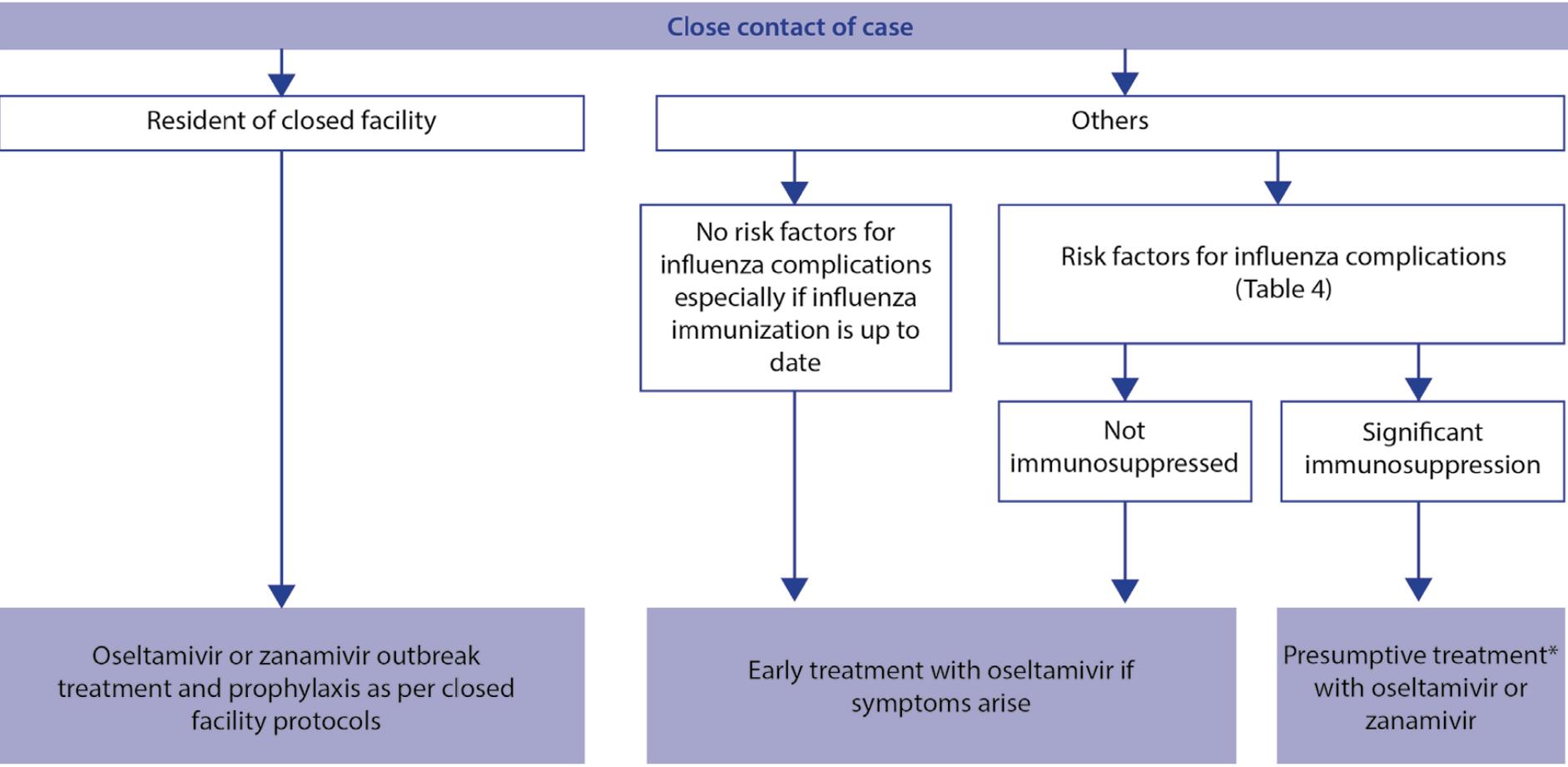
AMMI CANADA INFLUENZA ANTIVIRAL THERAPY – POST-EXPOSURE PROPHYLAXIS (PEP) VS. EARLY THERAPY

- **Early therapy is preferred over PEP** due to concerns regarding drug resistance (**Option, Grade D evidence**)
- PEP may be considered:
 - In family settings for persons who cannot be reliably protected by immunization (**Option, Grade D evidence**)
 - **To control outbreaks in closed facilities** when combined with inactivated vaccine administration (**Strong Recommendation, Grade C evidence**)
- Early treatment or PEP should **NOT** be prescribed:
 - For groups of healthy individuals based on possible exposure in the community
 - If the close contact did not occur during the infectious period (24 hrs. prior to and 24 hours after fever ends) of the person with suspected or confirmed influenza
 - If > 4 days have elapsed since the last infectious contact
 - (**Option, Grade D evidence**)

AMMI CANADA INFLUENZA ANTIVIRAL THERAPY – PRE-EXPOSURE PROPHYLAXIS (PrEP) VS. EARLY THERAPY

- Early therapy is preferred over routine seasonal PreP (**Recommendation, Grade D evidence**).
- **The selective use of PrEP** can be considered for the following scenarios during community outbreaks of influenza illness. (**Option, Grade D evidence**)
 - As a bridge to vaccine-induced immunity during the 14-day period after immunization of high-risk individuals**
 - Protection of high risk persons for whom vaccination is contraindicated or likely to be ineffective.
 - Protection of patients at high risk and their close contacts when circulating strains of influenza virus in the community are not matched with seasonal influenza vaccine strains**
 - Protection of family members or health care workers for whom influenza immunization is contraindicated and who are likely to have ongoing close exposure to unimmunized persons at high risk

ALGORITHM FOR OSELTAMIVIR AND ZANAMIVIR PROPHYLAXIS OR EARLY TREATMENT IN CLOSE CONTACTS OF SUSPECTED OR LAB-CONFIRMED CASES



* Presumptive treatment is therapy with twice-daily doses of oseltamivir or zanamivir initiated before the onset of influenza symptoms in close contact with an individual with suspected or lab-confirmed influenza illness

Guidance on use of antiviral drugs given potential low vaccine effectiveness for the 2017–2018 influenza season

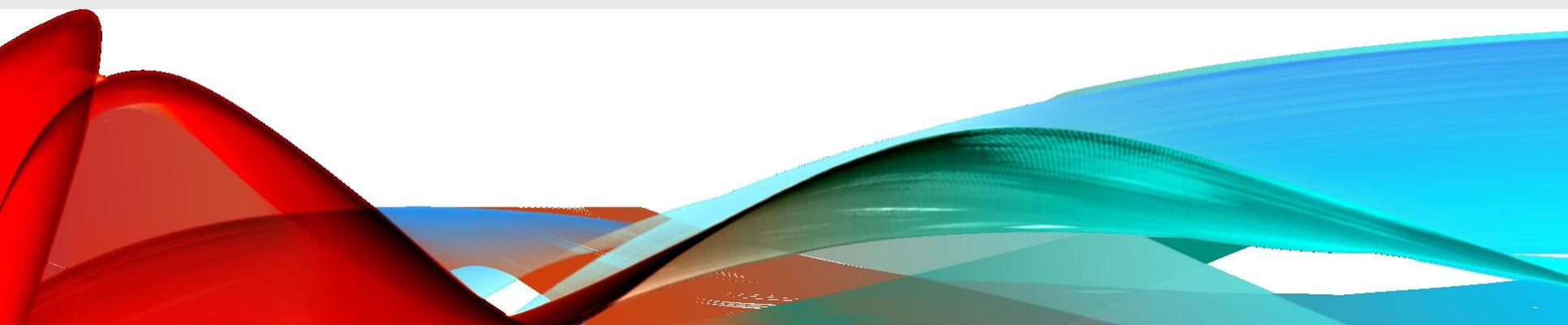
Upton D Allen MBBS¹, Fred Y Aoki MD², Gerald A Evans MD³, Michel Laverdière MD⁴,
Danuta M Skowronski MD⁵, H Grant Stiver MD⁶

- Antiviral therapy may be considered for **individuals at high risk of serious influenza complications** regardless of whether they received the seasonal influenza vaccine.
- Where influenza is clinically suspected, antiviral treatment of **high-risk individuals** should be initiated as soon as possible, ideally within the first 24 hours of ILI onset, irrespective of influenza vaccination status
 - Clinicians may consider personalized plans for timely antiviral drug access
- Antiviral chemoprophylaxis for the control of influenza outbreaks in health care facilities may, at the discretion of the local Medical Officer of Health (MOH), include staff
 - Where considered, such an offer to staff should be regardless of whether they received the seasonal influenza vaccine.



KEY MESSAGES AND RESOURCES ABOUT SEASONAL INFLUENZA FOR 2020-2021

Dr. Ian Gemmill



KEY MESSAGES FOR PROVIDERS TO COMMUNICATE ABOUT INFLUENZA PREVENTION

Everyone six months and older should get the influenza vaccine.

It is especially important for:

- People who are at high risk of getting the flu and flu-related complications;
- People who are especially capable of spreading the flu to those at high risk

We do not have a vaccine for COVID-19 yet, but we do have vaccines to protect against the flu. If you're at increased risk for flu-related complications, make sure you get your annual flu shot.

This year, it is an especially important for Canadians to get the flu vaccine to reduce the morbidity and mortality associated with influenza and to reduce any further pressure on the healthcare system during the COVID-19 pandemic.

KEY MESSAGES FOR PROVIDERS TO COMMUNICATE ABOUT INFLUENZA PREVENTION

The flu vaccine protects against several different flu virus strains each season. That's why a yearly vaccine is needed.

Even when there is lower effectiveness against one strain, the vaccine can still provide protection against the remaining two or three strains.

In addition to getting vaccinated, other ways to prevent getting or spreading the flu include:

- washing your hands often,
- coughing and sneezing into the bend of your arm,
- staying home while sick,
- keeping frequently touched surfaces clean,
- avoiding touching eyes, nose and mouth

IMMUNIZATION DURING COVID-19 RESOURCES

PHAC Guidance on the Delivery of Influenza Vaccination in the Presence of COVID-19 to support the delivery of influenza vaccination programs:

<https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/guidance-influenza-vaccine-delivery-covid-19.html>

This guidance provides details on:

- Public health measures (e.g., physical distancing) to be considered in the vaccination setting to reduce the spread of SARS-CoV-2
- Modifications to immunization practices and processes (e.g., scheduling appointments).
- Alternate vaccine delivery models (e.g., outdoor clinics)
- Appropriate use of personal protective equipment (PPE) by staff and volunteers, and use of non-medical masks or face coverings by vaccine recipients
- Outreach strategies to administer influenza vaccine to vulnerable persons

PHAC, in collaboration with NACI, has also released Interim guidance on continuity of immunization programs during the COVID-19 pandemic, which provides details on the deferral of immunizations and management of priority groups for immunization:

<https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/interim-guidance-immunization-programs-during-covid-19-pandemic.html>

SEASONAL INFLUENZA GUIDANCE

NACI statement on seasonal influenza vaccine for 2020–2021:

<https://www.canada.ca/en/public-health/services/publications/vaccines-immunization/canadian-immunization-guide-statement-seasonal-influenza-vaccine-2020-2021.html>

AMMI Canada guidance on use of antiviral drugs for influenza:

<https://jammi.utpjournals.press/doi/abs/10.3138/jammi.2019.02.08>

An Advisory Committee Statement (ACS)
National Advisory Committee on Immunization (NACI)

Canadian Immunization Guide Chapter on Influenza and Statement on Seasonal Influenza Vaccine for 2020–2021

Une déclaration d'un comité consultatif (DCC)
Comité consultatif national de l'immunisation (CCNI)

Chapitre sur la grippe du Guide canadien d'immunisation et Déclaration sur la vaccination antigrippale pour la saison 2020-2021

AMMI CANADA GUIDELINE

Use of antiviral drugs for seasonal influenza: Foundation document for practitioners—Update 2019

Fred Y Aoki MD¹, Upton D Allen MBBS^{2,3,4}, Samira Mubareka MD⁵, Jesse Papenburg MD^{6,7}, H Grant Stiver MD⁸, Gerald A Evans MD⁹ 

PROTECTING AND EMPOWERING CANADIANS TO IMPROVE THEIR HEALTH

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SEASONAL INFLUENZA AWARENESS RESOURCES

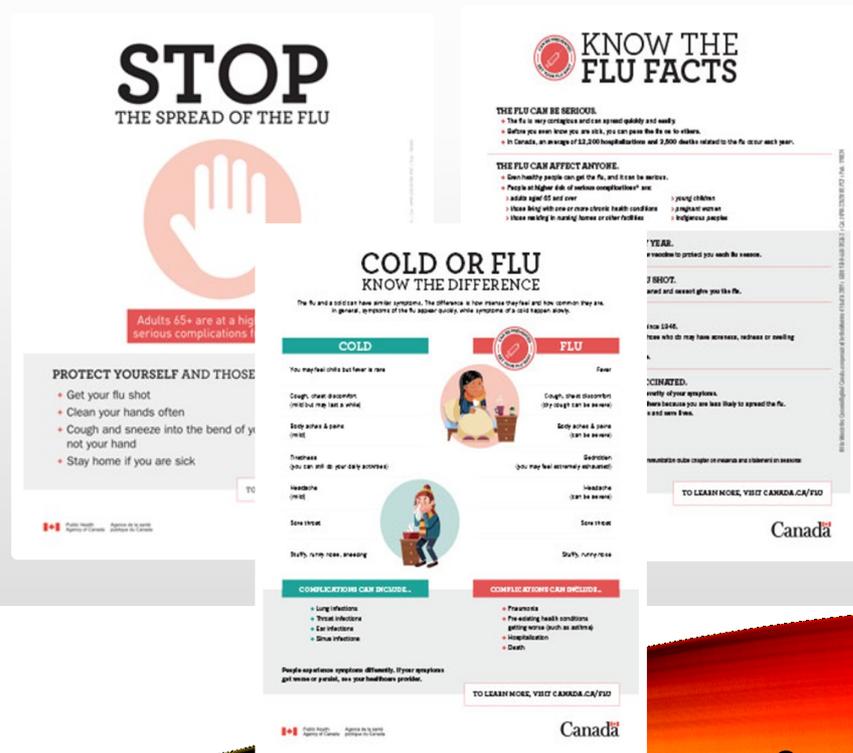
The Public Health Agency of Canada offers **free** resources for frontline providers available at:

Canada.ca/Flu – Canada.ca/Grippe

- **Available soon!** Seasonal Influenza Vaccine Recommendations from the National Advisory Committee on Immunization (NACI) 2020-2021 Edition – pocket guide!
- Flu awareness [posters](#) are available!
- [It's Flu Season](#) hand-outs!
- Flu awareness [videos](#) for sharing!

...and for flu awareness on social media:

- [Healthy Canadians](#) on Facebook
- [Public Health Agency](#) on LinkedIn



SEASONAL INFLUENZA AWARENESS RESOURCES



Free resources for frontline providers, available for download
<https://immunize.ca/influenza-campaign>

Immunize Canada is a national coalition of non-governmental, professional, health, government and private sector organizations with a specific interest in promoting the understanding and use of vaccines recommended by the National Advisory Committee on Immunization (NACI).

FluWatch

Sentinel Practitioners

Are you a physician or nurse
involved in primary care?

You can help monitor the ILI across Canada
and help us understand the effects of COVID-
19 on seasonal respiratory viruses.

With more data, FluWatch can better detect
signals of increased or unusual ILI activity.



Canada needs your ILI data!

*Sign up today for a more prepared
tomorrow!*

Email: phac.fluwatch.aspc@canada.ca

Flu Watchers

Canadian volunteers

Not a physician or nurse?

You can still help monitor ILI and
COVID-19 in Canada as a
FluWatcher!

FluWatchers answer 2 yes/no questions each
week to help show Canadians *when* and *where*
ILI and COVID-19 activity is occurring in Canada.



Canada needs more FluWatchers!

The more volunteers that report,
the more accurate the data

Google “**FluWatchers**” for more info and to sign up!

QUESTION AND ANSWER PERIOD