International influenza update
There are two main seasonal patterns of influenza virus circulation associated with either a tropical climate or a temperate climate. Tropical climate countries tend to have consistent levels of influenza years round with smaller peaks that might occur in the rainy season, whereas temperate climate countries, like the U.S., tend to see a distinct influenza season with a sharp peak of activity typically occurring during the winter months.

Temperate Climate Countries
- In Australia and New Zealand, influenza activity remains very low. Influenza A virus predominated (primarily A(H1N1)pdm09 viruses) but influenza A(H3N2) and influenza B viruses were reported from both countries.
- In South Africa, influenza activity began to increase in late-May and influenza A(H1N1)pdm09 viruses predominated although in recent weeks influenza B viruses (primarily B/Victoria) have been reported.
- In temperate countries of South America, influenza activity began to increase in early June, and A(H3N2) viruses have been most commonly reported in Chile and Paraguay. Influenza A(H1N1)pdm09 viruses have predominated in Brazil and Uruguay.

Tropical Climate Countries
- Overall influenza activity remained low, and the predominant virus type and subtype varied by country.
- In the Caribbean and Central America, influenza virus activity remained low with influenza A(H1N1) viruses predominating in El Salvador, Guatemala, Nicaragua, and Panama.
- Activity in Southern Asia was low with influenza A(H1N1)pdm09 viruses predominating. Elevated activity was reported in Bangladesh and India. Influenza activity in Southeast Asia was low. Influenza A(H1N1)pdm09 viruses predominated in Lao PDR while influenza A(H1N1)pdm09 and influenza B/Yamagata viruses co-circulated. In July-August, increase in influenza A(H3N2) viruses in the Philippines was reported.

The WHO recommendations for influenza vaccine composition for the 2019 Southern Hemisphere season will be made at the WHO Consultation meeting September 24-26, 2018, Atlanta, Georgia.

Influenza in the US
- From May-September 2018, the United States experienced low level seasonal influenza activity. Influenza B viruses were reported more frequently from late May to late June and influenza A viruses predominated beginning in early July. The majority of the subtyped influenza A viruses are influenza A (H1N1)pdm09 viruses.
- Abnormal presentation of influenza with parotitis and/or rash can occur.
- CDC has received reports of localized influenza outbreaks across the U.S.
- Maine will resume weekly reporting in October

Non-seasonal influenza
- Asian and African countries continue to report Avian influenza (H5N1) cases in 2018.
- As of July 2018, 860 H5N1 human infections were reported by countries world-wide.
- H7N9 continues to be a risk in travelers to China with cases reported in September. WHO reports more than 1,600 laboratory-confirmed human cases since early 2013 with about a 40% fatality rate. Most cases are exposed through contact with infected poultry or contaminated environments. There is no sustained human to human transmission at this time.
- A total of 14 variant virus infections has been reported in the United States during 2018. One of these has been an A(H3N2)v (Indiana [1]) and 13 have been A(H1N2)v viruses (California [6], Michigan [3], and Ohio [4]). No patients have been hospitalized as a result of their illness. No deaths have occurred. 12 of the variant virus infections have been associated with swine exposure in fair settings. One patient attended an agricultural fair but no contact with swine was reported. One patient reported no contact with swine and no attendance at an agricultural fair in the week preceding illness and it is possible that limited human-to-human transmission occurred. No on-going human-to-human transmission has been identified.
- Maine has not seen any H3N2v since 2011 but the risk remains and providers should ask about agricultural exposures.
• No high-path avian influenza (HPAI) detected in the US since March 2017.

Non-influenza respiratory viruses
• MERS-CoV continues to circulate in the Arab Peninsula – should be considered in the differential for patients with relevant clinical information and travel to a potentially affected area. Globally, 2,249 laboratory-confirmed cases of infection with MERS-CoV including at least 798 related deaths have been reported to WHO.
• Adenovirus, parainfluenza, RSV, rhinovirus and other viruses may co-circulate with influenza. Maine is continuing a project to help monitor what the current circulating viruses are through the National Respiratory and Enteric Virus Surveillance System (https://www.cdc.gov/surveillance/nrevss/)
• HETL can test for many of the circulating non-influenza respiratory viruses. For more information see www.mainepublichealth.gov/lab

Conclusion
• Please feel free to use influenza.dhhs@maine.gov to ask any questions we may not have answered
• We will have future calls as needed, they will be announced the same way this call was
• Notes from this call will be posted on maineflu.gov

Questions

Q: What are the differences between vaccines with a recommended dose of 0.5 mL (FluLaval and Fluarix) and those with a recommended dose of 0.25 mL (Fluzone)?
A: The FluLaval and Fluarix contain 15ug of HA per vaccine virus strain, while Fluzone contains 7.5ug of HA per vaccine virus strain. The dose recommendation for each is based on age group:

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>National Drug Code (NDC) Number</th>
<th>Dose</th>
<th>Age group the vaccine is licensed for</th>
<th>Available through the Maine Immunization Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluzone® Quadrivalent</td>
<td>49281-0518-25</td>
<td>0.25mL</td>
<td>6 to 36 months of age</td>
<td>Yes</td>
</tr>
<tr>
<td>Fluzone® Quadrivalent</td>
<td>49281-0418-50</td>
<td>0.50mL</td>
<td>36 months of age and older</td>
<td>Yes</td>
</tr>
<tr>
<td>FluLaval Quadrivalent</td>
<td>19515-0909-52</td>
<td>.50mL</td>
<td>6 months of age and older</td>
<td>Yes</td>
</tr>
<tr>
<td>No Supplied by MIP (but mentioned by listener):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluarix® Quadrivalent</td>
<td>58160-0898-52</td>
<td>0.50mL</td>
<td>6 months of age and older</td>
<td>No</td>
</tr>
</tbody>
</table>

Q: Do infants who receive Fluzone require a booster?
A: Yes, children 6 months through 8 years of age getting vaccinated for the first time, and those who have only previously received one dose of flu vaccine, should receive a second vaccination regardless of the original administered vaccine. The two doses should be spaced at least 4 weeks apart.

Q: What were the vaccination coverage rates for the 2017-2018 influenza season?
A: 25% against A(H3N2)
   65% against A(H1N1)
   49% against influenza B viruses
Q: If I am already on the email list for receiving the weekly flu report, will I have to sign up again with the new system?  
A: No. Anyone who already receives the weekly report will continue receiving them. The email will now be sent from mecdc@subscriptions.maine.gov. If you are not signed up, or wish to subscribe to other DHHS emails, please go to https://public.govdelivery.com/accounts/MEHHS/subscriber/new?preferences=true

Q: Should I still send samples in for testing even when we know influenza is circulating?  
A: Maine CDC asks that you send in samples to be typed at the beginning of the season and whenever there is a notable increase in cases, a change in the affected population, numerous cases with abnormal symptoms, or a case with a known agricultural exposure.

Q: Who should be tested for influenza?  
A: Testing should be performed on anyone who would benefit from the diagnosis. This includes immune deficient people, the very young, the very old, pregnant women, people with underlying medical conditions, and hospitalized patients.

Q: When should you report an outbreak in a college setting?  
A: Observing a large increase in the number of ILI cases, particularly if they share a living space, might indicate an outbreak at a college. To report a suspected outbreak or to ask a question, please contact Maine CDC disease reporting at 1-800-821-5821.