During week 3 (January 18 – January 24, 2015), influenza activity remained elevated in the United States.

- **Viral Surveillance:** Of 23,339 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 3, 4,651 (19.9%) were positive for influenza.

- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was above the epidemic threshold.

- **Influenza-associated Pediatric Deaths:** Five influenza-associated pediatric deaths were reported. A total of 61 influenza-associated deaths have been reported during the 2014-2015 season from New York City [1] and 24 states (Arizona [1], Colorado [2], Florida [2], Georgia [1], Indiana [1], Iowa [3], Kansas [2], Kentucky [3], Louisiana [2], Michigan [1], Minnesota [4], Missouri [1], North Carolina [2], Nevada [3], New York [1], Ohio [5], Oklahoma [4], Pennsylvania [1], South Carolina [1], South Dakota [1], Tennessee [4], Texas [7], Virginia [3], and Wisconsin [5]).

- **Influenza-associated Hospitalizations:** A cumulative rate for the season of 40.5 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. Between October 1, 2014 and January 24, 2015, 11,077 laboratory-confirmed influenza-associated hospitalizations were reported. The overall hospitalization rate was 40.5 per 100,000 population. The highest rate of hospitalization was among adults aged ≥65 years (198.4 per 100,000 population), followed by children aged 0-4 years (38.2 per 100,000 population). Among all hospitalizations, 10,690 (96.6%) were associated with influenza A, 290 (2.6%) with influenza B, 29 (0.3%) with influenza A and B co-infection, and 62 (0.5%) had no
virus type information. Among those with influenza A subtype information, 3,016 (99.7%) were A(H3N2) virus and nine (0.3%) were A(H1N1)pdm09.

- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 4.4%, above the national baseline of 2.0%. All 10 regions reported ILI at or above region-specific baseline levels. Puerto Rico and 29 states experienced high ILI activity; New York City and seven states experienced moderate ILI activity; six states experienced low ILI activity; eight states experienced minimal ILI activity; and the District of Columbia had insufficient data.

- **Geographic Spread of Influenza:** The geographic spread of influenza in Puerto Rico and 44 states was reported as widespread; the U.S. Virgin Islands and five states reported regional activity; and the District of Columbia, Guam, and one state reported local activity.

- **Antiviral Resistance:** In the United States, all recently circulating influenza viruses have been susceptible to the neuraminidase inhibitor antiviral medications, oseltamivir, zanamivir, and peramivir; however, rare sporadic instances of oseltamivir-resistant A(H1N1)pdm09 and A(H3N2) viruses have been detected worldwide. Antiviral treatment with oseltamivir, zanamivir, or peramivir is recommended as early as possible for patients with confirmed or suspected influenza who have severe, complicated, or progressive illness; who require hospitalization; or who are at high risk for serious influenza-related complications. Additional information on recommendations for treatment and chemoprophylaxis of influenza virus infection with antiviral agents is available at [http://www.cdc.gov/flu/antivirals/index.htm](http://www.cdc.gov/flu/antivirals/index.htm).

- **Avian Influenza A (H7N9) Virus Infection in a Human in North America:** On January 26, 2015, the Government of Canada and the Ministry of Health in British Columbia reported the first case
of human infection in North America with avian influenza A (H7N9) virus in a patient who returned home to British Columbia following a trip to Hong Kong and mainland China. The patient had recently traveled to Hong Kong and areas in mainland China where human cases have been reported earlier this month. Human infections with the H7N9 virus were first reported in China in April 2013.

While in China, the individual reportedly visited a location where poultry and poultry droppings were present, and Canadian public health authorities claim the individual was likely infected following exposure in China. The individual was not symptomatic during travel and was not sick enough to require hospitalization. The person is now recovering and has been treated with oseltamivir. All close contacts of the individual have been identified and are being monitored by provincial public health authorities.

The current health risk posed by detection of this case of H7N9 in Canada is very low. No cases have been detected in people or in animals in the United States. CDC is in close contact with Canadian public health partners and has offered laboratory and other support as needed.

- **Interim Guidance on Testing, Specimen Collection, and Processing for Patients with Suspected Infection with Novel Influenza A Viruses with the Potential to Cause Severe Disease in Humans**
- **Interim Guidance on Influenza Antiviral Chemoprophylaxis of Persons Exposed to Birds with Avian Influenza A Viruses Associated with Severe Human Disease or with the Potential to Cause Severe Human Disease**

- **CDC Health Update Regarding Treatment of Patients with Influenza with Antiviral Medications:** On 1/9/2015, this CDC Health Update was issued

  1) to remind clinicians that influenza should be high on their list of possible diagnoses for ill patients, because influenza activity is elevated nationwide, and
2) to advise clinicians that all hospitalized patients and all high-risk patients (either hospitalized or outpatient) with suspected influenza should be treated as soon as possible with one of three available influenza antiviral medications. This should be done without waiting for confirmatory influenza testing. While antiviral drugs work best when given early, therapeutic benefit has been observed even when treatment is initiated later.

**Influenza Activity in Massachusetts**

For week 3, influenza-like illness (ILI, defined by fever >100°F and cough and/or sore throat) activity was reported as widespread in Massachusetts, at high intensity.

Detailed weekly flu surveillance reports are posted on the Mass Public Health Blog.
Questions and Resources

New Resource: “Medical Office Telephone Evaluation of Patients with Possible Influenza” flowchart (see attached and link below). Recently released by CDC, this new tool was developed for medical office staff as they conduct telephone triage for patients who call with flu-like symptoms to help them identify when it might be appropriate to initiate antiviral treatment before an office visit. The tool can be accessed at: [http://www.cdc.gov/flu/professionals/antivirals/office-evaluation.htm](http://www.cdc.gov/flu/professionals/antivirals/office-evaluation.htm).

Vaccine Ordering and Locating Clinics

- Providers Wishing to Order Flu Vaccine for Private Purchase:

  The national Influenza Vaccine Availability Tracking System (IVATS) assists providers wishing to privately purchase flu vaccine. IVATS
identifies available doses of influenza vaccine by formulation and distributor/vendor throughout the season.

- **Location of Flu and Adult Vaccination Services:**

Flu vaccination clinics are listed on the mylocalclinic.com website sponsored by the Massachusetts Health Officers Association (MHOA). MDPH urges agencies to post their clinics on this website. Many boards of health (BOHs) may have clinics that make flu and other vaccines available to both adults and children. BOHs can be contacted individually for questions about possible flu vaccination clinics in Massachusetts municipalities, including the age groups served. HealthMap Vaccine Finder assists the public with locating influenza and adult vaccination services within their communities. It is a free, online service where users can search for locations that offer immunizations. Its staff works with partners such as clinics, pharmacies, and health departments to provide accurate and up-to-date information about vaccination services. MDPH urges providers and other agencies to register their locations on the HealthMap Vaccine Finder site too.

MDPH **Recommendations and Resources for the Control of Influenza (2014-2015).**

Questions about pneumococcal vaccine recommendations and insurance coverage? See the new MDPH “**Information about Pneumococcal Vaccination**” page.

For questions about influenza please call the Massachusetts Department of Public Health Immunization Program at 617-983-6800 or your local board of health.
For questions about state-supplied influenza vaccine, please call the Vaccine Unit at 617-983-6828.

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