

## CDC Influenza Division Key Points

October 3, 2014

### MMWR Update: Influenza Activity — United States and Worldwide, May 18–September 20, 2014

- The October 3, 2014 Morbidity and Mortality Weekly Report (MMWR) contains a summary of influenza activity in the United States and worldwide from May 18, 2014–September 20, 2014. *For the most recent data on influenza activity in the United States, please refer to weekly [FluView](#) report.*
- The MMWR report is available on the CDC website at [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6339a3.htm?s\\_cid=mm6339a3\\_e](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6339a3.htm?s_cid=mm6339a3_e).
- Key findings from U.S. and international influenza activity from May–September 2014 include the following:
  - Overall, the United States experienced low levels of influenza activity. Of the 66,006 respiratory specimens tested for influenza, 3,209 (4.9%) were positive.
  - Influenza A (H1N1) pdm09 (pH1N1), influenza A (H3N2), and influenza B viruses were identified sporadically in the United States.
  - In August, two influenza A (H3N2) variant viruses (H3N2v) were detected in Ohio. In both instances, direct contact with swine in the week preceding illness onset was reported.
  - Worldwide, from May 18 to September 20 typical seasonal patterns of influenza activity occurred in the temperate climate Southern Hemisphere. Overall influenza activity in tropical regions remained low. In temperate climate Northern Hemisphere countries, influenza activity was low. The predominant virus type and subtype varied by country.
  - Since May 18 to September 20, 2014, CDC has tested 325 U.S. and international flu virus samples for [resistance](#) to the neuraminidase inhibitor influenza antiviral drugs. None of the tested viruses were found to be resistant to either oseltamivir or zanamivir.
  - CDC antigenically characterized 391 viruses collected during May 18–September 20 from the United States and worldwide, including 70 pH1N1 viruses, 141 influenza A (H3N2) viruses, and 180 influenza B viruses.
    - All 70 (100%) pH1N1 viruses were antigenically similar to the A/California/7/2009, the influenza A (H1N1) vaccine component of the 2014–15 flu vaccine for the Northern Hemisphere.
    - 69 (49%) of the 141 influenza A (H3N2) viruses characterized were antigenically similar to A/Texas/50/2012, the influenza A (H3N2) component of the 2014–15 flu vaccine for the Northern Hemisphere.
    - 140 (78%) of the 180 influenza B viruses collected and analyzed during this period belonged to the B/Yamagata lineage, and all were antigenically similar to the B/Massachusetts/2/2012 virus, the influenza B component for the 2014–15 Northern Hemisphere flu vaccine.

- The 40 other influenza B viruses were characterized as B/Brisbane/60/2008-like, the recommended influenza B component of the 2014-15 Northern Hemisphere quadrivalent flu vaccine.
- It is not possible to predict the type and subtype of flu viruses that might circulate or how severe influenza-related disease activity will be during the 2014–15 flu season.
- Many of the recently examined influenza A (H3N2) viruses showed reduced reactivity with sera produced against the A/Texas/50/2012, the H3N2 component in the 2014-2015 flu vaccine.
- This suggests that recently circulating influenza A (H3N2) viruses in the United States may have undergone an antigenic drift. If these drifted influenza A (H3N2) viruses predominate in the United States this season, it's possible that vaccine effectiveness may be reduced.
- Even during seasons when the match between the vaccine viruses and circulating viruses is less than optimal and protection against illness might be reduced, vaccination can offer substantial benefit and might reduce the likelihood of severe outcomes such as hospitalization and death.
- CDC recommends a yearly flu vaccination as the first and most important step in protecting against flu and its potentially serious complications.
- Clinicians and the public should be aware that antiviral medication may be used as a second line of defense against flu. CDC's influenza antiviral treatment recommendations are available at <http://www.cdc.gov/flu/antivirals/index.htm>.
- Antiviral treatment should be considered for all suspected flu cases, even in the absence of confirmatory lab results and/or history of influenza vaccination, regardless of illness severity.
- Flu vaccination to prevent flu and prompt antiviral therapy to treat influenza illness are the two most important medical countermeasures against the influenza viruses. Their correct application by health care professionals can provide life-saving benefits to patients.