Influenza Update N° 230
9 February 2015, based on data up to 25 January 2015

Summary
Globally influenza activity remained high in the northern hemisphere with influenza A(H3N2) viruses predominating so far this season. Antigenic characterization of most recent A(H3N2) viruses thus far indicated differences from the A(H3N2) virus used in the influenza vaccines for the northern hemisphere 2014-2015. The vast majority of influenza A(H3N2) viruses tested to date this season were sensitive to neuraminidase inhibitors.

- In North America, the influenza activity seemed to have peaked. Influenza A(H3N2) virus predominated this season.
- In Europe, the influenza season is well under way, particularly in western and central countries in the WHO European Region. Influenza A(H3N2) was the dominant virus detected this season.
- In northern Africa and the middle East, influenza activity due to influenza A(H3N2) and B seemed to have peaked but increasing activity with influenza A(H1N1)pdm09 was reported by Algeria, and Iran.
- In the temperate countries of Asia, influenza activity appeared to have peaked in northern China, but was still increasing in Japan and the Republic of Korea. Influenza A(H3N2) virus predominated so far.
- In tropical countries of the Americas, influenza activity was low in most countries of the Caribbean, Central America and in the tropical countries of South America.
- In tropical Asia, influenza activity increased in south China; China Hong Kong Special Administrative Region and India.
- In the southern hemisphere, influenza activity remained at inter-seasonal levels.

Based on FluNet reporting (as of 5 February 2015, 10:20 UTC), during weeks 2 to 3 (11 January 2015 to 24 January 2015), National Influenza Centres (NICs) and other national influenza laboratories from 93 countries, areas or territories reported data. The WHO GISRS laboratories tested more than 135,489 specimens. 32,188 were positive for influenza viruses, of which 28,139 (87.4%) were typed as influenza A and 4,049 (12.6%) as influenza B. Of the sub-typed influenza A viruses, 11,51 (7.6%) were influenza A(H1N1)pdm09, 13,968 (92.4%) were A(H3N2). Of the characterized B viruses, 1,463 (99%) belonged to the B-Yamagata lineage and 15 (1%) to the B-Victoria lineage.
Countries in the temperate zone of the northern hemisphere

**North America**

In North America, the influenza season was still ongoing with high influenza activity in most countries. Influenza A(H3N2) virus predominated, with patterns similar to the influenza season of 2012-2013 when influenza A(H3N2) was the main virus detected.

In Canada, influenza activity seemed to have peaked with influenza-like illness (ILI) rates and number of influenza detections declining in comparison with previous update. The percentage of specimens positive for influenza virus decreased to 27.4% (from 34% for the last update). The number of outbreaks due to influenza declined to more than half the number of outbreaks in the previous weeks. Influenza A(H3N2) continued to be the most commonly detected influenza virus. Of the laboratory confirmed influenza virus detections, 94.5% were influenza A; of the subtyped influenza A viruses 99.6% were influenza A(H3N2). In both laboratory detections, hospitalizations and deaths, the majority of cases have been among people ≥ 65 years. RSV remained the second most frequently detected virus after influenza.

In the United States of America (USA), ILI activity had peaked around the end of 2014 and the timing and height of the peak mimicked the 2012-2013 season. The influenza detection rate peaked at 30.4% positivity and declined further to 19.9% positivity. The pneumonia and influenza mortality from the 122 Cities Reporting Systems increased further to 9.1% which is well above the epidemic threshold of 6.9%, and slightly below the values reported in the 2012-2013 season. The influenza-associated hospitalizations continued to increase with the highest rate among adults aged ≥ 65 years. Of 11 077
influenza positive specimens, 97% were influenza A and 2.6% were influenza B viruses. Of the influenza A viruses subtyped, 99.7% were influenza A(H3N2).

In Mexico, acute respiratory infections (ARI) activity remained consistent with seasonal patterns and influenza detections were mainly due to influenza A(H3N2).

**Europe**

In Europe, the influenza season was well under way, particularly in central and western countries in the WHO European Region. Twenty-six (26) countries reported an increased influenza activity and the overall proportion of influenza positive sentinel specimen was 48%. Among the influenza-positive samples, 87% were influenza A virus and 13% influenza B virus. Of the subtyped influenza viruses, 78% were A(H3N2) and 22% were A(H1N1)pdm09. Excess all-cause mortality among people aged ≥ 65 years has been seen in recent weeks in France, the Netherlands, Portugal, Spain and the United Kingdom of Great Britain and Northern Ireland (see the European project for monitoring excess mortality for public health action, EuroMOMO (http://www.euromomo.eu)). Similar to the findings in Canada and the USA, viral characterization data in Europe showed that a proportion of the A(H3N2) viruses had drifted from the H3N2 vaccine virus. All influenza A(H1N1)pdm09 and A(H3N2) viruses tested this season for neuraminidase inhibitor susceptibility were sensitive to Oseltamivir and Zanamivir.
In northern Africa, influenza B virus detections started to decrease while increased numbers of both influenza A(H1N1)pdm09 and A(H3N2) viruses were reported.

**Central and Western Asia region**

In the central and western Asian region, influenza activity remained low or decreased.

**Eastern Asia**

In the eastern Asian region, influenza activity seemed to have peaked in north China. In Japan the number of influenza cases per sentinel site increased sharply in the last few weeks. The weekly proportion of ILI visits per 1000 was 18, and surpassed the national baseline of 12 in the Republic of Korea. In Mongolia, ILI activity continued to rise and exceeded the upper tolerance limit. Influenza A(H3N2) was the predominant virus detected in this region.
Countries in the tropical zone

**Tropical countries of the Americas/Central America and the Caribbean**

Overall in this region influenza activity was low, with the exception of Puerto Rico where ILI activity remained high and Jamaica where severe acute respiratory infection (SARI) activity increased associated with circulation of influenza A(H3N2) virus.

Tropical countries in South America reported low ILI, SARI and laboratory-confirmed influenza activity.

**Central African tropical region**

In Africa, influenza detections were reported mainly from eastern Africa. Madagascar, Rwanda and the United Republic of Tanzania reported laboratory confirmed influenza A(H3N2) and B, while Rwanda also detected influenza A(H1N1)pdm09 viruses.

**Tropical Asia**

Increasing ILI activity was reported from south China with a mixture of influenza A(H3N2) and B detections and from China Hong Kong Special Administrative Region (SAR) with mainly influenza A(H3N2) viruses. Singapore reported an increasing average of daily clinic attendances for acute respiratory infections. In China Hong Kong SAR, the hospital admission rate of influenza among elderly aged 65 years or above was at a high level, exceeding the maximum levels recorded in the past few years.

India reported an increase in influenza A(H1N1)pdm09 detections. Sri Lanka reported co-circulation of influenza A(H3N2) and B viruses.
Countries in the temperate zone of the southern hemisphere

Influenza activity was at an inter-seasonal level in the southern hemisphere countries.

Source of data

The Global Influenza Programme monitors influenza activity worldwide and publishes an update every two weeks.

The updates are based on available epidemiological and virological data sources, including FluNet (reported by the WHO Global Influenza Surveillance and Response System) and influenza reports from WHO Regional Offices and Member States. Completeness can vary among updates due to availability and quality of data available at the time when the update is developed, usually the update is based on data which covers data until two weeks ago.

Link to web pages

Influenza reports from WHO Regional Offices:
EURO: http://www.flunewseurope.org/
WPRO: http://www.wpro.who.int/emerging_diseases/Influenza/

Epidemiological influenza updates:
http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance
Epidemiological influenza updates archives:
http://www.who.int/influenza/surveillance_monitoring/updates/en/
Virological surveillance updates:
http://www.who.int/influenza/gisrs_laboratory/updates/summaryreport
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