Influenza Update N° 228

12 January 2015

Summary

Globally influenza activity continued to increase in the northern hemisphere with influenza A(H3N2) viruses predominating so far this season. Antigenic characterization of most recent A(H3N2) viruses so far indicated differences from the A(H3N2) virus used in the influenza vaccines for the northern hemisphere 2014-2015. The tested influenza A(H3N2) viruses so far did show sensitivity to neuraminidase inhibitors.

- In North America, the influenza season was ongoing with influenza activity still increasing in most areas. Influenza A(H3N2) was the predominant virus.
- In Europe influenza activity was still low, but the season seemed to have started.
- In eastern Asia, influenza activity increased with influenza A(H3N2) virus predominated.
- In northern and western Africa influenza activity increased with influenza B virus predominant.
- In tropical countries of the Americas, influenza activity increased in some countries of the Caribbean, decreased in Central America and was low in the tropical countries of South America.
- In tropical Asia, influenza activity increased slightly but remained low with influenza B predominating.
- In the southern hemisphere, influenza activity remained at low levels, though ILI activity remained high in several Pacific Islands.
- Based on FluNet reporting (as of 9 January 2015 13:00 UTC), during weeks 51 to 52 (14 December 2014 to 27 December 2014), National Influenza Centres (NICs) and other national influenza laboratories from 80 countries, areas or territories reported data. The WHO GISRS laboratories tested more than 96 535 specimens. 23 421 were positive for influenza viruses, of which 22 129 (94.5%) were typed as influenza A and 1292 (5.5%) as influenza B. Of the sub-typed influenza A viruses, 163 (1.7%) were influenza A(H1N1)pdm09 and 9211 (98.3%) were influenza A(H3N2). Of the characterized B viruses, 423 (97.9%) belonged to the B-Yamagata lineage and 9 (2.1%) to the B-Victoria lineage.
Note: Global epidemiology and surveillance updates are periodically collected from data reported by National authorities or organizations responsible for reporting this data. For further information on specific influenza virus activity in the world and scientific literature for practitioners and other professionals in the field, please visit the links provided at the end of this document.

Countries in the temperate zone of the northern hemisphere

North America

In the countries in the North America, the influenza season is ongoing with sharp increased activity in most countries and with influenza A(H3N2) virus predominating.

In Canada, although influenza-like illness (ILI) activity was below expected rates, the influenza detections increased sharply in the last few weeks to 29.1% and widespread ILI/influenza activity was reported in eight regions. The rate of antiviral prescriptions more than doubled from the previous week. Influenza A(H3N2) continued to be the most common detected influenza virus. Of the laboratory confirmed influenza virus detections, 97% were influenza A; 99.8% of the subtyped influenza A viruses were influenza A(H3N2). Among cases with reported ages, 56% were aged ≥ 65 years. Hospitalizations due to influenza increased, again with influenza A(H3N2) dominating. The majority (85%) of adult hospitalizations were among adults of ≥ 65 years of age. The number of RSV detections increased as well RSV and was the second most frequently detected virus after influenza.

In the United States of America (USA), the influenza detection rate continued to increase (30.4% positivity). ILI activity was rapidly increasing to 5.9% which is at the level of the peak ILI activity seen in 2012-2013. All 10 regions were reporting ILI levels at or above regional-specific baseline levels and 29 states reported high ILI activity. The Pneumonia and Influenza mortality from the 122 Cities Reporting Systems was with 6.8%, just below the epidemic threshold of 6.9%. The overall hospitalization rate was 12.6 per 100,000 population with the highest rate among adults aged ≥ 65 years and 94% of hospitalized adults had at least one reported underlying medical condition. Of
7289 influenza positive specimens, 96.6% were influenza A and 3.4% were influenza B. Of the influenza A viruses subtyped, 99% were influenza A(H3N2). Influenza viral characterization data indicated that 68.3% of the influenza A(H3N2) viruses collected and analyzed in the USA from October 1 through December 27, 2014 were antigenically different (drifted) from the A(H3N2) vaccine virus currently in the northern hemisphere influenza vaccine but most were similar to the A(H3N2) vaccine virus strain selected for the 2015 Southern Hemisphere influenza vaccine. The RSV detection rate also increased. In the USA, all recently circulating influenza viruses that have been tested have been susceptible to the neuraminidase inhibitor antiviral medications.

In Mexico, acute respiratory infections (ARI) activity increased and remained consistent with seasonal patterns and influenza detections increased slightly.

**Number of specimens positive for influenza by subtype in North America**

![Graph showing number of specimens positive for influenza by subtype in North America]

*Data source: FluNet (www.who.int/flunet), Global Influenza Surveillance and Response System (GISRS) Data generated on 12/01/15*

**Europe**

In Europe, influenza activity remained low, but the season seemed to have started. Of the 649 specimens tested in the last week of 2014 from sentinel IILI and ARI patients from 25 countries, 85 samples (13%) from 15 countries tested positive for influenza virus. Influenza activity increased mainly in the north-western countries. The predominant influenza virus subtype circulating has been A(H3N2). Similar to the findings in the USA, viral characterization data in Europe showed that a proportion of the A(H3N2) viruses has drifted from the H3N2 vaccine virus. All 75 influenza A(H3N2) and 17 A(H1N1)pdm09 viruses tested this season for neuraminidase inhibitor susceptibility were sensitive to Oseltamivir and Zanamivir.
Northern Africa

In northern Africa, influenza detections continued to increase in Algeria, Morocco and Tunisia with influenza B virus dominating. Libya reported some severe cases of influenza A(H1N1)pdm09.

Western and Central Asia region

In the central Asian region, influenza activity remained low, except for Uzbekistan where an increased influenza A(H3N2) activity was reported. In western Asia, Bahrain and Qatar did report some influenza A(H1N1)pdm09 activity with.

Eastern Asia

In the eastern Asian region, influenza activity increased. In north China, influenza activity continued to rise with Influenza A(H3N2) viruses predominating. ILI activity increased to 4.1%, following the seasonal trend. It was slightly higher but similar to the same week in the years 2010-2013, where it ranged between 2.7 and 3.9%. In Japan, influenza activity increased with influenza A(H3N2) predominating. In Mongolia, ILI activity continued to rise and exceed the upper tolerance limit but with no indication of increased laboratory-confirmed influenza detection.
Countries in the tropical zone

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

Overall in this region, influenza activity was low.

In Cuba, influenza A(H3N2) detections started to decrease in the last few weeks. In Central America, influenza activity has decreased after a wave of influenza A(H3N2) activity but RSV activity remains high.

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

**Central African tropical region**

In Africa, influenza detections were reported from a few countries. Côte d’Ivoire reported mainly influenza B detections while the United Republic of Tanzania reported mainly influenza A(H3N2) detections. In Madagascar and Zambia, influenza activity caused by both influenza A and influenza B viruses was decreasing.

**Tropical Asia**

In most southern Asian and South-Eastern Asian countries, activity declined or remained low.

Countries in the temperate zone of the southern hemisphere
Influenza activity was at an inter-seasonal level in the southern hemisphere countries, except for some Pacific Islands where high activity was reported in American Samoa, Niue, the Solomon Islands and Vanuatu.

**Number of specimens positive for influenza by subtype in the southern hemisphere**

![Graph showing influenza activity by subtype in the southern hemisphere](Image)

**Data source:** FluNet (www.who.int/flunet), Global Influenza Surveillance and Response System (GISRS)

Data generated on 11/01/2015
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.

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 2012:
http://www.who.int/influenza/surveillance_monitoring/updates/GIP_surveillance_2012_archives
Virological surveillance updates:
http://www.who.int/influenza/gisrs_laboratory/updates/summaryreport
Virological surveillance updates archives:
http://www.who.int/influenza/gisrs_laboratory/updates/

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