Influenza Update N° 231
23 February 2015, based on data up to 07 February 2015

Summary

Globally, influenza activity remained high in the northern hemisphere with influenza A(H3N2) viruses predominating. Some countries reported an increase in influenza A(H1N1)pdm09 activity. 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 has predominated this season.

- **In Europe**, the influenza season continued to rise, particularly in western and central countries. Influenza A(H3N2) remained the dominant virus detected this season. However, in south west Europe the proportion of influenza A(H1N1) and influenza B increased.

- **In northern Africa and the middle East**, influenza activity is ongoing. Some countries are reporting an increase in influenza A(H1N1)pdm09 activity (Jordan, Morocco, Tunisia).

- **In the temperate countries of Asia**, influenza activity decreased from its peak in northern China, but continued to increase in Mongolia and the Republic of Korea. Influenza A(H3N2) virus predominated so far.

- **In tropical countries of the Americas**, influenza activity remained low in most countries.

- **In tropical Asia**, influenza activity continued to increase in southern 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 20 February 2015 08:25 UTC), during weeks 4 to 5 (25 January 2015 to 7 February 2015), National Influenza Centres (NICs) and other national influenza laboratories from 90 countries, areas or territories reported data. The WHO GISRS laboratories tested more than 138 720 specimens. 32 769 were positive for influenza viruses, of which 26 664 (81.4%) were typed as influenza A and 6105 (18.6%) as influenza B. Of the sub-typed seasonal influenza A viruses, 1580 (12.5%) were influenza A(H1N1)pdm09 and 11 094 (87.5%) were influenza A(H3N2). Of the characterized B viruses, 1813 (97.3%) belonged to the B-Yamagata lineage and 50 (2.7%) to the B-Victoria lineage.
Countries in the temperate zone of the northern hemisphere

**North America**

In North America, the influenza season seemed to have peaked in most countries, but influenza activity remained high. Influenza A(H3N2) virus continued to dominate.

In Canada, influenza activity appeared to have peaked with influenza-like illness (ILI) rates, hospitalization rates and the influenza positivity rate declining in the last few weeks. The rate of specimens testing positive for influenza declined from 27.4% (last report) to 19.5%. From the 1729 positive influenza detections, 90.1% were influenza A, and 98.8% of those subtyped were A(H3N2), 9.9% were influenza B. The vast majority of hospitalizations due to influenza were reported among adults aged ≥65 years. The detection of respiratory syncytial virus also continued to decrease, but the ILI rate continued to be above the expected rate.

In the United States of America (USA), influenza activity declined but remained high. The influenza detection rate peaked at 30.4% positivity at the end of December 2014 and decreased to 14.9%. The Pneumonia and Influenza mortality from the 122 Cities Reporting Systems returned to 8.1% but was still above the epidemic threshold of 7.2% for this week. Among the 1470 subtyped influenza specimens 1058 (71.9%) were influenza A(H3N2), 6 (0.4%) influenza A(H1N1)pdm09 and 406 (27.6%) were influenza B, indicating an increase of influenza B virus circulation. The influenza-related hospitalization rate was at 44.1 per 100 000 population, with the highest rate among adults ≥65 years of age.

In Mexico, influenza detections increased to 23.6% with a predominance of influenza A(H3N2). Acute respiratory infections (ARI) activity remained high and increased in the expected levels. Pneumonia activity was also high, but was within the expected levels.
In Europe, the influenza season continued to increase, particularly in western and central European Countries with 30 countries reported higher level influenza activity. Of the 2799 sentinel specimens, 1363 (49%) tested positive for the influenza virus. Of the influenza A viruses subtyped, 77% were A(H3N2) while 23% were A(H1N1)pdm09. Of the B viruses that were characterized, all were of the B/Yamagata lineage. Countries in south west Europe had a proportional increase in influenza A(H1N1)pdm09 and influenza B detections. Based on the European project for monitoring excess mortality for public health action (EUROMOMO) there was a higher level of mortality among elderly people (aged ≥65 years), than in the four previous seasons across all countries. The group aged ≥65 accounted also for the highest number of cases hospitalized. All influenza viruses that underwent phenotypic or genotypic testing for neuraminidase inhibitor susceptibility showed no evidence of reduced susceptibility to oseltamivir or zanamivir. RSV decreased across Europe following the peak in the first week of 2015.
Number of specimens positive for influenza by subtype in European Region of WHO

![Graph showing number of specimens positive for influenza by subtype in Europe](image)

**Data source:** FluNet (www.who.int/flunet). Global Influenza Surveillance and Response System (GISRS) Data generated on 19/02/15

**Northern Africa**

In northern Africa, influenza activity continued. Algeria, Morocco and Tunisia reported an increase in influenza A(H1N1)pdm09 detections in recent weeks.

**Western Asia**

In western Asia, influenza A remained active with both subtypes (H1N1)pdm09 and A(H3N2) circulating.

**Central Asia**

Countries in the central Asian region reported low or decreasing influenza activity.

**Eastern Asia**

In the eastern Asian region, influenza activity appeared to have peaked in northern China and Japan, but continued to increase in the Mongolia and Republic of Korea. Influenza A(H3N2) virus has predominated so far. In Japan, influenza A(H3N2) detections seemed to have peaked in the beginning of 2015. In the Republic of Korea, the proportion of physician visits for ILI was 22.6%, well over the baseline of 12.2%. Out of 287 positive influenza specimens, 219 (76.3%) were influenza A(H3N2). In Mongolia, influenza A(H3N2) was the predominant virus and detections continued to increase. The ILI rate and pneumonia rate though decreased. ILI rate per 10 000 population was highest in the 1-4 years age group 1-4.
Number of specimens positive for influenza by subtype in eastern Asia

Data source: FluNet (www.who.int/flunet). Global Influenza Surveillance and Response System (GISRS)
Data generated on 19/02/15

Countries in the tropical zone

Tropical countries of the Americas/Central America and the Caribbean

Overall influenza activity in the Caribbean, Central America and the tropical countries of South America experienced low influenza activity with the exception of Cuba, Jamaica and Puerto Rico. Cuba reported increased severe acute respiratory infections (SARI) and influenza detections and Puerto Rico reported high ILL activity and increased influenza detection. Jamaica has increased influenza activity with co-circulation of influenza A(H3N2) and influenza B virus, as well as increased hospitalizations due to SARI.

Central African tropical region

In Africa, influenza virus detections remained low. Cameroon, the Central African Republic and Cote d’Ivoire reported influenza B, while Zambia reported only influenza A viruses and Madagascar and the United Republic of Tanzania reported both influenza A and B.

Tropical Asia

In tropical Asia, influenza activity continued to increase in south China, China Hong Kong Special Administrative Region and India. South China continued to report a mixture of influenza A(H3N2) and influenza B detections, and in China Hong Kong Special Administrative Region (SAR) predominantly influenza A(H3N2) detections. Singapore reported an increased average daily number of patients seeking treatment of acute respiratory infections (ARI). The Islamic Republic of Iran reported increased activity with both subtypes of influenza A.
India reported a sharp increase in influenza A(H1N1)pdm09 virus detections. Sri Lanka continued to report 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) FluID (epidemiological data reported by national focal points) 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:
- WPRO: [http://www.wpro.who.int/emerging_diseases/Influenza/](http://www.wpro.who.int/emerging_diseases/Influenza/)

Epidemiological Influenza updates:
- [http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance](http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance)
  Virological surveillance updates :
  - [http://www.who.int/influenza/gisrs_laboratory/updates/summaryreport](http://www.who.int/influenza/gisrs_laboratory/updates/summaryreport)
  - Virological surveillance updates archives : [http://www.who.int/influenza/gisrs_laboratory/updates/](http://www.who.int/influenza/gisrs_laboratory/updates/)

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