Summary

- Most countries in the northern temperate zone have stopped weekly reporting or moved over to out of season surveillance schedules. The United States of America is continuing to detect cases of influenza A(H3N2)v in humans. Most cases have occurred with contact to swine and no sustained human to human transmission has been identified.

- In the tropical zone, the countries reporting notable influenza activity are Brazil, Cuba, El Salvador, Honduras and Panama in the Americas (influenza A(H1N1)pdm09 and type B); Ghana and Madagascar in sub-Saharan Africa (influenza A(H3N2) and type B); Bangladesh, southern China, India, Singapore, Sri Lanka and Viet Nam in Asia (influenza A(H3N2) or B).

- While New Zealand continues to report increases in some indicators, influenza activities have decreased in most of the temperate countries of the southern hemisphere. Australia, Chile, Paraguay and South Africa, continue to report declines in indicators. Argentina continues to report very low numbers of detections throughout 2012.

- Influenza A(H3N2) viruses are the most commonly reported type/sub-type in recent weeks across the southern hemisphere temperate region in Chile, South Africa, and Australia. A(H1N1)pdm09 is the most common influenza virus detected in Paraguay as well as neighbouring areas of southern Brazil and the Plurinational State of Bolivia, whereas Ecuador, El Salvador, Panama and Peru are reporting mostly influenza B.

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.

- Virological Update

- Peer-reviewed Literature: Early estimates of seasonal influenza vaccine effectiveness in Europe among target groups for vaccination: results from the I-MOVE multicentre case–control study, 2011/12
Countries in the temperate zone of the northern hemisphere

Influenza transmission in all reporting countries in the temperate regions of the northern hemisphere is at inter-seasonal levels.

Regarding the recent outbreak of influenza A(H3N2) variant (A(H3N2)v)\(^1\) in the United States of America, as of 10 August 2012, the total number of confirmed human cases of influenza A(H3N2)v for 2012 increased to 154, mainly as a result of follow up investigations of the initial cases in Ohio and Indiana. One case was also reported from Hawaii and one in Illinois. Most cases were children who had direct or indirect exposure to pigs in agricultural fairs, no human to human transmission has been documented for the 2012 cases. Clinically, these cases are similar to seasonal influenza cases, and all patients have recovered from their illness. Investigations around cases and contacts is on-going. More information on these events can be found at: http://www.cdc.gov/flu/swineflu/

Countries in the tropical zone

Tropical countries of the Americas

Active transmission of influenza has been reported in Central America and the Caribbean, mostly with influenza B, whilst in tropical South America, influenza A(H1N1)pdm09 has been the most detected virus.

In Central America where influenza A(H1N1)pdm09 dominated, El Salvador reported a predominance of influenza B over the past four weeks. Of the remaining countries in Central America, Honduras has reported persistent low levels of influenza A(H1N1)pdm09, while Nicaragua reports low levels of influenza B. Costa Rica has reported co-circulation of influenza B and A(H3N2) in low numbers. Panama reported a notable increase in influenza B detections in July, after initially reporting a predominance of influenza A(H1N1)pdm09 since early June.

In the Caribbean, since June Cuba has been reporting detection of primarily of influenza B, but since late July, detections have been decreasing. Jamaica reported low numbers of influenza A and B detections, with the lowest proportion of SARI cases compared to the last six weeks.

In the tropical zone of South America, recent transmission of influenza has been noted primarily in Brazil, Ecuador, and the Plurinational State of Bolivia with some persistent low level transmission in Peru.

Brazil has been reporting decreasing levels of influenza activity over the past several weeks. The most affected areas were the southern and south-eastern regions of the country. Since mid-July, there has been a reduction in the number of hospitalized SARI cases, deaths associated with influenza, and overall detections of influenza virus indicating that the season may have peaked. Brazil reported that influenza was detected in 22% (2996/13605) of SARI cases for the year, and of these, 74% (n=2191) were influenza A(H1N1)pdm09 virus. In addition, influenza was detected in 30% (320/1063) of all SARI deaths, of which 85% (273/320) were influenza A(H1N1)pdm09 virus. Influenza type B was reported primarily in the age groups 15-59 and was nearly absent in other age strata.

Ecuador reported a decrease in influenza B detections in the past reporting fortnight, the first sustained decrease since early June. All SARI indicators remained similar or decreased, when compared to the previous reporting week, corresponding with the reduction of influenza virus detections.

In the Plurinational State of Bolivia, according to laboratory data from La Paz (INLASA laboratory), viral circulation showed a decreasing trend since peaking in June with only a very small number of

\(^1\) [http://www.who.int/influenza/gisrs_laboratory/terminology_ah3n2v/en/index.html](http://www.who.int/influenza/gisrs_laboratory/terminology_ah3n2v/en/index.html)
virus detections in the last reporting fortnight. SARI indicators have continued to decrease since early July. Influenza A(H1N1)pdm09 has been the most common influenza virus detected during this period of transmission accounting for over 90% of influenza viruses identified.

Peru continued to report very low numbers of influenza A(H1N1)pdm09 and influenza type B since early May. Of all respiratory viruses detected, influenza B accounted for 69% (9/13) of positive specimens.

**Number of specimens positive for influenza by subtype in the tropical South America transmission zone**

<table>
<thead>
<tr>
<th>Week</th>
<th>A (H3N2)</th>
<th>A(H1)</th>
<th>B (Victoria lineage)</th>
<th>B (Yamagata lineage)</th>
<th>A (not subtyped)</th>
<th>B (lineage not determined)</th>
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<tbody>
<tr>
<td>2011</td>
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<tr>
<td>2012</td>
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Data source: FluNet ([www.who.int/flunet](http://www.who.int/flunet)). Global Influenza Surveillance and Response System (GISRS)
Data generated on 16/08/2012 13:01:53 UTC

**Sub-Saharan Africa**

In western Africa, co-circulation of influenza A(H3N2) and influenza B was reported in Ghana since early June with a predominance of influenza B in the past four weeks. In Madagascar, the previously noted high level influenza A(H3N2) transmission continued to decrease.

**Tropical Asia**

A few areas of tropical Asia have experienced recent significant influenza virus circulation most notably southern China, Singapore, and Viet Nam. India continues to detect persistent low numbers of A(H1N1)pdm09 and influenza type B, in approximately equal numbers. Neighbouring Sri Lanka has been detecting a similar distribution of viruses since early-June. In contrast, Bangladesh has reported a predominance of influenza A(H1N1)pdm09 with only sporadic detections of influenza B from early-April to late-May yet in the most recent reporting period, influenza B was the most detected virus.

In southern China, the percentage of outpatient visits that were due to influenza-like illness (ILI) at sentinel sites was 3.2% during the most recent reporting week which represents the first decrease of this indicator in the previous four weeks. 344 of 1061 (32%) specimens tested were positive for influenza, the first decrease in this trend for the past 8 weeks. Of the positive tests, 342 (99%) were influenza A and all of the influenza A viruses that were subtyped were A(H3N2).

The previously reported high level, persistent influenza activity in China Hong Kong Special Administrative Region has continued to decrease in recent weeks. Admissions for influenza, deaths
related to influenza, numbers of ILI cases presenting to emergency departments, and outbreaks of influenza have all decreased to low levels. Of the ILI specimens collected between 29 July to 4 August, influenza A(H3N2) accounted for 89% (76/85) of positive specimens, with influenza B and A(H1N1)pdm09 found in equal numbers. The prolonged influenza season resulted in levels of admission and death that were notably higher compared to the last two years, primarily associated with influenza A(H3N2) virus.

In Southeast Asia, transmission of A(H3N2) in Viet Nam has continued to decrease after peaking in late June. Cambodia and the Lao People's Democratic Republic have both reported low level transmission of A(H3N2) coinciding with the peak in Viet Nam.

In Singapore, acute respiratory infection (ARI) activity decreased during the week 5 to 11 August compared to the previous two weeks remaining at the warning level. The proportion of cases with ILI among the polyclinic ARI cases was low at 1%, of 132 ILI samples collected in July, 30% were positive for an influenza virus.

Number of specimens positive for influenza by subtype in the South East Asia transmission zone

Countries in the temperate zone of the southern hemisphere

Influenza activity continued to be reported in most temperate countries of the southern hemisphere.

Temperate countries of South America

Influenza activity in the southern cone of South America appears to have peaked and decreased in Chile and Paraguay while Argentina continued to report low numbers of virus detections. Chile reported a decrease of ILI activity for the third consecutive week, with an ILI consultation rate of 10.8 per 100 000; also decreased was the proportion of emergency room consultations for respiratory illness. Almost all of the influenza viruses detected in Chile were of subtype A(H3N2). Chile has also experienced a significant respiratory syncytial virus (RSV) season, accounting for a large portion of ILI and severe acute respiratory infection (SARI) cases. Of all respiratory virus detections, influenza A represents 10% of the total. SARI cases with confirmed influenza continued to decrease for the fourth consecutive week. Of the total 221 influenza confirmed SARI cases in 2012, 95% (n=209) were
influenza A and 5% (n=12) were B, of those that were further subtyped (N=149) 97% (n=145) were influenza A(H3N2) and 3% (n=4) A(H1N1)pdm09. Of the confirmed influenza A(H3N2) SARI cases, 15% required ICU admission. The main affected age groups for influenza A(H3N2) SARI cases are the 60 years and above (42%) and less than 5 years (39%). In the 60 SARI deaths occurred in 2012, five have been confirmed as influenza A(H3N2), one influenza A (not subtyped) and one type influenza B.

Argentina continued to report only small numbers of influenza virus detections. ILI and SARI cases remained elevated but appear to have peaked concurrently with decreased detections of respiratory syncytial virus (RSV), showing a decreasing trend since early-June. Among the small number of influenza viruses detected nationwide since the start of 2012, 56% (80/142) were influenza type A and 44% (62/142) type B.

In Paraguay, although the total number of influenza detections showed a decreasing trend since late July, ILI rates remained significantly elevated which seems to be related to RSV. For the last four reporting weeks, the rates of SARI hospitalizations and SARI mortality showed little change and RSV remains the main detected virus among identified respiratory viruses. In the last reporting week the proportion of SARI cases admitted to ICU increased to its highest rate since the start of 2012. Of the 2012 SARI mortalities with confirmed respiratory viruses (n=20), thirteen (65%) were confirmed influenza A(H1N1)pdm09.

**Number of specimens positive for influenza by subtype in the temperate South America transmission zone**

![Graph showing influenza cases by subtype](image)

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

Data generated on 16/08/2012 13:16:12 UTC

**Temperate countries of southern Africa**

In South Africa, co-circulation of influenza A(H3N2) and influenza B was reported with the total number of influenza detections having decreased since the first week of July. In SARI samples positive for influenza, A(H3N2) makes up the majority of detections.
Influenza update 17 August 2012

Number of specimens positive for influenza by subtype in the temperate southern Africa transmission zone

Data source: FluNet (www.who.int/flunet), Global Influenza Surveillance and Response System (GISRS)  Data generated on 16/08/2012 13:38:32 UTC

Oceania, Melanesia and Polynesia

While Australia reported a decrease in most influenza indicators in the recent reporting period (21 July-3 August 2012), New Zealand is still seeing an increase in ILI consultations.

In Australia, although almost all jurisdictions have continued to report influenza activity above baseline levels, most surveillance systems reported a decrease in activity compared to the previous reporting period. Compared with previous years (excluding 2009), there has been an earlier increase in seasonal ILI consultation rates and rates are currently higher than the seasonal peaks reported in 2010 and 2011. In the week ending 3 August 2012, sentinel general practitioner ILI consultation rates remained at 18.6 per 1000 consultations, following an apparent peak in the previous weeks of 22.1 per 1000 consultations. Nationally, there was 695 laboratory confirmed notifications of influenza in the past reporting fortnight, a slight decrease, with almost 45% coming from Queensland, where there continues to be an increasing trend. Notifications of all other jurisdictions plateaued or decreased.

The number of hospital admissions for influenza seem to have peaked. 17% of hospitalizations have been associated with influenza B virus infections, however half of them have been from the Northern Territory, with influenza A more common in other states. 76% of all hospitalized cases have known medical co-morbidities. A bimodal age distribution trend in hospitalizations was reported with peaks among those aged 0-9 years and over 70 years.

In the period 1 July – 6 August 2012, there were 13 paediatric hospitalizations associated with severe complications of influenza, including five ICU admissions. Half of these hospitalizations were associated with influenza A(not subtyped) and half with influenza B, half had an underlying chronic condition.

So far in 2012, 23 influenza associated deaths have been notified to the National Notifiable Diseases Surveillance System (NNDSS), with a median age of 74 years. All cases were reported as having influenza A(not subtyped) and are likely to be attributable to A(H3N2) infections.
Nationally, influenza A(H3N2) continues to be the predominant circulating virus with some co-circulation of influenza B. The distribution of types and subtypes is not uniform across all areas of the country, however. Influenza A(H3N2) is predominant across most states and territories, however influenza B represents around one third of notifications in Western Australia and 20% in the Northern Territory, with this proportion steadily decreasing. Of the 6095 influenza notifications reported to the NNDS this reporting period, 5225 were influenza A (4139 were influenza A (not subtyped), 1062 were A(H3N2) and 24 were influenza A(H1N1)pdm09), 866 were influenza B and 4 notifications were reported as A&B co-infections or not typed.

In New Zealand, ILI consultation rates remained above baseline for the fourth consecutive week with a weekly consultation rate of 154.1 per 100 000. Although ILI consultations continued to increase, the proportion of positive influenza samples has decreased.

Nationally, of the 566 ILI samples received, 42% (n=238) were positive for influenza viruses. Of these, influenza A(H3N2) accounted for 61% (n=144), influenza A not subtyped for 26% (n=61), influenza A(H1N1)pdm09 for 8% (n=19) and influenza B for 6% (n=14).

The number of SARI cases and incidence per 100 000 population has slightly decreased. Nationally, of the 57 SARI specimens tested between 22 to 29 July 2012 by The Southern Hemisphere Influenza and Vaccine Effectiveness Research and Surveillance (SHIVERS) Project, 27 (47%) were positive for influenza viruses with influenza A(not subtyped) accounting for 37% (n=10), influenza A(H3N2) for 26% (n=7); influenza B for 26% (n=7); and influenza A(H1N1)pdm09 for 11% (n=3).

Number of specimens positive for influenza by subtype in Oceania, Melanesia and Polynesia

Data source: FluNet (www.who.int/flunet). Global Influenza Surveillance and Response System (GISRS)
Data generated on 16/08/2012 13:41:20 UTC
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 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

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:

Contact
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