Virological Surveillance Summary

The number of specimens reported to FluNet by the Western Pacific Region countries and areas between week 1 and week 49, and the number of Influenza positive specimens are presented in the table below. Influenza A (H3) is currently the predominant circulating subtype (Figure 1).

Table 1: Countries and areas reporting data to FluNet, Western Pacific Region, weeks 1 to 49, 2016

<table>
<thead>
<tr>
<th>Country (most recent week)</th>
<th>Total number of specimens processed</th>
<th>Total number of influenza positive specimens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia (week 49)</td>
<td>36,411</td>
<td>6,190</td>
</tr>
<tr>
<td>Cambodia (week 48)</td>
<td>1,334</td>
<td>356</td>
</tr>
<tr>
<td>China (week 49)</td>
<td>524,461</td>
<td>77,504</td>
</tr>
<tr>
<td>Fiji (week 38)</td>
<td>349</td>
<td>120</td>
</tr>
<tr>
<td>Japan (week 48)</td>
<td>NA</td>
<td>7,231</td>
</tr>
<tr>
<td>Lao People's Democratic Republic (week 42)</td>
<td>4,495</td>
<td>403</td>
</tr>
<tr>
<td>Malaysia (week 30)</td>
<td>2,461</td>
<td>212</td>
</tr>
<tr>
<td>Mongolia (week 49)</td>
<td>3,783</td>
<td>364</td>
</tr>
<tr>
<td>New Caledonia (week 41)</td>
<td>1,360</td>
<td>301</td>
</tr>
<tr>
<td>New Zealand (week 39)</td>
<td>942</td>
<td>298</td>
</tr>
<tr>
<td>Papua New Guinea (week 39)</td>
<td>388</td>
<td>143</td>
</tr>
<tr>
<td>Philippines (week 48)</td>
<td>1027</td>
<td>251</td>
</tr>
<tr>
<td>Republic of Korea (week 49)</td>
<td>10,329</td>
<td>1,371</td>
</tr>
<tr>
<td>Singapore (week 49)</td>
<td>2,254</td>
<td>1,149</td>
</tr>
<tr>
<td>Viet Nam (week 47)</td>
<td>1,421</td>
<td>333</td>
</tr>
</tbody>
</table>

Figure 1: Number of influenza positive specimens by subtype and week, Western Pacific Region, 2015-16 (accessed 20 December 2016)
Influenza surveillance summary

Influenza surveillance in the WHO Western Pacific Region is based on outpatient and inpatient sentinel surveillance systems. Case definitions, populations under surveillance and data formats differ among these countries. This influenza surveillance summary includes countries where routine surveillance is conducted and information is available from syndromic surveillance systems for Influenza-like-illness (ILI) and Severe Acute Respiratory Infections (SARI).

The WHO surveillance case definition for ILI is an acute respiratory infection with a measured fever of $\geq 38^\circ C$ and cough, with symptom onset within the last 10 days. For SARI, it is an acute respiratory infection (ARI) with a history of fever or measured fever of $\geq 38^\circ C$ and cough, with symptom onset within the last 10 days and requires hospitalization.

Countries in the temperate zone of the Northern Hemisphere

In Republic of Korea, the proportion of ILI visits per 1,000 patients increased sharply between epidemiological weeks 48 and 50. In the most of the other countries within the temperate zone of the Northern Hemisphere, ILI and influenza activity is increasing and following seasonal trends.

Outpatient ILI Surveillance

China (North)
During week 47, the percentage of visits for ILI at national sentinel hospitals in northern China was 3.4%, which was higher than the previous week and the same week of 2014 and 2015 (Figure 2).

Mongolia
There has been an increase in ILI activity in Mongolia since week 30, which follows seasonal trends (Figure 3).

Republic of Korea
In week 50 2016, the proportion of ILI visits per 1,000 patients was 34.8 ILI cases per 1,000 patients, which increased sharply from 13.3 ILI cases per 1,000 patients recorded in the previous week. (Figure 4).


China (North)

Mongolia

Figure 2: Percentage of visits for ILI at sentinel hospitals, 2012-2016 (Source: China National Influenza Center)

Figure 3: Proportion of outpatient ILI visits (per 10,000 people), 2014-2016 (Source: Mongolia National Influenza Center)
Sentinel influenza surveillance

Japan
As of 30 November 2016, influenza activity is increasing and following seasonal trends (Figure 5).
Countries/areas in the tropical zone

In weeks 1 to 49 of 2016, ILI or ARI activity followed previous seasonal trends in countries/areas in the tropical zone.

**Outpatient Surveillance**

**Hong Kong (China) - ILI Surveillance**
In week 50, the average consultation rate for ILI among sentinel general outpatient clinics (GOPCs) was 4.0 ILI cases per 1,000 consultations, which was lower than the rate of 4.2 recorded in the previous week (Figure 6). The average consultation rate for ILI among sentinel private doctors was 50.8 ILI cases per 1,000 consultations, which was higher than the rate of 47.1 recorded in the previous week (Figure 7).

Among the respiratory specimens received in week 50, 20,200 (5.47%) tested positive for seasonal influenza viruses, which was lower than 6.34% recorded in the previous week. Influenza A(H3) was the predominant subtype detected comprising 96.5% of respiratory specimens. Other viruses detected were influenza C (2.0%), influenza A(H1) (1.0%), and influenza B (0.5%).

**China (South) - ILI Surveillance**
During week 47, the percentage of outpatient or emergency visits for ILI (ILI %) at national sentinel hospitals in southern China was 3.1%, which was the same as the previous week (3.1%), and higher than the same week of 2014 and 2015 (2.2% and 2.6%) (Figure 8).

**Singapore – ARI Surveillance**
The average daily number of patients seeking treatment in the polyclinics for ARI decreased from 2,589 (over 5.5 working days) in week 48 to 2,377 (over 5.5 working days) in week 49 (Figure 9). The proportion of patients with ILI among polyclinic attendances for ARI remained low at 1.0%. The overall positivity rate for influenza virus among ILI samples (n=62) in the community was 35.5% in the past 4 weeks. Of influenza-positive specimens in November 2016, the majority were influenza A(H3N2) (64.3%), followed by influenza A(H1N1)pdm09 (3.6%) and influenza B (32.1%).

Hong Kong (China) - ILI Surveillance

Figure 6: ILI consultation rates at sentinel general outpatient clinics, Hong Kong 2012-2016 (Source: Hong Kong Centre for Health Protection)

Figure 7: ILI consultation rates at sentinel private doctors, Hong Kong 2012-2016 (Source: Hong Kong Centre for Health Protection)

China (South) - ILI Surveillance

Figure 8: Percentage of visits due to ILI at national sentinel hospitals in South China, 2012-2016 (Source: China National Influenza Center)

Singapore - ARI Surveillance

Figure 9: Average daily polyclinic attendances for ARI, Singapore 2015-2016 (Source: Singapore Ministry of Health)
Countries in the temperate zone of the southern hemisphere

Influenza Situation Update

In the temperate zone of the southern hemisphere, influenza activity followed seasonal trends.

**Australia – Laboratory-confirmed influenza** (no update)

As of 28 October 2016, a total of 83,092 notifications of laboratory confirmed influenza were reported to the National Notifiable Diseases Surveillance System (Figure 10). Ninety percent of notifications were influenza A (73% A (unsubtyped), 6% influenza A(H1N1)pdm09 and 11% influenza A(H3N2), 10% were influenza B and less than 1% were influenza C, influenza A&B co-infections or untyped. Source:


![Figure 10: Australian notifications of laboratory confirmed influenza (Source: National Notifiable Diseases Surveillance System, Australian Department of Health)](image)

**New Zealand – Influenza like Illness** (no update)

In week 39, ending 2 October 2016, 24 patients with ILI consulted sentinel general practices in 20 District Health Boards. The weekly ILI incidence was 4.4 ILI cases per 100,000 patients. Of the 14 tested ILI cases, 4 were positive for influenza viruses, yielding an influenza-associated ILI incidence rate of 1.3 ILI cases per 100,000 patients (adjusted).

![Figure 11: Weekly resident ILI and influenza incidence since (Week 18) 2 May 2016 in New Zealand (Source: Institute of Environmental Science and Research Ltd (ESR), New Zealand)](image)
**Pacific Island Countries and Areas (PICs) - ILI Surveillance**

In the Pacific Island Countries and Areas, in week 49, the number of ILI cases reported was higher than the previous week in American Samoa and Vanuatu. The number of ILI cases in Solomon Islands, Fiji and Tonga decreased from the previous week (Figure 12).

**Global influenza situation updates**


Others:
Recommended composition of influenza virus vaccines for use in the 2016 southern hemisphere influenza season

Antigenic and genetic characteristics of zoonotic influenza viruses and candidate vaccine viruses developed for potential use in human vaccines
http://www.who.int/influenza/vaccines/virus/characteristics_virus_vaccines/en/

4th WHO Informal Consultation on Improving Influenza Vaccine Virus Selection

Video on influenza on WHO’s YouTube Channel
Arabic: https://www.youtube.com/watch?v=PxW6Pg1AnwI
Chinese: https://www.youtube.com/watch?v=xW9gDKePitQ
English: https://www.youtube.com/watch?v=yhhJfT86Bgg
French: https://www.youtube.com/watch?v=8mo8rWWJZkc
Russian: https://www.youtube.com/watch?v=XQ06nbKUWQ
Spanish: https://www.youtube.com/watch?v=qXr75cKxwTY