Virological Surveillance Summary

In the Western Pacific Region, the following influenza viruses predominated:

<table>
<thead>
<tr>
<th>Week</th>
<th>Predominant viruses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-9</td>
<td>A (H3)</td>
</tr>
<tr>
<td>10-16</td>
<td>B (Yamagata lineage), B (lineage not determined)</td>
</tr>
<tr>
<td>17-19</td>
<td>B (Yamagata lineage), A (H3)</td>
</tr>
<tr>
<td>20-37</td>
<td>A (H3)</td>
</tr>
<tr>
<td>38</td>
<td>A (H3), B (lineage not determined)</td>
</tr>
</tbody>
</table>

Countries providing specimens for FluNet reporting from the Western Pacific Region include Australia, Cambodia, China, Fiji, Lao PDR, Malaysia, Mongolia, New Zealand, Philippines, the Republic of Korea, Singapore, and Viet Nam. From week 1 to week 38, as of 28 September 2015, 89.9% of influenza specimens provided to FluNet were from China (n=405,896), 3.6% from Australia (n=16,356), 2.2% from New Zealand (n=9,967) and 1.8% from Republic of Korea (n=8,040).

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 \( \geq 38 \text{ C}^\circ \) and cough, with symptom onset within the last 10 days. For SARI, it is an acute respiratory infection with a history of fever or measured fever of \( \geq 38 \text{ C}^\circ \) and cough, with symptom onset within the last 10 days and requires hospitalization.
Countries in the temperate zone of the Northern Hemisphere

In most countries within the temperate zone of the Northern Hemisphere, ILI and influenza activity remained at low levels.

Outpatient ILI Surveillance

China (North)
During week 38, ILI activity remained low and consistent with the seasonal trend of previous years (2011 – 2014). ILI% at national sentinel hospitals in north China was 2.3%, which was same as the previous week (2.3 %) (Figure 2). Influenza A (H3N2) was dominant during week 38.

Mongolia
In week 37-38, 2015, ILI activity in Mongolia has been rising sharply and in week 38 was just below the upper tolerance limit of 90%. (Figure 3).

Republic of Korea
In week 37-38, 2015, the proportion of patients visiting sentinel physicians for ILI (4.7 and 4.6/1,000 outpatients, respectively) followed the seasonal trend of previous years (2011-2014) and was below baseline(Figure 4).

China (North)

Mongolia

Republic of Korea

Figure 2: Percentage of visits for ILI at sentinel hospitals, 2011-2015 (Source: China National Influenza Center)

Figure 3: Proportion of outpatients that were ILI (per 10,000 people), 2013-2015 (Source: Mongolia National Influenza Center)

Figure 4: Weekly proportion of ILI visits per 1,000 patients 2012-2015 (Source: Korean Centre for Disease Control and Prevention)
**Hospital influenza surveillance**

**Japan**
In Japan, the number of influenza cases reported weekly per hospital sentinel site follows the known seasonal trend (2005–2014), with case numbers remaining low (Figure 5).

![Figure 5: Number of influenza cases reported weekly per sentinel hospital site, Japan 2005-2015(Source: Japan National Institute of Infectious Diseases)](image)

**Countries/areas in the tropical zone**
In week 36-38 of 2015, ILI or Acute Respiratory Infection (ARI) activity followed previous seasonal trends in countries/areas in the tropical zone.

**Outpatient Surveillance**

**Hong Kong (China)- ILI Surveillance**
During week 38, the overall influenza activity in the past week remained low and the average consultation rate for ILI among sentinel general outpatient clinics (GOPCs) was 3.6 ILI cases per 1,000 consultations, which was the same as that recorded in the previous week (Figure 6). The average consultation rate for ILI among sentinel private doctors was 49.2 ILI cases per 1,000 consultations, which was higher than the 40.7 cases recorded in the previous week (Figure7). The percentage of respiratory specimens which tested positive for seasonal influenza viruses last week was 1.85%. Of the positive results, the proportions of influenza A (H3N2) and influenza B viruses in the last week were 66.7% and 22.2%, respectively, compared to 83.8% and 11.8% in previous week.

**China (South)- ILI Surveillance**
During week 38, the percentage of outpatient or emergency visits for ILI at national sentinel hospitals in south China was 2.7%, higher than the previous week in 2011, 2012, and 2014 (2.4%, 2.4% and 2.5%, but lower than the same week of 2013 (2.9%) (Figure 8). Influenza A (H3N2) was dominant in week 38 (84.3%), but Influenza B was also detected (15.7%).

**Singapore – ARI Surveillance**
In week 36-37, the average daily number of patients seeking treatment in the polyclinics for ARI increased from 2,280 (over 4.5 working days) in week 36 to 2,821 (over 5.5 working days) in week 37 (Figure 9).
Hong Kong (China) - ILI Surveillance

Figure 6: ILI consultation rates at sentinel general outpatient clinics, Hong Kong 2011-2015 (Source: Hong Kong Centre for Health Protection)

Figure 7: ILI consultation rates at sentinel private doctors, Hong Kong 2011-2015 (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, 2011-2015 (Source: China National Influenza Center)

Singapore - ARI Surveillance

Figure 9: Average daily polyclinic attendances for Acute Respiratory Infection, Singapore 2014-2015 (Source: Singapore Ministry of Health)
Countries in the temperate zone of the southern hemisphere

Influenza activity appears to have peaked in week 36-37 in Australia and has passed the peak in New Zealand.

**Australia – Laboratory-confirmed influenza**

Influenza activity has decreased with a downward trend since 15 August 2015. As of 11 September, Australia reported 74,220 laboratory confirmed cases of influenza for the year so far. In the fortnight ending 11 September, 14,408 notifications were reported (Figure 10). Influenza B continues to be the dominant influenza virus type nationally, comprising over two thirds of all notifications.

![Figure 10: Australian notifications of laboratory confirmed influenza, 2011-2015](Source: National Notifiable Diseases Surveillance System, Australian Department of Health)

**New Zealand – Influenza like Illness**

During week 38, ILI through sentinel surveillance was reported from 18 out of 20 District Health Boards resulting in a national consultation rate of 41.8 per 100,000 (130 ILI consultations). This is above the seasonal threshold, but below the alert threshold (Figure 11 and 12). In New Zealand, the predominant strain in positive swabs was influenza B.

![Figure 11: Weekly consultation rates for influenza-like illness in New Zealand, 2009–2015](Source: National Notifiable Diseases Surveillance System, Australian Department of Health)

![Figure 12: Weekly consultation rates for influenza-like illness in New Zealand in 2015 in comparison to the average seasonal curve, 2000–2013 (exc. 2009)](Source: National Notifiable Diseases Surveillance System, Australian Department of Health)
**Pacific Island Countries and Areas (PICs)- ILI Surveillance**

- In the PICs, ILI activity was variable with an increasing trend in ILI activity observed in a number of islands, in particular Niue, Northern Mariana Islands and Tuvalu (Figure 13).
- An outbreak is ongoing in the Northern Mariana Islands however there has been a decrease in the weekly number of cases reported for week ending 20 September, 2015.
- Influenza B and Influenza A (H3N2) have been reported in ILI cases from New Caledonia.

![Figure 13: Weekly consultation rates for influenza-like illness in PICs, 2014–2015](image)

**Global influenza situation updates**

Epidemiological update:
http://www.who.int/influenza/surveillance_monitoring/updates/2015_09_21_surveillance_update_246.pdf?ua=1

Virological update:

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/