Virological Surveillance Summary

The number of specimens provided to FluNet by each of the Western Pacific Region countries and areas that reported between week 1 and week 35, and the number of Influenza positive specimens are presented in the table below.

Table 1: Countries and areas reporting data to FluNet, Western Pacific Region, weeks 1 to 35, 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>China (week 35)</td>
<td>386,794</td>
<td>64,544</td>
</tr>
<tr>
<td>Republic of Korea (week 35)</td>
<td>7,371</td>
<td>1,286</td>
</tr>
<tr>
<td>Mongolia (week 35)</td>
<td>2,749</td>
<td>335</td>
</tr>
<tr>
<td>Lao People's Democratic Republic (week 35)</td>
<td>3,347</td>
<td>178</td>
</tr>
<tr>
<td>Malaysia (week 26)</td>
<td>2,237</td>
<td>179</td>
</tr>
<tr>
<td>Singapore (week 35)</td>
<td>1,438</td>
<td>836</td>
</tr>
<tr>
<td>Australia (week 35)</td>
<td>15,597</td>
<td>2,625</td>
</tr>
<tr>
<td>New Caledonia (week35)</td>
<td>810</td>
<td>173</td>
</tr>
<tr>
<td>Philippines (week 35)</td>
<td>760</td>
<td>208</td>
</tr>
<tr>
<td>Viet Nam (week 35)</td>
<td>771</td>
<td>274</td>
</tr>
<tr>
<td>Papua New Guinea (week 35)</td>
<td>377</td>
<td>143</td>
</tr>
<tr>
<td>Fiji (week 35)</td>
<td>334</td>
<td>119</td>
</tr>
<tr>
<td>Cambodia (week 35)</td>
<td>935</td>
<td>240</td>
</tr>
<tr>
<td>Japan (week 25)</td>
<td>NA</td>
<td>6,526</td>
</tr>
<tr>
<td>New Zealand (week 35)</td>
<td>540</td>
<td>123</td>
</tr>
</tbody>
</table>

Figure 1: Number of influenza positive specimens by subtype and week, Western Pacific Region, 2015-16 (accessed 12 September 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 ≥38°C 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 ≥38°C 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 34, the percentage (%) of ILI visits at national sentinel hospitals in Northern China was 2.3%. This is lower than the previous week of 2016 (2.4%) and the same week of 2015 (2.5%) (Figure 2).

Mongolia

Since week 30, there has been a steady increase in ILI activity in Mongolia (Figure 3).

Republic of Korea

In week 36, overall weekly influenza-like illness (ILI) rate was 3.8/1,000 outpatients, which is lower than 4.4 recorded in the previous week and the national baseline of 11.3/1,000 outpatients. (Figure 4).

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)
Republic of Korea

Figure 4: Weekly proportion of ILI visits per 1,000 patients 2012-2016
(Source: Korean Centre for Disease Control and Prevention)

Sentinel influenza surveillance

Japan
As of 31 August 2016, influenza activity is following seasonal trends (Figure 5).

Figure 5: Number of influenza cases reported weekly per reporting sentinel hospital site, Japan 2006-2016
(Source: Japan National Institute of Infectious Diseases)
Countries/areas in the tropical zone

In weeks 1 to 35 of 2016, 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
The latest surveillance data (as of week 36) showed that local influenza activity remained at a low level. The average consultation rate for influenza-like illness (ILI) among sentinel general outpatient clinics was 3.6 ILI cases per 1,000 consultations, which was lower than 4.14 ILI cases per 1,000 consultations recorded in the previous week (Figure 6).

The average consultation rate for ILI among sentinel private doctors was 50.0 ILI cases per 1,000 consultations, which was higher than 43.4 ILI cases per 1,000 consultations recorded in the previous week (Figure 7).

The percentage of respiratory specimens in week 36 which tested positive for seasonal influenza viruses was 7.31%. This is lower than 7.60% recorded in the previous week. Influenza A (H3) was the predominant circulating subtype comprising 91% of positive respiratory specimens. Other viruses detected were influenza B (5%), influenza A (H1) (3%), and influenza C virus 1%.

China (South) - ILI Surveillance
During week 34, the percentage of outpatient or emergency visits for ILI (ILI%) at national sentinel hospitals in southern China was 2.7%. This is lower than the previous week of 2016 (2.8%) and the same week of 2015 (3.0%) (Figure 8).

Singapore – ARI Surveillance
The average daily number of patients seeking treatment in the polyclinics for ARI decreased from 2,687 (over 5.5 working days) in epidemiologic week 34 to 2,573 (over 5.5 working days) in epidemiologic week 35 (Figure 9). The proportion of patients with ILI among the polyclinic attendances for ARI remained low at 1.3%. The overall influenza virus positivity of ILI samples (n=239) in the community was 38.9% in the past 4 weeks. Of the specimens tested positive for influenza virus in August 2016, 85.0% were positive for influenza A(H3N2), 13.1% for influenza B and 1.9% for influenza A(H1N1)pdm09.

Source:
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 Acute Respiratory Infection, Singapore 2015-2016 (Source: Singapore Ministry of Health)
Countries in the temperate zone of the southern hemisphere

Influenza activity remained at inter-seasonal levels in the reporting countries of the southern hemisphere.

**Australia – Laboratory-confirmed influenza**

As of 02 September 2016, a total of 53,159 notifications of laboratory confirmed influenza were reported to the National Notifiable Diseases Surveillance System (Figure 10). In the most recent fortnight, 90% of notifications were influenza A (69% A(unsubtyped), 9% influenza A(H1N1)pdm09 and 12% influenza A (H3N2)), 10% were influenza B and less than 1% were influenza C, influenza A&B co-infections or untyped. Source: [http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-surveil-ozflu-flucurr.htm/$File/Australian-Influenza-Surveillance-Report.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-surveil-ozflu-flucurr.htm/$File/Australian-Influenza-Surveillance-Report.pdf)

![Figure 10: Australian notifications of laboratory confirmed influenza](http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-surveil-ozflu-flucurr.htm/$File/Australian-Influenza-Surveillance-Report.pdf)

(Source: National Notifiable Diseases Surveillance System, Australian Department of Health)

**New Zealand – Influenza like Illness**

In week 34, ending 28 August 2016, 104 patients with influenza-like illness consulted sentinel general practices in 20 District Health Boards. The weekly ILI incidence was 19.7 per 100 000 patient population. Of the 58 tested ILI cases, 35 were positive for influenza viruses. This gives an ILI related influenza incidence (adjusted) of 11.9 per 100 000 patient population.

![Figure 11: Weekly resident ILI and influenza incidence since (Week 18) 2 May 2016 in New Zealand](http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-surveil-ozflu-flucurr.htm/$File/Australian-Influenza-Surveillance-Report.pdf)

(Source: Institute of Environmental Science and Research Ltd (ESR), New Zealand)
**Pacific Island Countries and Areas (PICs)- ILI Surveillance**

In the Pacific Island Countries and Areas, in week 35, the number of ILI cases reported in Guam, Marshall Islands, Samoa and Tonga shows an increasing trend and are above the threshold of 90% historical value (Figure 12).

![Figure 12: Reported cases of influenza-like illness (red line) in Pacific Island Countries, 2015–2016](image_url)

**Global influenza situation updates**


Others:
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=PxW6Pg1Anwl
  Chinese: https://www.youtube.com/watch?v=xW9gDKEPitQ
  English: https://www.youtube.com/watch?v=yhhJfT86Bqg
  French: https://www.youtube.com/watch?v=8mo8rWwjZkc
  Russian: https://www.youtube.com/watch?v=XQO6nbkKUWQ
  Spanish: https://www.youtube.com/watch?v=qXr75cKwTY