Virological Surveillance Summary

The number of specimens reported to FluNet by the Western Pacific Region countries and areas between week 1 and week 29, 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 29, 2017

<table>
<thead>
<tr>
<th>Country (most recent week of report)</th>
<th>Total number of specimens processed</th>
<th>Total number of influenza positive specimens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia (week 29)</td>
<td>20462</td>
<td>1370</td>
</tr>
<tr>
<td>Cambodia (week 29)</td>
<td>702</td>
<td>40</td>
</tr>
<tr>
<td>China (week 29)</td>
<td>358607</td>
<td>47745</td>
</tr>
<tr>
<td>Fiji (week 24)</td>
<td>251</td>
<td>87</td>
</tr>
<tr>
<td>Japan (week 28)</td>
<td>NA</td>
<td>6987</td>
</tr>
<tr>
<td>Lao People's Democratic Republic (week 29)</td>
<td>2463</td>
<td>235</td>
</tr>
<tr>
<td>Malaysia (week 17)</td>
<td>1848</td>
<td>236</td>
</tr>
<tr>
<td>Mongolia (week 26)</td>
<td>2136</td>
<td>412</td>
</tr>
<tr>
<td>New Caledonia (week 28)</td>
<td>258</td>
<td>4</td>
</tr>
<tr>
<td>New Zealand (week 18-27)</td>
<td>809</td>
<td>404</td>
</tr>
<tr>
<td>Papua New Guinea (week 25)</td>
<td>180</td>
<td>23</td>
</tr>
<tr>
<td>Philippines (week 28)</td>
<td>603</td>
<td>69</td>
</tr>
<tr>
<td>Republic of Korea (week 29)</td>
<td>6997</td>
<td>737</td>
</tr>
<tr>
<td>Singapore (week 27)</td>
<td>1385</td>
<td>777</td>
</tr>
<tr>
<td>Viet Nam (week 22)</td>
<td>834</td>
<td>145</td>
</tr>
</tbody>
</table>

Figure 1: Number of specimens positive for influenza by subtype, Western Pacific Region, week 31 2016 to week 29 2017 (Source: www.who.int/flunet)
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.

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 (ARI) 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 are consistent with seasonal trends but indicate an earlier start to the influenza season compared to the 2015-2016 season.

Outpatient ILI Surveillance

China (North)

During week 29, the percentage of visits for ILI at national sentinel hospitals in northern China was 2.5% of total visits, which is lower than last week. The ILI activity was approximately the same during the same week of 2014-2016 (2.3% - 2.7%) (Figure 2).

Mongolia

ILI activity remained at expected tolerance levels during week 28 of 2017 compared to the previous week and seasons. The most recent peak in ILI activity occurred in week 4 of 2017 (Figure 3). Mongolia publishes weekly reports, available here:

http://www.flu.mn/eng/index.php?option=com_content&task=section&id=5&Itemid=51

China (North)

Mongolia

Figure 2: Percentage of visits for ILI at sentinel hospitals in north China, 2014-2017 (Source: China National Influenza Center)

Figure 3: Proportion of outpatient ILI visits (per 10,000 people), 2014-2017 (Source: Mongolia National Influenza Center)
**Republic of Korea**

In week 29, 2017, there were 6.3 ILI cases per 1,000 outpatient visits, which was higher than 6.0 per 1,000 in the previous week. ILI activity remained stable and below the established baseline (8.9 per 1,000 outpatient visits) (Figure 4). Korea publishes a weekly report, available here: [http://www.cdc.go.kr/CDC/eng/info/CdcEngInfo0101.jsp?menuIds=HOME002-MNU0576-MNU0586](http://www.cdc.go.kr/CDC/eng/info/CdcEngInfo0101.jsp?menuIds=HOME002-MNU0576-MNU0586)

![Image of graph showing ILI incidence rate per 1000 patients, 2013-2017](image1.png)

*Figure 4: Weekly ILI incidence rate per 1000 patients, 2013-2017 (Source: Korean Centre for Disease Control and Prevention)*

**Sentinel influenza surveillance**

**Japan**

As of week 28 2017, influenza activity in Japan shows a similar seasonal pattern to previous years with few influenza cases reported weekly per reporting sentinel hospital (Figure 5). More information about historical trends are available here: [https://www.niid.go.jp/niid/en/10/2096-weeklygraph/2572-trend-week-e.html](https://www.niid.go.jp/niid/en/10/2096-weeklygraph/2572-trend-week-e.html)

![Image of graph showing number of influenza cases reported weekly per reporting sentinel hospital site, Japan 2007-2017](image2.png)

*Figure 5: Number of influenza cases reported weekly per reporting sentinel hospital site, Japan 2007-2017 (Source: Japan National Institute of Infectious Diseases)*
Countries/areas in the tropical zone

Countries/areas in the tropical zone are observing increased ILI and ARI activity in recent weeks in 2017.

Surveillance

**Hong Kong SAR (China) – ILI and hospital Surveillance**

Outpatient surveillance data showed that the local influenza activity remained at a very high level in the past week. In week 29, the average consultation rate for ILI among sentinel private doctors was 76.4 ILI cases per 1,000 consultations, which was higher than 65.5 in the previous week. Admission rates in public hospitals with principal diagnosis of influenza for persons aged 0-4 years and 65 years or above remains high, although slightly decreased from week 28; 7.16, and 5.27 cases (per 10,000 people in the age group) respectively compared to 9.80 and 6.40 cases in the previous week. As of 26 Jul, 379 severe cases including 255 deaths have been recorded since the activation of the enhanced surveillance for severe influenza infection on May 5. The majority (361/379) of the severe cases are adults above the age of 18 years, of these 131 (36.3%) were known to have received the influenza vaccine. Additionally there have been 18 cases of severe paediatric influenza (including 3 deaths) associated with complications. Hong Kong SAR, China publishes a weekly report, available here: [http://www.chp.gov.hk/en/guideline1_year/29/134/441/304.html](http://www.chp.gov.hk/en/guideline1_year/29/134/441/304.html)

**China (South) - ILI Surveillance**

During week 29, the percentage of outpatient or emergency visits for ILI at national sentinel hospitals in southern China was 4.1%, lower than the last week (4.3%) but higher than the same week of 2014-2016 (3.1-3.6%) (Figure 6).

**Singapore – Acute Respiratory Infection Surveillance**

The average daily number of patients seeking treatment in polyclinics for acute respiratory infection increased from 580 per working day in week 28, to 610 per working day in week 29 (Figure 9). The proportion of patients with ILI among polyclinic attendances for ARI remained low at 2.6%. Singapore publishes a weekly report, available here: [http://www.moh.gov.sg/content/moh_web/home/statistics/infectiousDiseasesStatistics/weekly_infectiousdiseasesbulletin.html](http://www.moh.gov.sg/content/moh_web/home/statistics/infectiousDiseasesStatistics/weekly_infectiousdiseasesbulletin.html)

![Hong Kong (China) - ILI Surveillance](image1.png)

*Figure 6: ILI consultation rates at sentinel general outpatient clinics, Hong Kong 2013-2017 (Source: Hong Kong Centre for Health Protection)*

*Figure 7: ILI consultation rates at sentinel private doctors, Hong Kong 2013-2017 (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, 2014-2017 (Source: China National Influenza Center)

Singapore - ARI Surveillance

Figure 9: Average daily polyclinic attendances for ARI in Singapore, 2016-2017 (Source: Singapore Ministry of Health)

Lao PDR

In week 29, influenza activity has increased compared to last week but the number of ILI presentations remains similar to previous years (see Figure 10). The number of severe acute respiratory infections increased this year and remains higher than numbers reported during week 29 in the past 5 years. However, the trend remains similar.

Figure 10: Weekly number of ILI presentations at sentinel sites, 2012 to week 29, 2017, Lao PDR (Source: Lao National Center for Laboratory and Epidemiology)
Countries in the temperate zone of the southern hemisphere

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

Australia – Laboratory-confirmed influenza

As of 21 July 2017, a total of 35,774 notifications of laboratory confirmed influenza were reported to the National Notifiable Diseases Surveillance System (Figure 11). Seventy-four percent of notifications were influenza A (65% A(unsubtype), 7% influenza A(H3N2) and 3% influenza A(H1N1)pdm09), 26% were influenza B and less than 1% were influenza C, influenza A and B co-infections or untyped. Australia publishes influenza surveillance reports on a fortnightly basis during the influenza season, typically between May and October. For more information:


Figure 11: Australian notifications of laboratory confirmed influenza (Source: National Notifiable Diseases Surveillance System, Australian Department of Health)
New Zealand – Influenza like Illness
During week 29, 194 patients with influenza-like illness consulted sentinel general practices in 20 district health boards (DHBs). The weekly ILI incidence was 47.2 per 100 000 patient population. Of the 159 laboratory tested ILI cases, 76 were positive for influenza viruses. This gives an ILI related influenza incidence (adjusted) of 22.6 per 100 000 patient population. New Zealand publishes a weekly report, available here: https://surv.esr.cri.nz/virology/influenza_weekly_update.php

Figure 12: Weekly resident ILI and influenza incidence since Week 1 of 2017 in New Zealand (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 29, the number of ILI cases reported in Solomon Islands and Samoa increased compared to previous weeks (Figure 13). The PICs submit a report on a weekly basis, for more information: http://www.wpro.who.int/southpacific/programmes/communicable_diseases/disease_surveillance_response/page/en/index2.html

Figure 13: Reported cases of influenza-like illness in Pacific Island Countries, 2017
Global influenza situation updates

Epidemiological update

Virological update:

Global update:
http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/

Others:
Recommended composition of influenza virus vaccines for use in the 2017 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=PxW6Pg1Anwl
  Chinese: https://www.youtube.com/watch?v=xW9gDKEPltQ
  English: https://www.youtube.com/watch?v=yhhJfT86Bgg
  French: https://www.youtube.com/watch?v=8mo8rWWJZkc
  Russian: https://www.youtube.com/watch?v=XQO6nkKWUWQ
  Spanish: https://www.youtube.com/watch?v=qXr75cKxwTY

Recommended composition of influenza virus vaccines for use in the 2017-2018 northern hemisphere influenza season
http://www.who.int/influenza/vaccines/virus/recommendations/201703_recommendation.pdf?ua=1