KEY POINTS

INFLUENZA AND INFLUENZA-LIKE ILLNESSES (ILI)

Summary: Influenza activity is currently at inter-seasonal levels and has declined in recent weeks.
- ILI presentations at sentinel GPs and EDs are fluctuating at low levels.
- Influenza notifications and PathWest laboratory detections and percent positivity have decreased over the past fortnight, following higher than expected interseasonal activity earlier this year.
- Overall non-influenza respiratory virus activity remains low.

GASTROENTERITIS
- Gastroenteritis activity at sentinel GPs and EDs is currently around expected levels for this time of year.
- Rotavirus and norovirus activity remains low.

VARICELLA AND OTHER VACCINE-PREVENTABLE DISEASES
- Chickenpox and shingles activity at both sentinel GPs and EDs continues to fluctuate around baseline levels.
- Rubella: no cases have been confirmed in WA since two imported cases in early April 2017.
- Measles: no cases have been confirmed since an imported case was reported in early January.
- Mumps: no cases have been reported since an imported case in early February.
- Pertussis (whooping cough): the number of notifications in 2017, and over the recent summer, was the lowest experienced for several years. Levels are currently declining further, consistent with the usual seasonal pattern (see: http://ww2.health.wa.gov.au/Articles/N_R/Notifiable-infectious-disease-report?report=pertussis).


Virus WAtch is a weekly electronic publication by the Communicable Disease Control Directorate (CDCD) and key collaborators. It provides a brief summary of General Practice and Hospital Emergency Department sentinel surveillance data on influenza-like illness, gastroenteritis and varicella-zoster disease, together with relevant laboratory information, to alert health care workers in WA to important circulating viruses. All figures and data were accurate at time of publication, but subject to change. The data collections used to create this publication include:
- Sentinel General Practice data collected by WA members of the Australian Sentinel Practices Research Network (ASPREN)
- Emergency Department data provided by the Emergency Department Information System (EDIS), which currently incorporates data from the following hospitals: Fiona Stanley Hospital, Sir Charles Gardiner Hospital, Royal Perth Hospital, Princess Margaret Hospital, King Edward Memorial Hospital, St John of God Midland, Bunbury Hospital, Armadale Hospital, Joondalup Health Campus, and Rockingham General Hospital.
- Notification data derived from disease notifications received by CDCD, WA Department of Health from medical providers and public or private laboratories in WA. These data are updated routinely to include admission status for all public and public/private hospitals in WA and hospitalisation data are included in the report during the influenza season.
- Viral laboratory data obtained from PathWest laboratories at QEII Medical Centre, as well as via notification data sent by all WA laboratories to CDCD, WA Department of Health.
Routine influenza detections have continued to decrease, and ILI presentations reported by WA ASPREN sentinel remain low. The sole sample submitted for influenza testing by sentinel GPs was negative.

The rate of ILI presentations to WA ASPREN sentinel GPs remains at interseasonal levels.
The following is a summary of current Emergency Department sentinel surveillance (EDSS) data for respiratory viral presentations.

**Viral Respiratory ED Presentations and Admissions**

Respiratory viral presentations and admissions to sentinel EDs remained stable this week.

The number of respiratory viral presentations to sentinel EDs remains in the mid range of interseasonal levels.
The number of influenza notifications received by the Department of Health has decreased over the past fortnight and is now similar to interseasonal levels experienced at this time in recent years. The graph is a summary of all influenza notifications received by the DoH, Western Australia to the end of the current reporting week, for which cases had date of symptom onset or specimen collection between 05/03/2018 and 11/03/2018. The seasonal threshold defines a value above which indicates epidemic seasonal influenza activity. The threshold value is calculated based on analysis of seasonal influenza data from the past four years.

The percentage of specimens testing positive for influenza virus at PathWest has decreased in recent weeks and is currently in the low to mid-range of values usually reported at this time of year. Of 132 specimens, 5 (4%) tested positive in the past week. The graph is a summary of all WA routine and sentinel samples that have been processed by PathWest as of Wednesday 14th March 2018. This number does not include samples referred by other private laboratories for influenza subtyping.
Five routine samples were subtyped by PathWest during this reporting week; 3 (60%) influenza A/H3N2; 1 (20%) influenza B; and 1 (20%) influenza A/H1N1.

The graph is a summary of all WA routine samples that have been recorded as subtyped at PathWest as of Wednesday 14th March 2018. This number does not include sentinel samples or samples referred by other private laboratories for influenza subtyping.

Overall non-influenza respiratory virus activity remains low.
The number of gastroenteritis presentations to sentinel GPs increased this week but levels remain relatively low.

The following is a summary of current Emergency Department Sentinel Surveillance (EDSS) data for gastroenteritis presentations. Baseline levels for gastroenteritis presentations and admissions were calculated using the mean of weekly EDIS data from week 1, 2013 to week 52, 2017.

**Gastroenteritis ED Presentations**

<table>
<thead>
<tr>
<th>Week ending</th>
<th>No. of gastro presentations</th>
<th>No. of presentations admitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>21/01/18</td>
<td>212</td>
<td>44</td>
</tr>
<tr>
<td>28/01/18</td>
<td>217</td>
<td>74</td>
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<tr>
<td>4/02/18</td>
<td>217</td>
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<td>11/02/18</td>
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<td>18/02/18</td>
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<td>25/02/18</td>
<td>196</td>
<td>32</td>
</tr>
<tr>
<td>04/03/18</td>
<td>205</td>
<td>36</td>
</tr>
<tr>
<td>11/03/18</td>
<td>216</td>
<td>41</td>
</tr>
</tbody>
</table>

Gastroenteritis presentations and admissions to sentinel EDs increased above baseline level this week.
The number of gastroenteritis presentations to sentinel EDs increased slightly and remains in the mid-range of values observed during this time period in recent years.

Rotavirus and norovirus activity remained low this week.
Shingles and chickenpox activity at WA ASPREN sentinel GPs fell below baseline levels this week.

Baseline levels for chickenpox and shingles presentations to WA ASPREN GPs per thousand consultations were calculated using the mean of weekly WA ASPREN data from week 1, 2013 to week 52, 2017.

The following is a summary of current Emergency Department sentinel surveillance (EDSS) data for varicella-zoster virus presentations. Baseline levels for varicella-zoster virus presentations were calculated using the mean of weekly EDIS data from week 1, 2013 to week 52, 2017.

Chickenpox and shingles presentations at sentinel EDs remained at or above baseline levels this week.