WEEK ENDING 30TH SEPTEMBER 2018

KEY POINTS

INFLUENZA AND INFLUENZA-LIKE ILLNESSES (ILI)

Summary: Influenza notifications, PathWest detections, test positivity and hospitalisations remain low for this time of the year. ILI activity reported by sentinel sites remained steady this week, after low reported levels earlier in the season.

- Influenza notifications, PathWest laboratory detections and percent positivity remain lower than expected for this time of year.
- ILI presentations at sentinel GPs fell this week, whilst activity at sentinel EDs increased.
- The majority (73%) of PathWest influenza detections this week were influenza A/H1N1, with low levels of influenza A/H3N2 and influenza B reported.
- Influenza-related hospitalisations are below average levels for this time of year; with most hospitalisations for confirmed influenza attributable to A/H1N1.
- Overall non-influenza respiratory viral activity reported by PathWest decreased this week.

GASTROENTERITIS

- Gastroenteritis activity at sentinel GPs and EDs is currently around expected levels for this time of year.
- PathWest laboratory detections of norovirus and rotavirus remains at low levels.

OTHER VACCINE-PREVENTABLE DISEASES

- Shingles and chickenpox: activity at sentinel GPs and EDs continues to fluctuate around baseline level.
- Measles: No measles cases notified this week.
- Invasive meningococcal disease (IMD): One case was notified this week in a toddler diagnosed with meningococcal serogroup W infection. To date in 2018, there have been 28 cases notified, comprising 19 serogroup W, seven serogroup B and two serogroup Y meningococcal infections.

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, Perth Children’s 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 PathWest influenza detections and ILI presentations reported by sentinel GPs decreased this week; one of the five samples (20%) submitted for influenza testing by sentinel GPs tested positive this week.

The rate of ILI presentations to WA ASPREN sentinel GPs decreased this week, and remains in the mid-range of values observed during this time period in recent years.
The following is a summary of current Emergency Department sentinel surveillance (EDSS) data for respiratory viral presentations.

**Viral Respiratory ED Presentations and Admissions**

Week ending

<table>
<thead>
<tr>
<th>Week ending</th>
<th>Number of ILI presentations</th>
<th>Number of ILI admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/08/18</td>
<td>653</td>
<td>41</td>
</tr>
<tr>
<td>19/08/18</td>
<td>679</td>
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</tr>
<tr>
<td>26/08/18</td>
<td>643</td>
<td>43</td>
</tr>
<tr>
<td>02/09/18</td>
<td>643</td>
<td>43</td>
</tr>
<tr>
<td>09/09/18</td>
<td>665</td>
<td>46</td>
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<td>682</td>
<td>48</td>
</tr>
<tr>
<td>30/09/18</td>
<td>721</td>
<td>50</td>
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</table>

Respiratory viral presentations and admissions to sentinel EDs increased this week.

**ED Respiratory Viral Presentations, 2014-2018**

The number of respiratory viral presentations to sentinel EDs increased this week and is now in the higher range of levels reported at this time of the year.
The number of influenza notifications received by the Department of Health decreased this week and is in the lower range of levels typically experienced at this time of year. 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 24/09/2018 and 30/09/2018. The seasonal threshold defines a value above which may indicate epidemic seasonal influenza activity. The threshold value is calculated based on analysis of seasonal influenza data from the past four years.

The number of influenza cases hospitalised remains lower than in recent years. Of the 52 hospitalised cases in the past week, 24 (46%) were influenza A/H1N1; 15 (29%) influenza A/unsubtyped; 7 (13%) influenza A/H3N2; 5 (10%) influenza B; and 1 (2%) unsubtyped.
The hospital admission rate of laboratory-confirmed influenza has remained well below the average rate for recent years. The rate for the last reporting week is subject to correction due to a lag in reporting.

The graph is a summary of influenza notifications received by the DoH who were recorded as having a hospital admission, expressed per 1,000 admissions. Data for the current reporting week may be incomplete.

PathWest-QEII influenza percentage positive 2014-2018

The percentage of specimens testing positive for influenza virus at PathWest fell this week, and remains low for this time of year. Of 352 specimens, 60 (20%) tested positive in the past week.

The graph is a summary of all WA samples reported by PathWest as of Wednesday 4th of October 2018, excluding samples referred by other private laboratories for influenza subtyping.
Sixty routine samples were subtyped by PathWest during this reporting week; 44 (73%) influenza A/H1N1; 9 (15%) influenza A/H3N2; 2 (4%) influenza A/unsubtyped; and 5 (8%) influenza B.

The graph is a summary of all WA samples positive for influenza reported at PathWest as of Wednesday 4th of October 2018, excluding samples referred by other private laboratories for influenza subtyping.

Overall non-influenza activity continued to decrease this week, mostly driven by a reduction in RSV detections.

The graph is a summary of all WA samples positive for a common respiratory virus other than influenza reported at PathWest as of Wednesday 4th of October 2018.
The number of gastroenteritis presentations and admissions to sentinel GPs is in the lower-range of values normally reported at this time of year.

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

Gastroenteritis presentations and admissions to sentinel EDs remain around baseline levels this week.
The number of gastroenteritis presentations to sentinel EDs is in the mid-range of values normally reported at this time of year.

PathWest laboratory detections of norovirus and rotavirus were low this week.
Shingles and chickenpox activity reported at WA ASPREN GPs fell below baseline 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.

**Varicella-Zoster Virus GP Presentations**

<table>
<thead>
<tr>
<th>Week ending</th>
<th>No. of chickenpox/1000 consults</th>
<th>No. of shingles/1000 consults</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/08/18</td>
<td>0.0</td>
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<td>19/08/18</td>
<td>0.4</td>
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<td>16/09/18</td>
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<td>0.3</td>
</tr>
<tr>
<td>23/09/18</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>30/09/18</td>
<td>0.0</td>
<td>0.8</td>
</tr>
</tbody>
</table>

**Shingles presentations at sentinel EDs were above baseline level this week.**
Baseline levels for varicella-zoster virus presentations were calculated using the mean of weekly EDIS data from week 1, 2013 to week 52, 2017.