KEY POINTS

INFLUENZA AND INFLUENZA-LIKE ILLNESSES (ILI)

Summary: Influenza and influenza-like illness activity is increasing and comparable with levels typically seen at this time of year.

- ILI presentations at sentinel GPs and EDs are overall trending upwards. Influenza notifications remained steady this week, whilst PathWest laboratory detections and percent positivity increased.
- Of those influenza specimens type, results show influenza B and influenza A (both H1N1 and H3N2) viruses are co-circulating at low levels over recent weeks, however the majority (76%) of influenza detections this week were A/H1N1.
- Influenza-related hospitalisations are approaching average levels expected for this time of year; primarily attributable to influenza A/H1N1 virus.
- Overall non-influenza activity increased sharply this week, driven mostly by RSV detections.

GASTROENTERITIS

- Gastroenteritis activity at sentinel GPs and EDs is currently around expected levels for this time of year.
- Rotavirus and norovirus activity continues to fluctuate, but remain at low levels.

VARICELLA AND OTHER VACCINE-PREVENTABLE DISEASES

- Shingles and chickenpox activity at sentinel GPs and EDs continues to fluctuate around baseline level.
- Mumps: One locally acquired case was notified this week. To date in 2018, seventeen cases have been confirmed, associated with infection acquired overseas or interstate, and with some low grade transmission in adolescents, and more recently young children, in the Perth metropolitan area.
- Measles: No cases have been notified since early May. Clinicians should remain alert to the possibility of measles in persons with fever and rash illnesses who have recently been overseas. It is recommended that measles vaccine (MMR) be considered for all people travelling overseas, including to Bali, who were born after 1965 and who do not have clear documentation of having previously received two doses of measles vaccine.

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.
Reported routine influenza detections increased this week, whilst ILI presentations reported by sentinel GPs remained steady; of the four samples submitted for influenza testing by sentinel GPs, three (75%) tested positive.

The rate of ILI presentations to WA ASPREN sentinel GPs remained steady this week, 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.

The number of respiratory viral presentations to sentinel EDs decreased this week, and is now in the mid-range of levels reported at this time of the year.
The number of influenza notifications received by the Department of Health is comparable with levels usually experienced in previous years at this time as indicated by the trend of increasing notifications which is now three fold above the seasonal threshold. 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 09/07/2018 and 15/07/2018. 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.

Laboratory-confirmed influenza cases hospitalised by subtype

The number of influenza cases hospitalised increased this week - and may increase further due to a lag in reporting. Of the forty-eight hospitalised cases in the past week, 26 (54%) were influenza A/H1N1; 2 (4%) influenza A/H3N2; 14 (29%) influenza A/unsubtyped; and 6 (13%) influenza B.
The hospital admission rate of laboratory-confirmed influenza is similar to 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-QEI influenza percentage positive 2014-2018

The percentage of specimens testing positive for influenza virus at PathWest increased this week, and is approaching seasonal levels; of 344 specimens, 45 (13%) 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 18th of July 2018. This number does not include samples referred by other private laboratories for influenza subtyping.
Forty-five routine samples were subtyped by PathWest during this reporting week; 34 (76%) influenza A/H1N1; 3 (7%) influenza A/H3N2; 2 (4%) influenza A/unsubtyped; and 6 (13%) influenza B.

The graph is a summary of all WA routine samples that have been recorded as subtyped at PathWest as of Wednesday 18 July 2018. This number does not include sentinel samples or samples referred by other private laboratories for influenza subtyping.

Overall non-influenza activity increased sharply this week, driven largely by RSV detections.
The rate of gastroenteritis presentations to sentinel GPs continues to fluctuate at relatively low levels.

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 increased this week, and are around baseline levels.
The number of gastroenteritis presentations to sentinel EDs increased by 30% this week and are in the upper range of levels expected at this time of the year.

Rotavirus and norovirus activity continues to fluctuate, but remain at low levels.
Shingles and chickenpox activity at WA ASPREN GPs was 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.

**Varicella-Zoster Virus ED Presentations**

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