INFLUENZA AND INFLuenza-like illnesses (ILI)
Summary: ILI and influenza activity, PathWest detections, test positivity and hospitalisations all increased slightly this week; however remain low for this time of the year.

- Influenza notifications, PathWest laboratory detections and percent positivity increased this week.
- ILI presentations at sentinel GPs and EDs increased this week, and are approaching the expected levels for this time of year.
- The majority (83%) 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 approaching average levels for this time of year; primarily attributable to influenza A/H1N1 virus.
- Overall non-influenza activity remained high this week; mostly driven by high human metapneumovirus activity.

GASTROENTERITIS
- Gastroenteritis activity at sentinel GPs and EDs is currently around expected levels for this time of year.
- Pathwest laboratory detections of norovirus activity increased this week, whilst rotavirus activity continues to fluctuate, but remain at low levels.

VARICELLA AND OTHER VACCINE-PREVENTABLE DISEASES
- Rubella: No rubella cases were notified this week.
- Mumps: No mumps cases were 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 in the Perth metro area.
- Measles: A further three measles cases were confirmed this week making a total of 15 confirmed cases over the last month. Cases were aged 15-39 years (median: 25 years). The first five confirmed cases were infected while travelling overseas, in Bali and the Philippines, while the following ten secondary cases were infected in Perth following exposure at a workplace and in an Emergency Department. Cases visited several Perth hospital emergency departments, GPs, specimen collection centres, and many other locations in Perth while infectious. Therefore additional cases are expected over coming days and weeks.

Clinicians should remain alert to the possibility of measles in persons with fever and rash illnesses even if fully vaccinated. 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, although, this does not guarantee immunity, given that five of the recent cases reported two childhood doses of MMR 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.
Routine PathWest influenza detections have continued to increase after remaining low in recent weeks. ILI presentations reported by sentinel GPs also increased slightly; of the eight samples submitted for influenza testing by sentinel GPs, one (13%) tested positive this week.

The rate of ILI presentations to WA ASPREN sentinel GPs increased slightly, but remains in the lower 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.

Respiratory viral presentations and admissions to sentinel EDs continued to increase this week.

ED Respiratory Viral Presentations, 2014-2018

The number of respiratory viral presentations to sentinel EDs is in the mid-range of levels reported at this time of the year.
The number of influenza notifications received by the Department of Health increased this week, but is still unusually low compared to 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 13/08/2018 and 19/08/2018. 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 recent years. Of the forty two hospitalised cases in the past week, 31 (74%) were influenza A/H1N1; 6 (14%) influenza A/unsubtyped; 3 (7%) influenza A/H3N2; and 2 (5%) influenza B.
The hospital admission rate of laboratory-confirmed influenza remained steady, and 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.

The percentage of specimens testing positive for influenza virus at PathWest increased slightly this week, however still remains low for the time of year. Of 407 specimens, 47 (12%) tested positive in the past week.

The graph is a summary of all WA samples reported by PathWest as of Wednesday 23rd of August 2018, excluding samples referred by other private laboratories for influenza subtyping.
Forty seven routine samples were subtyped by PathWest during this reporting week; 39 (83%) influenza A/H1N1; 2 (4%) influenza A/H3N2; 4 (9%) influenza A/unsubtyped; and 2 (4%) influenza B.

The graph is a summary of all WA samples positive for influenza reported at PathWest as of Wednesday 22nd of August 2018, excluding samples referred by other private laboratories for influenza subtyping.

Overall non-influenza activity remained high this week; mostly driven by high human metapneumovirus activity.

The graph is a summary of all WA samples positive for a common respiratory virus other than influenza reported at PathWest as of Wednesday 22nd of August 2018.
The number of gastroenteritis presentations and admissions to sentinel GPs remains in the mid-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 increased this week.
The number of gastroenteritis presentations to sentinel EDs increased this week, and is now in the higher-range of levels reported at this time of year.

Pathwest laboratory detections of norovirus activity increased this week, whilst rotavirus activity continues to fluctuate, but remain at low levels.
Chickenpox activity at WA ASPREN GPs increased this week, and is above baseline level. Shingles activity also increased and is just below baseline level. 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.

Shingles and chickenpox presentations at sentinel EDs continue to fluctuate around baseline levels. Baseline levels for varicella-zoster virus presentations were calculated using the mean of weekly EDIS data from week 1, 2013 to week 52, 2017.