

Communicable Diseases Weekly Report

Week 32 05 August 2013 – 11 August 2013

In summary, we report:

- **Shigellosis** – emergence of a new *S.flexneri* strain
- **Influenza** – reports of severe infections prompts health alert
- **Enterovirus infections** – Hand-foot-and-mouth disease activity continues to fall
- **MERS coronavirus** – no new cases reported; animal reservoir report
- **Summary of notifiable conditions activity in NSW**

For further information on infectious diseases and alerts see the [Infectious Diseases](#) webpage.

Follow the [A to Z of Infectious Diseases](#) link for more information on specific diseases.

For links to other surveillance reports, including influenza and enterovirus surveillance reports, see the [NSW Health Infectious Diseases Reports](#) webpage.

Shigellosis

There has been a change in the dominant serogroup of shigellosis with *Shigella flexneri* now accounting for almost half of all cases. One strain, *S.flexneri* 3A, has become the dominant strain particularly in cases in males. Overall, the total number of notifications of shigellosis for 2013 (71 cases up to the end of July) is similar to the average over the last five years.

Shigellosis is a diarrhoeal disease caused by infection with *Shigella* bacteria. Shigellosis is passed from person to person by the faecal-oral route, by direct or indirect contact with faecal matter. This commonly occurs if hands are not washed properly, particularly after going to the toilet or changing nappies. Transmission can also occur during certain types of sexual activity, such as oral-anal sex.

In the past, large numbers of locally-acquired cases in NSW were reported in males, with male to male sex the most common risk factor. In recent years, the majority of shigellosis cases have been acquired overseas where consumption of contaminated food or water is the most likely route of exposure. The predominant *Shigella* serotype in NSW has been *Shigella sonnei*, both for locally-acquired and imported cases.

To date in 2013, the number of reports of *S. flexneri* infection has increased in both males (up 108%) and females (up 85%) compared to the 5-year average for the same time period. However, the proportion of these cases believed to have been acquired locally is higher for males (64%) than for females (40%).

Among *S.flexneri* cases notified in 2013, the *S.flexneri* 3A strain has been the most frequently reported strain and accounts for 83 percent of cases in males. While full risk histories have not been completed on all cases, the only two *S.flexneri* 3A cases in females are believed to have been acquired overseas, while at least two of the ten cases in males were associated with male to male sex in their exposure periods.

The large increase in the proportion of shigellosis cases of the *S.flexneri* 3A strain in males in 2013 suggests that this strain may be an emerging risk to males engaging in male to male sex. Heightened surveillance for risk factors for these infections will assist in informing targeted prevention messages.

Follow the link for further information on [shigellosis data](#).

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Influenza

The [NSW Health Influenza Surveillance Reports](#) show rising influenza activity consistent with the annual influenza season since late June. In the past week, influenza reports from hospital emergency departments and intensive care units have indicated an increase in influenza severity across metropolitan Sydney and the Hunter region, despite warmer weather. This led to a [NSW Health alert](#) being issued, encouraging people in high-risk groups for influenza complications to be vaccinated against influenza if they have not already done so this year.

The influenza A(H1N1)pdm09 has been the dominant circulating influenza A strain. Unlike other seasonal influenza strains, young children and pregnant women are thought to be at greater risk of infection with the A(H1N1)pdm09 than older people who have higher rates of protective immunity left over from exposure to related strains in past decades.

Follow the link for more information on the groups eligible for [free influenza vaccination](#) under the National Immunisation Program.

Follow the link for further information on [influenza notifications data](#).

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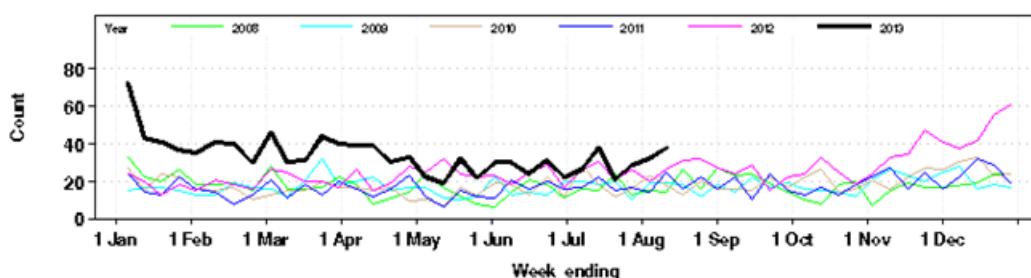
Enterovirus infections

Enterovirus infections (other than poliomyelitis) are not notifiable in NSW. NSW Health monitors enterovirus activity through NSW Emergency Department (ED) presentations for “meningitis or encephalitis” and for [hand-foot-and-mouth disease](#) (HFMD).

Enterovirus infections can rarely lead to meningitis or encephalitis but there are also a range of other causes for these illnesses. HFMD can be caused by a range of enteroviruses.

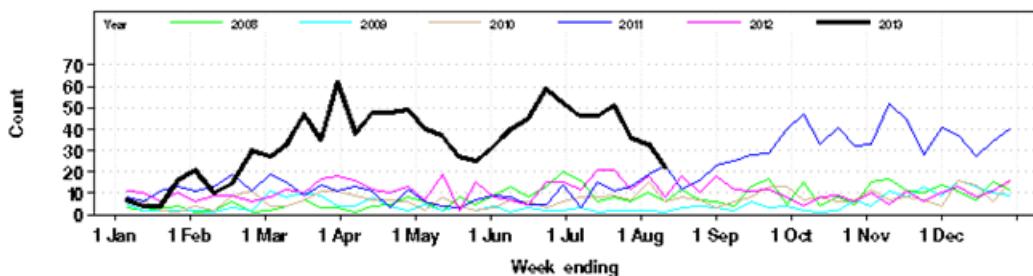
In the past week, the number of patients presenting to EDs with “meningitis or encephalitis” increased to 38, above the usual range for this time of year (Figure 1). The greatest increase compared with usual was in 35-64 year-olds, who comprised 18 of the 38 presentations.

Figure 1. Total weekly counts of ED presentations for meningitis/encephalitis, for 2013 (black line), compared with each of the 5 previous years (coloured lines), all ages, for 59 NSW hospitals.



In the past week, the number of ED presentations for HFMD decreased substantially to 26, remaining just above the usual level but below the peak of around 70 at the end of March (Figure 2). Most of these (22) were for children aged less than 5 years. Numbers were above usual for the Hunter New England, Northern Sydney and South Western Sydney Local Health Districts.

Figure 2: Total weekly counts of ED presentations for HFMD for 2013 (black line), compared with each of the 5 previous years (coloured lines), children aged under 5 years, for 59 NSW hospitals.



Follow the link for more information on [enterovirus infections](#).

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MERS coronavirus (MERS-CoV) update

There have been no additional reports of laboratory-confirmed cases of MERS-CoV infection by the World Health Organization (WHO) this week.

A study published this week in the journal [*The Lancet Infectious Diseases*](#) reports evidence that camels in the Middle East have been exposed to MERS coronavirus or a very close relative, suggesting a possible animal reservoir. High levels of antibodies specific to MERS-CoV were found in all 50 serum samples taken from dromedary camels sampled in Oman. The Oman samples originated from a number of different locations in the country, suggesting that MERS-CoV, or a very similar virus, is circulating widely in dromedary camels in the region.

No MERS-CoV antibodies were found in blood taken from cattle, sheep, goats and llamas from the Netherlands and Chile. Low levels of MERS-CoV-specific antibodies were also found in 14% of samples taken from dromedary camels in the Canary Islands (Spain), not previously known to be a location where MERS-CoV infections in humans have occurred.

These results suggest that dromedary camels may be one reservoir of the virus that is causing MERS-CoV in humans. Dromedary camels are a popular animal species in the Middle East, where they are used for racing, and also for meat and milk, so there are different types of contact of humans with these animals that could lead to transmission of a virus. One MERS-CoV in man from the United Arab Emirates but treated in Germany was reported to have been exposed to a sick racing camel prior to the onset of his illness.

Globally, from September 2012 to date, WHO has been informed of a total of 94 laboratory-confirmed cases of infection with MERS-CoV, including 46 deaths.

WHO has also recently issued [MERS-CoV travel advice for pilgrims to the Hajj and Umrah](#) in Saudi Arabia this year. For further travel advice see the [NSW Health Hajj travel advice](#) factsheet.

For more information and links see the [NSW Health MERS-CoV website](#).

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Summary of notifiable conditions activity in NSW

The following table summarises notifiable conditions activity over the reporting period (Table 1). See explanatory notes below.

**Table 1. NSW Notifiable conditions activity for the period 5 August 2013 – 11 August 2013
(by date received)**

| | | This week | Last week | Year to date | | | Full Year | |
|-----------------------------------|---------------------------------|-----------|-----------|--------------|-------|-------|-----------|-------|
| | | | | 2013 | 2012 | 2011 | 2012 | 2011 |
| Enteric Diseases | Cryptosporidiosis | 7 | 8 | 971 | 509 | 251 | 655 | 354 |
| | Giardiasis | 40 | 43 | 1490 | 1383 | 1683 | 2015 | 2377 |
| | Haemolytic Uremic Syndrome | 1 | 0 | 4 | 7 | 3 | 8 | 4 |
| | Listeriosis | 2 | 0 | 24 | 22 | 13 | 36 | 20 |
| | Rotavirus | 5 | 12 | 243 | 474 | 471 | 1761 | 1208 |
| | Salmonellosis | 34 | 35 | 2304 | 1859 | 2681 | 2943 | 3566 |
| | Shigellosis | 1 | 3 | 75 | 87 | 83 | 131 | 126 |
| | Typhoid | 1 | 0 | 43 | 30 | 37 | 43 | 45 |
| Respiratory Diseases | Influenza | 382 | 257 | 2283 | 5193 | 3292 | 8038 | 5791 |
| | Legionellosis | 2 | 1 | 60 | 79 | 74 | 105 | 104 |
| | Tuberculosis | 4 | 7 | 218 | 241 | 312 | 440 | 538 |
| Sexually Transmissible Infections | Chlamydia | 335 | 449 | 12966 | 13397 | 12708 | 21261 | 20448 |
| | Gonorrhoea | 67 | 75 | 2679 | 2505 | 1595 | 4114 | 2818 |
| | LGV | 3 | 1 | 24 | 8 | 28 | 28 | 36 |
| Vaccine Preventable Diseases | Meningococcal Disease | 4 | 1 | 23 | 47 | 44 | 68 | 72 |
| | Mumps | 1 | 3 | 61 | 83 | 37 | 110 | 61 |
| | Pertussis | 33 | 46 | 1422 | 4139 | 8068 | 5996 | 13411 |
| | Pneumococcal Disease (Invasive) | 10 | 14 | 289 | 308 | 305 | 563 | 530 |
| | Rubella | 1 | 3 | 9 | 8 | 13 | 11 | 17 |
| Vector Borne Diseases | Barmah Forest | 4 | 6 | 301 | 214 | 367 | 344 | 471 |
| | Dengue | 1 | 6 | 150 | 196 | 91 | 289 | 148 |
| | Malaria | 1 | 4 | 55 | 40 | 53 | 68 | 82 |

Notes on Table 1: NSW Notifiable Conditions activity

- Data cells represent the number of case reports received by NSW Public Health Units and recorded on the NSW Notifiable Conditions Information Management System (NCIMS) in the relevant period.
- Data cells in the 'Adverse Event Following Immunisation' category refer to suspected cases only. These reports are referred to the Therapeutic Goods Administration (TGA) for assessment. Data on adverse events following immunisation is available online from the TGA [Database of Adverse Event Notifications](#).
- Only conditions for which at least one case report was received appear in the table. HIV and other blood-borne virus case reports are not included here but are available from the [Infectious Diseases Data](#) webpage.

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