Welcome to the July edition of Disease WAWatch. This month there is a focus on the work of the enteric surveillance team and recent increases in norovirus and listeria cases. There are also articles on the increase in overseas acquired HIV and DIY Chlamydia testing. Sexual health unit staff are boosting education programs about the additional risk associated with unprotected sex in high incidence countries in Asia and Africa. A continuation of this trend places us at risk of increased endogenous heterosexual transmission after infected people return. The directorate has also seen another wave of measles cases in WA, with molecular typing suggesting the virus type is linked to outbreaks in India. It is likely that the cases are linked to the original Perth cluster following the visit of Amma in April. All doctors are reminded to have a high level of suspicion when assessing rashes associated with coryza and conjunctivitis. CDCD is gearing up for the National pandemic exercise in October and the August edition will focus on this topic.

Dr Paul Van Buynder, Director, Communicable Disease Control Directorate

Overseas acquired HIV
The number of overseas-acquired HIV notifications in Western Australia (WA) more than doubled from 10 (all male) in 2004 to 22 (2 females and 20 males) in 2005. Last year, 37% of newly notified HIV infections were contracted while working or travelling abroad. Of the 20 males, 12 were heterosexual, 7 homosexual, and 1 bisexual, and 67% were aged between 40 and 69 years. Nine of the men acquired their infection in Thailand.

These increases highlight the importance of practising safe sex when abroad, and doctors being aware of the possibility of HIV and other STIs in returning travellers.

The Sexual Health and Blood-borne Virus Program of the Department of Health (DoH) has produced a HIV pre-test discussion and post-test counselling guide for GPs, which has been sent to all GPs with this edition of Disease WAWatch. Additional copies can be downloaded at www.population.health.wa.gov.au.

A clinical challenge
A 45-year-old man presents to his GP with the flu, having recently returned from Thailand. What would you ask him?

After excluding possible H5N1 (avian) influenza through exposure to sick/dying birds, specifically ask about sexual contacts and practices, both overseas and at home.

Sexual history: number and gender of casual and regular sexual partners; specific sexual practices and if protected or unprotected; genital symptoms; injecting drug use; and body piercing and other skin penetration.

Examination & investigations: if the history indicates a risk of STIs, do a full physical examination, looking for enlarged lymph nodes and other systemic signs (particularly rash) consistent with seroconversion illness of HIV or genital lesions of an STI, and offer testing for HIV, STIs, hepatitis B and C as clinically indicated. Advise about the potential risks for partners, and the window periods for testing.

Eligibility Criteria for the National Varicella Vaccination Program
This is a reminder to immunisation providers in WA of the eligibility criteria for funded varicella (chickenpox) vaccine program which commenced on 1 November 2005. This program provides funded varicella vaccine for all children at 18 months of age born on or after 1 May 2004. Children born before May 2004 are not eligible for free vaccine. Funded vaccine should not be given to children before they reach the age of 17 months.

The program also includes a long-term catch-up component only for children in Year 7 in WA who have not received varicella vaccine and have no clinical history of chickenpox. This is offered as a school-based program in WA.

There has been significant leakage of the funded varicella vaccine in WA where free vaccine is given to non-eligible children. This is detrimental to the funding and supply of a viable program. It is essential that providers ensure that only eligible people receive vaccines funded under the National Immunisation Program. Should leakage continue, further strategies will be developed to curtail it.

In addition, a reminder that varicella vaccines are live attenuated vaccines, presented in a freeze-dried (lyophilised) form. The vaccine must be reconstituted with the diluent supplied to make a 0.5 mL dose.

Disease WAWatch is the newsletter of the Communicable Disease Control Directorate. To subscribe or contribute, contact the editor, Clare Chamberlain, at cdc@health.wa.gov.au or 9388 4878.
There has been a higher than expected number of listeria cases reported to the WA DoH this year, with 9 cases notified so far, all between February and April. This is a high number for a 3-month period compared to the historical mean of 3 cases per quarter and the annual 15-year mean of 8 cases. Only 1 of the 9 cases this year was pregnancy-associated. The other 8 cases were adults aged between 22 and 91 years who had either immunosuppressive illnesses such as ulcerative colitis and Crohn’s disease, or were undertaking immunosuppressive treatments for cancer or arthritis.

As with all cases of listeriosis reported to the DoH, an intensive investigation was carried out. A detailed food and environmental history was recorded for the month prior to the onset of each person’s illness. Genetic typing by pulse field gel electrophoresis (PFGE) of the 9 isolates was carried out at PathWest laboratories. The relatedness of the clinical isolates to each other as well as to a number of strains of *L. monocytogenes* isolated from a variety of food items in 2006 was examined. The clinical isolates were of 5 different genetic types, suggesting that there were at least 5 different circulating strains of *L. monocytogenes*. One person had a PFGE pattern indistinguishable from that in a range of food products tested including ham, fetta cheese, pork and roast beef. A group of 3 people had a PFGE pattern indistinguishable from salami and cacciatore products sampled from a small goods company at a similar time to the listeria onset dates. Furthermore, these people reported eating products from this company, suggesting a possible link to deli meat products. Investigations were conducted at the small goods company by officers of the DoH’s Meat Safety Branch and the company undertook a review of their production processes.

During this investigation it was found that there was low awareness of their greater risk for listeriosis among the cases and their treating physicians, and of the need to follow a low-listeria diet.

People at greater risk of contracting listeriosis were identified in a World Health Organization risk assessment as transplant recipients, people with HIV/AIDS, those on renal dialysis, people with cancer or diabetes, and alcoholics. Case histories from WA showed that other pre-disposing conditions for listeria included autoimmune disorders, cardiomyopathy, and immunosuppressive therapy for arthritis and emphysema.

All 9 listeria cases from this year were found to have eaten a range of foods that were high-risk for listeria. All reported eating ham in the month prior to onset, and 4 had eaten salami. In a US risk assessment, deli meats were found to be the foods with the highest risk of listeriosis. Other high-risk foods consumed by WA cases included lettuce, barbequed chicken, prawns, smoked salmon and raw fish. Ready-to-eat foods are not required to be free of listeria and can pose a risk to susceptible individuals.

Pregnant women and people with any illnesses or treatments that suppress the immune system should adopt a diet that is a low risk for listeria.

Important aspects of a low-risk diet for listeria are:

- Clean utensils
- Separate cutting boards for different types of food
- Clean fridge
- Washed fruit and vegetables
- Thoroughly cooked or re-heated food
- No food stored for longer than 24 hours in the fridge
- All food covered in the fridge
- No high risk foods such as deli meats, paté, cold cooked chicken, pre-prepared salads, undercooked meat, pre-cooked shellfish, smoked and raw fish, soft serve ice-cream, soft cheese and unpasteurised milk.

More information on low-listeria diets can be obtained from the Communicable Disease Control Directorate (CDDC). The Department’s pamphlet on Listeria can be ordered or downloaded at www.population.health.wa.gov.au.
Outbreaks of Norovirus in aged-care facilities in Western Australia

In 2005, 32 of 37 (86%) outbreaks of gastroenteritis were thought to be due to person-to-person transmission. The majority of these outbreaks occurred in aged-care facilities (24) and 11 were confirmed to be due to norovirus detected by PCR on faecal specimens. The remaining 13 outbreaks were epidemiologically and clinically consistent with causation by norovirus. Outbreaks of suspected or confirmed norovirus gastroenteritis were also reported in other institutions such as respite care centres, a child care centre and a school camp. In all, these outbreaks affected a total of 681 people, including patients and staff, hospitalising 21 people.

To the end of June in 2006, 37 outbreaks of suspected or confirmed norovirus gastroenteritis have been reported from aged-care facilities or hospitals in WA, 32 in metropolitan and 5 in country areas. In contrast to a seasonal peak in norovirus activity between late winter and early summer in previous years, increased activity has been observed from March through to June this year. Similar increases have been observed in other States and Territories (Communicable Diseases Network Australia status reports). This is partly attributable to a recent alert sent out by the Aged Care Division of the Commonwealth Department of Health and Ageing to all aged-care facilities encouraging them to report all outbreaks of gastroenteritis to their local Department of Health.

Nursing homes and hospitals are common settings for outbreaks of norovirus, due to the closed nature of these institutions, the low infectious dose of norovirus, and the increased susceptibility of the populations in these settings. Infection with norovirus is now recognised as an important cause of gastroenteritis in the elderly. Much of the recent prominence of norovirus may also be due to increasing number of elderly people in institutional care, coupled with improved detection methods. Recent genotyping data have also raised the possibility that some genotypes of norovirus predominate in outbreak settings and that a shift in the predominant genotypes is evident between epidemic seasons. However, while outbreaks of norovirus can result in high attack rates, morbidity is generally low, with a low hospitalisation rate and a relatively short duration of illness.

Transmission from person-to-person, particularly in the setting of an aged-care facility and resident transfer to a hospital or between institutions, has important implications for infection control procedures during an outbreak. Key strategies are outlined below. Sound infection control policies and procedures, and outbreak management plans incorporated into existing aged care accreditation standards are essential in aged-care settings. The collection of detailed information on the clinical and epidemiological features of any outbreak is also important to discount foodborne gastroenteritis, particularly in the early stages of an outbreak.

All new occurrences of 2 or more cases of gastroenteritis in a residential care facility should be reported as soon as possible to the CDCD in Perth (ph: 9388 4852) or to the appropriate local Population Health Unit or Local Government Authority. Faecal specimens should be collected from several cases in any outbreak and submitted for microbiological testing. The request form should identify the clinical symptoms, the fact that the case is part of an outbreak, and viral PCR testing (including norovirus) should be specifically requested.

### Key infection control procedures for the management of infectious diarrhoea in health care facilities

- **Strict hand washing before and after contact with each resident**
- **Minimise or preferably cease new admissions, or transfers to other facilities**
- **Isolate infected residents in single rooms or cohort ill residents, if possible**
- **Minimise visitors to ill residents**
- **Minimise agency staff**
- **Exclude infected staff until 48 hours after asymptomatic**
- **Exclude non-essential staff from clinical areas and wards**
- **Thoroughly clean and disinfect rooms and bathrooms, and any other infected equipment or material.**

### Bibliography

Easy, DIY Chlamydia testing for busy GPs

Background
Over 5000 cases of genital chlamydia were notified in WA in 2005 and the incidence of this often-asymptomatic infection continues to increase at an alarming rate. Ten to 15% of women will experience pelvic inflammatory disease (PID) after their first episode of chlamydia and 40% after a second episode. Untreated infections in males may lead to epididymoorchitis. Left uncontrolled, the current epidemic of chlamydia is likely to result in increases in ectopic pregnancy and infertility (female and male).

The RACGP’s 2005 Guidelines for Preventive Activities in General Practice or “Red Book” (www.racgp.org.au/redbook) recommends:
- opportunistic screening for all sexually active females <25 years, and
- annual chlamydia testing for all sexually active teenagers, and all men who have anal sex with men.

In addition, the DoH also recommends:
- opportunistic screening of sexually active males <25 years
- chlamydia testing for anyone who has recently changed sexual partners or had more than 1 sexual partner in the last year

How to test?

**Asymptomatic males:** 15-25 ml first void urine (no need to wait for 2 hours after passing urine)

**Asymptomatic females:** 15-25 ml first void urine and self-obtained lower vaginal swab (SOLVS).

Self-obtained lower vaginal swabs have been used successfully for more than five years in northern WA, the Northern Territory and overseas to test for chlamydia in asymptomatic women (see below).

Symptomatic patients should have a full physical examination to ensure that genital and extra-genital STIs manifestations are not missed. In females, this includes a vaginal speculum examination.

Guide to chlamydia testing
For a complete guide to chlamydia testing, treatment and contact tracing, see www.couldihaveit.com/media/FNL%20Guide%20to%20Testing.pdf.

Exercise Cumpston
An exercise to test the preparedness of health agencies and the adequacy of current plans will occur on October 16 to 19th. In Perth this will include the operation of a fever clinic and assessment of hundreds of volunteers, contact tracing those deemed to be infected with novel influenza strains, and medicating contacts with antivirals (jellybeans in this case). A number of preparatory exercises have been held to firm up planning processes. A primary care annex to the Australian Health Management Plan for Pandemic Influenza is expected soon and should greatly aid GPs in their own planning.

This is how to take your own swab for a SOLVS PCR test.

Put the tip of the cotton swab stick about 2 cm (length of 1 finger joint) inside your vagina. Turn the swab around once.

Count to 10 while leaving the cotton swab stick in the vagina.

Diagram courtesy of Kimberley Population Health Unit