From the Director’s desk

As we enter the season of reflection, I look back on a year of significant achievement and look forward with great anticipation. This year saw the introduction of two new vaccines targeting rotavirus and HPV. Their successful introduction is a credit to the combined public health workforce. Additionally, the new Immunisation Training Program was developed and training has commenced and the Western Australian Immunisation Coalition had their first meetings and will assist greatly with community understanding of immunisation issues. Key immunisation rates continue to hover at around the 90 percent mark and we would like to pick this up in the coming years.

Outbreak staff have had a busy year; July was dominated by influenza deaths in children and the arrival of norovirus 2000b led to significant impacts on nursing homes and acute care facilities. TB rates and malaria rates declined after bumper years in 2005 and the notification system expanded to include infectious disease related conditions such as intussusception and rheumatic fever. Outbreaks of syphilis occurred in the metropolitan area, hepatitis C rates remained steady (bring on the Prison Health Review), HIV rates are increasing with a changing pattern and the global epidemic of Chlamydia continues despite innovative programs to target key risk groups.

The Health Care Acquired Infections Unit has expanded the agreed mandatory indicators for hospitals and is targeting staph aureus strains in the community of particular virulence. Their work underpins infection control processes in Western Australia hospitals regarded in peer review journals as the best in Australia.

Next year promises to be exciting for Disease Control staff. A revitalised winter campaign linked to an investigation of the benefits of influenza vaccination in young children may have major impacts on flu related diseases in WA. The continued expansion of Australia’s best sentinel surveillance program in conjunction with our general practitioner colleagues will enable us to collect carriage data and be well prepared for decisions regarding new generation pneumococcal vaccines as well as continuing to monitor rotavirus serotype changes and the impact of varicella vaccine.

We hope your children returned home safely from schoolies and the festive season is relaxing. We look forward to a continued cooperative relationship next year. The staff at CDCD are totally dependent on our general practitioner, specialist and laboratory colleagues. Drive safely; Western Australia’s road toll is unacceptable.

Merry Christmas to all
Paul Van Buynder, December 2007

Fighting the pandemic with Christmas Trees

With the potential arrival in Australia of a novel avian influenza A virus with the capacity for human to human transmission (pandemic strain influenza), governments across the nation have been feverishly planning for the health response necessary to minimise the impact of the epidemic.

This planning has included the stockpiling of millions of courses of the anti-viral neuraminidase inhibitor oseltamivir, thought to be effective in ameliorating disease if given sufficiently early. The main ingredient of oseltamivir, a compound called shikimic acid, which is usually obtained from star anise, a cooking spice from a tree grown in China. Prices of the spice skyrocketed when anxiety over a possible human outbreak of avian flu escalated.

CNN has reported that the needles of pine, spruce and fur trees contain a fairly high concentration of shikimic acid and that a small Canadian pharmaceutical company is collecting the needles from discarded Christmas trees to process them and convert them to the oseltamivir precursor. These trees, previously converted into mulch and potting soil, are instead forming the basis of an additional pandemic response.
Viral meningitis in the Kimberley Region

Background

An outbreak of enteroviral meningitis in the Northern Territory (NT) has been ongoing over the last few months affecting dozens of children and adolescents. The NT outbreak coincides with a larger outbreak of a fever, headache and vomiting illness in children. The responsible strain of enterovirus was not previously known to occur in Australia and the subsequent lack of immunity may explain the significant number of cases seen. There are now several confirmed cases of disease in the Kimberley region due to the same enterovirus strain signalling the entry of the virus into WA. It is yet to be determined if WA will experience the large outbreak seen in the NT.

Clinical features of the NT cases

Three-quarters of meningitis cases are under 15 years of age and almost half are under 12 months of age. Some of the meningitis cases have had a maculopapular blanching rash. Infants present with fever, vomiting, irritability and drowsiness. Recovery is prompt and there have been no sequelae to date. Associated conditions such as paralysis, myocardiitis, myalgia and conjunctivitis have not been reported thus far. The meningitis cases have coincided with an outbreak of fever, headache and vomiting without diarrhoea with high attack rate. It is thought this most likely represents a spectrum of disease caused by the same virus as can occur with enterovirus outbreaks.

Management of cases

Treatment is symptomatic for immunocompetent patients who experience generally milder disease. Management of ill immunocompromised patients should be discussed with an infectious disease specialist. Cases are most infectious during the first week of acute illness and mode of transmission is from respiratory secretions and from faecal-oral spread. Patients should remain at home and precautions to prevent faecal spread should be recommended for 7 days from illness onset. However, the virus may persist in stools for several weeks. Therefore promoting general cleanliness and hand hygiene is very important to limit the spread between household members.

Laboratory confirmation

Cases are confirmed by enteroviral PCR or culture as there is no serology test available for enteroviral infections. The virus is best identified from patients presenting with fever/headache/vomiting by performing a dry throat swab (orange top) for PCR or swab into viral transport medium (VTM) for enteroviral PCR and culture. Neonates and infants may present with a nonspecific febrile illness leading to suspicion of bacterial sepsis. Concomitant screening for enteroviral infection of these cases should be considered.

“Once diagnosed, patients should remain at home and precautions to prevent faecal spread should be recommended for 7 days from illness onset.”

If you have any queries regarding management of the case please contact an infectious diseases physician. If there are any public health concerns regarding this please contact your public health unit.

by Dr. David Speers
Worried about interest rate rises?  
Wait till you see the syphilis rate

This catchy logo, developed by the WA AIDS Council, is just one of the many and varied strategies aimed at controlling increased syphilis rates in Perth males.

Infectious syphilis notifications in WA started to increase in November 2006. The initial rise occurred predominantly in metropolitan men who have sex with men (MSM), many of whom were also HIV positive and having unprotected sex with other HIV positive males with knowledge of each other’s HIV-status. Notifications decreased in early 2007 following implementation of outbreak control strategies. However, in May 2007 notifications rose again, and disturbingly, the ‘second wave’ of this outbreak has spread outside HIV-positive MSM to the broader MSM community, including bisexual men.

The disease is being spread through unprotected oral and anal sex. Often chancre/s are only present on the lips or in the mouth as unprotected oral sex is mistakenly perceived as being a low-risk activity.

Some usual presentations of syphilis have included the concurrent presence of chancre/s and features of secondary syphilis (only in HIV positive men), severe headache, bone pain due to osteitis, visual disturbance due to uveitis, condylomata lata which have been mistaken for genital warts and a pale, macular rash on the trunk which may go unnoticed. Concurrent rectal and oro-pharyngeral chlamydia or gonorrhoea has been seen and 2 cases were newly diagnosed with HIV when they presented with syphilis reinforcing the maxim ‘if you suspect one STI, test for all’.

Medical practitioners should offer opportunistic testing for syphilis to sexually active HIV positive male patients, MSM and those who believe themselves to be at risk of an STI. If your patient is at risk and their first syphilis test is negative, it is worthwhile repeating the test one month later as it is possible for a chancre of primary syphilis to appear before seroconversion.

GPs and obstetricians are reminded to offer syphilis testing to all antenatal patients to prevent the devastating effects of congenital syphilis.

Doctors are reminded to report all suspected and confirmed infectious syphilis cases to Communicable Disease Control Directorate (CDCD) by faxing a disease notification form to 93884848. For telephone advice call CDCD on 93884852 or the sexual health clinic at Royal Perth or Fremantle Hospitals.

For more information see:
Intussusception

Intussusception is the most common cause of acute intestinal obstruction in children less than 5 years of age. It occurs when one portion of the small bowel invaginates into a more distant portion of the bowel. This in turn, leads to swelling, inflammation, and decreased blood flow to the intestines involved. If left untreated intussusception can be a potentially life threatening illness.

The causes of intussusception is unknown but may follow a recent bout of gastroenteritis. Most cases of intussusception occur in children aged 6 to 12 months of age with 80% of cases occurring before a child is 24 months old.

Intussusception became a notifiable condition under the Health Regulations 2007 (WA Health Act 1911) as of the 1st of July 2007. The reason for this is that all children born on or after the 1st of May 2007 are eligible to receive a new rotavirus vaccine (Rotarix®) as part of the Western Australian vaccination schedule.

A previous rotavirus vaccine (Rotashield®) which had been released in the USA was associated with intussusception and was therefore withdrawn from the world market. Although pre-licensure studies on the GSK Rotarix® vaccine have not demonstrated an association with intussusception it is possible that a random temporal association of an individual case of intussusception could occur with administration of the vaccine on a large scale. It is therefore important that we are able to examine whether any such association is due to chance alone or whether there is a true statistical association. In order to achieve this it is essential to collect detailed clinical information (including vaccination status) and stool samples from all children (vaccinated or not) with intussusception in Western Australia.

Recent data suggests that intussusception in Australia occurs at a rate of approximately 10 per 10,000 person years for children less than 1 year of age¹. We therefore estimate that approximately 20 - 30 children will develop intussusception in Western Australia each year. Since notification of this condition began Communicable Disease Control Directorate (CDCD) has received 13 reported cases with nearly all coming from Princess Margaret Hospital (PMH).

Guidelines for the notification and sampling requirements of intussusception cases are provided in the ‘Intussusception Notification and Sampling Pack’. If you work at PMH, these packs can be found in the Emergency, Surgery and Radiology Departments. If you do not work at PMH and there is a likelihood that you will manage a case of intussusception, please request an ‘Intussusception Notification and Sampling Pack’ from Dale Morgan at CDCD (ph 9388 4876, fax 9388 4877, or email dale.morgan@health.wa.gov.au).

Reference
Surveillance of Vaccine Preventable Viruses

Sentinel Practitioners Network of WA — SPN (WA)

In 2007 the Communicable Disease Control Directorate (CDCD) together with a number of key stakeholders established a surveillance program for monitoring influenza, rotavirus and varicella. Effective surveillance is required to monitor the impact of existing and newly introduced vaccines on these viruses. Surveillance encompasses inpatient and outpatient settings. Below is a brief summary of the systems in place.

- Representative General Practice surveillance in WA was established in April 2007
- 36 GPs from 28 general practices in WA are contracted members of SPN (WA) and contribute on a weekly basis data on: influenza-like illness, gastroenteritis, chicken pox and shingles
- 15 GPs are from the 8 regional general practice divisions and 21 are from the 6 metropolitan general practice divisions
- Data is submitted to the Australian Sentinel Practice Research Network (ASPREN) and WA GPs make up over 50% of the national reporting each week (see the tables below for the last two weeks of reporting)
- WA GP surveillance data is reported in the weekly newsletters Virus WAtch and Virus News which are distributed to over 700 health professionals including GPs, infectious disease and infection control personnel.

Emergency Department Sentinel Surveillance (EDSS)

- Inpatient surveillance was set up in July 2007 using the Emergency Department Information System (EDIS) for collecting data on the cases of respiratory viral presentations, gastroenteritis and varicella cases
- Nine Perth metropolitan Emergency Departments provide data to CDCD on a weekly basis
- The major paediatric and adult hospitals are included in the surveillance system
- The results of ED surveillance are reported in the weekly newsletters Virus WAtch and EDSS News that are distributed to over 700 health personnel.

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Virus Watch Subscription: If you would like to subscribe to an electronic copy of Virus Watch, Virus News and/or EDSS News send an email to Virus.Watch@health.wa.gov.au stating which newsletters you would like to receive on a weekly basis. For any further information on SPN(WA), EDSS or the newsletters please contact Dale Morgan on phone 9388 4876 or email Dale.Morgan@health.wa.gov.au.
GP Sexual Health Training

- In 2007, the Sexual Health and Blood-borne Virus Program continued to provide funding to enable some GPs to undertake sexual health training at the two metropolitan sexual health clinics. GPs who had previously attended the Australasian Chapter of Sexual Health Medicine (ACSHM)'s interactive case-based three day Sexual Health Workshop were offered the chance to undertake 12 session clinical placements at either Royal Perth Hospital or Fremantle Hospital Sexual Health clinics.

- The Sexual Health and Blood-borne Virus Program has also funded the ACSHM to conduct another three day Sexual Health Workshop for GPs in early 2008. Topics covered will include: Herpes, warts, discharges, sexual history taking, counselling techniques and contact tracing. For more information, please contact Suzanne Marks at ACSHM, Tel: 02 9256 9643; Fax: 02 9256 9693; Email: sexualhealthmed@racp.edu.au

Guidelines for managing STIs

- The Department of Health’s Guidelines for Managing Sexually Transmitted Infections (commonly known as The Silver Book) documents best practice STI clinical management in Western Australia. Throughout 2007, the SHBBVP has continued to distribute the guidelines to health care providers throughout WA. Copies were also provided to medical students at both The University of WA and Notre Dame University. For more information or to obtain a free copy, please contact Sue Laing; Email: susan.laing@health.wa.gov.au

Policy development

In 2007, the SHBBVP:

- Developed a new operational directive about antenatal testing for sexually transmissible infection and blood-borne viruses that recommends appropriate testing for pregnant women as part of their antenatal care http://intranet.health.wa.gov.au/circularsnew/circular.cfm?Circ_ID=12299


Prevention and Control

The prevention and control team while few in staff numbers have played a significant role in the prevention and containment of disease in 2007 through such activities as:

- Introduction of the new oral Rotavirus vaccine to the childhood schedule

- Introduction of HPV vaccine to all girls in years 10/11/12 attending WA schools and 18 - 26 yr old women

- further developed our partnership with WA General Practice Network and GP Divisions to foster “Best Practice” standards in the delivery of immunisation

- developed a new immunisation training manual and course for registered nurses to enable them to become immunisation certified and participate in school based or GP immunisation programs

In addition, the Prevention and Control team have been the driving force behind Influenza Pandemic preparation. From coordinating regional health services and all key government and non-government organisations to develop their business continuity plans; updating the WA Influenza pandemic plan; engaging International Airport Border agency staff to agree and attend a training program to prepare staff for monitoring and responding to passengers returning to WA. Prevention and Control worked with such industries as the funeral, cemetery board and the police department to negotiate a system for managing large numbers of dead bodies.

Prevention and control continues to be the lead agency in initiating a response to outbreaks of disease. Examples include; the cases of influenza this winter which caused the death of three children in the metropolitan area; enterovirus outbreak in the Kimberley that resulted in several cases of meningitis from a small community, as well as a significant outbreak of mumps in the indigenous population in the Kimberley.
Unique Opportunity to Limit the Impact of Epidemic MRSA Clones

Scope of the problem

Imported epidemic clones of community-associated MRSA (CAMRSA) are increasingly detected in WA (figure 1). These organisms, in addition to resistance to all beta-lactam antibiotics, possess unique virulence factors including Panton-Valentine leukocidin (PVL), a toxin associated with tissue necrosis.

In Australia, USA and Europe they have rapidly spread and become established as endemic pathogens within communities and subsequently healthcare settings. In the USA these clones are now a major public health concern and the predominant cause of significant skin and soft tissue infections.

Healthy children and adults are primarily at risk of infection characteristically presenting with an “insect bite”, which may progress quickly to cellulitis or abscess.

Serious complications include necrotising pneumonia, bacteraemia, endocarditis and osteomyelitis.

What is the response of WA Health?

In WA, MRSA is notifiable and isolates are routinely typed. WA is therefore in a unique position to detect the emergence of significant epidemic clones and to take action to limit the possibility of them becoming locally endemic.

Control measures are outlined in policy documents developed by the Communicable Disease Control Directorate (CDCD). Resources available online will include General Practitioner guidelines for the management of infections due to these clones, decolonisation instructions, MRSA fact sheets and hygiene advice.

Area Health Services via Public Health Units will be responsible for the follow up of patients with these specific clones supported by the CDCD. Some individuals infected with these clones will be directed to their General Practitioner and management guidelines will be provided.

For further information: preferably email - hiswa@health.wa.gov.au or alternatively phone the Healthcare Associated Infection Unit (HCAIU) at CDCD on +61 8 9388 4878 or +61 8 9388 4868.

For more information


Figure 1: Cases of epidemic PVL - positive CAMRSA in WA
Safe Holiday Feasting

Christmas is a popular time to catch up with family and friends and the average home kitchen isn’t designed for large volume of cooking, so good hygiene practices and planning are essential to ensure food safety.

Depending on the type of bacteria causing food poisoning, symptoms can first appear as soon as 1 hour after ingesting contaminated food, which is common in toxin producing bacteria such as *Staphylococcus aureus* and *Bacillus cereus*, or take as long as 10 days for bacteria such as *Campylobacter*.

Many food poisoning causing bacteria are found in the gut of animals that are ubiquitous in the environment. Bacterial growth is determined by time, temperature, water activity, pH and a food or energy source. For these reasons some foods, such as dried fruit or lollies, will not encourage bacterial growth. Recent food poisoning outbreaks have been linked to the use of raw eggs, improperly cooked minced meat, fresh fruit, vegetables and infected food handlers. It is important to carry out simple food hygiene practices to avoid risking infection.

✔ Always wash your hands before commencing food preparation, after handling raw meats, going to the toilet or doing any other activity that may contaminate your hands

✔ Avoid cross contamination - prepare and store raw meat separately from cooked and ready to eat foods such as salad and cooked chicken. Items such as tongs, chopping boards and knives used on raw meats should be washed before being used to handle ready to eat foods.

✔ Keep food out of the temperature danger zone (between 5°C and 60°C) - food poisoning bacteria will start to multiply rapidly when chilled food is heated to temperatures above 5°C and will stop multiplying when food reaches 60°C. You can transport or keep potentially hazardous food out of temperature control by applying the 2 hour/4 hour guide. This guide means that you can have freshly prepared food out of temperature control for up to 2 hours then refrigerate it for later use. If out of temperature control for between 2 hours and 4 hours use the food. After 4 hours throw it out.

✔ Keep leftovers for a maximum of 3 days and if reheating, reheat until steaming hot.

✔ Ensure you have plenty of fridge and freezer space as overloading will reduce cooling efficiency - low risk items such as cool drinks, alcohol and water can be kept in eskies to free up refrigerator space.

Entertaining and cooking for more people than normal can increase the risk of food poisoning so please ensure you and your friends and family don’t expose themselves to these risks!