Department of **Health**
Government of **Western Australia**

TO ALL DISEASE CONTROL COLLEAGUES

I write in part to introduce myself as the new Director of the Communicable Disease Control Directorate (CDCD) but predominantly to flag opportunities for further collaboration that are imminent. I also wish to note the arrival of Dr Tania Wallace to head the Prevention and Control Program, which includes immunisation.

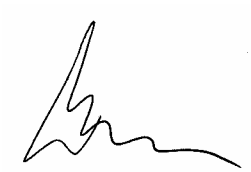
These are challenging times in disease control, continually changing vaccine schedules, impending influenza pandemics, and a steady increase in some sexually transmitted diseases to name just a few. While we look to ways to do things differently to meet the challenges we need to maintain a focus on core business and what is working as well.

A recent overseas acquired measles case in Perth, a significant 'unseasonal' influenza outbreak on the MV Funchal, and the dozens of tetanus cases we saw in Banda Aceh when medical teams went there last year, remind us that we live in a global village. While we do have an exemplary public health disease control system, maintenance of this is critical.

In the course of the next few months we will be seeking input and support for a variety of enhanced collaborative processes including:

- An enhanced GP sentinel surveillance program. With the introduction of varicella vaccine and the arrival of rotavirus vaccines (described in detail next month) both diseases will be added to the notifiable diseases list soon. As they become less common and with the prospect of changes to the patterns of disease and prevalent serotypes, there will be a need to increase pathology testing at sentinel sites to monitor this.
- Involvement of General Practitioners in the pandemic planning and response process. Any response to a pandemic must involve altered health care delivery models and GPs will be wanted to supervise semi-skilled staff at fever clinics amongst other roles. The above-mentioned enhanced surveillance network may assist with monitoring any outbreak. CDCD and Area/Regional Population Health Units will increase liaison with Divisions of General Practice to help develop models of GP involvement in response. Similar linked work by the Disaster Planning and Management Unit will focus on GP involvement in disasters generally.
- Support for occasional surveys to assess quality issues. The Vaccine Trials Group has been contracted to undertake the first of these, a review of vaccine fridge functionality in the bush after concerns expressed to CDCD.

We will be increasing our training and education focuses in key areas while this continues. There is a monthly update on pandemic flu (next on 21 April at Grace Vaughan House) and we are happy to speak at GP forums whenever they are held on disease control issues. We also are desirous of support from 'product champions'. Let us know if you have an interest in these areas and want to get further involved.



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From the Director:

Welcome to the first revised edition of Disease Watch, the bulletin of the Communicable Disease Control Directorate (CDCD). The previous journal type publication had proved difficult to maintain and had not 'appeared' for eighteen months. It has been decided to trial a shorter version to be sent out 4-6 weekly with highlights of recent activity and significant changes to programs. This first edition highlights recent outbreak investigations, Hepatitis C, and tips on the vaccine schedule and also includes a summary of the notifiable diseases for last year. It is intended to produce more detailed disease annual summaries and specific disease reports as a separate directorate output. In next month's edition measles appears in WA and the new Rotavirus vaccines are outlined. A letter to all GPs accompanies this bulletin outlining opportunities for closer collaboration. We welcome feedback at all times.

Epidemiology & Surveillance Program

Investigation of respiratory illness on a cruise ship

In response to concerns raised through the Communicable Disease Control Network Australia (CDNA) regarding high rates of respiratory illness aboard a cruise ship (MV Funchal) circumnavigating Australia for 4 weeks from mid February, CDCD initiated an investigation, also involving the Environmental Health Directorate (EHD), Eastern Goldfields Population Health Unit and PathWest. High rates of illness had also been noted on a previous visit to Fremantle in mid January, when 6 cases of influenza A were diagnosed amid widespread reports of illness.

Investigations

The public health team boarded at Esperance to inspect health, hygiene and food safety practices, and test water cooling systems and the swimming pool. Throat and nose swabs, and blood samples were taken from passengers who reported experiencing a respiratory illness, all of whom completed a questionnaire.

Results

Laboratory results revealed the presence of 3 common winter respiratory viruses (influenza A, parainfluenza and human metapneumovirus* [HMPV]), that are transmitted through droplet and aerosol spread. Predisposing factors which exacerbated the severity of illness and transmissibility were the passengers' mean age of 71 years, additional chronic medical conditions, the low uptake of influenza vaccine (the local seasonal influenza vaccine was only just available), poor personal hygiene practices such as not covering the mouth when coughing, and the close, prolonged contact between passengers in an enclosed environment. Influenza virus is also known to persist on environmental surfaces which may have exacerbated the problem. Many passengers delayed seeking medical attention on board preferring to wait until they could access a free service under Medicare at the next port of call.

Recommendations

Health professionals can play a vital role in promoting influenza and pneumococcal vaccination, especially in the elderly, many of whom travel extensively.

*For more information about HMPV go to the American Lung Association at *www.lungusa.org.*

Outbreak of Salmonellosis Linked to Alfalfa Sprouts

In the last 2 weeks of November 2005, 27 cases of gastroenteritis caused by Salmonella Oranienburg were notified to CDCD, an unusually large number compared to the annual average of 6 to 12 cases.

The CDCD commenced an investigation, interviewing cases about possible food exposures in the week prior to illness. At this stage, a focal source of exposure was not identified, but the investigation showed twice as many females than males reported illness. A case-control study was then commenced using a questionnaire that included additional questions about foods more commonly consumed by females, such as fruit and vegetables.

This study identified alfalfa sprouts to be strongly linked to the cases, with all having consumed sprouts produced by one company. The company's products were sampled and found to be contaminated with Salmonella Oranienburg. As a result, in February 2006, the company ceased sprout production and recalled its products, and collaborated in an investigation into the source of the contamination carried out by local government Environmental Health Officers and EHD staff.

There were 126 reported cases of food poisoning associated with this outbreak, with only a few cases reported after the recall of the sprouts. As relatively few people with food poisoning present to a doctor, far more people were probably affected. This investigation shows the critical role of GPs in requesting specimen tests to identify the causative agent in cases of gastroenteritis, and the importance of notifying the CDCD of results.

Disease WAtch is the newsletter of the Communicable Disease Control Dire**ctorate**.

To subscribe or contribute, contact the editor, Clare Chamberlain, at cdc@health.wa.gov.au or 9388 4878.

Sexual Health & Blood-borne Viruses Program

Liver biopsy no longer a barrier to Hepatitis C treatment

As of 1st April 2006, patients with hepatitis C no longer need a liver biopsy to be eligible for subsidised treatment. Currently, only 1% of patients diagnosed with hepatitis C are being treated each year and, without treatment, around 15 to 20% of people with hepatitis C will develop cirrhosis and end-stage liver disease, and require liver transplantation.

Hepatitis C treatment involves pegylated interferon (weekly injection) and ribavirin (twice daily tablets) for 6 to 12 months. Treatment results in sustained viral response (i.e. absence of HCV RNA in the serum for 6 months after cessation of treatment) in up to 85% of patients, depending on HCV genotype. Patients with a sustained viral response have decreased risks of developing progressive cirrhosis, liver failure and hepatocellular carcinoma, increased survival rates and improved quality of life.

To refer a patient for treatment, send a referral letter outlining patient and clinical information, along with copies of all relevant laboratory results to a tertiary hospital liver clinic or an appropriate specialist in your area. To increase access to hepatitis C testing and treatment, including GP-specialist shared-care, the Hepatitis Council of WA (*www.hepatitiswa.com.au*) is seeking GPs for their list of "Hep C-friendly" GPs.

Prevention & Control Program

Working with the Current WA Immunisation Schedule

WA has had a "split schedule" since November 2005, for Indigenous and non-Indigenous children. This has created some confusion with the HIB and Hep B vaccine components of the current schedule. Some simple rules apply when switching schedules;

- HIB vaccine – use PRP-OMP containing vaccines (Pedvax HIB or Comvax) for Indigenous children at 2, 4 and 12 months.
- If any dose of PRP-T-Hib containing vaccine is given (Infanrix Hexa), a total of 4 doses of Hib vaccine (2, 4, 6 and 12 months) should be given.
- Hepatitis B vaccine – a total of 3 doses of Hepatitis B containing vaccine is required following the birth dose, at either 2, 4 and 6 months; or at 2, 4 and 12 months.
- For routine childhood immunisation, OPV has been replaced by IPV-combination and is no longer available.
- Ensure that reconstitution instructions are followed. The Hib component of Infanrix Hexa has been omitted in some cases. Some providers have only given the diluent component of the Varilrix vaccine.

Have a small supply of Comvax to give at 12 months for those children who have not received their 6 month Hepatitis B vaccine on the old schedule. All practices need to stock both Infanrix Penta and Infanrix Hexa for the Indigenous and non-Indigenous schedule.

With the split schedule, there is a risk that Indigenous children may not be identified and given the appropriate vaccines. Immunisation service providers need to correctly identify and check the Indigenous status of all children.

What's new?

To reflect the new schedules, the Commonwealth's *Understanding Childhood Immunisation* (OA420) has been updated, and will shortly to be included in the WA Personal Health Record ('purple book').

The National Vaccine Storage Guidelines (formerly cold chain guidelines) have been updated as *Strive for Five* (HP3271), a practical, user-friendly guide to safe vaccine storage and a "must have" book for all immunisation providers. As the new schedule requires larger volumes of stock in vaccine fridges, it is essential that all immunisation providers adhere to cold chain guidelines.

To order these booklets, please call HealthInfo on 1300 135 030 or download from *immunise.health.gov.au*.

Websites of Interest:

- **Health Protection Group**
  (including Disaster Preparedness & Management):
  www.health.wa.gov.au/hpg/
- **Department of Health and Ageing**
  (including Pandemic and Avian Influenza):
  www.health.gov.au

Table 1. Number of notifications in WA by year, 2001 to 2005 (see overleaf for notes and descriptive comment)

Disease	Year (population)				
	2001 (1,901,329)	2002 (1,927,497)	2003 (1,952,417)	2004 (1,976,172)	2005 (2,000,459)
Enteric diseases					
Amoebiasis	14	12	8	7	8
Campylobacteriosis	2607	2160	1977	1938	2437
Cholera	0	0	0	1	1
Cryptosporidiosis	166	226	438	125	182
Giardiasis	933	976	774	930	736
Hepatitis A	40	36	95	57	54
Hepatitis E	1	0	0	3	2
Listeriosis	11	13	6	9	4
Paratyphoid fever	6	5	0	13	4
Salmonellosis	837	725	616	620	785
Shigellosis	79	127	111	113	154
Typhoid fever	11	5	10	5	8
Verotoxigenic E.coli	3	4	3	0	12
Vibrio parahaemolyticus	2	6	3	3	0
Yersinosis	3	4	2	1	2
Vaccine preventable diseases					
H. influenza type b	1	5	1	0	2
Influenza	234	544	616	186	463
Measles	13	0	0	9	1
Mumps	29	13	13	10	22
Pertussis	227	231	254	2091	501
Pneumococcal infection	203	211	150	196	137
Rubella	3	3	3	3	6
Rubella (congenital)	0	1	0	0	0
Tetanus	0	1	0	0	0
Vector-borne diseases					
Arbovirus encephalitis	2	2	0	0	0
Barmah Forest virus	75	40	22	70	78
Dengue fever	15	18	17	7	18
Malaria	50	27	56	36	83
Ross River virus	203	128	662	1101	270
Schistosomiasis	50	64	84	93	403
Typhus	6	14	8	8	10
Zoonotic diseases					
Brucellosis	0	1	0	0	0
Hydatid disease	9	4	4	5	1
Leptospirosis	2	3	6	5	5
Psittacosis	9	6	4	0	3
Q fever	19	20	19	9	6
Blood-borne viral diseases					
Hepatitis B (newly acquired)	38	35	45	29	29
Hepatitis B (unspecified)*	626	375	408	404	395
Hepatitis C (newly acquired)	153	143	145	135	104
Hepatitis C (unspecified)*	1264	1029	1153	1075	1003
Hepatitis D	0	1	1	0	2
Sexually transmissible infections					
Chancroid (soft sore)	1	0	0	0	2
Chlamydia (genital)	2727	3060	3769	4335	5413
Donovanosis	9	2	1	1	2
Gonorrhoea	1347	1368	1455	1420	1572
Syphilis (infectious)	53	54	17	50	19
Syphilis (non-infectious)*	164	134	145	157	183
Syphilis (congenital)	1	0	0	0	0
Other diseases					
Haemolytic Uraemic Syndrome	0	0	1	1	1
Legionellosis	42	54	65	50	73
Leprosy	2	2	1	0	3
Melioidosis	6	4	3	4	3
Meningococcal infection	74	67	46	40	47
Scarlet fever	6	17	24	22	7
Tuberculosis*	67	61	64	81	68
Total	**12443**	**12041**	**13305**	**15457**	**15324**

Review of Notifiable Diseases, 2001 to 2005 (refer to Table 1)

Enteric Diseases

As in previous years, Campylobacter, Giardia and Salmonella were the most frequently notified enteric pathogens, comprising 90% of all enteric diseases notified in 2005. Following a steady decline in the notifications of Salmonella between 2000 and 2004, they increased by 21% in 2005 compared with 2004. This increase in notifications can be attributed to an increase in overseas travel, particularly to South-East Asia, and a Salmonella Oranienburg outbreak in late 2005.

Campylobacter notifications increased by 20%, Giardia notifications decreased by 21%, and there was a 31% increase in Cryptosporidium notifications, when compared with 2004. Notifications of Shiga toxin producing *E. coli* (STEC) cases increased by 79% compared to the 2001 to 2004 case average, due to the trial of an enhanced screening program.

Vaccine-preventable diseases

The number of invasive *Haemophilus influenzae* type b cases remains low, with 2 cases notified in adults aged 45 and 80 years.

There was 1 case of overseas acquired measles in an unvaccinated 27 year old female. The 9 measles cases reported in 2004 included a cluster of 6 locally acquired cases in the Pilbara-Gascoyne region, where no link to an imported index case could be established.

After an epidemic of pertussis in late 2004 when 1,204 cases were notified, the number of cases decreased to 501 in 2005, reflecting the tail end of the epidemic at the beginning of that year together with an above average number of notifications. While the number of influenza cases in 2005 increased 2.5-fold compared to 2004, the number of invasive pneumococcal cases notified was the lowest since the disease became notifiable in 2001, which may partly be due to the introduction of the universal childhood pneumococcal vaccination program in January 2005.

Vector-borne diseases

The number of Ross River Virus cases declined in 2005 to 270 cases, after the largest ever recorded outbreak of the disease in WA occurring between October 2003 and May 2004 (1,548 cases). In 2005, the number of notifications for malaria and schistosomiasis increased over 2-fold and 4-fold respectively, the highest recorded number of cases since notifications were electronically catalogued in 1990, reflecting an increase in the number of recently arrived immigrants, almost exclusively from Africa.

Zoonotic diseases

The numbers of notified cases of brucellosis, hydatid disease, leptospirosis and psittacosis have remained stable and low over the last 5 years. Notifications of Q fever have declined over the last 4 years to 6 cases in 2005, the lowest since 1995.

Blood-borne Viral Diseases

The total numbers (newly acquired + unspecified) of both hepatitis B and hepatitis C have decreased since 2001. Hepatitis B decreased by 6%, from 664 notifications in 2001 to 424 in 2005, and hepatitis C decreased by 22%, from 1,417 notifications in 2001 to 1107 in 2005.

Sexually Transmissible Infections

The number of chlamydia notifications in WA continues to rise with 5,413 reported in 2005, an increase of 25% on the 4,335 cases notified the previous year, although this may be partly attributable to higher rates of testing following the Chlamydia campaign. Since 2001, the number of gonorrhoea notifications in WA has been gradually increasing. In 2005, 1,572 notifications were reported, an increase of 11% from the 1,420 cases notified in 2004.

There were 19 notifications of infectious syphilis (primary syphilis + secondary syphilis) in 2005, a decrease of 62% from the 50 notifications reported in 2004.

Other diseases

Notifications of legionellosis increased between 2004 (50 cases) and 2005 (73 cases). Of these, 56 (78%) were identified as *L. longbeachae*, 10 (18%) were *L. pneumophila*, and 6 unspecified.

The number of meningococcal cases has plateaued over the past 3 years. Of the 47 cases reported in 2005, serogroup information was available for 44 cases: 41 (87%) were serogroup B, 2 (4%) were serogroup Y, and 1 (2%) was serogroup C. There were 3 reported deaths from meningococcal disease in 2005, all of which were serogroup B.

Notes on Table 1

1. Data extracted from WA Notifiable Infectious Diseases Database (WANIDD).
2. All data analysed on basis of the earliest available date reflecting date of onset of disease ("optimal date of onset" in WANIDD), except those diseases highlighted with *. These diseases were analysed by date of receipt of the notification.
3. All diseases for which notifications were received in the period of interest are shown in the tables, plus other diseases where zero counts are of particular interest.
4. Data for Methicillin Resistant Staphylococcus aureus (MRSA) are not shown, as these are better subject to laboratory surveillance, and a high proportion of cases are detected by screening and represent carriage only, rather than disease.