



STI Testing Guidelines For Men Who Have Sex With Men (MSM)

Sexually Transmitted Infections in MSM have been steadily increasing in Australia and overseas. Having an STI increases the risk of HIV infection. There is an ongoing syphilis outbreak amongst homosexually active men in the metropolitan area. It has occurred over the past 18 months and is continuing.

Initially, the majority of cases were co-infected with HIV but more recently there has been a steady increase of new cases of infectious syphilis amongst HIV-negative men, including bisexual men. More recently, there has been an outbreak of lymphogranuloma venereum in Perth MSM.

We encourage GPs and all health care providers to follow the recommendations outlined in the

STI Testing Guidelines for Men who have Sex with Men, (www.ashm.org.au/uploads/STIGMA_STI_Testing_Guidelines_for_MSM.pdf), in order to increase early diagnosis and treatment of STIs (and HIV) amongst homosexually and bisexually-active men; and to reduce transmission of these infections both within these groups and from these groups into the wider community.

The Department of Health's *Guidelines for Managing Sexually Transmitted Infections* also addresses STI testing for men who have sex with men (based upon the above guidelines). See: www.public.health.wa.gov.au/3/634/3/guidelines_for_.pm (Specifically, Part 1; section 1.7; page 72 - 73).

Review of Notifiable Diseases, January - June 2008

(refer to Tables 1 and 2 for data)

Overview

There was a record 10,381 communicable disease notifications in WA in the first six months of 2008, 7.7% higher than for the same period in 2007. Significant contributors to the overall increase included increased Ross River virus activity, increases in notifications of both hepatitis B and hepatitis C, a mumps outbreak in the Kimberley region and a continuing rise in notifications of genital chlamydia infection. Conversely, there were decreases in notifications of most enteric infections, particularly cryptosporidiosis. The most frequently notified diseases in this period were genital chlamydia (4,339 cases), gonorrhoea (927), *Campylobacter* infection (830), varicella-zoster virus infection (753) and hepatitis C (739).

Enteric diseases

There were fewer cases of *campylobacteriosis* notified in the first half of 2008 than in any of the preceding four years and *Salmonella* notifications declined by 9.6% relative to 2007. By contrast, notifications of *Shigella* infection were almost double the number seen in the first half of 2007. Whilst the highest notification rates were recorded in the Kimberley and Pilbara, reflecting the usual association of this disease with poor hygiene

and transmission in Aboriginal communities, an unusually high number of sporadic *Shigella* cases were reported in the South Metropolitan region.

There were 3 sporadic cases of *listeriosis* notified during this period, all in persons with chronic immunocompromising illnesses. Of the 5 cases of **typhoid fever** notified, 3 were acquired overseas (India, Indonesia and Malaysia), one was an asymptomatic carrier with links to China and for the fifth case, the source was undetermined.

Cryptosporidiosis notifications declined substantially, particularly in the metropolitan area, following the epidemic activity observed in the first half of 2007. The highest notification rate, as in previous years, was recorded in the Kimberley region. Similarly, **rotavirus** notifications declined by 28% statewide compared to the same period in 2007. Rotavirus infection was reported most frequently in the Kimberley and Southwest regions.

Notifications of **hepatitis A** continued at historically low levels in the first half of 2008. Of the 13 cases recorded, 5 were acquired overseas (Indonesia x 3, Myanmar and Sudan)

and 1 interstate. Two household clusters in metropolitan area residents made up nearly all the remaining cases, and there were no notifications in Aboriginal people. Hence, the introduction in late 2005 of hepatitis A vaccine for indigenous children continues to have a dramatic effect on notifications of this disease. There were 3 notifications of **hepatitis E** infection in the first half of 2008, all acquired overseas (Indonesia, India and Bangladesh).

Vaccine preventable diseases

There were 6 confirmed cases of **measles** notified in the first half of 2008, compared to none in the same period in 2007. Unusually, only 2 of the cases were clearly acquired overseas (Japan and Thailand). The other cases 4 were acquired locally: 2 co-workers co-infected at the same time in Margaret River and 2 unlinked cases infected around the same time in the metropolitan area, indicating at least 2 undiagnosed imported cases. All cases were adults - 3 unvaccinated, 2 had possibly received one dose of MMR vaccine, and one had documentation of 2 doses. Similarly, there were only 3 confirmed cases of **rubella** in this period, all adult men - one acquired infection in the Philippines and the source was undetermined in the other 2 cases.

By contrast, 80 cases of **mumps** were notified, nearly all part of the outbreak that commenced in mid-2007, predominantly in teenage and young adult Aboriginal people from the Kimberley region. Over half the reported cases had received at least one dose of mumps vaccine. The peak of the outbreak was in November-December 2007 and cases occurring in June 2008 were part of an extended tail.

There were no cases of invasive *Haemophilus influenzae type b* (Hib) disease notified in this period. There were 63 notifications of invasive **pneumococcal disease** (IPD), consistent with the number reported in the first half of each of the previous four years. Notification rates for IPD are highest in the Goldfields, Pilbara and Kimberley regions, reflecting the higher incidence in Aboriginal people. Serotypes not present in the heptavalent conjugate pneumococcal vaccine, and particularly serotype 19A, now cause the majority of IPD in WA children under 5 years of age. **Pertussis** notifications were around double the number for the same period in 2007, but still lower than in the previous 3 years.

Influenza notifications in the first half of the year were at around the same level as in 2007, but were spread fairly evenly over this period, and a mixture of influenza A and B viruses. By the end of June, the influenza season had not commenced.

Notifications of **varicella-zoster** disease, and particularly shingles, were higher in the first half of 2008 than in 2007, which was the first full year of reporting. There were 753 cases notified, of which 16% were chickenpox, 34% shingles, and the remainder unspecified. Notification rates for varicella-zoster infection were generally highest in the southern regions of the State.

There was a single case of **Tetanus** notified in an elderly woman who developed clinical tetanus after injuring her leg in a fall. This is the first case of tetanus in WA since 2002.

Vector-borne diseases

Notifications of **Ross River virus** infection were increased by 91% compared to 2007, but still lower than levels for the same period in 2006. Notification rates were highest in the Pilbara, Midwest and Kimberley regions, although in absolute terms, the number of notifications was, not surprisingly, highest in the populous Peel area. Overall, **Barmah Forest virus** notifications were similar to levels reported in 2007. There was one (fatal) case of **Murray Valley encephalitis virus** infection notified in the Kimberley region - the first case since 2006. Three times as many cases of **dengue fever** (62 cases) were notified compared to the same period in 2007. The majority of these infections were acquired in South-East Asia, with Bali the most frequently reported source. **Schistosomiasis** notifications remained similarly high to the

Notes on Tables 1 and 2

1. Data extracted from WA Notifiable Infectious Diseases Database (WANIDD) on 29th July 2008. Data are subject to change.
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 chronic diseases marked with * - which were analysed by date of receipt of the notification.
3. 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.
4. Crude cumulative rates per 100,000 population were calculated using the Rates Calculator Version 9.3.1 (Department of Health).
5. Total cases in Table 2 also includes cases with interstate or overseas residential addresses, or where no postcode was specified.
6. NN= not notifiable. These diseases became notifiable on 28th July 2006.
7. HIV notifications (Table 1) include WA residents and overseas students living in WA, but exclude overseas visitors, interstate residents and cases that have been previously notified in other States/Territories.

Table 1. Number of notifications in WA from 1st January to 30th June by year, 2004 to 2008

Disease	Year (population)				
	2004 (n=1,982,204)	2005 (n=2,010,113)	2006 (n=2,059,045)	2007 (n=2,082,562)	2008 (n=2,118,462)
Enteric diseases					
Campylobacteriosis	974	1,152	986	1,011	830
Cholera	1	1	0	0	0
Cryptosporidiosis	86	115	118	498	104
Hepatitis A	41	43	31	12	13
Hepatitis E	0	2	0	0	3
Listeriosis	4	3	9	1	3
Paratyphoid fever	5	2	0	1	1
Rotavirus	NN	NN	NN	207	149
Salmonellosis	336	400	445	492	445
Shigellosis	66	85	83	54	105
Shiga/Vero-toxin producing <i>E. coli</i>	0	8	2	0	0
Typhoid fever	5	4	7	7	5
<i>Vibrio parahaemolyticus</i>	0	0	0	2	4
Yersiniosis	1	0	0	3	4
Vaccine preventable diseases					
<i>H. influenzae</i> type b	0	1	0	2	0
Influenza	13	73	55	140	138
Measles	1	0	27	0	6
Mumps	4	9	11	6	80
Pertussis	262	320	143	60	117
Pneumococcal infection	63	56	53	61	63
Rubella	0	5	0	2	3
Tetanus	0	0	0	0	1
Varicella (chickenpox)	NN	NN	NN	107	124
Varicella (Shingles)	NN	NN	NN	197	259
Varicella (unspecified)	NN	NN	NN	347	370
Vector-borne diseases					
Arboviral encephalitis	0	0	3	0	1
Barmah Forest virus	36	33	120	74	86
Dengue fever	3	9	10	21	62
Malaria	15	44	55	49	40
Ross River virus	1,030	73	642	265	506
Schistosomiasis	30	215	146	169	161
Typhus (Rickettsial infection)	8	5	10	5	7
Zoonotic diseases					
Brucellosis	0	0	0	1	0
Leptospirosis	0	2	0	2	0
Psittacosis	0	1	2	0	5
Q fever	4	2	3	2	2
Blood-borne viral diseases					
Hepatitis B (newly acquired)	12	18	25	22	19
Hepatitis B (unspecified)*	187	110	166	292	399
Hepatitis C (newly acquired)	54	53	61	38	42
Hepatitis C (unspecified)*	513	530	528	549	697
Hepatitis D	0	0	1	0	5
Sexually transmissible infections					
Chancroid (soft sore)	0	1	0	0	0
Chlamydia (genital)	2,155	2,640	2,902	3,875	4,339
Donovanosis	0	0	0	0	0
Gonorrhoea	714	858	889	878	927
HIV	25	34	29	33	30
Syphilis (infectious)	31	7	16	49	78
Syphilis (non-infectious)*	84	70	79	63	55
Other diseases					
Haemolytic Uraemic Syndrome	1	0	0	0	0
Creutzfeldt-Jakob disease	2	1	0	2	0
Legionellosis	26	26	32	30	28
Leprosy	0	3	1	2	0
Melioidosis	3	1	4	4	4
Meningococcal infection	14	12	9	5	9
Tuberculosis*	37	32	59	29	52
Total	6,821	7,025	7,745	9,636	10,381

See page 2 for notes.

Table 2. Number and cumulative rate (per 100,000 population) of notifications in WA by region,

Disease	North Metropolitan (n=855,424)		South Metropolitan (n=775,731)		Central (n=73,575)		Goldfields (n=57,452)	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
	Enteric diseases							
Campylobacteriosis	345	40.3	251	32.4	32	43.5	25	43.5
Cholera	0	0.0	0	0.0	0	0.0	0	0.0
Cryptosporidiosis	17	2.0	23	3.0	1	1.4	2	3.5
Hepatitis A	8	0.9	3	0.4	0	0.0	0	0.0
Hepatitis E	1	0.1	1	0.1	1	1.4	0	0.0
Listeriosis	1	0.1	2	0.3	0	0.0	0	0.0
Paratyphoid fever	0	0.0	1	0.1	0	0.0	0	0.0
Rotavirus	75	8.8	33	4.3	2	2.7	2	3.5
Salmonellosis	142	16.6	136	17.5	8	10.9	11	19.1
Shigellosis	10	1.2	27	3.5	11	15.0	6	10.4
Shiga/Vero-toxin producing <i>E. coli</i>	0	0.0	0	0.0	0	0.0	0	0.0
Typhoid fever	4	0.5	1	0.1	0	0.0	0	0.0
<i>Vibrio parahaemolyticus</i>	2	0.2	1	0.1	0	0.0	0	0.0
Yersiniosis	3	0.4	0	0.0	1	1.4	0	0.0
Vaccine preventable diseases								
<i>H. influenzae</i> type b	0	0.0	0	0.0	0	0.0	0	0.0
Influenza	57	6.7	49	6.3	2	2.7	7	12.2
Measles	4	0.5	0	0.0	0	0.0	0	0.0
Mumps	7	0.8	7	0.9	2	2.7	9	15.7
Pertussis	44	5.1	38	4.9	0	0.0	4	7.0
Pneumococcal infection	22	2.6	12	1.5	1	1.4	4	7.0
Rubella	2	0.2	0	0.0	1	1.4	0	0.0
Tetanus	1	0.1	0	0.0	0	0.0	0	0.0
Varicella (Chickenpox)	52	6.1	35	4.5	12	16.3	3	5.2
Varicella (Shingles)	111	13.0	98	12.6	17	23.1	7	12.2
Varicella (unspecified)	150	17.5	125	16.1	8	10.9	2	3.5
Vector-borne diseases								
Arboviral encephalitis	0	0.0	0	0.0	0	0.0	0	0.0
Barmah Forest virus	16	1.9	35	4.5	1	1.4	4	7.0
Dengue fever	30	3.5	19	2.4	0	0.0	1	1.7
Malaria	18	2.1	18	2.3	0	0.0	2	3.5
Ross River virus	84	9.8	208	26.8	18	24.5	7	12.2
Schistosomiasis	100	11.7	52	6.7	0	0.0	1	1.7
Typhus (Rickettsial infection)	2	0.2	1	0.1	0	0.0	0	0.0
Zoonotic diseases								
Brucellosis	0	0.0	0	0.0	0	0.0	0	0.0
Leptospirosis	0	0.0	0	0.0	0	0.0	0	0.0
Psittacosis	3	0.4	2	0.3	0	0.0	0	0.0
Q fever	1	0.1	0	0.0	1	1.4	0	0.0
Blood-borne viral diseases								
Hepatitis B (newly acquired)	8	0.9	8	1.0	1	1.4	1	1.7
Hepatitis B (unspecified)*	182	21.3	149	19.2	2	2.7	21	36.6
Hepatitis C (newly acquired)	19	2.2	18	2.3	1	1.4	1	1.7
Hepatitis C (unspecified)*	259	30.3	268	34.5	23	31.3	19	33.1
Hepatitis D	4	0.5	1	0.1	0	0.0	0	0.0
Sexually transmissible infections								
Chancroid (soft sore)	0	0.0	0	0.0	0	0.0	0	0.0
Chlamydia (genital)	1,590	185.9	1,496	192.9	73	99.2	210	365.5
Donovanosis	0	0.0	0	0.0	0	0.0	0	0.0
Gonorrhoea	145	17.0	136	17.5	9	12.2	112	194.9
Syphilis (infectious)	36	4.2	21	2.7	1	1.4	1	1.7
Syphilis (non-infectious)*	13	1.5	12	1.5	0	0.0	4	7.0
Other diseases								
Creutzfeldt-Jakob disease	0	0.0	0	0.0	0	0.0	0	0.0
Haemolytic Uraemic Syndrome	0	0.0	0	0.0	0	0.0	0	0.0
Legionellosis	12	1.4	7	0.9	0	0.0	3	5.2
Leprosy	0	0.0	0	0.0	0	0.0	0	0.0
Melioidosis	0	0.0	0	0.0	0	0.0	0	0.0
Meningococcal infection	4	0.5	2	0.3	0	0.0	0	0.0
Tuberculosis*	30	3.5	16	2.1	0	0.0	0	0.0
Total	3,613	422.4	3,312	427.0	229	311.2	469	816.3

Region

Great Southern (n=55,918)		Kimberley (n=41,167)		Midwest (n=63,286)		Pilbara (n=43,744)		Southwest (n=146,395)		Total (n=2,112,692)	
Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
17	30.4	25	60.7	21	33.2	21	48.0	81	55.3	830	39.3
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3	5.4	29	70.4	8	12.6	11	25.1	10	6.8	104	4.9
0	0.0	0	0.0	0	0.0	1	2.3	0	0.0	13	0.6
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
1	1.8	7	17.0	2	3.2	3	6.9	23	15.7	149	7.1
12	21.5	64	155.5	14	22.1	21	48.0	35	23.9	445	21.1
0	0.0	22	53.4	8	12.6	15	34.3	3	2.0	105	5.0
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7	12.5	5	12.1	4	6.3	2	4.6	4	2.7	138	6.5
0	0.0	0	0.0	0	0.0	0	0.0	2	1.4	6	0.3
0	0.0	53	128.7	0	0.0	2	4.6	0	0.0	80	3.8
3	5.4	0	0.0	3	4.7	8	18.3	16	10.9	117	5.5
0	0.0	9	21.9	4	6.3	4	9.1	5	3.4	63	2.9
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
2	3.6	0	0.0	3	4.7	1	2.3	15	10.2	124	5.9
6	10.7	1	2.4	5	7.9	1	2.3	11	7.5	259	12.3
9	16.1	8	19.4	13	20.5	5	11.4	48	32.8	370	17.5
0	0.0	1	2.4	0	0.0	0	0.0	0	0.0	1	0.0
4	7.2	6	14.6	6	9.5	4	9.1	9	6.1	86	4.1
1	1.8	2	4.9	1	1.6	3	6.9	1	0.7	62	2.9
0	0.0	0	0.0	1	1.6	1	2.3	0	0.0	40	1.9
7	12.5	30	72.9	49	77.4	51	116.6	50	34.2	506	24.0
1	1.8	0	0.0	1	1.6	1	2.3	2	1.4	161	7.6
3	5.4	0	0.0	0	0.0	0	0.0	1	0.7	7	0.3
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
0	0.0	0	0.0	0	0.0	0	0.0	1	0.7	19	0.9
5	8.9	9	21.9	6	9.5	11	25.1	3	2.0	399	18.9
0	0.0	0	0.0	1	1.6	0	0.0	2	1.4	42	2.0
10	17.9	11	26.7	25	39.5	19	43.4	33	22.5	697	33.0
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
76	135.9	311	755.5	184	290.7	148	338.3	215	146.9	4,339	205.4
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7	12.5	312	757.9	63	99.5	125	285.8	12	8.2	927	43.9
0	0.0	12	29.1	0	0.0	7	16.0	0	0.0	78	3.7
0	0.0	23	55.9	0	0.0	1	2.3	0	0.0	55	2.6
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2	3.6	2	4.9	1	1.6	1	2.3	0	0.0	28	1.3
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
0	0.0	4	9.7	0	0.0	0	0.0	0	0.0	4	0.2
0	0.0	0	0.0	2	3.2	0	0.0	1	0.7	9	0.4
0	0.0	2	4.9	0	0.0	1	2.3	0	0.0	52	2.5
176	314.7	948	2,302.8	425	671.6	468	1,069.9	583	398.2	10,351	489.9

previous three years, reflecting continued high levels of migration under humanitarian programs from endemic African countries.

Zoonotic diseases

No cases of **brucellosis** or **leptospirosis** were reported in this period. By contrast, 5 cases of **psittacosis** were notified, compared to a total of 3 cases over the same period in the previous four years. All cases had a history of exposure to caged birds, either at home or occupationally in the period preceding their illnesses. Only two cases of **Q fever** - both unimmunized and with occupational exposures to stock animals - were notified in the first half of 2008, similar to levels over the previous four years.

Blood-borne viral diseases

Notifications of **unspecified hepatitis B** and **unspecified hepatitis C** infections increased by 37% and 27%, respectively, compared to the same period in 2007. However, these increases substantially reflect the inclusion of a backlog of previously un-notified cases received from one pathology laboratory in March, as these chronic infections are reported by date of receipt of the notification. Reassuringly, although representing only a small proportion of all cases of these diseases, notifications of both **newly acquired hepatitis B** (4.5% of cases) and **newly acquired hepatitis C** (5.7%) were similar to levels reported for the same period in 2007. Hepatitis B notification rates varied considerably between regions, and were relatively low in the Southwest, Great Southern, Midwest and Central regions, whilst notification rates for hepatitis C showed less variation, excepting lower rates again in the Southwest and Great Southern regions. In the 12 months to June 2008, the notification rate for hepatitis B was 2.5 times higher in Aboriginal compared to non-Aboriginal West Australians, and the male:female ratio was 1.2:1. In the 12 months to June 2008, the notification rate for hepatitis C was 3.5 times higher in Aboriginal people and males out-numbered females by a factor of 1.9:1.

There were 30 cases of **HIV** infection notified in the first half of 2008, 9% fewer than in the comparative period in 2007. The median age of notified cases in the 12 month period to June 2008 was 33 years, 77% were male, and of all cases, 51% were men who have sex with men (MSM), 19% were heterosexual men, 21% were heterosexual women, and 4% had injecting drug use as their major risk category. The majority of both male and female heterosexual cases had acquired their infections overseas in their regions of birth - mostly recognized high HIV

prevalence countries. Rates of HIV infection were similar in Aboriginal and non-Aboriginal people.

Sexually transmissible infections

There has been a doubling in notifications of **genital chlamydia** over the last five years. This is thought to reflect a mixture of more testing, more complete notification and a real increase. The 4,339 notifications in the first half of 2008 represented a 12% increase on levels for the same period in 2007. In the 12 months to June 2008, 65% of notified cases were aged 15 - 24 years, females outnumbered males by 1.39:1, and the Aboriginal: non-Aboriginal rate ratio was 9.3. Eight cases of rectal **lymphogranuloma venereum**, which is caused by *Chlamydia trachomatis* immunotypes L-1, L-2 and L-3, were notified in the first six months of 2008 - all cases were MSM (median age 47 years, range 33 - 72 years), most of whom were also HIV-positive and resident in the Perth metropolitan area.

There was a relatively modest 5.6% increase in **gonorrhoea** notifications in the first half of 2008, compared to the same period in 2007; and in the 12 months to June 2008, 53% of notified cases were aged 15 - 24 years, there was a male preponderance (ratio 1.36:1), and the Aboriginal: non-Aboriginal rate ratio was 81.0. The outbreak of **infectious syphilis** among MSM resident in the Perth area, which commenced towards the end of 2006, continued throughout the first 6 months of 2008. In this period, a total of 78 cases of infectious syphilis were notified, representing a 59% increase on the number of cases in the corresponding period of 2007, which in itself was significantly higher than levels in the three preceding years. A small outbreak among young Aboriginal people in the north-west also contributed to the increase in notifications. By contrast, notifications of non-infectious syphilis in WA have continued to decline.

Other diseases

There were 9 notifications of **invasive meningococcal infection** in the first half of 2008, similar to the low levels recorded in recent years. There were no deaths, and all cases were serogroup B, apart from one that could not be typed. No cases of serogroup C disease have been notified since 2006, indicating the effective elimination of serogroup C disease since the introduction of the conjugate group C vaccine in the childhood vaccination program in 2003. Nonetheless, most of the decline in incidence of the disease in WA since the year 2000 has been in serogroup B disease, reflecting natural variation in the organism. Notifications of **legionellosis** have

been relatively steady for the corresponding period over the past 5 years, with 28 cases, all sporadic, notified to the mid-point of 2008. Of these, 83% were *L. longbeachae* infection, 14% *L. pneumophila*, and there was a single case of *L. micdadei* infection. Seventy two percent of cases were aged 50 years and over, most with underlying chronic risk factors, and 59% of cases were men. There was one death (case fatality rate 3.6%) from legionellosis.

Notifications of **tuberculosis** have fluctuated in recent years, largely reflective of patterns of migration and refugee resettlement from high incidence regions. There were 52 cases notified in the first half of 2008, significantly more than in the same period in 2007. Only 4% of cases were Australian born and there were no Aboriginal cases. Of those born overseas, the median number of years in Australia was 4 years, down from 8 years in the corresponding period of 2007. The majority of new cases were born in high prevalence countries in South-East Asia and Africa.

WA Leading the Way in Migrant Health

Australia is one of a handful of countries operating a well established refugee resettlement program. On average, Australia accepts 13,000 refugees for resettlement per annum. Around 1500 of these entrants are settled in Western Australia every year.

Refugees experience a great deal of hardship in their countries of origin and in refugee camps. These include; persecution, violence, poor living conditions, infectious diseases, malnutrition and poor access to health care. The transition from living in a refugee camp in the Third World to living in the suburbs of Perth is often a difficult one. There may be cultural, linguistic and financial barriers to accessing mainstream health care in Australia. Just going to a general practitioner can be a bewildering experience for many refugee families.

For almost 30 years, the Migrant Health Unit (MHU) has been assisting refugees who settle in WA. The current service evolved from the Community Health Centre at Graylands Migrant Hostel which was established in the late 1970s. It relocated to Osborne Park Hospital in 1988 where it became known as the Migrant Health Clinic (MHC). In 1990 MHC was relocated to the current Perth Chest Clinic (opposite RPH). The profile of those attending MHU is constantly changing as conflicts wax and wane around the globe. In the early period the majority of refugees were from South East Asia, particularly Vietnam,

Cambodia and Laos. Health screening was infectious diseases focused, looking for conditions like Tuberculosis and Hepatitis B. In the mid-nineties refugees were predominately Burmese, Bosnians, Serbians, Croatians and Iraqis. More recently, the majority of refugees arriving in Perth are from sub-Saharan Africa, mainly Sudan. The mix is likely to change again as more people flee conflict in Afghanistan and Iraq.

MHU provides refugees with a free one-off health check soon after they arrive in WA. The unit has become a GP-run service and our hope is to provide a more holistic service to our clients, while preserving our important public health role. Refugees are directed to MHU by their settlement caseworker or sponsors.

Clients are seen in family groups on two occasions. It is not uncommon for families to have 6 or 8 children. An onsite interpreter is used for non-English speaking clients. The first visit involves taking a medical and immunisation history. The second visit provides a physical examination, interpretation of laboratory results and ordering of treatment if required. A management plan is created for each person and then forwarded to the regional community nurse who works in the area where the family resides. A home visit is made to the family to inform them of local services and to assist them in finding a GP.

MHU works closely with Infectious Diseases departments in the teaching hospitals, the Refugee Health Clinic at PMH and community organisations, community health services and general practice divisions.

The work is often quite challenging; overcoming cultural and linguistic barriers and advocating for better health outcomes for refugees. However, working with refugee families is very rewarding. At the end of a day's work at MHU, one often leaves with great admiration for the clients, who have shown incredible resilience to overcome unimaginable trauma to start a new life in Western Australia.

GPs and practice nurses are encouraged to contact MHU if they require information about their client's care or have any questions regarding the initial screening process.

Telephone: (08) 9219 3256

Email: Migranthealth@health.wa.gov.au

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GPs Urged to Give Parents and Child Care Providers a dTpa Booster as Pertussis Infections Rise Among Infants in WA

WA has seen an alarming rise in pertussis infections among children less than 6 months of age. So far in 2008, twelve children under six months have been diagnosed with whooping cough; this compares to just one illness in this age group in all of 2007. The rise in infections among very young children is concerning because pertussis can be very severe, even life threatening, in infants. Children less than six months of age are particularly vulnerable to pertussis because maternal antibody does not provide reliable protection; and the maximal risk of severe morbidity is before infants are old enough to have received at least two doses of the primary pertussis vaccination series (DTPa recommended at 2, 4 and 6 months of age).

The best way to prevent pertussis infection in infants is to ensure that the child's family members and other caregivers are immune. *B. pertussis* is highly transmissible through respiratory droplets and there is an 80% attack rate among susceptible family members of a case. Research in Australia has identified that most babies with pertussis illness acquired their infection from a family member or other care giver. Persons who were fully vaccinated as children may be susceptible to infection as adults because the protection afforded by the pertussis vaccine wanes over 6 - 10 years.

The National Health and Medical Research Council now recommends a single booster dose of the adult formulation pertussis vaccine (i.e. dTpa - Adacel, Boostrix) for the following groups:

- Adults planning a pregnancy; or for both parents as soon as possible after delivery of an infant (preferably before hospital discharge), unless contraindicated.
- Other adult household contacts of young children, including grandparents.
- Adults working with young children, especially childcare workers.
- All healthcare workers. Several case reports have documented nosocomial infection in young infants acquired from healthcare workers.

- Any adult expressing an interest in receiving a booster dose of dT vaccine should be encouraged to do so with dTpa vaccine. At the age routinely recommended for tetanus and diphtheria booster (50 years, if they have not received a dT booster in the previous 10 years), dTpa produces immune responses to tetanus and diphtheria antigens equivalent to dT vaccine; and would also provide protection against pertussis.

The only contraindication to acellular pertussis vaccines is anaphylaxis following a previous dose of an acellular pertussis vaccine or any vaccine component.

In 2005, there were more than 10,000 pertussis notifications received nationwide in Australia and more than 85% of infections occurred in adults. The characteristic paroxysmal cough with inspiratory whoop seen in young children is less common among adolescents and adults, likely contributing to substantial under-diagnosis in older age groups. *B. pertussis* can be associated with significant morbidity in adults, however, with cough persisting up to 3-months, and other significant symptoms, such as sleep disturbance or rarely, rib fracture.

GPs should consider pertussis infection in any individual presenting with persistent (> 2 weeks) or paroxysmal coughing. If the patient presents less than 21 days from illness onset, a specimen should be obtained for PCR and/or culture either by aspiration (preferred) or a rayon swab (not a cotton swab).

All confirmed and probable pertussis infections should be reported to the local Public Health Unit so that appropriate public health interventions, including prophylaxis of contacts, can be initiated when indicated.

