

Additional Reports

Gonococcal surveillance

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The Australian Gonococcal Surveillance Programme (AGSP) reference laboratories in the various States and Territories report data on sensitivity to an agreed 'core' group of antimicrobial agents on a quarterly basis. The antibiotics which are currently routinely surveyed are the penicillins, ceftriaxone, ciprofloxacin and spectinomycin, all of which are administered as single dose regimens. When *in vitro* resistance to a recommended agent is demonstrated in 5% or more of isolates, it is usual to reconsider the inclusion of that agent in current treatment schedules. Additional data are also provided on other antibiotics from time to time. At present all laboratories also test isolates for the presence of high level resistance to the tetracyclines. Tetracyclines are however not a recommended therapy for gonorrhoea. Comparability of data is achieved by means of a standardised system of testing and a programme-specific quality assurance process. Because of the substantial geographic differences in susceptibility patterns in Australia, regional as well as aggregated data are presented.

Reporting period 1 July to 30 September 1998

The AGSP laboratories examined 840 isolates of *Neisseria gonorrhoeae* for sensitivity to the penicillins, ceftriaxone, quinolones and spectinomycin and for high level resistance to the tetracyclines in the September quarter of 1998.

Penicillins

Resistance to this group of antibiotics (penicillin, ampicillin, amoxycillin) shows considerable regional variation. Penicillin resistance was present in a high proportion of isolates examined in Melbourne (31%) and Sydney (56%). In Adelaide, Brisbane and Perth the proportion of penicillin-resistant strains was 22%, 17% and 4% respectively. A lower proportion of strains was resistant in the Northern Territory (2.3%). Figure 1 shows the proportion of isolates fully sensitive, less sensitive or relatively resistant to the penicillins by chromosomal mechanisms (CMRNG) and the proportion of penicillinase-producing gonococci (PPNG) in different regions and as aggregated data for Australia. penicillinase-producing gonococci and relatively resistant isolates usually fail to respond to therapy with the penicillins. Those in the fully sensitive and less sensitive categories (minimal inhibitory concentration - MIC \leq 0.5 mg/L) usually respond to a regimen of standard treatment with the above penicillins.

There were 44 PPNG identified in this reporting period (5.2% of all isolates). These were distributed widely with 9 PPNG reported from Melbourne, 20 from Sydney, 4 from Perth, 8 from Brisbane, 2 from the Northern Territory and 1 from Adelaide. Infections with PPNG were acquired locally, but more frequently in South East Asian countries often visited by Australians. The Philippines, Thailand, Singapore, China, Indonesia, Vietnam, and Mexico were

among the countries where infections with PPNG were acquired.

Of relatively greater importance than PPNG were the 217 (26%) of all isolates resistant to the penicillins by separate chromosomal mechanisms. These so-called CMRNG were most often seen in Sydney (168 strains, 50%), Melbourne (35 strains, 25%), Brisbane (9 strains, 9%) and Adelaide (4 strains, 18%). One relatively resistant isolate was seen in the Northern Territory.

Ceftriaxone and spectinomycin

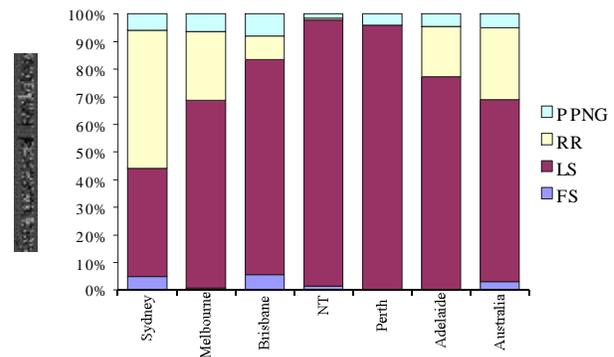
Although all isolates from all parts of Australia were sensitive to these injectable agents, a small number of isolates showed some decreased sensitivity to ceftriaxone.

Quinolone antibiotics (Ciprofloxacin, norfloxacin and enoxacin)

Thirty-seven isolates (4.4%) throughout Australia had altered resistance to this group of antibiotics (QRNG) with 23 of these showing high level resistance. Twenty-two QRNG (6.5%) were detected in Sydney, 9 (6.3%) in Melbourne and 5 (5%) in Brisbane. QRNG were also detected in Canberra and Perth.

An increase in rates of isolation of QRNG was noted in

Figure 5. Penicillin resistance of gonococcal isolates for Australia and by region, 1 July to 30 September 1998



FS Fully sensitive to penicillin, MIC \leq 0.03 mg/L
LS Less sensitive to penicillin, MIC 0.06 - 0.5 mg/L
RR Relatively resistant to penicillin, MIC \geq 1 mg/L
PPNG Penicillinase producing *Neisseria gonorrhoeae*

AGSP reports in 1997. Additionally, the appearance of QRNG in locally acquired infections especially in Sydney but also in Melbourne was specifically mentioned. Local acquisition of high level resistance to quinolone antibiotics was seen again in Sydney and Melbourne in this quarter and additionally in this quarter in Perth and Brisbane. However, most of the infections with QRNG were acquired overseas. The countries identified as sources of acquisition included Singapore, Pakistan, Vietnam, New

Zealand, Thailand, the Philippines, Indonesia and China reflecting the wide dispersal of these strains.

In the corresponding period of 1997, 51 QRNG comprised 7.2% of all Australian isolates.

The quinolone agents are the oral agents most often used in centres where penicillins are ineffective. The appearance of quinolone resistance reduces options for successful treatment of gonorrhoea.

High level tetracycline resistance - 'TRNG'

Forty six TRNG were detected throughout Australia (5.5% of all strains) with isolates of this type again present in most centres. The highest number and proportion of TRNG was found in Sydney where the 27 TRNG represented 8% of all isolates. TRNG were also prominent in Perth (7 isolates, 7%) and Brisbane (7 isolates, 7%). Three TRNG were seen in Melbourne and single isolates of this type were present in Adelaide and the Northern Territory. There were 32 (4.5%) TRNG isolated in the corresponding period of 1997. Infections with TRNG were acquired in Indonesia, the Philippines, Thailand, Singapore and the USA. Local acquisition of TRNG was increasingly prominent in Sydney and also noted in other centres.

Sentinel Chicken Surveillance Programme

Sentinel chicken flocks are used to monitor flavivirus activity in Australia. The main viruses of concern are Murray Valley encephalitis (MVE) and Kunjin which cause the potentially fatal disease Australian encephalitis in humans. Currently 26 flocks are maintained in the north of Western Australia, seven in the Northern Territory, nine in New South Wales and ten in Victoria. The flocks in

Western Australia and the Northern Territory are tested year round but those in New South Wales and Victoria are tested only from November to March, during the main risk season.

Results are coordinated by the Arbovirus Laboratory in Perth and reported bimonthly. For more information see CDI 1999;23:57-58

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January to February 1999

Sentinel chicken serology was carried out for 25 of the 27 flocks in Western Australia in January and February 1999. There were a large number of seroconversions to flaviviruses in both the Kimberley and Pilbara flocks during this period. The increased flavivirus activity was a result of early, heavy wet season rainfall in the Kimberley region of Western Australia. To date, only one mild case of Kunjin virus infection from Kununurra has been reported.

The number of chickens for flavivirus antibodies by ELISA and the virus (or viruses) they were infected with, is shown in Table 1.

Serum samples from all of the seven Northern Territory sentinel chicken flocks were tested in our laboratory in January and February 1999. Seroconversions to flaviviruses were detected in serum samples from

Table 1. Flavivirus seroconversions in Western Australian sentinel chicken flocks in January and February 1999

Location	January '99			February '99		
	MVE	KUN	MVE/KUN	MVE	KUN	MVE/KUN
Kimberley						
Kalumburu	1					
Wyndham				2		
Kununurra	1		1	5		2
Halls Creek				1		
Fitzroy Crossing				6		
Derby ¹				8		2
Broome ¹				3	2	
Pilbara						
Karratha				1		1
Pardoo			1			

1. 2 Flocks of 12 chickens at these sites.

MVE Antibodies to Murray Valley encephalitis virus detected by ELISA.

KUN Antibodies to Kunjin virus detected by ELISA.

MVE/KUN Antibodies to both MVE and Kunjin viruses detected by ELISA.

Katherine, Tennant Creek and Gove in February 1999. These results are shown in Table 2.

There were no seroconversions to flaviviruses recorded in Victoria or New South Wales in January or February 1999.

Table 2. Flavivirus seroconversions in Northern Territory sentinel chicken flocks in February 1999

Location	Antibodies detected			
	MVE	KUN	MVE/ KUN	FLAVI only
Katherine	2		1	
Tennant Creek	4		4	
Gove		4		2

Flavi only Antibodies in serum competed only with flavivirus monoclonal in ELISA.

Australia, by either the diagnosing laboratory (ACT, New South Wales, Tasmania, Victoria) or by a combination of laboratory and doctor sources (Northern Territory, Queensland, South Australia, Western Australia). Cases of AIDS are notified through the State and Territory health authorities to the National AIDS Registry. Diagnoses of both HIV infection and AIDS are notified with the person's date of birth and name code, to minimise duplicate notifications while maintaining confidentiality.

Tabulations of diagnoses of HIV infection and AIDS are based on data available three months after the end of the reporting interval indicated, to allow for reporting delay and to incorporate newly available information. More detailed information on diagnoses of HIV infection and AIDS is published in the quarterly Australian HIV Surveillance Report, available from the National Centre in HIV Epidemiology and Clinical Research, 376 Victoria Street, Darlinghurst NSW 2010. Telephone: (02) 9332 4648 Facsimile: (02) 9332 1837.

HIV and AIDS diagnoses and deaths following AIDS reported for 1 to 31 October 1998, as reported to 31 January 1999, are included in this issue of CDI (Tables 7 and 8).

HIV and AIDS Surveillance

National surveillance for HIV disease is coordinated by the National Centre in HIV Epidemiology and Clinical Research (NCHECR), in collaboration with State and Territory health authorities and the Commonwealth of Australia. Cases of HIV infection are notified to the National HIV Database on the first occasion of diagnosis in

Table 7. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 to 31 October 1998, by sex and State or Territory of diagnosis

										Totals for Australia			
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1999	This period 1998	Year to date 1999	Year to date 1998
HIV diagnoses	Female	0	4	0	0	1	0	1	0	6	7	74	65
	Male	0	23	2	5	2	0	12	2	46	57	524	600
	Sex not reported	0	1	0	0	0	0	0	0	1	0	7	12
	Total ¹	0	28	2	5	3	0	13	2	53	64	605	678
AIDS diagnoses	Female	0	1	0	0	0	0	0	0	1	2	9	24
	Male	0	3	0	2	0	0	0	0	5	20	193	263
	Total ¹	0	4	0	2	0	0	0	0	6	22	202	287
AIDS deaths	Female	0	0	0	0	0	0	1	0	1	2	8	12
	Male	0	3	0	2	0	1	2	0	8	12	94	190
	Total ¹	0	3	0	2	0	1	3	0	9	14	102	203

1. Persons whose sex was reported as transgender are included in the totals.

Table 8. Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 31 October 1998, by sex and State or Territory

		State or Territory								
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	21	571	8	131	55	4	198	99	1,087
	Male	183	10,456	101	1,856	642	77	3,720	868	17,903
	Sex not reported	0	260	0	0	0	0	24	0	284
	Total ¹	204	11,306	109	1,994	697	81	3,955	970	19,316
AIDS diagnoses	Female	8	166	0	45	20	2	65	23	329
	Male	83	4,476	32	775	325	43	1,562	337	7,633
	Total ¹	91	4,653	32	822	345	45	1,634	362	7,984
AIDS deaths	Female	2	113	0	30	15	2	47	16	225
	Male	62	3,078	24	538	222	28	1,226	241	5,419
	Total ¹	64	3,198	24	570	237	30	1,279	258	5,660

1. Persons whose sex was reported as transgender are included in the totals.

Overseas briefs

Source: World Health Organization (WHO)

This material has been condensed from information on the WHO Internet site. A link to this site can be found under 'Related sites' on the CDI homepage.

Cholera, Somalia

Cholera has occurred seasonally in the country for a number of years and usually starts in late November/ early December ending around May. In the first week of December 1998 cholera was reported in Mogadishu (Banadir Region) and since then several regions have reported cases. The other regions currently affected are Bay, Gedo, Lower Juba and Lower Shabelle. A total of 4,457 cases with 166 deaths have been reported since December, up to 19 February.

The epidemic is occurring in communities already weakened by severe shortage of food and in areas where only polluted water is available as wells have dried up. Supplies for treatment have been made available by WHO to UNICEF. The UN agencies, NGOs and the local health authorities are all collaborating in dealing with the epidemic. As well as clinical case management, efforts have also been directed at preventive measures such as chlorination of public water sources and health education on personal hygiene. At present, tests for cholera can be conducted in four laboratories.

Meningococcal disease

Sudan - update

The outbreak that started in Northern Darfur State in December 1998 has now spread to 15 States, some of

them reaching epidemic level. From the beginning of the epidemic up to 9 March, 2,293 cases and 262 deaths have been reported by the Federal Ministry of Health. An appeal has been launched by the Ministry of Health in Khartoum, with support from the executive members of the International Coordinating Group, WHO, UNICEF, IFRC and MSF, for the provision of meningococcal vaccine. There is an urgent need for more vaccines, drugs and technical support to strengthen the surveillance systems and laboratory capacity.

Guinea-Bissau

An outbreak of meningococcal meningitis has been reported in Guinea-Bissau. The outbreak started early January and has mainly affected the regions Oio, Bafata and Gabu. The causative organism has been identified as *Neisseria meningitidis* serogroup A.

Since the beginning of 1999 up to 21 February, 139 cases have been notified, of which 36 were fatal. During 1998 Guinea-Bissau reported 112 cases of meningococcal disease, of which 12 died.

The national health authorities and the local representatives of the Executive Group of the International Coordinating Group for the Provision of Meningococcal Meningitis (ICG) are implementing measures to control the outbreak.

Acute respiratory infection, Afghanistan

On 13 February, an outbreak of an unidentified disease was reported to have occurred in Darwaz, Badakhshan,