



Antimicrobial resistance among *Neisseria gonorrhoeae*

April to June 2008

This report is the last for this enhanced quarterly surveillance of antimicrobial resistance among *Neisseria gonorrhoeae*.

This enhanced surveillance began in October 2005 in response to increases in ciprofloxacin resistance among gonococci. Antimicrobial susceptibility test results were collected quarterly from the laboratories that do the majority of the local sexual health clinic and general practice gonococcal diagnostic work. All the participating laboratories used CLSI susceptibility test methods.

In future, national gonococcal susceptibility data will be available on an annual basis in reports on this website at http://www.surv.esr.cri.nz/antimicrobial/general_antimicrobial_susceptibility.php.

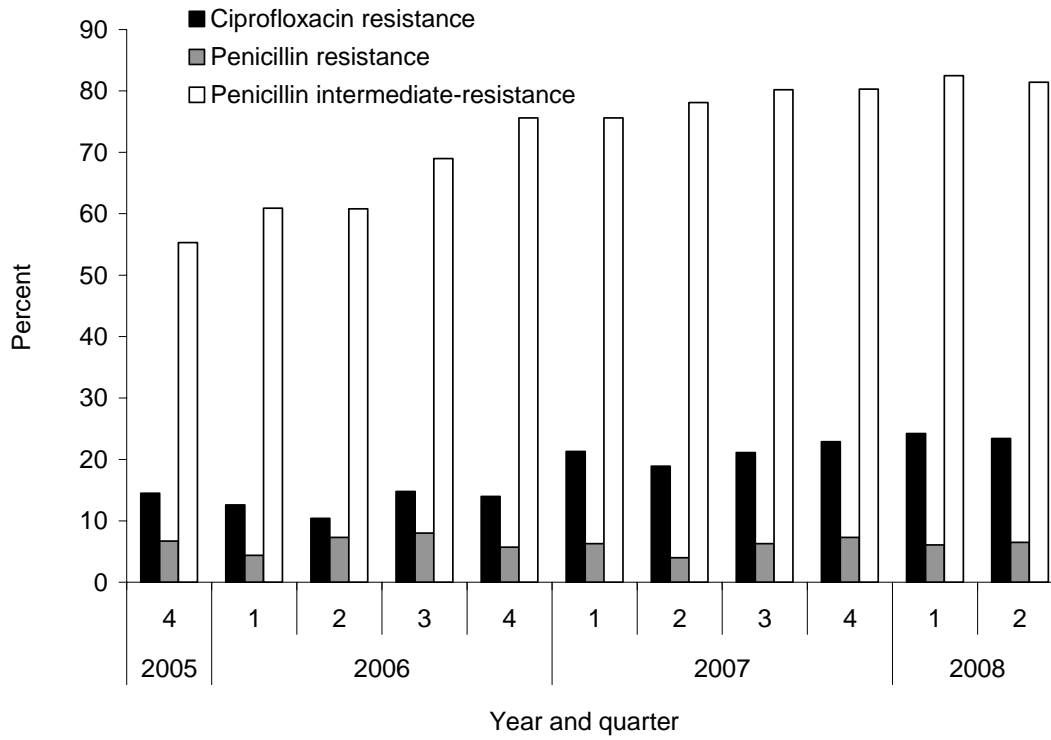
This last quarterly report covers the 3 months of 1 April to 30 June 2008 and the previous 12 months of 1 July 2007 to 30 June 2008. The rates of ciprofloxacin, penicillin and tetracycline resistance are shown by district health board (DHB) in the table below. All isolates tested were susceptible to ceftriaxone.

Over the last 12 months, 1 July 2007 to 30 June 2008, the national rate of ciprofloxacin resistance was 22.9% and the rate of penicillin resistance was 6.5%. Ciprofloxacin resistance was more prevalent than penicillin resistance in all areas of New Zealand participating in this surveillance except in the West Coast DHB which reported a very low number of gonorrhoea cases and no resistance to either antibiotic. Ciprofloxacin resistance exceeded 5% (the threshold acceptable for a first-line agent for the treatment of gonorrhoea) in all DHB areas except the West Coast and Otago DHBs. In contrast, penicillin resistance only exceeded 5% in the Auckland region (ie, combined Waitemata, Auckland and Counties Manukau DHBs), Lakes DHB, Taranaki DHB, Wellington region (ie, Capital and Coast, and Hutt DHBs), and Nelson Marlborough DHB.

Trends in the national rates of ciprofloxacin resistance, penicillin resistance and penicillin intermediate-resistance are shown in the figure below. Ciprofloxacin resistance increased from 15% in the Oct-Dec 2005 quarter (when this surveillance began) to rates of 19-24% in each quarter since the beginning of 2007. There has been no overall change in penicillin resistance since Oct-Dec 2005, but penicillin intermediate-resistance increased from 55% in 2005 to 81% in the latest quarter.

Helen Heffernan
Antibiotic Reference Laboratory

Ciprofloxacin resistance, penicillin resistance and penicillin intermediate-resistance, October-December 2005 quarter to April-June 2008 quarter



Ciprofloxacin, penicillin and tetracycline resistance among *Neisseria gonorrhoeae*, during the 3 months, April to June 2008, and the previous 12 months, July 2007 to June 2008

District Health Board ^{1,2}	Ciprofloxacin				Penicillin				Tetracycline			
	Latest 3 months Apr – Jun 08		Latest 12 months Jul 07 – Jun 08		Latest 3 months Apr – Jun 08		Latest 12 months Jul 07 – Jun 08		Latest 3 months Apr – Jun 08		Latest 12 months Jul 07 – Jun 08	
	No. tested	% resistant	No. tested	% resistant	No. tested	% resistant (intermediate)	No. tested	% resistant (intermediate)	No. tested	% resistant	No. tested	% resistant
Northland	10	10.0	31	16.1	10	0 (80.0)	31	3.2 (74.2)	0	-	0	-
Auckland ³	274	12.0	1056	13.8	274	9.5 (80.7)	1057	10.2 (82.5)	60	48.3	266	47.4
Waikato	72	12.5	263	16.7	72	4.2 (88.9)	229	3.9 (86.0)	0	-	0	-
Lakes	41	43.9	158	47.5	41	12.2 (78.1)	149	8.7 (82.6)	11	27.3	18	22.2
Bay of Plenty	33	18.2	150	31.3	33	3.0 (90.9)	150	3.3 (85.3)	0	-	0	-
Tairāwhiti	20	60.0	72	45.8	20	0 (100)	60	0 (96.7)	20	60.0	60	53.3
Taranaki	10	0	61	37.7	10	0 (100)	61	11.5 (83.6)	10	0	61	37.7
Hawkes Bay	55	34.6	218	35.3	55	0 (90.9)	218	0 (88.1)	55	41.8	218	40.4
MidCentral	24	25.0	117	28.2	24	8.3 (83.3)	120	3.3 (74.2)	24	33.3	120	30.0
Capital and Coast/Hutt ⁴	92	43.5	337	27.6	92	8.7 (81.5)	333	6.9 (81.7)	92	31.5	335	25.1
Nelson Marlborough	5	20.0	19	36.8	5	40.0 (60.0)	19	21.1 (15.8)	3	0	8	37.5
West Coast	1	0	7	0	1	0 (0)	7	0 (71.4)	1	0	7	0
Canterbury ⁵	104	32.7	375	24.5	104	3.9 (78.9)	375	4.5 (81.1)	104	32.7	375	24.0
Otago	17	0	43	4.7	17	0 (52.9)	43	0 (51.2)	17	5.9	40	7.5
Southland	28	17.9	73	8.2	28	0 (57.1)	73	0 (48.0)	28	17.9	70	8.6
Total	786	23.4	2980	22.9	786	6.5 (81.4)	2925	6.5 (81.2)	425	33.9	1578	31.4

Notes:

- 1 The patient's place of residence, if known, was used to assign cases to a DHB, otherwise the location of the laboratory was used. For laboratories that do a lot of out-of-area work, place of residence data was available and used.
- 2 No data for Whanganui or Wairarapa District Health Boards.
- 3 The three Auckland District Health Boards (Waitemata, Auckland and Counties Manukau) are combined.
- 4 The two Wellington District Health Boards (Capital and Coast, and Hutt) are combined.
- 5 The two Canterbury District Health Boards (Canterbury and South Canterbury) are combined.

Acknowledgements: The following laboratories are participating in this surveillance system: Aotea Pathology, Wellington; Canterbury Health Laboratories; Diagnostic and Medical Laboratory, Auckland; Hamilton Medical Laboratory; Healthlab Kew, Invercargill; LabCare Pathology, New Plymouth; LabPlus, Auckland; MedLab Central, Palmerston North; Medlab South, Christchurch; Nelson Hospital; PathLab Bay of Plenty; Rotorua Diagnostic Laboratory; Rotorua Hospital; Southern Community Laboratories, Hastings, Christchurch and Dunedin; TLab, Gisborne; Waikato Hospital; Waikato Pathology Laboratory; Whakatane Hospital; and Whangarei Hospital.

So Ling Ho and Jonathan Williman, ESR, for database management.