



Antimicrobial resistance among *Neisseria gonorrhoeae*

January to March 2008

This surveillance of antimicrobial resistance among *Neisseria gonorrhoeae* is based on antimicrobial susceptibility test results 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 use CLSI susceptibility test methods.

This report covers the 3 months of 1 January to 31 March 2008 and the previous 12 months of 1 April 2007 to 31 March 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 April 2007 to 31 March 2008, the national rate of ciprofloxacin resistance was 21.8% and the rate of penicillin resistance was 5.9%. 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 Southland 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.

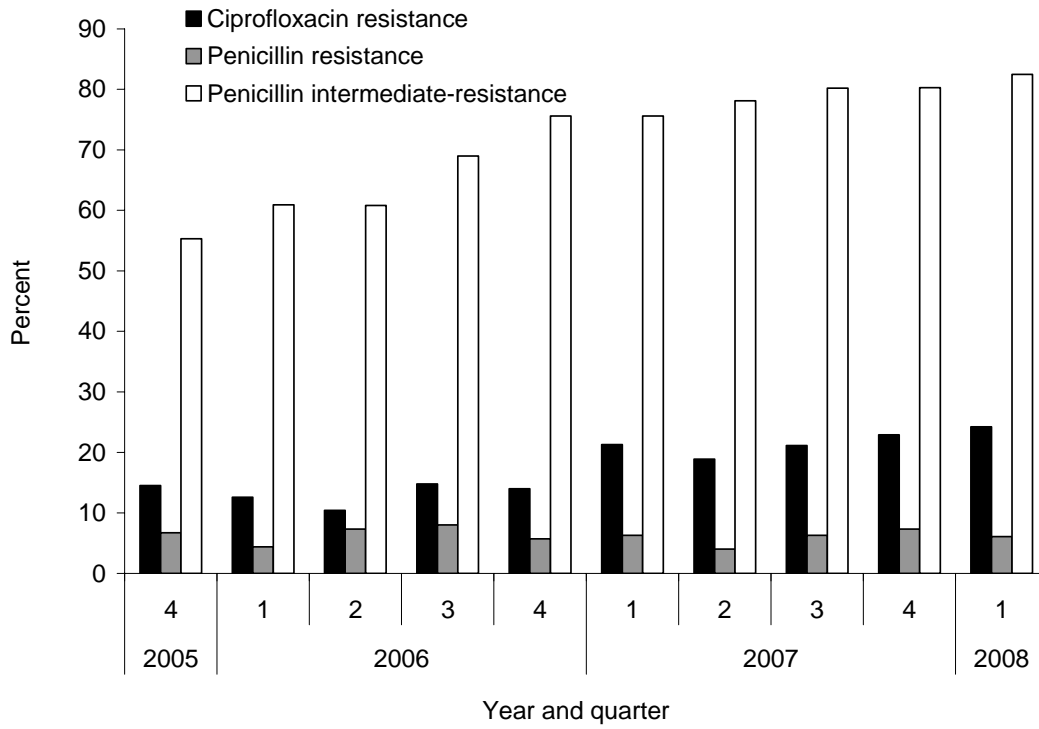
Trends in the national rates of ciprofloxacin resistance, penicillin resistance and penicillin intermediate-resistance are shown in the figure below. Ciprofloxacin resistance increased from 14.5% in the Oct-Dec 2005 quarter to 24.2% in this latest quarter (Jan-Mar 2008). Over the same period, there was no overall change in penicillin resistance, but penicillin intermediate-resistance increased from 55.3% to 82.5%.

Helen Heffernan
Antibiotic Reference Laboratory

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.

Ciprofloxacin resistance, penicillin resistance and penicillin intermediate-resistance, October-December 2005 quarter to January-March 2008 quarter



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

District Health Board ^{1,2}	Ciprofloxacin				Penicillin				Tetracycline			
	Latest 3 months Jan – Mar 08		Latest 12 months Apr 07 – Mar 08		Latest 3 months Jan – Mar 08		Latest 12 months Apr 07 – Mar 08		Latest 3 months Jan – Mar 08		Latest 12 months Apr 07 – Mar 08	
	No. tested	% resistant	No. tested	% resistant	No. tested	% resistant (intermediate)	No. tested	% resistant (intermediate)	No. tested	% resistant	No. tested	% resistant
Northland	8	25.0	26	15.4	8	0 (50.0)	26	3.9 (73.1)	0	-	0	-
Auckland ³	250	14.0	1050	14.1	250	9.6 (86.4)	1052	10.0 (83.2)	70	48.6	272	41.9
Waikato	60	18.3	270	18.5	61	4.9 (80.3)	207	3.4 (81.2)	0	-	1	0
Lakes	52	53.9	145	47.6	52	5.8 (84.6)	132	6.8 (81.1)	7	14.3	7	14.3
Bay of Plenty	27	33.3	158	35.4	27	11.1 (81.5)	159	2.5 (84.3)	0	-	0	-
Tairāwhiti	24	54.2	79	30.4	24	0 (100)	48	0 (95.8)	24	54.2	48	45.8
Taranaki	19	52.6	65	38.5	19	36.8 (57.9)	65	10.8 (81.5)	19	52.6	65	38.5
Hawkes Bay	61	26.2	225	35.1	61	0 (91.8)	225	0 (85.8)	61	32.8	225	37.3
MidCentral	39	33.3	140	22.9	39	2.6 (74.4)	143	1.4 (67.1)	39	35.9	143	23.8
Capital and Coast/Hutt ⁴	80	25.0	327	21.4	80	3.8 (87.5)	323	5.3 (82.0)	80	25.0	325	25.8
Nelson Marlborough	0	-	14	42.9	0	-	14	14.3 (0)	0	-	5	60.0
West Coast	1	0	6	0	1	0 (0)	6	0 (83.3)	1	0	6	0
Canterbury ⁵	120	22.5	361	21.6	120	2.5 (77.5)	361	4.2 (81.2)	120	21.7	361	21.3
Otago	12	0	45	6.7	12	0 (58.3)	45	0 (51.1)	12	0	41	4.9
Southland	13	7.7	54	1.9	13	0 (61.5)	54	0 (37.0)	13	7.7	51	3.9
Total	766	24.2	2965	21.8	767	6.1 (82.5)	2860	5.9 (80.3)	446	31.2	1550	28.9

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.