



Antimicrobial resistance among *Neisseria gonorrhoeae*

October to December 2007

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 October to 31 December 2007 and the previous 12 months of 1 January to 31 December 2007. 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 January to 31 December 2007, the national rate of ciprofloxacin resistance was 21.0% and the rate of penicillin resistance was 6.0%. Ciprofloxacin resistance was more prevalent than penicillin resistance in all areas of New Zealand participating in this surveillance except in the West Coast and Southland DHBs, which both 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 and Nelson Marlborough DHB.

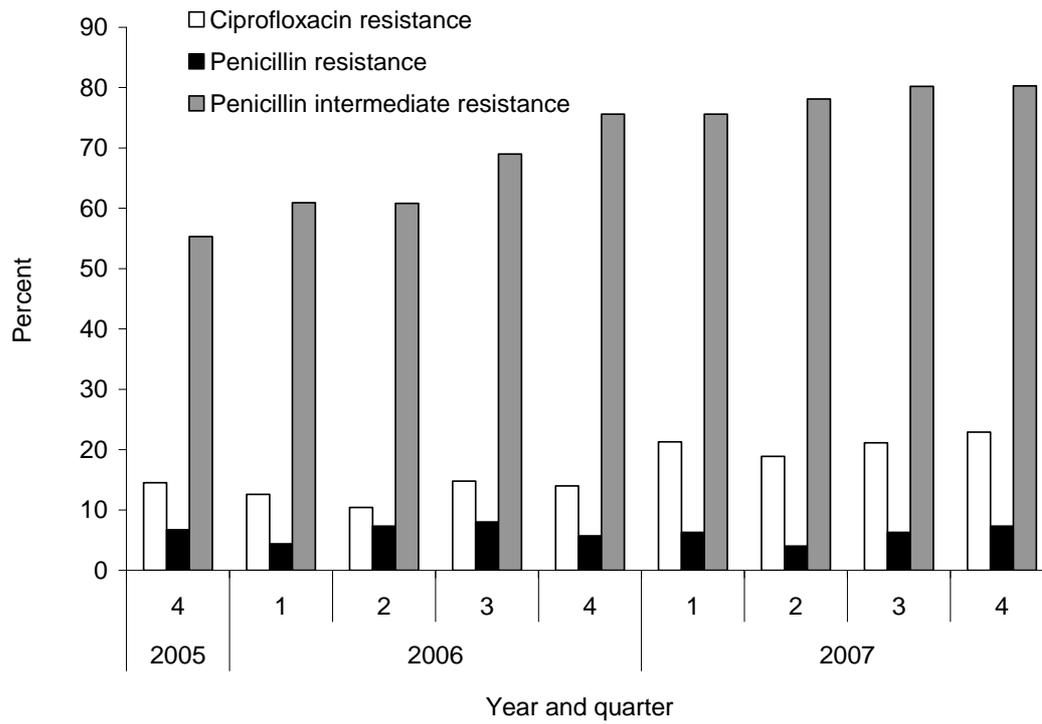
Trends in the national rates of ciprofloxacin resistance, penicillin resistance and penicillin intermediate-resistance are shown in the figure below. Ciprofloxacin resistance increased from 14.5% in the Oct-Dec 2005 quarter to 22.9% in this latest quarter (Oct-Dec 2007). Over the same period, there was no overall change in penicillin resistance, but penicillin intermediate-resistance increased from 55.3% to 80.3%.

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Acknowledgements: The following laboratories are participating in this surveillance system: Aotea Pathology, Wellington; Canterbury Health Laboratories; Diagnostic and Medical Laboratory, Auckland; Gisborne Hospital; 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; Waikato Hospital; Waikato Pathology Laboratory; Whakatane Hospital and Whangarei Hospital.

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Ciprofloxacin resistance, penicillin resistance and penicillin intermediate-resistance, October-December 2005 quarter to October-December 2007 quarter



Ciprofloxacin, penicillin and tetracycline resistance among *Neisseria gonorrhoeae*, during the 3 months, October to December 2007, and the previous 12 months, January to December 2007

District Health Board ^{1,2}	Ciprofloxacin				Penicillin				Tetracycline			
	Latest 3 months Oct - Dec 07		Latest 12 months Jan – Dec 07		Latest 3 months Oct - Dec 07		Latest 12 months Jan – Dec 07		Latest 3 months Oct - Dec 07		Latest 12 months Jan – Dec 07	
	No. tested	% resistant	No. tested	% resistant	No. tested	% resistant (intermediate)	No. tested	% resistant (intermediate)	No. tested	% resistant	No. tested	% resistant
Northland	8	12.5	24	8.3	8	0 (100)	24	4.2 (75.0)	0	-	2	0
Auckland ³	253	16.6	1097	13.0	254	13.0 (80.3)	1099	10.0 (80.3)	64	51.6	283	40.6
Waikato	57	15.8	285	20.7	44	4.6 (84.1)	200	2.5 (81.5)	0	-	1	0
Lakes	42	40.5	140	39.3	39	12.8 (76.9)	120	8.3 (75.0)	0	-	0	-
Bay of Plenty	48	25.0	182	40.1	48	2.1 (85.4)	183	1.1 (85.8)	0	-	0	-
Tairāwhiti	13	46.2	84	19.1	16	0 (87.5)	42	4.8 (81.0)	16	43.8	42	28.6
Taranaki	16	62.5	52	28.9	16	0 (93.8)	52	0 (92.3)	16	68.8	52	28.9
Hawkes Bay	58	39.7	224	32.6	58	0 (86.2)	224	0.5 (83.5)	58	43.1	196	35.7
MidCentral	27	37.1	123	20.3	30	0 (76.7)	126	0.8 (63.5)	30	36.7	126	20.6
Capital and Coast/Hutt ⁴	80	22.5	308	21.4	79	7.6 (81.0)	303	4.6 (81.2)	79	24.1	305	26.2
Nelson Marlborough	7	14.3	22	50.0	7	14.3 (0)	22	22.7 (9.1)	5	60.0	7	57.1
West Coast	3	0	5	0	3	0 (100)	5	0 (100)	3	0	5	0
Canterbury ⁵	89	19.1	344	24.1	89	4.5 (86.5)	344	4.9 (81.7)	89	19.1	344	23.6
Otago	4	0	53	13.2	4	0 (25.0)	53	1.9 (47.2)	1	0	49	10.2
Southland	21	0	45	0	21	0 (38.1)	45	0 (26.7)	18	0	42	2.4
Total	726	22.9	2988	21.0	716	7.3 (80.3)	2842	6.0 (78.5)	379	33.3	1454	28.1

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.