

Antimicrobial susceptibility of invasive *Neisseria meningitidis*, 2007

The antimicrobial susceptibility of all 67 viable meningococcal isolates received at ESR from cases of invasive disease in 2007 was tested. All isolates were susceptible to the four antimicrobials tested (see table). 20.9% (14/67) of isolates had reduced penicillin susceptibility: 75.0% (3/4) of serogroup W135 isolates, 22.2% (2/9) of serogroup C isolates, 17.3% (9/52) of serogroup B isolates and 11.1% (4/36) of isolates of the NZ epidemic strain (serogroup B, subtype P1.4).

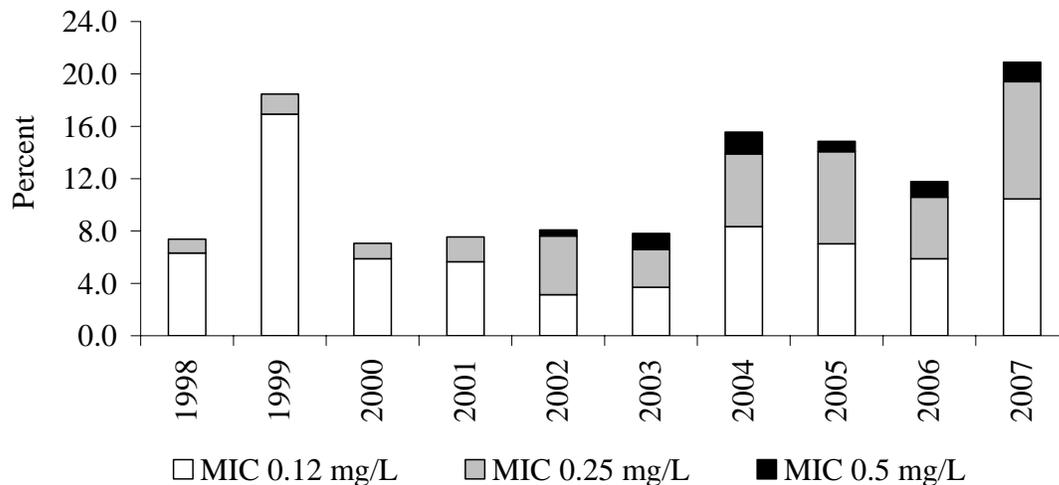
MIC range, MIC₉₀ and resistance among N. meningitidis isolates from invasive disease cases, 2007

Antimicrobial	MIC range (mg/L)	MIC ₉₀ (mg/L)	Percent reduced susceptibility	Percent resistance
penicillin	0.016-0.5	0.25	20.9 ¹	0
ceftriaxone	0.002	0.002	0	0
rifampicin	0.002-0.12	0.06	0	0
ciprofloxacin	0.002-0.008	0.008	0	0

¹ penicillin MIC \geq 0.12 mg/L

Over the last 10 years there has been a general trend of an increasing proportion of isolates with reduced penicillin susceptibility (MIC \geq 0.12 mg/L). There has also been a shift to higher penicillin MICs. Until 2002, the majority of isolates with reduced penicillin susceptibility had MICs of 0.12 mg/L. Since then, isolates with penicillin MICs of 0.25 mg/L have formed a larger proportion of the isolates with reduced susceptibility, and isolates with penicillin MICs of 0.5 mg/L have emerged. Meningococcal infections due to isolates with reduced susceptibility are still treatable with penicillin.

Reduced penicillin susceptibility among N. meningitidis from invasive disease, 1998-2007



No resistance to ceftriaxone or ciprofloxacin has been confirmed among meningococci isolated from cases of invasive disease in New Zealand. Only four rifampicin-resistant isolates have been confirmed: one serogroup B (B:4:P1.4) isolate in 2003, one serogroup C (C:2b:P1.2) isolate in 1997, one serogroup B (B:15:P1.7,16) isolate in 1992, and one serogroup A isolate in 1986.