

Quarterly report

Australian Gonococcal Surveillance Program, 1 January to 31 March 2026

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The National Neisseria Network (NNN), Australia, established in 1979, comprises reference laboratories in each state and territory. Since 1981, the NNN has reported data for the Australian Gonococcal Surveillance Programme (AGSP), on antimicrobial susceptibility profiles for *Neisseria gonorrhoeae* isolated from each jurisdiction for an agreed group of agents. In 2026, the quarterly surveillance reports present data for antibiotics currently used for the treatment of gonorrhoea in Australia, ceftriaxone and azithromycin. Antimicrobial resistance data for ciprofloxacin, penicillin, and more recently, gentamicin and tetracycline are included in the AGSP Annual Report.

Ceftriaxone, combined with azithromycin, is the recommended treatment regimen for gonorrhoea in Australia. Historically, there were substantial geographic differences in susceptibility patterns across the country, with certain remote regions of the Northern Territory and Western Australia having low gonococcal antimicrobial resistance rates. In these regions, an oral treatment regimen comprising amoxycillin, probenecid, and azithromycin was recommended. Since January 2023, increased detections of penicillin resistant *N. gonorrhoeae* in the Northern Territory have led to treatment recommendations being aligned with those used in the majority of Australia.¹ Antimicrobial resistance data reported by the AGSP are supported by a programme-specific quality assurance process.

Results

Table 1 provides a summary of the proportion of *Neisseria gonorrhoeae* isolates resistant to azithromycin for Quarter 1, 2026.

Table 1: Gonococcal isolates resistant to azithromycin, Australia, 1 January to 31 March 2026, by state or territory

Jurisdiction	Number of isolates tested	Resistance to azithromycin ^a	
	Q1 2026	n	%
Australian Capital Territory	64	5	7.8 ^b
New South Wales	906	85	9.4
Queensland	417	89	21.3
South Australia	160	9	5.6
Tasmania	29	3	10.3 ^b
Victoria	766	32	4.2
Northern Territory non-remote	24	0	0 ^b
Northern Territory remote	20	0	0 ^b
Western Australia non-remote	359	61	17.0
Western Australia remote	31	1	3.2 ^b
Australia	2,776	285	10.3

a Resistance as defined by jurisdictional reporting criteria.

b Interpret results with caution: low number of isolates tested.

Ceftriaxone

The AGSP has historically reported *N. gonorrhoeae* with ceftriaxone minimum inhibitory concentration (MIC) values ≥ 0.064 mg/L, and these are reported for observation of trends. In line with the 2012 World Health Organization criterion and defined as 'decreased susceptibility' (DS), the focus of the AGSP is on isolates with a ceftriaxone MIC ≥ 0.125 mg/L.² Of concern since 2023 has been the increasing detection of isolates with ceftriaxone DS (MIC values ≥ 0.125 mg/L), from 0.51% in 2024 to 0.73% (74/10,204) in 2025 (Table 2).³ In the first quarter of 2026, this trajectory continued with 35 ceftriaxone DS isolates (35/2,776; 1.3%) detected across Australia (Table 2). The ceftriaxone MIC values for these isolates ranged from 0.125 mg/L to 2 mg/L and were largely reported from New South Wales (n = 19) and Victoria (n = 10), with fewer numbers from non-remote Western Australia (3), Queensland (2) and the Australian Capital Territory (1). In quarter one of 2026, 74.3% of the ceftriaxone DS isolates (26/35) harboured the key determinant mosaic alleles *penA* 60.001 (24/35) and *penA* 237.001 (2/35).⁴ These are associated with the Asia-Pacific region and highlight the importance of continued and enhanced antimicrobial surveillance in Australia for disease control and to inform therapeutic strategies.⁵

Notably in the first quarter of 2026, 6/35 isolates with decreased susceptibility to ceftriaxone had an extensively drug resistant (XDR) phenotype (defined phenotypically as ceftriaxone MIC ≥ 0.125 mg/L and azithromycin MIC ≥ 256 mg/L);⁶ these were reported from New South Wales (3) and Victoria (3) (Table 2). All six XDR isolates had the *penA* 60.001 allele detected and two different multi-locus sequence types (MLST) were identified. In 2022–2024, a spike in detection of XDR *N. gonorrhoeae* was reported both in Australia and globally, all with the *penA* 60.001 allele detected and identifying as ST-16406, and many were associated with travel to the Asia-Pacific.⁷ Since 2025, genomic analyses have shown that the MLST associated with XDR in Australia are becoming more varied, as new importation events occur and *N. gonorrhoeae* diversifies.

Azithromycin

Dual therapy using ceftriaxone plus azithromycin has been the recommended treatment for gonorrhoea in Australia since 2014, as a strategy to temper development of more widespread ceftriaxone resistance. For the period 2019–2024, azithromycin resistance in Australia was stable, in the range 3.9–4.7% (Table 2).⁸ However, in 2025, the proportion of azithromycin resistant *N. gonorrhoeae* rose to 7.1% (727/10,204), and in the first quarter of 2026 reached 10.3% (285/2,776) (Table 2).³ Azithromycin resistance was noticeably higher in Queensland and non-remote Western Australia in quarter one of 2026 than in other jurisdictions in Australia (Table 1). The AGSP trend data for azithromycin resistance since 2010 are shown in Table 2.

N. gonorrhoeae isolates with high-level azithromycin resistance (MIC value ≥ 256 mg/L) increased in Australia since 2022: nine in 2022 (0.11%), 27 in 2023 (0.27%), and 46 in 2024 (0.43%), the highest ever reported by the AGSP (Table 2).⁸ In 2025, twenty isolates (0.20%; 20/10,204) were reported nationally, substantially lower than in 2024.³ Eight isolates with high-level azithromycin resistance were reported in the first quarter of 2026 from Victoria (4), New South Wales (3) and South Australia (1) and include the six *N. gonorrhoeae* with an XDR phenotype.

Patients with extragenital gonococcal infections, and those with infections with *N. gonorrhoeae* with raised MIC values to ceftriaxone, should have test of cure cultures collected following treatment.⁹ Continued surveillance to monitor *N. gonorrhoeae* with elevated MIC values, coupled with sentinel site surveillance in high-risk populations, remain essential to inform therapeutic strategies, to identify incursion of resistant strains, and to detect instances of treatment failure.

Table 2: The national number of gonococcal isolates tested and the proportion of *N. gonorrhoeae* with ceftriaxone minimum inhibitory concentration (MIC) values 0.064 and ≥ 0.125 mg/L, azithromycin resistance, high-level azithromycin resistance and those with an extensively drug-resistant phenotype, Australia, 2010 to 2025 and 1 January to 31 March 2026

Category ^a	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026 Q1
Number of isolates tested nationally	4,100	4,230	4,718	4,897	4,804	5,411	6,378	7,835	9,006	9,668	7,222	6,254	8,199	10,105	10,702	10,204	2,776
Ceftriaxone MIC 0.064 mg/L	4.80%	3.20%	4.10%	8.20%	4.80%	1.70%	1.65%	1.02%	1.67%	1.19%	0.87%	0.83%	5.05%	3.29%	2.29%	2.70%	2.31%
Ceftriaxone DS (MIC ≥ 0.125 mg/L)	0.10%	0.10%	0.30%	0.60%	0.60%	0.10%	0.05%	0.04%	0.06%	0.11%	0.07%	0.03%	0.51%	0.22%	0.51%	0.73%	1.26%
Azithromycin resistance ^b	n/a	1.1%	1.3%	2.1%	2.4%	2.6%	5.0%	9.3%	6.2%	4.6%	3.9%	4.7%	3.9%	4.5%	4.6%	7.1%	10.3%
Azithromycin HLR (MIC ≥ 256 mg/L)	n/a	0.00%	0.00%	0.08%	0.04%	0.04%	0.08%	0.05%	0.10%	0.08%	0.01%	0.00%	0.11%	0.27%	0.43%	0.20%	0.29%
XDR	n/a	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.01%	0.04%	0.08%	0.10%	0.22%

- a DS: decreased susceptibility;² HLR: high level resistance (for NG, azithromycin MIC ≥ 256 mg/L); XDR: extensively drug resistant (for NG, isolates having both ceftriaxone MIC ≥ 0.125 mg/L and azithromycin MIC ≥ 256 mg/L).
- b Azithromycin resistance includes low-level and high-level resistance.

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