

Organism (No. tested #)	Amoxicillin IV	Amoxicillin / Clavulanate IV	Piperacillin / Tazobactam	Aztreonam	Meropenem	Cefaclor *	Cefuroxime IV	Ceftriaxone	Ceftazidime	Gentamicin	Amikacin	Cotrimoxazole	Ciprofloxacin	Norfloxacin *	Nitrofurantoin *	Trimethoprim *	Fosfomycin *	Mecillinam *	Tetracycline
<i>Citrobacter freundii</i> (81) (2021 & 2022 combined)	R	R			100	R	R	70		100		96	96	95	98	97			
<i>Citrobacter koseri</i> (128) (2021 & 2022 combined)	R	96			100	98	98	100		100		100	100	98	86	98			
<i>Enterobacter</i> spp. (190)	R	R	73	80	99	R	R	67		99	98	91	99	97	76	93			
<i>E.coli</i> excluding ESBLs (2309)	56	56	93	92	100	96	95	98		95	99	79	76	90	99	79	97	90	
ESBL producing <i>E.coli</i> (253)	R	R		R	100	R	R	R		49	99	53	51	17	98	33	97		
<i>Klebsiella pneumoniae</i> (344)	R	89	92	98	100	98	93	99		99	98	98	92	91	81	84			
ESBL producing <i>Klebsiella pneumoniae</i> (80) (2021 & 2022 combined)	R	R		R	97	R	R	R		54	100	14	30	40	62	15			
<i>Klebsiella oxytoca</i> (180) (2021 & 2022 combined)	R	80	53	65	100	89	66	82		100	100	100	100	98	99	94			
<i>Klebsiella aerogenes</i> (96) (2021 & 2022 combined)	R	R	67	78	100	R	R	71		100	100	97	92	93	90	98			
<i>Morganella morganii</i> (72)	R	R	99	100	100	R	R	97		97	100	83	87	90	R	93			
<i>Proteus mirabilis</i> (284)	77	89			100	97	99	98		96	94	81	95	98	R	78			
<i>Serratia marcescens</i> (93)	R	R	97	98	100	R	R	97		99		98	98	90	R	86			
<i>Pseudomonas aeruginosa</i> (700)			98		97				95				93						
<i>Stenotrophomonas maltophilia</i> (72) (2021 & 2022 combined)												100							
<i>H.influenzae</i> (150)	59	84					77	95				72							100
<i>Moraxella catarrhalis</i> (51)	R	100					94					98							96

R = predictably resistant

S = predictably sensitive

All organisms were not tested against all antibiotics

* Tested against urinary isolates only. Norfloxacin should be reserved for infections caused by resistant isolates. Nitrofurantoin should not be used for complicated urinary tract infections. Trimethoprim should not be used for complicated urinary tract infections. Cefaclor should not be used for complicated urinary tract infections.

Where number of isolates insufficient data from 2021 and 2022 were combined.

Extended spectrum beta-lactamase (ESBL) - producing organisms are considered resistant to penicillins, cephalosporins and aztreonam, despite apparent in vitro susceptibility to some of these agents.

Most strains of *Enterobacter*, *Serratia*, *Citrobacter*, *Proteus vulgaris*, *Proteus penneri*, *Providencia* and *Morganella* spp (ESCPPM) produce an inducible beta-lactamase. Clinical failures have been described in patients with infections caused by these organisms when treated with third generation cephalosporins, due to selection of resistant mutants with permanent hyper-production of the enzyme.

Please see https://surv.esr.cri.nz/antimicrobial/neisseria_meningitidis.php for information on antimicrobial susceptibility among *Neisseria meningitidis* isolates.