

Waikato DHB cumulative antibiotic susceptibilities (antibiogram) (Compiled November 2023, based on 2022 annual data)

Numbers denote % susceptible

| Organism group                                            | Number tested | Common usage (1st line) antibiotics |             |                         |                |            |              |                |               | Restricted (2nd line) antibiotics |                 |             |               |             |             |                         |           |            |          |            |     |     |
|-----------------------------------------------------------|---------------|-------------------------------------|-------------|-------------------------|----------------|------------|--------------|----------------|---------------|-----------------------------------|-----------------|-------------|---------------|-------------|-------------|-------------------------|-----------|------------|----------|------------|-----|-----|
|                                                           |               | Penicillin                          | Amoxicillin | Amoxicillin+clavulanate | Flucloxacillin | Cefuroxime | Erythromycin | Co-trimoxazole | Tetracycline^ | Trimethoprim*                     | Nitrofurantoin* | Clindamycin | Ciprofloxacin | Ceftriaxone | Ceftazidime | Piperacillin-tazobactam | Meropenem | Gentamicin | Amikacin | Vancomycin |     |     |
| Swabs and Respiratory Isolates                            |               |                                     |             |                         |                |            |              |                |               |                                   |                 |             |               |             |             |                         |           |            |          |            |     |     |
| <i>Staphylococcus aureus</i> (all)                        | 2241          |                                     |             |                         | 86             | 86         | 89           | 99             | 97            |                                   |                 |             |               |             |             | 86                      | 86        | 97         |          | 100        |     |     |
| Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) | 269           |                                     |             |                         |                |            | 85           | 100            | 98            |                                   |                 |             |               |             |             |                         |           | 90         |          | 100        |     |     |
| <i>Haemophilus influenzae</i>                             | 240           |                                     | 53          | 64                      |                |            |              | 71             | 100           |                                   |                 |             |               |             |             |                         |           |            |          |            |     |     |
| <i>Pseudomonas aeruginosa</i>                             | 220           | R                                   | R           | R                       | R              | R          | R            | R              | R             |                                   |                 |             |               |             |             | 88                      | 88        | 93         |          | R          |     |     |
| <i>Streptococcus pneumoniae</i>                           | 97            | <sup>3</sup> Note                   | 92          | 100                     |                |            | 80           | 69             | 80            |                                   |                 |             |               | 100         |             |                         |           |            |          | 100        |     |     |
| <i>Streptococcus anginosus</i> group                      | 101           | 100                                 |             |                         |                |            |              |                |               |                                   |                 |             |               |             |             |                         |           |            |          | 100        |     |     |
| <i>E.coli</i>                                             | 87            | R                                   | 40          | 75                      | R              | 75         | R            | 71             |               |                                   |                 |             |               | R           | 83          | 82                      | 94        | 93         | 100      | 93         | 98  | R   |
| Bacteraemic isolates                                      |               |                                     |             |                         |                |            |              |                |               |                                   |                 |             |               |             |             |                         |           |            |          |            |     |     |
| <i>E. coli</i> (all)                                      | 308           | R                                   | 47          | 85                      | R              | 87         | R            | 75             |               |                                   |                 |             |               | R           | 89          | 92                      | 96        | 94         | 100      | 95         | 97  | R   |
| ESBL-positive <i>E.coli</i>                               | 20            | R                                   | R           |                         | R              | R          | R            | 60             |               |                                   |                 |             |               | R           | 25          | R                       |           |            | 100      | 90         | 75  | R   |
| <i>Klebsiella</i> spp                                     | 96            | R                                   | R           | 91                      | R              | 81         | R            | 85             |               |                                   |                 |             |               | R           | 89          | 91                      | 89        | 89         | 100      | 95         | 100 | R   |
| <i>Staphylococcus aureus</i>                              | 170           | 20                                  |             |                         | 90             | 90         | 92           | 99             | 96            |                                   |                 |             |               | 95          | 95          | 90                      |           | 90         | 90       | 96         |     | 100 |
| <i>Pseudomonas</i> spp                                    | 40            | R                                   | R           | R                       | R              | R          |              | R              | R             | R                                 |                 |             |               | R           | 97          | R                       | 95        | 87         | 97       | 100        |     | R   |
| Beta haemolytic Streptococci (Groups A, B, C and G)       | 92            | 100                                 |             |                         |                |            | 87           | 100            |               |                                   |                 |             |               | 88          |             |                         |           |            |          |            | 100 |     |
| <i>Streptococcus pneumoniae</i> (meningitis criteria)     | 59            | 59                                  |             |                         |                |            |              |                |               |                                   |                 |             |               |             |             | 100                     |           |            |          |            | 100 |     |
| <i>Streptococcus pneumoniae</i> (non-meningitis criteria) | 59            | <sup>#</sup> Note                   | 100         | 100                     |                |            | 98           | 65             | 97            |                                   |                 |             |               | 100         |             |                         |           |            |          |            | 100 |     |
| <i>Streptococcus viridans</i> group                       | 74            | 94                                  | 85          |                         |                |            |              |                |               |                                   |                 |             |               | 94          |             | 93                      |           |            |          |            | 100 |     |
| <i>Enterococcus</i> spp                                   | 56            |                                     | 77          |                         |                |            |              |                | R             |                                   |                 |             |               |             |             |                         |           |            |          |            | 100 |     |
| Urine isolates                                            |               |                                     |             |                         |                |            |              |                |               |                                   |                 |             |               |             |             |                         |           |            |          |            |     |     |
| <i>E. coli</i> (all)                                      | 2664          | R                                   | 48          | 84                      | R              | 86         | R            | 78             |               | 75                                | 99              |             |               | R           | 89          | 93                      | 97        | 93         | 100      | 84         | 99  | R   |
| ESBL-positive <i>E. coli</i>                              | 173           | R                                   | R           |                         | R              | R          | R            | 39             |               | 39                                | 96              |             |               | R           | 38          | R                       |           |            | 100      | 69         | 91  | R   |
| <i>Klebsiella</i> spp (excluding <i>K.aerogenes</i> )     | 375           | R                                   | R           | 87                      | R              | 84         | R            | 88             |               | 84                                |                 |             |               | R           | 89          | 90                      | 100       | 87         | 100      | 92         | 98  | R   |
| <i>Proteus mirabilis</i>                                  | 208           | R                                   | 81          | 91                      | R              | 99         | R            | 87             |               | 85                                | R               |             |               | R           | 98          | 100                     | 99        | 100        | 100      | 97         | 99  | R   |
| <i>Pseudomonas aeruginosa</i>                             | 205           | R                                   | R           | R                       | R              | R          | R            | R              | R             | R                                 | R               |             |               | R           | 88          | R                       | 94        | 91         | 95       |            |     | R   |
| <i>Staphylococcus aureus</i> (all)                        | 167           |                                     |             |                         | 90             |            |              | 100            |               |                                   |                 |             |               | 97          |             |                         |           |            |          |            |     |     |

\*recommended for uncomplicated UTI isolates only

<sup>^</sup>Isolates that are Tetracycline susceptible can also be considered susceptible to Doxycycline

<sup>3</sup>Note: 57% of Isolates fully susceptible to Penicillin (MIC ≤0.06g/L) a further 43% had MIC values between 0.12g/L and 2g/L. No swab or respiratory isolates had MIC values >2g/L and would be classed as "Resistant" using current EUCAST guidelines

R = always resistant

#Note: 59% of *S.pneumoniae* isolated were fully susceptible to Penicillin (MIC ≤0.06g/L). The remaining 41% had MIC values between 0.12g/L and 2g/L. No bacteraemic isolates of *S.pneumoniae* isolated in 2020 were classified as "Resistant using current EUCAST guidelines

<70% Susceptible

70-89% Susceptible

≥90% Susceptible