

HNE LHD Cumulative Antibiograms 2017: Overview

Cumulative antibiograms summarise the collective susceptibility of specific bacterial isolates against various antibiotics. Online versions are available from <https://aimed.net.au/antibiograms/>.

Antibiogram key

n/a	not available - not routinely tested in this laboratory or no testing standard available
93%	> 90% of isolates susceptible
S	Susceptible by extrapolation or intrinsically susceptible.
75%	70-89% of isolates susceptible
45%	< 70% of isolates susceptible
R	Intrinsically resistant
*	<i>Enterobacter, Serratia, Citrobacter, Providencia, Morganella</i> species (excludes <i>C. diversus</i>)
**	Resistance may emerge during therapy and ceftriaxone NOT recommended for these species.
***	Based on oxacillin susceptibility. A majority of oxacillin resistant isolates remain susceptible to benzylpenicillin/amoxicillin used for non-meningeal infection
Ceftriaxone	Antibiotics shaded yellow are restricted agents. Across HNE Health, the restricted indications specified by the Clinical Excellence Commission are endorsed- see link that is held here- https://aimed.net.au/about/hne-guidelines/ .

Infectious Disease consultancy advice on clinical and antimicrobial treatment is available at all hours from the on-call HNE Infectious Diseases Service (call 49213000 and page ID registrar or consultant). It is strongly recommended that advice is obtained for all patients with:

- *Staphylococcus aureus* bloodstream infection
- Infective spinal discitis or osteomyelitis at any site
- Infected joint replacements (early or late; suspected or proven)
- Bacterial meningitis (suspected or proven)
- Bacterial or culture negative endocarditis

An abridged **CEC Severe Sepsis First Dose Empirical Intravenous Antibiotic Guideline** and other antibiotic guidelines/resources are available on the HNE Quality Use of Medicines Smart phone enabled website www.hnegum.com and via the HNE Guidelines and CEC Sepsis pages via www.aimed.net.au, Pathology North's Antimicrobial Stewardship resource site.

For queries or production of other summary analyses of microbiology data, please contact the on-call Medical Microbiologist (tel. 49214000). Other Hunter New England Health epidemiological reports relating to infection are available on the [Infection Prevention Service intranet page](#).

Data source

These analyses are derived from the OrgTrx system which receives data from the Pathology North Laboratory Information System. For most sites, data from 2017 is included. Where necessary due to low numbers of isolates, a longer period has been sampled. It is not possible to separate hospital or healthcare-acquired from community isolates.

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Other antibiogram notes

- Analyses and this document was prepared by Dr John Ferguson, Pathology North, March 2018
- Testing was mostly performed according to the European Union Committee on Antimicrobial Susceptibility Testing (EUCAST) method over this period. Mid-North Coast (Coffs Harbour and Kempsey), Armidale (Tablelands) and Tamworth (Peel) laboratories utilise the Calibrated Dichotomous Susceptibility Testing (CDS) method.
- The methods employed to construct the antibiogram are broadly based upon the Clinical and Laboratory Standards Institute (CLSI) M39-A3 document – *Analysis and presentation of cumulative antimicrobial susceptibility test data; approved guideline – Third Edition*. Published Feb 2009. The format was defined by the Australian Commission on Safety and Quality in Healthcare in 2013.
- Isolates cultured from all inpatients and outpatients attending HNE facilities served by Pathology North and SYDPATH laboratories in this region. Comparative resistance rates between certain patient groups and institutions may differ significantly. Infection control screening isolates have not been included at most sites.
- Only the first isolate per patient per 365 day period has been included to prevent statistical bias from repeated sampling of multi-resistant isolates.
- Note that not all antibiotics were tested against every isolate listed in each category. If this has happened, the number of isolates tested is shown below the percentage where this number is less than 90% of the total isolates. Where lesser numbers are tested, overall susceptibility may be falsely deflated as only more resistant isolates get tested against broader spectrum (restricted) antibiotics.
- Species with test data for less than 30 isolates have generally been excluded.