

## HNELHD Cumulative Antibigrams 2019: Overview

Cumulative antibigrams summarise the collective susceptibility of specific bacterial isolates against antibiotics. Their chief function is to guide local antimicrobial stewardship (AMS) committees in the development of local policies to guide empiric therapy.

### 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 or amoxicillin when used for non-meningeal infections
Ceftriaxone	Antibiotics shaded yellow are restricted agents. Across the HNELHD, the restricted indications specified by the Clinical Excellence Commission are endorsed - see link that is held on the HNE District Antimicrobial Stewardship webpage <a href="http://intranet.hne.health.nsw.gov.au/immunology_and_infectious_diseases_stream/antimicrobial_stewardship">http://intranet.hne.health.nsw.gov.au/immunology_and_infectious_diseases_stream/antimicrobial_stewardship</a>

**Infectious Diseases consultancy advice** on clinical and antimicrobial treatment is available at all hours from the on-call HNE Infectious Diseases Service (call 02 4921 3000 and ask to page the 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

Antibiotic guidelines and resources are available on the Therapeutic Guidelines (available via CIAP), the HNELHD Policy, Procedure and Guideline (PPG) Directory and Pathology North's Antimicrobial Stewardship resource site ([www.aimed.net.au](http://www.aimed.net.au)).

For queries or production of other summary analyses of microbiology data, please contact the on-call Medical Microbiologist (02 4921 4000). Other Hunter New England Health epidemiological reports relating to infection are available on the Infection Prevention Service intranet page.

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### Data Sources

These analyses are derived from the OrgTrx system which receives data from the Pathology North Laboratory Information System as well as additional external providers for HNELHD facilities, namely SydPath and Lavery. Infection control screening isolates were excluded from the data sets. For the reported information, not all antibiotics were tested against every isolate listed in each category - often only more resistant isolates were tested against restricted antibiotics.

In the Hunter Valley, Lower Hunter, Greater Newcastle and Lower Mid-North Coast Sectors, testing was performed according to the European Union Committee on Antimicrobial Susceptibility Testing (EUCAST) standards, except for cefazolin/cephalexin for which the Clinical and Laboratory Standards (CLSI) were used. Lavery Pathology (Peel Sector) also utilise EUCAST standards. Armidale (Tablelands Sector), Tamworth (Peel Sector) and SydPath (Mehi Sector) laboratories utilised the Calibrated Dichotomous Susceptibility (CDS) method.

### Data Analysis

The antibiogram presentation is in accordance with the Specification for a Hospital Cumulative 2019 Antibiogram (Australian Commission on Safety and Quality in Healthcare). Only the first isolate per patient per calendar year is included in the data set. Initial analysis was performed in OrgTrx (Queensland Health) system for data from the NSW Health Pathology Laboratory Information System and otherwise by the information technology services of SydPath and Lavery Pathology. When less than 30 isolates are tested, the percentage susceptibility is a statistically unreliable estimate and is excluded from the published antibiogram in most cases.

Online versions of these cumulative antibiograms have been published on the HNE LHD Antimicrobial Stewardship webpage:

[http://intranet.hne.health.nsw.gov.au/immunology\\_and\\_infectious\\_diseases\\_stream/antimicrobial\\_stewardship](http://intranet.hne.health.nsw.gov.au/immunology_and_infectious_diseases_stream/antimicrobial_stewardship)