PIONEER
Health Data Research Hub

NIHR | Birmingham Biomedical Research Centre

An NIHR BRC Dataset: Antimicrobial Stewardship And Antimicrobial Resistance.

Data range for infographic: 01.01.2010-30.09.2022
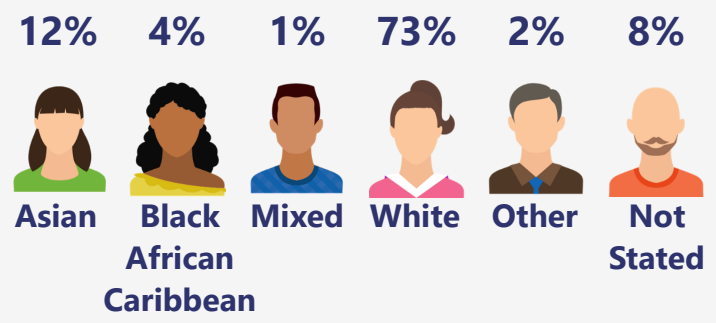**Other extended time periods are available on request**

A highly granular dataset of 273,437 admissions curated by PIONEER for the Birmingham BRC, including demography, serial physiology, laboratory tests, diagnoses (ICD10, SNOMED CT), procedures (OPCS4), prescriptions, microbiology results and outcomes.

Demographic

The dataset includes:
- Young adults **9%** (ages 0-24)
- Adults **46%** (ages 25-64)
- Older adults **45%** (ages 65+)

Based on the index of multiple deprivation map, **43%** of the population are from most deprived areas and **6%** of patients are from least deprived areas.

12%	4%	1%	73%	2%	8%
Asian	Black African Caribbean	Mixed	White	Other	Not Stated

Culture antibiotic resistance

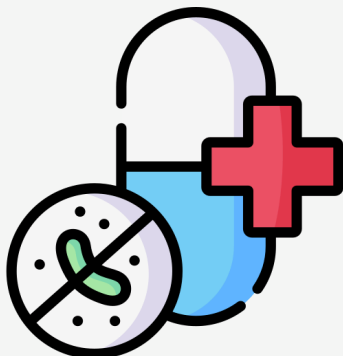| 21%	17%	16%
Penicillin resistance	Trimethoprim resistance	Augmentin resistance

Micro sensitivity test

Top 5 culture organisms are:
- **14K** Escherichia coli spells
- **9K** Staphylococcus aureus spells
- **4K** Pseudomonas aeruginosa spells
- **4K** Mixed anaerobic organism spells
- **3K** Klebsiella pneumoniae spells

Other organisms and antibiotics are recorded.

Antibiotics

262K spells prescribed antibiotics within 48 hours of admission with the most common antibiotic being Co-amoxiclav.

Other antibiotic details are available.

Drug allergy

19K patients reported to be allergic to penicillin and related drugs.
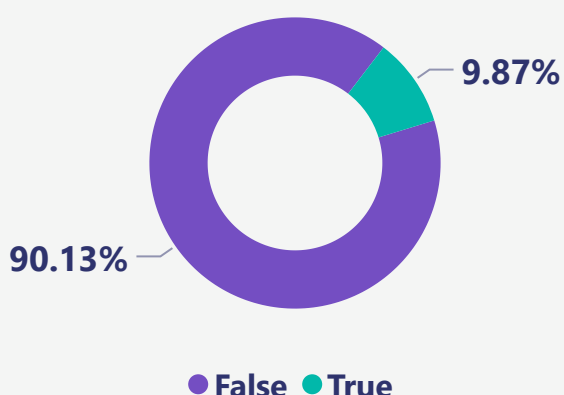
Other allergens are available.

Inpatient care

- **273,437 Hospitalised spells;** containing **152,235** unique patients admitted to hospital
- **2.3M** days worth of hospital data with an average in-hospital length of stay of 8 days
- The average National Early Warning Score is 2 and the average Clinical Frailty Scale is 4

Sepsis

27K spells are diagnosed with sepsis with an average length of stay of 14 days.

9.87%

90.13%

● False ● True

Discharge destination

- **85%** Usual place of residence
- **6%** Patient died
- **6%** Other
- **3%** Care home

EXIT

Other associated data available upon request

Contact us at:
www.pioneerdatahub.co.uk
pioneer@uhb.nhs.uk