PIONEER
Health Data Research Hub

NIHR | Midlands Patient Safety Research Collaboration

NIHR dataset: Penicillin Allergy And The Presence Of Antimicrobial Resistance

Data range for infographic: 04.01.2015-06.01.2020
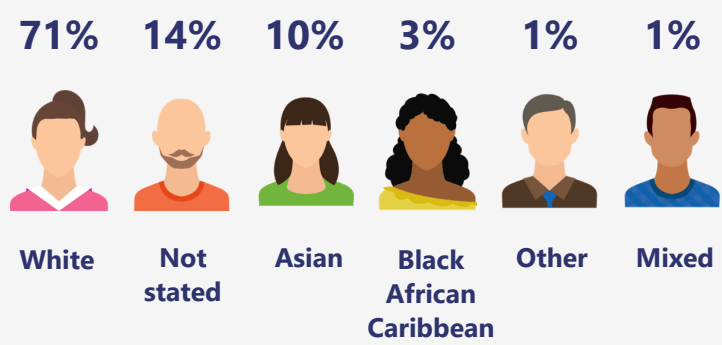**Other extended time periods are available on request**

A NIHR supported, highly granular dataset of 17k acute bloodstream infection spells curated by PIONEER, including demography, stated allergies, symptoms, physiology, investigations including microbiology, diagnoses, medications and outcomes.
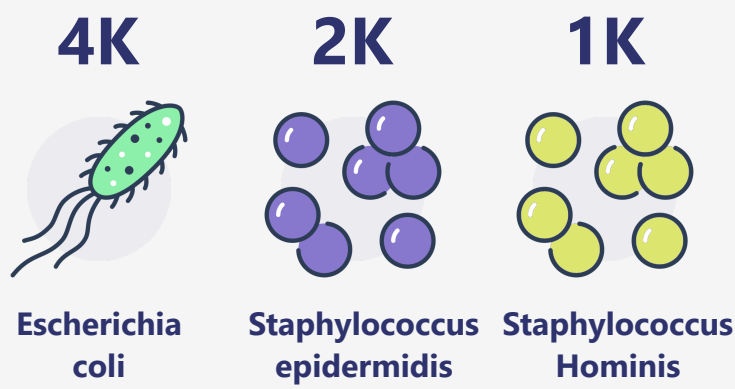
Demographic

The dataset includes:
- Young adults **3%** (ages 16-24)
- Adults **35%** (ages 25-64)
- Older adults **62%** (ages 65+)

Based on the index of multiple deprivation map, **42%** of the population are from most deprived areas and **12%** of patients are from least deprived areas.

71%	14%	10%	3%	1%	1%
White	Not stated	Asian	Black African Caribbean	Other	Mixed

Microbiology

Top 3 blood infection species

4K	2K	1K
Escherichia coli	Staphylococcus epidermidis	Staphylococcus Hominis

Over **400** different blood infections species recorded.
- **15K** spells with one blood infection organism
- **2K** spells with two blood infection species
- **474** spells with three or more blood infection species

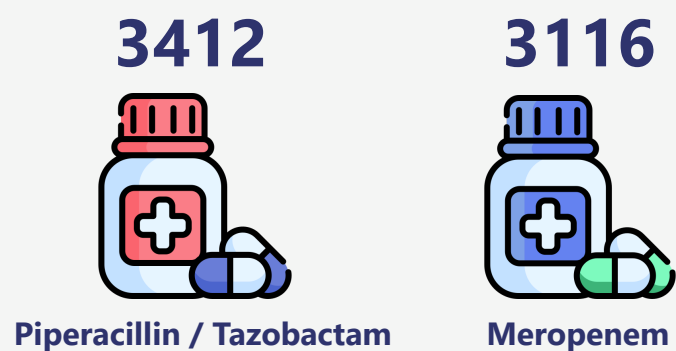Antibiotic sensitivity is available for each organism.

Penicillin allergy

1060 patients declared penicillin allergy**.**

Other allergies are available upon request.

Medication

Top 2 antibiotics prescribed

3412	3116
Piperacillin / Tazobactam	Meropenem

Over **65K** antibiotic prescriptions recorded and **474K** antibiotic drug administrations.

Other medication details are available.

Inpatient care

- **17,444 Hospitalised spells;** containing **15,069** unique patients with blood stream infections
- **337K** days worth of hospital data with an average in-hospital length of stay of 19 days
- In-hospital mortality rate of 14% with 64% of patients surviving 12 months after discharge
- The average presenting national early warning score (NEWS2) is 3.5 with median of 3
- ICU delirium score, Standardised early warning score, Glasgow coma score are available

Diagnoses

Over **491K** diagnoses recorded.
- **7K** Spells with sepsis
- **4K** Spells with urinary tract infection
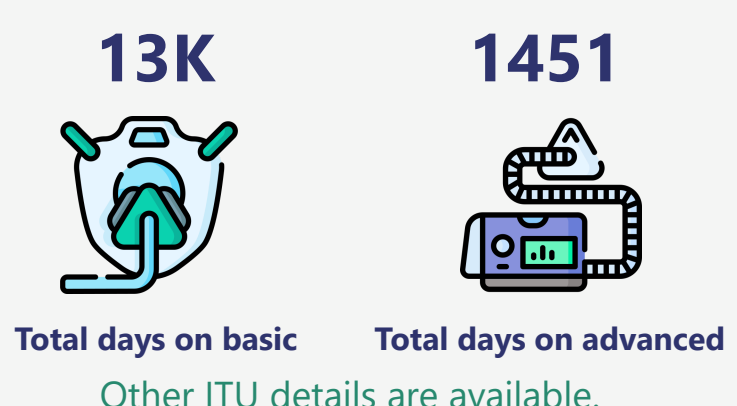- **2K** Spells with Escherichia-Coli

Other diagnoses details are available

Intensive care unit

Total of **2662** intensive care unit (ICU) admissions with **2581** unique patients.

Respiratory support

13K	1451
Total days on basic	Total days on advanced

Other ITU details are available.