



PIONEER

Health Data Research Hub

HDRUK Medicines: Self-reported Penicillin Allergy And Outcomes On Intensive Care

Data range for infographic: 16.02.2010-18.10.2019
Other extended time periods are available on request

A highly granular dataset of 37,639 critical care admissions with and without self-reported penicillin allergies. The data includes demography, serial physiology, investigations, ventilator parameters, antibiotic prescriptions and outcomes.

Demographic

The dataset includes:

- Young adults **6%** (ages 0-24)
- Adults **55%** (ages 25-64)
- Older adults **39%** (ages 65+)

The median age of patients in this dataset is 60 years old.

61%



Male

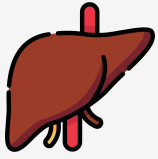
39%



Female

Patients admitted to ICU wards

33%



Liver

21%



Neurology

25%



Cardiac

20%



Trauma/Burns

Intensive care unit

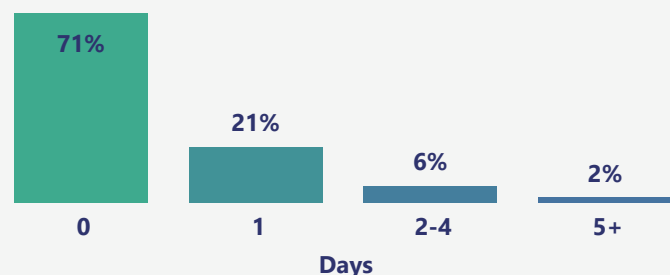
- Over **222K** days worth of Intensive Care Unit (ICU) stay with an average length of stay of **6** days.
- Mortality rate in ICU is **10%**.
- **51%** of ICU admissions are Emergency admissions.
- **49%** of ICU admissions being Elective admissions.



Self-reported penicillin allergy

12% of patients reported that they have a penicillin allergy.

Number of days on penicillin in ICU



Antibiotics in ICU

- **27%** of patients were Piperacillin-Tazobactam
- **16%** of patients were Meropenem
- **3%** of patients were Cephalosporins
Other antibiotics are available.

Inpatient care

- **37,639 Hospitalised spells;** containing **32,753** unique patients admitted to critical care
- **849K** days worth of hospital data with an average in-hospital length of stay of 22 days
- Average number of antibiotic courses in hospital is 1 with an average duration of 11 days
- In-hospital mortality rate of 12%

Charlson comorbidity index

The median Charlson Comorbidity Index (CCI) is 1; 96% estimated 10-year survival rate.

73%



Mild
(CCI 0-2)

20%



Moderate
(CCI 3-4)

7%



Severe
(CCI 5+)

SOFA score

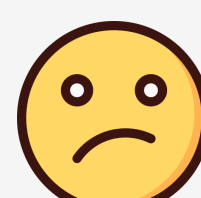
The median Sequential Organ Failure Assessment (SOFA) is 3.5; 97% estimated ICU survival rate.

77%



Mild
(SOFA 0-6)

22%



Moderate
(SOFA 7-14)

1%



Severe
(SOFA 15+)