PIONEER
Health Data Research Hub

Medications On Intensive Care: A HDRUK Medicines Driver Programme Dataset

Data range for infographic: 01.01.2021-31.12.2023
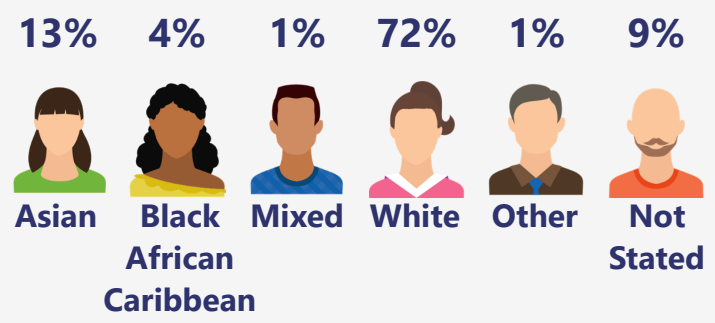**Other extended time periods are available on request**

A highly granular dataset of 9,100 intensive care spells curated by PIONEER, including demography, serial physiology, consult specialties, diagnostics codes, initial presentations, presenting symptoms, cognition scores and all medications (dose and route).
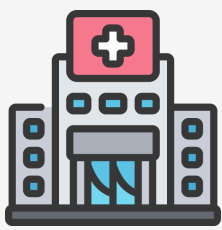
Demographic

The dataset includes:
- Young adults **5%** (ages 18-24)
- Adults **57%** (ages 25-64)
- Older adults **38%** (ages 65+)

Based on the index of multiple deprivation map, **41%** of the population are from most deprived areas and **11%** of patients are from least deprived areas.
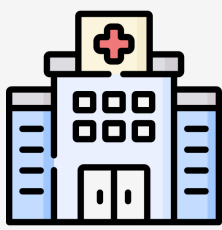
13%	4%	1%	72%	1%	9%
Asian	Black African Caribbean	Mixed	White	Other	Not Stated

Intensive care unit

ICU Hospital admissions

7002	1614	620
Queen Elizabeth	Heartlands	Goodhope

65K Days worth of data in intensive care with an average of **7** days in intensive care.
Over **358K** prescriptions recorded, **5M** drug administrations, **412K** laboratory tests and **2M** observations recorded during their intensive care unit stay.

Other treatments and investigations are available.

Cognitive impairment at ICU admission

41%	51%	8%
None (ACB 0)	Moderate (ACB 1-2)	High (ACB 3+)

Anticholinergic burden

The average anticholinergic burden (ACB) score at ICU admission is 0.9 and at ICU discharge is 1.3.

Scores at other timepoints are available.

Cognitive impairment at ICU admission

71%	18%	4%
None (AEC 0)	Moderate (AEC 1-2)	High (AEC 3+)

Anticholinergic effect on cognition

The average anticholinergic effect on cognition (AEC) score at ICU admission is 0.4 and at ICU discharge is 0.7.

Inpatient care

- **9,100 Hospitalised spells;** containing **8,738** unique patients admitted to ICU
- **228K** days worth of hospital data with an average in-hospital length of stay of 25 days
- In-hospital mortality rate of 17% and 91% of patients surviving 12 months after discharge
- The median Standardised Early Warning Score is 1 and the median Waterlow score is 11

Hospital electronic recorded frailty index

13%	20%	67%
Mildly frail (HerFI <0.24)	Moderately frail (HerFI 0.24-0.36)	Moderately frail (HerFI >0.36)

ICU delirium score

1,622 patients in intensive care unit had a positive delirium score and 6,831 patients had a negative delirium score.

Other associated data available upon request

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