



PIONEER

Health Data Research Hub

Improving the diagnosis of Acute compartment syndrome using synthetic data

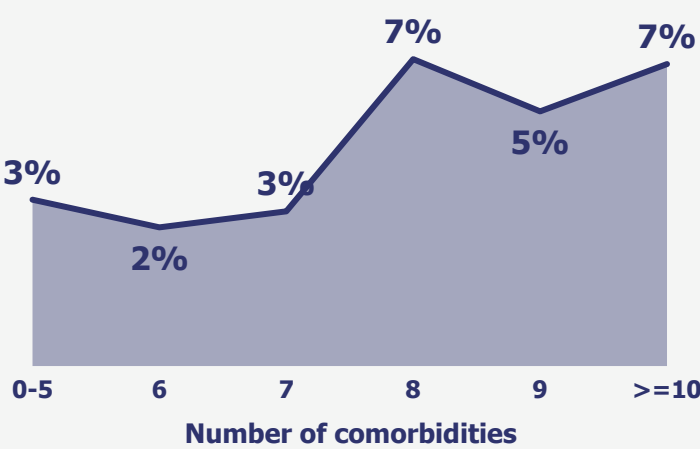
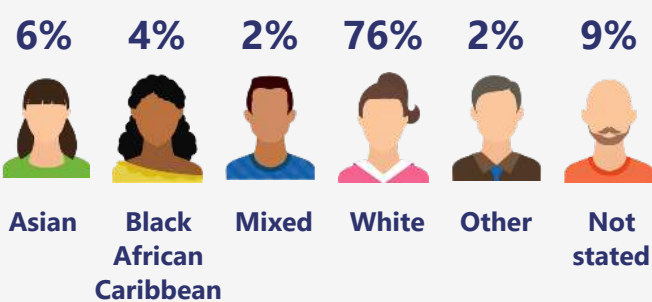
Data range for infographic: 30.06.2004-26.06.2022
Other extended time periods are available on request

Demography, physiology, injury status, muscle and blood biomarkers preserved synthetic data for Acute Compartment Syndrome patients, including intra-compartmental pressure and tissue oxygenation data alongside clinical observations and treatments.

Demographic

- The dataset includes:
- **27%** female and **73%** male patients
 - minors **6%** (ages under 20)
 - adults **63%** (ages 21-65)
 - elderly **31%** (ages 66+).

Based on the index of multiple deprivation; **41%** of patients come from most deprived areas and **5%** are from least deprived areas.



Mortality by comorbidity

- Top 5 diagnosis in patient spells:
- **348** Traumatic ischaemia of muscle
 - **335** Essential (primary) hypertension
 - **231** Acute renal failure
 - **201** Ischaemic infarction of muscle
 - **179** Tendency to fall

7644

Blood pressure



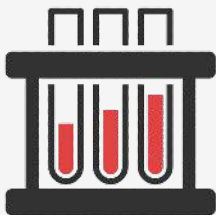
Observations

Over **60K** diastolic blood pressure and systolic blood pressure recorded.

Other vital signs are available.

8739

Sample analysis



Laboratory test

Over **1K** creatine kinase tests recorded with an average of **627** U/L.

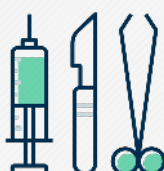
Other assessments are available.

Inpatient care

- **990 Hospitalised spells;** containing **559 acute compartment syndrome patients**
- **32,257** days worth of inpatient hospital stays with an average stay of 34 days per spell
- **1,180** Surgery operations synthetically generated including 382 fasciotomy procedures
- Less than **6%** mortality rate for patients with acute compartment syndrome

Medical procedures

- Top 5 medical procedures in patient spells:
- **715** Left sided operation
 - **692** Right sided operation
 - **659** Debridement of skin
 - **488** Dressing of skin using vacuum assisted closure device
 - **377** Intravenous cannulation



Surgery theatre to recovery ward

