



# PIONEER

## Health Data Research Hub

### Virtual Wards For Exacerbations Of Chronic Obstructive Pulmonary Disease

Data range for infographic: 01.01.2019-31.12.2023  
Other extended time periods are available on request

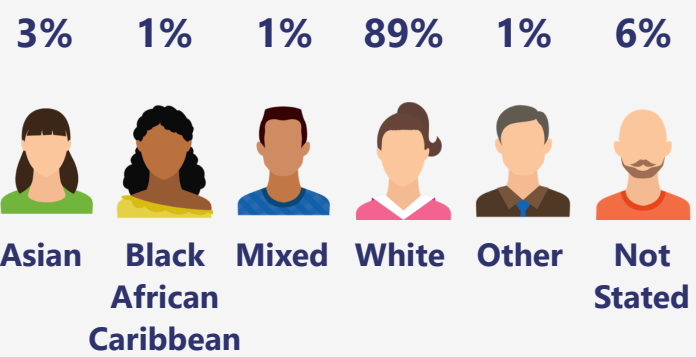
A granular dataset of 7k patients on a Respiratory Virtual Ward for exacerbations of Chronic Obstructive Pulmonary Disease, including demography, serial physiology, DECAF scores, diagnostic codes, presenting symptoms, imaging, prescriptions, and outcomes.

#### Demographic

The dataset includes:

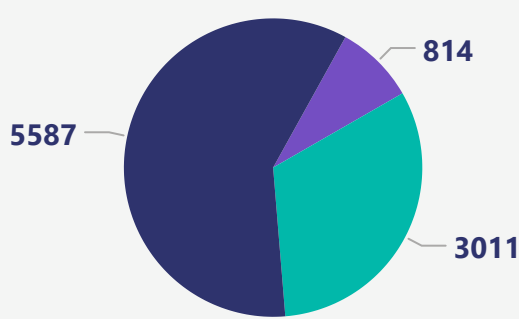
- Adults **26%** (ages <=64)
- Older adults **73%** (ages 65+)

Based on the index of multiple deprivation map, **56%** of the population are from most deprived areas and **4%** of patients are from least deprived areas.



#### Chronic Obstructive Pulmonary Disease (COPD) ICD10 Diagnosed spells

● Bronchitis ● Emphysema ● Other COPD



#### Comorbidities

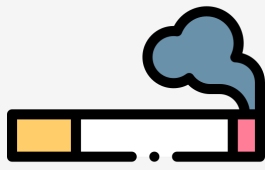
Top 5 SNOMED diagnoses are:

- Chronic obstructive lung disease **5085** spells
- Shortness of breath **3137** spells
- Dyspnea **3078** spells
- Chronic obstructive pulmonary disease **2298** spells
- Suspected COVID19 **1541** spells

Other diagnoses are available

**2335**

Spells



Current smokers

**2901**

Spells

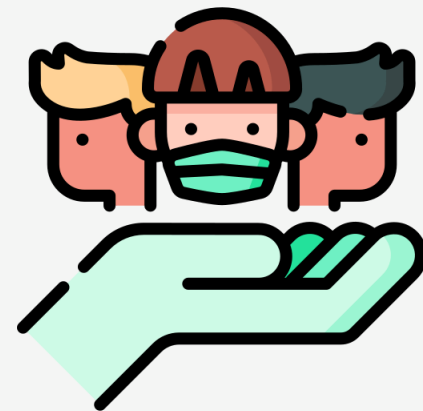


Non-smoker

#### Smoking Status

- 75%** of spells with a smoking status
- 1415** spells who were ex smokers

Other smoking status are available



#### Community Healthcare

**1416** respiratory virtual ward admission recorded from Birmingham and Solihull community healthcare with average length of stay 14 days.

#### Inpatient care

- 6,973 Hospitalised spells;** containing **2,158** unique patients who attended the respiratory virtual ward or met the control group criteria
- 40K** days worth of hospital data with an average in-hospital length of stay of 5 days
- In-hospital mortality rate of 2% with 96% of patients surviving 30 days after discharge
- The average National Early Warning Score is 5 with a median score of 4

#### DECAF Score

Predicts in-hospital mortality in acute COPD exacerbation.

Number of spells

**1085**

**633**

**415**



0-1

2

3-6

DECAF score

#### Readmissions

Percentage of patients readmitted to hospital within 30 days:

- 35%** readmitted to University hospitals Birmingham
- 5%** readmitted to University Hospital Birmingham from virtual respiratory admission

