PIONEER
Health Data Research Hub

Investigating interactions between Mycobacterium tuberculosis and SARS-CoV-2
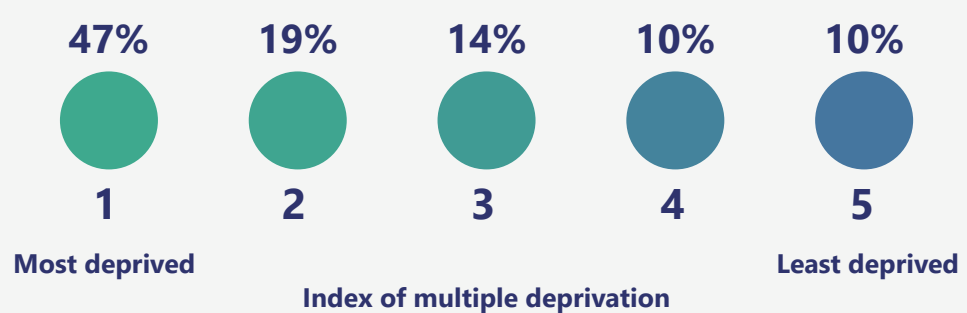
Data range for infographic: 01.03.2020-31.10.2020
Other extended time periods are available on request

Highly granular dataset of over 4,000 patients being investigated for TB and Covid-19. Longitudinal linked healthcare utilisation data. Serial physiology readings, lab analysis results, drug administrations and co-morbidities.
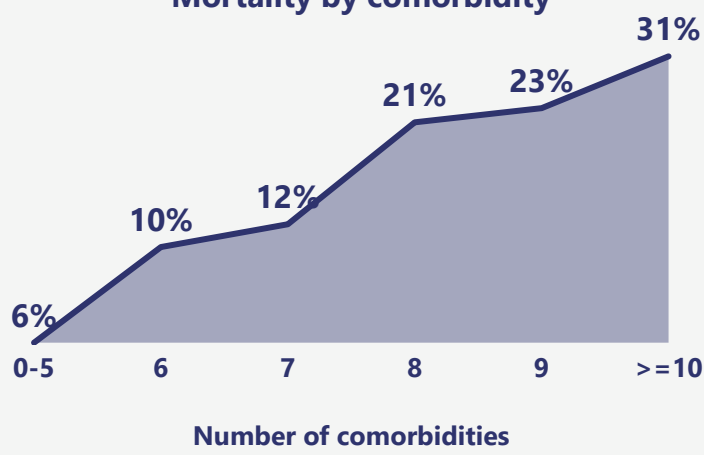
Demographic

The dataset includes:
- children **<1%** (ages 0-16)
- adults **35%** (ages 17-64)
- elderly **65%** (ages 65+).

47%	19%	14%	10%	10%
1	2	3	4	5

Most deprived   Index of multiple deprivation   Least deprived

The majority of the patients are of White ethnic background accounting for **57%** of the population followed by **20%** Unknown, **16%** Asian, **4%** Black/African/Caribbean, **2%** Other and **<1%** Mixed.

Diagnosis

Mortality by comorbidity

6%   10%   12%   21%   23%   31%

| 0-5 | 6 | 7 | 8 | 9 | >=10 |

Number of comorbidities

Top 5 diagnosis in patient spells:
- **13K** Confirmed case of Covid-19
- **10K** Coronavirus as the cause of disease
- **9K** Essential (primary) hypertension
- **8K** Other viral pneumonia
- **5K** Type 2 diabetes mellitus

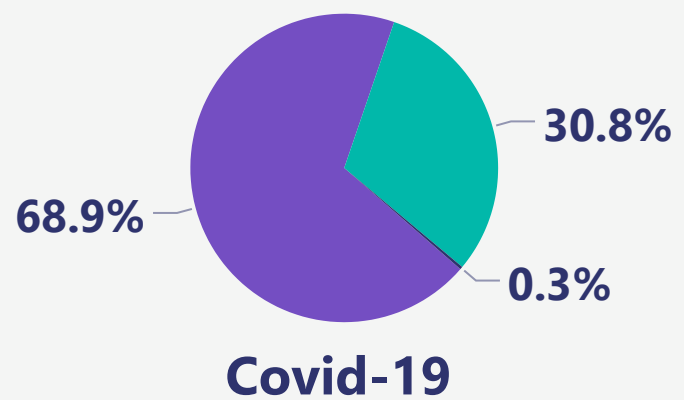Other diagnoses are available.

2M
Vital signs and lab tests

Measurements

- **900K** Observations available
- **637K** laboratory tests available
- **342K** blood gas tests available
- **143K** O2 saturation recorded

Covid-19 in ● Wave 1 ● Wave 2 ● Both
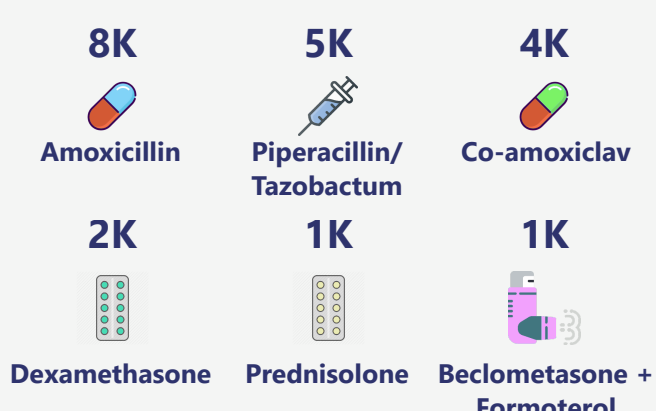
68.9%   30.8%   0.3%

Covid-19

For spells with a Covid-19 severity score;
42% of Covid-19 episodes are moderate,
39% of Covid-19 episodes are mild and
18% of Covid-19 episodes are severe.

Inpatient care

- **4,465 Spells;** containing **4,179 patients** to investigate TB and Covid-19 interactions
- **55K** days worth of hospital data with an average in-hospital length of stay of 12 days
- **4K** Medical imaging's recorded with over **3k** Chest X-Rays completed for 1,259 patients
- The median presenting Covid-19 Clinical Frailty Scale score (Covid-19 CFS) is 4
- The median presenting National Early Warning Score (NEWS2) is 3 and the average is 4

Medications

43K Antibiotics and **9K** Corticosteroids administered. The most common antibiotics and corticosteroids are:

8K	5K	4K
Amoxicillin	Piperacillin/ Tazobactum	Co-amoxiclav

2K	1K	1K
Dexamethasone	Prednisolone	Beclometasone + Formoterol

Discharge locations

- **3K** Discharged home
- **1K** Patient died
- **186** Care home
- **131** Temporary home

Other discharge locations are available