

OpenSAFELY

Delivering EHR data analytics
infrastructure at scale

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What is OpenSAFELY?



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OXFORD





**Beware of the
Leopard**

Principles



**Secure data
centres**



**Layers of security
engineering**



**Access
control**



**Open
working**



**Sandpit
environment**



**Transparent
and public**

Datasets



Primary care EHR data



Emergency Care data



National intensive care data



National death certificate data



Laboratory test results



High-cost drug data

Datasets



Covid-19 vaccination data



Covid-19 therapeutics data



Community infection survey



Hospital Episode Statistics data



Renal registry data



Master Patient Index data



nature

Factors associated with Covid-19 related death using OpenSAFELY

Ethnic differences in SARS-CoV-2 infection and COVID-19-related hospitalisation, intensive care unit admission, and death in 17 million adults in England: an observational cohort study using the OpenSAFELY platform

THE LANCET

Factors associated with deaths due to COVID-19 versus other causes: population-based cohort analysis of UK primary care data and linked national death registrations within the OpenSAFELY platform

THE LANCET *Regional Health
Europe*

HIV infection and COVID-19 death: a population-based cohort analysis of UK primary care data and linked national death registrations within the OpenSAFELY platform

THE LANCET
HIV

Risk of COVID-19-related death among patients with chronic obstructive pulmonary disease or asthma prescribed inhaled corticosteroids: an observational cohort study using the OpenSAFELY platform

THE LANCET
Respiratory Medicine

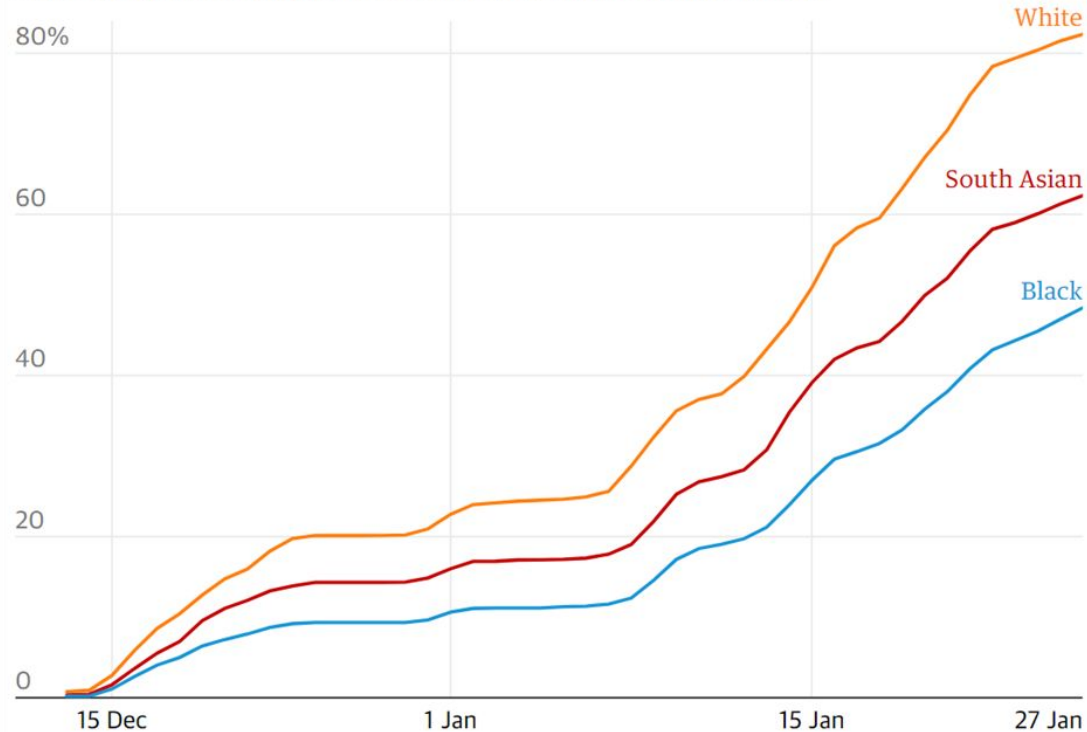
Effect of pre-exposure use of hydroxychloroquine on COVID-19 mortality: a population-based cohort study in patients with rheumatoid arthritis or systemic lupus erythematosus using the OpenSAFELY platform

THE LANCET
Rheumatology

Black over-80s in England half as likely as white people to have had Covid jab

White people are more likely to have received the vaccine than minority ethnic people in the 80+ age group

Share of population aged 80+ to have received at least one vaccine dose



Guardian graphic. Source: OpenSAFELY

Coronavirus

Ministers have been criticised for failing to act more urgently on coronavirus vaccine disparities after data showed that white people are almost twice as likely to have been vaccinated as black people among over-80s in [England](#).

Black, Asian and mixed ethnicity people are all less likely to have been vaccinated than white people among those aged 80 and above in England, according to [new research](#). A lower proportion of ethnic minorities have been shown to have received at least one vaccine dose up to 27 January.

Equality campaigners have said calls to ministers 10 months ago to take urgent action to protect overexposed black, Asian and minority ethnic (BAME) communities were ignored, leading to the current [vaccine uptake](#) crisis.

The data is based on 23.4m anonymised primary care patient records in England from [OpenSafely](#). The study, by academics at the University of Oxford and London School of Hygiene & Tropical Medicine, has yet to be peer-reviewed, and covers people, excluding care home residents, who received a dose of the vaccine up to 27 January.

People with learning disabilities in England 'have eight times Covid death rate'

Study found patients with Down's syndrome and other major conditions much more vulnerable than general population



▲ A Covid patient with Down's syndrome is 36 times more likely to die from the infection than the general population. Photograph: Neil Hall/AFP/Getty Images

Coronavirus

People with learning disabilities in England are eight times more likely to die from Covid than the general population, according to research that highlights a “hidden calamity” of the coronavirus crisis.

The study from the London School of Hygiene & Tropical Medicine, Oxford University and Public [Health](#) England found risks were particularly high for those with profound learning disabilities linked to Down's syndrome and cerebral palsy. Among Covid patients with Down's syndrome, for example, the risk of dying from the infection was 36 times higher than in the general population.

“This is really stark. I was shocked at the increased death rates for people with learning disabilities and particularly for people with Down's syndrome,” said Prof Hannah Kuper, director of the International Centre for Evidence in [Disability](#) at the LSHTM.

The findings are based on more than 17m NHS electronic health records analysed through Oxford University's OpenSafely platform. Of 90,307 adults on the learning disability register, 538 (0.6%) were admitted to hospital with Covid, and 222 (0.25%) were recorded as Covid-related deaths.

What have we learnt?

Five key lessons



Data Sharing in a Pandemic: Three Citizens' Juries

Juries' Report



Q1a: How supportive are you of the decision to introduce this data sharing initiative in 2020 as part of tackling the COVID-19 outbreak?

Answer choices	Summary Care Record Additional Information	NHS COVID-19 Data Store & Platform	Early Warning System*	Immunisation & Vaccination Management Capability*	OpenSAFELY
Very much in support	49%	38%	53%	75%	77%
Broadly supportive	45%	49%	38%	17%	23%
Neutral	4%	8%	4%	4%	0%
Broadly opposed	2%	4%	4%	4%	0%
Very much opposed	0%	2%	2%	0%	0%



OpenSAFELY

Was supported because it was considered more transparent than the other initiatives



OpenSAFELY Jobs

This site logs all jobs executed on production data as they happen, with a link to the Github repository and commit reference that uniquely identifies the exact code that was run.

In accordance with the [Principles of OpenSAFELY](#) some Github repositories are kept private until the results are shared publicly - at which point we require the entire repository to be made public. If the repository is currently private, any links to it from this site will return a "404 Not Found" error unless you are logged in and have the relevant permissions.

Pick a Workspace below to get started running your research on the OpenSAFELY platform or look at some of the existing research tasks that have been created to run on it.

Latest Jobs

Below are the 5 latest requests for Jobs to be run on the OpenSAFELY platform.

	Workspace	Started at	
✓	postopcovid	2022-04-04 18:15:07+0000	View
✗	service_eval_work	2022-04-04 18:05:02+0000	View
✓	postopcovid	2022-04-04 18:04:11+0000	View
✗	service_eval_work	2022-04-04 17:28:26+0000	View
✓	service_eval_work	2022-04-04 17:23:57+0000	View

[View all logs](#)



Search or jump to...

Pull requests Issues Marketplace Explore



opensafely / PostOpCovid Public

Watch 8 Fork 1 Star 0

generated from opensafely/research-template

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

730b02cf8e PostOpCovid / analysis / study_definition.py / <> Jump to Go to file

ColinCrooks COVID-19 wave definition Latest commit 71a9eac 3 days ago History 1 contributor

412 lines (351 sloc) 16.5 KB Raw Blame

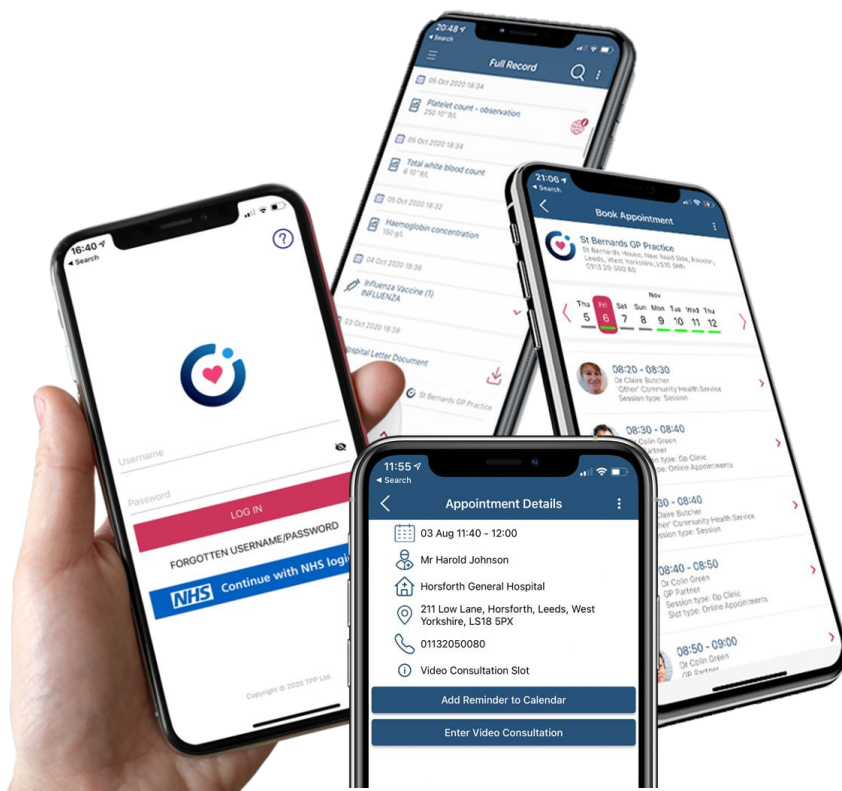
```
1 from cohortextractor import StudyDefinition, patients, codelist, codelist_from_csv
2 from codelists import *
3
4 list_dict = {"LeftHemicolectomy":left_hemicolectomy_codes, "RightHemicolectomy":right_hemicolectomy_codes,
5 "TotalColectomy":total_colectomy_codes,"RectalResection":rectal_resection_codes}
6
7 comorb_code_list_dict = {"MI":MI_Read_codes,"CCF":CCF_Read_codes,"Stroke":Stroke_Read_codes,"PVD":PVD_Read_codes,"Dementia":Dementia_Read_codes,
8 "Respiratory":Chronic_Respiratory_Read_codes,"RA_SLE_Psoriasis":RA_SLE_Psoriasis_Read_codes,"Ulcer_or_bleed":Ulcer_or_bleed_Read_codes,
9 "all_liver":all_liver_disease_Read_codes,"Cirrhosis":cirrhosis_snomed_codes,"all_diabetes":all_diabetes_Read_codes,
10 "Diabetic_Complications":diabetic_complication_snomed_codes,"Other_Neurology":other_neuro_Read_codes,"Renal":Chronic_kidney_snomed_codes,"CKD_3_5":CKD_Read_codes,
11 "Non_Haematology_malignancy":non_haem_cancer,"Haematology_malignancy":haem_cancer_Read_codes,"Metastases":metastatic_cancer_snomed_codes,
12 "HIV":HIV_Read_codes}
13
14 def with_these_vaccination_date_x(name, index_date, n, return_expectations):
15
16     def var_signature(name, on_or_after, return_expectations):
17         return {
18             name: patients.with_tpp_vaccination_record(
19                 returning="date",
```

Onboarding...



How does long COVID affect quality of life?

New study aims to work out cost to NHS and support long-term care





OpenSAFELY Core

The code that runs the OpenSAFELY platform

<https://opensafely.org> Verified

[Overview](#)

[Repositories](#) 37

[Packages](#)

[People](#) 3

[Projects](#) 2

Pinned

[cohort-extractor](#)

Public

Cohort extractor tool which can generate dummy data, or real data against OpenSAFELY-compliant research databases

Python 25 9

[opencodelists](#)

Public

OpenCodelists is an open platform for creating and sharing codelists of clinical terms and drugs.

Python 20 8

[job-runner](#)

Public

A client for running jobs in an OpenSAFELY secure environment, requested via job-server (q.v.)

Python 3 4

[job-server](#)

Public

A server for mediating jobs that can be run in an OpenSAFELY secure environment. q.v. job-runner

Python 3 3

[opensafely-cli](#)

Public

Command line interface for OpenSAFELY

Python 1

[python-docker](#)

Public

Image for running python in OpenSAFELY environments

Dockerfile

Thank you!



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