





Our mission

HDR UK's mission is to unite the UK's health data to enable discoveries that improve people's lives

Our 20-year vision is for

large scale data and advanced analytics to benefit every patient interaction, clinical trial, biomedical discovery and enhance public health.

Core funders













Programme funders

















Data and Connectivity National Core Study:

Supporting COVID-19 response with research data infrastructure



Surveillance & Epidemiology

Professor Ian Diamond (ONS)

Collecting and analysing data to understand incidence and prevalence broadly and in different settings in order to inform response measures.

Longitudinal Health and Wellbeing

Professor
Nishi Chaturvedi
(UCL)
Professor Jonathan
Sterne (University of
Bristol)

Understanding the impact of Covid-19 on long term health (including long covid) to inform the design of mitigating policies.

Clinical Trials
Infrastructure & Support

Professor Patrick Chinnery (MRC)

Establishing infrastructure to run large scale trials for Covid-19 drugs and vaccines without disrupting trials for other diseases.

Transmission & Environment

Professor Andrew Curran (HSE)

Taking samples to aid understanding of transmission of the disease in workplace, transport and public places.

Immunity

Professor Paul Moss (University of Birmingham)

Understanding serology as a useable predictor of immunity against Covid.



Government Office for Science



Medical Research Council

Data and Connectivity Professor Andrew Morris (HDR UK in partnership ONS)

Making UK-wide health and administrative data available for linkage and accessible to catalyse COVID-19 research.

Data and Connectivity National Core Study Core aims: "Data as Infrastructure"





1

Map the Data for national data science driven research efforts related to COVID-19 and National Core Studies

2

Accelerate access to UK-wide priority data relevant to COVID-19 for research

3

Address important questions by leveraging the UK's health data science capability

- Support the response across the four nations
- Involve patients and the public to demonstrate trustworthiness



A model of collaboration across the UK health data ecosystem



Trusted Research Environment Delivery partners

















Stakeholders





































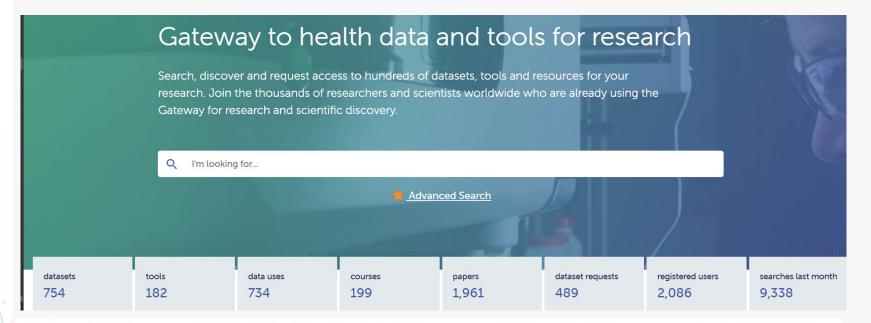




HDR Innovation Gateway – 'one stop shop' for data access



Building the "Gateway" to Findable Accessible Interoperable and Reusable (FAIR) datasets, tools and resources



"Really impressed with this resource. I think as a gateway to search by data type and indication, it's a really powerful tool."

David Leather, GSK



For Researchers



For Data Custodians



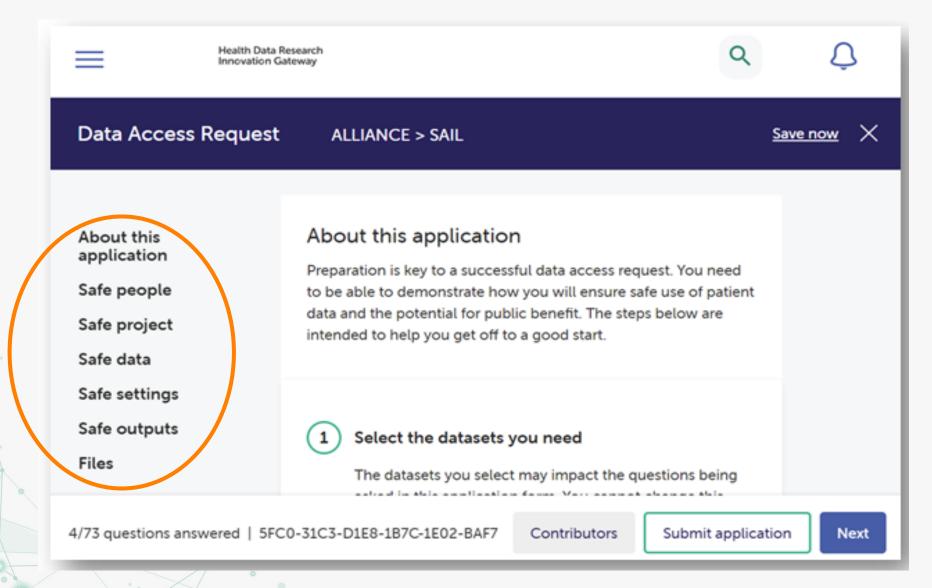
For Patients and Public

https://www.healthdatagateway.org/

95 NCS datasets now discoverable and accessible

The Gateway provides a common, transparent approach to data access management based around the Five Safes framework

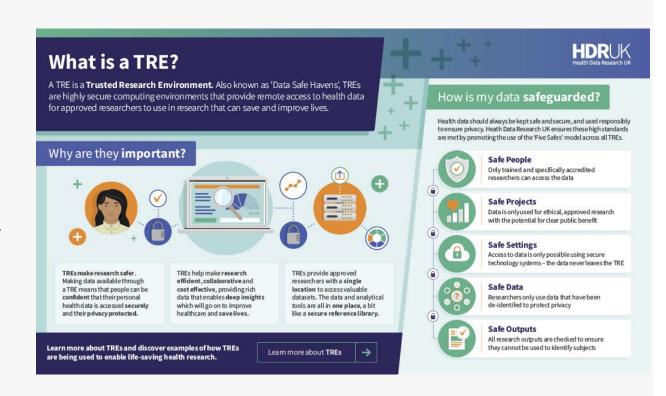






Enabling secure access via national network of Trusted Research Environments

- •Trusted Research Environments (TREs), also known as 'Data Safe Havens', are highly secure spaces for researchers to access sensitive data.
- •They are based on the idea that researchers **should** access and use data within a single secure environment.
- •TREs have multiple layers of security and safeguards in place, designed to minimise the risk of anyone's data being misused.
- •Multiple examples of TREs operating successfully in this way, both for healthcare data and other potentially sensitive data





Working with patients and the public...

Working together, we want to ensure the patient and public voice influences and shapes our work in "Data



and engagement impact

Data & Connectivity NCS: progress so far..



NCS Data Assets

- 95 datasets now made FAIR including
- Viral sequencing
- Vaccination
- Census data linked to GP and hospital data
- Geospatial, socioeconomic data

Developing cross-TRE innovation

 Implementing a Cohort Discovery tool for all NCS datasets (in partnership with CO CONNECT)

Enhancing and improving user experience

- Streamlined Data Access Request process by
- Implementing a new standardised form across providers
- Testing new **platform-approval models** of access
- Piloting a **unified 4-nations governance** process

Research using NCS data assets and infrastructure informing UK and international policy: >600 projects and 246 papers (and preprints) using NCS data assets and infrastructure*



Vaccine Safety and Effectiveness

E LANCET

THE LANCET

Two-dose ChAdOx1 nCoV-19 vaccine protection against COVID-19 hospital admissions and deaths over time: a retrospective, population-based cohort study in Scotland and Brazil

Prof Srinivasa Vittal Katikireddi. PhD * - Thiazo Cerqueira-Silva * - Eleftheria Vasileiou. PhD *

Risk of thrombocytopenia and thromboembolism after covid-19 vaccination and SARS-CoV-2 positive testing; self-controlled case series study

BMJ 2021; 374 doi: https://doi.org/10.1136/bmj.n1931 (Published 27 August 2021) Cite this as: BM/ 2021;374:n1931

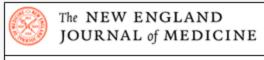
Association of COVID-19 vaccines ChAdOx1 and BNT162b2 with major venous, arterial, or thrombocytopenic events: A population-based cohort study of 46 million adults in England

William N. Whiteley . Samantha Ip, Jennifer A. Cooper, Thomas Bolton, Spencer Keene, Venexia Walker, Rachel Denholm, Ashley Akbari, Efosa Omigie, Sam Hollings, Emanuele Di Angelantonio, Spiros Denaxas, Angela Wood m. [

COVID-19 hospital admissions and deaths after BNT162b2 and ChAdOx1 nCoV-19 vaccinations in 2.57 million people in Scotland (EAVE II): a prospective cohort study

Utkarsh Agrawal, PhD 1 - Prof Srinivasa Vittal Katikireddi, PhD 1 - Prof Colin McCowan, PhD 1 -Rachel H Mulholland, MSci 1 - Amaya Azcoaga-Lorenzo, PhD - Sarah Amele, MSc - et al. Show all au Viral and host genomics





BNT162b2 and ChAdOx1 nCoV19 Vaccine Effectiveness against Death from the Delta Variant

nature https://doi.org/10.1038/s41586-022-04576-6 Accelerated Article Preview Whole genome sequencing reveals host factors underlying critical Covid-19

Impact of COVID-19 across different groups

A population-based cohort study of obesity, ethnicity and COVID-19 mortality in 12.6 million adults in England

Thomas Yates 3 1,288, Annabel Summerfield3, Cameron Razieh 3 1,2,4, Amitava Banerjee 5,6,

Trends and clinical characteristics of COVID-19 vaccine recipients:

a federated analysis of 57.9 million patients' primary care records in situ using OpenSAFEL1

ARTICLES

https://doi.org/10.1038/s41591-021-01666-2

medicine

Check for updates

SARS-CoV-2 infection and COVID-19 vaccination rates in pregnant women in Scotland

BMJ Open Sociodemographic inequality in COVID-19 vaccination coverage among elderly adults in England: a national linked data study

Vahe Nafilyan O, 1.2 Ted Dolby, 1 Cameron Razieh, 3.4.5





Priorities to end of March 2023 (and beyond!)

Addressing high priority areas of unmet data need:

- ✓ Outbreak Data Analysis Platform (ODAP)— progress linking outbreak data from ISARIC4C, COG-UK, GenOMMIC, PHOSP, ICNARC, clinical records, research studies. Finalising single panel, multi custodian, proportionate and robust data access Governance process. Vision is to create single UK-wide capability for pandemic data science in partnership with PHAs
- ✓ Enabling, rapid, regional linked acute admissions data flows for research: currently available national data feeds are dated (up to a 6-week time delay), do not include people still in hospital, and lack diagnostic granularity. This is a gap in the UK health data research ecosystem collaborating with 9 UK wide regions to implement regional linked feeds and scale up across the UK
- ✓ Further streamline data access at both researcher and custodian to custodian level
- ✓ Secure legacy of the national network of TRE data infrastructures and NCS curated data assets