

HDRUK
Health Data Research UK



HSC Public Health Agency
Research and Development



COVID-19 Health Data Research

15 December 2020 - Fortnightly update for SAGE,
National Core Studies & UKRI/DHSC

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Health data research community highlights this period*



26 COVID-19 taskforce calls with **180** clinical and health data research leaders engaged



1,122 COVID-19 pre-print publications



749 academic, industry and NHS participants in COVID-19 Slack channel with 10 sub-channels



111 health data research questions identified – 42 prioritised



This Week's Patient and Public Voice Feedback:

Given the current vaccine rollout, priority for research needs to explore the immunogenicity, effects and impact vaccines could have on those who are immunocompromised so as to not marginalise this large population.

[Click here](#) to read more feedback



Click [here](#) for a link to the full prioritised list of questions, status, and prioritisation process

*Following on from the establishment of the National Core Studies Programme we will be tracking the SAGE-endorsed recommendations from November 10, 2020 through this report going forward.

Research topics with new insights generated in last 3 weeks

Health data research on COVID-19 continues to grow, now reaching 1122 (+78) non peer-reviewed pre-prints & 75 (+7) published papers.

Topic	Insights from ongoing studies (links provide further details):
Surveillance & Epidemiology	<ul style="list-style-type: none"> • A recent genome-wide association study has discovered and replicated five genes associated with COVID-19 – specifically, genes involved in antiviral immunity and lung inflammation. Based on these findings, the researchers suggest that clinical trials should focus on existing drugs that target these pathways. • Further potential drug targets were uncovered by a phenome-wide association study. ACE2 overexpression and IFNAR2 underexpression in hospitalised COVID-19 patients indicates that drugs that target these genes should be prioritised for early management of COVID-19. • Analyses from the community survey, REACT-1, report a 28% fall in the prevalence of SARS-CoV-2 swab-positivity nationally for the period between 13 November and 3 December. Estimates of R differed by both region and sub-region, with a decline in the West Midlands and recent growth concentrated in the East and Southeast of London. • The most recent analysis of the CAPACITY-COVID patient registry has shown that the incidence of cardiac complications during hospital admission for COVID-19 is low. Whilst good news, long-term cardiac outcomes in COVID-19 patients warrants investigation. • A study exploring the usability of point-of-care COVID-19 testing for care home residents and staff found good agreement between point-of-care and laboratory PCR results. Whilst no safety concerns were identified, the small-scale of this study suggests further testing would be required prior to widespread roll out.
Immunity	<ul style="list-style-type: none"> • Results of an online questionnaire sent to a subset of NHS patients suggests that the levels of people wanting to be vaccinated against COVID-19 are below those required to reach herd immunity. These results complement those of a recent systematic review that looked at the public’s willingness to vaccinate against COVID-19 across 13 countries and found that the intention to vaccinate is declining. Taken together these studies speak to the need for informed public health messaging and education.
Longitudinal health & wellbeing	<ul style="list-style-type: none"> • Researchers using near real-time hospital data in England detected marked reductions in cancer services including referrals and chemotherapy attendance – and models revealed that this reduction is likely to lead to substantial excess deaths in people with cancer and multimorbidity. This work highlights the need for treatment prioritisation and further monitoring as NHS cancer services resume and the wider clinical backlog is addressed.
Transmission & Environment	<ul style="list-style-type: none"> • Early data from the Virus Watch household study revealed that most participants with a positive COVID-19 test reported having no non-household contacts in the period they were likely to be contagious. On-going household monitoring is key to identifying how COVID-19 spreads. • Analyses of national-linked datasets have uncovered that adults living with younger people are at an increased risk of COVID-19 mortality – particularly South Asian women. This information is especially important when considering how vaccines are prioritised and targeting public health interventions.
Clinical Trials	<ul style="list-style-type: none"> • Latest results from the RECOVERY trial show that in patients hospitalised with COVID-19, azithromycin did not provide any clinical benefit. Azithromycin use in patients hospitalised with COVID-19 should be restricted to patients where there is a clear antimicrobial indication. • Following a recommendation by the UK COVID-19 Therapeutics Advisory Panel, the RECOVERY trial will now investigate colchicine as a possible COVID-19 treatment. Colchicine is an inexpensive and commonly used anti-inflammatory, like dexamethasone. • Budesonide, the inhaled corticosteroid, will be investigated as part of the UK’s national priority platform trial for Covid-19 treatments that can be taken at home. The trial will explore whether inhaling budesonide directly into the airways minimises any lung damage that might otherwise be caused by the virus.

Data & Connectivity National Core Study: COVID-19 dataset availability – 15 December 2020

Significant data custodian engagement across the sprint 2 priority datasets and continued improvement of sprint 1 metadata. Intensive care data now available in SAIL databank in Wales, and Pillar 1 testing data available in Northern Ireland's Honest Broker Service.

KEY

1. Custodian engagement

2. Dataset available in secure Trusted Research Environment

3. Linkages established to other priority datasets (within TRE)

4. Datasets available for COVID-19 research via [Gateway](#)

Data & Connectivity Sprint 2 linkage priorities

Core COVID-19 Datasets available for linkage	Office for National Statistics Secure Research Service	England (NHS Digital Data Processing Service)	Scotland (National Data Safe Haven)	Wales (SAIL Databank)	Northern Ireland (Honest Broker Service)
Pillar 1 COVID-19 Testing Data	To be linked				
Pillar 2 Testing data (UK Gov)	To be linked				Missing results prior to 26 Apr – Data quality issue
Primary Care	GPES Onboarding underway	GPES extract – 98% practice coverage, large subset of codes (4bn items) Community Prescribing	Albasoft ESCRO GP Extraction* Prescribing Information System	80%+ coverage of full longitudinal record, with 100% coverage for COVID codes	Enhanced Prescribing Database as proxy
Secondary Care	HES – available for internal access only 100% coverage	100% coverage	100% coverage	100% coverage	
Personal Demographic Service	100% coverage	100% coverage	100% coverage	100% coverage	
Death registry	Provisional Monthly Extract & Linked Census and death occurrence	100% coverage	100% coverage	100% coverage	Requires oversight from NISRA GRO
C-19 Infection Survey (Pillar 4)					
COVID-19 Clinical Information Network (CO-CIN)	To be linked to 2011 census	Data for linkage in Scottish Data Safe Haven agreed	Limited metadata	Awaiting decision on data access	
Census 2011	Household structure				
Covid Opinions Survey					
Business Impact of Covid Survey	c. 5,000 businesses				
Labour Force Survey	40,000 households, 100,000 individuals				
Intensive Care data	HES critical care	ICNARC – internal use only	SICSAG (updated weekly)	ICNARC: COVID-specific weekly extract	
Pillar 3 Testing data (NHS labs)		Internal use only			
Pillar 3 Testing data (iELISA)		Internal use only			
Other Pillar 4 Testing data	VIVALDI, REACT II				
ZOE Symptom Study App Data				UK wide (unlinked) Wales (linked)	
COG-UK Viral Genome				Finalising governance	

Status of COVID-19 projects using the data – 15 December 2020

14 additions to active research taking place takes total over 220. Most new projects enabled either by NHS Digital or the SAIL databank in Wales. There is a decrease in the bottle neck at projects submitted for IG approval.

Further information about **Data & Connectivity** can be found [here](#). Including recently published end of [Sprint 2 report](#).

# of COVID-19 Projects by stage (change from previous report)	Office for National Statistics Secure Research Service	England (NHS Digital Data Processing Service)	Scotland (National Data Safe Haven)	Wales (SAIL Databank)	Northern Ireland (Honest Broker Service)	Total
In development	18 (+5)	29 (+6)	30 (-12)	90 (+6)	6 (-)	173 (+5)
- a/w researcher	10 (+5)	22(+6)	Not available	56 (+3)	6 (-)	N/A
- a/w data custodian	8 (+6)	7 (-)	Not available	34 (+3)	0 (-)	N/A
Submitted for Information Governance approval	9(+4)	6 (-4)	6(-3)	0 (-)	0 (-)	21 (-3)
Approved but not yet active	7 (+6)	3 (+1)	7 (+1)	3 (+1)	1(-1)	21 (+8)
Active research taking place	6 (-)	75 (+7)	59 (-1)	87 (+7)	1(+1)	228 (+14)
Active Number of Researchers	Not yet available	Not yet available	Not yet available	180 (+2)	Not yet available	
Average time from application to active research	Not yet available	Not yet available	Not yet available	3 days	Not yet available	

Participation in key UK wide studies:

- [PRINCIPLE](#): 2,572 participants, an increase of around 25% in last 3 weeks following establishment of data flow of Pillar 2 COVID positive test results to support recruitment
- [RECOVERY](#): 18,570 participants across 176 active sites (an increase of 10% in last 3 weeks)
- [CO-CIN \(ISARIC 4C\)](#)
 - 116,970 Tier 0 (case report) (and increase of around 10% in last 3 weeks)
 - 665 Tier 1 (single sample)
 - 1,736 Tier 2 (serial sampling)
- [GENOMICC](#): 6722 participants across 210 ICUs with a total of 5075 intensive care beds
- [COVID-19 ZOE symptom study](#): 4,477,564
- [COG-UK](#): 117,375 viral genomes sequenced

Data Access Registers

For more information on the active projects:

- [ONS Secure Research Service](#): List of accredited researchers and research projects under the Research Strand of the Digital Economy Act)
- [NHS Digital](#): Register of approved data releases (includes all access)
- [Scotland](#): Public Benefit and Privacy Panel approvals
- [SAIL Databank](#): COVID-19 projects listed on gateway
- [NI Honest Broker Service](#): Projects currently being carried out.

12 new COVID-19 research studies funded

- Selected following rapid funding call from HDRUK and ONS to use and enrich the National Core Study data.
- Studies chosen for their potential to impact near real time C-19 responses and cover topics including: **palliative care, long COVID, epidemiology, transmission, vaccines, ethnicity, inequalities, and employment.**
- 12 studies will use data from across the four nations and will make data accessible for other researchers.