National Core Studies

July 2022

This is a monthly update from the National Core Studies programme with our latest news, key findings and things to look out for.

The COVID-19 National Core Studies (NCS) are a crucial part of the UK's ongoing pandemic response. They are enabling the UK to use health data and research to inform both our near and long-term responses to COVID-19, as well as accelerating progress to establish a world-leading health data and research infrastructure for the future.

This month we publish a new quarterly impact report for Apr - Jun 2022, exploring the impact National Core Study insights are having on COVID-19 response and recovery.

We ask an NCS public advisory group to review each of our reports - here's their commentary for this quarter:

"We have seen many examples of substantive impact across this quarter's NCS Impact Report, and also important work that has potential to have long term impact beyond COVID-19. The work led by Data and Connectivity NCS to make regional , rapid, linked health data available in a much more timely fashion than is currently possible relying on existing national data flows, both enables

response to the current COVID-19 challenges, and paves the way for emergency responses to future demands. For example, enabling secure access to these regional, more rapidly linked health data flows, via local Trusted Research Environments, offers the potential for enormous benefit to health service users and the public as a whole (through impact on patient safety and economic impact). These benefits could be realised, for example, following the introduction of any new treatment, especially ones affecting large numbers of the population (eg, vaccines, cardiovascular disease or cancer), or the introduction of new NICE guidance or changes to its existing guidance through evaluation of treatment and monitoring of care pathways to be monitored in real time".

Read the latest impact report here

News from the National Core Studies

PROTECT Annual Science review

Health and Safety Executive's 2022 Annual Science review launched in June, which summarises **PROTECT NCS'** work supporting COVID-19 response and 'living with Covid'. The launch seminar was attended remotely by over 300 people from around the world and included a talk from **PROTECT NCS** theme 1 (Outbreak Investigations) lead Yiqun Chen.

Covid Infection Survey goes digital

Epidemiology & Surveillance NCS continues its transition to COVID-19 Infection Survey Digital, with a “Go” decision received to invite the first group of participants to move across on 29 June 2022. The survey continues to track Omicron sub-variants, and introduces multiple thresholds of antibody positivity to enable enhanced monitoring of waning antibody levels.

US-UK task force collaboration on long Covid

In June 2020, **Longitudinal Health & Wellbeing NCS** presented their work at a UK Foreign, Commenwealth & Development office joint meeting between NIHR-funded long COVID projects and NIH-funded US initiatives. This aimed to identify future research and collaboration avenues and promote sharing of tools and data. **LHW NCS** followed up with US researchers on areas of synergy.

PROTECT at the International Festival of Public Health

This year’s International Festival of Public Health, held at the University of Manchester, included a 75 minute workshop on **PROTECT NCS**, chaired by PROTECT researcher Rebecca Canham.

Innovative Covid Infection Survey analysis results released

As part of the **Data & Connectivity NCS**, Office for National Statistics (ONS) announced funding awards for three academic projects on 24 December 2021, to use COVID-19 Infection Survey data in innovative ways. The funding period for the projects is now complete and the results are summarised here.

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110 datasets now made available to access via the Health Data Research Innovation Gateway by Data & Connectivity NCS

Latest additions include NHS England's specialised commissioning dataset for antivirals and monoclonal antibody prescriptions for COVID-19, made available via the QResearch platform.

Transparent information on the 271 research teams using these datasets for research, in many cases including the outputs their research produced, is now captured in the Gateway Data Use Register.

Health Data Research Innovation Gateway

Browse NCS datasets here

NCS research finding highlights this month:

New research from the **NCS Immunity**-funded team behind the DuRaCoV study found that Omicron infection only provides weak immune protection against Omicron re-infection, even in people who are triple-vaccinated. They analysed blood samples from 731 triple-vaccinated healthcare workers. Those infected during the first wave of the pandemic and then again later with Omicron didn’t see any uplift in immunity at all from the later infection.

Data & Connectivity NCS researchers based at the MRC-University of Glasgow Centre for Virus Research, co-funded by Alan Turing Institute, examined why the mutations in the Omicron variant make our vaccines less effective. Using real-world data they showed that Omicron escapes immunity from two vaccine doses, with evidence suggesting it has switched its route of entry into human cells.

Longitudinal Health & Wellbeing NCS released further work on long Covid symptom clustering in research cohorts, proposing two main clusters – one with higher burden of symptoms, and one with lower burden. This further builds the evidence base on long Covid to improve diagnosis, research into mechanisms, and patient access to treatment and services.

PROTECT NCS released a follow-up to previous research on perceptions of COVID-19 protection measures, examining how public transport sector worker, organisational leader and passenger attitudes have changed during the introduction of 'living with Covid' measures. One finding noted that while there was a general shift in attitude towards the virus with it becoming endemic, ongoing consideration should be given to continued observable COVID-19 risk mitigations such as cleaning and face coverings, as these are important for operators, workers
and passengers as a point of visible reassurance.

Longitudinal Health & Wellbeing NCS used electronic health records in the OpenSAFELY platform for studies on vaccine waning and boosters in England. These found that protection against severe COVID-19 from two doses of Pfizer-BioNTech and AstraZeneca COVID-19 vaccines remained high up to six months

after second doses. They also confirmed that the Pfizer booster vaccine lowered rates of COVID-19 infection, hospitalisation and death.

More NCS research publications for the month:

- Longitudinal changes in proportionate mortality due to COVID-19 by occupation in England and Wales
- OpenSAFELY NHS Service Restoration Observatory 2: changes in primary care activity across six clinical areas during the COVID-19 pandemic
- Factors associated with COVID-19 vaccine uptake in people with kidney disease: an OpenSAFELY cohort study
- A retrospective cohort study measured predicting and validating the impact of the COVID-19 pandemic in individuals with chronic kidney disease.
- COVID-19 trajectories among 57 million adults in England: a cohort study using electronic health records.
- Associations of BMI with COVID-19 vaccine uptake, vaccine effectiveness, and risk of severe COVID-19 outcomes after vaccination in England: a population-based cohort study
- SARS-CoV-2 infection risk among 77,587 healthcare workers: a national observational longitudinal cohort study in Wales, United Kingdom, April to November 2020.
- Risk of severe COVID-19 outcomes associated with immune-mediated inflammatory diseases and immune-modifying therapies: a nationwide cohort study in the OpenSAFELY platform.
- Safety of COVID-19 vaccination and acute neurological events: A self-controlled case series in England using the OpenSAFELY platform.
- Shielding reduced incidence of COVID-19 in patients with inflammatory arthritis but vulnerability is associated with increased mortality.
- Accelerated waning of the humoral response to SARS-CoV-2 vaccines in obesity

- SARS-CoV-2 antibody trajectories after a single COVID-19 vaccination with and without prior infection
- Two Years On: What the COVID-19 Infection Survey has achieved so far – and what comes next
- The COVID-19 Infection Survey is changing. What does this mean for how the UK monitors the virus?
- How coronavirus (COVID-19) compares with flu as a cause of death
- Self-reported long COVID after infection with the Omicron variant in the UK
- Comparison of two T-cell assays to evaluate T-cell responses to SARS-CoV-2 following vaccination in naïve and convalescent healthcare workers
- Potent cross-reactive antibodies following Omicron breakthrough in vaccinees

Regular ONS reporting of

- Coronavirus (COVID-19) Infection Survey, UK: antibody and vaccination data
- Coronavirus and vaccination rates in people aged 18 years and over by socio-demographic characteristic and region, England
- COVID-19 Schools Infection Survey, England: pupil antibody data and vaccine sentiment, March to April 2022
- Coronavirus (COVID-19) Infection Survey: characteristics of people testing positive for COVID-19 in England

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Thanks for reading - we will now move to quarterly reporting for the remaining term of the National Core Studies. So, we will publish our next Impact Report in October 2022.

NCS are managed by:

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PROTECT

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