

Longitudinal Health and Wellbeing

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The UKRI funded Longitudinal Health and Wellbeing National Core Study aims to understand the health, social and economic impacts of the COVID-19 pandemic by uniting established population cohorts and national anonymised electronic health records to inform policy.





COVID-19 National Core Study



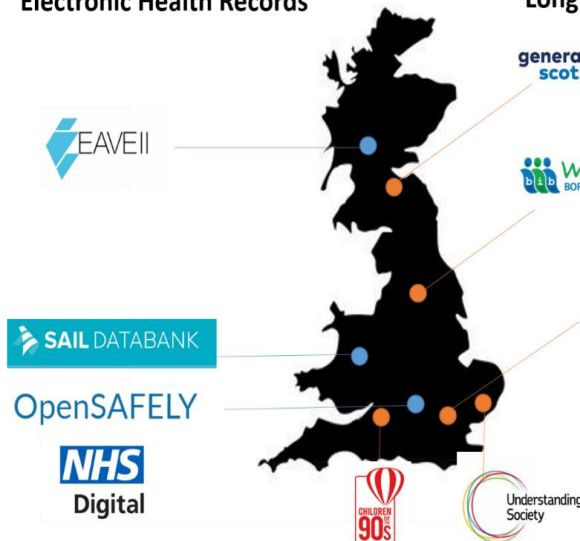
Coronavirus post-acute long-term effects: constructing an evidence base

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Breadth of coverage that captures all individuals presenting to health professionals, with linked prescribing, consulting, referral and outcome data.

Electronic Health Records



Longitudinal Population Studies



Rich depth of pre-pandemic health and socioeconomic data, collected at multiple time points and capture individuals that do not present to health professionals.

Society and Health

Furlough was associated with preservation of health behaviours similar to those remaining in employment, and more favourable to those who became unemployed.

The pandemic led to unequal healthcare disruptions. Females, ethnic minorities and the disadvantaged were most effected.

Healthcare Disruption

Vaccination

People with learning disabilities were identified as a group for early vaccination. Ethnic differences in vaccine uptake and breakthrough cases reported.

Recording of long COVID in primary care is very low, and variable between practices. Risk factors associated with Long Covid identified.

Long Covid

Long-term Risk

Rates of vascular disease after COVID-19 diagnosis remain elevated up to 49 weeks after COVID-19.

Key Findings



GP National Alert

Instances of inappropriate switching of blood thinners led to a national GP alert.

Long COVID findings played an important role in the NICE evidence review for risk factors

NICE Guidelines

SAGE Reports

long COVID burden of disease, risk factors, definition and long term outcomes

On inequalities in healthcare disruption, mental health decline, the impact of furlough on health behaviour and mental health and risk of low antibody response.

Cabinet Briefing Notes

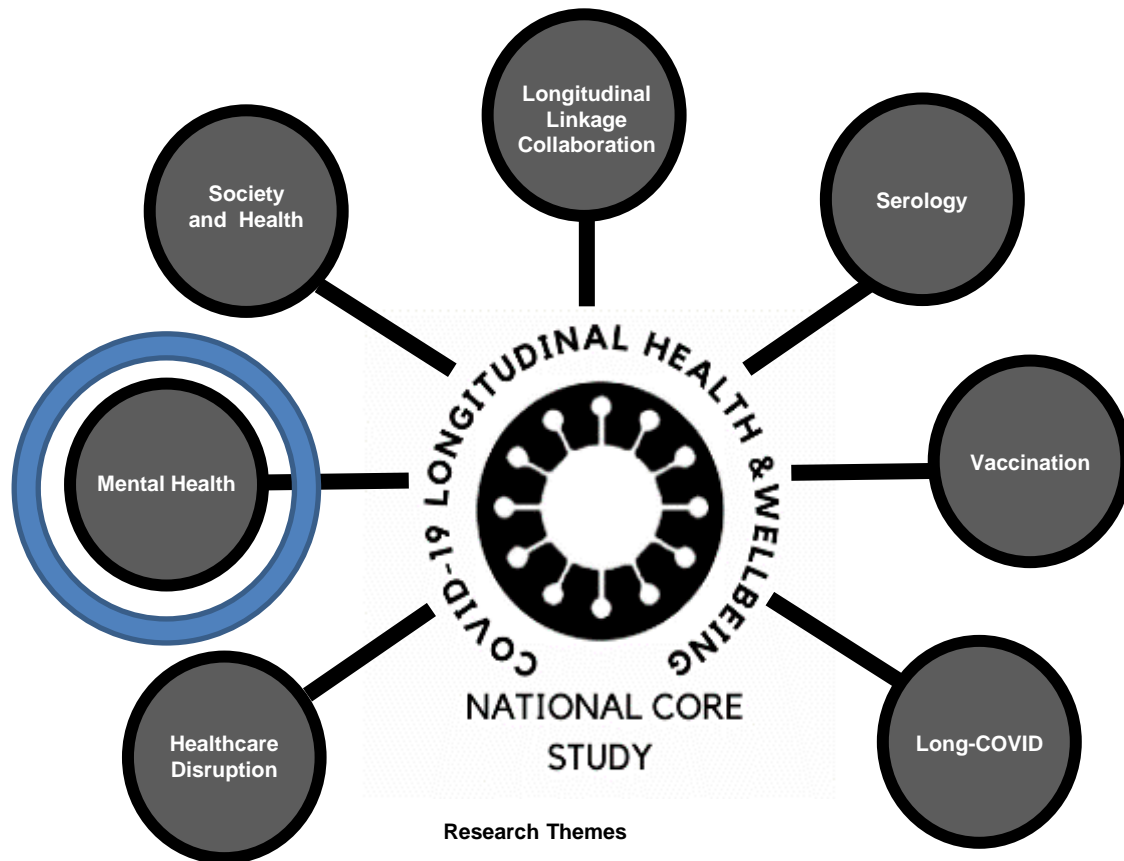
NHS Enhanced Service specification

Low long COVID coding detection led to an NHS enhanced service specification, directed at GPs, to drive an increase in coding

Impact

Mental Health

Dr Ellen Thompson



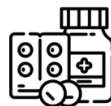
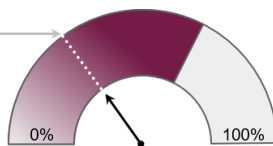
During the pandemic people with pre-existing mental health difficulties experienced relatively more negative impacts to...

Healthcare

disruptions to prescriptions/medication

33%

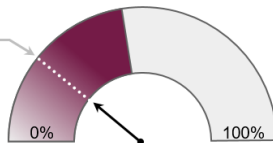
increased risk
for people with moderate
mental health difficulties
compared to those with
average mental health



disruptions to procedures/surgery

24%

increased risk

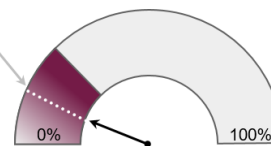


Economic situation

employment loss

13%

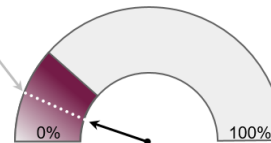
increased risk



income loss

12%

increased risk

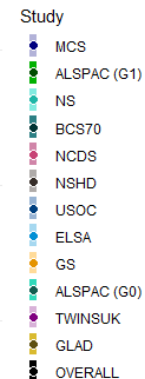
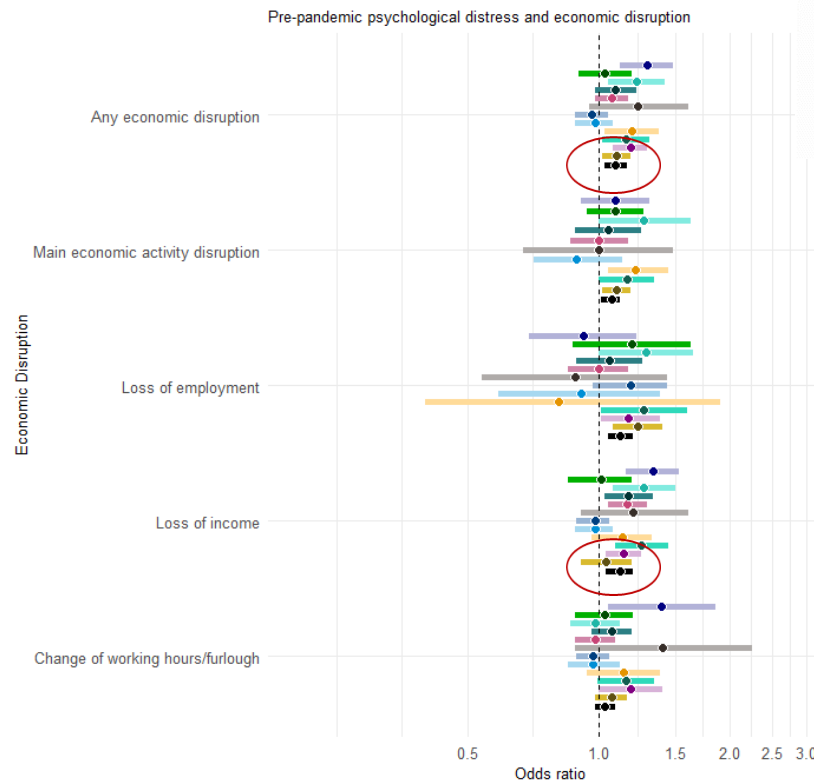
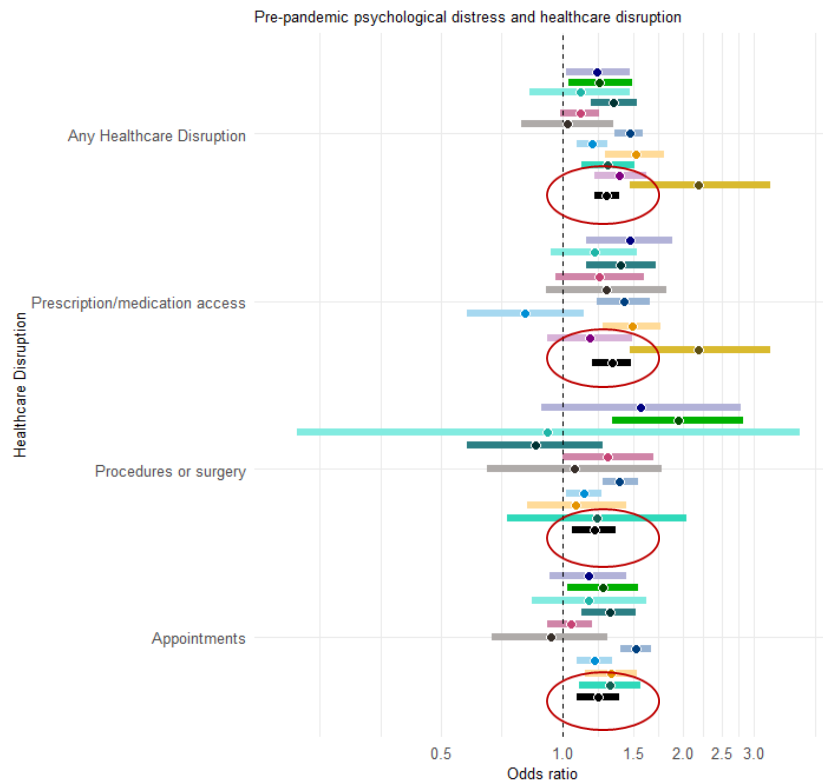


*For people with more severe mental health problems the increased risk was higher than for people with moderate mental health difficulties

Data analysed from 59,482 participants in 12 UK longitudinal studies

Individuals with poor mental health may need additional support to manage these disruptions and prevent widening inequalities

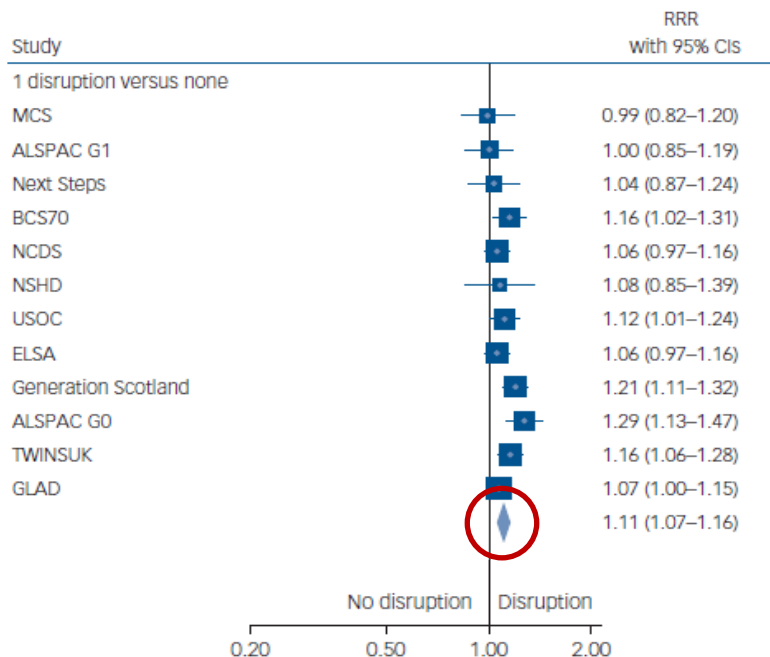
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Cumulative disruptions

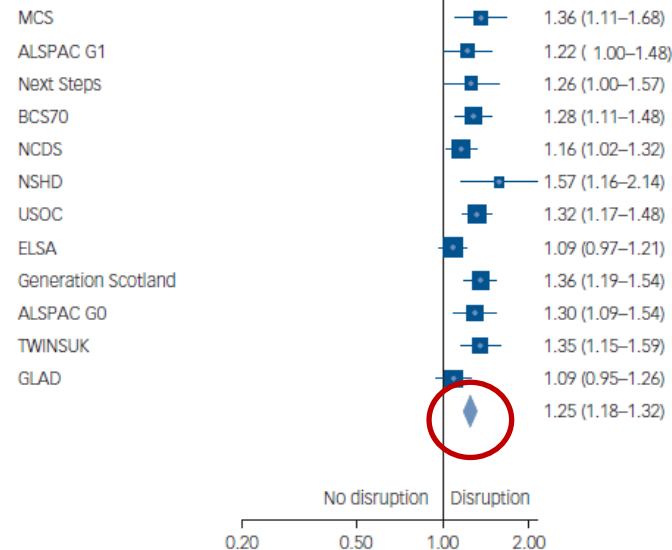
Cumulative disruption

Overall $I^2 = 52.9\%$



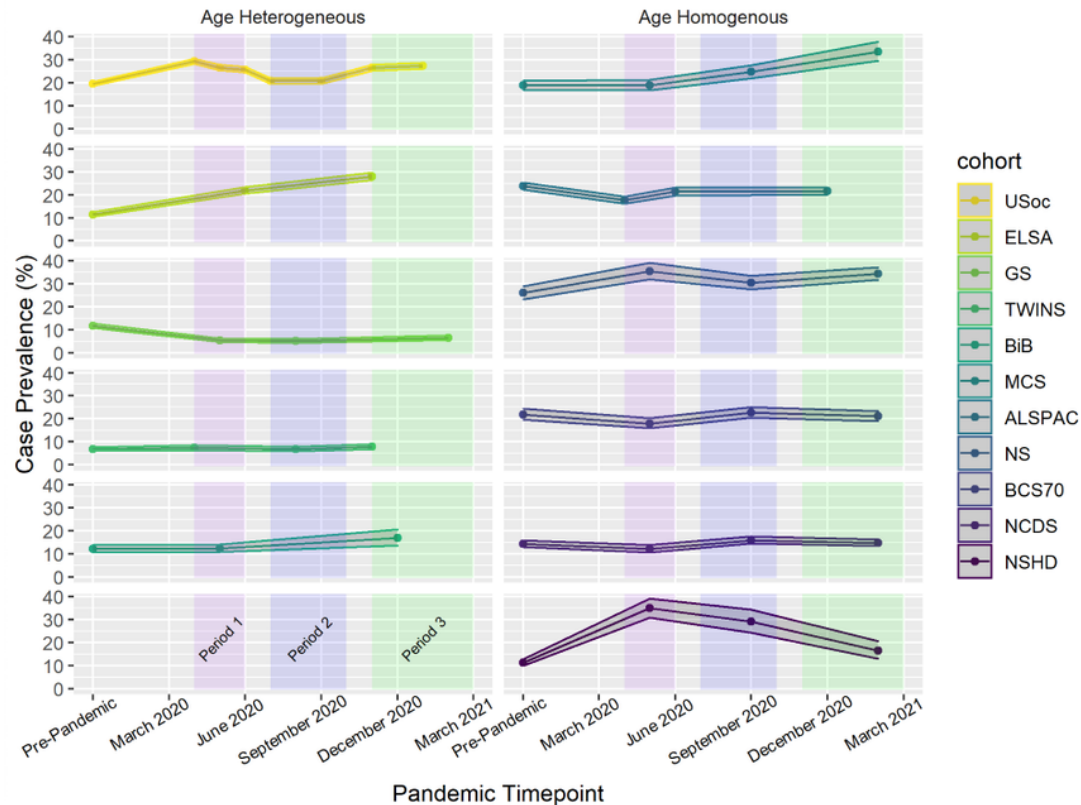
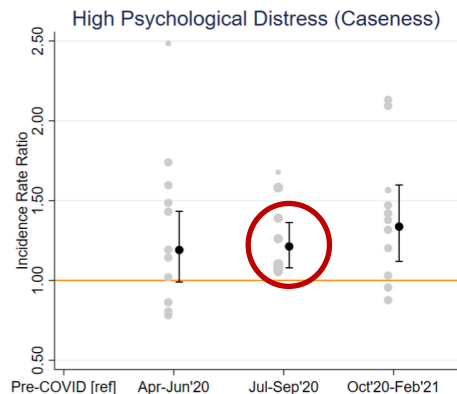
For 1 SD higher pre-pandemic distress...

≥2 disruptions versus none



Mental health changes and socio-demographic inequalities

11 longitudinal cohorts with pre-pandemic & COVID-19 data

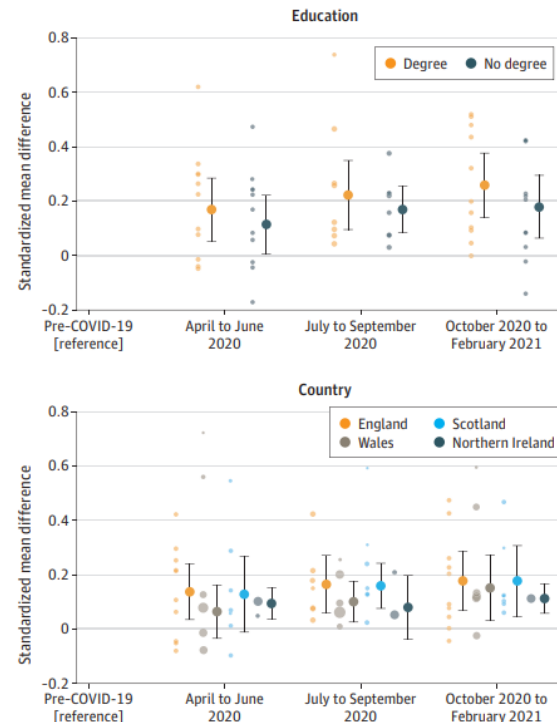
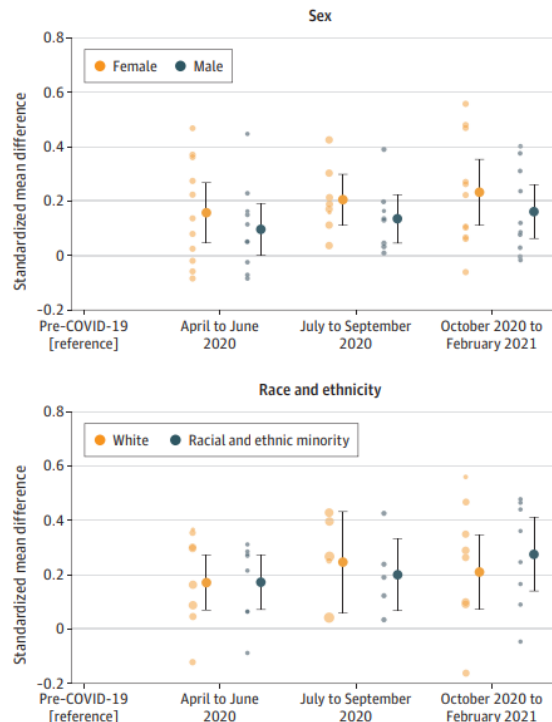


Mental health changes and socio-demographic inequalities

Meta-analysis of timings and groups to get a 'global' picture

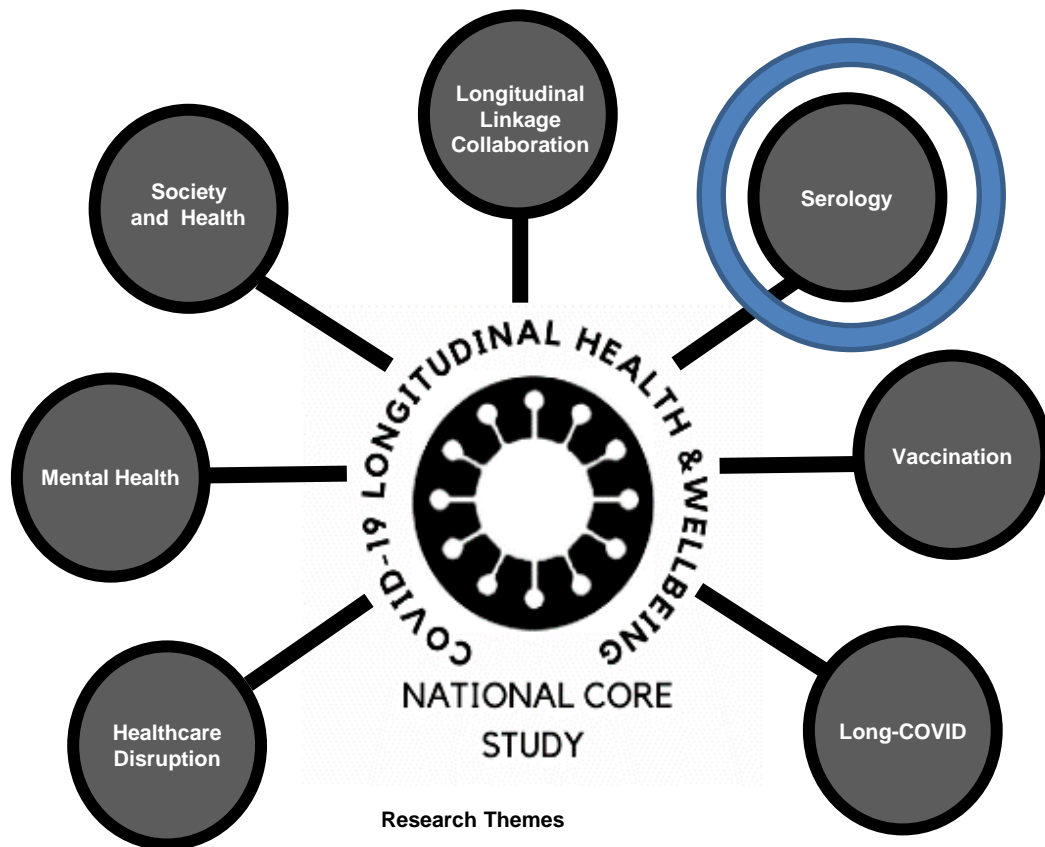
Psych distress increased at population level

More in some groups (female, high education, early adults)



Serology

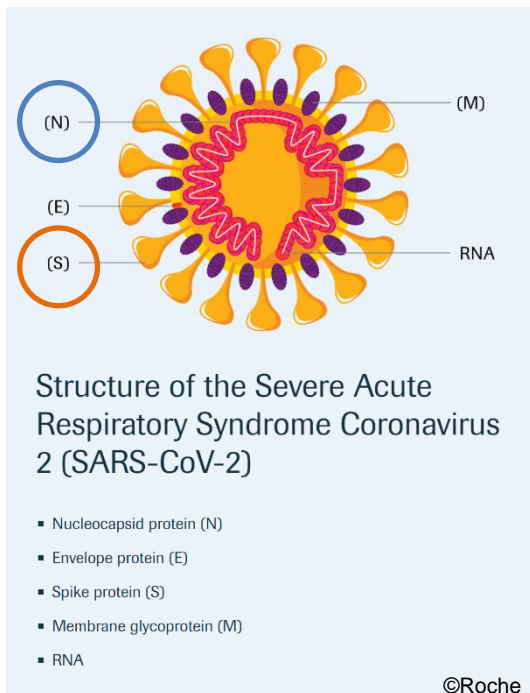
Dr Milla Kibble



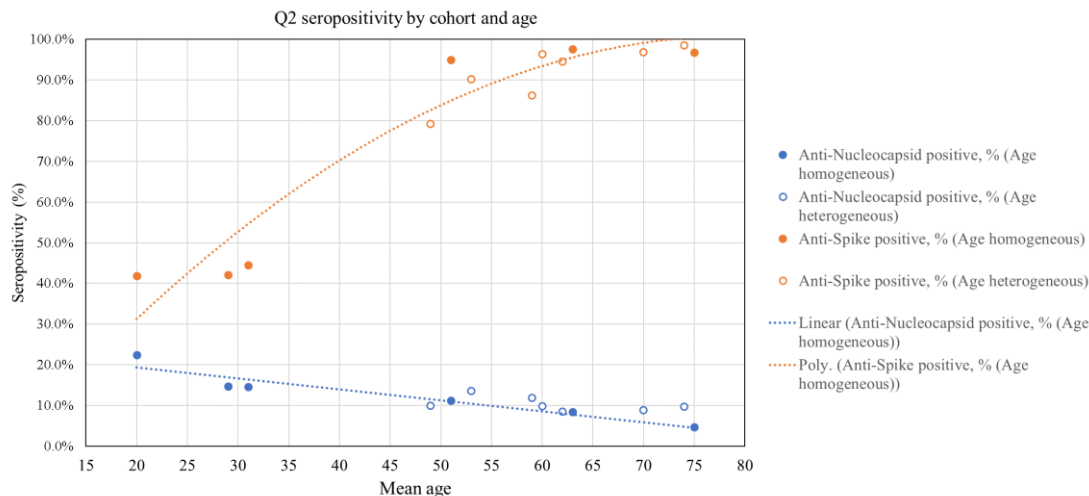
Antibody testing in well-characterized longitudinal population cohorts



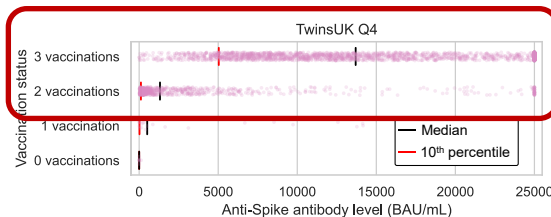
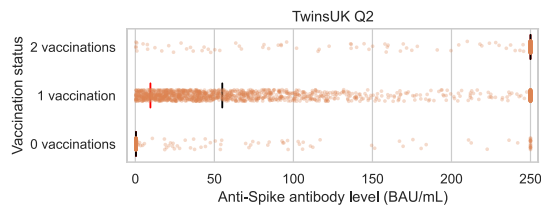
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- Blood samples collected in 11 of the NCS cohorts in April – May 2021
- Over 40,000 participants
- Higher anti-S and lower anti-N seropositivity associated with increasing average age

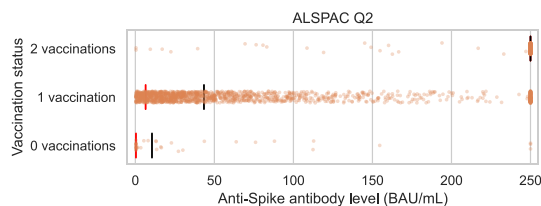


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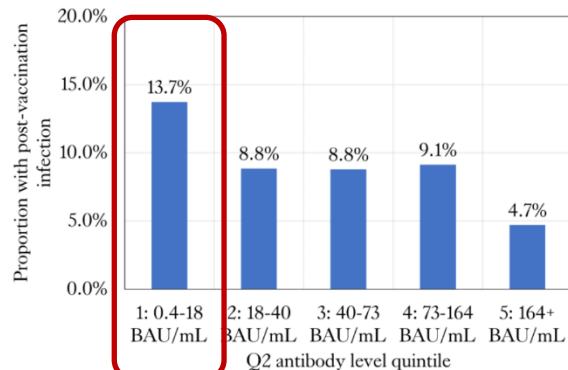


Third vaccination produced a large increase in antibody levels

Q4: November 2021-January 2022



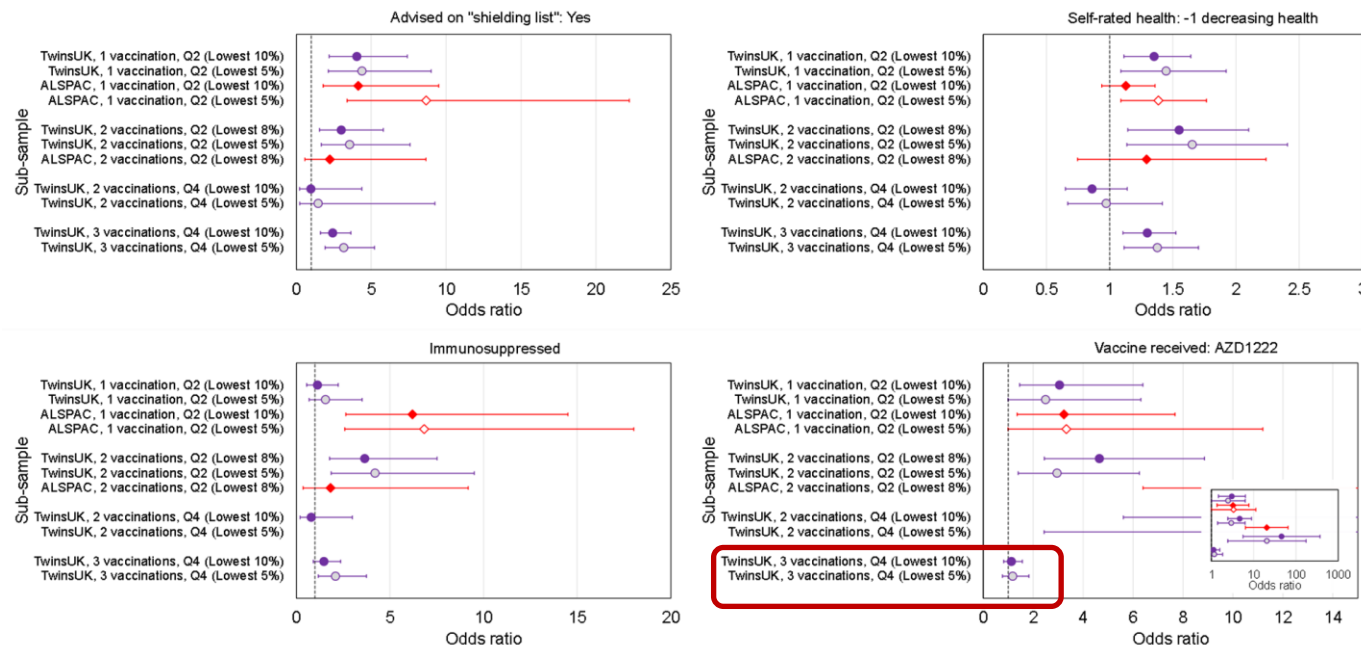
Q2: April-May 2021



Single-vaccinated with lowest 20% of anti-Spike levels had 3- times the odds of infection over the next 6 to 9 months, compared to the top 20%

Antibody levels following vaccination against SARS-CoV-2: associations with post-vaccination infection & risk factors, Cheetham et al., <https://www.medrxiv.org/content/10.1101/2022.05.19.22275214v1>

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Elevated odds of low antibody levels for those:

- on UK shielded patient list,
- with poorer self-rated health, and
- with indicators of immunosuppression

No disparities due to vaccine type after third vaccination

Future Analyses

- Next round of serology testing in ALSPAC in May 2022
 - Associations of SARS-Cov-2 exposure profiles with health and socio-demographic factors as well as reported (repeat) infections
- Examining biological explanations for variation in infection and vaccine immune response
 - HLA haplotype, PRS genotypic risk, history of infection, trajectories of health, epigenetic and metabolomic variation and other immune variables



UK Health
Security
Agency



Department
of Health &
Social Care

We are grateful to participants from all studies for participating in testing and completing questionnaires during the COVID-19 pandemic



Thank you for your attention

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The Team

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Website: www.ucl.ac.uk/covid-19-longitudinal-health-wellbeing

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UK Government National Core Study programme to understand the impact of COVID-19 on long-term health. Funded by @UKRI_news @NIHRresearch

📅 Joined April 2021



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