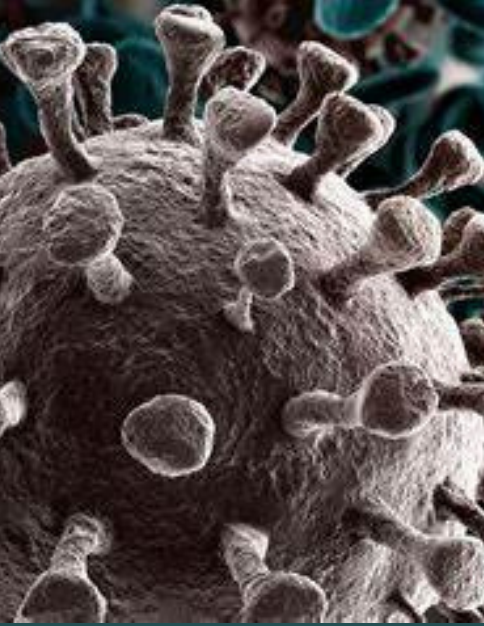


Insights and Impact

**COVID-19 Longitudinal Health and Wellbeing
National Core Study**

2021

Impact



During lockdown the LH&W Team identified instances of inappropriate switching of blood thinners (from warfarin to Direct Oral Anticoagulants). This triggered a national alert to GPs

GP National Alert

SAGE reports

Policy makers have been provided with information on long COVID burden of disease, risk factors, definition and long term outcomes via cabinet briefing reports and SAGE reports.

We reported low levels of long COVID GP coding. This work led to a NHS enhanced service specification, directed at GPs, to drive an increase in long COVID coding.

GP Coding of long COVID

NICE Living Guideline

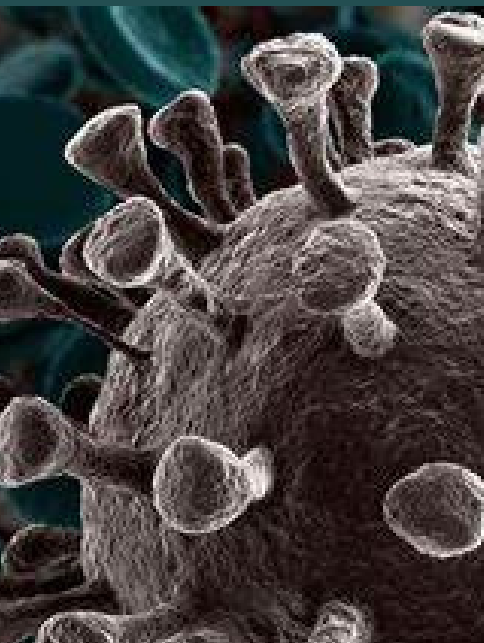
NICE used our long COVID findings in its evidence review for risk factors, the analysis played an important role in the evidence assessment.

Briefing notes have been submitted addressing inequalities in healthcare disruption, mental health decline during lockdown, the impact of furlough on health behaviour and mental health and reasons for a low antibody response.

Cabinet Briefing Notes

Vaccination

LH&W work was among the first to provide the Chief Medical Officer with a quantification of vaccine side effects and the first to point out that people with learning disabilities should be prioritised for vaccination. Our analyses also identified differences in vaccine uptake among ethnic groups.



Insights

Society and Health

- The Coronavirus Job Retention scheme was associated with preservation of health behaviours (eating, drinking, smoking, sleeping habit), similar to those remaining in employment, and more favourable to those who became unemployed.
- While mental and social wellbeing declined in those furloughed, effects were far less than those who lost their jobs. Social protection policies should be implemented in the post-pandemic recovery period and during future economic crises.

Healthcare Disruption

- The pandemic led to unequal healthcare disruptions. Females, ethnic minorities and the disadvantaged were most effected. Action is needed to prevent the widening of existing health inequalities, and efforts to ensure continuity of care during pandemic-related disruptions may need to be more clearly targeted to those who most need that care.
- During the first lockdown there were substantial reductions in primary care contacts and hospital admissions nationally (rates for cancer, cardiovascular and respiratory (excluding COVID) fell by 34% in England, 21% in Scotland, and 25% in Wales), with limited recovery once restrictions were removed. Maintaining healthcare access should be a key priority in future public health planning and restrictions.
- The pandemic had a negative impact on mothers' experiences of pregnancy; however, this did not translate to adverse birth outcomes for babies. During times of restrictions, expectant mothers should be given extra support to maintain their wellbeing.

Vaccination

- People with learning disabilities were identified as a group for early vaccination.
- Ethnic differences in vaccine uptake were reported.
- Breakthrough infections post vaccination are infrequent, less severe and more likely to occur in older care home residents, and immunocompromised individuals.
- While the AZ (but not the Pfizer) vaccine was associated with greater risks of blood clots, these events are rare and outweighed by the considerable benefit of vaccination.
- Factors for a low antibody response after vaccination have been identified.
- These findings have important implications for current and future booster plans.

Long COVID

- Current recording of long COVID in primary care is very low, and variable between practices. Increased awareness of diagnostic codes is recommended
- Risk factors for long COVID have been identified: long COVID is associated with women, middle-age and pre-existing health factors, including asthma. Understanding explanations for differential risk could both identify high risk groups and causal mechanisms for intervention.

Mental Health

- People with prior mental ill health were hit harder by pandemic disruption. Inequality between those with and without mental health problems should be taken into account when provisioning current and post-pandemic health, economic and well-being support.
- A substantial deterioration in mental health seen during the first lockdown did not reverse when lockdown lifted: Lockdown alone is not responsible for the decline in mental health. There is a need for investment of mental health support to address all underlying causes.

Insights

Risk

- Some minority ethnic populations in England have excess risks of testing positive for SARS-CoV-2 and of adverse COVID-19 outcomes compared with the White population. Tackling ethnic inequalities will require action across many fronts, including reducing structural inequalities, addressing barriers to equitable care, and improving uptake of testing and vaccination.
- A proportion of patients were inappropriately switched from warfarin to a direct oral anticoagulant during lockdown. A national alert was subsequently issued to practices. Caution should be taken to ensure that future changes to ongoing therapy during times of restriction are safe.
- A substantial drop in the incidence of cardiometabolic and pulmonary events was observed in the non-COVID-19 general population. This suggests that people are not presenting to health care early in the course of disease, when treatment would be most effective at delaying progression to severe disease. This work has implications for a) ensuring people do present early, and b) health and care provision in the long term.

Outcomes

- Rates of vascular disease after COVID-19 diagnosis remain elevated up to 49 weeks after COVID-19. These results support continued policies to avoid COVID-19 infection with effective COVID-19 vaccines and use of secondary preventive agents in high-risk patients.
- Cardiometabolic and pulmonary adverse outcomes are markedly raised following hospitalisation for COVID-19 compared to the general population. Identifying patients at particularly high risk of outcomes can inform targeted preventive measures.
- Large numbers of people have been hospitalised with COVID-19 during the pandemic, and the raised risks of re-admission to hospital in these individuals could significantly impact public health and resources. Risks might be minimised or mitigated by increasing monitoring of patients in the months following hospital discharge, and greater awareness among patients and clinicians of potential problems.

These 2021 outputs demonstrate the value of uniting resources to answer a broad range of key COVID-19 policy relevant questions.

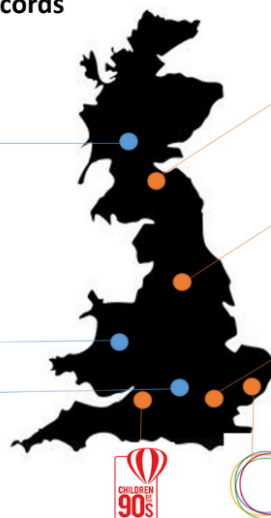
Electronic Health Records



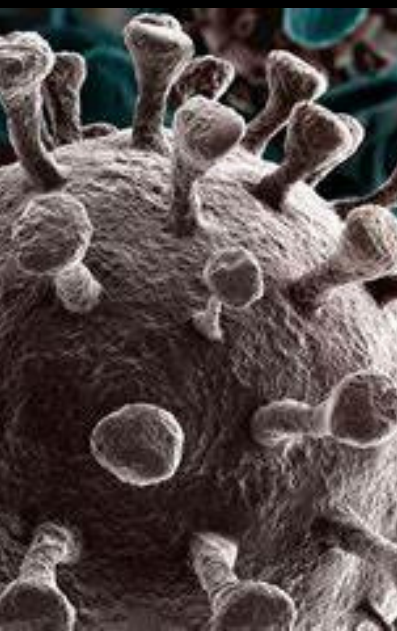
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Longitudinal Population Studies



Priority policy relevant research in 2022

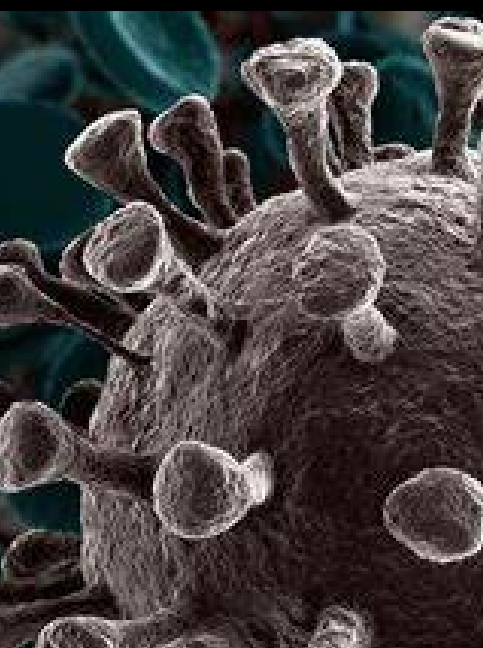


Society and Health Understand the longer term impacts of the pandemic on employment, education, social networks, mental and physical health. A key priority is to understand the effects of the discontinuation of the furlough scheme
Policy implications: provision of welfare and training support for those in precarious employment, or for those who missed out on educational opportunities. Understanding the long term effects on both health and societal wellbeing of furlough will be of policy value for future waves or future pandemics.

Vaccination Report the medium and long term effects of vaccination on infection and severe disease for new variants, and how these vary by population subgroup. Examine waning of vaccine effectiveness, booster uptake and new vaccine initiatives.
Policy implications: effectiveness, timing and targeting of booster vaccination.

Mental Health Study of differential impacts on key subgroups, whether and in whom symptoms reverse or decline with time, and the extent to which the timing of infection during the pandemic determines impact. Longer follow up will establish the magnitude and determinants of mental health changes, and may identify factors that offer resilience to the mental health impacts of this and future pandemics.
Policy implications: support services for those with mental health difficulties, implementation of strategies to enhance resilience.

Healthcare Disruption Re-deployment of the three-nation approach to update estimates of current impacts on hospital admissions, and find explanations for differential impacts by key subgroups. Understand the impact of elevated risks of secondary events and chronic disease, as a consequence of missed or delayed treatment. Identify services which provide the most value and which appear less effective and could perhaps be discontinued.
Policy implications: planning of health care services, resumption or cessation of screening and interventions in primary care.



Consequences of infection and long COVID Examine explanations for variation in risk of infection, and of severe infection. The role of multi-morbidity, genetics and biomarkers to understand pathways. Examine mental health, respiratory health, diabetes, and kidney disease after infection and variation in these results by variant. Clustering of symptoms across different disease areas to inform improved, evidence-based definitions of long COVID phenotypes. Further work includes the long-term effectiveness and outcomes of treatments, such as monoclonal antibodies and analysis of adherence to NICE guidelines for both diagnosis and management.
Policy Implications: Provide a deeper understanding of factors enhancing the recovery from long COVID.

Antibody response: Work on determinants of antibody response to vaccination and infection will continue and antibody testing will be redeployed in the longitudinal cohorts. **Policy implications: Identification of individuals with a low response to guide prioritisation of future boosters.**