

## **NIHR Plain English Summary – Investigating the impact of SARS-CoV-2 on gastrointestinal illness using advanced linked data systems**

COVID-19 is a complex illness which can cause a wide range of symptoms. We know that around one in five people with COVID-19 illness will experience stomach & bowel issues such as diarrhoea & vomiting. We also know that the virus that causes COVID-19 can negatively affect our bowel health. Currently, there are thought to be millions of people suffering from persistent, long-lasting symptoms after having COVID-19. There is some evidence to suggest that people suffering from 'long-COVID' may have symptoms like diarrhoea & vomiting, and that some individuals may be more prone to developing certain illnesses that affect our bowel after having COVID-19.

Research investigating the long-lasting impact of COVID-19 on our bowel health is relatively weak. This means we can't currently say who might be affected and to what degree (if anybody at all). Our study aims to investigate the relationship between a positive COVID-19 test and patients attending their GP or hospital for stomach & bowel complaints. We are asking the question, do people infected with COVID-19 have an increased risk of stomach bugs and longer-term stomach & bowel problems?

To do this we will use anonymised routine healthcare records from patients in the UK. We will look for GP consultations and hospital records for symptoms like diarrhoea & stomach ache, and for conditions like gastroenteritis ('a stomach bug'). We will also look at diagnoses in a patient's GP and hospital record for certain illnesses such as irritable bowel syndrome, inflammatory bowel disease and coeliac disease. We will then explore whether COVID-19 vaccination has any impact on the rate of stomach bugs and bowel issues after COVID-19.