

To: Chair of Health and Social Care Committee, Steve Brine MP

**Re: Health and Social Care Committee: Inquiry -
COVID-19: Lessons Learned**

Dear Steve Brine,

Thank you for the opportunity to provide evidence to the Committee on 4 March, and for your letter dated 26 March, requesting information on the long-term impacts and outcomes of COVID-19 infections for people who did not avail themselves of some or any of the vaccination rollouts. Below are responses to your specific questions.

What assessment has been made of the long-term health outcomes and impacts of people who have recovered from a covid infection without having had all or any of the available vaccinations (i.e., whether research has been carried out, or is in train, into the contribution vaccination makes to avoiding, or mitigating the severity of the long-term health impacts of covid infection(s))?

A rapid review of the existing evidence has been conducted by UKHSA¹, and the evidence suggests that vaccination reduced the likelihood of developing long COVID (or post COVID-19 syndrome) symptoms in both the short term (4 weeks post infection) and the longer term (6 months after infection). There was also evidence that in people already with long COVID, receiving the vaccination improved their symptoms.

[The Office of National Statistics has published data on self-reported long COVID](#)², comparing those that were vaccinated against those that were not, and found long COVID symptoms of any severity were reported by 9.5% of double-vaccinated study participants, compared with 14.6% of similar participants who were unvaccinated, a relative decrease of 41%.

The government has invested in research via UK Research and Innovation (UKRI) and the National Institute of Health Research (NIHR). The NIHR estimates that 1.8 million people in the UK (3% of the population) are experiencing ongoing symptoms known as long COVID. To date, more than £50 million of government funding has been invested in long COVID research projects.³ The bulk of this (£39.2 million) has been awarded to 19 projects.

These 19 projects examine the underlying mechanisms of long COVID, investigate symptoms such as 'brain fog' and breathlessness, and test possible treatments. They explore whether NHS services, such as long COVID clinics, meet people's needs, and look at what people can do to optimise their own recovery.

Several studies reported their first results in less than six months, with more results awaited. This research helps to improve our understanding of the prevalence of long COVID and who's most likely to be affected. Further information is available at [National Institute for Health and Care Research | NIHR](#)

NIHR's latest themed review addressing a new global health challenge summarises the current state of play for these studies and the research findings to date. ⁴

UKHSA in collaboration with Oxford University, is currently developing a surveillance dataset using data from secondary healthcare and mortality records. This dataset will be used to describe the occurrence of routinely recorded health events in secondary care, as well as death among individuals in the post-acute period following COVID-19. Due to the limitations of the information available, analysis of symptom-based clinical presentation will not be possible through this surveillance approach. Once the development of this surveillance dataset is complete, future analysis plans and sharing with academic partners will be developed.

What consideration has been given to the potential impact on vaccine hesitancy, avoidance, or rejection, of a full and clear explanation of the relationship between the effects of the available vaccinations and the long-term impacts of covid infections amongst those who recover in the short term?

Since the introduction of the vaccine, UKHSA has frequently provided evidence-based information to the public about the benefits of vaccination.

The effectiveness and safety of vaccination has been at the front of UKHSA's messaging. UKHSA's predecessor, PHE, supported JCVI whenever changes or developments to the vaccine programme occurred. When the vaccine programme evolved, PHE delivered media briefing alongside JCVI and MHRA to ensure information was credible and grounded in effectiveness and safety.

The benefits of vaccination are communicated in practical ways such as press releases and blogs. PHE ran the SIREN study which followed 40,000 healthcare workers over a 12-month period to investigate COVID-19 reinfection rates and immune response. One blog from February 2021 analysed first vaccine effectiveness in the UK through the SIREN study.⁵

Vaccine effectiveness data has been consistently published throughout the pandemic in different formats, including press releases covering new research⁶ and blogs.⁷

In advising which groups are eligible for an immunisation programme, the Joint Committee on Vaccination and Immunisation (JCVI) carefully considers the groups most at risk of illness, severe illness, or death as a consequence of infection.

The JCVI autumn 2023 statement provided advice and considerations around the eligibility for COVID-19 vaccination and stated that until more and better data are available, the impact of vaccination on the risk, progression and/or outcome of post-COVID syndromes remains difficult to assess or quantify objectively. The JCVI has not specifically considered whether explaining post-COVID-19 syndromes could impact vaccine hesitancy.⁸

It is increasingly apparent that there are likely to be different subtypes of post-COVID-19 syndrome and that the underlying mechanisms of illness may differ between these subtypes. This may explain some of the variation in the reported effects of vaccination in people with long COVID. Studies undertaken over many months following acute COVID-19 infection have also found that symptoms consistent with long COVID may fluctuate over time, adding to the challenges in understanding the condition.⁹

It is hoped that research in this field will lead to better management options for people experiencing post-COVID-19 symptoms. It may be that different subtypes require different management strategies. Until more and better data are available, the impact of vaccination on the risk, progression and/or outcome of post-COVID-19 syndromes remains difficult to assess or quantify.

In addition to the research outputs mentioned above, please note the following papers on this topic:

- [Byambasuren O et al Effect of covid-19 vaccination on long covid: systematic review; BMJ¹⁰](#) which concluded that 'current studies suggest that COVID-19 vaccines might have protective and therapeutic effects on long covid. More robust comparative observational studies and trials are needed, however, to clearly determine the effectiveness of vaccines in preventing and treating long covid'.
- [Ceban et al COVID-19 vaccination for the prevention and treatment of long COVID: A systematic review and meta-analysis; Brain Behav Immun¹¹](#) which concluded that 'future research should investigate factors which affect the trajectory of long COVID symptoms, as well as the temporality of changes following SARS-CoV-2 vaccination, the effects of boosters, and how different long COVID patient subgroups respond to SARS-CoV-2 vaccination'.

I hope that the Committee will find this information helpful. If you have further questions, please do not hesitate to contact me.

Yours sincerely,



Professor Dame Jennifer Harries DBE DL
Chief Executive Officer
UK Health Security Agency

¹ <https://www.gov.uk/government/publications/covid-19-the-effect-of-vaccination-on-transmission-and-against-long-covid>

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<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/selfreportedlongcovidaftertwodosesofacoronaviruscovid19vaccineintheuk/26january2022>

³ <https://www.nihr.ac.uk/about-us/our-key-priorities/covid-19/researching-the-long-term-impact.htm>

⁴ <https://evidence.nihr.ac.uk/themed-review/researching-long-covid-addressing-a-new-global-health-challenge/>

⁵ [COVID-19: analysing first vaccine effectiveness in the UK.](#)

⁶ [Boosters give over 90% protection against symptomatic COVID-19 in adults over 50,](#)

⁷ [Transparency and data – UKHSA's vaccines report.](#)

⁸ [JCVI statement on the COVID-19 vaccination programme for autumn 2023, 26 May 2023 - GOV.UK \(www.gov.uk\)](#)

⁹ <https://www.gov.uk/government/publications/covid-19-the-effect-of-vaccination-on-transmission-and-against-long-covid>

¹⁰ <https://bmjmedicine.bmj.com/content/2/1/e000385>

¹¹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10067136/>