



## Participant Newsletter

As we come to the end of March, we take a look back at the SIREN+ Winter Pressures and RespOME sub-studies, and highlight some of the valuable data you have provided.

We will also be looking ahead, and are excited to share our plans for new data collection, including a survey investigating persistent COVID-19 symptoms, ongoing data analysis, and what the next steps will be for the SIREN study.

### Coming up in this issue...

**Wrapping up SIREN+ Winter Pressures**

As we approach the end of the SIREN+ Winter Pressures sub-study, take a look at our data on symptoms and time off work in healthcare workers during this winter season.

**The SIREN+ RespOME pilot study**

Participants taking part in the RespOME sub-study have now completed surveys and testing, and samples are arriving at the Wellcome Sanger laboratory for processing and analysis.

**Persistent COVID-19 symptoms**

Long lasting symptoms after a COVID-19 infection can affect people's lives and work. SIREN is planning a new survey to collect data on people's experiences to understand how this may have changed over time.

**Science Corner**

Learn about SIREN's latest research comparing at-home and in-hospital blood sampling methods, and investigating immune responses to COVID-19 variants after vaccine roll-out.

**Future plans for SIREN**

Read about our plans for SIREN over the coming year.



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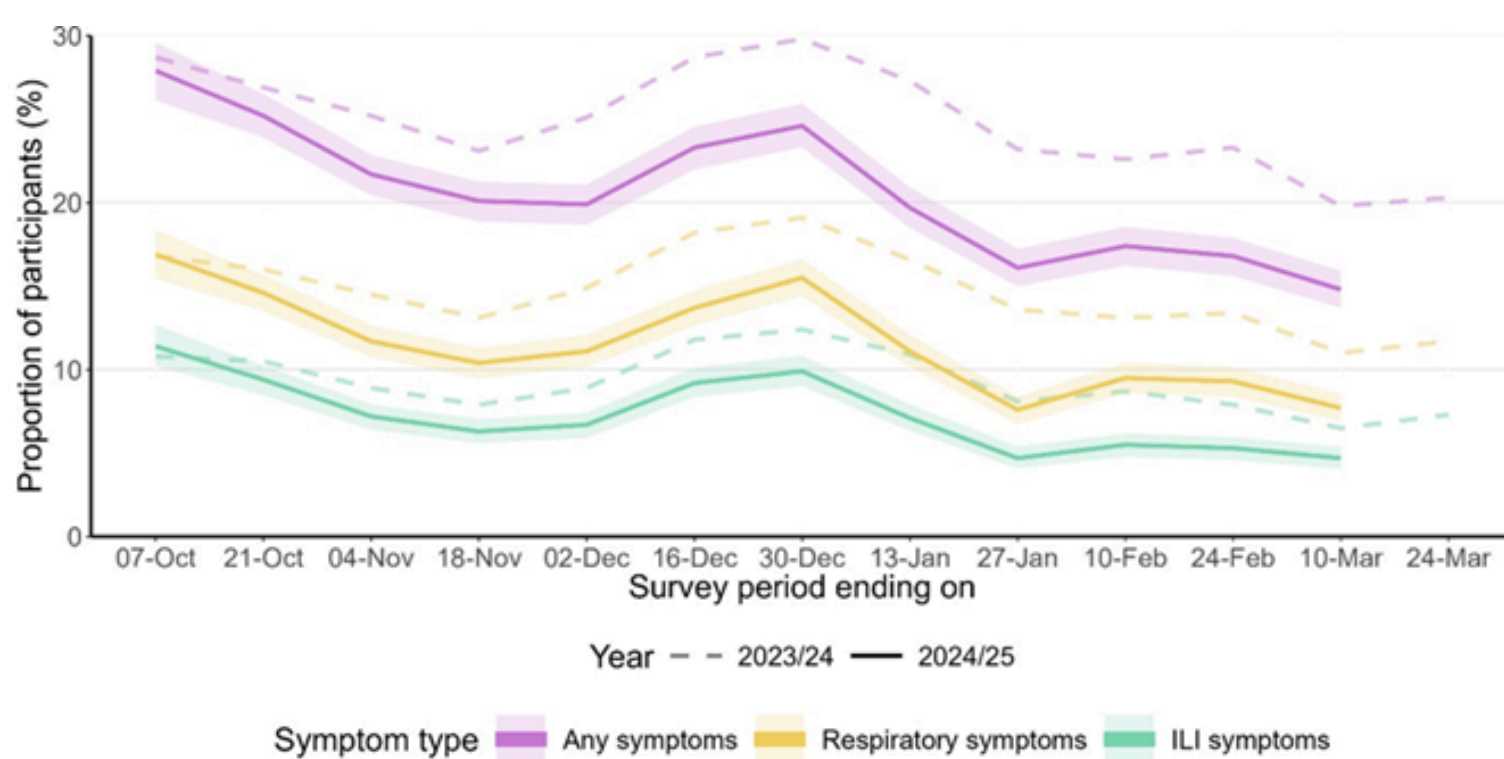
### WRAPPING UP

### Wrapping up SIREN+

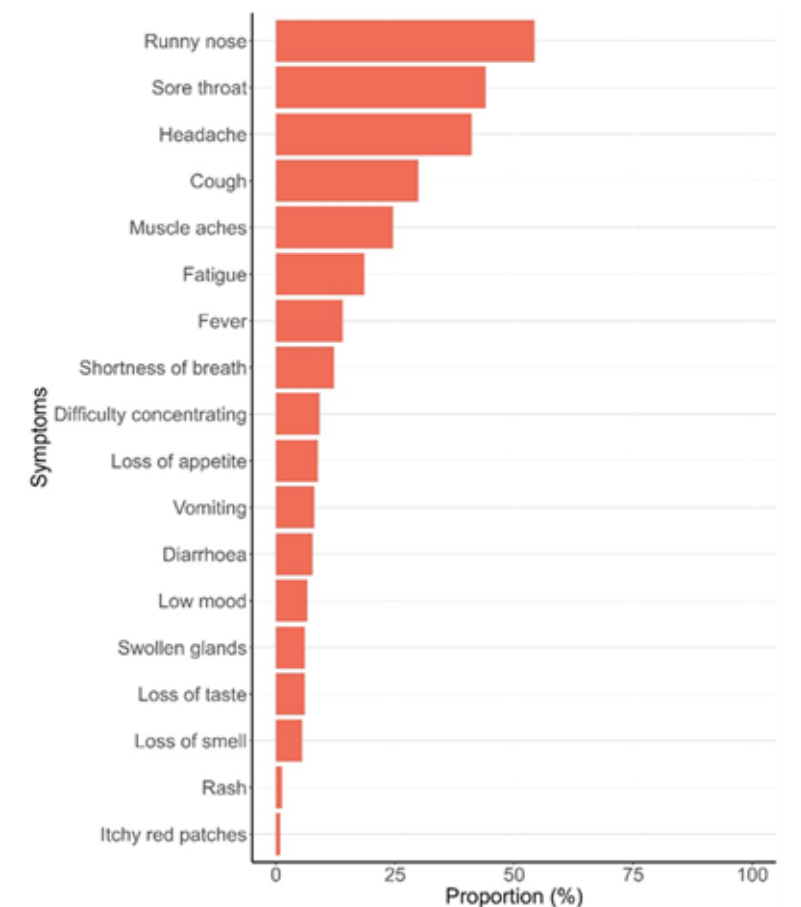
The SIREN+ Winter Pressures sub-study is now coming to an end, and final surveys are being completed.

This winter season, 5,302 people took part in the fortnightly surveys, recording information on their symptoms and time off work. We had a great response to this sub-study, with an average of 85% of surveys being completed each fortnight!

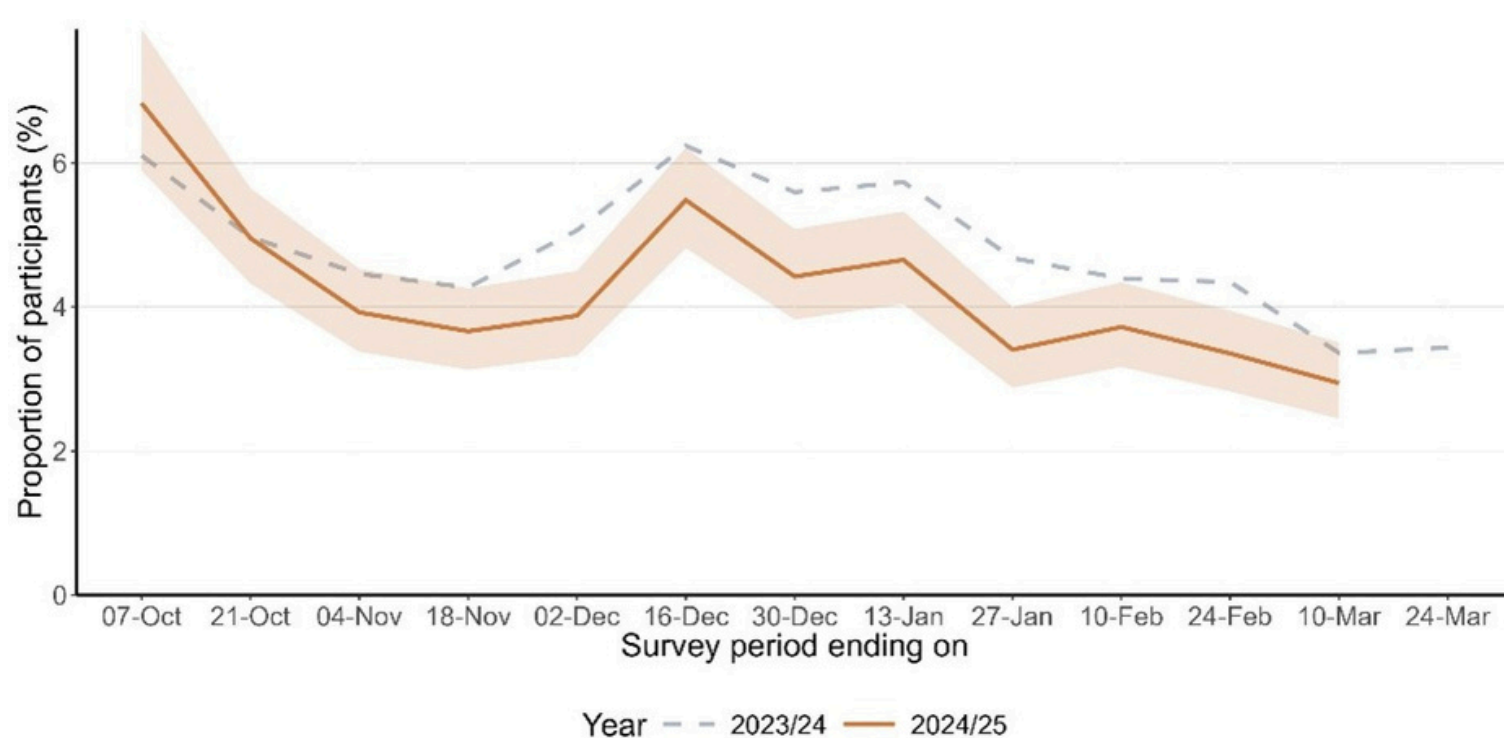
Take a look below to see a snapshot of our preliminary results.



Proportion of SIREN+ participants reporting any symptoms, influenza-like illness (ILI) symptoms and respiratory symptoms, by fortnight, September 2024 to March 2025



Cumulative proportion of participants reporting symptoms by type, September 2024 to February 2025



Proportion of SIREN+ participants who reported taking time off work due to sickness, by fortnight, September 2024 to March 2025



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# SIREN

SARS-Cov-2 Immunity & Reinfection Evaluation

## Participant Newsletter

UPDATES

As always, we want to share a huge thank you with those that took part. The data we've collected with your help will be invaluable for understanding how winter pressures affect our hospitals' workforce and staff resilience.

### The SIREN+ RespOME pilot study: an update

You may have read about the SIREN+ RespOME pilot study in our last newsletter. To briefly recap, this is an exciting collaboration with the Wellcome Sanger Institute at the University of Cambridge.



The study has two goals: firstly, characterising the respiratory microbiome of healthcare workers, and, secondly, measuring how many participants carry bacterium such as *Staphylococcus aureus* in their nose or throat.

Healthcare workers are exposed to respiratory pathogens through their work, so understanding how these microorganisms live together, and what factors influence colonisation may be useful for preventing infections and understanding if healthcare workers differ from the general population.



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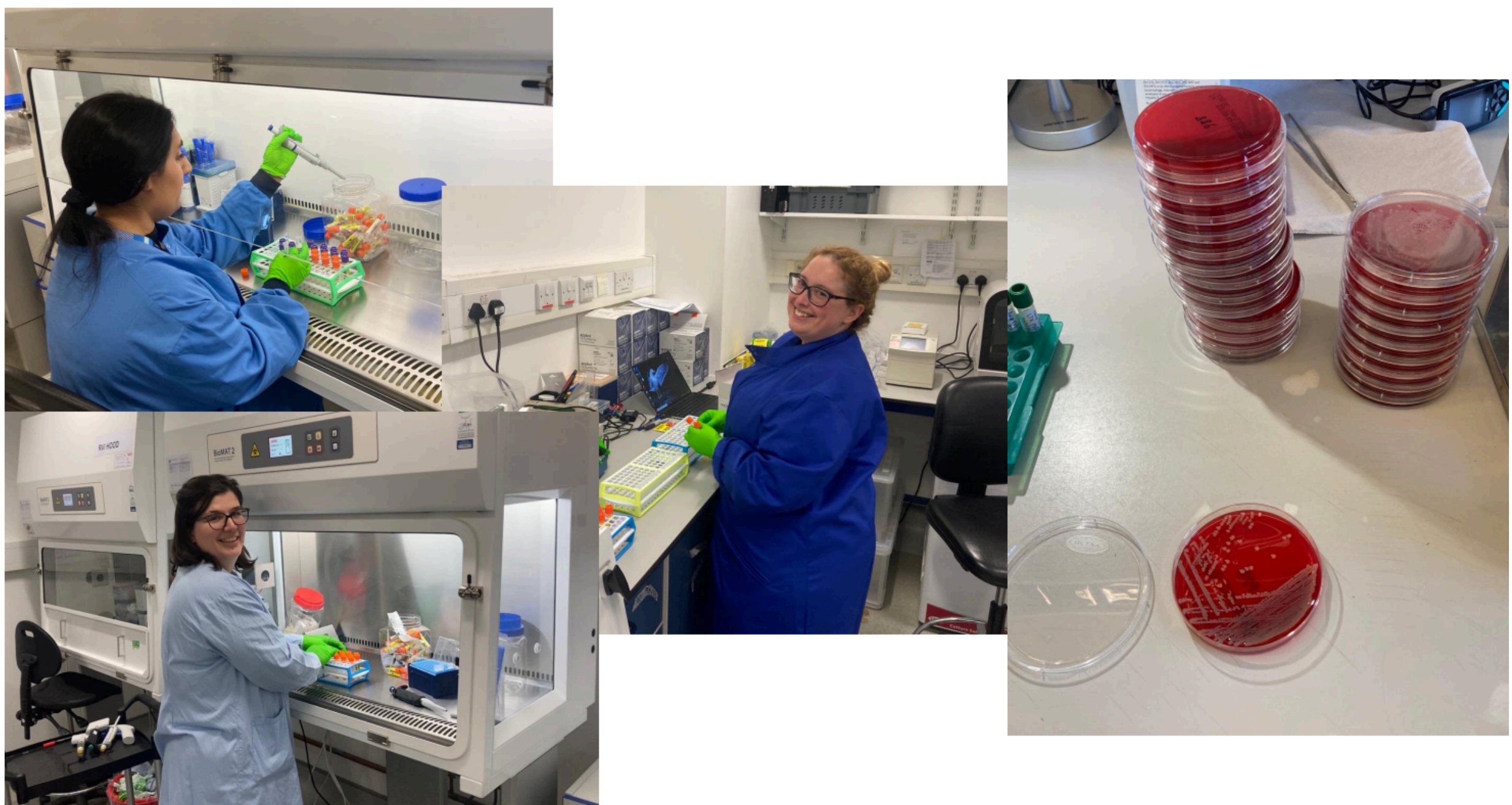
## Participant Newsletter

UPDATES

252 front-line workers from the SIREN+ cohort joined the RespOME pilot study in early February 2025. There was lots of interest in the study, and the recruitment target was met in under 24 hours of registration going live.

94% of RESPOME participants have completed an online questionnaire and 85% have completed their postal nose and throat swab, the swabs will undergo testing at the Wellcome Sanger Institute in Cambridge. As this sub-study progresses, we look forward to sharing more information with you through the SIREN newsletter.

For now, take a little peek behind the scenes at how your samples are being processed at the Sanger lab:





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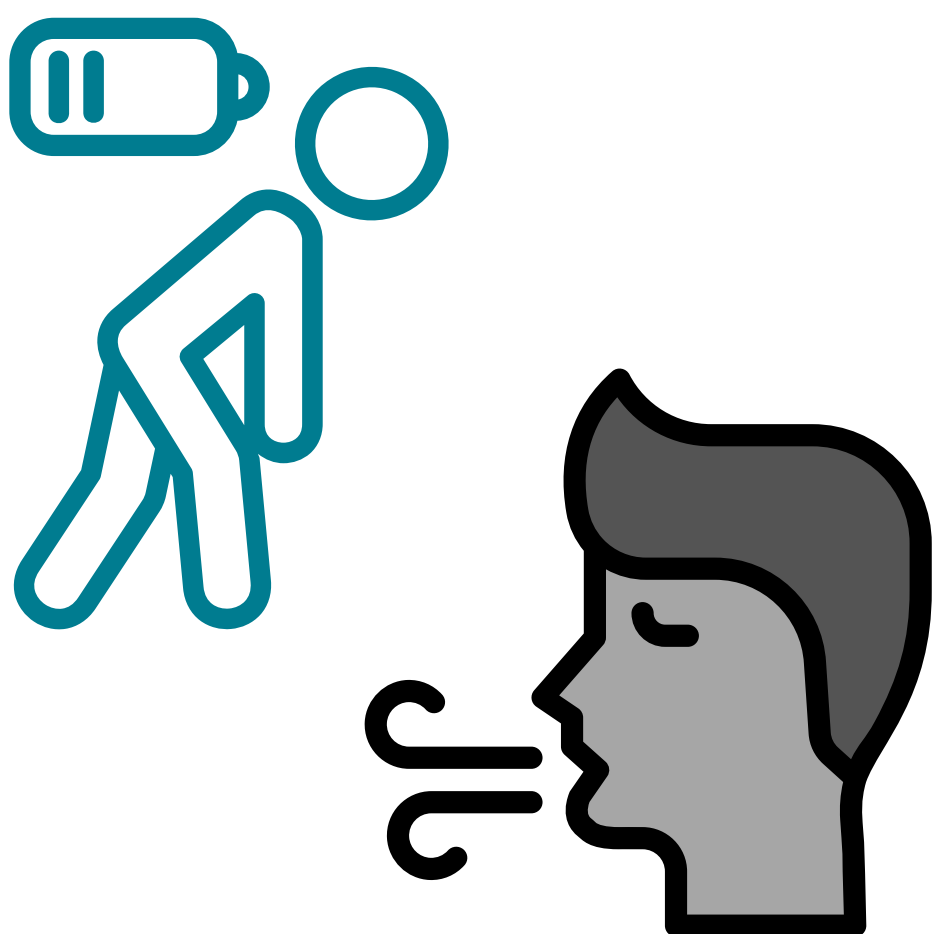
## Participant Newsletter

RESEARCH

### Upcoming research into persistent COVID-19 symptoms

COVID-19 infection can lead some people to experience a range of long-lasting symptoms, affecting their lives and ability to work.

To better understand this, SIREN study participants were invited to complete a questionnaire about symptoms and time off work following infection in September 2022. Over 6,500 people responded, and shared information about their experiences following a COVID-19 infection.



We found that persistent symptoms are most likely to occur after the first COVID-19 infection compared to subsequent infections. The most commonly reported symptoms were fatigue, tiredness, shortness of breath, and difficulty concentrating. The full analysis has now been published in the *Journal of Infection* and you can read the article [here](#).



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RESEARCH

We would now like to understand how people's experiences of long-lasting symptoms may have changed since 2022. We are currently finalising a new questionnaire, which has been developed with experts in the field. This is to ensure we capture the most important data for the UK.

We are also working with international researchers on this topic through the SEARCH network, a collaboration between healthcare worker studies spanning Europe, America, and Asia.



We plan to share further details about the survey with you shortly, so please keep an eye out for future communications if you are interested in taking part.



## Participant Newsletter

**Pre-print: Evaluating blood sampling strategies within the SIREN study: the experience from a large cohort of healthcare workers in the UK**

### Research questions

- To evaluate different blood sampling methods used in SIREN throughout the years.

### Methods

- A process evaluation was carried out, which involved:
- Describing blood sample collection and management over the course of the study (2020 – 2024)
- Comparing two methods of blood sampling: hospital-based (venous phlebotomy) vs. at-home (capillary sampling)

### What did the study find?

- There were pros and cons of each sampling method.
- Samples taken at home had a higher return rate than those taken in a hospital (80% vs 71% respectively), and were sent to the laboratory for testing more rapidly. At-home samples were also cheaper.
- However, hospital samples collected more blood, and were less likely to be void (0%) than at-home samples (4%).
- Most participants also reported preferring at-home sampling to testing in a hospital (55% vs 23%).

### Why is this significant?

- Large-scale research studies like SIREN are complex, and it can be tricky to collect and manage the blood samples for all participants.
- Understanding the pros and cons of hospital vs at-home blood testing allows research to be done more effectively in future.

### Take home messages

- Compared to blood sampling in a hospital, at-home blood sampling can be effective and cheap, and participants often prefer it.
- You can read the full pre-print [here](#).



## Participant Newsletter

### Estimating neutralising antibody responses against emerging SARS-CoV-2 variants utilising convalescent sera before the roll-out of XBB-lineage vaccines

#### Research questions

- Predicting real-life protection of COVID-19 vaccines against new variants is challenging.
- The Omicron variant BA.2.86 has a lot of mutations and is genetically distant from other variants, raising concerns around whether immunity (either from vaccination or infection) based on other strains would be effective against it. For example, new vaccines rolled out to address XBB variants (XBB-lineage vaccines).
- Here, SIREN blood samples collected over time are used to:
  1. Predict how well the updated XBB vaccines would protect people against the BA.2.86 Omicron variant.
  2. Understand the real-world immune response after the updated XBB vaccine boosters were rolled out

#### Methods

- Blood samples from people before and after infection with the variant XBB.1.5, and before and after receiving the updated XBB vaccination, were tested against Omicron subvariants.

#### What did the study find?

- Both infection and vaccination with the updated XBB booster, led to increase in neutralising antibody titres against the BA, 2.86 variant .

#### Why is this significant?

- These results informed decision-making on offering XBB booster vaccines in the UK in Autumn 2023.

#### Take home messages

- Immunity gained through either infection or vaccination with the XBB strain of SARS-CoV-2 may also provide some protection against other Omicron variants.
- You can read the full article [here](#).





## Participant Newsletter

### Future Plans

While the SIREN+ Winter Pressures sub-study 2024/5 is coming to an end, there's still plenty of work going on behind the scenes to analyse the huge amounts of data collected – both from this Winter and before, using samples stored in our Biobank.

For the latest information about our ongoing research collaborations, including the organisations we are working with and a summary of each project, please take a look at our study portal [here](#).

#### *A snapshot of the new portal:*

SIREN Study   Latest News   Manage Participation   Publications <b>Collaborations</b> Contact Us		
Collaboration has been a key feature of SIREN, increasing the impact of our study through multidisciplinary partnerships.		
Below you can find a list of our main collaborators throughout the study:		
ACTIVE		
Collaborator	Project/Study Name	Projects/Study Aim
	Participant Involvement Panel (PIP)	To facilitate the meaningful involvement of study participants in shaping key aspects of SIREN throughout the study life cycle including the development of research questions and identifying priorities. PIP members meet regularly to discuss study developments and provide feedback to the research team.

In addition to ongoing data analysis, we are now looking ahead to the next exciting research studies within the SIREN cohort focused on healthcare worker health. We look forward to sharing more details of this with you in due course, both through our newsletters and via email.



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Thank you for your continued engagement with SIREN, which makes this research possible.

If you have any questions or want to get in touch, please email  
[phe.siren.participants@ukhsa.gov.uk](mailto:phe.siren.participants@ukhsa.gov.uk)

*Thank  
you!*