



# SIREN

SARS-Cov-2 Immunity & Reinfection Evaluation

## Participant Newsletter



Welcome to the Christmas issue of the SIREN participant newsletter. Read on to find out about our latest updates, including details of our new SIREN+ cohort, how we are working to create an accessible SIREN Biobank, the new Participant Involvement Panel, and our latest research.

As ever, a massive thank you for your valuable contribution to SIREN, and we wish you a happy festive period.

### Coming up in this issue..

#### 1. The SIREN+ Cohort

Learn more about our research this Winter, and details on our SIREN+ cohort

#### 2. Building a SIREN Biobank

Creating a valuable resource for public health and the medical research community

#### 3. Introducing our PIP!

The SIREN+ members taking part in our Participant Involvement Panel

#### 4. Science Corner

Sharing our latest data on vaccine protection and persistent COVID-19 symptoms



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### SIREN+ Winter Pressures sub-study

#### What is SIREN+ Winter Pressures sub-study?

Healthcare workers face significant challenges over the winter period, with higher demand for services coinciding with respiratory infections affecting both staff and patients.

From October 2024, fortnightly SIREN+ surveys are being sent to participants to ask about their symptoms experienced, vaccination history, and time off work due to respiratory illness.

#### Why is this important?

Seasonal winter pressures affect hospitals every year. Collecting this data on staff symptoms, vaccination, time off work, and more, provides valuable insights into the health and wellbeing of healthcare workers across the UK. This information helps us to understand the burden of respiratory infections during winter in healthcare workers and how to better support the workforce against the respiratory illness over that period.

#### What's changed?

SIREN+ participants are still being asked to complete fortnightly surveys. We have adapted the surveys to include information on time off work, tests participants have taken outside of SIREN+, vaccinations, and treatment for COVID-19 and influenza, which will allow us to build a more detailed picture of health and respiratory infection over this winter season.

However, in contrast to previous years, those taking part are not being asked for blood or PCR samples.



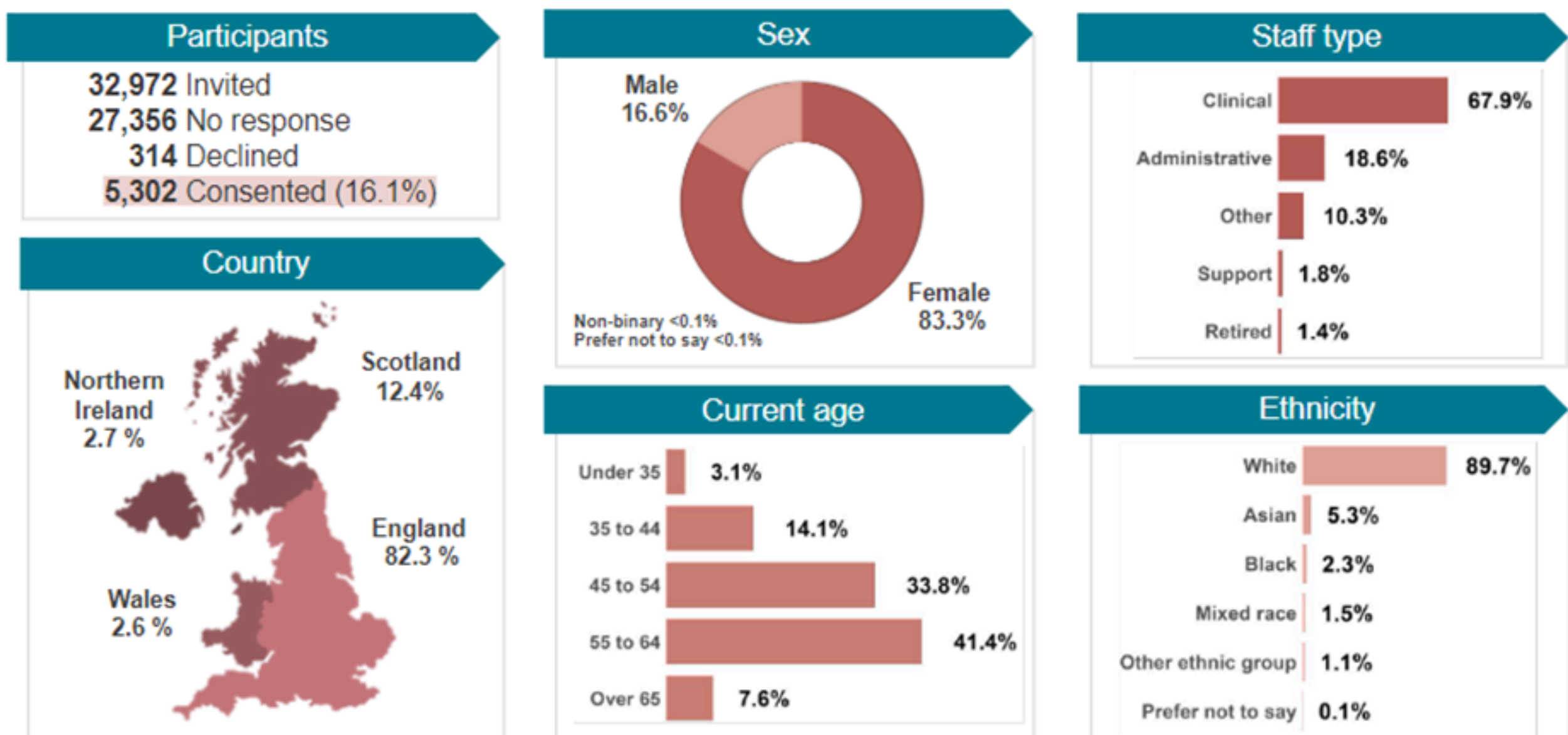


## Participant Newsletter

### Introducing the SIREN+ Cohort

Recruitment closed for SIREN+ on the 25th October 2024. We are excited to announce more than 5,300 participants have signed up to take part, and the study is running until March 2025. A range of participants were recruited across different demographic groups including professional roles, ethnicity, gender identity, and location, which mostly reflects the diversity of the UK healthcare system.

Read on to see a snapshot of our cohort demographics...



Participants were recruited across the United Kingdom, with over 80% of participants from England and one quarter of participants from Wales, Northern Ireland, and Wales. Two in three SIREN+ participants work on a clinical role. The age of the cohort skews slightly older with over 70% over 45 years. Most (83.3%) participants are female and of white ethnicity (89.7%), followed by asian (5.3%) and black (2.3%) ethnicity.



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### Developing a SIREN Biobank

Since SIREN started, our participants have contributed over one million PCR swabs and 400,000 sera samples. Each sample has been used to answer key questions around respiratory infections and COVID-19 immunity. Now, we are looking to develop the SIREN biobank of left-over samples into an accessible resource for the public health and medical research communities, to continue providing invaluable data for pressing research questions.

In practice, this means we may share some of the samples you provided with external academic and research partners, subject to a robust approval process. We will continue to ensure high ethical and data protection standards are in place for sharing any samples.



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**PARTICIPANT INFORMATION LEAFLET:**  
**Utilising your leftover samples for future research**

To understand more about the SIREN biobank and how your samples may be used, the Participant Information Leaflet is available [here](#). You may also find a list of our research collaborators at the [SIREN Study portal](#)



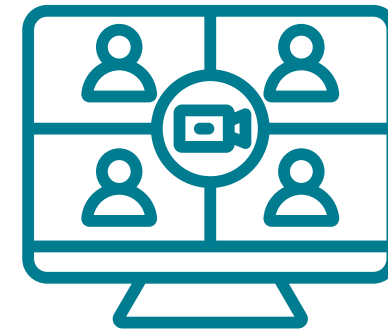
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### Our Latest SIREN Participant Webinar



We hosted a SIREN+ participant webinar on the 26th November 2024. In addition to outlining the SIREN biobank, we were also joined by our collaborators from the Francis Crick Institute and the Wellcome Sanger Institute to share examples of how SIREN data can be used by researchers to provide important inputs into public health questions.

- **Dr Edward Carr, Francis Crick Institute**, outlined key research into antibody responses against flu (influenza) following vaccination in the SIREN 2.0 cohort, using a large-scale testing developed at The Crick. Preliminary data found that flu antibodies are boosted by vaccination and that antibody response was similar between different age groups. Further analysis is ongoing to better understand antibody responses from those vaccinated who have got a flu infection for 2023/24 winter season and who have not.
- **Dr Ewan Harrison, Wellcome Sanger Institute**, shared how using metagenomics to investigate which respiratory viruses other than SARS-CoV-2, Influenza and RSV were present in SIREN 2.0 PCR swabs. This data will inform our understanding of which other pathogens are cause infections in healthcare workers, their symptoms, and how they transmit.



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The webinar was well received by attending participants with positive feedback.

**“The webinar was very informative and explained everything so well.”**~SIREN Participant

If you would like to catch-up with the recording, please view [here](#). The link is also available at the Latest News tab at the [SIREN Study Portal](#).



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### The SIREN+ PIP Corner

**Thank you for your interest!**

A massive thank you to everyone that expressed interest in being in our Participant Involvement Panel (PIP). We received a huge number of responses - over 300!

The PIP is made up of ten members and aims to reflect the range of participants in SIREN+. The PIP's role is to provide invaluable insights into the participant experience, providing a feedback loop between the central SIREN team and participant representatives.

The PIP will discuss significant changes and updates to the study, as well as contributing to participant and public engagement activities essential to the running of the study. For example, previous PIP members have contributed to study newsletters, webinars and blog posts.



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### Science Corner

**Protection of vaccine boosters and prior infection against mild/asymptomatic and moderate COVID-19 infection in the UK SIREN healthcare worker cohort: October 2023 to March 2024**

#### Research questions

- Did the Autumn 2023 COVID-19 booster vaccine (monovalent) provide extra protection against COVID-19 infection?
- Does prior infection protect you from COVID-19 infection?

#### Who participated in the study?

- 2,867 SIREN participants who had had their last COVID-19 booster in Autumn 2023

#### What did the study find?

- Half of the participants (1422) had a booster in October 2023
- Over the 6-month follow-up period, 536 (19%) participants had at least one COVID-19 infection
- Compared to boosters over six months old (waned boosters), a new booster in October 2023 was shown to give a 27.2% protection against infection through mathematical modelling.
- Having had a COVID-19 infection in the last six months gave a 49.3% increase in protection in the follow-up period

#### Why is this significant?

- This is one of the most up-to-date pieces of evidence of real-world effectiveness for COVID-19 boosters. This data therefore has important policy implications for future vaccination campaigns.

#### Take home messages

- Vaccination and prior infection provide an additional but temporary increase in protection against COVID-19 infection.

You can read the full article [here](#).



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### Science Corner

**Prevalence and impact of persistent symptoms following SARS-CoV-2 infection among healthcare workers: A cross-sectional survey in the SIREN cohort**

#### Research questions

- What is the prevalence and impact of persistent (long-term) symptoms due to COVID-19 infection before and after vaccination in the SIREN cohort?

#### Who participated in the study?

- SIREN participants who had a COVID-19 infection before September 2022 were sent a symptoms questionnaire
- 5,053 participants completed the survey and were included in the analysis

#### What did the study find?

- Almost a third of respondents had experienced symptoms lasting over 12 weeks after infection.
  - The most common symptoms were fatigue and tiredness.
  - Different COVID-19 variants showed different effects, with Wild-type infections associated with higher proportion of long lasting symptoms
- Fewer people had persistent symptoms after COVID-19 vaccination.

#### Why is this significant?

- Persistent symptoms have implications not just for people's wellbeing and health, but also workforce planning and occupational health teams supporting those coming back to work.

#### Take home messages

- A substantial number of SIREN participants have experienced persistent symptoms after a COVID-19 infection, impacting their life and work.  
You can read the full article [here](#).



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**Thank you for your ongoing support to the SIREN study!**

As always, should you want to get in touch with us directly please reach out to [phe.siren.participants@ukhsa.gov.uk](mailto:phe.siren.participants@ukhsa.gov.uk).

From the SIREN team, we wish you a very merry Christmas and a happy New Year!

