UK Health Security Agency

SIREN PARTICIPANT NEWSLETTER

20 JANUARY 2023

Dear colleagues,

Happy new year! Welcome to the first SIREN newsletter of 2023. In this issue you will find updates from the UKHSA SIREN team which we hope you will find helpful.

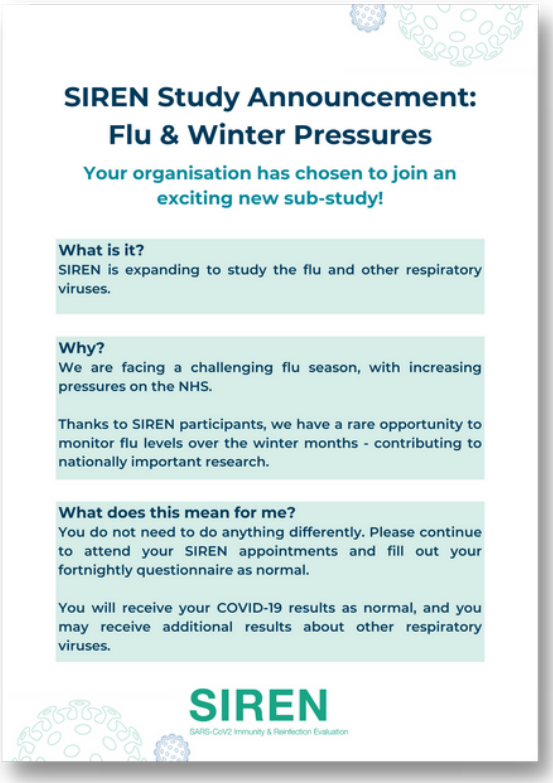
SIREN is shaped by your feedback and we'd really like to hear from you. If you would like to submit your reflections to be included as a case study in an upcoming issue of the SIREN newsletter, please fill out our form.

As ever, thank you for your ongoing contribution to the SIREN study.

Coming up in this issue...

1. Announcements

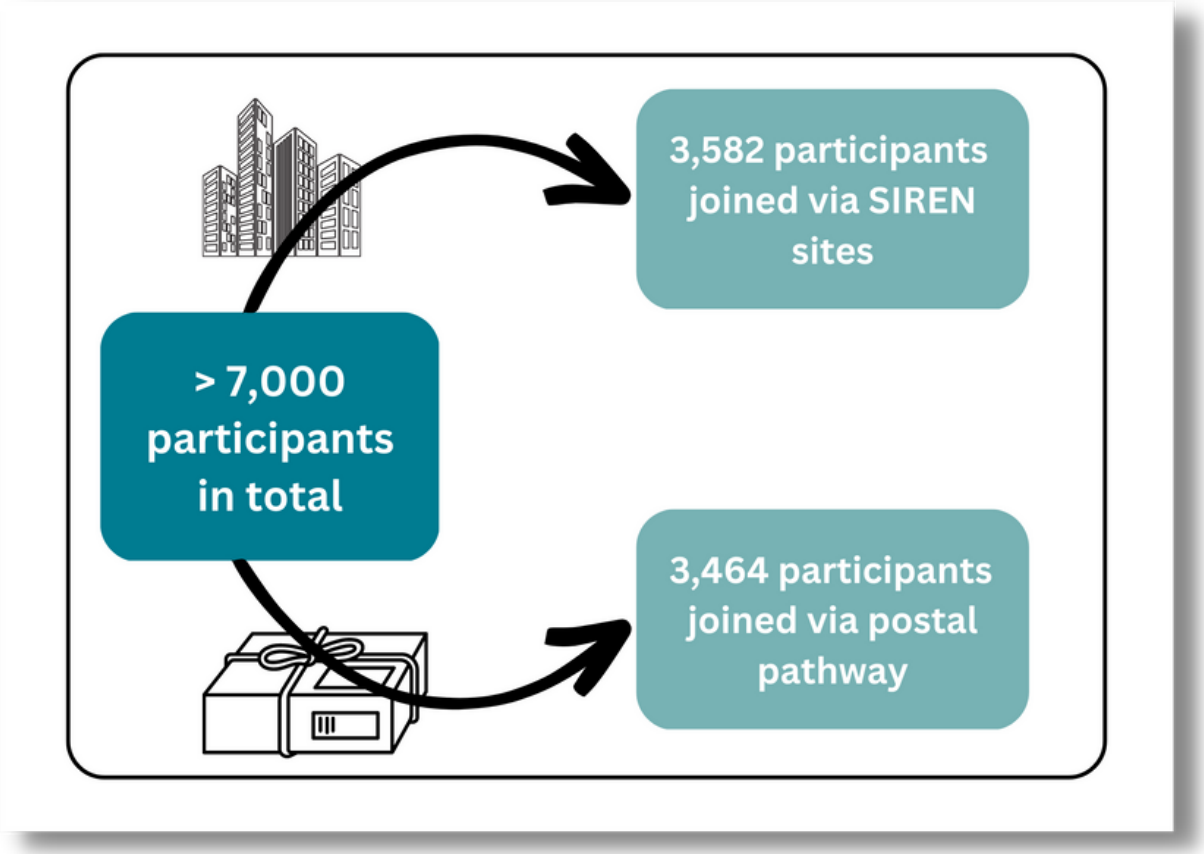
A) Flu & Winter Pressures Sub-study Update



As many of you may be aware, SIREN launched a new sub-study at the end of 2022 to investigate additional respiratory viruses within the cohort. This includes flu and RSV.

Thirty seven SIREN sites have joined the Flu & Winter Pressures sub-study to date, and we were also able to invite a number of participants to contribute via a postal pathway.

We are really grateful to those who are taking part. As a cohort you have helped find answers to some of the most pressing COVID-19 research questions, and we look forward to sharing the results of our research into additional respiratory viruses at a later date.



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B) SIREN Participant Webinar

The SIREN study team will soon be sharing an invite to join us for a live webinar on 17th March 2023, 12:30-13:30.

All SIREN participants will be invited to attend, and we hope as many of you as possible can join us!

The webinar will be an opportunity for the SIREN study to share key research outputs, and the impact of the study to date, to highlight what the regular samples you have provided over the past 2+ years has contributed towards.

The webinar is also an opportunity to thank you all for your contribution to date, celebrate what has been achieved and provide an update on plans for SIREN post-March 2023.

Please keep the date in your diary free, and look out for an email or text with further information on how to join.

In the meantime, if you would like to keep up with the latest about the SIREN study please head to our **webpage**. You can also join the conversation on Twitter by searching **#SIRENstudy** and following **@Victoria_jhall** and **@SMHopkins**.

2. The Easy Digest

Early Warning Surveillance for SARS-CoV-2 Omicron Variants, United Kingdom, November 2021–September 2022

Plain Language Summary

OVERVIEW

This article demonstrates that the SIREN study acts as an early warning surveillance system for COVID-19 and COVID-19 variants.

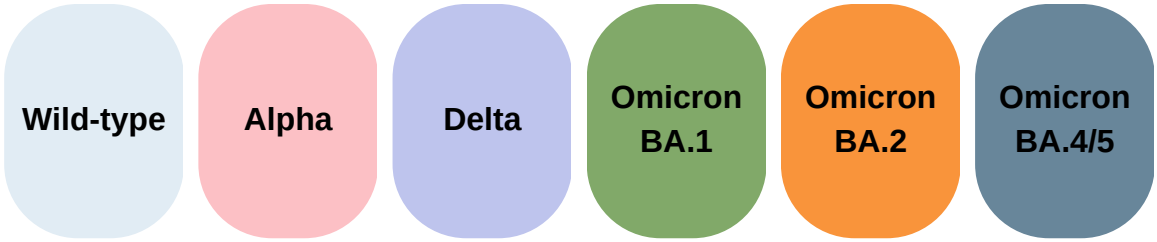
KEY POINTS

Making waves:

- SIREN plays an ongoing role in national COVID-19 surveillance by monitoring primary infections and reinfections, and by monitoring emerging variants.
- The paper defines a primary infection and reinfection in the following ways:

PRIMARY INFECTION:	REINFECTION:
A PCR-positive test from a participant without laboratory evidence of prior infection, such as a positive PCR test or antibody positivity before first vaccination.	A PCR-positive test more than 28 days after an antibody positive test (antibodies from infection, not vaccination) OR two PCR-positive tests more than 90 days apart.

- SIREN data has highlighted six distinct infection waves:



- SIREN data shows that the highest infection rates were recorded during the Omicron BA.1 and BA.2 waves.

Observing Omicron:

- During the Omicron BA.1 and BA.2 waves the reinfection rate exceeded the primary infection rate for the first time.
- Immunity (gained from previous infection or vaccination) was less protective against an Omicron infection.
- Reinfection rates dropped during the BA.4/5 Omicron wave, likely because protection improved after BA.1 and BA.2 infection.

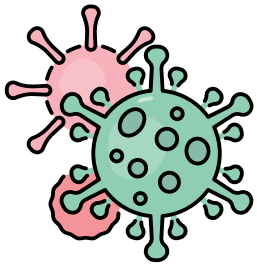
Comparison to other studies:

- SIREN samples with a high enough RNA load can be sent for sequencing. This is known as sequencing yield. The SIREN sequence yield was found to be comparable to other studies.
- COVID-19 waves identified by SIREN waves are consistent with national surveillance trends.

TAKE HOME MESSAGES

- SIREN data showed that **Omicron** emerged and **caused a rapid rise in infection and reinfection** rates, **regardless of vaccination** status.
- **SIREN data** detected COVID-19 variants within a **similar timeframe to national data**.
- While SIREN is not representative of the general UK population, the **cohort represents a highly exposed group** who also have contact with vulnerable patients.
- This, in addition to the relative timeliness of its surveillance, shows the **SIREN study plays a valuable role in complementing other national surveillance** programmes.
- As the UK adapts to a new phase of the pandemic response with reduced testing, **SIREN provides a sustainable and focused surveillance platform**.

Read the full article: CLICK HERE



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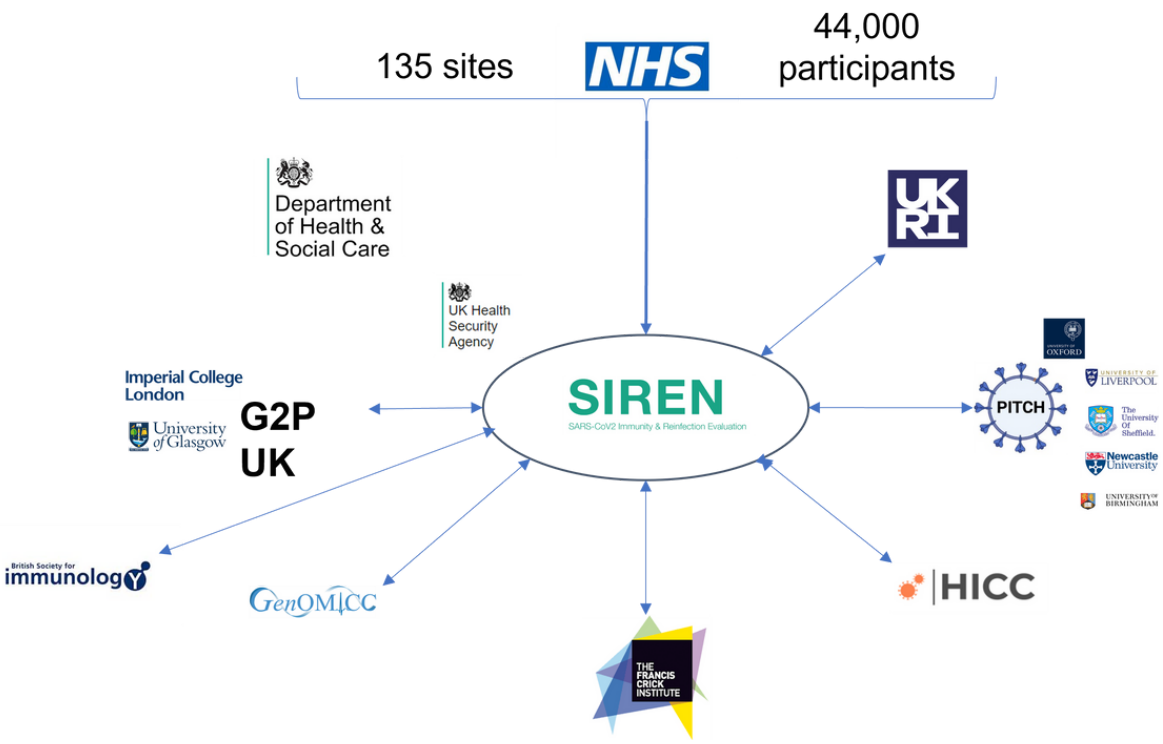
3. Consortium Corner

The SIREN Consortium is a unique, multidisciplinary collaboration established to answer key questions about the mechanisms and durability of COVID-19 immunity.

Consortium members include:



Each SIREN Consortium member focuses on its own particular research area. To **provide more insight into the Consortium and some of the people behind the research**, we asked representatives from different organisations to share a bit about themselves and their work with SIREN.

We share the first two introductions below, and look forward to introducing more Consortium members in future newsletter issues. **Please click on the videos to watch.**

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SIREN PARTICIPANT NEWSLETTER

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"Hello, I'm Erika Aquino and I am the Public Engagement Manager at the British Society for Immunology. We work within the SIREN Consortium managing and facilitating the Participant Involvement Panel (PIP). The PIP is a group of 10 SIREN participants, and essentially it's an active partnership between participants and the researchers. The PIP is about bringing people together to have conversations about what is happening in SIREN, the science, and bringing in that patient perspective to the study management. The PIP feeds back on how the study is run, what the study outcomes are and how we communicate this to the wider public."

"Hi my name is Susanna Dunachie, I'm a Professor of infectious diseases at Oxford University. I am one of the co-leads of the UK PITCH Consortium which is a study of t-cell in healthcare workers. This study is nested within SIREN. PITCH is based at five sites, three of the sites – Liverpool, Sheffield and Newcastle – are also SIREN sites, the other two sites are Oxford and Birmingham."