Witness Name: Jenny Harries
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UK COVID-19 INQUIRY
MODULE 3
SUPPLEMENTAL CORPORATE WITNESS STATEMENT OF
PROFESSOR DAME JENNY HARRIES

Section 1: Introduction

I, Professor Dame Jenny Harries, of the UK Health Security Agency ("UKHSA"), 10 South Colonnade, Canary Wharf, London E14 4PU, will say as follows: -

1.1. I am the Chief Executive ("CE") of UKHSA. Prior to taking on that role, I was Deputy Chief Medical Officer for England from 15 July 2019 to 31 March 2021.

1.2. Module 3 of the UK Covid-19 Inquiry ("the Inquiry") is investigating the impact of the pandemic on healthcare systems in the four nations of the UK. In response to a Rule 9 request dated 9 May 2023 seeking a corporate witness statement from UKHSA, I provided a statement for this module dated 31 January 2024 **[INQ000410865]**. I will refer to this as my corporate witness statement to distinguish it from the corporate witness statement dated 31 January 2024 provided for Module 3 by Professor Susan Hopkins, Chief Medical Advisor to UKHSA, (hereafter Professor Hopkins' statement) **[INQ000410867]** and from the personal statement for Module 3, dated 27 June 2024, I made in response to a Rule 9 request from the Inquiry dated 18 March 2024 **[INQ000489907]**.

1.3. On 6 November 2024, I gave oral evidence at the Module 3 public hearings. During that evidence, I offered to write to the Inquiry with further information on a few key areas. I make this statement to fulfil that commitment. This is my ninth statement to the Inquiry to date, having provided 7 corporate statements and two personal statements for Modules 1 – 4.

Section 2: Post-hearing evidence

Change to shielding guidance

2.1. Paragraph 95 of my corporate witness statement introduces a table setting out the contribution of Public Health England ("PHE"), and subsequently UKHSA, to Government guidance for the Clinically Extremely Vulnerable ("CEV") and Clinically Vulnerable ("CV") **[INQ000410865/0033].** The table also explains what changes were made to the guidance over time. The entry for 29 September 2020 notes that guidance given to the CEV group was "*updated to remove references to rates of transmission of coronavirus falling, in response to user feedback*". I was asked by Counsel to the Inquiry ("CTI"), Jacqueline Carey KC, to clarify what the user feedback was and why that led to a change in the guidance.

2.2. As with all guidance related to shielding, the CEV guidance was hosted on gov.uk, which was an important reference point for those shielding. The site allows its users to provide feedback and comments online which is then available to individual government departments and agencies. Throughout the pandemic PHE monitored epidemiological and other factors routinely to ensure accuracy, consistency, and coherence of public health guidance. In Autumn 2020, PHE and DHSC recognised that the Government's CEV guidance did not reflect the changing epidemiological picture. Transmission rates were beginning to rise in parts of the country, yet the extant CEV guidance referred to rates of community transmission falling. Steps were therefore taken to update the guidance. The difference between the published guidance and transmission rates was raised in feedback from those accessing the guidance on gov.uk. The entry in the table reflects the latter input but to be clear the driver for the change in the guidance was the ongoing monitoring of the epidemiology. To that extent the table does not give the full picture.

Terminology related to transmission of respiratory viruses

2.3. Having been asked about evidence given by Professor Hopkins at the Module 3 public hearing on 18 September 2024, I offered to provide the Inquiry with details of the work that has been and is being undertaken to review the terminology used in relation to the transmission characteristics of respiratory viruses.

2.4. Changing the descriptive terminology used across different disciplines requires both national and international agreement to be effective. UKHSA is committed to contributing to developing agreed terminology that better reflects the transmission through the air of pathogens that can potentially cause infection in humans. UKHSA has already engaged with the World Health Organization ("WHO") on this issue. In November 2021, the WHO convened a global technical consultation with public health agencies and experts to resolve inconsistencies and seek agreement on descriptors and terminology relating to transmission of pathogens through the air. UKHSA representatives were invited, via its membership of the WHO Global Infection Prevention and Control Network ("GIPCN")[1], to attend the WHO consultation meetings on the proposed new terminology. Following that consultation process, the WHO published a report in April 2024, titled '*Global technical consultation report on proposed terminology for pathogens that transmit through the air*' ("the 2024 WHO report") **(Exhibit JH9/01 INQ000492325)**.

2.5. The 2024 WHO report recognises that the terms *'airborne*', '*airborne transmission*', and '*aerosol transmission'* were used in different ways in different scientific disciplines, *"which may have contributed to misleading information and confusion about how pathogens are transmitted in human populations*" (see executive summary). It proposed that a new descriptor of *'infectious respiratory particles*' be adopted, noting that these particles exist in a wide range of sizes and that a number of factors influence how they travel through the air. The report explained that using the phrase *'transmission through the air'* as an umbrella term to describe the transmission of infectious respiratory particles through the air via either the mode of airborne

[1] The GIPCN aim to enhance local, national, and international coordination and collaboration in the field of infection prevention and control ("IPC") and to support WHO's and Member States' efforts on IPC; from preparedness, to IPC systems and programmes strengthening, outbreak prevention and control, as well as capacity building for surveillance.

transmission or direct deposition simplified a highly complex issue. Its use would require specific socialisation and training to be understood by healthcare workers and the public. The report noted concerns that changes in terminology could have *"legal, operational, logistical, and financial consequences with global implications for equity and access"* and concluded that the descriptors proposed *"should be a starting point for further evidence review, urgent and detailed discussions, and multidisciplinary research with associated funding to address pathogen-, discipline- and or/setting specific implementation of the suggested changes"* (see pages 12, 13, 15 and 32 of the report).

2.6. The 2024 WHO report reflects the shared agreement on terminology between the WHO, the African Center for Disease Control ("CDC"), the Chinese CDC, the European CDC, and the US CDC. The areas of overall general agreement included "*the importance of adequate ventilation and airflow patterns within indoor spaces to help mitigate the risk of transmission of IRP*" (page 32).

2.7. There remain areas of non-consensus and the need for further consultation. As the WHO explained: "*This consultation is the first phase of the global scientific debate led by WHO. From which the next steps will require further technical and multidisciplinary research and exploration of the wider implications of the updated descriptors before an update on infection prevention and control or other mitigation measures guidance is issued by WHO*" (see executive summary). Standardising terminology will require global agreement and UKHSA welcomes the WHO's work as a positive step towards this. In common with our international partners in the GIPCN, UKHSA is currently considering the implications for guidance of using the proposed descriptors. This will involve subsequent working with DHSC (which includes the social care remit), the NHS as a key employer to whom guidance is directed, and the Health and Safety Executive as the UK's regulator for workplace health and safety.

Assessing mask use by healthcare workers

2.8. I offered to provide the Inquiry with additional information on UKHSA-led studies assessing mask use by healthcare workers. As a starting point, I would draw the Inquiry's attention to the section in Professor Hopkins' statement titled *'Assessment of Risks to Workers in Healthcare Settings'* **[INQ000410867/0075/159ff]**. Here, UKHSA

sets out the efforts of PHE, and subsequently UKHSA, to assess potential risks to healthcare workers from Covid-19 as part of work monitoring and modelling the transmission of Covid-19.

2.9. I was specifically asked about the Winter Personal Protective Equipment Trial ("WIPPET"), a cluster randomised clinical control trial[2] designed in Autumn 2021, discussed at paragraphs 186 and 351 of Professor Hopkins' statement **[INQ000410867/0085, 0139]**. The primary objective of the WIPPET trial was to address the evidence gap in real world settings and assess the effect of different strategies of respiratory protective equipment ("RPE") use on Covid-19 related sickness absence among healthcare workers in England. This would enable better decision making and recommendations as to the types of masks to be worn by healthcare workers, to help answer the critical question on FFP3 masks versus Fluid Resistant Surgical Face Masks ("FRSM"), as well as how they should be used, i.e., sessional use versus targeted use. UKHSA is not a funding body and must apply for research funding. An application by UKHSA on 4 January 2022 to the National Institute for Health and Care Research ("NIHR") for funding was rejected because NIHR wanted the involvement of a clinical trial unit given the lack of substantive randomised clinical trial expertise within UKHSA.

2.10. UKHSA addressed NIHR's concerns in a resubmitted application in April 2022 known as "SURE" (Sessional Use of RPE). The Agency proposed using an individual randomised control design based on modelling from the University of Oxford. Further details of this trial are found at paragraph 366 of Professor Hopkins' statement **[INQ000410867/0144]**. The application was rejected on 21 June 2022 and so the trial could not go ahead. The primary reason for the refusal of funding on this occasion was that NIHR wanted to see a cluster-randomised design, as opposed to the individual method proposed.

2.11. Despite the lack of NIHR funding for the WIPPET and SURE trials, UKHSA has taken forward several related studies of policies and experiences relating to the use of face masks and RPE by healthcare workers. These have already been set out in detail in

[2] A cluster-randomised trial is where clusters of individuals (e.g. clinics, families, geographical areas), rather than individuals themselves, are randomised to different arms of the trial.

Professor Hopkins' statement **[INQ000410867/0146/369]**. It is useful to provide an update on the progress of the studies referred to in that statement:

i. Paragraph 369a – the SIREN study. On 13 November 2024, a preprint paper was published, titled '*Characterisation of the SARS-CoV-2 Pandemic in Healthcare Workers within the United Kingdom: Risk Factors for Infection During Four Successive Waves*'. The paper has been disclosed to the Inquiry (along with all relevant SIREN study work to date – see Annex A). This particular study aimed to recognise the risk factors for infection over four successive waves of the pandemic in a large, UK healthcare worker cohort. The findings highlight clinical areas and occupational groups in which there may be scope to better prevent healthcare-associated infections, particularly during winter pressures. Prospective studies to establish which interventions are most effective are essential, e.g., prospective collection of IPC measures including dedicated mask usage. This will require a global effort by research communities. The SIREN study underscores the importance of the use of purposefully designed prospective studies to measure IPC intervention effectiveness including personal protective equipment ("PPE"), RPE, and ventilation, and to address possible contributory risk factors for staff infection within the community and healthcare environments.

ii. Paragraph 369b – an interview study titled '*Understanding healthcare workers' experiences of face mask and RPE use in healthcare settings*'. This study is now complete and is currently under review for publication in a peer reviewed journal. It will be used to inform the future work of the Agency.

iii. Paragraph 369c – the observational framework. In late 2022, UKHSA internally funded a piece of work to examine the feasibility of developing an observational research tool to support any future submissions of the SURE application (mentioned at 2.10. above), and for use in potential future research exploring adherence to recommended guidelines for face covering usage among healthcare workers. The funded work programme was undertaken in February 2023. An initial rapid evidence assessment identified relevant observational tools used to record behaviour in clinical settings. UKHSA then developed its own observational tool and reviewed this with internal stakeholders. Further

work in early 2025 will include workshops with representatives from NHS trusts to discuss the tool. Any subsequent work will require additional funding.

iv. Paragraph 369d – a survey of local policy recommendations for face mask and RPE use in NHS hospitals in England. This survey is complete, and the report is in its final draft. Once finalised and published, the report will be used to assist the development of a risk assessment tool for recommended mask selection and to inform future workstreams relating to respiratory protection risk assessments in health and care settings. The published report can be provided to the Inquiry if required.

2.12. In addition to the studies already mentioned, in April 2024 UKHSA published the results of a systematic review looking at the effect of face covering use on adherence to other Covid-19 protective behaviours. During the pandemic, concerns were raised that face covering use may elicit risk compensation - a false sense of security resulting in reduced adherence to other protective behaviours such as physical distancing. The published review is exhibited (**Exhibit JH9/02 [INQ000528377]**). In conjunction with the Healthcare Infection Society, UKHSA has also convened a foundation course on IPC aimed at medical trainees in infection-related specialties, newly appointed consultants, nurses, and clinical scientists. The course takes place twice a year and is a combination of self-directed learning and facilitated sessions with subject matter experts. The next course will be in March 2025. Further, as part of UKHSA's Clinical Countermeasures Programme, an internal IPC Research Oversight Group has been established. It aims to enhance the effectiveness and impact of IPC strategies and policies through evidence-based research and multi-disciplinary collaboration. The next step for the group is to prioritise IPC research activities that are in progress and to identify new high priority projects for discussion with external agencies to identify collaborative opportunities.

2.13. Finally, in respect of wider studies and work by other research institutes or international organisations, the below may be of interest to the Inquiry:

i. The UK Collaborative on Development Research ('UKCDR') is an organisation working side-by-side with government departments and research funders to simplify and enhance the UK's international development research. The UKCDR developed a comprehensive list of funded international research for

Covid-19 and mapped this against the WHO priorities at the time: see the Covid-19 tracker (**Exhibit JH9/03 [INQ000528378]**). UKHSA utilised the tracker to monitor what research was happening across the globe during the pandemic to inform which research the Agency could undertake. UKHSA equally informed the UKCDR's Epidemics Preparedness and Response Group of its emergency research needs during the pandemic to influence research at the time.

ii. McMaster COVID-END, the Covid-19 Evidence Network to support decision-making in Canada, provided a suite of eight living evidence syntheses which collated the best-available evidence on the effectiveness of public health and social measures including masks and ventilation (**Exhibit JH9/04 [INQ000528379]**).

iii. Cochrane, an international network producing systematic reviews to help people make informed health decisions, published '*The effects of public health and social measures implemented during the Covid-19 pandemic: an overview of systematic reviews*'. This was supported by the Norwegian Institute of Public Health and with input from the WHO (**Exhibit JH9/05 [INQ000528380]**).

iv. The Royal Society, the independent scientific academy of the UK, published '*Covid-19: examining the effectiveness of non-pharmaceutical interventions*', covering international literature (**Exhibit JH9/06** INQ000282456).

v. More generally, the WHO has developed a searchable library of public health and social measures publications which can be filtered by infection (**Exhibit JH9/07** INQ000528381).

SAGE Environmental Modelling Group (EMG)

2.14. I was asked by CTI whether UKHSA is building on the work of the SAGE EMG, not only for Covid-19 but for other pathogens and respiratory viruses.

2.15. During the pandemic, the aim of the SAGE EMG was to identify, develop, and utilise tools to better understand Covid-19 transmission and the impact of environmental and behavioural interventions. Its membership included representatives of PHE, and later, UKHSA. Professor Isabel Oliver, UKHSA's Chief Scientific Officer, co-chaired the transmission subgroup with Paul Monks, the then Chief Scientific Advisor at BEIS. Additionally, UKHSA was a partner organisation for the PROTECT Covid-19 National

Core Study on transmission and environment: a UK-wide research programme focused on improving understanding of how Covid-19 is transmitted from person to person, and how this varies in different settings and environments (**Exhibit JH9/08 [INQ000528387]**). Tools and methods developed and used as part of PROTECT have provided UKHSA with the capability to better understand the survival and persistence of new and emerging pathogens, e.g., Mpox. Project partners continue to collaborate and apply for research funding to continue the themes of PROTECT in the context of pandemic preparedness. PHE/UKHSA also collaborated with academic partners on a project named TRACK (Transport Risk Assessment for Covid Knowledge), which is a multidisciplinary project designed to address knowledge gaps around Covid-19 transmission on public transport (**Exhibit JH9/09 [INQ000528388]**). As a result, UKHSA published several publications which analysed the effectiveness of an antimicrobial coating used by transport operators during the pandemic and the transmission risk of Covid-19 on public transport. This has led to further work, described at paragraph 2.17. below.

2.16. Since the pandemic, the relevant skills, expertise, and capabilities of the SAGE EMG now remain with UKHSA and academia. Work undertaken by UKHSA to support the SAGE EMG prompted the formation of UKHSA's specialist Environmental Virology Team ("EVT"), which sits within UKHSA's Biosafety, Air and Water Microbiology Group at Porton Down. The EVT provides UKHSA with the capability to respond to incidents of new and emerging viral pathogens and to better understand virus survival, persistence, and transmission within the indoor environment. UKHSA is able to carry out environmental sampling to support incident response, to better understand dispersal and spread of emerging pathogens, and to help inform IPC guidance. This has recently included UKHSA's response to influenza (H1N2) and the Mpox virus (clades Ib and IIb).

2.17. Finally, as mentioned at 2.15, UKHSA has collaborated on several other research projects. UKHSA, along with other PROTECT partners, applied to the Engineering and Physical Sciences Research Council ("EPSRC") for funding for the Protection from Respiratory-borne Pathogens for a more Resilient UK ("PREPARE") health technology hub, with the aim of demonstrating how and when new and existing technological interventions, including for example ventilation and face

masks/coverings, would be most effective in healthcare. The University of Manchester led the project application but unfortunately, the funding was rejected by the EPSRC with limited feedback. A further application for alternative funding is under consideration. UKHSA is involved in a project named 'CleanTravel', led by the University of Leeds and funded by the EPRSC Acceleration Funding, which aims to create the first cleaning framework to mitigate against infectious disease transmission on public transport. This derived from the TRACK project mentioned above. Lastly, UKHSA is collaborating on a project named 'CHARIOT' which aims to deliver new tools, data, models, and frameworks to provide resilience to health threats (including infectious diseases) within public transport environments. A funding application is currently being prepared by the University of Leeds for submission to the EPSRC.

Aerosol generating procedures ("AGPs")

2.18. The Inquiry requested further details of any ongoing research relating to AGPs. The Inquiry will be aware that, in response to the pandemic, IPC guidance was developed for the NHS across the four nations in the UK ("the National IPC Manual") and this included a list of AGPs ("the UK AGP list"). In 2022, a rapid review was conducted by NHS England and NHS Improvement on behalf of the UK IPC Cell that, amongst other things, sought to assess the available evidence identified for each procedure included on the UK AGP list. The review resulted in a report published on 9 June 2022 (**[INQ000130583]**). The conclusions of the report are summarised at page 5 as follows: "*The review identified evidence which suggests that consideration should be given to removing some of the procedures currently included on the UK AGP list. However, the evidence assessed was subject to a number of limitations and uncertainties that should be considered before amending the UK AGP list.*" It is UKHSA's understanding that the list of AGPs has remained unchanged since this time. NHS England owns the UK AGP list and will be best placed to comment on any current work to review or amend the list.

2.19. Additionally, the WHO is in the process of updating its 2014 guidelines on *'Infection prevention and control of epidemic and pandemic prone acute respiratory infections in healthcare'* (**Exhibit JH9/10** **INQ000528375**). The WHO is considering three background questions as part of this work. Firstly, what are the possible modes of

transmission for certain acute respiratory infections. Secondly, and following on from this, what is the infectious period for those acute respiratory infections. Thirdly, what is considered an AGP. To assist with the third background question, in July 2024, the WHO commissioned UKHSA to produce an AGP list on selected pathogens. However, following discussions with UKHSA IPC Leads and WHO counterparts, it was agreed that UKHSA would instead provide an updated evidence synthesis on the transmission risk relating to AGPs for selected pathogens that are transmitted through the air. A list was not considered to be the most effective output to support the WHO in answering the third background question, particularly in light of the changing paradigms for descriptions of the transmission risks associated with pathogens that are transmitted through the air. The rapid review, discussed at paragraph 2.18. above, has provided a starting point/reference for this work.

2.20. UKHSA is on course to complete the evidence review by the end of March 2025, which will then be considered by the WHO Guideline Development Group. It is anticipated the WHO guidelines will be updated in the second half of 2025.

Mental Health Guidance for Children and Young People

2.21. Questions were also put to me by Core Participants including on behalf of Mind, the mental health charity. Counsel representing Mind asked why there was no specific reference to children and young people's mental health in the guidance published by PHE on 29 March 2020 regarding the mental health and wellbeing aspects of Covid-19.

2.22. In responding, I made the point that, although I was not employed by PHE at the time this guidance was published and so not a direct author of it, I had, as DCMO personally engaged with organisations such as the Royal College of Pediatrics and Child Health and with the CMOs in considering the impact of the pandemic on access to education. The concern that children should be considered when developing guidance is an important one and I agreed to confirm my recollection that there was separate guidance produced for children. The guidance I had in mind was that first published on 29 March 2020 for parents and carers on supporting children and young people's

mental health and wellbeing during the pandemic (see **Exhibit JH9/11 [INQ000528386]**).

Statement of Truth

I believe that the facts stated in this witness statement are true. I understand that proceedings may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief of its truth.

Signed: PD

Dated: 10 January 2025

Annex A: SIREN studies

Exhibit Number	Date	Title	INQ Reference
Exhibit JH9/12	December 20	SIREN protocol: Impact of detectable anti-SARS-CoV-2 on the subsequent incidence of COVID-19 in 100,000 healthcare workers: do antibody positive healthcare workers have less reinfection than antibody negative healthcare workers?	INQ000513051
Exhibit JH9/13	January 21	Do antibody positive healthcare workers have lower SARS-CoV-2 infection rates than antibody negative healthcare workers? Large multicentre prospective cohort study (the SIREN study), England: June to November 2020.	INQ000089714
Exhibit JH9/14	April 21	COVID-19 vaccine coverage in health-care workers in England and effectiveness of BNT162b2 mRNA vaccine against infection (SIREN): a prospective, multicentre, cohort study..	INQ000477138
Exhibit JH9/15	April 21	SARS-CoV-2 infection rates of antibody-positive compared with antibody-negative health-care workers in England: a large, multicentre, prospective cohort study (SIREN)	INQ000348250
Exhibit JH9/16	September 21	Serological profile of first SARS-CoV-2 reinfection cases detected within the SIREN study	INQ000513037
Exhibit JH9/17	November 21	T-cell and antibody responses to first BNT162b2 vaccine dose in previously infected and SARS-CoV-2-naive UK health-care workers: a multicentre prospective cohort study.	INQ000513041
Exhibit JH9/18	November 21	Immunogenicity of standard and extended dosing intervals of BNT162b2 mRNA vaccine	**INQ000354544**
Exhibit JH9/19	December 21	Effectiveness and durability of protection against future SARS-CoV-2 infection conferred by COVID-19 vaccination and previous infection; findings from the UK SIREN prospective cohort study of healthcare workers March 2020 to September 2021.	INQ000348251
Exhibit JH9/20	February 22	Protection against SARS-CoV-2 after Covid-19 Vaccination and Previous Infection	INQ000513036
Exhibit JH9/21	April 22	Determinants of SARS-CoV-2 anti-spike antibody levels following BNT162b2 vaccination: cross-sectional analysis of 6,000 SIREN study participants.	INQ000513048
Exhibit JH9/22	May 22	Impact of prior SARS-CoV-2 infection and COVID-19 vaccination on the subsequent incidence of COVID-19: a multicentre prospective cohort study among UK healthcare workers - the SIREN (Sarscov2 Immunity & Reinfection Evaluation) study protocol	INQ000513034

Exhibit JH9/23	July 22	Burden of SARS-CoV-2 infection in healthcare workers during second wave in England and impact of vaccines: prospective multicentre cohort study (SIREN) and mathematical model	**INQ000212138**
Exhibit JH9/24	November 22	SIREN Study Group and the Crick COVID Immunity Pipeline Consortium (2022). Antibody correlates of protection from SARS-CoV-2 reinfection prior to vaccination: A nested case-control within the SIREN study.	**INQ000398900**
Exhibit JH9/25	January 23	Early Warning Surveillance for SARS-CoV-2 Omicron Variants, United Kingdom, November 2021–September 2022	INQ000513031
Exhibit JH9/26	April 23	Antibody Correlates of Protection Against Delta Infection after Vaccination: A Nested Case-Control within the UK-Based Siren Study	INQ000513052
Exhibit JH9/27	May 23	Effectiveness of BNT162b2 mRNA vaccine third doses and previous infection in protecting against SARS-CoV-2 infections during the Delta and Omicron variant waves; the UK SIREN cohort study September 2021 to February 2022.	INQ000513047
Exhibit JH9/28	August 23	Omicron infection following vaccination enhances a broad spectrum of immune responses dependent on infection history	INQ000513038
Exhibit JH9/29	September 23	Adapting COVID-19 research infrastructure to capture Influenza and Respiratory Syncytial Virus alongside SARS-CoV-2 in UK healthcare workers Winter 2022/23 and beyond: protocol for a pragmatic sub-study	INQ000513046
Exhibit JH9/30	September 23	CD4+ and CD8+ T cells and antibodies are associated with protection against Delta vaccine breakthrough infection: a nested case-control study within the PITCH study	INQ000513039
Exhibit JH9/31	September 23	Antibody correlates of protection against Delta infection after vaccination: A nested case-control within the UK-based Siren Study	INQ000513030
Exhibit JH9/32	October 23	Protection of second booster vaccinations and prior infection against SARS-CoV-2 in the UK SIREN healthcare worker cohort	INQ000513045
Exhibit JH9/33	October 23	The burden and dynamics of hospital-acquired SARS-CoV-2 in England	INQ000513040
Exhibit JH9/34	October 23	Demonstrating the learning and impact of embedding participant involvement in a pandemic research study: the experience of the SARS-CoV-2 immunity & reinfection evaluation (SIREN) study UK, 2020–2023	INQ000513035
Exhibit JH9/35	November 23	Effectiveness of BNT162b2 mRNA vaccine third doses and previous infection in protecting against SARS-CoV-2 infections during the Delta and Omicron variant waves; the UK SIREN cohort study September 2021 to February 2022	INQ000513029

Exhibit JH9/36	December 23	Effect of second booster vaccinations and prior infection against SARS-CoV-2 in the UK SIREN healthcare worker cohort	INQ000513028
Exhibit JH9/37	January 24	Adapting COVID-19 research infrastructure to capture influenza and respiratory syncytial virus alongside SARS-CoV-2 in UK healthcare workers winter 2022/23 and beyond: protocol for a pragmatic sub-study	INQ000513044
Exhibit JH9/38	January 24	Adapting COVID-19 research infrastructure to capture influenza and respiratory syncytial virus alongside SARS-CoV-2 in UK healthcare workers winter 2022/23 and beyond: protocol for a pragmatic sub-study	INQ000513027
Exhibit JH9/39	May 24	Cohort retention in a pandemic response study: Lessons from the SARS-Cov-2 Immunity & Reinfection Evaluation (SIREN) study	INQ000513043
Exhibit JH9/40	August 24	Prevalence and impact of persistent symptoms following SARS-CoV-2 infection among healthcare workers: A cross-sectional survey in the SIREN cohort	INQ000513026
Exhibit JH9/41	September 24	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	INQ000513025