PARTICIPANT INFORMATION SHEET:

Evaluating COVID-19 Vaccine Boosters (COV-BOOST):

Bivalent Omicron Variant Fourth Dose Booster sub-study

We are recruiting people aged 30 years or older who have had 3 doses of COVID-19 vaccine. Please register your interest if you would like to take part!

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Participation could really make a difference during a public health emergency.

Are you aged 30 years or older and have had three doses of COVID-19 vaccine? Thank you for reading this, your help, whatever your final decision, is very much valued. We would like to invite you to take part in our study, Evaluating COVID-19 Vaccine Boosters (COV-BOOST). Before you make any decision, it is important you take the time to understand why we are doing this research and what it would involve. Please read the following information carefully and consider discussing it with friends, relatives or others as you wish.

Summary of the trial

We are studying the use of a new COVID-19 vaccine given as a fourth dose booster, compared to a dose of BNT162b2 (the Pfizer COVID-19 vaccine). The Omicron variant has a large number of mutations to the "spike" protein on its surface, which is the protein most COVID-19 vaccines have used to train the body to recognise the virus which causes COVID-19 (SARS-CoV-2). This has made Omicron more effective at evading the immune response generated from existing vaccines. The pharmaceutical company Moderna which produced the mRNA-1273 vaccine for COVID-19, has adapted it and made a new vaccine (mRNA-1273.214) which contains 2 versions of the spike protein (because it has 2 versions, it is called a "Bivalent" vaccine). One of these is the original version of the spike protein found in the widely used COVID-19 vaccines, based on the originally circulating form of the virus. The other is a version of the spike protein which more closely resembles the one found on Omicron. We also know that giving a third dose of the Pfizer vaccine (BNT162b2) significantly increased the immune system's ability to recognise the Omicron variant spike protein. This study is to evaluate the safety and side effect profile of giving a dose of mRNA-1273.214 compared to BNT162b2 COVID-19 vaccine to healthy adults, as a fourth dose COVID-19 booster, as well as assessing its impact on the immune response to different variants of SARS-CoV-2, including the Omicron and Delta variants.

Participants will be randomised to receive either a dose of the BNT162b2 (Pfizer) vaccine or a dose of the mRNA-1273.214 vaccine. Participants will be "blinded", meaning they will not be told which vaccine they have been given until after they have completed the study (If proof of fourth dose vaccination is required for international travel, participants may request to be unblinded early). They will then complete a diary of their symptoms over the next 7 days, and any other adverse events which occur up to 3 months after having had the vaccine. There are several follow up visits to have blood tests to check for immune markers, and to check on the participants health.

What is the purpose of this research trial?

There are now a number of vaccines that have been approved in the UK to prevent COVID-19 and other vaccines that are still in UK clinical trials. Millions of people have now received their first 2 vaccinations, as well as a third dose booster vaccine. The Omicron variant is now the most common variant of the virus which causes COVID-19 (SARS-CoV-2) in the UK, and due to mutations on its spike protein it is more capable of evading the immune response generated by existing vaccines against COVID-19 than previous variants. Two doses are thought to provide very little protection against infection with the omicron variant (although they do

provide good protection against severe disease), however three doses provide much improved protection against infection and severe disease or death. We also know that protection against infection wanes over a period of months following vaccination.

It is currently unknown whether providing further doses of existing COVID-19 vaccines (such as BNT162b2, the Pfizer vaccine) would produce better immune responses against the Omicron variant, or other variants of SARS-CoV-2 (such as Delta), or whether giving updated vaccines which are designed to help the body recognise the Omicron variant spike protein (such as mRNA-1273.214) would provide superior protection.

This study is trying to determine the side effect profile, safety and immune response of giving different fourth COVID-19 vaccine booster doses of BNT162b2 (Pfizer) and a bivalent vaccine, mRNA-1273.214 (Moderna) to people who have previously received 3 doses of COVID-19 vaccine. We will be enrolling men and women aged 30 years or older who have received 3 doses of COVID-19 vaccine (with the third dose being either BNT162b2 or mRNA-1273) and are at least 3 months (84 days) after their third dose.

What vaccines are being used in this trial?

BNT162b2 (Pfizer/BioNTech) 30mcg
mRNA-1273.214 (Moderna) 50mcg

BNT162b2 (Pfizer/BioNTech): Common use under emergency provision

This is the vaccine commonly known as 'The Pfizer vaccine.' This is a messenger RNA (mRNA) vaccine. This vaccine uses a small amount of the genetic coding material (mRNA) of the SARS-CoV-2 spike (S) protein packaged inside very small fatty particles (lipid nanoparticles). When these are injected into your body, your cells take up these fatty particles, and then start producing the SARS-CoV-2 spike protein. Your immune system then "sees" these spike proteins and makes a protective immune reaction against them. The original mRNA that has been taken into your cells is broken down within a few days and cannot be incorporated into your own genetic code.

This vaccine has been tested in more than 40,000 people worldwide and subsequently given to tens of millions of people, and has been shown to be both safe, and effective.

The vaccine does not contain a live version of the SARS-CoV-2 coronavirus and therefore cannot give you COVID-19. The potential side effects of these vaccines are discussed in more detail in the section 'What are the risks of taking part in this trial'.

mRNA-1273.214 (Moderna): Undergoing phase II clinical trials

This is a "bivalent" vaccine, meaning it contains mRNA for two different antigens (the protein which helps the body identify a virus which it needs to fight). One is the same antigen which

was contained in the original Moderna vaccine for COVID-19, called mRNA-1273. The other antigen is a different version of the spike protein which more closely resembles that which is found on the Omicron variant of SARS-CoV-2. This is also a messenger RNA (mRNA) vaccine which works in a similar way to BNT162b2 (The Pfizer vaccine).

This vaccine is currently undergoing phase II clinical trials to assess its safety and immunogenicity against different variants of SARS-CoV0-2.

Participants will not know which vaccine or dose they have received until they have attended their final follow up visit.

Do I have to take part?

No. It is up to you to decide whether or not to take part. If you do decide to take part, you will be given this information sheet to keep (or be sent it electronically) and will be asked to sign a consent form. You are free to withdraw at any time and without giving a reason, but you may be asked to come for an extra visit for a follow up appointment for safety reasons.

Am I suitable to take part?

Adults who are aged 30 years or older who have had 3 doses of a COVID-19 vaccine (with the third dose having been mRNA1273 or BNT162b2) and are at least 3 months (84 days) since their third dose are eligible to take part. In order to participate in the study:

- You must be willing to tell the trial staff about your medical history, and you may be asked to allow the trial staff to check this with your General Practitioner (GP). Bear in mind that we would also notify your GP if you joined the trial (even if we did not need to check your medical history with them in advance).
- If you are able to become pregnant you must be willing to practice continuous effective contraception during the first 3 months of the trial and have negative pregnancy tests on the days of vaccination
- You must agree not to donate blood during the trial

You cannot take part in this trial if you:

- Have already received a Fourth dose of COVID-19 vaccine via the NHS or a clinical trial
- Have had a positive test for COVID-19 within 84 days prior to vaccination (day 0)
- Are not at least 84 days post your third COVID-19 vaccine
- Have participated in another research trial involving an investigational product in the past 12 weeks.
- Have any vaccine (licensed or investigational) in the 30 days before or after this trial vaccine. The exceptions to this are the seasonal influenza vaccine and the pneumococcal vaccine (known as Pneumovax, which is routinely given to over 65-year olds). If you are offered these by your GP or your place of work, we ask that you have these at least 7 days before or after you receive the trial vaccine dose.
- Have received a transfusion of any blood products, or immunoglobulins (antibodies) within the 3 months before having the trial vaccine
- Are pregnant at enrolment or planning to become pregnant during the first 3 months following vaccination

- Have immunosuppression or immunodeficiency – this includes being on medications that reduce the immune system such as methotrexate and steroid tablets within the past 6 months, except topical steroids or short-term oral steroids (courses lasting 14 days or less)
- Have ever had a severe allergic reaction (anaphylaxis)
- Have an allergy to any of the component of the COVID vaccines used in this study, including polyethylene glycol/macrogol (PEG). PEGs are a group of known allergens commonly found in medicines, many household products and cosmetics, and are contained in the BNT162b2 (Pfizer/BioNTech) vaccine. Known allergy to PEG is very rare.
- Have a current diagnosis of, or are having treatment for, cancer. Exceptions to this are certain skin cancers and pre-cancer of the cervix.
- Have a bleeding disorder
- Continuously take medicines that reduce your blood clotting, such as coumarins and related anticoagulants (i.e. warfarin) or novel oral anticoagulants (i.e. apixaban, rivaroxaban, dabigatran and edoxaban)
- Have current alcohol or drug dependency
- Have severe and/or uncontrolled cardiovascular disease, respiratory disease, gastrointestinal disease, liver disease, renal disease, endocrine disorder or neurological illness
- History of active or previous auto-immune neurological disorders (e.g. multiple sclerosis, Guillain-Barre syndrome, transverse myelitis). Bell's palsy is not an exclusion criterion

What will happen if I decide to take part?

The study team will then contact you to check your eligibility for the study based on the criteria listed in the section above. They will then be able to book you in for a screening visit that you can attend to fully enrol onto the study. Details of what will happen at this screening visit are listed in the section below titled "Enrolment on the Study".

IMPORTANT: If you develop a fever or cough, or loss of sense of smell or taste, or become unwell then you must contact the study team for advice before attending any visit.

Please note that it may not be possible to enrol everybody that wishes to take part in the trial and passing through the screening process does not guarantee participation in the trial. In the case that you are not enrolled in the trial, your data would not be stored beyond the end of the trial.

What should I do if I am offered an NHS booster vaccination during the study?

As you will have received a fourth dose COVID-19 booster vaccine as part of the study, you should not require any additional vaccination via the NHS. If you are contacted to be offered a COVID-19 vaccine, please contact the study team for advice.

Enrolment on the Study

Screening and vaccination visit - *1.5 hours (review of medical history, vital signs, blood test, receive vaccine, up to 30 minute observation in clinic after the vaccine)*

Screening component

If you qualify to be in the trial, we will ask you to attend on the vaccination day (Day 0). We will outline the nature of the trial, and this will explain what to expect by taking part, the risks involved and what side-effects you might expect to experience. There will be an opportunity to ask any questions you may have about the trial, and if you decide to take part we will ask you to sign a consent form.

There may be additional stages of the trial added at a later time point if more vaccines become available. As long as no new information that would affect your involvement in the trial comes to light, we will not ask for you to consent again when these additional stages are added.

If you sign the consent form a member of the medical team would check details of your medical history, and may perform a physical examination; which could involve listening to your heart and lungs with a stethoscope, examining your abdomen as well as feeling for lymph nodes around your neck and in your armpits.

We will measure and record your:

- Height
- Weight
- Temperature
- Blood pressure
- Pulse rate
- Respiratory rate
- Non-invasive blood oxygen level (saturations)
- Pregnancy test (women only)

Blood samples will be taken just before vaccination to check later for:

- Your baseline antibody test before any booster vaccine
- Whether you are anaemic or have any other blood, kidney or liver abnormalities. Sometimes these blood tests need to be repeated, and we would ask you to come for an extra visit to have these taken. It is possible that these tests could reveal unexpected findings which might be of significance to your health. If that is the case, or if the results indicate that it would not be safe to carry on in the trial we would let you know this. Additionally, regardless of whether you continue in the trial, we may

ask for you permission to contact your GP or a specialist so that any further required treatment or investigation can be organised.

Vaccination

Once your eligibility and consent are re-confirmed, we will collect samples of blood as a baseline to compare future blood tests against. We will give you an injection with the vaccine into your arm. We will need to keep an eye on you for 15 – 30 minutes after the vaccine has been administered.

Follow-up after vaccination

Electronic Symptom Diary "e-diary" – *Completed at home*

We will give you a thermometer, tape measure and an "e-diary" account to record all your symptoms, your temperature and your vaccination site every day for 7 days after vaccination.

After these 7 days, and for the next 3 weeks, we will ask you to record if you feel unwell or if you take any new medications. The research staff will monitor the e-diary and may telephone you to ask for more information.

You will also be asked to record in the diary any medical conditions for which you see a doctor/dentist until three months after your vaccine, and any serious medical illnesses or hospital visits you may have over the course of the trial.

Follow-up visits – 30 minutes (vital signs, blood tests and check for side effects or new health problems)

Following vaccination, we will ask you to attend a series of short follow-up visits to ensure everything is fine, to check your symptoms and to have blood tests done.

Note: due to the high number of planned volunteers in this trial, visits may take longer than the estimates given here

During the course of the trial you may be asked to attend for an extra visit, for example, if a blood test needs to be repeated.

In the unlikely event of you having a problem with your arm where the vaccination was given, we might ask to photograph your arm. Consent for this is included when you are enrolled to the study. You would not be identifiable in these photographs, as only the vaccination site and your unique trial number would be visible. These photographs could be shown to other professional staff, used for educational purposes, or included in a scientific publication.

How many visits will I have to attend?

All participants will have the following visits:

Trial timeline	**Day 0**	**Day 14**	**Day 28**	**Day 84**	**Day 242**
Vaccination	Yes				
Blood tests	Yes	Yes	Yes	Yes	Yes

Should you be unable to attend a scheduled visit (for example because you are self-isolating or quarantining), then a researcher might do this visit over the phone with you instead (as long as it was on the correct schedule).

What things should I consider before taking part in this study?

Private Insurance

If you have private medical or travel insurance you are advised to contact your insurance company before participating in this trial, as involvement may affect the cover provided.

Are there things I will be asked to avoid doing during the trial?

You should not donate blood during the trial or take part in other studies that involve blood sampling or the administration of drugs or vaccines, including trials testing other preventive interventions for COVID-19.

If during the trial you require any other vaccinations for health, travel, or occupational reasons, you should inform the trial team beforehand. We will discuss with you the most appropriate time to receive them.

What are the risks of taking part in this trial?

The risks and side effects of the proposed vaccinations and trial procedures are detailed here:

Blood samples

Drawing blood may cause slight pain and occasionally bruising at the site where the needle enters. Some people feel light-headed or even faint when having blood taken. During the course of the trial we will need to take between 20ml and 67ml of blood at a single visit. The total amount we will take over the period of the trial will be up to (approximately) 271ml. If repeat bloods are requested for safety reasons at a visit this will be up to 7ml. These amounts over the course of the year, should be below the limit of 470mL every 3 – 4 months for blood donations to the National Blood Transfusion Service.

Before the COVID-19 vaccine and at day 14 there will be an additional blood test for a protein called “Troponin” which can indicate inflammation of the heart muscle. This is to see whether this is influenced by vaccination.

If abnormal results or undiagnosed conditions are found during the course of the trial these will be discussed with you and, if you agree, your GP (or a hospital specialist, if more appropriate) will be informed. Any newly diagnosed conditions will be looked after within the NHS. Participants will not be informed of the results of their levels of post-vaccine immunity against the COVID-19 virus as these are not clinically validated tests.

Vaccination Side Effects

Common side effects

People very often have tenderness, pain, warmth, redness, itching, swelling or bruising or less commonly have a small lump in their arm where they have been vaccinated.

Other common systemic side effects

Some people can develop these symptoms after vaccination. They usually last for less than a week after you are vaccinated (more commonly 24-48 hours afterwards).

- Fatigue
- Headaches
- Flu-like symptoms, such as high temperature, sore throat, runny nose, cough and chills
- Muscle aches
- Joint aches
- Feeling unwell (malaise)
- Feeling sick or nauseated or vomiting

Other less common side effects:

- Abdominal pain
- Decreased appetite
- Feeling dizzy
- Swollen lymph nodes (glands)
- Excessive sweating, itching skin or rash

These symptoms can be reduced by use of paracetamol around the time of immunisation and over the next 24 hours. We would not routinely recommend the use of ibuprofen or other anti-inflammatory medication at this time.

After immunisation with the BNT162b2 (Pfizer/BioNTech) vaccine, difficulty sleeping has been observed in fewer than 1 in 100 people, and weakness of the muscles on one side of the face has been observed in fewer than 1 in 1000 people.

Data from studies comparing mixed prime-boost regimes of COVID-19 vaccination (e.g. Oxford/AstraZeneca followed by Pfizer) have found this may increase the risk of side effects following the second vaccine. It is possible that by receiving a COVID-19 booster vaccine in this study which is different to your previous COVID-19 vaccines, this might increase the side effects following vaccination.

Serious Reactions

With any vaccination there is a small risk of rare serious adverse events, such as an allergic reaction. These may be related to the immune system or to the nervous system. Severe allergic reactions to vaccines (anaphylaxis) are rare (approximately 1 per million vaccine doses) but can be fatal. In case of this unlikely event, medication for treating allergic reactions is available and the researchers are appropriately trained in the management of anaphylaxis.

These are new vaccines, and there may be side effects that we are not yet aware of. Further information about vaccine safety is being actively gathered as the vaccines are being used in the UK and globally. You will be informed of any significant change in the vaccine safety profile.

You will be provided with a 24h trial mobile number. If you experience unexpected events or become in any way concerned you can use this to contact one of the trial doctors at any time. We will ask you to record these symptoms in the e-diary too.

Theoretical risks - Could immunisation make COVID-19 disease worse?

In the past, experimental vaccines were developed by different research groups against the SARS virus, which is in the same family as the COVID-19 virus and also infects the lungs. In some cases, animals that received certain types of experimental SARS vaccines appeared to develop *more severe* lung inflammation when they were later infected with SARS compared with unvaccinated animals. There has also been one report of this increased disease-associated inflammation being seen in a mouse study for a vaccine against MERS-CoV (another related virus), but this has not been observed in any other reported animal studies, and has not been seen in any of the trials of the vaccines being used in this trial. Importantly, this has not been seen to date in any of the human studies of these vaccines.

Will I be protected against COVID-19 from having the vaccines in this trial?

If you participate in this trial we do not know the additional amount of protection you will receive. The BNT162b2 vaccine has been shown to be effective when given as a 2 dose series, or as a third dose booster. The original version of mRNA1273 was shown to be effective in this way and this antigen is contained in the new vaccine, but there is no evidence for the efficacy of the other version contained in the vaccine which has been adapted to the Omicron variant, mRNA-1273.214. We do not know whether having fourth doses of these vaccines will improve protection against the Omicron variant, or other variants of SARS-CoV-2 The answers to these questions, which you would be helping us to provide, are really important for future UK and global vaccine use in populations. You should still continue to follow up-to-date national guidelines regarding social distancing and other coronavirus precautions as appropriate.

What are the advantages of taking part?

It is possible that participating in the trial will mean that you gain some additional protection against the coronavirus. Most importantly, the information gained from the trial will make a valuable contribution to the pandemic response.

What should you do if you believe you may have developed COVID-19 during the trial?

A common and expected side effect of COVID-19 vaccines is fever. If you develop fever in the first 48 hours post-vaccination only, you would not need to self-isolate unless you had other symptoms of COVID-19. If your fever continued (or you had another episode of fever) after 48 hours then you would need to follow the current government advice. We would also ask you to record any fever that you have in your e-diary. If the fever didn't continue, then it is likely that it was a vaccine effect and you can carry on as normal.

Excluding the above, if you develop symptoms that meet the UK government COVID-19 testing criteria, then you must arrange an NHS test as soon as possible, following the normal routes. If this test is positive, you would need to follow government guidance regarding self-isolation as usual. We would also ask you to contact the trial team. If you test positive on an alternative route such as via work or a commercial test then please let the trial team know as well. We may ask you to forward on your test result to us.

Please do not attend the clinical trial site until you have been asked by the trial team to do so. Although, in general, you should adhere to government guidance and stay at home when required (for instance during self-isolation or lockdown), attending the trial site for visits during these periods (once asked to do so) is exempt from these rules.

If you are unwell and unable to contact the trial team directly then contact the NHS 111 service or phone 999 if you are severely unwell.

If you are admitted to hospital during the trial then you should inform the medical or nursing staff that you are taking part in this trial. We will provide a contact card for you to give to these staff which will have a link to a website for them to fill in details about your admission. We would also like you to let us know (if you are able) that this has happened.

Do I get access to extra medical treatment from being in the trial?

It is important that you understand that if you do become seriously unwell and need to be admitted to hospital, the standard referral routes within the NHS will be used. Participants will be treated the same way as the general population in this context of the COVID-19 pandemic. We are unable to offer extra medical support outside what is available within the NHS for the general public.

Will I be compensated for taking part in this trial?

Once enrolled you will be compensated for your time, the inconvenience of having blood tests and procedures, and your travel expenses. The total amount compensated will be approximately **£225** if all scheduled visits are attended. Additional visits will be paid at a rate of £45/visit. Please ask the study team if you would like more information on how and when you will be reimbursed. Those who attend for final screening and vaccination visit (Day 0) but are not eligible to proceed further in the trial, will be reimbursed for their time.

Trial reimbursement will be made by bank transfer throughout the trial, so please bring your bank details with you to your screening visit (no cash payments can be made). Should you decide to withdraw from the trial before it is completed, payment will be *pro rata* (you will receive a proportion of the total amount).

What if the area I live in, or where the trial is, goes back into lockdown or high level restrictions?

Travel for visits for trial purposes are exempt from government restriction, as it is considered an essential journey.

What if new information becomes available?

Sometimes during a trial, new information relevant to the trial becomes available. If this happens, we will tell you about it and discuss whether you want to, or should, continue in the trial. If you decide to continue to take part, you may be asked to sign an updated consent form. On receiving new information, we may consider it to be in your best interests to withdraw you from the trial. Your participation in this trial may also be stopped at any time by the trial doctor or the Sponsor for other reasons.

Will I be given proof of immunisation?

Your GP will be informed that you have taken part in the trial. At the end of the study we will inform you and your GP of which fourth dose vaccine you received.

What will happen if I do not want to carry on with the trial?

If, at any time, after enrolment, you change your mind about being involved with this trial you are free to withdraw without giving a reason. If you withdraw we would not usually perform any more research procedures; although occasionally we might need to offer you a follow up visit for safety purposes, for example for blood tests. You would not have to agree to this. Your decision will not result in any penalty. Unless you state otherwise, any samples taken whilst you have been in the trial will continue to be stored and used for research as detailed above. You are free to request that your samples are destroyed at any time during or after the trial. Your data would be managed as laid out in the section 'What will happen to my data'. If you choose to withdraw from the trial, your standard medical care will not be affected.

Compensation for study-related injury

Your participation will be covered by the NHS Indemnity Scheme, which will cover any study-related injury or clinical negligence

What if something goes wrong?

The investigators recognise the important contribution that volunteers make to medical research and make every effort to ensure your safety and well-being. The University Hospital Southampton NHS Foundation Trust, as the research Sponsor, has arrangements in place in the unlikely event that you suffer any harm as a direct consequence of your participation in this trial.

In the event of harm being suffered, while the Sponsor will cooperate with any claim, you may wish to seek independent legal advice to ensure that you are properly represented in pursuing any complaint. The trial doctor can advise you of further action and refer you to a doctor within the NHS for treatment, if necessary. NHS indemnity operates in respect of the clinical treatment which may be provided if you needed to be admitted to hospital.

Complaints statement

If you wish to complain about any aspect of the way in which you have been approached or treated during the course of this trial, you should contact the research investigators who will do their best to address your concerns by sending them an email.

Would my taking part in this trial be kept confidential?

All information that is collected about you during the course of the research will be coded with a trial number and kept confidential. The information is available to the trial team, authorised collaborators, ethical review committees, your study site, government regulatory agencies and the Sponsor (University Hospital Southampton NHS Foundation Trust) who can ask to access the trial data. Responsible independent monitors may be given access to data for monitoring and/or audit of the trial to ensure we are complying with regulations. They are bound by the same confidentiality rules. The electronic diary is sent to you by email to complete online. University of Oxford will host the trial database and your email address will

be stored on a secure University of Oxford server, access to the diary system is password controlled and only trial site staff and sponsor and University of Oxford IT management can view the email address.

Every effort will be taken to maintain confidentiality. Information about you may be stored electronically on a secure server, and paper notes will be kept in a key-locked filing cabinet or restricted access office at your study site. Trial results will be published in a scientific journal but nothing that could identify you will be included in any report or publication. Your de-identified data collected in the trial may also be used in future research projects that may take place in hospitals, universities, non-profit institutions or commercial laboratories worldwide. We would not share anything that could identify you.

If you are not enrolled on the trial, either because you were not eligible after screening or there was not capacity to enrol you, then any data collected will be kept until the end of the trial.

What will happen to my data?

Data protection regulation requires that we state the legal basis for processing information about you. In the case of research, this is 'a task in the public interest.' University Hospital Southampton NHS Foundation Trust is the data controller and is responsible for looking after your information and using it properly.

We will be using information from you and your medical records in order to undertake this trial and will use the minimum personally-identifiable information possible. We will keep identifiable information about you such as contact details for 5 years, but with a review of this every 5 years after the trial has finished. This includes a copy of your consent form. The need to store this information for longer will be subject to ongoing review, taking into account the value of retaining this information for participant safety (e.g. to inform participants of unexpected safety signals emerging from post-licensing surveillance), as a resource for the participants (e.g. if they wish to check which vaccines they have received in the study) and any regulatory requirements. De-identified research data will be stored indefinitely. If you have agreed that samples can be retained for future research then your personally identifiable information will be kept with restricted access solely for the purposes of sample management for a minimum of five years after the last sample has been either used or disposed of in order to meet regulatory requirements. Samples will be provided for future research only in a form that does not identify you. The University of Oxford are storing the trial data on behalf of the study Sponsor, University Hospital Southampton NHS Foundation Trust. Research data will be stored securely at the University of Oxford indefinitely following removal of identifiable information. If you agree to your details being held to be contacted regarding future research, we will retain a record of this consent until such time as your details are removed from our database but will keep this separate from your research data.

The trial team will use your name and contact details, to contact you about the research trial, and make sure that relevant information about the trial is recorded for your care, in relation to your health during the trial and to oversee the quality of the trial.

At the completion of the trial, unless you consent otherwise (e.g. if you request to be informed of other trials), your personal details will not be used to contact you other than exceptional circumstances concerning your safety. If you consent to take part in another trial carried out by the your study site, personal information and medical information including blood test results may be accessed to avoid unnecessary repetition.

Your bank details will be stored securely in line with the trial site financial policies.

Data protection regulation provides you with control over your personal data and how it is used. When you agree to your information being used in research, however, some of those rights may be limited in order for the research to be reliable and accurate. Further information about your rights with respect to your personal data is available at: https://www.uhs.nhs.uk/Media/UHS-website-2019/Patientinformation/Visitinghospital/Your-personal-data-and-your-rights.pdf

Note that in order to check that we are conducting the trial to high standards we will be engaging trial monitors, who will have access to your data (including personal identifying information). They will not be retaining data beyond the end of the study. Minimal information about you (not including any identifiable information) may also be shared with third parties such as Public Health England or laboratories undertaking analysis of your blood samples (including, but not limited to, Oxford Immunotec and Nexelis) to help us conduct this research. Retention of data by these third parties will be as per PHE/local policies. Anonymised reports on safety information related to any of the study vaccines will be shared with the relevant vaccine manufacturer.

Some participants will have signed up to NHS Digital's *'Sign up to be contacted for coronavirus vaccine studies'* service. Further information regarding how we will inform NHS Digital of your enrolment in this trial, will be supplied in a Supplementary Privacy Notice for volunteers who are enrolled in the trial.

Involvement of the General Practitioner (GP)/Family doctor (GP)

In order to enrol into this trial, you will be required to sign a form documenting that you consent for us to contact your GP if we need to. This is in case we need to contact your GP to check there are no medical reasons that they are aware of that would make your participation inadvisable. Your GP may be asked to share information about your medical history and give access to any other medical records as required. The researchers will not enrol you in the trial if your GP has relevant concerns about your eligibility or safety.

If you are enrolled in the trial we will write to your GP to let them know this. This will be done regardless of whether we check any medical information with them. It is important to do this so that your medical records are kept up to date.

If you have up to date copies of your medical records or GP summary records please bring these to your screening visit.

What will happen to any samples I give?

If you consent, some of your leftover blood samples can be stored and used for future infectious disease or vaccine-related research in your study site's Biobank or Bioresource. This

is optional; your participation in this trial will not be affected by your decision whether to allow storage and future use of your leftover samples. Upon your request at any time, your remaining blood samples will be destroyed.

Your trial samples will be analysed in your study site research laboratories or other specialist laboratories. Tests to look at the response of your body to the vaccine or to COVID-19 disease will be done with collaborating laboratories in the UK and in other countries, including North America. Any samples or data sent to them would not include information that identifies you. However, your DNA is unique to you so it can never be completely anonymous.

Will any genetic tests be done?

We would also ask for your permission to store your DNA for research related to infectious diseases and vaccination; you can still take part in the trial if you did not want us to do this.

We are not planning to perform any genetic tests within this trial.

What will happen to the results of the research trial?

The results of this research trial may be presented at scientific meetings or conferences and published in a scientific medical journal. This may not happen until 1 or 2 years after the trial is completed. If you contact the researchers in the future, you can obtain a copy of the results. You will not be identified in any report or publication.

The de-identified data from this trial will be shared with the collaborating partners who are organising and funding this research work. You will not be paid for any part of this. Data from this trial may be used as part of a student post-graduate degree, for example a MD or PhD.

Taking part in future vaccine-related research

With your consent, we would like to keep your contact details after the trial is complete, so we may inform you of opportunities to participate in future vaccine-related research. This is entirely optional and your participation in this trial will not be affected by your decision to allow or not allow storage of your contact details beyond your participation in this trial.

Your details will be stored electronically on a secure server and only authorised individuals at the your study site will have access to it. We will not, under any circumstances, share your contact details with any third party institutions without your permission. Being contacted does not oblige you to agree to take part in future research and you can ask us to have your contact details removed from our database at any time.

Who is sponsoring, organising and funding the research? Does University Hospital Southampton NHS Foundation Trust (The Sponsor) have a financial interest in the results of this trial?

The trial is organised and sponsored by the University Hospital Southampton NHS Foundation Trust. The trial is funded through financial support to the University Hospital Southampton NHS Foundation Trust from the National Institute for Health Research (NIHR), which is a UK government funded research agency. Neither your GP nor the researchers are paid for recruiting you into this trial. Southampton NHS Foundation Trust has no financial interest in the results of this trial.

Who has reviewed the trial?

This trial has been reviewed by the NHS Research Ethics Service (RES) – South Central – Berkshire and has been given a favourable ethical opinion. The Medicines and Healthcare products Regulatory Agency (MHRA), which regulates the use of all medicines in the UK, has reviewed the trial design and has granted permission to use these unlicensed vaccine schedules in this clinical trial.

Further information and contact details

If you relocate during the course of the trial and would like to continue taking part, it may be possible if there is a trial site nearby that are able to perform the remainder of your trial visits. If this were the case, we may transfer copies of your research notes including consent forms. The responsibility for your continued care in the trial would be transferred to the new trial site.

We hope this information sheet has answered all your questions. If you would like further information about participating in research please visit the following website: http://www.nhs.uk/conditions/Clinical-trials/Pages/Introduction.aspx. For independent advice about participating in this trial you may wish to contact your GP. If you would like to speak to one of our team members to discuss any aspect of this trial or **if you are interested in taking part in the trial, please contact us**.

Supplementary Privacy Notice for Enrolled Participants

This privacy notice is for the Evaluating COVID-19 Vaccine Boosters (COV-Boost) study participants who have signed up to NHS Digital's *'Sign up to be contacted for coronavirus vaccine studies'* service.

Data Protection

In the course of enrolling in the Evaluating COVID-19 Vaccine Boosters (COV-Boost) study you have provided information about yourself ('personal data'). We (UHS NHS FT as Sponsor of the study) are the 'data controller' for this information, which means we decide how to use it and are responsible for looking after it in accordance with the General Data Protection Regulation and associated data protection legislation.

How we use your data

NHS Digital contacted you on behalf of the University Hospital Southampton NHS Foundation Trust to invite you to join our Evaluating COVID-19 Vaccine Boosters (COV-Boost) study.. This is because you signed up to NHS Digital's '*Sign up to be contacted for coronavirus vaccine studies service*'. You were contacted because you were eligible to take part in our study based on the information you provided to NHS Digital when you signed up to its service (namely your age and geographical location).

You can only be enrolled in one vaccine study at a time. This means we need to let NHS Digital know that you are now enrolled in our study. We will do this so that NHS Digital can update its records and so you are not contacted unnecessarily about joining any other vaccine studies or inadvertently enrolled in more than one study at a time.

Each site will review which of their participants had signed up to NHS Digital's *Sign up to be contacted for coronavirus vaccine studies'* service. If you had signed up to this service, the site you are enrolled with will share your name with NHS Digital to confirm your enrolment. They will keep a record of having confirmed your enrolment with NHS Digital.

We need to process your data for the above purpose in order to effectively carry out research, which is a task we carry out in the public interest. Data concerning health and ethnicity is special category data, which means that we must meet additional requirements to process it. The additional requirement we meet to process this data is that the processing is necessary for the purpose of research.

We will only use your data for the purposes for which we collected it, unless we reasonably consider that we need to use it for another related reason and that reason is compatible with the original purpose. If we need to use your data for an unrelated purpose, we will seek your consent to use it for that new purpose.

Who has access to your data?

Access to your data will be provided to those who need to view it as part of their work in carrying out the purposes described above.

Where we share your data will with NHS Digital, we will seek to share the minimum amount necessary (please see NHS Digital's privacy notice for how it uses your data).

Retaining your data

Once we have confirmed your enrolment to NHS Digital, we will securely destroy the list of people that NHS Digital contacted about our study on our behalf.

We will retain a record of having confirmed your enrolment with NHS Digital along with other identifiable information about you for 5 years and with a review of this every 5 years after the trial has finished. The need to store this information for longer in relation to licensing of the vaccine will be subject to ongoing review.

Security

Your data will be held securely in accordance with the University of Oxford or equivalent University Hospital Southampton policies and procedures. Further information is available on the University of Oxford's Information Security website here.

Where we store and use your data

We store and use your data electronically on a secure server, and paper notes will be kept in a key-locked filing cabinet or restricted access office at the NIHR Southampton Clinical Research Facility or on University premises.

Your rights

Information on your rights in relation to your personal data are explained here.

Contact

If you wish to raise any queries or concerns about our use of your data, please contact your study site. Alternatively, you may contact the University Hospital Southampton NHS FT on Data Protection Office at dataprotection@uhs.nhs.uk or telephone: 023 8120 4743