PARTICIPANT INFORMATION SHEET

VIBRANT: Vaccine Immunity Breakthrough and Reinfection – ANtibodies & T cells

We would like to invite you to take part in this study to understand why some people get infection with SARS-CoV2 (the virus that causes COVID-19) having had a previous SARS-CoV-2 infection, or after receiving a COVID-19 vaccine course.

Before you decide to join this study, it is important that you understand why the research is being done and what it would involve for you. Please take time to read this information and discuss it with others if you wish. Please contact the VIBRANT study team to ask questions if there is anything that is not clear. The VIBRANT contact details are at the end of this information leaflet.

This study is being delivered across the UK in collaboration with academic institutions and public health agencies in all four nations (England, Northern Ireland, Scotland, and Wales).

What is the purpose of the study?

The introduction of COVID-19 vaccination has had a positive impact on infection rates, but we recognise that vaccines don't protect everybody against future infection. The reasons for this are currently unknown:

One reason might be that the vaccine has "worn off". It is natural for the immune system to wear off following vaccination, but it is hoped that immunity remains at a level that can be quickly reactivated when the individual is exposed to the SARS-CoV-2 virus to protect the individual from infection.

Another reason might be that an individual isn't able to produce a strong response to the vaccine or original infection. We know that some individuals with underlying health conditions may not respond well but equally we know some healthy individuals can suffer further infection but the reasons for this are currently unknown.

A further reason is that the vaccine may not protect against the variant of SARS-CoV-2 virus that has caused the illness.

This study is investigating which of these possibilities is most common to learn how we should be using COVID vaccines going forward.

Why have I been invited?

VIBRANT is recruiting participants of existing COVID-19 studies in healthcare workers, including the SARS-CoV-2 Immunity and Reinfection Evaluation study (SIREN) and other

studies contributing to the Protective Immunity from T cells to Covid-19 in Health workers study (PITCH).

You have been invited to take part because you work in a healthcare setting and are already part of one of these health care worker COVID research studies. Monitoring of your health (through COVID testing or questionnaires) through this study has identified that you have experienced a COVID infection after vaccination, either a second (or third) infection case or have made a suboptimal immune response to COVID-19 vaccination. We know that individuals who work in healthcare settings have higher rates of infection with SARS-COV-2 than the general population, and therefore are a good group in which to look for re-infections and infections after COVID-19 vaccination.

You are eligible to join and continue in this study even if you are currently enrolled in, or subsequently join, another COVID-19 study. We would ask which studies you are currently enrolled with when you join VIBRANT.

Do I have to take part?

Taking part is voluntary and you should not be placed under any pressure to do so. It is completely up to you to decide whether or not to take part.

If you no longer want to be involved, you can withdraw from the study at any time without giving reason. Please contact the VIBRANT team on the study email to let us know. We would continue to include your health questionnaire data and samples, which you will be asked to do as part of the study, unless you specifically state otherwise.

What will happen to me if I decide to take part?

Enrolment into the study.

For participants from the SIREN study:

If you are eligible to join VIBRANT and you are a SIREN study participant, then you will have received an email or text directly from the central SIREN team inviting you to join VIBRANT. This message will also include a link to the VIBRANT online consent form for you to complete, after you have read this information sheet. If you complete the VIBRANT consent, you and your local SIREN study team will receive a confirmatory message from the central SIREN team. The SIREN team will directly contact the VIBRANT team to inform them you have joined VIBRANT and will share your contact details with them to enable you to take part in VIBRANT. You will then receive a welcome message from the VIBRANT team confirming your enrolment and asking you to complete an online health questionnaire.

For participants from other COVID-19 health care worker (HCW) studies:

If you are eligible to join VIBRANT and you are already enrolled in an allied COVID-19 health care worker study, then you will have received an email directly from your study team inviting you to join VIBRANT with this information sheet. This message will also include a link to the VIBRANT online consent form for you to complete, after you have read this information sheet. You will then receive a welcome message from the VIBRANT team confirming your enrolment and asking you to complete an online health questionnaire.

For all participants

- Once you are enrolled you will be given access to an online health questionnaire. This is asking about your previous medical history including what infections you might have had and other conditions you may have needed specific care for. This questionnaire can take between 10 and 30 minutes, depending on how well you have been in the past.

- Your health questionnaire will be screened by the clinical team associated with the study. If there is anything that they are concerned about they will contact, you directly for a telephone consultation.

VIBRANT Sub-study

VIBRANT is undertaking an in-depth study of 200 enrolled HCWs. We don't yet know how common it is going to be to get reinfection and so we will be choosing who to include in this sub-study from the health questionnaire screening, response to vaccination course (if you have had this) and feasibility of getting samples from you.

We will contact you if you fit the criteria for the sub-study and arrange for a blood test and mucosal sampling (this includes using a sponge, which is placed in the nose for 1 minute, to get nasal secretions and collecting saliva by dribbling into a pot for 4 minutes). We will collect a 60mls blood sample (approximately 4 tablespoons). Some of this blood will be used for general health testing and to investigate for common causes of a weaker immune system. You will get a report of these results by email. If you would like, a copy of these results can also be sent to your GP in the post. If there is something on the results or your questionnaire that we need to clarify we would ask to be able to contact you for a telephone consultation.

In specific cases it may be necessary to request further blood and/or mucosal samples. Each additional blood sample will be no more than 60mls with a maximum of 180mls taken over a six-month period.

As far as possible, blood sampling will be done in the workplace but it may be necessary for this to be arranged in a different location depending on where you work.

In addition, your blood and mucosal sample will be used to explore why some people are more likely to get infection. This is an exploratory research element of the project and we do not yet know the usefulness of the tests being undertaken so these results will not be reported back to you. These tests will be used to discover new markers that may explain why some people are more likely to get infection.

If you agree, the study also involves the analysis or use of DNA to explore whether there are genetic markers that may explain why some people are more likely to get infection.

What will happen to you in the VIBRANT study?

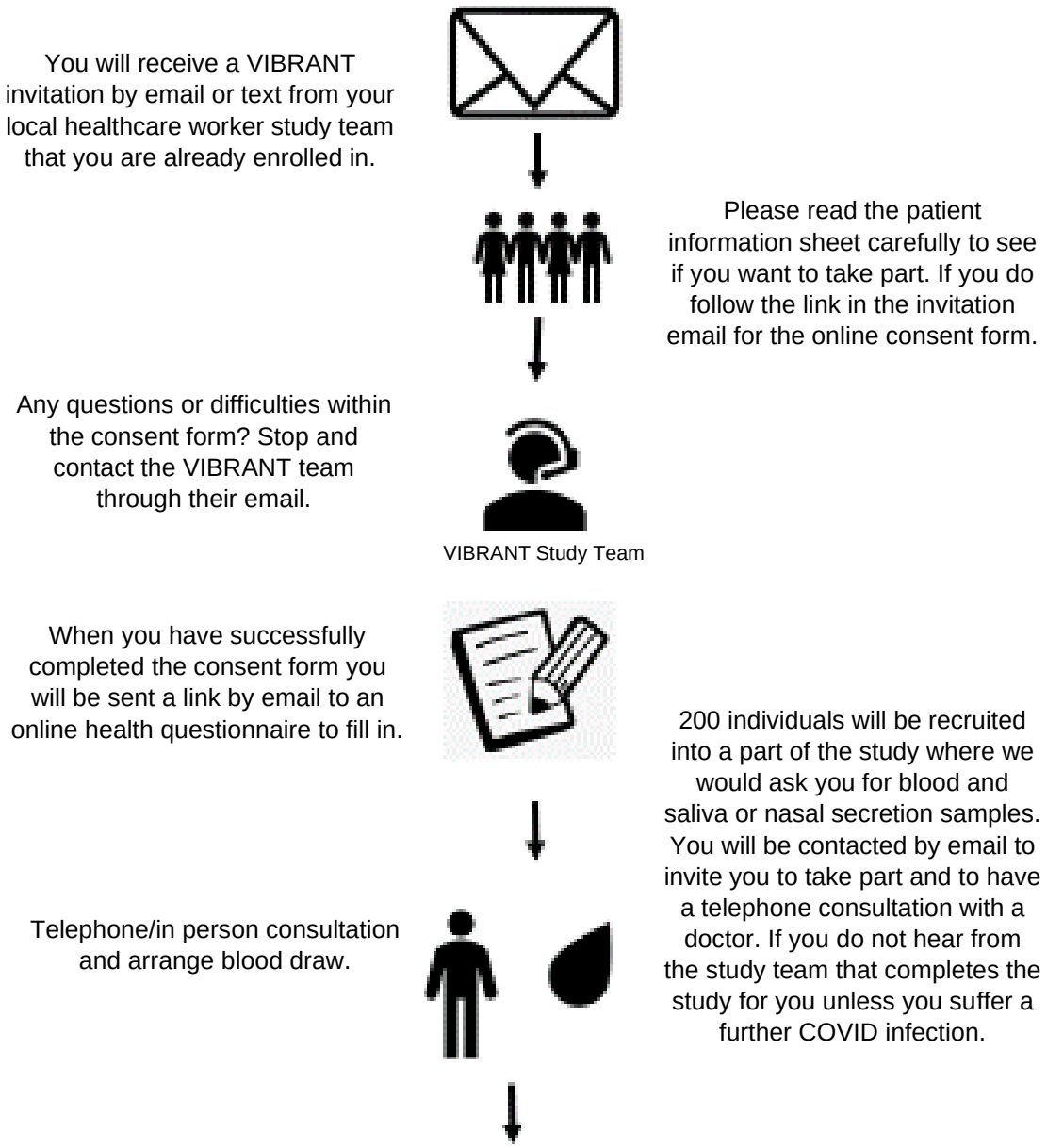

Figure 1: Summary of what will happen to you during the study

What should I consider (benefits and disadvantages)?

An external clinical review of your health questionnaire will be undertaken. The questionnaire will be screened to see if there are any reported findings that might be of concern. For the 200 individuals in the sub-study we will also review common blood tests that tell us about your general and immune health. These will be reported to you if you chose.

The research testing will not benefit you directly, we as yet do not know the outcome, that is why we are conducting the research, but your participation will help provide important information about SARS-CoV2 re-infection among staff working in healthcare organisations and provide a stronger evidence base to inform national guidance and policy. At the end of the study, the overall results will be published in national reports.

It is possible that we may find an underlying health problem that you were not previously aware of. For most conditions it is better to know earlier rather to enable treatment and if something was found we would contact you for a telephone consultation. The condition would be explained and a plan made with you as to how to access the right care.

It is also possible that we may find that there is no obvious reason why you have suffered a further infection and this is just a spectrum of normal.

Not everyone can be considered for the VIBRANT sub-study which is funded for 200 participants. If you are not selected but you are worried about your health please discuss this with your GP.

For some, blood sampling may cause momentary discomfort at the site of the blood draw, possible bruising, redness, and swelling around the site, bleeding at the site, feeling of light headedness when the blood is drawn, and rarely, an infection at the site of blood draw. Some individuals additionally find the swab tests uncomfortable.

Will my General Practitioner/family doctor (GP) be informed of my participation?

Your GP will not routinely be informed of your participation in the VIBRANT study. However, if you are selected for the in-depth sub study when bloods are taken, you will get a report of your test results and if you would like, a copy of these results can also be sent to your GP with a copy of the study information sheet.

We would also ask whether we can contact your GP, the National Immunisation Management system or other national health data sets including Hospitalisation Episode Statistics, for more information about you that is relevant to the study. Examples of this might be what vaccines you have had in the past, how many times you have been in hospital or how many antibiotic courses you might have had in the last 5 years. We will ask you for your preference regarding contacting your GP in the consent form if you chose to take part.

Will I be reimbursed for taking part?

You will not be reimbursed for taking part in the study.

What will happen to the samples I give?

The clinical testing of your samples will either be undertaken at the laboratory used by your organisation, or the sample will be sent to the University of Birmingham (UoB) Clinical Immunology Service laboratory for testing. The UoB lab will process and store your blood samples for the research testing. There are a number of laboratories in the country, which are part of the VIBRANT study, that have specific expertise in a type of test. Samples will be sent in batches to these laboratories for testing. Your personal details are not stored on the sample container and so no one will be able to identify you.

At the end of the study, any remaining samples will be anonymised and incorporated into the UK Health Security Agency (UKHSA) previously Public Health England serology biobank. Samples stored at this biobank will be used to perform a range of different national antibody surveys in the future. If you do not want us to transfer your sample to this biobank, you can indicate this on your consent form, and your sample will be destroyed after the VIBRANT study is completed. Selecting this option will not prevent your participation in the VIBRANT study. The donated samples will be treated as a gift, which means that we will not be able to return them to you. *If you agree to your samples being used in future research, your consent form will be held until the samples have been depleted or destroyed.*

What will happen to my data?

VIBRANT is aligned to the COVID-19 healthcare worker study you are currently enrolled in (such as SIREN or PITCH). This means that in order to investigate your case comprehensively, data will be shared between VIBRANT and your COVID-19 healthcare worker study research teams. This may include details on your COVID-19 vaccinations, COVID-19 symptom and testing history, COVID-19 hospitalisations, and results of antibody or PCR testing collected by your healthcare worker study. By consenting to VIBRANT you are therefore consenting to these research teams sharing your personal data to complete the study. Your data will be transferred securely between these organisations.

Access to identifiable data will be controlled so that only members of the study team who need to see this are able to do so. Non-identifiable data will be used to enable research testing by the VIBRANT team but also in reports and scientific publications. Non-identifiable information may be collected, analysed, reported and shared with others within and outside the UK to contribute to research.

The local study team will use your name, home address, and contact details including email and phone number, to be able to contact you about the research study, and to oversee the quality of the study. They will keep identifiable information about you from this study for 5 years after the study has finished.

We will ask you whether you would like to be contacted about future research studies. If you agree we will retain a copy of your online consent form and your personal details both on the secure online REDCap server, until such time as your details are removed from our database but will keep the consent form and your details separate.

UK General Data Protection Regulations (UK GDPR) 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.' The University of Oxford is the sponsor for this study, based in the United Kingdom, is the data controller and is responsible for looking after your information and using it properly. Your

personal data will be stored and processed in accordance with the General Data Protection Regulations (GDPR) and the Data Protection Act 2018.

We will be using information from you and the data from the previous HCW study to which you were involved in order to undertake this study and will use the minimum personally-identifiable information possible. We will keep identifiable information about you for 5 years after the study has finished. This excludes any research documents with personal information, such as consent forms, which will be held securely on the online server REDCap licensed to the University of Oxford for 5 years after the end of the study.

We will let very few people know your name or contact details, and only if they really need it for this study. People who do not need to know who you are will not be able to see your name or contact details. Where possible your data will be identified through a code number instead so people won't know who you are. Your personal information will only be used to contact you about the research study and only designated members of the research study team will have access to these personal details. The exception to this is that sometimes responsible members of the University of Oxford or relevant NHS Trust(s) may be given access to data for monitoring and/or audit of the study to ensure that the research is complying with research regulations

Your clinical test data will be attached to your name so that we can send you a report. Any research tests data will only be linked to your personal details by the study number. This test information will be kept and analysed on computer servers within the VIBRANT consortium. Your anonymized information will be kept securely on the secure online database called REDCap for 10 years. At the end of the study we will save some of the data in case we need to check it and for future research if you agree to this. We will make sure no-one can work out who you are from the research reports we write.

If you agree, the study also involves the analysis or use of DNA. Whilst your sample and information will be 'de-identified' and assigned a study code, your DNA is unique to you so it can never be completely anonymous.

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://compliance.web.ox.ac.uk/individual-rights

The VIBRANT study and associated parent studies and NHS Trusts are not responsible for the security of personal devices. When consents or questionnaires are submitted from a personal device it is the responsibility of the participant to ensure the device and network connections are secure.

You can find out more about how we use your information by contacting the study team at vibrant@ndm.ox.ac.uk .

Participation in future research

We would like to be able to contact you in the future if another ethically approved research study occurs that you might be eligible for. In order to do this we would need your permission, documented through the consent form, to keep your personal details in the secure online database REDCap that is password protected and only accessible by the study investigators. All contact will come from your research team in the first instance. Agreeing to be contacted

does not oblige you to take part in future research, and you can be removed from this register at any time you wish.

What will happen if I don't want to carry on with the study?

If you no longer want to be involved, you can withdraw from the study at any time without giving reason. Please contact the VIBRANT team on the study email vibrant@ndm.ox.ac.uk to let us know. We would continue to include your health questionnaire data and samples unless you specifically state otherwise. Withdrawing from VIBRANT will not affect your ongoing participation in the parent COVID-19 healthcare worker study.

What if there is a problem?

The University of Oxford, as Sponsor, has appropriate insurance in place in the unlikely event that you suffer any harm as a direct consequence of your participation in this study. NHS indemnity operates in respect of the clinical treatment which is provided.

If you wish to complain about any aspect of the way in which you have been approached or treated, or how your information is handled during the course of this study, you should contact VIBRANT by email vibrant@ndm.ox.ac.uk and one of the chief or lead investigators will contact you (Professors Paul Klenerman, Susie Dunachie or Alex Richter). If you are still unhappy, you may contact the University of Oxford Research Governance, Ethics & Assurance (RGEA) office on 01865 616480, or the head of RGEA, ctrg@admin.ox.ac.uk.

How have healthcare workers been involved in this study?

This study has been reviewed by healthcare workers who have participated in the other parent studies for VIBRANT.

Who is organising and funding the study?
The study is funded by a UK Research and Innovation grant.

Who has reviewed the study?

All research in the NHS is looked at by an independent group of people, called a Research Ethics Committee, to protect participants' interests. This study has been reviewed and given favourable opinion by the London-Chelsea Research Ethics Committee Ethics Committee.

Further information and contact details:

If you would like to join, please complete the consent form linked in the approach email, once you are successfully enrolled you will then be sent a link to the health questionnaire. The VIBRANT research team will discuss with you how to arrange your blood tests if you take part in the sub-study. If you have any questions about enrolment or the running of the study at your organisation, please contact the VIBRANT study team by email and some will get back to you.

Thank you for reading this information and considering taking part.