Welcome to the Integrated Research Application System

IRAS Project Filter

The integrated dataset required for your project will be created from the answers you give to the following questions. The system will generate only those questions and sections which (a) apply to your study type and (b) are required by the bodies reviewing your study. Please ensure you answer all the questions before proceeding with your applications.

Please complete the questions in order. If you change the response to a question, please select 'Save' and review all the questions as your change may have affected subsequent questions.

Please enter a short title for this project (maximum 70 characters)
FALCON C-19

1. Is your project research?

(●) Yes ( ) No

2. Select one category from the list below:

( ) Clinical trial of an investigational medicinal product

( ) Clinical investigation or other study of a medical device

( ) Combined trial of an investigational medicinal product and an investigational medical device

( ) Other clinical trial to study a novel intervention or randomised clinical trial to compare interventions in clinical practice

( ) Basic science study involving procedures with human participants

( ) Study administering questionnaires/interviews for quantitative analysis, or using mixed quantitative/qualitative methodology

( ) Study involving qualitative methods only

(●) Study limited to working with human tissue samples (or other human biological samples) and data (specific project only)

( ) Study limited to working with data (specific project only)

( ) Research tissue bank

( ) Research database

If your work does not fit any of these categories, select the option below:

( ) Other study

2a. Please answer the following question(s):

a) Will you be taking new samples primarily for research purposes (i.e. not surplus or existing stored samples), including any removal of organs or tissue from the deceased?	(●) Yes	( ) No
b) Will you be using surplus tissue or existing stored samples identifiable to the researcher?	(●) Yes	( ) No
c) Will you be using only surplus tissue or existing stored samples not identifiable to the researcher?	( ) Yes	(●) No
d) Will you be processing identifiable data at any stage of the research (including in the identification of participants)?	(●) Yes	( ) No

3. In which countries of the UK will the research sites be located?*(Tick all that apply)*

- [x] England
- [x] Scotland
- [x] Wales
- [x] Northern Ireland

3a. In which country of the UK will the lead NHS R&D office be located:

- (•) England
- ( ) Scotland
- ( ) Wales
- ( ) Northern Ireland
- ( ) This study does not involve the NHS

4. Which applications do you require?

- [x] IRAS Form
- [ ] Confidentiality Advisory Group (CAG)
- [ ] Her Majesty's Prison and Probation Service (HMPPS)

Most research projects require review by a REC within the UK Health Departments' Research Ethics Service. Is your study exempt from REC review?

( ) Yes (•) No

5. Will any research sites in this study be NHS organisations?

(•) Yes ( ) No

5a. Are all the research costs and infrastructure costs (funding for the support and facilities needed to carry out research e.g. NHS Support costs) for this study provided by a NIHR Biomedical Research Centre, NIHR Collaboration for Leadership in Health Research and Care (CLAHRC), NIHR Patient Safety Translational Research Centre or Medtech and In Vitro Diagnostic Cooperative in all study sites?

Please see information button for further details.

( ) Yes (•) No

Please see information button for further details.

5b. Do you wish to make an application for the study to be considered for NIHR Clinical Research Network (CRN) Support and inclusion in the NIHR Clinical Research Network Portfolio?

Please see information button for further details.

(•) Yes ( ) No

The NIHR Clinical Research Network provides researchers with the practical support they need to make clinical studies happen in the NHS e.g. by providing access to the people and facilities needed to carry out research "on the ground".

If you select yes to this question, you must complete a NIHR Clinical Research Network (CRN) Portfolio Application Form (PAF) immediately after completing this project filter question and before submitting other applications. Failing to complete

the PAF ahead of other applications e.g. HRA Approval, may mean that you will be unable to access NIHR CRN Support for your study.

6. Do you plan to include any participants who are children?

○ Yes ◉ No

7. Do you plan at any stage of the project to undertake intrusive research involving adults lacking capacity to consent for themselves?

◉ Yes ○ No

Answer Yes if you plan to recruit living participants aged 16 or over who lack capacity, or to retain them in the study following loss of capacity. Intrusive research means any research with the living requiring consent in law. This includes use of identifiable tissue samples or personal information, except where application is being made to the Confidentiality Advisory Group to set aside the common law duty of confidentiality in England and Wales. Please consult the guidance notes for further information on the legal frameworks for research involving adults lacking capacity in the UK.

8. Do you plan to include any participants who are prisoners or young offenders in the custody of HM Prison Service or who are offenders supervised by the probation service in England or Wales?

○ Yes ◉ No

9. Is the study or any part of it being undertaken as an educational project?

○ Yes ◉ No

10. Will this research be financially supported by the United States Department of Health and Human Services or any of its divisions, agencies or programs?

○ Yes ◉ No

11. Will identifiable patient data be accessed outside the care team without prior consent at any stage of the project (including identification of potential participants)?

○ Yes ◉ No

Integrated Research Application System
Application Form for Research limited to working with human tissue samples and/or data

IRAS Form (project information)

Please refer to the E-Submission and Checklist tabs for instructions on submitting this application.

The Chief Investigator should complete this form. Guidance on the questions is available wherever you see this symbol displayed. We recommend reading the guidance first. The complete guidance and a glossary are available by selecting Help.

Please define any terms or acronyms that might not be familar to lay reviewers of the application.

Short title and version number: (maximum 70 characters - this will be inserted as header on all forms)
FALCON C-19

Please complete these details after you have booked the REC application for review.

REC Name:
Undetermined (central submission)

REC Reference Number:
Undetermined

Submission date:
21/05/2029

PART A: Core study information

1. ADMINISTRATIVE DETAILS

A1. Full title of the research:

Facilitating Accelerated CLinical evaluation Of Novel diagnostic tests for COVID-19 (FALCON C-19)

A3-1. Chief Investigator:

Title	Forename/Initials	Surname
Prof	Richard	Body

Post	Professor, Emergency Medicine
Qualifications	MB ChB, MRCSEd(A&E), FRCEM, PhD
ORCID ID	0000 0001 9089 8130
Employer	The University of Manchester
Work Address	Emergency Department, Manchester Royal Infirmary Oxford Rd, Manchester
Post Code	M13 9WL
Work E-mail	richard.body@manchester.ac.uk
* Personal E-mail	rbody@doctors.org.uk
Work Telephone	01612765071
* Personal Telephone/Mobile	07880712929

Fax

** This information is optional. It will not be placed in the public domain or disclosed to any other third party without prior consent.*
A copy of a current CV (maximum 2 pages of A4) for the Chief Investigator must be submitted with the application.

A4. Who is the contact on behalf of the sponsor for all correspondence relating to applications for this project?
This contact will receive copies of all correspondence from REC and HRA/R&D reviewers that is sent to the CI.

	Title	Forename/Initials	Surname
	Ms	Emma	Columbine
Address	Sponsorship Governance Coordinator		
	Research Office, 1st Floor, The Nowgen Centre		
	29 Grafton Street, Manchester		
Post Code	M13 9WU		
E-mail	research.sponsor@mft.nhs.uk		
Telephone	01612765787		
Fax			

A5-1. Research reference numbers. *Please give any relevant references for your study:*

Applicant's/organisation's own reference number, e.g. R & D (if available):	B00944
Sponsor's/protocol number:	Not applicable
Protocol Version:	1.0
Protocol Date:	20/05/2007
Funder's reference number (enter the reference number or state not applicable):	Not applicable
Project website:	Not applicable

Additional reference number(s):

Ref.Number	Description	Reference Number

Registration of research studies is encouraged wherever possible. You may be able to register your study through your NHS organisation or a register run by a medical research charity, or publish your protocol through an open access publisher. If you have registered your study please give details in the "Additional reference number(s)" section.

A5-2. Is this application linked to a previous study or another current application?

○ Yes ◉ No

Please give brief details and reference numbers.

2. OVERVIEW OF THE RESEARCH

To provide all the information required by review bodies and research information systems, we ask a number of specific questions. This section invites you to give an overview using language comprehensible to lay reviewers and members of the public. Please read the guidance notes for advice on this section.

A6-1. Summary of the study. *Please provide a brief summary of the research (maximum 300 words) using language*

easily understood by lay reviewers and members of the public. Where the research is reviewed by a REC within the UK Health Departments' Research Ethics Service, this summary will be published on the Health Research Authority (HRA) website following the ethical review. Please refer to the question specific guidance for this question.

The United Kingdom and wider world is in the midst of the 2019 novel coronavirus (SARS-CoV-2) pandemic. Accurate diagnosis of infection, identification of immunity and monitoring the clinical progression of infection are of paramount importance to our response. Widespread population testing has proven difficult in western countries and has been limited by test availability, human resources and long turnaround times (up to 72 hours). This has limited our ability to control the spread of infection and to develop effective clinical pathways to enable early social isolation of infected patients and early treatment for those most at risk. The life sciences industry has responded to the pandemic by developing multiple new in vitro diagnostic tests (IVDs). To leverage the potential clinical benefit of those tests we require efficient but robust clinical evaluation. Therefore, to optimise resource utilisation in this global pandemic, we will conduct a platform adaptive diagnostic study on a national level, utilising a national network of expertise in the evaluation of diagnostic technology. This study will enable the evaluation of multiple assays in three priority areas:

(1) Evaluation of the diagnostic accuracy of IVDs for active infection with SARS-CoV-2
(2) Evaluation of assays monitoring the immune response to SARS-CoV-2 infection
(3) Evaluation of the prognostic value of commercially available tests for predicting prognosis in patients with suspected or confirmed SARS-CoV-2 infection. (This arm will not be active immediately but may be activated after initiation).

Recognising the need for a holistic, specialty-agnostic approach, our overall programme of work will take place in both primary and secondary healthcare settings, spanning the breadth of a patient's journey. The study described in this application (referred to as FALCON) focuses only on secondary care settings. A separate study (RAPTOR) is being initiated to evaluate IVDs for COVID-19 diagnosis in community settings.

A6-2. Summary of main issues. *Please summarise the main ethical, legal, or management issues arising from your study and say how you have addressed them.*

Not all studies raise significant issues. Some studies may have straightforward ethical or other issues that can be identified and managed routinely. Others may present significant issues requiring further consideration by a REC, HRA, or other review body (as appropriate to the issue). Studies that present a minimal risk to participants may raise complex organisational or legal issues. You should try to consider all the types of issues that the different reviewers may need to consider.

This study addresses an issue of critical importance to planning our public health response to the COVID-19 pandemic. Our findings will inform the testing strategy for the United Kingdom and other countries. This work will facilitate an increase in testing capacity by providing robust clinical performance evaluation for multiple commercially available in vitro diagnostic tests (IVDs). It is vital that the IVDs we use to diagnose and monitor COVID-19 infections have received robust clinical evaluations prior to widespread use. Without that there the is the potential for misdiagnosis on a large scale, with serious implications for the health of both individuals and the wider public.

The patients that we plan to include will have presented for medical attention in an emergency. It is critical for the IVDs to be evaluated in that setting because that is how they would be used in practice. If we were to draw samples at a later stage in a patient's journey, our findings may be misleading. (Tests may be more or less accurate if samples are taken hours or days later). However, because patients will have presented to hospital in an emergency, we must make provision for that with our consent process.

When patients first present, they may be seriously unwell; they are likely to be very anxious; and the face masks and PPE worn by patients and clinicians present significant barriers to communication. Therefore, there will be many instances where patients are unable to provide consent at the time of first approach. Some patients will never regain capacity, particularly those with severe disease. However, it is scientifically imperative to represent such patients in the evaluation of new tests. We need to have confidence that the tests remain accurate in such patients.

In line with other similar studies, therefore, we will take a pragmatic approach to patient consent. The COVID-19 platform trials (RECOVERY, REMAP-CAP) enable patients to be enrolled with assent from a relative, witnessed verbal consent or assent from an independent professional representative. This study is much lower risk because the care of patients will not change. The samples required for this study will not cause harm to patients and can usually be drawn at the same time as routine clinical samples. Therefore, we will include patients if they are able to provide written informed consent, witnessed verbal consent or if witnessed assent is obtained from a relative or independent professional representative. Wherever possible, we will then seek to obtain full written informed consent from participants when they have regained capacity and/or have time to consider their participation. No further samples will be drawn from those patients and any stored samples will be destroyed. Data from samples that have been analysed will be retained, which is a governance requirement.

We will also provide provisions for consultee telephone declaration in the event that visitors are not allowed on the hospital site and so we cannot gain personal consultee consent in person. This will allow for us to gain witnessed consultee consent over the phone. If the participant then regains capacity we will approach them for deferred consent.

3. PURPOSE AND DESIGN OF THE RESEARCH

A7. Select the appropriate methodology description for this research. *Please tick all that apply*:

- ☐ Case series/ case note review
- ☐ Case control
- ☐ Cohort observation
- ☐ Controlled trial without randomisation
- ☐ Cross-sectional study
- ☐ Database analysis
- ☐ Epidemiology
- ☐ Feasibility/ pilot study
- ☐ Laboratory study
- ☐ Metanalysis
- ☐ Qualitative research
- ☐ Questionnaire, interview or observation study
- ☐ Randomised controlled trial
- ☑ Other (please specify)

Diagnostic test accuracy study

A10. What is the principal research question/objective? *Please put this in language comprehensible to a lay person.*

To evaluate the diagnostic accuracy of multiple commercially available diagnostic tests for COVID-19 infection, in the hospital setting.

A11. What are the secondary research questions/objectives if applicable? *Please put this in language comprehensible to a lay person.*

We will also compare the results of two methods: the new test vs a reference standard test. This will enable us to determine whether there are systematic differences in the results, which may not be picked up only by looking at diagnostic accuracy.

This is a platform study and we will therefore adapt to evaluate new tests that are developed while the study is running. New information may also become available to suggest that there are other important biomarkers that could help with the diagnosis of COVID-19, or to help estimate a patient's prognosis. We therefore retain the flexibility to evaluate the prognostic value of commercially available tests in patients with suspected or confirmed COVID-19, using the same study design.

A12. What is the scientific justification for the research? *Please put this in language comprehensible to a lay person.*

There is an urgent need to harmonise the approach to rapid evaluations of diagnostics for COVID-19 diagnosis and management in the UK. A unified approach across all 4 nations is required, utilising existing infrastructure and national networks for research design and delivery. This will ensure a methodologically robust, standardised approach to the evaluation process, avoiding duplication of effort, providing diagnostic test evidence to inform Urgent Public Health clinical trial platforms and national diagnostic test guidelines.

On April 21st 2020, the website FindDx reported that there were 247 CE-marked in vitro diagnostics (IVDs) relating to the diagnosis of COVID-19. We urgently require a unified and efficient approach to support the IVD industry, to rapidly evaluate new diagnostic technologies and support early adoption into clinical practice, increasing testing capacity and improving standards of care across the NHS.

This study will form part of a wider platform study encompassing all diagnostics, providing a robust national mechanism to accelerate promising COVID-19 diagnostics to real-world use

This national collaborative platform for COVID-19 diagnostics research and evaluation. We will optimise resource utilisation and promote shared best practice, we will mobilise a network of hospital laboratories, primary and secondary care settings, ensuring rapid evaluation of medical tests to support diagnosis and management of patients with suspected COVID-19, assess immunity of the UK population, and alongside these aims collect data which allows us to develop effective diagnostic pathways for subsequent waves of infection in the post pandemic setting. This collaborative platform will also place the UK in a unique position to rapidly evaluate and deliver novel diagnostics into clinical practice when faced with future pandemics.

The collective output of the platform will be the generation of setting specific evidence to inform the rapid adoption of clinical tests likely to improve COVID-19 patient pathways within the NHS in the inter and post pandemic phases. Strong links with NICE and Public Health England will facilitate this adoption

A13. Please summarise your design and methodology. *It should be clear exactly what will happen to the research participant, how many times and in what order. Please complete this section in language comprehensible to the lay person. Do not simply reproduce or refer to the protocol. Further guidance is available in the guidance notes.*

This will be a prospective diagnostic test accuracy study, taking place at centres across the United Kingdom. After screening and consent/assent, we will draw samples from participants. Wherever possible, this will be done at the same time as patients are undergoing routine tests as part of their usual clinical care. Sampling will begin as soon as possible after the patient presents to secondary care.

We will draw the following samples:

● Combined nasal/throat swab and/or saliva and approximately 15mL venous blood taken at the time of first contact (Baseline/Day 0)
● Combined nasal/throat swab and/or saliva and/or approximately 2mL whole blood and/or finger stick blood samples will also be collected on Day 1, 3, 5,9,30 and 90 (only during the evaluation of point of care tests intending to use finger stick blood samples for analysis)

Because this is a platform study designed to evaluate multiple different tests, not every patient will undergo all of these tests. This depends on the tests being evaluated at any given time and in any given hospital. Sites will be advised if it is not necessary to collect any of these samples for a given period, and this will therefore not be considered as a protocol deviation.

We will also collect basic data from participants about their demographics, presenting symptoms, past medical history, relevant vaccinations, physical examination findings, vital signs and the results of any routine tests that they undergo as part of their clinical care. On follow-up visits for sampling, we will also collect details of the patient's condition (e.g. mortality status, requirement for intensive care, organ support, oxygen treatment).

The data will be entered (pseudonymously) into a secure electronic case report form (e-CRF) in full compliance with Good Clinical Practice.

A14-1. In which aspects of the research process have you actively involved, or will you involve, patients, service users, and/or their carers, or members of the public?

- [x] Design of the research
- [x] Management of the research
- [x] Undertaking the research
- [x] Analysis of results
- [x] Dissemination of findings
- [ ] None of the above

Give details of involvement, or if none please justify the absence of involvement.
We are being supported by an experienced patient group associated with the Leeds NIHR Medtech and In vitro diagnostic Cooperative (MIC), led by Graham Prestwich. A group of 24 participants met to discuss this proposal. Their ongoing input will be sought as follows: two lay members will form part of the Trial Steering Committee; the patient

group will be consulted with regard to interpretation of our findings, prioritisation of tests for evaluation, and dissemination of our findings.

4. RISKS AND ETHICAL ISSUES

RESEARCH PARTICIPANTS

A15. What is the sample group or cohort to be studied in this research?

Select all that apply:

- [ ] Blood
- [ ] Cancer
- [ ] Cardiovascular
- [ ] Congenital Disorders
- [ ] Dementias and Neurodegenerative Diseases
- [ ] Diabetes
- [ ] Ear
- [ ] Eye
- [ ] Generic Health Relevance
- [x] Infection
- [ ] Inflammatory and Immune System
- [x] Injuries and Accidents
- [ ] Mental Health
- [ ] Metabolic and Endocrine
- [ ] Musculoskeletal
- [ ] Neurological
- [ ] Oral and Gastrointestinal
- [ ] Paediatrics
- [ ] Renal and Urogenital
- [ ] Reproductive Health and Childbirth
- [ ] Respiratory
- [ ] Skin
- [ ] Stroke

Gender:	Male and female participants
Lower age limit: 18	Years
Upper age limit: 100	Years

A17-1. Please list the principal inclusion criteria (list the most important, max 5000 characters).

Work Stream A (In-hospital patients)
Group 1:
1. Patients are 18 years or older
2. Patient is presenting or referred to secondary/tertiary care with possible SARS-CoV-2 infection
3. Patients will require testing in the opinion of the treating clinician
4. Patients may have presented with acute symptoms of COVID-19 (e.g. fever, cough, dyspnoea) or they may be

asymptomatic, but require testing for other reasons

Group 2:
1. Patients are aged 18 years or older
2. Patient has been admitted for another reason other than suspected SARS-CoV-2 infection, but when routinely swabbed the patient has had a positive PCR result for SARS-CoV-2

Work Stream B (Lighthouse Laboratories)
Group 3:
1. Patients are aged 18 years or older
2. Patients have been identified as positive for SARS-CoV-2 PCR through national laboratory infrastructure

A17-2. Please list the principal exclusion criteria (list the most important, max 5000 characters).

1. Impossible or unsafe to obtain the required research samples
2. Prisoners
3. Patients where sampling is not feasible

RESEARCH PROCEDURES, RISKS AND BENEFITS

A18. Give details of all non-clinical intervention(s) or procedure(s) that will be received by participants as part of the research protocol. *These include seeking consent, interviews, non-clinical observations and use of questionnaires.*

Please complete the columns for each intervention/procedure as follows:

1. Total number of interventions/procedures to be received by each participant as part of the research protocol.
2. If this intervention/procedure would be routinely given to participants as part of their care outside the research, how many of the total would be routine?
3. Average time taken per intervention/procedure (minutes, hours or days)
4. Details of who will conduct the intervention/procedure, and where it will take place.

Intervention or procedure	1	2	3	4
Informed consent/assent	1	0	20	Research nurse/practitioner or an appropriately trained member of the clinical team.

A19. Give details of any clinical intervention(s) or procedure(s) to be received by participants as part of the research protocol. *These include uses of medicinal products or devices, other medical treatments or assessments, mental health interventions, imaging investigations and taking samples of human biological material. Include procedures which might be received as routine clinical care outside of the research.*

Please complete the columns for each intervention/procedure as follows:

1. Total number of interventions/procedures to be received by each participant as part of the research protocol.
2. If this intervention/procedure would be routinely given to participants as part of their care outside the research, how many of the total would be routine?
3. Average time taken per intervention/procedure (minutes, hours or days).
4. Details of who will conduct the intervention/procedure, and where it will take place.

Intervention or procedure	1	2	3	4
Nose/throat swab +/- saliva sample	6	1	5 minutes	Research nurse/practitioner or an appropriately trained member of the clinical team
Venous blood sample	6	6	5 minutes	Research nurse/practitioner or an appropriately trained member of the clinical team
Clinical data collection	6	5	5 minutes	Research nurse/practitioner or an appropriately trained member of the clinical team
Finger stick blood sample	6	0	5	Research nurse/practitioner or an appropriately trained member of

minutes the clinical team

A21. How long do you expect each participant to be in the study in total?

90 days (total duration of follow-up)

A22. What are the potential risks and burdens for research participants and how will you minimise them?

For all studies, describe any potential adverse effects, pain, discomfort, distress, intrusion, inconvenience or changes to lifestyle. Only describe risks or burdens that could occur as a result of participation in the research. Say what steps would be taken to minimise risks and burdens as far as possible.

Nose and throat swabs cause some transient discomfort to patients but there are no clinically significant risks of the procedure. Blood testing causes discomfort and may lead to bruising and swelling at the site of venipuncture.

To mitigate these risks, wherever possible we will take samples at the same time as routine clinical samples are being taken, or if lines are in situ the samples may be drawn from the lines with aseptic technique. The procedures will be undertaken by trained personnel who undertake this procedures as a routine part of their duties.

A24. What is the potential for benefit to research participants?

There is no direct benefit to research participants. We are unsure of the accuracy of the research tests (which is why this research is necessary) so the results cannot be used to guide clinical care. It is possible that patients may benefit indirectly, either because they may require future testing (and the new tests may be available) or because the tests could be used to improve public health strategy and accelerate control of the COVID-19 pandemic.

RECRUITMENT AND INFORMED CONSENT

In this section we ask you to describe the recruitment procedures for the study. Please give separate details for different study groups where appropriate.

A27-1. How will potential participants, records or samples be identified? Who will carry this out and what resources will be used?*For example, identification may involve a disease register, computerised search of GP records, or review of medical records. Indicate whether this will be done by the direct healthcare team or by researchers acting under arrangements with the responsible care organisation(s).*

For Work Stream A, potential participants will be identified by the clinical teams upon arrival in the hospital (Emergency Department or other receiving unit). If they suspect a diagnosis of COVID-19 then the patient may be eligible for participation and may be screened for potential inclusion.

For Work Stream B, potential participants will also be identified through the NHS Test and Trace system. Those participants who have had a positive SARS-CoV-2 test and have given permission to be approached for research will be approached by research staff for participation in the study.

A27-2. Will the identification of potential participants involve reviewing or screening the identifiable personal information of patients, service users or any other person?

○ Yes ◉ No

Please give details below:
Clinicians will process personal information while providing clinical care, but not specifically to screen patients for potential inclusion.

A28. Will any participants be recruited by publicity through posters, leaflets, adverts or websites?

○ Yes ◉ No

A29. How and by whom will potential participants first be approached?

For Work Stream A, potential participants will be approached by the clinical staff providing healthcare or by a clinical research nurse/practitioner working in the relevant clinical department.

A30-1. Will you obtain informed consent from or on behalf of research participants?

◉ Yes ○ No

If you will be obtaining consent from adult participants, please give details of who will take consent and how it will be done, with details of any steps to provide information (a written information sheet, videos, or interactive material). Arrangements for adults unable to consent for themselves should be described separately in Part B Section 6, and for children in Part B Section 7.

If you plan to seek informed consent from vulnerable groups, say how you will ensure that consent is voluntary and fully informed.

Participants who are successfully screened for potential inclusion will be asked to provide consent, if appropriate. Given the known challenges of obtaining full written informed consent in this setting, patients may participate in the trial if any of the following is provided:
(1) Full written informed consent, in the event that this is feasible and participants have full mental capacity.
(2) Witnessed verbal consent, for patients who have sufficient mental capacity to decide about participation but when written informed consent is unfeasible.
(3) Consent provided by an independent professional representative or relative, where both the researcher and an independent professional representative or a patient relative agree that participation in the study is likely to be in accordance with the wishes of the patient, in the event that the patient does not have sufficient mental capacity to decide.
For patients who have not provided written consent but who regain capacity at the time of follow-up, deferred written consent will be sought. This approach to consent in emergency settings has been adopted in many similar studies in this setting, including interventional platform trials that have been set up in response to the COVID-19 pandemic.

If you are not obtaining consent, please explain why not.

Please enclose a copy of the information sheet(s) and consent form(s).

A30-2. Will you record informed consent (or advice from consultees) in writing?

◉ Yes ○ No

A31. How long will you allow potential participants to decide whether or not to take part?

Due to the emergency nature of the study (patients will be recruited in emergency departments and other receiving units when they present for urgent medical attention) and the need to draw samples at the time of arrival, participants will not have long to decide about participation. Therefore, many patients will not feel able to provide full written informed consent immediately, or they may lack the capacity to do so. In that event, they may provide witnessed verbal consent or assent may be sought from a relative or independent professional representative. In that case, the participant will have longer to consider their participation before providing written informed consent. For patients with capacity, consent will need to be provided before the second sample is drawn. For those who lacked capacity initially but who regain capacity within the follow-up period, they will similarly be allowed at least 24 hours to consider their participation.

A33-1. What arrangements have been made for persons who might not adequately understand verbal explanations or written information given in English, or who have special communication needs?*(e.g. translation, use of interpreters)*

Wherever possible, we will arrange for face to face translation to facilitate communication. Where that is possible, it is unlikely that we will be able to take initial consent from participants during the pandemic. There are substantial challenges to communicating over the telephone while wearing PPE, which is likely to limit the value of telephone interpretation in this context.

A33-2. What arrangements will you make to comply with the principles of the Welsh Language Act in the provision of information to participants in Wales?

We do not currently have any sites in Wales but we remain open to their participation. If Welsh sites join, we will ensure the availability of Welsh language interpretation and translation of the relevant documentation.

A35. What steps would you take if a participant, who has given informed consent, loses capacity to consent during the study? *Tick one option only.*

- ○ The participant and all identifiable data or tissue collected would be withdrawn from the study. Data or tissue which is not identifiable to the research team may be retained.
- ○ The participant would be withdrawn from the study. Identifiable data or tissue already collected with consent would be retained and used in the study. No further data or tissue would be collected or any other research procedures carried out on or in relation to the participant.
- ◉ The participant would continue to be included in the study.
- ○ Not applicable – informed consent will not be sought from any participants in this research.
- ○ Not applicable – it is not practicable for the research team to monitor capacity and continued capacity will be assumed.

Further details:

These are important outcomes and we anticipate that a substantial proportion of patients who participate in this study will unfortunately die during the follow-up period. It is important that such cases are represented in this research, to ensure scientific validity.

Please complete Part B, Section 6, giving further information about arrangements for including adults unable to consent for themselves.

CONFIDENTIALITY

In this section, personal data means any data relating to a participant who could potentially be identified. It includes pseudonymised data capable of being linked to a participant through a unique code number.

Storage and use of personal data during the study

A36. Will you be undertaking any of the following activities at any stage (including in the identification of potential participants)? *(Tick as appropriate)*

- ☐ Access to medical records by those outside the direct healthcare team
- ☐ Access to social care records by those outside the direct social care team
- ☐ Electronic transfer by magnetic or optical media, email or computer networks
- ☑ Sharing of personal data with other organisations
- ☐ Export of personal data outside the EEA
- ☑ Use of personal addresses, postcodes, faxes, emails or telephone numbers
- ☐ Publication of direct quotations from respondents
- ☐ Publication of data that might allow identification of individuals
- ☐ Use of audio/visual recording devices
- ☑ Storage of personal data on any of the following:
  - ☑ Manual files (includes paper or film)
  - ☑ NHS computers
  - ☐ Social Care Service computers
  - ☐ Home or other personal computers

- ☐ University computers
- ☐ Private company computers
- ☐ Laptop computers

Further details:
We will write to patients' general practitioners to inform them of their participation in the study, which necessitates the transfer of some limited personal data between NHS organisations.

We will retain addresses, telephone numbers and email addresses to ensure that follow-up may be completed. They will be stored securely in accordance with local information governance requirements.

We will store personal data in paper case report forms and on NHS servers at the local NHS trusts. This is required for monitoring and follow-up. Data will be entered into an electronic case report form with a secure UK server in pseudonymous form.

A37. Please describe the physical security arrangements for storage of personal data during the study?

Manual records will be stored in compliance with GCP and local information governance requirements. At the time of writing this includes storage in locked cabinets in secure, non-clinical areas. Electronic personal data will be stored on secure NHS servers.

A38. How will you ensure the confidentiality of personal data?*Please provide a general statement of the policy and procedures for ensuring confidentiality, e.g. anonymisation or pseudonymisation of data.*

Data will be anonymised prior to leaving NHS computers for analysis. A unique study ID will be retained, which could be used to link records back to the source data if required (e.g. for monitoring purposes).

A40. Who will have access to participants' personal data during the study? *Where access is by individuals outside the direct care team, please justify and say whether consent will be sought.*

Only investigators and employees of the sponsor organisation, who are bound by a code of confidentiality.

Storage and use of data after the end of the study

A41. Where will the data generated by the study be analysed and by whom?

The data will be analysed by the study statisticians. The current study statisticians are Sara Graziadio, based at Newcastle University; and Rafael Perera-Salazar, based at the University of Oxford. Anonymous copies of the dataset will be transferred to them for analysis. Health economic analysis may also be undertaken by health economists at the University of Leeds, University of Manchester and/or University of Oxford. Anonymous copies of the dataset may be stored on encrypted non-NHS devices with the required statistical software.

A42. Who will have control of and act as the custodian for the data generated by the study?

	Title	Forename/Initials	Surname
	Prof	Richard	Body
Post	Professor, Emergency Medicine		
Qualifications	MB ChB, MRCSEd(A&E), FRCEM, PhD		
Work Address	Emergency Department,		
	Manchester Royal Infirmary		
	Oxford Rd, Manchester		
Post Code	M13 9WL		
Work Email	rbody@doctors.org.uk		

Work Telephone 01612765071
Fax

A43. How long will personal data be stored or accessed after the study has ended?

- ○ Less than 3 months
- ○ 3 – 6 months
- ○ 6 – 12 months
- ○ 12 months – 3 years
- ◉ Over 3 years

If longer than 12 months, please justify:
Limited personal data (e.g. consent forms, records of patients included) will be retained for 5 years, in compliance with the requirements of the sponsor, for monitoring purposes.

A44. For how long will you store research data generated by the study?

Years: 5
Months: 0

A45. Please give details of the long term arrangements for storage of research data after the study has ended.*Say where data will be stored, who will have access and the arrangements to ensure security.*

Data will be securely archived in accordance with the requirements of the sponsor organisation.

INCENTIVES AND PAYMENTS

A46. Will research participants receive any payments, reimbursement of expenses or any other benefits or incentives for taking part in this research?

◉ Yes ○ No

If Yes, please give details. For monetary payments, indicate how much and on what basis this has been determined.
Work Stream A:
If participants are asked to return to the hospital to provide additional samples (as stated in the protocol), we will offer to cover reasonable travel expenses.

Work Stream B:
Participants will be reimbursed for their time for each set of samples taken.

A47. Will individual researchers receive any personal payment over and above normal salary, or any other benefits or incentives, for taking part in this research?

○ Yes ◉ No

A48. Does the Chief Investigator or any other investigator/collaborator have any direct personal involvement (e.g. financial, share holding, personal relationship etc.) in the organisations sponsoring or funding the research that may give rise to a possible conflict of interest?

○ Yes ◉ No

NOTIFICATION OF OTHER PROFESSIONALS

A49-1. Will you inform the participants' General Practitioners (and/or any other health or care professional responsible for their care) that they are taking part in the study?

(●) Yes ( ) No

If Yes, please enclose a copy of the information sheet/letter for the GP/health professional with a version number and date.

A49-2. Will you seek permission from the research participants to inform their GP or other health/ care professional?

(●) Yes ( ) No

It should be made clear in the participant's information sheet if the GP/health professional will be informed.

PUBLICATION AND DISSEMINATION

A50. Will the research be registered on a public database?

(●) Yes ( ) No

Please give details, or justify if not registering the research.
We will register the study at www.clinicaltrials.gov or a similar trial registration website.

Registration of research studies is encouraged wherever possible.
You may be able to register your study through your NHS organisation or a register run by a medical research charity, or publish your protocol through an open access publisher. If you are aware of a suitable register or other method of publication, please give details. If not, you may indicate that no suitable register exists. Please ensure that you have entered registry reference number(s) in question A5-1.

A51. How do you intend to report and disseminate the results of the study?*Tick as appropriate:*

- [x] Peer reviewed scientific journals
- [x] Internal report
- [x] Conference presentation
- [x] Publication on website
- [ ] Other publication
- [ ] Submission to regulatory authorities
- [ ] Access to raw data and right to publish freely by all investigators in study or by Independent Steering Committee on behalf of all investigators
- [ ] No plans to report or disseminate the results
- [ ] Other (please specify)

A52. If you will be using identifiable personal data, how will you ensure that anonymity will be maintained when publishing the results?

Only aggregated data will be reported. Where required to demonstrate very relevant individual cases (e.g. important false negatives), we will only report basic, non-identifiable details.

A53. Will you inform participants of the results?

( ) Yes (●) No

Please give details of how you will inform participants or justify if not doing so.
We will not systematically write to all participants with the results. However, we will make reports available to participants who ask to be kept informed. We will work with patient and public representatives to ensure that such reports are communicated in an appropriate manner for a lay audience.

5. Scientific and Statistical Review

A54. How has the scientific quality of the research been assessed?*Tick as appropriate:*

- [x] Independent external review
- [ ] Review within a company
- [x] Review within a multi−centre research group
- [x] Review within the Chief Investigator's institution or host organisation
- [x] Review within the research team
- [ ] Review by educational supervisor
- [ ] Other

Justify and describe the review process and outcome. If the review has been undertaken but not seen by the researcher, give details of the body which has undertaken the review:
The protocol has been reviewed internally, by representatives from the NIHR MICs in Leeds, Newcastle, Oxford and London; by the NIHR Urgent Public Health panel and by the UKRI Rapid Review Panel for COVID-19. The NIHR Urgent Public Health panel (which includes methodologists and clinical experts) has accepted the study for inclusion as an urgent public health study.

For all studies except non-doctoral student research, please enclose a copy of any available scientific critique reports, together with any related correspondence.

For non-doctoral student research, please enclose a copy of the assessment from your educational supervisor/ institution.

A56. How have the statistical aspects of the research been reviewed?*Tick as appropriate:*

- [x] Review by independent statistician commissioned by funder or sponsor
- [x] Other review by independent statistician
- [ ] Review by company statistician
- [ ] Review by a statistician within the Chief Investigator's institution
- [ ] Review by a statistician within the research team or multi−centre group
- [ ] Review by educational supervisor
- [ ] Other review by individual with relevant statistical expertise
- [ ] No review necessary as only frequencies and associations will be assessed – details of statistical input not required

In all cases please give details below of the individual responsible for reviewing the statistical aspects. If advice has been provided in confidence, give details of the department and institution concerned.

	Title	Forename/Initials	Surname
	Dr	Sara	Graziadio
Department	NIHR Medtech and In vitro Diagnostics Cooperative, Newcastle		
Institution	Newcsatle Upon Tyne Hospitals NHS Foundation Trust		
Work Address	Freeman Road		
	High Heaton		
	Newcastle upon Tyne		

Post Code	NE7 7DN
Telephone	
Fax	
Mobile	
E-mail	sara.graziadio@newcastle.ac.uk

Please enclose a copy of any available comments or reports from a statistician.

A57. What is the primary outcome measure for the study?

The diagnosis of COVID-19

A58. What are the secondary outcome measures?*(if any)*

Detection of antibodies to SARS-CoV-2 by a reference method.

Other secondary outcome measures will include length of hospital stay, the development of multi-organ failure, critical care admission, mechanical ventilation, organ support, vasopressor use and SARS-CoV-2 related death.

A59. What is the sample size for the research? *How many participants/samples/data records do you plan to study in total? If there is more than one group, please give further details below.*

Total UK sample size:	1000
Total international sample size (including UK):	1000
Total in European Economic Area:	1000

Further details:
This is an indicative sample size. For each IVD evaluation, we anticipate requiring up to 600 patients, as calculated below. A total sample of 1,000 patients (accepting that many evaluations will occur in parallel, and some will be found futile prior to recruiting the full sample) is likely ot be sufficient to evaluate 5 to 10 novel IVDs.

A60. How was the sample size decided upon? *If a formal sample size calculation was used, indicate how this was done, giving sufficient information to justify and reproduce the calculation.*

We intend to recruit an initial sample of 1,000 patients, which is likely to be sufficient to enable the evaluation of approximately 5 to 10 new in vitro diagnostic tests (IVDs).

Required sample sizes for the evaluation of each individual IVD will be calculated using standard methodology based on minimum clinically relevant sensitivity or specificity (whichever is the most critical for the intended placement in the care pathway), instead of expected values from preliminary work.

For example, based on POC-test desired performance, thresholds for minimum sensitivity and specificity of 80% and 98% respectively (value for the lower limit of the 95% Confidence Interval), can be used to determine sample size requirements and a strategy for early identification of poorly performing tests. Assuming a test with 90% Sensitivity, a 99% Specificity, and a pre-test probability (prevalence) of .3, we would require 600 participants to meet the minimum thresholds as stated above. This would also mean that tests with more than 19 false negatives OR five false positives could be immediately dropped from the study. This would allow us to exclude tests with sensitivities of: 50%, 60%, 70%, or 80% after the first 130, 160, 210, and 320 participants recruited. For tests with poor specificities of: 80%, 85%, 90% or 95% these would be identified after 35, 50, 70, and 145 participants recruited.

This sample of 600 would still be adequate based on small changes in prevalence. For example a change from .3 to .15 would mean that the minimum threshold for sensitivity would move from 85% to 82% while for specificity it would shift marginally upwards from 97.5% to 97.7%.

A61. Will participants be allocated to groups at random?

○ Yes ◉ No

A62. Please describe the methods of analysis (statistical or other appropriate methods, e.g. for qualitative research) by which the data will be evaluated to meet the study objectives.

The statistical analyses will be designed to match the relevant objective(s)/design in the different studies. Examples of the type of approaches likely to be followed are presented below:
Objective A: to determine the diagnostic accuracy of new tests to identify COVID-19 in patients arriving in the Emergency Department with a suspected diagnosis of COVID-19.

This objective will be investigated using a traditional diagnostic accuracy design where the new tests will be evaluated against the reference standard. Diagnostic accuracy measures such as sensitivity, specificity, positive/negative likelihood ratios and predictive values will be calculated with corresponding 95% confidence intervals.

RT-PCR assays that are currently used in reference laboratories will be considered as the reference standard for COVID-19 diagnosis. However, due to the imperfect nature of the reference standard (RT-PCR diagnostics are believed to have a sensitivity between 70-90%) we will run a sensitivity analysis including two additional composite reference standards. One will maximize sensitivity and thus minimize the number of false negatives and the other will maximize specificity and thus minimize false positives. This will provide a better understanding of the robustness of the RT-PCR test.

Objective B: Evaluation of the diagnostic performance of the index tests against the reference standard at various time points. The index tests will be evaluated against the reference standard at various time points using traditional diagnostic accuracy measures. This will allow us to examine the time effect on the performance of the tests. Repeated measurement analyses will be considered, such as mixed effect models or generalised estimating equations (GEEs).

6. MANAGEMENT OF THE RESEARCH

A63. Other key investigators/collaborators. *Please include all grant co−applicants, protocol co−authors and other key members of the Chief Investigator's team, including non-doctoral student researchers.*

	Title	Forename/Initials	Surname
	Prof	Gail	Hayward
Post Qualifications	Associate Professor of Primary Care; Deputy Director, Oxford NIHR Community Healthcare MIC		
Employer	University of Oxford		
Work Address	Nuffield Department of Primary Care University of Oxford		
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Telephone			
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Mobile			
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	Title	Forename/Initials	Surname
	Dr	Mike	Messenger
Post Qualifications	Deputy Director, Leeds NIHR MIC		
Employer	University of Leeds		
Work Address	Leeds Centre for Personalised Medicine & Health Worsley Building		
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Title	Forename/Initials	Surname
Dr	Joy	Allen

Post	Senior In vitro diagnostic evaluation methodologist
Qualifications	
Employer	Newcastle University
Work Address	NIHR Newcastle In Vitro Diagnostics Cooperative 2nd Floor, William Leech Building Institute of Cellular Medicine, Newcastle University
Post Code	NE2 4HH
Telephone	
Fax	
Mobile	
Work Email	joy.allen@ncl.ac.uk

Title	Forename/Initials	Surname
Dr	Sara	Graziadio

Post	Senior clinical test evaluation methodologist
Qualifications	
Employer	Newcastle University
Work Address	NIHR Newcastle In vitro diagnostics cooperative 2nd Floor, William Leech Building Institute of Cellular Medicine, Newcastle University
Post Code	NE2 4HH
Telephone	
Fax	
Mobile	
Work Email	sara.graziadio@newcastle.ac.uk

Title	Forename/Initials	Surname
Dr	Phil	Turner

Post	Manager & senior researcher, NIHR Community Healthcare MIC
Qualifications	
Employer	Nuffield Department of Primary Care Health Services
Work Address	Radcliffe Primary Care Building Radcliffe Observatory Oxford
Post Code	OX2 6GG
Telephone	01865289292
Fax	
Mobile	
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Title	Forename/Initials	Surname
Prof	Dan	Lasserson

Post Qualifications	Professor of Ambulatory Care
Employer	University fo Birmingham
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Post Code	B15 2TT
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Title	Forename/Initials	Surname
Dr	Charles	Reynard

Post Qualifications	NIHR Doctoral Research Fellow
Employer	University of Manchester
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Post Code	M13 9WL
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Fax	
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Title	Forename/Initials	Surname
Prof	Paul	Dark

Post Qualifications	Professor of Critical Care Medicine
Employer	
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Title	Forename/Initials	Surname
Prof	Paul	Klapper

Post Qualifications	Professor of Medical Virology
Employer	University of Manchester
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Title	Forename/Initials	Surname
Prof	Pam	Vallely

Post	Professor of Medical Virology
Qualifications	
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Work Address	School of Biological Sciences University of Manchester
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Title	Forename/Initials	Surname
Dr	Nick	Machin

Post	Clinical Lead, Virology
Qualifications	
Employer	Manchester University NHS Foundation Trust
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Title	Forename/Initials	Surname
Dr	Eloïse	Cook

Post	Senior Clinical Trials Co-ordinator
Qualifications	PhD, BSc (Hons)
Employer	Manchester University NHS Foundation Trust
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Title	Forename/Initials	Surname
Dr	Ashley	Price

Post	Consultant in Infectious Diseases

Qualifications	
Employer	Newcastle upon Tyne Hospitals NHS Foundation Trust
Work Address	Royal Victoria Infirmary Freeman Rd Newcastle upon Tyne
Post Code	NE7 7DN
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Fax	
Mobile	
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Title	Forename/Initials	Surname
Prof	Rafael	Perera-Salazar

Post	Director of Medical Statistics
Qualifications	
Employer	University of Oxford
Work Address	Nuffield Department of Primary Care Health Sciences Radcliffe Primary Care Building Radcliffe Observatory
Post Code	OX2 6GG
Telephone	01865617843
Fax	
Mobile	
Work Email	rafael.perera@phc.ox.ac.uk

Title	Forename/Initials	Surname
Dr	Brian	Nicholson

Post	Clinical Lecturer in Primary Care
Qualifications	
Employer	University of Oxford
Work Address	Nuffield Department of Primary Care Health Sciences Radcliffe Primary Care Building Radcliffe Observatory
Post Code	OX2 6GG
Telephone	
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Mobile	
Work Email	brian.nicholson@phc.ox.ac.uk

Title	Forename/Initials	Surname
Prof	Pete	Buckle

Post	Principal Research Fellow in Human Factors
Qualifications	
Employer	Imperial College London
Work Address	Faculty of Medicine, Department of Surgery & Cancer Queen Elizaeth the Queen Mother Wing St Mary's Campus, London
Post Code	
Telephone	02033121820
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Mobile	
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Title	Forename/Initials	Surname
Prof	Mark	Wilcox

Post	Professor of Medical Microbiology
Qualifications	
Employer	University of Leeds
Work Address	Old Medical School Leeds General Infirmary Leeds
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Mobile	
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Title	Forename/Initials	Surname
Dr	Taj	Hassan

Post	Consultant in Emergency Medicine
Qualifications	
Employer	Leeds Teaching Hospitals NHS Trust
Work Address	Emergency Department Leeds Teaching Hospitals NHS Trust Great George St Leeds
Post Code	LS1 3EX
Telephone	
Fax	
Mobile	
Work Email	taj.hassan@nhs.net

Title	Forename/Initials	Surname
Dr	Andrew	Lewington

Post	Consultant Renal Physician
Qualifications	
Employer	Leeds Teaching Hospitals NHS Trust
Work Address	Great George St Leeds
Post Code	LS1 3EX
Telephone	
Fax	
Mobile	
Work Email	andrew.lewington@nhs.net

A64. Details of research sponsor(s)

A64-1. Sponsor

Lead Sponsor

Status:
- (●) NHS or HSC care organisation
- ( ) Academic
- ( ) Pharmaceutical industry
- ( ) Medical device industry
- ( ) Local Authority
- ( ) Other social care provider (including voluntary sector or private organisation)
- ( ) Other

Commercial status: Non-Commercial

If Other, please specify:

Contact person

Name of organisation	Manchester University NHS Foundation Trust
Given name	Lynne
Family name	Webster
Address	Head of the Research Office, Research Office, 1st Floor, Nowgen Centre, 29 Grafton Street
Town/city	Manchester
Post code	M13 9WU
Country	United Kingdom
Telephone	01612764125
Fax	
E-mail	lynne.webster@mft.nhs.uk

A65. Has external funding for the research been secured?

Please tick at least one check box.

- [x] Funding secured from one or more funders
- [ ] External funding application to one or more funders in progress
- [ ] No application for external funding will be made

What type of research project is this?

- ( ) Standalone project
- (●) Project that is part of a programme grant
- ( ) Project that is part of a Centre grant
- ( ) Project that is part of a fellowship/ personal award/ research training award
- ( ) Other

Other – please state:

Please give details of funding applications.

Organisation	UK Research & Innovation (UKRI)
Address	Solaris House
	1ET, N Star Ave,
	Swindon
Post Code	SN2 1FL
Telephone	01793 444000
Fax	
Mobile	
Email	grantspostaward@funding.ukri.org

Funding Application Status: ○ Secured ◉ In progress

Date Funding decision expected: 11/05/2020

Amount: £1.3 million

Duration

Years: 1

Months: 0

If applicable, please specify the programme/ funding stream:

What is the funding stream/ programme for this research project?

Urgent Public Health (COVID-19)

A66. Has responsibility for any specific research activities or procedures been delegated to a subcontractor (other than a co-sponsor listed in A64-1) ? *Please give details of subcontractors if applicable.*

◉ Yes ○ No

Name: Newcastle University

Type of organisation:

○ NHS ◉ Academic ○ Commercial ○ Other

Please give further details of sub-contractor and main areas of delegated responsibility: Statistical analysis

A67. Has this or a similar application been previously rejected by a Research Ethics Committee in the UK or another country?

○ Yes ◉ No

Please provide a copy of the unfavourable opinion letter(s). You should explain in your answer to question A6-2 how the reasons for the unfavourable opinion have been addressed in this application.

A68-1. Give details of the lead NHS R&D contact for this research:

Title	Forename/Initials	Surname
Dr	Lynne	Webster

Organisation	Manchester University NHS Foundation Trust
Address	R&D Department, Manchester Royal Infirmary

	Manchester
Post Code	M13 9WL
Work Email	lynne.webster@cmft.nhs.uk
Telephone	01619011441
Fax	
Mobile	

Details can be obtained from the NHS R&D Forum website: http://www.rdforum.nhs.uk

A68-2. Select Local Clinical Research Network for NHS Organisation identified in A68-1:

Thames Valley and South Midlands

For more information, please refer to the question specific guidance.

A69-1. How long do you expect the study to last in the UK?

Planned start date: 01/06/2020
Planned end date: 01/06/2021
Total duration:
Years: 1 Months: 0 Days: 1

A70. Definition of the end of trial, and justification in the case where it is not the last visit of the last subject undergoing the trial (1)

All sample analyses complete, all follow-up complete, all primary statistical analyses complete.

A71-1. Is this study?

- ○ Single centre
- ◉ Multicentre

A71-2. Where will the research take place? *(Tick as appropriate)*

- ☑ England
- ☑ Scotland
- ☑ Wales
- ☑ Northern Ireland
- ☐ Other countries in European Economic Area

Total UK sites in study 10

Does this trial involve countries outside the EU?

○ Yes ◉ No

A72. Which organisations in the UK will host the research?*Please indicate the type of organisation by ticking the box and give approximate numbers if known:*

☑ NHS organisations in England	10
☐ NHS organisations in Wales	
☐ NHS organisations in Scotland	
☐ HSC organisations in Northern Ireland	
☐ GP practices in England	
☐ GP practices in Wales	
☐ GP practices in Scotland	
☐ GP practices in Northern Ireland	
☐ Joint health and social care agencies (eg community mental health teams)	
☐ Local authorities	
☐ Phase 1 trial units	
☐ Prison establishments	
☐ Probation areas	
☐ Independent (private or voluntary sector) organisations	
☐ Educational establishments	
☐ Independent research units	
☐ Other (give details)	
Total UK sites in study:	10

A73-1. Will potential participants be identified through any organisations other than the research sites listed above?

○ Yes ◉ No

A74. What arrangements are in place for monitoring and auditing the conduct of the research?

The study will be monitored in accordance with the research governance framework of the sponsor organisation. The sponsor routinely monitors a sample of its research studies annually using a risk-based approach. In addition, triggered monitoring is undertaken as required. All studies are subject to self-monitoring and reporting on an annual basis. Given the multi-centre nature of this research, we anticipate that most monitoring will be undertaken remotely.

A76. Insurance/ indemnity to meet potential legal liabilities

***Note:** in this question to NHS indemnity schemes include equivalent schemes provided by Health and Social Care (HSC) in Northern Ireland*

A76-1. What arrangements will be made for insurance and/or indemnity to meet the potential legal liability of the sponsor(s) for harm to participants arising from the management of the research? *Please tick box(es) as applicable.*

Note: Where a NHS organisation has agreed to act as sponsor or co-sponsor, indemnity is provided through NHS schemes. Indicate if this applies (there is no need to provide documentary evidence). For all other sponsors, please describe the arrangements and provide evidence.

☑ NHS indemnity scheme will apply (NHS sponsors only)

☐ Other insurance or indemnity arrangements will apply (give details below)

Please enclose a copy of relevant documents.

A76-2. What arrangements will be made for insurance and/ or indemnity to meet the potential legal liability of the sponsor(s) or employer(s) for harm to participants arising from the <u>design</u> of the research? *Please tick box(es) as applicable.*

<u>Note:</u> Where researchers with substantive NHS employment contracts have designed the research, indemnity is provided through NHS schemes. Indicate if this applies (there is no need to provide documentary evidence). For other protocol authors (e.g. company employees, university members), please describe the arrangements and provide evidence.

- [x] NHS indemnity scheme will apply (protocol authors with NHS contracts only)
- [ ] Other insurance or indemnity arrangements will apply (give details below)

Please enclose a copy of relevant documents.

A76-3. What arrangements will be made for insurance and/ or indemnity to meet the potential legal liability of investigators/collaborators arising from harm to participants in the <u>conduct</u> of the research?

<u>Note:</u> Where the participants are NHS patients, indemnity is provided through the NHS schemes or through professional indemnity. Indicate if this applies to the whole study (there is no need to provide documentary evidence). Where non-NHS sites are to be included in the research, including private practices, please describe the arrangements which will be made at these sites and provide evidence.

- [x] NHS indemnity scheme or professional indemnity will apply (participants recruited at NHS sites only)
- [ ] Research includes non-NHS sites (give details of insurance/ indemnity arrangements for these sites below)

Please enclose a copy of relevant documents.

A78. Could the research lead to the development of a new product/process or the generation of intellectual property?

- (•) Yes
- ( ) No
- ( ) Not sure

Part B: Section 4 – Use of residual or existing stored human tissue(or other human biological materials)

1. What types of human tissue or other biological material will be included in the study?

Nose/throat swabs
Venous blood, separated into serum
Finger stick blood samples
Saliva samples

2. Will the samples be released to the researcher:

In fully anonymised form? *(link to stored tissue and data is broken)*
○ Yes ◉ No

In linked anonymised form? *(linked to stored tissue but donor not identifiable to researchers)*
◉ Yes ○ No

In a form in which the donor could be identifiable to researchers?
○ Yes ◉ No

3. Has consent been obtained previously to use the samples for research

◉ Consent has been given for all samples
○ Consent has been given for some of the samples
○ No consent has been given

4. Please outline what consents are already in place, distinguishing between different groups of samples where appropriate.

This is a prospective study, so the samples have not been collected. When they have been collected, consent will have been obtained.

6. Will any tissues or cells be used for human application or to carry out testing for human application in this research?

○ Yes ◉ No

8. What types of test or analysis will be carried out on the samples?

Testing for SARS-CoV-2 antigens and antibodies.

9. Will the research involve the analysis or use of human DNA in the samples?

○ Yes ◉ No

10. Is it possible that the research could produce findings of clinical significance for donors or their relatives?

◉ Yes ○ No

11. If so, will arrangements be made to notify the individuals concerned?

- ○ Yes
- ◉ No
- ○ Not applicable

If No, please justify. If Yes, say what arrangements will be made and give details of the support or counselling service.

The tests must undergo evaluation prior to clinical use because we do not know how accurate they are. Therefore, if we were release the results to patients this could cause confusion and unnecessary anxiety.

12. Who is the holder of the samples?

Please tick either/both boxes as applicable.

- ☑ NHS pathology department(s) / diagnostic archive(s)
  Specific details of each department/archive are not required
- ☐ Other research tissue bank(s) or sample collection(s)
  Please provide further details of each bank/collection below

13. Will any of the samples be imported from outside the UK?

○ Yes ◉ No

14. Please give details of where the samples will be stored, who will have access and the custodial arrangements.

Samples will be stored at Manchester University NHS Foundation Trust until further notice. It is possible that samples will be transferred to Public Health England in future, in which case we will apply for an amendment.

15. What will happen to the samples at the end of the research? *Please tick all that apply and give further details.*

- ☐ Return to current holder of the samples
- ☐ Transfer to another tissue bank

(If the bank is in England, Wales or Northern Ireland a licence from the Human Tissue Authority will be required to store relevant material for possible further research.)

- ☑ Storage by research team pending ethical approval for use in another project

(Unless the researcher's institution holds a storage licence from the Human Tissue Authority, or the tissue is stored in Scotland, or it is not relevant material, a further application for ethical review should be submitted before the end of this project.)

- ☐ Storage by research team as part of a new research tissue bank

(The institution will require a storage licence for research from the Human Tissue Authority if the bank will be storing relevant material in England, Wales or Northern Ireland. A separate application for ethical review of the tissue bank may also be submitted.)

- ☑ Storage by research team of biological material which is not “relevant material” for the purposes of the Human Tissue Act
- ☐ Disposal in accordance with the Human Tissue Authority Code of Practice

☐ Other

☐ Not yet known

Please give further details of the proposed arrangements:

We will store frozen serum samples in order that future diagnostic tests may be evaluated without needing to recruit a new sample of patients.

Part B: Section 5 – Use of newly obtained human tissue(or other human biological materials) for research purposes

1. What types of human tissue or other biological material will be included in the study?

Nose/throat swab samples
Serum samples
Finger stick blood samples
Blood samples

2. Who will collect the samples?

Research nurses/practitioners or appropriately trained clinicians.

3. Who will the samples be removed from?

- [x] Living donors
- [ ] The deceased

4. Will informed consent be obtained from living donors for use of the samples? *Please tick as appropriate*

In this research?
(●) Yes ( ) No

In future research?
( ) Yes (●) No ( ) Not applicable

If answering No in either case, please justify:
We will ask for consent to store the samples for future research into the diagnosis of COVID-19, but we will not re-consent patients every time a new test for COVID-19 is evaluated.

6. Will any tissues or cells be used for human application or to carry out testing for human application in this research?

( ) Yes (●) No

8. Will the samples be stored: *[Tick as appropriate]*

In fully anonymised form? *(link to donor broken)*
( ) Yes (●) No

In linked anonymised form? *(linked to stored tissue but donor not identifiable to researchers)*
(●) Yes ( ) No

If Yes, say who will have access to the code and personal information about the donor.
Researchers at Manchester University NHS Foundation Trust who are trained and delegated to work on this study.

In a form in which the donor could be identifiable to researchers?
( ) Yes (●) No

9. What types of test or analysis will be carried out on the samples?

Tests for SARS-CoV-2 antigens or antibodies

10. Will the research involve the analysis or use of human DNA in the samples?

○ Yes ◉ No

11. Is it possible that the research could produce findings of clinical significance for donors or their relatives?

◉ Yes ○ No

12. If so, will arrangements be made to notify the individuals concerned?

○ Yes ◉ No ○ Not applicable

If No, please justify. If Yes, say what arrangements will be made and give details of the support or counselling service.

The tests are undergoing evaluation because we do not know how accurate they are. Therefore, communicating results to patients could cause confusion or unnecessary anxiety. They will know the results of routine clinical tests for COVID-19.

13. Give details of where the samples will be stored, who will have access and the custodial arrangements.

Manchester University NHS Foundation Trust, in the custody of Dr Jay Brown.
Where samples are being tested off site by manufacturers, the samples will be stored at the manufacturer's labs for analysis on their point-of-care devices. They will only have access to the samples that are to be tested on their machine.

14. What will happen to the samples at the end of the research? *Please tick all that apply and give further details.*

☐ Transfer to research tissue bank

(If the bank is in England, Wales or Northern Ireland the institution will require a licence from the Human Tissue Authority to store relevant material for possible further research.)

☑ Storage by research team pending ethical approval for use in another project

(Unless the researcher's institution holds a storage licence from the Human Tissue Authority, or the tissue is stored in Scotland, or it is not relevant material, a further application for ethical review should be submitted before the end of this project.)

☐ Storage by research team as part of a new research tissue bank

(The institution will require a licence from the Human Tissue Authority if the bank will be storing relevant material in England, Wales or Northern Ireland. A separate application for ethical review of the tissue bank may also be submitted.)

☑ Storage by research team of biological material which is not "relevant material" for the purposes of the Human Tissue Act

☐ Disposal in accordance with the Human Tissue Authority's Code of Practice

☐ Other

☐ Not yet known

Please give further details of the proposed arrangements:

We will store frozen serum samples in order that future diagnostic tests may be evaluated without needing to recruit a new sample of patients.

B. All research other than CTIMPs

In this sub-section, an adult means a person aged 16 or over.

B1. What impairing condition(s) will the participants have?

The study must be connected to this condition or its treatment.

They may have COVID-19 or symptoms compatible with COVID-19, which may impair their judgement. The patients will have presented to hospital in the midst of medical emergencies, which may compromise their ability to process new information.

B2. Justify the inclusion of adults unable to consent for themselves. It should be clear why the research could not be carried out as effectively if confined to adults capable of giving consent.

The research has to be done in this population in order for future diagnostic tests to be used in this population. Findings could not be extrapolated otherwise.

B3. Who in the research team will decide whether or not the participants have the capacity to give consent? What training/experience will they have to enable them to reach this decision?

The clinician, research nurse or research practitioner, who will be trained to assess capacity. Clinicians and research nurses/practitioners working in Emergency Departments routinely assess mental capacity as part of their duties.

B4. Does the research have the potential to benefit participants who are unable to consent for themselves?

○ Yes ◉ No

B5. Will the research contribute to knowledge of the causes or the treatment or care of persons with the same impairing condition (or a similar condition)?

◉ Yes ○ No

If Yes, please explain how the research will achieve this:

The research will tell us whether the new tests are sufficiently accurate to be used to diagnose COVID-19 in the future.

B6. Will the research involve any foreseeable risk or burden for these participants, or interfere in any way with their freedom of action or privacy?

○ Yes ◉ No

Questions B7 and B8 apply to any participants recruited in England and Wales.

B7. What arrangements will be made to identify and consult persons able to advise on the presumed wishes and feelings of participants unable to consent for themselves and on their inclusion in the research?

If a patient cannot provide written informed consent at the time of screening, we will first determine whether it is possible to obtain witnessed verbal consent.

If that is not possible, we will seek assent from a relative. This is likely to be by telephone during the COVID-19 pandemic, given that relatives are not allowed to visit the hospital. If there are no available relatives, we will approach an independent professional representative. They will review all available information regarding the patient, evidence of their prior beliefs and current condition, and will determine whether the patient may be included in the study on the basis that participation appears (given all the available evidence) that the patient would be willing to participate in the study.

For patients who have not provided written consent but who regain capacity at the time of follow-up, deferred written consent will be sought. This approach to consent in emergency settings has been adopted in many similar studies in this setting, including interventional platform trials that have been set up in response to the COVID-19 pandemic.

Please enclose a copy of the written information to be provided to consultees. This should describe their role under section 32 of the Mental Capacity Act and provide information about the research similar to that which might be given to participants able to consent for themselves.

B8. Is it possible that a participant requiring urgent treatment might need to be recruited into research before it is possible to identify and consult a person under B7?

○ Yes ◉ No

If Yes, say whether arrangements will be made instead to seek agreement from a registered medical practitioner and outline these arrangements. Or, if this is also not feasible, outline how decisions will be made on the inclusion of participants and what arrangements will be made to seek consent from the participant (if capacity has been recovered) or advice from a consultee as soon as practicable thereafter.

Question B7-1 applies to any participants recruited in Scotland.

B7-1. What arrangements will be made to identify and seek consent from a guardian or welfare attorney or, if there is no such person, from the participant's nearest relative?

If a patient cannot provide written informed consent at the time of screening, we will first determine whether it is possible to obtain witnessed verbal consent.

If that is not possible, we will seek assent from a relative. This is likely to be by telephone during the COVID-19 pandemic, given that relatives are not allowed to visit the hospital.

Please enclose a copy of the written information to be provided and the consent form to be used. The information sheet should provide information about the research similar to that which might be given to participants able to consent for themselves.

Questions B7-2 and B8-2 apply to any participants recruited in Northern Ireland.

B7-2. What arrangements will be made to consult a close relative or close friend able to advise on the inclusion of the participant and on their likely wishes?

If a patient cannot provide written informed consent at the time of screening, we will first determine whether it is possible to obtain witnessed verbal consent.

If that is not possible, we will seek assent from a relative. This is likely to be by telephone during the COVID-19 pandemic, given that relatives are not allowed to visit the hospital.

B8-2. Is it possible that a participant might need to be treated urgently as part of the research before it is possible to consult with a close relative or close friend?

◉ Yes ○ No

If Yes, say whether arrangements will be made instead to seek agreement from a registered medical practitioner and outline these arrangements. Or, if this is also not feasible, outline how decisions will be made on the inclusion of participants.

If there are no available relatives, we will approach an independent professional representative. They will review all available information regarding the patient, evidence of their prior beliefs and current condition, and will determine whether the patient may be included in the study on the basis that participation appears (given all the available evidence) that the patient would be willing to participate in the study.

B9. What arrangements will be made to continue to consult such persons during the course of the research where necessary?

For patients who have not provided written consent but who regain capacity at the time of follow-up, deferred written consent will be sought. This approach to consent in emergency settings has been adopted in many similar studies in this setting, including interventional platform trials that have been set up in response to the COVID-19 pandemic.

B10. What steps will you take, if appropriate, to provide participants who are unable to consent for themselves with information about the research, and to consider their wishes and feelings?

We will review all available information to determine whether participation in the study is consistent with what we understand about the patient's prior beliefs and values. An individualised capacity assessment will be made. We will present patients with information that is proportionate to their level of mental capacity. That may enable witnessed verbal consent to be obtained initially in some circumstances.

B11. Is it possible that the capacity of participants could fluctuate during the research? How would this be handled?

Yes. If patients are unable to consent initially, we will seek written informed consent at follow-up visits. If they had capacity initially but subsequently lose capacity, the patient's data (and samples) will continue to be included in the study unless we have reason to believe that the patient wished to withdraw from the study.

B12-1. What will be the criteria for withdrawal of participants?

Participants will be withdrawn if they wish to do so, or if clinicians believe that is no longer appropriate to collect data and/or samples from participants.

B12-2. Where a participant is recruited urgently, and later withholds their consent or is withdrawn or dies before consent / consultation can take place, what provisions will apply to the study data collected up to that point?

The samples will be destroyed. No further data will be collected. Basic details of the participant will be retained for monitoring and audit purposes.

B13. Describe what steps will be taken to ensure that nothing is done to which participants appear to object (unless it is to protect them from harm or minimise pain or discomfort).

We will review all available evidence to ensure that nothing is done that is likely to be against the wishes of the patient. We will contact relatives for information and assent wherever possible. If a relative is not available, a professional representative (e.g. doctor, nurse) who is not a member of the study team will make a reasoned judgement on the patient's behalf. If the patient regains capacity, we will seek written informed consent at the earliest possible opportunity.

B14. Describe what steps will be taken to ensure that nothing is done which is contrary to any advance decision or statement by the participant? *This question applies to England, Wales and Scotland only – please see guidance notes for further information.*

If there is an advance decision or statement that suggests a patient would not like to participate or that it would be inappropriate for them to participate, then we will not include them.

PART C: Overview of research sites

Please enter details of the host organisations (Local Authority, NHS or other) in the UK that will be responsible for the research sites. *For further information please refer to guidance.*

Investigator identifier	Research site		Investigator Name	
IN1	◉ NHS/HSC Site ○ Non-NHS/HSC Site		Forename Middle name Family name Email Qualification (MD...) Country	Richard Body richard.body@manchester.ac.uk MB ChB, MRCSEd(A&E), FRCEM, PhD United Kingdom
	Organisation name Address Post Code Country	MANCHESTER UNIVERSITY NHS FOUNDATION TRUST COBBETT HOUSE OXFORD ROAD MANCHESTER GREATER MANCHESTER M13 9WL ENGLAND		
IN2	◉ NHS/HSC Site ○ Non-NHS/HSC Site		Forename Middle name Family name Email Qualification (MD...) Country	Taj Hassan taj.hassan@nhs.net United Kingdom
	Organisation name Address Post Code Country	LEEDS TEACHING HOSPITALS NHS TRUST ST. JAMES'S UNIVERSITY HOSPITAL BECKETT STREET LEEDS LS9 7TF ENGLAND		
IN3	◉ NHS/HSC Site ○ Non-NHS/HSC Site		Forename Middle name Family name Email Qualification (MD...) Country	Alex Novak alex.novak@ouh.nhs.uk United Kingdom
	Organisation name Address Post Code	OXFORD UNIVERSITY HOSPITALS NHS FOUNDATION TRUST JOHN RADCLIFFE HOSPITAL HEADLEY WAY HEADINGTON OXFORD OX3 9DU		

Country	ENGLAND

IN4

- (●) NHS/HSC Site
- ( ) Non-NHS/HSC Site

Forename	Heather
Middle name	
Family name	Jarman
Email	
Qualification (MD...)	
Country	

Organisation name	ST GEORGE'S UNIVERSITY HOSPITALS NHS FOUNDATION TRUST
Address	ST GEORGE'S HOSPITAL BLACKSHAW ROAD TOOTING LONDON
Post Code	SW17 0QT
Country	ENGLAND

IN5

- (●) NHS/HSC Site
- ( ) Non-NHS/HSC Site

Forename	David
Middle name	
Family name	Price
Email	
Qualification (MD...)	
Country	

Organisation name	THE NEWCASTLE UPON TYNE HOSPITALS NHS FOUNDATION TRUST
Address	FREEMAN HOSPITAL FREEMAN ROAD HIGH HEATON NEWCASTLE UPON TYNE
Post Code	NE7 7DN
Country	ENGLAND

IN6

- (●) NHS/HSC Site
- ( ) Non-NHS/HSC Site

Forename	Frank
Middle name	
Family name	Coffey
Email	
Qualification (MD...)	
Country	

Organisation name	NOTTINGHAM UNIVERSITY HOSPITALS NHS TRUST
Address	TRUST HEADQUARTERS QUEENS MEDICAL CENTRE DERBY ROAD NOTTINGHAM
Post Code	NG7 2UH
Country	ENGLAND

IN7

- (●) NHS/HSC Site
- ( ) Non-NHS/HSC Site

Organisation name	SALFORD ROYAL NHS FOUNDATION TRUST
Address	SALFORD ROYAL STOTT LANE SALFORD GREATER MANCHESTER
Post Code	M6 8HD
Country	ENGLAND

Forename	Daniel
Middle name	
Family name	Horner
Email	
Qualification (MD...)	
Country	

IN8

- (●) NHS/HSC Site
- ( ) Non-NHS/HSC Site

Organisation name	ROYAL BERKSHIRE NHS FOUNDATION TRUST
Address	ROYAL BERKSHIRE HOSPITAL LONDON ROAD READING
Post Code	RG1 5AN
Country	ENGLAND

Forename	
Middle name	
Family name	
Email	
Qualification (MD...)	
Country	

IN9

- (●) NHS/HSC Site
- ( ) Non-NHS/HSC Site

Organisation name	UNIVERSITY HOSPITAL SOUTHAMPTON NHS FOUNDATION TRUST
Address	SOUTHAMPTON GENERAL HOSPITAL TREMONA ROAD SOUTHAMPTON
Post Code	SO16 6YD
Country	ENGLAND

Forename	Robert
Middle name	
Family name	Crouch
Email	
Qualification (MD...)	
Country	

IN10

(•) NHS/HSC Site
( ) Non-NHS/HSC Site

Organisation name	FRIMLEY HEALTH NHS FOUNDATION TRUST
Address	PORTSMOUTH ROAD FRIMLEY CAMBERLEY
Post Code	GU16 7UJ
Country	ENGLAND

Forename	
Middle name	
Family name	
Email	
Qualification (MD...)	
Country	

IN11

(•) NHS/HSC Site
( ) Non-NHS/HSC Site

Organisation name	BARKING, HAVERING AND REDBRIDGE UNIVERSITY HOSPITALS NHS TRUST
Address	QUEENS HOSPITAL ROM VALLEY WAY ROMFORD
Post Code	RM7 0AG
Country	ENGLAND

Forename	Darryl
Middle name	
Family name	Wood
Email	
Qualification (MD...)	
Country	

IN12

(•) NHS/HSC Site
( ) Non-NHS/HSC Site

Organisation name	SANDWELL AND WEST BIRMINGHAM HOSPITALS NHS TRUST
Address	CITY HOSPITAL DUDLEY ROAD BIRMINGHAM
Post Code	B18 7QH
Country	ENGLAND

Forename	Daniel
Middle name	
Family name	Lasserson
Email	
Qualification (MD...)	
Country	

IN13

◉ NHS/HSC Site
○ Non-NHS/HSC Site

Forename	Adrian
Middle name	
Family name	Kennedy
Email	
Qualification (MD...)	
Country	

Organisation name	AIREDALE NHS FOUNDATION TRUST
Address	AIREDALE GENERAL HOSPITAL SKIPTON ROAD STEETON KEIGHLEY
Post Code	BD20 6TD
Country	ENGLAND

IN14

◉ NHS/HSC Site
○ Non-NHS/HSC Site

Forename	Krishna
Middle name	
Family name	Banavathi
Email	
Qualification (MD...)	
Country	

Organisation name	UNIVERSITY HOSPITALS OF NORTH MIDLANDS NHS TRUST
Address	NEWCASTLE ROAD STOKE-ON-TRENT
Post Code	ST4 6QG
Country	ENGLAND

IN15

◉ NHS/HSC Site
○ Non-NHS/HSC Site

Forename	
Middle name	
Family name	
Email	
Qualification (MD...)	
Country	

Organisation name	
Address	
Post Code	
Country	

PART D: Declarations

D1. Declaration by Chief Investigator

1. The information in this form is accurate to the best of my knowledge and belief and I take full responsibility for it.

2. I undertake to fulfil the responsibilities of the chief investigator for this study as set out in the UK Policy Framework for Health and Social Care Research.

3. I undertake to abide by the ethical principles underlying the Declaration of Helsinki and good practice guidelines on the proper conduct of research.

4. If the research is approved I undertake to adhere to the study protocol, the terms of the full application as approved and any conditions set out by review bodies in giving approval.

5. I undertake to notify review bodies of substantial amendments to the protocol or the terms of the approved application, and to seek a favourable opinion from the main REC before implementing the amendment.

6. I undertake to submit annual progress reports setting out the progress of the research, as required by review bodies.

7. I am aware of my responsibility to be up to date and comply with the requirements of the law and relevant guidelines relating to security and confidentiality of patient or other personal data, including the need to register when necessary with the appropriate Data Protection Officer. I understand that I am not permitted to disclose identifiable data to third parties unless the disclosure has the consent of the data subject or, in the case of patient data in England and Wales, the disclosure is covered by the terms of an approval under Section 251 of the NHS Act 2006.

8. I understand that research records/data may be subject to inspection by review bodies for audit purposes if required.

9. I understand that any personal data in this application will be held by review bodies and their operational managers and that this will be managed according to the principles established in the Data Protection Act 2018.

10. I understand that the information contained in this application, any supporting documentation and all correspondence with review bodies or their operational managers relating to the application:

    - Will be held by the REC (where applicable) until at least 3 years after the end of the study; and by NHS R&D offices (where the research requires NHS management permission) in accordance with the NHS Code of Practice on Records Management.
    - May be disclosed to the operational managers of review bodies, or the appointing authority for the REC (where applicable), in order to check that the application has been processed correctly or to investigate any complaint.
    - May be seen by auditors appointed to undertake accreditation of RECs (where applicable).
    - Will be subject to the provisions of the Freedom of Information Acts and may be disclosed in response to requests made under the Acts except where statutory exemptions apply.
    - May be sent by email to REC members.

11. I understand that information relating to this research, including the contact details on this application, may be held on national research information systems, and that this will be managed according to the principles established in the Data Protection Act 2018.

12. Where the research is reviewed by a REC within the UK Health Departments Research Ethics Service, I understand that the summary of this study will be published on the website of the Health Research Authority (HRA) together with the contact point for enquiries named below. Publication will take place no earlier than 3 months after the issue of the ethics committee's final opinion or the withdrawal of the application.

Contact point for publication*(Not applicable for R&D Forms)*

HRA would like to include a contact point with the published summary of the study for those wishing to seek further

information. We would be grateful if you would indicate one of the contact points below.

- (●) Chief Investigator
- ( ) Sponsor
- ( ) Study co-ordinator
- ( ) Student
- ( ) Other – please give details
- ( ) None

Access to application for training purposes *(Not applicable for R&D Forms)*

Optional – please tick as appropriate:

☑ I would be content for members of other RECs to have access to the information in the application in confidence for training purposes. All personal identifiers and references to sponsors, funders and research units would be removed.

Signature: .....

Print Name: Richard Body

Date: 21/05/2020 *(dd/mm/yyyy)*

D2. Declaration by the sponsor's representative

If there is more than one sponsor, this declaration should be signed on behalf of the co−sponsors by a representative of the lead sponsor named at A64-1.

I confirm that:

1. This research proposal has been discussed with the Chief Investigator and agreement in principle to sponsor the research is in place.

2. An appropriate process of scientific critique has demonstrated that this research proposal is worthwhile and of high scientific quality.

3. Any necessary indemnity or insurance arrangements, as described in question A76, will be in place before this research starts. Insurance or indemnity policies will be renewed for the duration of the study where necessary.

4. Arrangements will be in place before the study starts for the research team to access resources and support to deliver the research as proposed.

5. Arrangements to allocate responsibilities for the management, monitoring and reporting of the research will be in place before the research starts.

6. The responsibilities of sponsors set out in the UK Policy Framework for Health and Social Care Research will be fulfilled in relation to this research.

   Please note: *The declarations below do not form part of the application for approval above. They will not be considered by the Research Ethics Committee.*

7. Where the research is reviewed by a REC within the UK Health Departments Research Ethics Service, I understand that the summary of this study will be published on the website of the National Research Ethics Service (NRES), together with the contact point for enquiries named in this application. Publication will take place no earlier than 3 months after issue of the ethics committee's final opinion or the withdrawal of the application.

8. Specifically, for submissions to the Research Ethics Committees (RECs) I declare that any and all clinical trials approved by the HRA since 30th September 2013 (as defined on IRAS categories as clinical trials of medicines, devices, combination of medicines and devices or other clinical trials) have been registered on a publically accessible register in compliance with the HRA registration requirements for the UK, or that any deferral granted by the HRA still applies.

Signature: .....

Print Name: Lynne Webster

Post: Head of Research Office

Organisation: Manchester University NHS Foundation Trust

Date: 21/05/2020 *(dd/mm/yyyy)*