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) PLORAS version 1

1. Is your project research?

🖲 Yes 🔿 No

2. Select one category from the list below:

- Clinical trial of an investigational medicinal product
- O Combined trial of an investigational medicinal product and an investigational medical device
- O Clinical investigation or other study of a 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
- O Study administering questionnaires/interviews for quantitative analysis, or using mixed quantitative/qualitative methodology
- Study involving qualitative methods only
- O 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
- O Research database

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

Other study

2a. Will the study involve the use of any medical device without a UKCA/CE UKNI/CE Mark, or a UKCA/CE UKNI/CE marked device which has been modified or will be used outside its intended purposes?

🔵 Yes 🛛 💿 No

2b. Please answer the following question(s):			
a) Does the study involve the use of any ionising radiation?	⊖ Yes	💿 No	
b) Will you be taking new human tissue samples (or other human biological samples)?	◯ Yes	🖲 No	
c) Will you be using existing human tissue samples (or other human biological samples)?	○ Yes	🖲 No	

d) Will the study involve any other clinical procedures with participants (e.g. MRI, ultrasound, physical examination)?

🔵 Yes 💿 No

3. In which countries of the UK will the research sites be located?(Tick all that apply)
► England
Scotland
Wales
Northern Ireland
3a. In which country of the UK will the lead NHS R&D office be located:
England
◯ Scotland
◯ Wales
Northern Ireland
O This study does not involve the NHS
4. Which applications do you require?
IRAS Form
NHS/HSC Research and Development offices
Social Care Research Ethics Committee
Research Ethics Committee
Confidentiality Advisory Group (CAG)
Her Majesty's Prison and Probation Service (HMPPS)
5. Will any research sites in this study be NHS organisations?
5a. Are all the research costs and infrastructure costs (funding for the support and facilities needed to carry out the research e.g. NHS support costs) for this study provided by a NIHR Biomedical Research Centre (BRC), NIHR Applied Research Collaboration (ARC), NIHR Patient Safety Translational Research Centre (PSTRC), or an NIHR Medtech and In Vitro Diagnostic Co-operative (MIC) 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.
The NIHR Clinical Research Network (CRN) provides researchers with the practical support they need to make clinical studies happen in the NHS in England 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, information from your IRAS submission will automatically be shared with the NIHR CRN. **Submission of a Portfolio Application Form (PAF) is no longer required.**

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
Please describe briefly the involvement of the student(s): Some MSc Speech and Language Sciences students from University College London undertake their final year research project with us. This includes collecting and analysing data, and writing up results.
9a. Is the project being undertaken in part fulfilment of a PhD or other doctorate?
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 Basic science study involving procedures with human participants

The student should complete this form on behalf of the Chief Investigator. 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 <u>Help</u>.

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) PLORAS version 1

PART A: Core study information

1. ADMINISTRATIVE DETAILS

A1. Full title of the research:

Predicting Language Outcome and Recovery After Stroke

A2-1. Educational projects

Name and contact details of student(s):

Name and contact details of academic supervisor(s):

Academic supervisor 1

	Title	Forename/Initials	Surname
	Professor	Cathy	Price
	12 Queen	Square	
	London		
<u>~</u>		5	

Post CodeWC1N 3ARE-mailc.j.price@ucl.ac.ukTelephone020 3448 4362Fax

Please state which academic supervisor(s) has responsibility for which student(s): Please click "Save now" before completing this table. This will ensure that all of the student and academic supervisor details are shown correctly.

Student(s)

Address

Academic supervisor(s)

A copy of a <u>current CV</u> for the student and the academic supervisor (maximum 2 pages of A4) must be submitted with the application.

A2-2. Who will act as Chief Investigator for this study?

O Student

Academic supervisor

Other

A3-1. Chief Investigator: Title Forename/Initials Surname Professor Cathy Price Principal Investigator of Language Post PhD Qualifications ORCID ID Employer University College London Work Address 12 Queen Square London WC1N 3AR Post Code Work E-mail c.j.price@ucl.ac.uk * Personal E-mail Work Telephone 020 3448 4362 * Personal Telephone/Mobile 07973243789 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 <u>current CV</u> (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.

Address	Title Forename/Initials Surname Pushpsen Joshi
Address	UCLH/UCL Joint Research Office, part of the Research Directorate
	4th Floor, West
	250 Euston Road, London
Post Code	NW1 2PG
E-mail	UCLH.RandD@nhs.net
Telephone	
Fax	

A5-1. Rese	earch reference	numbers. F	Please giv	e any relevant	references	for your study:
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Applicant's/orga available):	nisation's own reference number, e.g. R & D (if	13/0435
Sponsor's/proto	col number:	
Protocol Version	n:	7
Protocol Date:		13/10/2022
Funder's referer applicable):	nce number (enter the reference number or state not	224562/Z/21/Z
Project website:	www.ucl.ac.uk/ploras	

Registry reference number(s):

The UK Policy Framework for Health and Social Care Research sets out the principle of making information about research publicly available. Furthermore: Article 19 of the World Medical Association Declaration of Helsinki adopted in 2008 states that "every clinical trial must be registered on a publicly accessible database before recruitment of the first subject"; and the International Committee of Medical Journal Editors (ICMJE) will consider a clinical trial for publication only if it has been registered in an appropriate registry. Please see guidance for more information.

International Standard Randomised Controlled Trial Number (ISRCTN): ClinicalTrials.gov Identifier (NCT number):

Additional reference number(s):

Ref.Number Description	Reference Number
Integrated Research Application System (IRAS) number	133939
NIHR Central Portfolio Management System (CPMS) ID	15511
Research Ethics Committee (REC) reference	13/LO/1515
UCL Data Protection Reference number	Z6364106/2013/08/42

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

Yes ONO

Please give brief details and reference numbers.

This project is continuation of the project: Neural Basis of Language 00/N032 which was created prior to the implementation of IRAS

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 aim of the study is to provide a clinical protocol that will predict speech and language outcome and recovery after stroke. The system we are developing takes a structural brain image of a new stroke survivor with a language disorder (aphasia) - with or without a motor speech disorder (dysarthria, dyspraxia) - and produces probabilistic estimates of long term outcome, based on how the speech and language abilities of other stroke survivors with 'matching' lesions changed over time.

The project rests on a database that records three types of information from many hundreds of stroke survivors including: i) speech, language and communication abilities (from participant-reported outcome measures and objective assessment), ii) brain imaging data (from structural Magnetic Resonance Imaging or Computerised Tomography), with associated information (e.g. time post-stroke), and iii) sensory and demographic information (vision, hearing, age, education, ethnicity, etc.). Critical lesion sites for speech and language symptoms are identified by linking i) and ii) above. A combination of all data types (i, ii and iii) then enters the PLORAS system, which predicts the degree, type and time course of recovery in new stroke survivors, and how this might be affected by speech and language therapy.

In order to be successful, we need to study large numbers of stroke survivors who have, or had, post-stroke aphasia (with or without dysarthria/dyspraxia). The information from this study will enable us to make predictions about likely recovery patterns in future stroke survivors with speech and language difficulties. This will help guide both clinical and experimental therapeutic interventions.

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, R&D office 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.

Managing patient expectations:

Some stroke survivors will hope that we can provide medical diagnostic information or other information/advice that might help their recovery. We inform participants verbally and in writing via our information booklet that we do not provide treatment, however, we may be able to offer a prediction for their recovery and provide information to help them find treatment.

Informed consent:

The study will be explained to stroke survivors using language that is accessible to their level of communication. Our information booklet is designed to be accessible to participants with aphasia, to convey the goal of the study and what it involves. Potential participants will be encouraged to take their time to consider whether they wish to take part in the study.

Interested and eligible stroke survivors will be consented to the study (with the support of a consultee where necessary) by Clinical Research Network (CRN) staff or the PLORAS research team after they have been informed about the study. The initial consent form includes provision of the participant's contact details and identifiers (name, date of birth and NHS number) and permission to share the following information with the PLORAS team: i) hospital brain imaging and associated reports, ii) stroke details and other relevant medical information, and iii) speech and language therapy records. In addition, participants can agree/disagree to be contacted about other stroke research activities and the PLORAS newsletter. After entering the study, the PLORAS Team may ask for further participant consent, depending on the type of assessment that is being made.

PLORAS Team members taking consent will have completed Good Clinical Practice Training and the Health Research Authority (HRA) 'Research involving participants lacking mental capacity' module (or similar). They will also be familiar with the Mental Capacity Act's key principles and two stage test of capacity (2005). Principle Investigators at study sites will be responsible for ensuring that staff consenting participants are suitably trained to take informed consent, including assessing capacity/adhering to the Mental Capacity Act (2005), establishing any advanced decisions or statements from the participant and consulting a consultee around study consent, where appropriate.

Consent may be obtained using paper or electronic methods. The participant (or their consultee where appropriate) will be asked to provide their signature via wet-ink or a simple electronic signature. Depending on the assessment/form, the simple electronic signature might be a stylus or finger drawn signature, a typed name, or a tick box in a declaration form. A copy of the consent forms (or declaration forms if using a consultee) will be provided to the participant/consultee and also retained by the PLORAS Team (saved electronically and stored on the PLORAS database).

Adults lacking capacity to consent may be enrolled with the involvement of a personal consultee who is a person that cares for the participant (not professionally or for payment), is interested in their welfare, and is willing to help. They will probably be a family member, but could be another person (e.g. close friend). If no personal consultee is available or willing, participants will be asked who can be consulted about their participation in the research. This may include family members or friends or an advocate. The consultee advises on what the participant's wishes and feelings would be if they were able to consent for themselves, and on whether they should take part. The consultee does not give consent, only advice, and will be asked to sign a consultee declaration form. If, after enrolment, the consultee has concerns or thinks the participant should be withdrawn they should contact the PLORAS Team.

The participant will not be recruited to the study if the researcher feels that their decision to enter the study has been co-erced by another individual and/or is not representative of their wishes. The participant will be encouraged to withdraw from the study if at any time they demonstrate verbal or non-verbal indications that they are distressed. Given our patient group we believe it is justifiable to include a means for a family member or friend to give written consent on the participant's behalf.

Risks, disadvantages and benefits:

There is a small risk that some patients, particularly those with communication difficulties, may become upset and/or fatigued by the language questionnaires and assessments which by their nature are focused on their area of difficulty. Steps will be taken to reduce this by encouraging the patient to take regular breaks, reiterating their right to withdraw and by the sensitive approach of our team of researchers who are all speech and language therapists or have received training from speech and language therapist colleagues. Patients are also given the option to complete the language testing on another day if they wish to continue with the study after a period of rest.

Some participants may be invited to contribute to our related study ELORAS ("Explaining Language Outcome and

Recovery After Stroke") which involves having a functional MRI brain scan. This would be the case for participants who had damage to particular brain regions of interest that we know are important for language. The particular risks and benefits for this are covered in the information for that study (REC ref: 19/LO/1755, IRAS ID: 265430).

Confidentiality and data protection:

This study will comply with: UCL Data Protection Policy; Common Law Duty of Confidentiality; Data Protection Act 2018; UK General Data Protection Regulation (UK GDPR); Computer Misuse Act 1990; NHS Code of Practice on Confidentiality; Good Clinical Practice; The International Conference on Harmonisation of Tripartite Guidelines (CPMP/ICH/135/95), including all aspects of data collection and management.

List of all data to be collected:

1. Participant consent responses including their contact preferences.

2. Personal data including: name, DOB, contact details (and, if necessary, additional contact details e.g. of a friend or family member).

3. Clinical data including: brain imaging (with associated reports), NHS number, stroke date and type, stroke symptoms, selected National Institute of Health Stroke Scale Scores, time since onset of symptoms, aphasic syndrome subtype, relevant information about other neurological conditions and past medical history, other factors that might affect neurological function and communication, clinical speech and language assessment reports, etc.

4. Other data: other languages spoken, details for Speech and Language Therapy department, co-enrolment to other studies, details about participant's access to technology.

5. Questionnaire data, including: About You questionnaire, Communication Recovery questionnaire, Multilingual questionnaire, Language Practice questionnaire.

6. Formal language assessment scores/transcripts completed for research (e.g. using the Comprehensive Aphasia Test).

7. Communication between PLORAS Team and participant/carer/Study Site, etc.

- 8. Audio and video recordings of participants, either individually or during group discussions.
- 9. Transcriptions of group discussions.

This project is covered by the UCL Data Protection Registration, reference number Z6364106/2013/08/42, section 19, research: health research.

Data collected from participants will be uploaded directly and securely to the PLORAS database and automatically encrypted where appropriate. CDs with clinical scan data will be shredded after the scans have been uploaded to the database. Paper data (which may include a copy of consent forms) are stored in a locked cabinet at UCL. Paper files will be archived at the UCL Records Office when they no longer need to be referred to. All data in the database and cabinets can only be accessed by authorised personnel. The degree of access depends on what the data are being used for. I.e. only authorised members of the PLORAS Patient Team can access personal data (name, address, date of birth etc.) to check participant eligibility and contact participants regarding their involvement in the study (e.g. to administer the questionnaires and assessments) or to arrange follow-up activities. Other members of the PLORAS Team (e.g. analysis-only team) can access non-identifiable data for data-analysis and publication (rather than participant recruitment and testing). Researchers outside the PLORAS Team do not have any access to the database. Those conducting ethically approved studies can be sent data from the PLORAS Team. This will not include any personal information unless the participant has already participated in the other team's study.

A Data Sharing Agreement has been produced by UCL and will need to be signed by all Study Sites before any data is transferred to the PLORAS Team at UCL. This outlines agreed methods for secure data transfer from Study Sites to the PLORAS Team at UCL. This includes use of encrypted e-mail (i.e. NHS mail or using encryption software that would meet AES-256 standard) or direct and secure upload to the PLORAS database.

For data uploaded to the PLORAS database the connection between the user and our servers will be secured via https. The data will be uploaded directly to the PLORAS database as soon as possible and is not stored on any thirdparty servers. The data collected is automatically encrypted where appropriate. Access will only be available via the PLORAS database (our internal server). This server, and hence the data, is password protected and can only be accessed by authorised members of the PLORAS Research Team.

Occasionally, it is necessary for PLORAS to transfer personal data, this will be done using encrypted e-mail (i.e. NHS mail or using encryption software that would meet AES-256 standard), or encrypted files (sent via UCL dropbox or department networks).

Professor Cathy Price (CI) is the custodian of the data which will be stored for 20 years after study end, providing an extremely rich data set for future investigations. After this time, all personal data will be destroyed in accordance with all applicable legal and regulatory requirements, including the UK General Data Protection Regulation (UK GDPR) and Data Protection Act 2018, and any amendments thereto. UCL will act as the data controller of such data for the study.

Eventually, the plan is to transfer anonymised datasets to an open source database for widespread use and new applications.

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)
The study also has longitudinal elements i.e. carrying out repeat language measures and assessments with participants whose aphasic symptoms persist.

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

The main objective is to create a clinical tool that will enable future stroke patients with aphasia to be given specific, individualized prediction information on the likely recovery of their language skills e.g. "based on the recovery of other patients with the same region of damage it is likely to take 2 years to recover your speech. This was the case for 90% of previous patients with this region of damage."

In order to achieve this objective our primary research questions ask (A) which brain regions are consistently, or inconsistently, associated with language impairments; and (B) how does the degree and rate of recovery from these impairments depend on lesion site and other factors.

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

A secondary objective is to try to understand how recovery takes place. This will involve inviting participants to participate in our other on-going study 'Explaining Language Outcomes and Recovery After Stroke' for which we already have ethics approval (19/LO/1755). This replaces our former 'Neural Basis of Language and Object Recognition' study (00/N032). We hope that the combined approach will be useful to other projects (by other investigators) who are developing and testing new therapies.

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

Currently, it is not possible for clinicians to provide helpful, personalised and accurate predictions of how speech and language might recover after brain damage because the factors explaining why stroke survivors recover at different rates are not understood. Our approach is to understand, and control and utilize sources of inter-participant variability. In order to do this, we need to collect data from hundreds of stroke survivors who vary from one another in terms of the lesion location and a wide range of demographic factors (e.g. age, education, ethnicity, etc.). The same speech and language assessments are used with all participants. This allows us to compare different groups of participants while controlling for all experimental factors. Our current database, with brain scans and language assessments late after stroke from more than 2000 participants, indicates that the most effective predictor of speech and language recovery is lesion site (assessed from the brain scans).

Previous studies have demonstrated that damage to many left hemisphere brain areas can disrupt speech and language but they have not demonstrated that the effects of damage to the same region are consistent across large populations of patients. Indeed, the effect of damage to one region may depend on the degree of concurrent damage to other brain regions or non-lesion factors such as therapeutic interventions. In the last decade, technical advances in the analysis of neuroimaging data have improved the precision with which we can identify lesion location while computational advances allow us to combine and compare data from large populations of participants. We therefore have new approaches to tackle old problems.

Our study investigates the extent to which variability in the speed and degree of speech and language recovery arises from (i) the availability of intact neural structures that can learn to support lost functions, and (ii) non-lesion factors (e.g. therapy type/dose or demographics) that affect the ability to use these intact structures. This requires an investigation into how the effect of lesion and non-lesion variables interact with one another. For example, when lesion site is controlled, we expect to find that recovery is slower or less complete when early speech and language impairments co-occur with other impairments (e.g. perceptual or memory difficulties); and, conversely, faster and more complete when receiving more intensive early therapy. In both examples, stroke survivors may have the neural resources available to support recovery but vary in whether or not they learn to engage these resources effectively.

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.

Our methodology involves combining three types of information from stroke survivors including: i) speech, language and communication abilities (from participant-reported outcome measures and objective assessment), ii) brain imaging data (from structural Magnetic Resonance Imaging or Computerised Tomography), with associated information (e.g. time post-stroke), and iii) sensory and demographic information (vision, hearing, age, education, ethnicity, etc.). A combination of all data types (i, ii and iii) then enters the PLORAS system, which predicts the degree, type and time course of recovery in new stroke survivors, and how this might be affected by speech and language therapy.

Participants will be asked to sign an initial consent form to confirm that they understand the study information booklet, agree to take part in the study, and are happy to share the following with the PLORAS team: i) their hospital CT/MRI brain scans, ii) their speech and language therapy (SALT) records, and iii) other relevant medical information. They will then complete a short participant interview (approx. 30 minutes) with a research practitioner (or a member of the PLORAS team) which involves answering questions about how their stroke affected them and whether they have access to technology for online data collection. A friend or family member may be able to help them answer the questions. For most participants the initial consent form and interview are completed whilst they are in hospital, however this may also be done by the PLORAS team at a later date. Once consented to PLORAS, we will obtain a copy of the data the participant agreed to share in the initial consent form (their hospital CT/MRI brain imaging, relevant medical records and details of speech and language therapy).

Enrolled participants will then be contacted separately by members of the PLORAS team to complete further questionnaires. These may be administered to participants and/or their carers via online video conferencing, over the phone, by post, or via email. All participants will be invited to complete an 'About You' questionnaire (which collects demographic information such as vision, hearing, age, education, ethnicity, etc. and takes approx. 10 minutes to complete) and a 'Communication Recovery Measure' asking about their speech and language abilities (this collects information about how the stroke affected their speaking/understanding/reading/writing and takes approx. 20-45 minutes to complete).

Where applicable, participants will be asked to complete other questionnaires. For example, those who speak other languages will be asked to complete a 'Multilingual' questionnaire (which asks how their languages were affected by the stroke and takes approx. 15-30 minutes to complete). Participants receiving speech and language therapy, will be asked to complete a 'Language Practice' questionnaire (which takes approx. 20-45 minutes to complete and asks about the everyday language use and the amount and type of speech and language therapy received). The PLORAS team will also contact their speech therapist to complete a complementary 'Therapy' questionnaire (which asks about the amount/frequency/timing of therapy, and factors that may affect the provision of or participant response to therapy).

The PLORAS team will continue to contact participants every 3 to 6 months to repeat the 'Communication Recovery Measure' and to ask about their speech and language therapy (if applicable), until either: their language difficulties recover, they no longer wish to take part or the study funding is not renewed.

During the course of their participation, the PLORAS team may invite some participants to complete standardised speech and language assessments such as the Comprehensive Aphasia Test (i.e. for participants whose self-report aphasic symptoms persist for more than three months post-stroke or who report being less severe than predicted

from their brain scan) or the Aphasia Impact Questionnaire-Concise (i.e. for participants who still report aphasia or have impaired scores on the Comprehensive Aphasia Test at 6-12 months.

Depending on a participant's symptoms and enthusiasm to participate further, they may be invited to take part in supplementary activities such as: tests of apraxia; language assessments in other languages spoken, functional magnetic resonance imaging (fMRI) to understand which parts of their brain have learnt to support their recovered speech and language abilities, and/or discussion forums to help us improve our research methods. Separate consent will be obtained for any subsequent involvement outside the main study activities. Participants can withdraw from the study or refuse to take part in further activities at any time.

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?

Design of the research

Management of the research

Undertaking the research

Analysis of results

Dissemination of findings

None of the above

Give details of involvement, or if none please justify the absence of involvement.

We are committed to involving patients in our research plans, and will seek their input into our research processes and procedures, including the delivery of recovery prognoses, the contents and administration of our assessments and the implementation of the study results into clinical practice. This may include small focused discussion groups, or short questionnaires/surveys, taking place in person or online. These will be carried out on an ad hoc basis. If suitable, patients may be invited to take part in ongoing involvement in the research as part of a committee or advisory panel.

We plan to carry out public engagement activities including but not limited to:

- Patient-focused events offering stroke survivors the opportunity to contribute to our research
- · Events for healthcare professionals and associated practitioners
- Aphasia awareness raising events
- Advice for the design of our on-line language assessments.

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

Infection

Inflammatory and Immune System	
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: 105	Years

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

In order to be included in the study, participants must meet the following criteria:

• A medical diagnosis of one or more strokes (at any time in past) in cerebral or cerebellar regions. The cause of the stroke can be ischemic or haemorrhagic. It must be visible (>1cm3) on a brain scan (according to lesion-measuring software or Consultant/Radiologist report).

• Evidence of mild, moderate or severe spoken communication difficulties post-stroke. Evidence can be from a variety of sources, such as the multidisciplinary team, interactions with the patient or patient/carer reports. Patients may also have motor speech disorder (dysarthria, dyspraxia) in addition to language difficulties (aphasia). The severity of aphasia can be assessed, according to the National Institute of Health Stroke Scale

(https://www.stroke.nih.gov/documents/NIH_Stroke_Scale_508C.pdf).

• Able to complete our questionnaires/assessments with or without assistance. Formal language assessments, which are standardised on an English-speaking population, will only be conducted on patients who were fluent speakers of English prior to their strokes. This is to ensure that errors are not the result of learning English as an additional language. Patients who do not speak English are still included, using patient-reported outcome measures, if they have someone who can translate our questionnaires, which are written in English. Understanding recovery in multiple languages will contribute to our ongoing evaluations of how prediction accuracy is influenced by the language spoken, the number of languages spoken and proficiency of each spoken language.

• No hearing and vision problems (unrelated to stroke) that cannot be corrected (unable to be certain that symptoms/errors on assessment result from stroke rather than poor vision/hearing only).

• Capacity to consent or have a family member/close friend (consultee) who can sign a declaration form indicating the participant's wishes.

· Willingness to participate

• Not under the age of 18 (our ethics approval is for adults only).

• No significant medical or psychiatric co-morbidity that might influence attention to, interpretation of, or co-operation with, any of the assessments.

• No other neurological condition in addition to stroke e.g. Dementia, Multiple Sclerosis, Parkinson's Disease, Motor Neurone Disease. This is to ensure that symptoms/errors noted during assessments result from the stroke rather than other conditions. Controlled epilepsy and meningiomas can be included, unless neurosurgery for these or other conditions resulted in aphasia.

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

We exclude patients who:

• Had strokes that only damaged the brainstem, or were the consequence of a subdural haematoma or subarachnoid

haemorrhage, because these sites are already known not to be related to speech or language impairments.

Had strokes that never resulted in spoken communication difficulties.

• Have hearing and vision problems (unrelated to stroke) that cannot be corrected (unable to be certain that

symptoms/errors on assessment result from stroke rather than poor vision/hearing only).

Lack capacity to consent and do not have a family member/close friend available to act as a consultee.

Are under the age of 18.

• Have a significant medical or psychiatric co-morbidity that might influence attention to, interpretation of, or cooperation with, any of the assessments.

• Have other neurological conditions in addition to stroke e.g. Dementia, Multiple Sclerosis, Parkinson's Disease, Motor Neurone Disease.

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
Written informed consent taken	1	0	15-30 minutes	Completed with research staff (e.g. research assistants/practioners/nurses/associates) at time and place of recruitment Completed with research staff (e.g. research assistants/practitioners/nurses/associates) at time and place of recruitment and where relevant at time of additional behavioural data collection (by PLORAS team).
Participant Entry Form	1	0	30 minutes	Completed with the participant and/or their consultee by researchers/health professionals at any of the PLORAS study sites or by participants at home - in writing, online or over the telephone.
About You Questionnaire	1	0	10 minutes	Completed by participant, with support from PLORAS staff, via telephone, post, online questionnaire, e-mail or face to face.
Multilingual Questionnaire	1	0	15-30 minutes	Completed by participant, with support from PLORAS staff, via telephone, post, online questionnaire, e-mail or face to face.
Language Practice Questionnaire	1- 6	0	20-45 minutes	Completed by participant, with support from PLORAS research staff, via telephone, post, online questionnaire, e-mail or face to face.
Communication Recovery Measure	1- 6	0	20-45 minutes	Completed by participant, with support from PLORAS research staff, via telephone, post, online questionnaire, e-mail or face to face.
Aphasia Impact Questionnaire- Concise	1- 6	0	20-45 minutes	Completed by participant, with support from PLORAS research staff, via telephone, post, online questionnaire, e-mail or face to face.
Video or audio sample of conversational speech	1	0	2-3 minutes	PLORAS research staff ask patient to talk about when they had the stroke on video (or just audio if preferred)
National Institute of Health Stroke Scale assessment Modified Rankin Scale Assessment		1		Completed by a member of the research team, care team or PLORAS research team, in the research setting, with participants who are recruited via a clinical source.

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

Participants will be contacted every 3 to 6 months to repeat the Communication Recovery Measure until either: their language difficulties recover, they no longer wish to take part or the study funding is not renewed. Participants can withdraw from the study or refuse to take part in activities at any time.

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.

There is a small risk that some participants, particularly those with communication difficulties, may become fatigued and/or frustrated by the language questionnaires and assessments which focus on their area of difficulty. Steps will be taken to reduce this by encouraging the patient to take regular breaks, reiterating their right to withdraw and sensitive handling from our team of researchers who are all speech and language therapists or have received training from speech and language therapist colleagues. Patients are also given the option to complete the language testing on another day if they wish to continue with the study after a period of rest.

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

There are no direct benefits to participants taking part in this study and we do not provide treatment. However, (i) we find that our participants are usually enthusiastic to contribute to the research and find out more about their own abilities; (ii) for some participants, we can provide a confident prediction about their speech and language recovery and (iii) if needed, we can provide information to help them find treatment.

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 social care or GP records, or review of medical records. Indicate whether this will be done by the direct care team or by researchers acting under arrangements with the responsible care organisation(s).

Participants will primarily be recruited and identified at PLORAS Study Sites by health professionals. Participants can be recruited (i) directly from a variety of settings (e.g. hospital wards and clinics) as per local Clinical Research Network (CRN) permissions, (ii) indirectly, e.g. using hospital and research databases, or (iii) from the community (e.g. stroke groups and events).

Participants can also self-refer to PLORAS after being informed about the study from other sources, e.g. health professionals (not affiliated to a Clinical Research Network study site), collaborators (e.g. speech and language therapists and other research studies), existing research participants, via the community (e.g. at stroke clubs, presentations and exhibitions) and via the media (e.g. print and online advertisements, TV/radio coverage, websites, Facebook, Twitter, leaflets and posters). Participants can contact us via telephone/email, or via the PLORAS Registration Form on the PLORAS website.

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 O No

Please give details below:

Yes medical notes, clinical imaging and electronic records regarding participants may be screened by members of staff from the Clinical Research Network/Primary Care Network, health care professionals involved in the participant's care and members of the research team who have an honorary contract with the NHS site. For participants who are recruited outside of the Clinical Research Network, members of the PLORAS research team will request the aforementioned personal information for screening purposes with the participant's consent.

A27-3. Describe what measures will be taken to ensure there is no breach of any duty of confidentiality owed to

patients, service users or any other person in the process of identifying potential participants. Indicate what steps have been or will be taken to inform patients and service users of the potential use of their records for this purpose. Describe the arrangements to ensure that the wishes of patients and service users regarding access to their records are respected. Please consult the guidance notes on this topic.

Patient medical records can only be accessed for screening by Clinical Research Network staff, health care professionals involved in the patient's care and members of the research team who have an honorary contract with the NHS site. First level screening would involve briefly checking the patient's medical notes and clinical imaging or liaising with the medical team to check whether the patient meets the inclusion/exclusion criteria before approaching them with details of the study.

Second level screening would involve helping the patient to complete a consent form and 'Participant Entry Form'. Pls at study sites will be responsible for local arrangements and compliance. Copies of relevant sections of patient's medical notes and clinical imaging will be obtained by members of the PLORAS research team for all patients following their consent. Written consent for this will be obtained from patients prior to requests being made. These relevant sections of medical notes and clinical imaging may need to be viewed by the radiographers at the Department of Imaging Neuroscience, UCL, for participants invited to take part in our related study ELORAS ("Explaining Language Outcome and Recovery After Stroke") as part of MRI safety screening. All persons with access to confidential data will have training in data protection and confidentiality.

A27-4. Will researchers or individuals other than the direct care te	am have	access	to identit	fiable personal	information
of any potential participants?					

🔵 Yes 🛛 💿 No

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

Yes ONO

If Yes, please give details of how and where publicity will be conducted, and enclose copy of all advertising material (with version numbers and dates).

Posters:

Will be displayed in conference and event settings, community centres, NHS primary and secondary care settings e.g. clinics and hospitals, around UCL

Leaflets:

Will be distributed via health professionals, at conferences and events, via stroke clubs, via charities such as Stroke Association and Different Strokes, via willing existing participants, via NHS primary and secondary care settings e.g. clinics and hospitals and via other relevant researchers.

Adverts:

Will be placed in newspapers (any of local, national, specialist), magazines such as Stroke News, SAGA, Retirement today and on websites e.g. Gumtree

Websites and online:

We may recruit some participants via our own website (www.ucl.ac.uk/ploras), via our Facebook page and profile and via our Twitter account and via the websites and social media of related organisations e.g. Stroke Association, Different Strokes, specific language groups etc.

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

This will depend on the setting. In clinical settings the participants will first be approached by a clinician involved directly in their care or a member of the Clinical Research Network team or researchers with an honorary clinical contract. Initial contact may be face-to-face, by telephone or post.

Participants may also be approached at stroke clubs, community groups, conferences and events by researchers (who may occasionally include sufficiently trained MSc/PhD students).

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

Yes ONO

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.

After they have been informed about the study, interested and eligible stroke survivors will be consented to the study (with the support of a consultee where necessary) by Clinical Research Network staff or the PLORAS research team. after they have been informed about the study.

PLORAS Team members taking consent will have completed Good Clinical Practice Training and the Health Research Authority (HRA) 'Research involving participants lacking mental capacity' module (or similar). They will also be familiar with the Mental Capacity Act's key principles and two stage test of capacity (2005). Principle Investigators at study sites will be responsible for ensuring that staff consenting participants are suitably trained to take informed consent, including assessing capacity/adhering to the Mental Capacity Act (2005), establishing any advanced decisions or statements from the participant and consulting a consultee around study consent, where appropriate.

After entering the study, the PLORAS Team may ask for further consent, depending on the type of assessment that is being made.

Consent may be obtained at study sites and by the PLORAS Team using paper or electronic methods. The participant (or their consultee where appropriate) will be asked to provide their signature via wet-ink or a simple electronic signature. Depending on the assessment/form, the simple electronic signature might be a stylus or finger drawn signature, a typed name, or a tick box in a declaration form.

A copy of the consent forms (or declaration forms if using a consultee) will be provided to the participant/consultee. A copy will also be retained by the PLORAS Team (saved electronically and stored on the PLORAS database) and the study site that referred them (if applicable).

Adults lacking capacity to consent may be enrolled with the involvement of a personal consultee who is a person that cares for the participant (not professionally or for payment), is interested in their welfare, and is willing to help. They will probably be a family member, but could be another person (e.g. close friend). If no personal consultee is available or willing, participants will be asked who can be consulted about their participation in the research. This may include family members or friends or an advocate. The consultee advises on what the participant's wishes and feelings would be if they were able to communicate consent for themselves, and on whether they should take part. The consultee does not give consent, only advice, and will be asked to sign a consultee declaration form. If, after enrolment, the consultee has concerns or thinks the participant should be withdrawn they should contact the PLORAS Team.

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 ONO

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

We will encourage participants to take their time and as long as they need in when deciding whether or not to take part. and We make it clear that there is no rush to make a decision as the study will be recruiting for a number of years. We will typically assume that patients no longer wish to participate if they have not been in contact for 6 months or more and have not responded to follow-up messages. This will be indicated on our participant database but we will keep all records in case of future contact from the participant.

A32. Will you recruit any participants who are involved in current research or have recently been involved in any research prior to recruitment?

Yes

🔘 No

🔘 Not Known

If Yes, please give details and justify their inclusion. If Not Known, what steps will you take to find out?

There is no reason for participants who are taking part in other research not to take part in our study, particularly as our study does not involve treatment.

Where there is any cross-over between procedures carried out by ourselves and that of other research teams with stroke patients we will aim to support each the other research team in recruitment (by informing patients of other studies). We will also actively try to 'share' participant's data (with consent) to avoid duplication of procedures for participants.

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)

We have produced accessible participant-facing documents to support those with communication difficulties. It is a pre-requisite for our study that participants speak English. If a participant prefers to communicate in another language, a family member (who is fluent in both the native language of the participant and English) will be needed to translate parts of the questionnaire.

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?

As above, it is a pre-requisite for our study that participants speak English. If they have better communication in Welsh, a family member who is fluent in both English and Welsh can assist by translating parts of the questionnaire into Welsh.

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.*

O 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.

O 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:

As this is a long-term study (at least 5 further years) it is likely that some participants will lose capacity to consent before the end of the study. Due to the large number of participants it will not be feasible to monitor capacity to consent however if information is brought to our attention e.g. via contact with the participant or from a medical professional on their behalf we will not request any further data from the participant. We will continue to use their anonymised data in the research, given that the data were collected with informed consent.

If you plan to retain and make further use of identifiable data/tissue following loss of capacity, you should inform participants about this when seeking their consent initially.

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:

Access to medical records by those outside the direct healthcare team:

For participants who are not recruited via the Clinical Research Network (i.e. self-referring participants), it may be necessary for members of the PLORAS research team to access their records (with consent) to check they can be included in the study.

Electronic transfer by magnetic or optical media, email or computer networks:

Personal data can be transferred to PLORAS either via encrypted e-mail (i.e. NHS mail or using encryption software that would meet AES-256 standard) or direct and secure upload to the PLORAS database. For data uploaded to the PLORAS database the connection between the user and our servers will be secured via https. The data will be uploaded directly to the PLORAS database as soon as possible and is not stored on any third-party servers. The data collected is automatically encrypted where appropriate. Access will only be available via the PLORAS database (our internal server). This server and hence the data is password protected and can only be accessed by authorised members of the PLORAS Research Team.

Where it is necessary for PLORAS to transfer personal data, this will be done using encrypted e-mail (i.e. NHS mail or using encryption software that would meet AES-256 standard), or encrypted files (sent via UCL dropbox or department networks).

Use of personal addresses, postcodes, faxes, emails or telephone numbers:

Personal contact details will be provided to us by participants and will be stored in the PLORAS database and on paper in locked cabinets at UCL. These details will only be accessed by authorised members of the PLORAS team who need to contact the participant (i.e. to check eligibility, administer questionnaires/assessments or to arrange follow-up activities).

Publication of direct quotations from respondents

It is possible that quotations from participant's e.g. speech samples or comments about the research may be included in some publications, without names (or with pseudo-names e.g. "stroke survivor John says...") unless consent has been sought.

Use of audio/visual recording devices:

Much of the Comprehensive Aphasia Test (CAT) will be videoed and/or audio recorded (with consent) for later analysis. Some of our participant involvement activities (such as focus groups and events) could potentially involve audio/visual recording. In such cases, participant consent will be obtained prior to use of such devices. We may share quotations from participant's speech in some publications, without names or further consent.

Sometimes, we use a pseudo name (e.g. "stroke survivor John says...")

Storage of personal data:

Data collected from participants will be uploaded directly and securely to the PLORAS database and automatically encrypted where appropriate. CDs with clinical scan data will be shredded after the scans have been uploaded to the database. Paper data (which may include a copy of consent forms) are stored in a locked cabinet at UCL. Paper files will be archived at the UCL Records Office when they no longer need to be referred to. All data in the database and cabinets can only be accessed by authorised personnel. The degree of access depends on what the data are being used for, membership to the PLORAS team and appropriate training.

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

Paper files are stored in locked file-cabinets in a building that is accessed via a key-card. Electronic data are stored on a database which is only accessible to members of the research team. All data in the database and cabinets can only be accessed by authorised personnel. The degree of access depends on what the data are being used for, membership to the PLORAS team and appropriate training.

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.*

This study will comply with:

- UCL Data Protection Policy
- Common Law Duty of Confidentiality
- Data Protection Act 2018
- UK General Data Protection Regulation (UK GDPR)
- Computer Misuse Act 1990
- NHS Code of Practice on Confidentiality
- Good Clinical Practice

• The International Conference on Harmonisation of Tripartite Guidelines (CPMP/ICH/135/95), including all aspects of data collection and management.

Data collected from participants will be uploaded directly and securely to the PLORAS database and automatically encrypted where appropriate. CDs with clinical scan data will be shredded after the scans have been uploaded to the database.

Paper data (which may include a copy of consent forms) are stored in a locked cabinet at UCL. Paper files will be archived at the UCL Records Office when they no longer need to be referred to. All data in the database and cabinets can only be accessed by authorised personnel. The degree of access depends on what the data are being used for, membership to the PLORAS team and appropriate training.

Only authorised members of the PLORAS Patient Team can access personal data (name, address, date of birth etc.) to check participant eligibility and contact participants regarding their involvement in the study (e.g. to administer the questionnaires and assessments) or to arrange follow-up activities.

Other members of the PLORAS Team (e.g. analysis-only team) can access non-identifiable data for data-analysis and publication (rather than participant recruitment and testing).

Researchers outside the PLORAS Team do not have any access to the database. Those conducting ethically approved studies can be sent data from the PLORAS Team. This will not include any personal information unless the participant has already participated in the other team's study.

Research data will be stored securely for 20 years after the study end in case the researchers need to check it. After this time, any participant identifiable data will be destroyed. Participants will not be identified in any publication arising from this study.

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 authorised members of the PLORAS Patient Team can access personal data (name, address, date of birth etc.) to check participant eligibility and contact participants regarding their involvement in the study (e.g. to administer the questionnaires and assessments) or to arrange follow-up activities.

Personal data may be provided to other researchers working on projects that the participant has also participated in and completed a consent form for, to avoid duplication of the participant providing this information.

For participants who are also taking part in our related study ELORAS ("Explaining Language Outcome and Recovery After Stroke"; REC ref: 19/LO/1755, IRAS ID: 265430), radiographers at the Department of Imaging Neuroscience (UCL) will have access to personal data, for safety reasons.

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?

At 12 Queen Square on password protected computers by members of the research team (including Masters and doctorate students) under the guidance of the CI (Professor Cathy Price). Data may be analysed on external computers by members of the research team and collaborators, only when in coded form (i.e. using patient ID numbers).

Post-COVID, members of the PLORAS team may work remotely using a password protected UCL laptop. They may use this to connect to a computer at UCL's Department of Imaging Neuroscience or to connect to departmental network via VPN.

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

	Title Forename/Initials Surname
	Professor Cathy Price
Post	Principal Investigator of Language Studies
Qualifications	PhD
Work Address	Department of Imaging Neuroscience (UCL)
	12 Queen Square
	London
Post Code	WC1N 3AR
Work Email	c.j.price@ucl.ac.uk
Work Telephone	020 3448 4362
Fax	

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

O Less than 3 months

O 3 − 6 months

○ 6 – 12 months

12 months – 3 years.

Over 3 years

If longer than 12 months, please justify:

Our patient database will contain a wealth of valuable information about stroke and aphasia that can be analysed in numerous ways and as such it is justifiable to keep the data for many years.

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

Years: 20

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.

Paper files will be kept in locked cabinets at the Department of Imaging Neuroscience, UCL. The cabinets are accessed by key card. When the files no longer need to be regularly accessed they will be archived at the University

College London Records Office. UCL Records Office provides a service to UCL staff and maintains manual / hard copy records in a safe and secure off-site location. Access to stored records is strictly controlled. Electronic data will remain on our database, which is password protected and only accessible by authorised members of the PLORAS Research Team.		
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?		
O Yes		
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 No		
If Yes, please enclose a copy of the information sheet/letter for the GP/health professional with a version number and date.		
PUBLICATION AND DISSEMINATION		
A50-1. Will the research be registered on a public database?		
The UK Policy Framework for Health and Social Care Research sets out the principle of making information about research publicly available. Furthermore: Article 19 of the World Medical Association Declaration of Helsinki adopted in 2008 states that "every clinical trial must be registered on a publicly accessible database before recruitment of the first subject"; and the International Committee of Medical Journal Editors (ICMJE) will consider a clinical trial for publication only if it has been registered in an appropriate registry. Please see guidance for more information.		
<i>Please give details, or justify if not registering the research.</i> This is not a clinical trial and has not therefore been registered.		
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:		
✓ Peer reviewed scientific journals		

Internal report

Conference presentation

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)

Newsletter to patients and other interested health professionals/researchers/members of the public and on our website www.ucl.ac.uk/ploras

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

Individual references to patients will be anonymised e.g. 'patient 1'

A53. How and when will you inform participants of the study results?

If there will be no arrangements in place to inform participants please justify this. Via our annual newsletter and website. Possibly also via written feedback to research participants; presentation to participants or relevant community groups.

5. Scientific and Statistical Review

A54-1. How has the scientific quality of the research been assessed? Tick as appropriate:

Independent external review

Review within a company

Review within a multi-centre research group

Review within the Chief Investigator's institution or host organisation

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: Independent external review has been given by: The Wellcome Trust who selected the study for funding. Within the CI's

host organisation it has been reviewed by the Head of Department (Professor Martina Callaghan) and Scientific Director (Professor Karl Friston) and all members of the research team.

A copy of the external reviews from the Wellcome funding application can be provided upon request.

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:

Review by independent statistician commissioned by funder or sponsor

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 Professor	Forename/Initials Karl J.	Surname Friston
Departme	nt of Imaging Neur	oscience
University	College London, U	CL
12 Queen	Square	
London		
WC1N 3A	R	
02034484	344	
k.friston@	ucl.ac.uk	
	Professor Departme University 12 Queen London WC1N 3AI 02034484	Professor Karl J. Department of Imaging Neur University College London, U 12 Queen Square

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

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

Cross-validation. Predictions of language outcome and recovery are generated from lesion site, time post stroke and other variables in one sample and tested (i.e. validated) in another sample of patients.

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

New and Replication of scientific findings. Publications

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:	5000
Total international sample size (including UK):	6000
Total in European Economic Area:	1000

Further details:

It is difficult to estimate the exact number of patients that we need to recruit but we have made estimates in terms of 1000s as we already have a number of national and international collaborators interested in participating in the project.

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.

Data from every participant we include will add value to everyone's confidence in future prognoses. The proposed sample size is therefore dictated by the cost of staff to monitor participant recovery and analyse the factors influencing recovery. Wellcome have awarded us funds to monitor recovery in 1000 additional participants (September 2022-2027). We will continue to apply for funding to ensure the accuracy and confidence in future prognoses. A sample size of 1000, will allow us to:

Systematically dissociate the multiple variables that influence the degree and speed of recovery over time, for example, the exact location of the stroke, the amount and type of therapy received, and the pre-stroke language experience of the participant. Our prognoses for future stroke survivors depend on understanding these variables.
Generate confidence in our predictions for future stroke survivors by increasing the number of previous participants who contribute to the prediction. For example, we can be more confident if a prediction is based on the consistency of recovery profiles from a hundred previous participants, with the same lesion features, than if the prediction is only based on data from 10 previous participants.

• Identify and learn about participants who have unusual symptoms, lesions, demographics and/or recovery profiles. This will allow us to generate and test hypotheses about when and why our prognoses are inaccurate. In practice, no test sample will ever be large enough to completely obviate the need to record exceptions (as is recognised, for example, in the way new drugs are trialled). This is why we will continue to apply for funds to increase our participant sample - and share our data with other researchers whose goal is to improve the lives of patients with post-stroke aphasia.

A61-1. 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.

Building on conceptual and computational developments over recent years, we have developed a new approach for identifying critical lesion sites that consistently result in speech and language difficulties.

Our methods for identifying critical lesion sites are based on a search for rules that relate brain lesions to cognitive impairments in powerfully predictive ways. The search is iterative and constrained, through what might be called a 'solution-space'. The starting point for the search is a 'reasonable' solution. For example, a thresholded 'lesion-overlap map' for patients with a particular symptom. This identifies areas that are the most consistently damaged in a population of patients with the same symptom. The regions of highest lesion-symptom consistency are then converted into a rule which relates the likelihood of damage in each region, and each combination of regions, to a functional impairment. Searching for the rule can proceed in a number of ways. Our implementation is a stochastic optimisation algorithm, which works by making an iterative series of small changes to a given solution. If the change produces a better solution, it is kept and this is repeated until no further improvements can be found. The best solution is a set of lesion sites that are present in "all" patients with a particular lesion site; and "none" of the patients who do not have damage to the same area. This allows us to predict that new patients with the identified lesions will have impaired function, whereas those without the identified lesions are likely to make a faster recovery.

Although we anticipate that the most powerful predictor of recovery is lesion site, we are also investigating other factors that influence the speed of recovery. These include age of the patient, time post stroke, intellectual abilities and therapeutic interventions.

The predictive value of all rules is validated in new samples of patients.

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

 Dr
 Alex

 Leff

 Clinical Senior Lecturer & Honorary Consultant Neurologist

Post

Full Set of Project Data

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Full Set of Project Data

IRAS Version 6.3.2

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Mobile	
Work Email	ruben.pereira@ucl.ac.uk

A64. Details of research sponsor(s)

64-1. Sponsor		
Lead Sponsor		
Status: ONHS or	HSC care organisation	Commercial status:
Academ	lic	
O Pharma	ceutical industry	
O Medical	device industry	
O Local A	uthority	
Other so organisatio Other	ocial care provider (including voluntary sector or pr n)	ivate
lf Other, plea	ase specify:	
Contact person		
Name of organisati	on UCLH/UCL Joint Research Office, part of the R	esearch Directorate
Given name	Pushpsen	
amily name	Joshi	
Address	4th Floor, West, 250 Euston Road	
Fown/city Post code	London NW1 2PG	
Country	United Kingdom	
Γelephone ⁻ ax	X	
E-mail	UCLH.RandD@nhs.net	
Clinical Investigation	ve for clinical investigation of medical device (stu ns of Medical Devices that take place in Northern based in Northern Ireland or the EU	

Town/city

Post code

Country

Telephone

Fax

E-mail

A65. Has external funding for the research been secured?

Please tick at least one check box.

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?

O Standalone project

O Project that is part of a programme grant

O 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 Address	Wellcome Trust Gibbs Building 215 Euston Road	
Post Code Telephone Fax Mobile Email	London NW1 2BE 02076118888	
Funding Application Status: Secured In progress 		
Amount:	3,309,491	
Duration Years: Months:	5 0	
If applicable, please specify the programme/ funding stream:		
What is the funding stream/ programme for this research project? Biomedical Science		

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
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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 Pushpsen Joshi
Organisation	UCLH/UCL Joint Research Office, part of the Research Directorate
Address	4th Floor, West
	250 Euston Road
	London
Post Code	NW1 2PG
Work Email	UCLH.RandD@nhs.net
Telephone	
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:

North Thames

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

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

20/08/2013
31/08/2027

Years: 14 Months: 0 Days: 12

A71-1. Is this study?

O 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 approx 50	
Does this trial involve countries outside the EU?	
 ✓ USA	
✓ Other international (please specify)	
UK, Canada, China, Chile, perhaps many othe	er countries that are currently being recruited.
L	
A72. Which organisations in the UK will host the give approximate numbers if known:	research? <i>Please indicate the type of organisation by ticking the box and</i>
▶ NHS organisations in England	50
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	1
Independent research units	
Other (give details)	
Total UK sites in study:	51

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

💿 Yes 🛛 🔿 No

A73-2. If yes, will any of these organisations be NHS organisations?

Yes ONO

If yes, details should be given in Part C.

A73-3. Approximately how much time will these organisations expect to spend on screening records and/or provision of information to potential participants, and how will the costs of these activities be funded?

10 minutes screening patient notes

10-15 minutes providing information to potential participants

Study sites will seek NIHR reimbursement via accrual data which will reflect their contribution in terms of numbers of participants.

A76. Insurance/ indemnity to meet potential legal liabilities

<u>Note:</u> 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.

<u>Note:</u> 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)

The management of the research will be covered by UCL insurance for negligent harm.

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.

NHS indemnity scheme will apply (protocol authors with NHS contracts only)

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

The management of the research will be covered by UCL insurance for negligent harm.

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.

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?

A79. Please select the level of commercial participation in this project.

None

O Industry funding, but not industry sponsored

Industry funding and industry sponsored

O Industry sponsored, but not industry funded

A80. Please select the main subject area of research. Additional sub-topics may be selected, if required
Age and Ageing
Cancer (includes malignant haematology
Cardiovascular
Dementias and Neurodegenerative Diseases
Dermatology
Diabetes
Ear, Nose and Throat
Gastrointestinal
Health Services Research
Hepatology
Immunology and Inflammation
Infectious Disease and Microbiology
Injuries and Accidents
Medicines for Children (does not include Paediatrics)
Mental Health
Metabolic and Endocrine
Musculoskeletal (Rheumatoid Arthritis is a separate category)
Nervous System Disorders
Non-malignant Haematology
Ophthalmology
Oral and Dental
Paediatrics (does not include Medicines for Children)
Primary Care
Public Health Research

Renal

Reproductive Health and Childbirth

Respiratory

Rheumatoid Arthritis

Stroke

Surgery

Urogenital

9. Has the study been the subject of a scientific review/opinion (Expert Panel)?

🔿 Yes 🛛 🔿 No

If yes, please provide a copy of the review as part of your application.

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.

All the patient participants will have had a stroke. In some cases this will impair the patient's language and cognitive skills and/or their ability to write (both cognitive and physical). It is for these participants that we may seek consent via somebody indicated by the patient - a close family member or friend.

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.

We are studying the effects of and recovery from brain damage to a person's language system. It is important that we include patients who, due to damage to brain areas that support language and cognition, may not be able to access all of the details of the study and/or be able to form letters and words to give informed written consent and may struggle to clearly communicate consent via other means of communication. If we do not include these patients we will be missing a subset of impaired patients. This means that the clinical tool which we are developing from the research will not be able to give clinical predictions and prognoses for these type of patients.

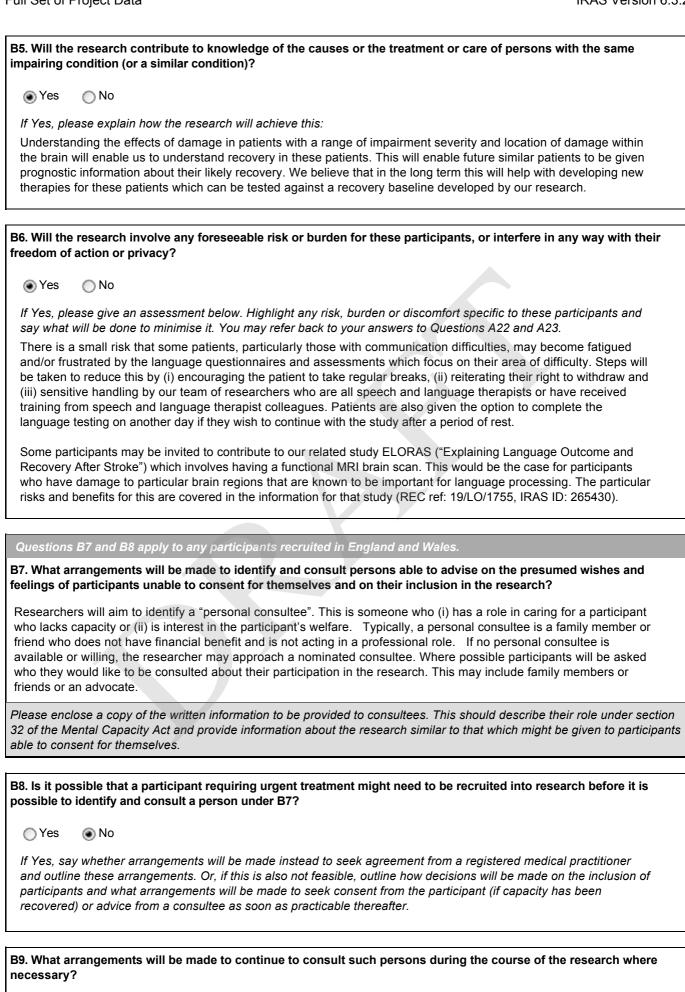
B3. Who in the research team will decide whether or not the participants have the capacity to give consent? What training/experience will they have to enable them to reach this decision?

Members of the PLORAS Research Team (who may be UCL students) who have had training and experience in communicating with people with aphasia and understanding of the issues around consent in this population. They will have completed Good Clinical Practice Training and the Health Research Authority (HRA) 'Research involving participants lacking mental capacity' module (or similar). They will also be familiar with the Mental Capacity Act's key principles and two stage test of capacity (2005).

Principle Investigators at study sites will be responsible for ensuring that staff consenting participants are suitably trained to take informed consent, including assessing capacity/adhering to the Mental Capacity Act (2005), establishing any advanced decisions or statements from the participant and consulting a consultee around study consent, where appropriate.

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

🔵 Yes 🛛 💿 No



N/A

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 provide an accessible information booklet and seek involvement of a personal consultee where appropriate who can advise on what the participant's wishes and feelings would be (if they were able to communicate consent for themselves).

Our language measures and assessments will be administered by members of the PLORAS team who have had training and experience in communicating with people with aphasia and understanding of the issues around consent in this population. They may use other means of non-verbal communication such as gesture and drawing where appropriate. We have also purchased some communication support materials from Speakability (an aphasia charity) to use with participants.

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

As this is a long-term study (at least 5 further years) it is likely that some participants will lose capacity to consent before the end of the study. Due to the large number of participants it will not be feasible to monitor capacity to consent however if information is brought to our attention e.g. via contact with the participant or from a medical professional on their behalf we will not request any further data from the participant. We will continue to use their anonymised data in the research, given that the data were collected with informed consent.

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

Any verbal or non-verbal indication that the patient wishes to be withdrawn. They may also be withdrawn at the request of a family member/close friend acting as a consultee or by a medical professional involved in their direct care.

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).

Participants will be closely monitored for any verbal or non-verbal indication that they object to procedures at any stage. Research activities discontinue with any indication that participants are uncomfortable.

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?

The consultee will be asked whether the procedures of the study are in conflict with any advance decisions or statements by the participant.

PART C: Overview of research sites

		organisations (Local A mation please refer to		ther) in the UK that will be responsible for the
Investigator identifier	Research site		Investigator Nam	ie
IN1	NHS/HSC Si	te		
	O Non-NHS/HS		Forename	Syed
	0		Middle name	
			Family name Email	Haider syedhaider1@nhs.net
	Country: Englar	10	Qualification (MD)	Dr
	Organisation name	COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST	Country	United Kingdom
	Address	THE COUNTESS OF CHESTER HEALTH PARK		
	Post Code	CHESTER CHESHIRE CH2 1UL		
	Institution name Department nam Street address	COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST e THE COUNTESS OF CHESTER		
	Street address	HEALTH PARK		
	Town/city			
	Post Code	CH2 1UL		
	Participant Identi	fication Centres		
	PIC Type	Cen	tre	Individual(s)
IN2	NHS/HSC Si			
	Non-NHS/HS		Forename	Sonia
			Middle name	
	_		Family name Email	Raj Sonia.Raj@lthtr.nhs.uk
	Country: Englar	nd	Qualification (MD)	Coman Agenna Inno. uk

1						I
		LANCASHIRE	Country	United Kingdo	m	
	Organization	TEACHING				
	Organisation name	HOSPITALS NHS				
	-	FOUNDATION TRUST				
		CHIEF				
	Address	EXECUTIVE'S OFFICE				
		ROYAL PRESTON HOSPITAL				
		SHAROE GREEN LANE, FULWOOD PRESTON				
	De et Oe de					
	Post Code	PR2 9HT				
		LANCASHIRE				
		TEACHING				
	Institution name	HOSPITALS NHS FOUNDATION				
	Department name	TRUST				
	Department nam	CHIEF				
	Street address	EXECUTIVE'S OFFICE				
	Town/city	ROYAL PRESTON HOSPITAL	\mathbf{V}			
	Post Code	PR2 9HT				
	Participant Identif	fication Centres				
	PIC Type			Centre	Individual(s)	
	NHS (Englar)	nd)				
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	Non-NHS	······································			E-mail:	
IN4						
	NHS/HSC Si		Forename	Marie		
	O Non-NHS/HS	SC Site	Middle name			
			Family name	Gibson		
	Country: Englan	d	Email	rebeccamarie.g	ibson@nca.nhs.uk	
	, <u> </u>		Qualification (MD)			
			Country	United Kingdo	m	
	Organisation	NORTHERN CARE ALLIANCE NHS				
	name	FOUNDATION				
		TRUST				
	Address	SALFORD ROYAL				
		STOTT LANE				
		SALFORD GREATER				
		MANCHESTER				
-						

Post Code	M6 8HD			
Institution name	NORTHERN CARE ALLIANCE NHS FOUNDATION TRUST			
Department name	e			
Street address	SALFORD ROYAL			
Town/city	STOTT LANE			
Post Code	M6 8HD			
Participant Identif	ication Centres			
PIC Type			Centre	Individual(s)
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◯ NHS (outside	e England)			E-mail:
O Non-NHS				
				/
NHS/HSC Sit	e			
O Non-NHS/HS	C Site	Forename	Katja	
		Middle name Family name	Adie	
		Email	k.adie@nhs.net	
Country: Englan	d	Qualification		
		(MD)	MD	
Organisation	ROYAL CORNWALL HOSPITALS NHS	Country	United Kingdom	
name	TRUST			
Address	ROYAL CORNWALL HOSPITAL			
	TRELISKE TRURO			
	CORNWALL			
Post Code	TR1 3LJ			
Institution name	ROYAL CORNWALL HOSPITALS NHS TRUST			
Department name				
Street address	ROYAL CORNWALL			
	HOSPITAL			
Town/city				
Post Code Participant Identif	TR1 3LJ			
PIC Type			Centre	Individual(s)
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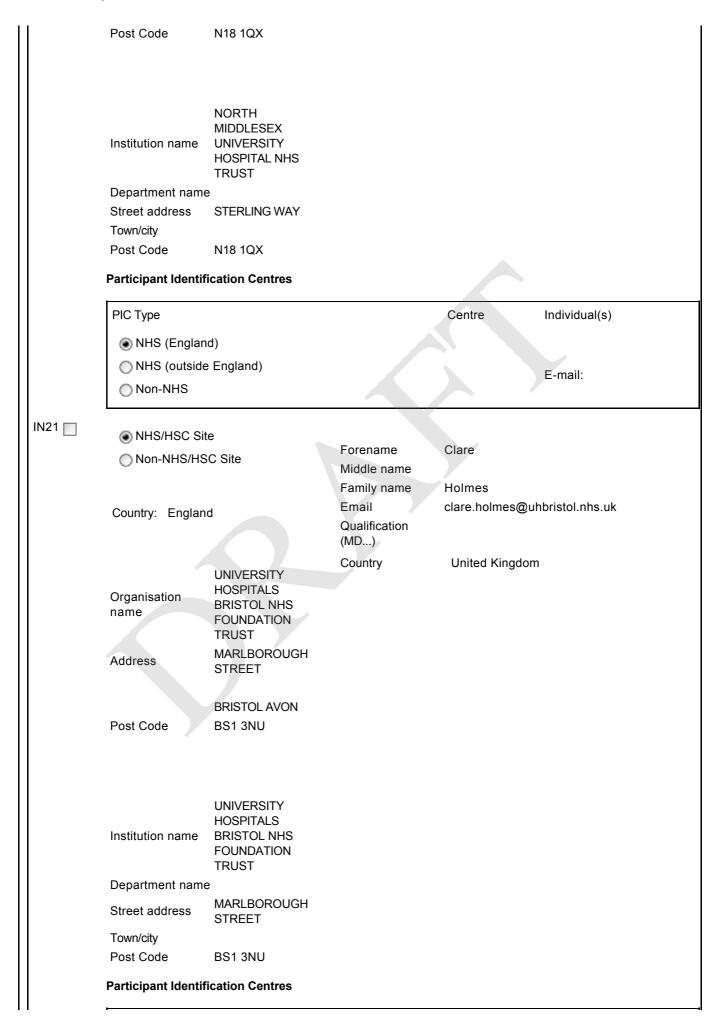
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	O NHS (outside	e England)		E-mail:		
	O Non-NHS					
IN7	NHS/HSC Sit	te				
	O Non-NHS/HS		Forename	Jane		
	0		Middle name	a .		
			Family name Email	Sword j.sword@nhs.ne	ot	
	Country: Englan	d	Qualification	j.sword@mis.ne	σι	
			(MD)			
	Organisation name	ROYAL DEVON UNIVERSITY HEALTHCARE NHS FOUNDATION TRUST	Country	United Kingdo	m	
	Address	ROYAL DEVON UNIVERSITY NHS FT				
		BARRACK ROAD				
		EXETER				
	Post Code	EX2 5DW				
	Institution name	ROYAL DEVON UNIVERSITY HEALTHCARE NHS FOUNDATION TRUST				
	Department name					
	Street address	ROYAL DEVON UNIVERSITY NHS FT				
	Town/city	BARRACK ROAD				
	Post Code	EX2 5DW				
	Participant Identif	fication Centres				
	РІС Туре			Centre	Individual(s)	
	NHS (England)	nd)				
	NHS (outside	e England)			E-mail:	
	O Non-NHS					
IN8	NHS/HSC Sit	te				
	O Non-NHS/HS	SC Site	Forename	Louise		
	Country: Englan	d	Middle name Family name Email Qualification	Shaw Louisej.shaw@	nhs.net	
			(MD)			

	Organisation name Address Post Code	ROYAL UNITED HOSPITAL BATH NHS TRUST COMBE PARK BATH AVON BA1 3NG	Country	United Kingdon	n
	Institution name Department name Street address Town/city Post Code Participant Identif	COMBE PARK BA1 3NG			
	PIC Type			Centre	Individual(s)
	NHS (Englan)	d)			
	◯ NHS (outside	e England)			E-mail:
	O Non-NHS				
IN10	 NHS/HSC Sit Non-NHS/HS Country: Englan Organisation name Address Post Code 	C Site	Forename Middle name Family name Email Qualification (MD) Country	Azlisham Mohd Nor a.mohdnor@nhs United Kingdon	
	Institution name Department name Street address	PLYMOUTH HOSPITALS NHS TRUST DERRIFORD HOSPITAL			

	Town/city	DERRIFORD ROAD				
	Post Code	PL6 8DH				
	Participant Identi	ification Centres				
	PIC Type			Centre	Individual(s)	
	NHS (Engla)	nd)				
	ONHS (outsid	le England)			E-mail:	
	O Non-NHS					
N16 🗌	() NHS/HSC S	ite				
	O Non-NHS/H	SC Site	Forename	Sissy		
	0		Middle name Family name	Ispoglou		
			Email	lspoglou sispoglou@n	hs.net	
	Country: Engla	nd	Qualification (MD)	enopogiou en		
			Country	United King	dom	
		SANDWELL AND WEST				
	Organisation name	BIRMINGHAM HOSPITALS NHS				
	Address	TRUST CITY HOSPITAL				
	Address	DUDLEY ROAD				
		BIRMINGHAM				
		WEST MIDLANDS				
	Post Code	B18 7QH				
		SANDWELL AND				
	Institution name	WEST BIRMINGHAM				
		HOSPITALS NHS TRUST				
	Department nam	ne				
	Street address	CITY HOSPITAL				
	Town/city Post Code	DUDLEY ROAD B18 7QH				
	Post Code Participant Identi					
	PIC Type			Centre	Individual(s)	
		nd)		• •		
	NHS (Engla) NHS (outside)					
	Non-NHS	ic England)			E-mail:	
N17 📃	NHS/HSC S	ite				
	O Non-NHS/H		Forename Middle name	Nasar		
			Family name	Ahmad		

	Country: Englar	ıd	Email Qualification	ahmad.nasar@n	ihs.net
			(MD)	Dr	
	Organisation name	THE ROYAL WOLVERHAMPTON HOSPITALS NHS TRUST	Country	United Kingdon	n
	Address	NEW CROSS HOSPITAL			
		WOLVERHAMPTON ROAD			
		HEATH TOWN WOLVERHAMPTON WEST MIDLANDS			
	Post Code	WV10 0QP			
	Institution name	THE ROYAL WOLVERHAMPTON HOSPITALS NHS TRUST			
	Department nam				
	Street address	NEW CROSS HOSPITAL			
	Town/city	WOLVERHAMPTON ROAD			
	Post Code	WV10 0QP			
	Participant Identi	fication Centres			
	PIC Type			Centre	Individual(s)
	NHS (Englar	nd)			
	ONHS (outside	e England)			E-mail:
	O Non-NHS				L-man.
IN19 📃	NHS/HSC Si	te			
	O Non-NHS/HS		Forename Middle name	Robert	
			Family name	Luder	
	Country: Englar	ıd	Email Qualification (MD)	r.luder@nhs.net	
	Organisation name	NORTH MIDDLESEX UNIVERSITY HOSPITAL NHS TRUST	Country	United Kingdon	n
	Address	STERLING WAY			
		LONDON GREATER LONDON			



	PIC Type			Centre	Individual(s)
	 NHS (Englar NHS (outside Non-NHS 				E-mail:
IN23 📃	● NHS/HSC Si ○ Non-NHS/HS		Forename Middle name	Meena	
	Country: Englar	nd	Family name Email Qualification (MD)	Srinivasan Meena.sriniva	san@sath.nhs.uk
	Organisation name	SHREWSBURY AND TELFORD HOSPITAL NHS TRUST	Country	United Kingd	om
	Address	MYTTON OAK ROAD			
		SHREWSBURY SHROPSHIRE			
	Post Code	SY3 8XQ			
	Institution name	SHREWSBURY AND TELFORD HOSPITAL NHS TRUST			
	Department nam				
	Street address	MYTTON OAK ROAD			
	Town/city Post Code	SY3 8XQ			
	Participant Identi	fication Centres			
	РІС Туре			Centre	Individual(s)
	NHS (Englar)	nd)			
	○ NHS (outside ○ Non-NHS	e England)			E-mail:
IN26 📃	● NHS/HSC Si ○ Non-NHS/HS		Forename Middle name	Timothy	
	Country: Englar	nd	Family name Email Qualification (MD)	Griffiths t.d.griffiths@no	cl.ac.uk
		THE NEWCASTLE	Country	United Kingd	om

	Organisation name	UPON TYNE HOSPITALS NHS FOUNDATION TRUST			
	Address	FREEMAN HOSPITAL			
		FREEMAN ROAD HIGH HEATON NEWCASTLE- UPON-TYNE TYNE			
	Post Code	AND WEAR NE7 7DN			
	Institution name	THE NEWCASTLE UPON TYNE HOSPITALS NHS FOUNDATION TRUST			
	Department nam				
	Street address	FREEMAN HOSPITAL			
	Town/city	FREEMAN ROAD			
	Post Code	NE7 7DN			
	Participant Identi	fication Centres		Centre	Individual(s)
	-				
	NHS (Englar)				
	ONHS (outside	e England)			E-mail:
	Non-NHS				
IN28	NHS/HSC Si	te			
	O Non-NHS/HS		Forename Middle name	Alex	
			Family name	Leff	
	Country: Englar	nd	Email Qualification (MD)	a.leff@ucl.ac.uk	
	Organisation name	UNIVERSITY COLLEGE LONDON HOSPITALS NHS FOUNDATION TRUST	Country	United Kingdom	n N
	Address	250 EUSTON ROAD			
		LONDON GREATER LONDON			
	Post Code	NW1 2PG			

	UNIVERSITY COLLEGE LONDON		
Institution name	HOSPITALS NHS FOUNDATION TRUST		
Department name	e		
Street address	250 EUSTON ROAD		
Town/city			
Post Code	NW1 2PG		
Participant Identif	ication Centres		
РІС Туре			Centre Individual(s)
NHS (Englan)	ld)		
O NHS (outside	e England)		The set
O Non-NHS			E-mail:
Ŭ			
NHS/HSC Sit	le		
O Non-NHS/HS	C Site	Forename	Suzanne
-		Middle name	Deset
		Family name Email	Ragab Suzanne.ragab@poole.nhs.uk
Country: Englan	d	Qualification (MD)	Suzanne.ragab@poole.nns.uk
		Country	United Kingdom
	UNIVERSITY		
Organisation	HOSPITALS DORSET NHS		
name	FOUNDATION		
	TRUST		
Address	MANAGEMENT OFFICES		
	POOLE HOSPITAL		
	LONGFLEET ROAD		
	POOLE		
Post Code	BH15 2JB		
	UNIVERSITY HOSPITALS		
Institution name	DORSET NHS		
	FOUNDATION		
Department name	TRUST		
Street address	MANAGEMENT OFFICES		
Tours/oitu	POOLE HOSPITAL		
Town/city	FUULE NUSFITAL		

	PIC Type			Centre	Individual(s)
				Genile	mumuual(S)
	NHS (Englar)				
	ONHS (outside	e England)			E-mail:
	O Non-NHS				
IN36 📃	NHS/HSC Si	te			
	O Non-NHS/HS		Forename	Grace	
			Middle name		
			Family name	Fawehinmi	
	Country: Englar	nd	Email Qualification	grace.fawehin	mi@nns.net
			Qualification (MD)		
			Country	United Kingd	om
		BARKING, HAVERING AND	-		
	Organisation	REDBRIDGE			
	name				
		HOSPITALS NHS TRUST			
	Address	QUEENS HOSPITAL			/
		ROM VALLEY WAY			
		ROMFORD ESSEX			
	Post Code	RM7 0AG			
		BARKING, HAVERING AND			
	Institution name	REDBRIDGE			
	matterion name	UNIVERSITY HOSPITALS NHS			
		TRUST			
	Department nam				
	Street address	QUEENS HOSPITAL			
	Town/city	ROM VALLEY WAY			
	Post Code	RM7 0AG			
	Participant Identif	fication Centres			
	РІС Туре			Centre	Individual(s)
	NHS (Englar)	nd)			
	ONHS (outside				
	O Non-NHS	<u> </u>			E-mail:
IN43 🗌	NHS/HSC Si	te			
	O Non-NHS/HS		Forename	Emma	
			Middle name		
			Family name	Richards	24@pha not
	Country: Englar	nd	Email Qualification	emma.richard	s34@nns.net
1			Suumouton		

			(MD)		
			Country	United Kingdo	m
	Organisation name	SHEFFIELD TEACHING HOSPITALS NHS FOUNDATION TRUST	Country	onned Kingdo	2011
	Address	NORTHERN GENERAL HOSPITAL			
		HERRIES ROAD SHEFFIELD SOUTH YORKSHIRE			
	Post Code	S5 7AU			
	Institution name	SHEFFIELD TEACHING HOSPITALS NHS FOUNDATION TRUST			
	Department nam				
	Street address	NORTHERN GENERAL HOSPITAL			
	Town/city	HERRIES ROAD			
	Post Code	S5 7AU			
	Participant Identif	fication Centres			
	PIC Type			Centre	Individual(s)
	NHS (Englar)	nd)			
	NHS (outside				
	Non-NHS				E-mail:
	O NOT-NI 13				
IN48 📃	• NHS/HSC Si	te			
IN48	NHS/HSC Si Non-NHS/HS		Forename Middle name	Amit	
IN48				Amit Banerjee	
IN48		SC Site	Middle name)nhs.net
IN48	O Non-NHS/HS	SC Site	Middle name Family name Email Qualification	Banerjee	
IN48	Non-NHS/HS Country: Englar Organisation	NORTHERN LINCOLNSHIRE AND GOOLE HOSPITALS NHS FOUNDATION TRUST DIANA PRINCESS OF WALES HOSPITAL	Middle name Family name Email Qualification (MD)	Banerjee Amitbanerjee@	
IN48	O Non-NHS/HS Country: Englar Organisation name	NORTHERN LINCOLNSHIRE AND GOOLE HOSPITALS NHS FOUNDATION TRUST DIANA PRINCESS OF WALES	Middle name Family name Email Qualification (MD)	Banerjee Amitbanerjee@	

	Post Code	EAST LINCOLNSHIRE DN33 2BA NORTHERN LINCOLNSHIRE AND GOOLE HOSPITALS NHS FOUNDATION TRUST			
	Department name Street address	DIANA PRINCESS OF WALES HOSPITAL			·
	T				
	Town/city	SCARTHO ROAD			
	Post Code	DN33 2BA			
	Participant Identif	ication Centres			
	PIC Type			Centre	Individual(s)
	NHS (Englar				
	○ NHS (outside	e England)			E-mail:
	O Non-NHS				
IN50 📃	NHS/HSC Si	te			
	O Non-NHS/HS	SC Site	Forename	Daniel	
	0		Middle name		
			Family name	Epstein	
	Country: Englan	d	Email	d.epstein@nh	s.net
			Qualification		
			(MD)		
		ROYAL FREE	Country	United Kingd	om
	Organisation	LONDON NHS			
	name	FOUNDATION			
		TRUST			
	Address	ROYAL FREE			
		HOSPITAL			
		POND STREET			
	_	LONDON			
	Post Code	NW3 2QG			
		ROYAL FREE			
	Institution name	LONDON NHS FOUNDATION TRUST			
	Department name				
	Street address	ROYAL FREE HOSPITAL			
	Town/city	POND STREET			
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Full Set of Project Data

IRAS Version 6.3.2

	Post Code	NW3 2QG			
	Participant Identif	ication Centres			
	РІС Туре			Centre	Individual(s)
	● NHS (Englar ● NHS (outside ● Non-NHS				E-mail:
IN52	NHS/HSC Sit	te			
	O Non-NHS/HS		Forename Middle name Family name	Thomas Harrison	
	Country: Englan	d	Email Qualification (MD)		on@bartshealth.nhs.uk
	Organisation name	BARTS HEALTH NHS TRUST	Country	United Kingdo	om
	Address	THE ROYAL LONDON HOSPITAL 80 NEWARK STREET LONDON			
	Post Code	E1 2ES			
	Institution name	BARTS HEALTH NHS TRUST			
	Department name	9			
	Street address	THE ROYAL LONDON HOSPITAL			
	Town/city	80 NEWARK STREET			
	Post Code Participant Identif	E1 2ES			
	РІС Туре			Centre	Individual(s)
	NHS (Englar	ıd)			
	NHS (outside				E-mail:
IN53 📃	● NHS/HSC Sir		Forename	Mohammed	
	Country: Englan		Middle name Family name Email Qualification (MD)	Alkhaddour mohammed.all	khaddour@nhs.net

		EPSOM AND ST HELIER	Country	United Kingdom	
	Organisation name	UNIVERSITY HOSPITALS NHS TRUST			
	Address	ST HELIER HOSPITAL WRYTHE LANE			
	Post Code	CARSHALTON SURREY SM5 1AA			
	Institution name	EPSOM AND ST HELIER UNIVERSITY HOSPITALS NHS TRUST			
	Department name	e			
	Street address	ST HELIER HOSPITAL			
	Town/city	WRYTHE LANE			
	Post Code	SM5 1AA			
	Participant Identif	fication Centres			
	PIC Type			Centre Individual(s)	
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	NHS (Englar)				
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154 🔲	 NHS (Englar NHS (outside Non-NHS 	e England)			
154	 NHS (Englar NHS (outside Non-NHS NHS/HSC Si 	e England) te	Forename		
154 🗌	 NHS (Englar NHS (outside Non-NHS 	e England) te	Middle name	E-mail: Enas	
154 🔲	 NHS (Englar NHS (outside Non-NHS NHS/HSC Si Non-NHS/HS 	e England) te SC Site	Middle name Family name	E-mail: Enas Lawrence	
154 🗌	 NHS (Englar NHS (outside Non-NHS NHS/HSC Si 	e England) te SC Site	Middle name	E-mail: Enas	
N54 🔲	 NHS (Englar NHS (outside Non-NHS NHS/HSC Si Non-NHS/HS 	e England) te SC Site nd CROYDON HEALTH SERVICES NHS	Middle name Family name Email Qualification	E-mail: Enas Lawrence	
N54 🗌	 NHS (Englar NHS (outside Non-NHS NHS/HSC Si Non-NHS/HS Country: Englan Organisation 	e England) te SC Site nd CROYDON HEALTH	Middle name Family name Email Qualification (MD)	E-mail: Enas Lawrence enaslawrence@nhs.net	
N54 🔲	 NHS (Englar NHS (outside Non-NHS NHS/HSC Si Non-NHS/HS Country: Englar Organisation name 	e England) te SC Site nd CROYDON HEALTH SERVICES NHS TRUST MAYDAY UNIVERSITY HOSPITAL LONDON ROAD THORNTON	Middle name Family name Email Qualification (MD)	E-mail: Enas Lawrence enaslawrence@nhs.net	
N54 🗌	 NHS (Englar NHS (outside Non-NHS NHS/HSC Si Non-NHS/HS Country: Englar Organisation name 	e England) te SC Site nd CROYDON HEALTH SERVICES NHS TRUST MAYDAY UNIVERSITY HOSPITAL LONDON ROAD	Middle name Family name Email Qualification (MD)	E-mail: Enas Lawrence enaslawrence@nhs.net	
N54 🗌	 NHS (Englar NHS (outside Non-NHS NHS/HSC Si Non-NHS/HS Country: Englan Organisation name Address 	e England) te SC Site nd CROYDON HEALTH SERVICES NHS TRUST MAYDAY UNIVERSITY HOSPITAL LONDON ROAD THORNTON HEATH SURREY	Middle name Family name Email Qualification (MD)	E-mail: Enas Lawrence enaslawrence@nhs.net	

	Institution name Department name Street address Town/city Post Code Participant Identif	MAYDAY UNIVERSITY HOSPITAL LONDON ROAD CR7 7YE			
	PIC Type			Centre	Individual(s)
	💿 NHS (Englan	d)			
	ONHS (outside				
	O Non-NHS				E-mail:
IN56 📃	● NHS/HSC Sit		Forename Middle name Family name	Laszlo Sztriha	
	Country: Englan	d	Email Qualification (MD)	laszlo.sztriha	
	Organisation name	KING'S COLLEGE HOSPITAL NHS FOUNDATION TRUST	Country	United King	gdom
	Address	DENMARK HILL LONDON GREATER LONDON			
	Post Code	SE5 9RS			
	Institution name	KING'S COLLEGE HOSPITAL NHS FOUNDATION TRUST			
	Department name				
	Street address	DENMARK HILL			
	Town/city Post Code	SE5 9RS			
	Participant Identif	ication Centres			
	РІС Туре			Centre	Individual(s)
	left NHS (Englan	d)			
	ONHS (outside	e England)			E-mail:

	O Non-NHS				
N58 📃	NHS/HSC Si	te	_	.	
	Non-NHS/HSC Site		Forename Middle name Family name Email Qualification (MD)	Chakravarthi RajKumar Raj.Rajkumar@bsuh.nhs.uk	
	Organisation name	BRIGHTON AND SUSSEX UNIVERSITY HOSPITALS NHS TRUST	Country	United Kingd	lom
	Address	ROYAL SUSSEX COUNTY HOSPITAL EASTERN ROAD			
		BRIGHTON EAST SUSSEX			
	Post Code	BN2 5BE			
	Institution name	BRIGHTON AND SUSSEX UNIVERSITY HOSPITALS NHS TRUST			
	Department nam				
	Street address	ROYAL SUSSEX COUNTY HOSPITAL			
	Town/city	EASTERN ROAD			
	Post Code	BN2 5BE			
	Participant Identi	fication Centres			
	PIC Type			Centre	Individual(s)
	NHS (Englar)	nd)			
	◯ NHS (outsid	e England)			E-mail:
	O Non-NHS				
166 📃	NHS/HSC Si	te			
	O Non-NHS/HS	SC Site	Forename Middle name	Gillian	
	Country: Englar	nd	Family name Email Qualification (MD)	Cluckie Gillian.cluckie	@stgeorges.nhs.uk
	Organisation name	ST GEORGE'S HEALTHCARE NHS TRUST	Country	United Kingd	lom

	Address Post Code	ST GEORGE'S HOSPITAL BLACKSHAW ROAD TOOTING LONDON GREATER LONDON SW17 0QT			
	Institution name Department name Street address Town/city Post Code Participant Identif	ST GEORGE'S HOSPITAL BLACKSHAW ROAD SW17 0QT			
	PIC Type			Centre	Individual(s)
	● NHS (Englan ○ NHS (outside ○ Non-NHS				E-mail:
IN67 📃	NHS/HSC Sit	e			
	O Non-NHS/HS		Forename Middle name	Peter	
	Country: Englan	d	Family name Email Qualification (MD)	Sommerville peter.sommervill Dr	le@gstt.nhs.uk
	Organisation name Address	GUY'S AND ST THOMAS' NHS FOUNDATION TRUST TRUST OFFICES GUY'S HOSPITAL	Country	United Kingdon	n
	Post Code	GREAT MAZE POND LONDON GREATER LONDON SE1 9RT			
	Institution name	GUY'S AND ST THOMAS' NHS FOUNDATION TRUST			

	Department name Street address Town/city Post Code Participant Identif	TRUST OFFICES GUY'S HOSPITAL SE1 9RT			
	РІС Туре			Centre	Individual(s)
	NHS (Englan)	ıd)			
	ONHS (outside	e England)			E-mail:
	O Non-NHS				
IN69 📃	O NHS/HSC Sit	te			
	Non-NHS/HS		Forename	Cathy	
			Middle name		
			Family name Email	Price	
		University College	Qualification (MD)	c.j.price@ucl.a	ac.uk
	Institution name	London/Institute of Neurology	Country	United Kingo	lom
	Department name	Imaging	oountry	onned Kinge	
	Street address	12 Queen Square			
	Town/city	London			
	Post Code	WC1N 3AR			
	Institution name	University College London/Institute of Neurology			
	Department name	e Imaging Neuroscience			
	Street address	12 Queen Square			
	Town/city	London			
	Post Code	WC1N 3AR			
	Country	United Kingdom			
	Participant Identif	ication Centres			
	PIC Type			Centre	Individual(s)
	O NHS (Englan	ıd)			
	ONHS (outside	e England)			E-mail:
	Non-NHS				E-mail.
N70	O NHS/HSC Sit	te			
	Non-NHS/HS		Forename Middle name	Cathy	
			Family name	Price	
	Institution name	University College	Email Qualification	c.j.price@ucl.a	ac.uk
		London Birkbeck UCL	(MD) Country	United Kingo	lom

	Department name	Neuroimaging			
	Street address	26 Bedford Way			
	Town/city	London			
I	Post Code	WC1H 0AP			
I	Institution name	University College London			
I	Department name	Birkbeck UCL Centre for Neuroimaging			
	Street address	26 Bedford Way			
	Town/city	London			
	Post Code	WC1H 0AP			
	Country	United Kingdom			
F	Participant Identifi	cation Centres			
Γ	РІС Туре			Centre	Individual(s)
	NHS (England)	1)			7
	ONHS (outside	England)			
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	NHS/HSC Site	e		_	
	O Non-NHS/HS	C Site	Forename	Mahmud	
	0		Middle name		
			Family name	Sajid	
	Country: England		Email	Mahmud.saji	d@nhs.net
			Qualification (MD)	Dr	
			Country	United King	dom
		CHESTERFIELD	Country	Gritted Killy	
	Organisation	ROYAL HOSPITAL			
	name	NHS FOUNDATION TRUST			
	Address	CALOW			
1	1001035	CALC W			
		CHESTERFIELD			
		DERBYSHIRE			
I	Post Code	S44 5BL			
		CHESTERFIELD			
	Institution name	ROYAL HOSPITAL NHS FOUNDATION TRUST			
l	Department name				
:	Street address	CALOW			
	Town/city				
	Post Code	S44 5BL			

IN76 🗌	PIC Type NHS (Englan) NHS (outside Non-NHS NHS/HSC Sit Non-NHS/HS	e England) e C Site	Forename Middle name Family name Email	Centre Shahid Kausar shahid.kausar@	Individual(s) E-mail:
	Country: Englan	d	Qualification (MD) Country	Dr United Kingdon	
	Organisation name	THE DUDLEY GROUP OF HOSPITALS NHS FOUNDATION TRUST	Country		
	Address	C BLOCK RUSSELLS HALL HOSPITAL PENSNETT ROAD DUDLEY WEST MIDLANDS			
	Post Code	DY1 2HQ THE DUDLEY GROUP OF			
	Institution name	HOSPITALS NHS FOUNDATION TRUST			
	Department name Street address	e C BLOCK			
	Town/city	RUSSELLS HALL HOSPITAL			
	Post Code	DY1 2HQ			
	Participant Identif	ication Centres			
	PIC Type			Centre	Individual(s)
	NHS (Englan)				
	○ NHS (outside ○ Non-NHS	England)			E-mail:
IN77 📃	NHS/HSC Sit Non-NHS/HS		Forename Middle name	Conrad	
	Country: Englan	d	Family name Email Qualification (MD)	Athulathmudali conrad.athulathr Dr	nudali@esht.nhs.uk

1					I
	Organisation name	EAST SUSSEX HEALTHCARE NHS TRUST	Country	United Kingdon	1
	Address	ST. ANNES HOUSE 729 THE RIDGE ST. LEONARDS-			
	Post Code	ON-SEA EAST SUSSEX TN37 7PT			
	Institution name	EAST SUSSEX HEALTHCARE NHS TRUST			
	Department nam	е			
	Street address	ST. ANNES HOUSE			
	Town/city Post Code	729 THE RIDGE TN37 7PT			
	Participant Identi	fication Centres			
	PIC Type			Centre	Individual(s)
	NHS (Englar)	nd)			
	ONHS (outside	e England)			E-mail:
	O Non-NHS				
IN81 📃	NHS/HSC Si	te			
	O Non-NHS/HS	SC Site	Forename Middle name	Thomas	
			Family name	Harrison	1 Ontro ant
	Country: Englar	nd	Email Qualification	thomas.harrison	r@nns.net
			(MD)	Dr	
		HOMERTON	Country	United Kingdom	ו
	Organisation	UNIVERSITY			
	name	HOSPITAL NHS FOUNDATION			
		TRUST			
	Address	HOMERTON ROW			
		LONDON			
		GREATER LONDON			
	Post Code	E9 6SR			
	-				
		HOMERTON			
	Institution name	UNIVERSITY HOSPITAL NHS FOUNDATION			

		TRUST			
	Department name				
	Street address	HOMERTON ROW			
	Town/city Post Code				
		E9 6SR			
	Participant Identif	ication Centres			
	PIC Type			Centre	Individual(s)
	NHS (Englan)	d)			
	O NHS (outside	e England)			E-mail:
	O Non-NHS				
IN83 🕅					
	NHS/HSC Sit		Forename	Peter	
	O Non-NHS/HS	C Site	Middle name		
			Family name	Anderton	
	Country: Englan	d	Email	peter.anderton@)dbh.nhs.uk
		ŭ	Qualification (MD)	DR	
		DONCASTER AND	Country	United Kingdor	n
	Organisation	BASSETLAW			
	name	HOSPITALS NHS			
		FOUNDATION TRUST			
	Address	DONCASTER			
	Address	ROYAL INFIRMARY			
		ARMTHORPE ROAD			
		DONCASTER			
		SOUTH			
		YORKSHIRE			
	Post Code	DN2 5LT			
		DONCASTER AND			
		BASSETLAW			
	Institution name	HOSPITALS NHS FOUNDATION			
		TRUST			
	Department name	9			
	Street address	DONCASTER ROYAL INFIRMARY			
	Town/city	ARMTHORPE ROAD			
	Post Code	DN2 5LT			
	Participant Identif	ication Centres			
	PIC Type			Centre	Individual(s)
	NHS (Englan)	d)			
	ONHS (outside				E-mail:
	1				∟-man.

E-mail:

	O Non-NHS				
IN85 📃	NHS/HSC Si	te			
	Non-NHS/HS		Forename	Imran	
	~		Middle name Family name	Ashraf	
	Country: Englar	nd	Email	imran.ashraf@dvh.nhs.uk	
	, ,		Qualification (MD)	Dr	
	Organisation name	DARTFORD AND GRAVESHAM NHS TRUST	Country	United Kingdom	
	Address	DARENT VALLEY HOSPITAL			
		DARENTH WOOD ROAD			
	Post Code	DARTFORD KENT DA2 8DA			
	1 USI COUE				
	Institution name	DARTFORD AND GRAVESHAM NHS TRUST			
	Department nam				
	Street address	DARENT VALLEY HOSPITAL	V Y		
	Town/city	DARENTH WOOD ROAD			
	Post Code	DA2 8DA			
	Participant Identi	fication Centres			
	РІС Туре			Centre Individual(s)	
	NHS (Englar)	nd)			
	◯ NHS (outside	e England)		E-mail:	
	O Non-NHS				
IN87 🕅					
	● NHS/HSC Si ○ Non-NHS/HS		Forename Middle name	Hayden	
			Family name	Kirk	
	Country: Englar	nd	Email	hayden.kirk@solent.nhs.uk	
			Qualification (MD)	Dr	
	Organisation name	SOLENT NHS TRUST	Country	United Kingdom	
	Address	ADELAIDE HEALTH CENTRE			
		WESTERN COMMUNITY HOSPITAL			

	Post Code	WILLIAM MACLEOD WAY SOUTHAMPTON HAMPSHIRE SO16 4XE				
	Institution name	SOLENT NHS TRUST				
	Department name	9				
	Street address	ADELAIDE HEALTH CENTRE				
	Town/city	WESTERN COMMUNITY HOSPITAL				
	Post Code	SO16 4XE				
	Participant Identif	ication Centres				
	РІС Туре			Centre	Individual(s)	
	NHS (Englan)	d)				
	ONHS (outside	e England)			E-mail:	
	O Non-NHS					
IN94 📃	● NHS/HSC Sit ○ Non-NHS/HS		Forename Middle name Family name	Khalid Rashed		
	Country: Englan	d	Email Qualification (MD)	Khalid.rashed Dr	l@ydh.nhs.uk	
	Organisation name Address	YEOVIL DISTRICT HOSPITAL NHS FOUNDATION TRUST YEOVIL DISTRICT HOSPITAL HIGHER KINGSTON YEOVIL SOMERSET	Country	United Kingo	dom	
	Post Code	BA21 4AT				
	Institution name	YEOVIL DISTRICT HOSPITAL NHS FOUNDATION TRUST				
	Department name	YEOVIL DISTRICT				
	Street address	HOSPITAL				

	Town/city	HIGHER KINGSTON			
	Post Code	BA21 4AT			
	Participant Identi	fication Centres			
	PIC Type			Centre	Individual(s)
	NHS (Englar)	nd)			
	ONHS (outside	e England)			E-mail:
	O Non-NHS				E-mail.
195 📃	NHS/HSC Si	te			
	Non-NHS/HS		Forename	Matthew	
	0		Middle name		
			Family name Email	Lambon-Ralp	
		Linivorsity of	Email Qualification		ralph@manchester.ac.uk
	Institution name	University of Manchester	(MD)	PhD, Profess	or
	Department nam	School of	Country	United Kingo	dom
	Street address				
	Town/city	Manchester			
	Post Code				
	Institution name	University of Manchester			
	Department nam	School of e Psychological Sciences			
	Street address				
	Town/city	Manchester			
	Post Code				
	Country				
	Participant Identif	fication Centres			
	PIC Type			Centre	Individual(s)
	ONHS (Englar	nd)			
	O NHS (outside	e England)			E-mail:
	Non-NHS				L-mail.
196 📃	NHS/HSC Si	te			
	O Non-NHS/HS		Forename Middle name	Carinna	
			Family name	Vickers	
	Country: Englar	nd	Email Qualification (MD)	carinna.vicker	rs@somersetft.nhs.uk

	Organisation name Address Post Code	Somerset NHS Foundation Trust Trust Management Lydeard House Musgrove Park Hospital Taunton Ta1 5DA	Country	United Kingdom
	Institution name Department nam Street address Town/city Post Code Participant Identi	TRUST MANAGEMENT LYDEARD HOUSE TA1 5DA		
	PIC Type			Centre Individual(s)
	 NHS (Englar NHS (outside Non-NHS 			E-mail:
IN99 📃	● NHS/HSC Si ○ Non-NHS/HS		Forename Middle name	Stuart
			Family name	Maguire
	Country: Englar	nd	Email	Stuart.maguire@bthft.nhs.uk
			Qualification (MD)	Dr
	Organisation name	BRADFORD TEACHING HOSPITALS NHS FOUNDATION TRUST	Country	United Kingdom
	Address	BRADFORD ROYAL INFIRMARY		
		DUCKWORTH LANE BRADFORD WEST YORKSHIRE		
	Post Code	BD9 6RJ		
		BRADFORD		

	Institution name	TEACHING HOSPITALS NHS FOUNDATION TRUST			
	Department name Street address	BRADFORD ROYAL			
	Town/city	DUCKWORTH			
	Post Code	BD9 6RJ			
	Participant Identif	ication Centres			
	РІС Туре			Centre	Individual(s)
	NHS (England)	ıd)			
	ONHS (outside	e England)			E-mail:
	O Non-NHS				
N101 🕅		ła			
	NHS/HSC Sit		Forename	Udayaraj	
	O Non-NHS/HS	Site	Middle name		
			Family name	Umasankar	
	Country: Englan	d	Email Qualification (MD)	udayaraj.umasa Dr	ankar@nhs.net
			Country	United Kingdo	m
	Organisation name	LEWISHAM AND GREENWICH NHS TRUST			
	Address	UNIVERSITY HOSPITAL LEWISHAM			
		LEWISHAM HIGH STREET			
		LONDON			
	Post Code	SE13 6LH			
	Institution name	LEWISHAM AND GREENWICH NHS TRUST			
	Department name				
	Street address	UNIVERSITY HOSPITAL LEWISHAM			
	Town/city	LEWISHAM HIGH STREET			
	Post Code	SE13 6LH			
	Participant Identif	ication Centres			
	PIC Type			Centre	Individual(s)
	NHS (England)	A)			

	○ NHS (outsid ○ Non-NHS	e England)			E-mail:	
IN102	● NHS/HSC Si ○ Non-NHS/HS		Forename Middle name	Rayessa		
	Country: Englar	nd	Family name Email Qualification (MD)	Rayessa Rayessa.Ray Dr	yessa@hey.nhs.uk	
	Organisation name	HULL AND EAST YORKSHIRE HOSPITALS NHS TRUST	Country	United King	ldom	
	Address	HULL ROYAL INFIRMARY ANLABY ROAD HULL EAST				
	Post Code	HULL EAST YORKSHIRE HU3 2JZ				
	Institution name	HULL AND EAST YORKSHIRE HOSPITALS NHS TRUST				
	Department nam Street address	e HULL ROYAL				
	Town/city	INFIRMARY ANLABY ROAD				
	Post Code	HU3 2JZ				
	Participant Identi					
	PIC Type			Centre	Individual(s)	
	NHS (Englar)	nd)				
	ONHS (outsid	e England)			E-mail:	
	O Non-NHS				E mail.	
IN110	INHS/HSC Si	ite				
	O Non-NHS/H	SC Site	Forename Middle name	Ravi		
	Country: Englar	nd	Family name Email Qualification (MD)	Rangasamy Ravi.Rangas Dr	amy@btuh.nhs.uk	
	Organisation name	MID AND SOUTH ESSEX NHS FOUNDATION TRUST	Country	United King	Jdom	

Address	PRITTLEWELL CHASE			
	WESTCLIFF-ON- SEA			
Post Code	SS0 0RY			
Institution name	MID AND SOUTH ESSEX NHS FOUNDATION TRUST			
Department name				
Street address	PRITTLEWELL CHASE			
Town/city				
Post Code	SS0 0RY			
Participant Identifi	cation Centres			
PIC Type	Cent	re	Individual(s)	
11 🗌 💿 NHS/HSC Site	e			
O Non-NHS/HS	C Site	Forename	Francesca	
0		Middle name		
		Family name	Sheldon	
Country: England	d	Email Qualification (MD)	francesca.sheldon@nhs.net	
Organisation name Address Post Code	MAIDSTONE AND TUNBRIDGE WELLS NHS TRUST MAIDSTONE HOSPITAL HERMITAGE LANE MAIDSTONE KENT ME16 9QQ	Country	United Kingdom	
Institution name Department name				
Street address	MAIDSTONE HOSPITAL			
Town/city	HERMITAGE LANE			
Post Code	ME16 9QQ			
Participant Identifi	cation Centres			
PIC Type	Cent	re	Individual(s)	

IN113 🗌	O NHS/HSC Sit	te	_		
	Non-NHS/HS	C Site	Forename Middle name	Rebecca	
			Family name		
			Email	r.l.palmer@sh	effield.ac.uk
	Institution name	University of Sheffield	Qualification (MD)		
	Department name	School of Health e and Related Research	Country	United Kingd	om
	Street address	The Innovation Centre, 217 Portobello			
	Town/city	Sheffield			
	Post Code	S1 4DP			
	Institution name	University of Sheffield			
	Department name	Research			
	Street address	The Innovation Centre, 217 Portobello			
	Town/city	Sheffield			
	Post Code	S1 4DP			
	Country	United Kingdom			
	Participant Identif	ication Centres			
	PIC Type			Centre	Individual(s)
	○ NHS (Englan	(bu			
	NHS (outside				
	-				E-mail:
	Non-NHS				
IN115	NHS/HSC Sit				
		te			
	Ŭ		Forename	Kiruba	
	Non-NHS/HS		Middle	Kiruba	
	O Non-NHS/HS	SC Site	Middle name Family		
	Ŭ	SC Site	Middle name Family name	Nagaratnam	
	O Non-NHS/HS	SC Site	Middle name Family name Email	Nagaratnam Kirubananthan.Naga	aratnam@royalberkshire.nhs.u
	O Non-NHS/HS	sC Site	Middle name Family name	Nagaratnam Kirubananthan.Naga	aratnam@royalberkshire.nhs.u
	O Non-NHS/HS	SC Site	Middle name Family name Email Qualification	Nagaratnam Kirubananthan.Naga	aratnam@royalberkshire.nhs.u
	Non-NHS/HS Country: Englan Organisation	C Site d ROYAL BERKSHIRE NHS FOUNDATION	Middle name Family name Email Qualification (MD)	Nagaratnam Kirubananthan.Naga Dr	aratnam@royalberkshire.nhs.u

		ROYAL BERKSHIRE NHS			
	Institution name	FOUNDATION TRUST			
	Department name	STROKE UNIT (LEVEL 1, BATTLE BLOCK)			
	Street address	ROYAL BERKSHIRE HOSPITAL			
	Town/city	LONDON ROAD			
	Post Code	RG1 5AN			
	Participant Identifi	cation Centres			
	PIC Type			Centre Individual(s)	
	NHS (England)	(b			
	ONHS (outside	England)			
	O Non-NHS	ũ ,		E-mail:	
16 📃	NHS/HSC Site				
	õ		Forename	Claire	
	O Non-NHS/HS	C Site	Middle name	Gatehouse	
			Family name		
	Country: England	ł	Email	Claire.gatehouse@nhs.net	
			Qualification (MD)		
	Organisation		Country	United Kingdom	
	name	LIVEWELL S/W			
	Address	LOCAL CARE			
	, luciou	CENTRE			
		MOUNT GOULD HOSPITAL			
		PLYMOUTH			
	Post Code	PL4 7PY			
	Institution name	LIVEWELL S/W			
		Mount Gould Hospital (1st Floor,			
	Department name	Beauchamp Centre)			
	Street address	LOCAL CARE CENTRE			
	Town/city	MOUNT GOULD HOSPITAL			
	Post Code	PL4 7PY			

	PIC Type			Centre	Individual(s)		
	● NHS (England)						
	O NHS (outsid	de England)			E-mail:		
	O Non-NHS			2 11011			
IN118							
	NHS/HSC S		Forename	Ahamad			
	O Non-NHS/HSC Site		Middle name	,			
			Family name	Hassan			
	Country: England		Email Qualification	ahamad.hassan@nhs.net			
			(MD)				
	Organisation name	LEEDS TEACHING HOSPITALS NHS TRUST	Country	United Kinge	dom		
	Address	ST. JAMES'S UNIVERSITY HOSPITAL					
		BECKETT STREET					
	Post Code	LS9 7TF					
		LEEDS TEACHING					
	Institution name						
	Department nan	ne					
	Street address	ST. JAMES'S UNIVERSITY					
	Sheet address	HOSPITAL					
	Town/city	BECKETT STREET					
	Post Code	LS9 7TF					
	Participant Identification Centres						
	PIC Type			Centre	Individual(s)		
	NHS (Engla)	ind)					
	NHS (outside England)				E-mail:		
	O Non-NHS						
IN120	() NHS/HSC S	Site					
	Non-NHS/HSC Site		Forename	Catherine			
	~		Middle name	Curlov			
			Family name Email	Curley catherine.curl	ley@elht.nhs.uk		
	Country: Engla	ina	Qualification (MD)				
		FAOT	Country	United Kinge	dom		
	Organisation name	EAST LANCASHIRE HOSPITALS NHS					

	Address Post Code	TRUST ROYAL BLACKBURN HOSPITAL HASLINGDEN ROAD BLACKBURN BB2 3HH						
	Institution name	EAST LANCASHIRE HOSPITALS NHS TRUST						
	Department name							
	Street address	ROYAL BLACKBURN HOSPITAL						
	Town/city	HASLINGDEN ROAD						
	Post Code	BB2 3HH			1			
	Participant Identification Centres							
	РІС Туре			Centre	Individual(s)			
	NHS (England)							
	ONHS (outside	e England)	V /		E-mail:			
	O Non-NHS				L-mall.			
IN121	NHS/HSC Site							
	O Non-NHS/HS		Forename	Habib				
	0		Middle name	Dohmon				
			Family name Email	Rehman Habib.Rehma	n@wwl.nhs.uk			
	Country: England		Qualification		~			
			(MD)					
	Organisation name	WRIGHTINGTON, WIGAN AND LEIGH NHS FOUNDATION TRUST	Country	United Kingo	lom			
	Address	ROYAL ALBERT EDWARD INFIRMARY WIGAN LANE						
	Post Code	WIGAN WN1 2NN						
	Institution name	WRIGHTINGTON, WIGAN AND LEIGH NHS FOUNDATION TRUST						

	Department name	e						
	Street address	ROYAL ALBERT EDWARD INFIRMARY						
	Town/city	WIGAN LANE						
	Post Code	WN1 2NN						
	Participant Identification Centres							
	РІС Туре			Centre	Individual(s)			
	NHS (England)							
	○ NHS (outside England)				E-mail:			
	O Non-NHS				E-man.			
IN122	NHS/HSC Sit	te			•			
	Non-NHS/HS		Forename	Sara				
			Middle name					
			Family name	Eltringham				
	Country: Englan	ıd	Email Qualification (MD)	sara.eltringham@nnuh.nhs.uk on				
			Country	United Kinge	dom			
	Organisation name	NORFOLK AND NORWICH UNIVERSITY HOSPITALS NHS FOUNDATION TRUST						
	Address	COLNEY LANE						
		COLNEY						
		NORWICH						
	Post Code	NR4 7UY						
	Institution name	NORFOLK AND NORWICH UNIVERSITY HOSPITALS NHS FOUNDATION TRUST						
	Department name	е						
	Street address	COLNEY LANE						
	Town/city							
	Post Code	NR4 7UY						
	Participant Identification Centres							
	РІС Туре			Centre	Individual(s)			
	● NHS (England)							
	ONHS (outside	e England)		E-mail:				
	O Non-NHS				L=mail.			