

# MRI Scanning Guide

## Running Projects on the FMRIB and OHBA scanners



Starting a new project at the Oxford University Centre for Integrative Neuroimaging, particularly if you do not already have a close link, can appear daunting. However, we welcome new researchers and collaborators, and the following document is intended to help you find the right help and complete the necessary procedures as quickly and easily as possible.

### Step 1 - Making Initial Contact

All studies carried out at **FMRIB** need to be signed off by the OxCIN Centre Director, Karla Miller. All studies carried out at **OHBA** need to be signed off by the Centre Director, Mark Woolrich. Please email [admin@oxcin.ox.ac.uk](mailto:admin@oxcin.ox.ac.uk) to make first contact about starting a new MRI project.

### Step 2 – Ethics and Project Planning

As you start to plan your project, you will need to apply for ethical approval to run the project and figure out the practical details of your scanning project. These are often done in parallel, and we recommend getting in touch with OxCIN about both at this early stage. Before you can start your scanning project, you will be required to complete the following:

- Ethics approval
- Work In Progress Presentation
- Project Code Request Form

Please see below for more details.

#### A) Applying for Ethics

All projects need ethical approval prior to starting. This process involves several steps, often including approvals at the centre, department, and university level. The approval process often takes several months to complete. Please note that **you must submit your application for the OxCIN check before submitting it to the relevant ethics approval body**. Failure to do so may result in a delay in starting your study.

##### *Healthy volunteer projects*

If your project fits within the standard MRI approved procedure defined by CUREC, you can apply for a CUREC1 approval. Please read the MRI approved procedure on

<https://researchsupport.web.ox.ac.uk/governance/ethics/resources/ap#collapse397171>

If your experiment doesn't fit within the standard MRI approved procedure, it may fit under a CUREC2 application.

To complete a CUREC 1 or 2 application:

- Read the application guidance on <https://researchsupport.web.ox.ac.uk/governance/ethics/apply/msidrec#widget-id-98531>
- Download the latest template forms from the CUREC website (<https://researchsupport.admin.ox.ac.uk/governance/ethics>), enter the relevant details and make appropriate edits to the forms.
- Download and complete the OxCIN CUREC check sheet (<https://www.oxcin.ox.ac.uk/research/ethics/win-ethics-procedure>)
- Email all documents to [admin@oxcin.ox.ac.uk](mailto:admin@oxcin.ox.ac.uk) who will check your application for OxCIN approval.

- Request your department HoD signature on the forms. This step may involve submission of project-specific risk assessments.
- Submit your forms to the Medical Sciences Division IDREC ([ethics@medsci.ox.ac.uk](mailto:ethics@medsci.ox.ac.uk)) to receive approval.

If your study involves administering licensed drugs or other substances to healthy volunteers, you may need to use a CUREC3 application.

#### *Patient or clinical projects*

Studies involving patients or clinical work may need to use the NHS and HRA ethical approval process <https://researchsupport.web.ox.ac.uk/clinical-trials-research-governance>.

If you need support setting up a clinical study at OxCIN that is led by external collaborators, please contact [laura.cini@ndcn.ox.ac.uk](mailto:laura.cini@ndcn.ox.ac.uk)

If you have questions about the ethics procedures involving MRI scans, feel free to email [admin@oxcin.ox.ac.uk](mailto:admin@oxcin.ox.ac.uk).

### **B) Planning a Project**

With many things to arrange to get your project started, you will find that making early contact with our Radiography Team is invaluable. They can help you think about practical issues to do with running your MRI project, advise on sequences and show you how to get help with stimulus presentation, recruitment, screening, and other issues. You may find it useful to start filling in a project code request form (see OxCIN Project Code below) at this stage, which will prompt you on several things to think about when planning your study. You can contact the Radiography Team at [radiographers@oxcin.ox.ac.uk](mailto:radiographers@oxcin.ox.ac.uk). The team can also put you in touch with centre physicists if your MRI protocols need development.

#### Standard Operating Procedures

It is essential that you are familiar with the Centre's Standard Operating Procedures (SOPs), particularly in relation to **dealing with incidental findings** on participants' scans. Separate SOPs exist for adults and paediatrics, both documents are in the induction pack.

The other SOPs that may be relevant to your research are

- Screening participants for safety to scan
- Informed consent
- Ethical considerations for technical development scans
- Safety considerations for rapidly acting drugs
- MRI scanning in children aged 6-15

All SOPs are available on the OxCIN intranet at <https://www.oxcin.ox.ac.uk/research/ethics/sops>. If you plan to use tDCS/tACS, EEG or pain devices in the scanner environment then additional procedures or training may be required. You should also consider if you need to develop any project-specific risk assessments if your project includes any additional devices or procedures.

#### *MRI Protocol Advice*

We encourage researchers to deposit their MRI protocols in the OxCIN Protocols Database (<https://open.oxcin.ox.ac.uk/protocols>). Browsing this database can be helpful to find suitable protocols for your study. Further advice can be obtained from the Radiography team, who can also put you in touch with the core physics team as needed.

#### Stimulus presentation

All the scanners have computers which run stimulus presentation software. This includes PsychoPy (recommended for new projects), NBS Presentation (historically supported software at FMRIB, with extensive documentation available at [www.oxcin.ox.ac.uk/support](http://www.oxcin.ox.ac.uk/support)), and Matlab (with Psychtoolbox and Cogent toolboxes) for legacy scripts. Eprime is available, but you need your own licence dongle. Alternatively, you may use your own laptop for stimulus presentation. For information and support with any aspect of stimulus presentation, physiological measurement, and

custom MRI compatible instrumentation, contact the Experiment Support Team ([Sebastian.Rieger@psych.ox.ac.uk](mailto:Sebastian.Rieger@psych.ox.ac.uk)). If you are taking new equipment into the magnet room, then an equipment protocol will need to be written and its safety checked by one of the Centre staff. Template equipment protocols are at <https://www.oxcin.ox.ac.uk/research/research-facilities/3-tesla-human-mri-scanner> (see links on the right-hand side under 'user guides and documents).

#### Equipment Purchasing and Custom Equipment

Contact the Experiment Support team early in the project planning phase if you intend to purchase any new equipment or require custom instrumentation. The team can advise on what is already available and what can be developed and built in-house, help with market research and purchasing decisions, and ensure that any new equipment will be suitable for use in our MRI suites.

#### Experienced researchers

Since running an MRI experiment is complex, involves risks and is expensive, it is essential that researchers are suitably experienced to deal with the participant, run the stimulus presentation and support in the case of an emergency. New DPhil students, or those new to the OxCIN MRI scanners, must be supervised by an experienced researcher for the first few sessions until the supervisor and the Centre staff are confident that the individual can run the study on their own. If you do not have access to an experienced researcher, please contact [radiographers@oxcin.ox.ac.uk](mailto:radiographers@oxcin.ox.ac.uk) for advice.

#### Analysis advice

If you have questions about how to analyse your data, then others in your research group or field with MRI experience are often an excellent place to start. If you are planning to use FSL, the Wiki has comprehensive instructions on using each of the tools (<https://fsl.fmrib.ox.ac.uk/fsl/fslwiki>). If you need further advice, or don't have anyone locally you can speak to, try posting your question on the FSL JISCM@IL discussion page (<https://www.jiscmail.ac.uk/cgi-bin/webadmin?A0=fsl>) in the first instance. If it is something not appropriate for a public forum, then a direct email to [matthew.webster@ndcn.ox.ac.uk](mailto:matthew.webster@ndcn.ox.ac.uk) is acceptable.

#### Work in Progress Meetings

Any study that runs at OxCIN must be presented at a 'Work in Progress' meeting which are part of the OxCIN Wednesday meetings, 12:00-13:00. This allows others in the lab to give you valuable input into your study design, execution, and analysis. You can choose whether to present before ethics approval is sought, or after, but you will not be able to start scanning until this has been done.

To arrange to present then please visit <https://www.oxcin.ox.ac.uk/about/communications/wips>.

#### **C) OxCIN Project Code**

A Project Code request form is available at <https://www.oxcin.ox.ac.uk/research/research-facilities/3-tesla-human-mri-scanner> (link to form on the right-hand side under 'user guides and documents'). You can start filling this in at any time, as it prompts you about many of the important aspects of running your study. Once completed send the form to [radiographers@oxcin.ox.ac.uk](mailto:radiographers@oxcin.ox.ac.uk), who will get in touch and arrange a meeting to discuss the study with you. Once the details of the study (including scan charges) have been agreed and signed off by the relevant Centre Director, the radiographers will then assign you a project code which you use to book time on the scanners.

## **Step 3 – Scan Costs and Charging Policy**

### **Scan costs**

Scans are billed monthly, when a list of scans completed on project codes are sent to the PI and researcher.

Researchers are charged on a 'per-scan' basis, where the appropriate charge per scan should reflect the scanner-hours required by the project including appropriate set up time. Advice on protocol durations can be obtained from the radiographers at any point, from grant proposal to

pilot. Indications of the amount of scanning time that can be accommodated in sessions of various lengths are given in the table below. Note that these times are for healthy volunteer scanning using the centre stimulus equipment, studies involving patients or complex stimulus setups will likely require shorter protocols for the same scan session duration.

Scan session duration	Length of protocol
30 minutes	10 minutes
45 minutes	25 minutes
1 hour	40 minutes
1 hour 15 minutes	55 minutes
1 hour 30 minutes	70 minutes

**The current per-hour rate for scans are £790/hour. Overnight scans (e.g., scanning post-mortem tissue) are charged at £1580.**

If a lower scan rate was used in a grant application, or if scans are requiring more time than initially planned for, and additional funding is not available, researchers should use the 'top-up' grant scheme described below.

### **Budgeting for scan fees in grant applications**

It is vital that researchers have sufficient funding for MRI scans in their grant proposal. To assist researchers in their grant proposals, the radiographers, with input from physicists and other centre staff, are happy to advise on estimated protocol durations to achieve the goals.

Researchers should also factor into their participant numbers some level of participant attrition.

We are aware that there are occasions when sources of funding available do not meet the full costs of scan fees and in the following instances researchers can apply to the OxCIN top-up grant scheme:

- Ongoing projects that were externally funded under historical (lower) rates
- Capped grants, particularly those available on early career researchers' fellowships, where the full cost of the project cannot be covered on the grant
- Ongoing projects of strategic importance that require bridging between grants

It is appreciated that it is often a considerable time between the grant submission and a project starting, and protocols may need to be lengthened in the light of recent scanning development. However, a compelling scientific case for extending the scan time without increasing the charge will need to be made using the OxCIN top-up grant scheme.

Please find the OxCIN top-up application form under the 'user guides and documents' section on <https://www.oxcin.ox.ac.uk/research/research-facilities/3-tesla-human-mri-scanner>.

### **Failed or Partial Scans**

If a full data set is not collected due to a fault of the scanner, errors by the scanner operator or failure of the shared stimulus presentation equipment then the scan will not be chargeable. However, if researchers are using a developmental scanning method as part of their protocol, and this scan fails, then the scan will still be chargeable.

If a participant does not undertake the scan at all due to claustrophobia, not being safe to scan or similar reason then, provided the researcher has taken appropriate steps to avoid this happening (see below), the scan will not be chargeable. If a partial data set is acquired before the participant decides to withdraw then a pro-rata charge can be requested. If a scan is not completed due to the participant turning up late, not turning up at all, or cancelling at the last minute, then the full scan rate will not be chargeable, provided the researcher has taken steps to avoid this happening (see below).

## Cancelled Scans

If a researcher does not turn up for a slot they have booked, then they will be charged the full scan rate for that slot. Researchers will also be charged if they cancel within 24 hours of the slot starting for a reason other than a participant cancellation or researcher illness.

If a researcher cancels a slot within 1 week of the slot starting, and another researcher does not eventually use the slot, then they may be charged the full scan rate for that slot. This is intended to reduce researchers 'blocking' slots.

If a researcher is not taking appropriate steps to avoid participants arriving late or cancelling at the last minute (see below) then these slots will be treated as a researcher 'no-show' and a full scan rate charge will be made. If a scan is not completed due to failure of researcher specific stimulus presentation equipment or the researcher not booking enough time for their requirements, then a full scan charge will be made.

When cancelling a scan on Calpendo (the scanner booking software) you should both select a reason for the cancellation **and use the cancellation text box** to explain the reason for the cancellation and any measures you took to prevent this happening e.g., confirming the scan time with the participant on more than one occasion.

## Step 4 – Piloting

There are several piloting options that can be helpful when starting a new project. This includes testing new equipment or sequences and feasibility and study piloting. The radiographers will go through piloting options with you at your OxCIN Project Code review meeting but are happy to discuss piloting at any stage. All piloting and equipment testing bookings need to be made with the radiographers.

### Sequence Development Pilots

- Some scanning can be done without CUREC ethics approval if it is for the purposes of technical development, creating/optimising or testing new sequences.
- If you think that this applies to your scanning, then read the SOP on Technical Development Scanning available from <https://www.oxcin.ox.ac.uk/research/ethics/sops>.
- In the first instance you should contact the radiography team who can then put you in touch with the appropriate members of the OxCIN physics group.
- Scans are generally not charged and take place prior completing a WIP or submitting a OxCIN Project Code Request.
- Please note that the data cannot be used in your study though could be written up under the TechDev SOP.

### Study Pilots

- Up to two participant pilot scans per project can be obtained without charge, although the data cannot be used in your study.
- Study pilots are useful for making sure the protocol runs correctly and that everything works as expected e.g., stimulus, paradigm, scan parameters, study specific equipment.
- Study pilots require a Calpendo code and OxCIN approval, they must be done under your study's ethics.
- Where appropriate, it is possible to reclassify a successful pilot as the first study scan so that the data may be used for publication, although the normal scanning fee will apply.

### Feasibility Pilots

- Feasibility piloting can sometimes be helpful when there is a question about whether an experimental design will work.
- They can be done prior to the WIP taking place but require approval from either the OxCIN Centre Director approval (FMRIB) or OHBA Director (depending on the site).

- These scans need to be done under the studies ethics and require a Calpendo code and OxCIN approval.
- The scans are billed but the data can be published.

#### Equipment and Stimulus Testing

- Researchers can use a reasonable amount of late availability time (time not booked within 1 week of the session start) for testing stimulus presentation, setting-up or troubleshooting a protocol.
- This includes phantom scanning for equipment testing/troubleshooting with the Experimental Support team e.g., checking that a piece of equipment will respond to scanner triggers, won't produce RF noise.
- Bookings will be made under a generic testing project and will not be charged.

## Step 5 – Making scanner bookings

### The Calpendo Booking System

To book the scanning facilities using <https://calpendo.fmrib.ox.ac.uk/bookings/> you need a OxCIN Project Code and a Calpendo account. Information on how to register for a Calpendo account can be found at <https://www.oxcin.ox.ac.uk/about/communications/wips/calpendo-booking-guide>.



## OxCIN Scanner Booking Policy

We have booking rules in place to maximise use of the finite radiographer covered time and ensure fair access for other studies. **Please note that a booking should only be made when a scan has been organised with a participant.** If these rules present any problems for your study design or participant group, please contact the radiographers for help.

### Whether a booking is a short, medium or long-term the following always applies –

Bookings should have either the start or end of the slot adjacent to the following:

- Start of day (0900)
- QA time and radiographer break (generally 1230-1330)
- End of day (either 1645 or 1630)
- Consecutive study bookings need to have 15mins gap between them

### The short, medium and long-term bookings rules are as follows -

#### Short-term bookings i.e. next 14 calendar days

- During busy periods there can be limits on the number of bookings that can be made.
- Any bookings cancelled within 7 days may be charged depending on the reason for the cancellation.
- Any next day bookings (including Monday bookings made on a Friday) will only be possible if there is radiographer cover. You must email the radiographers to check this before making a booking.

#### Medium-term bookings i.e. 2-12 weeks

- There is a limit of 4 bookings per study per week.
- The 12 week booking period will be automatically updated by Calpendo on a rolling basis.

#### Long-term bookings i.e. 12+ weeks in the future

- If you need to book more than 12 weeks into the future, please contact the radiographers.
- You will need to provide an acceptable reason for the booking request e.g. organising a patient participant scan on the same day as a hospital appointment.

### Please note

- Where possible, please try to accommodate requests from other studies to slightly adjust existing bookings to make the best use of the covered time. In the first instance these requests should be made to the study in question and not the radiographers.
- The prep rooms (FMRIB) / changing room (OHBA) are reserved for the duration of a scanner booking and are only suitable for screening and changing the participant. If you have pre or post scan requirements you should book a testing room.
- Testing room bookings should include the study's Calpendo ID. If you do not have permission to book the testing rooms, you can request this in Calpendo.
- For FMRIB, on days where there is only one radiographer, only one scanner will be marked with availability. Bookings on the scanner without cover are possible provided there isn't a concurrent booking on the scanner showing cover. Requests to book uncovered time should be made to the radiographers.
- **Recurring scanner bookings are not allowed. When recurring bookings are cancelled, they do not generate cancellation emails notifying other users that the time has become available.**
- When emailing <[radiographers@oxcin.ox.ac.uk](mailto:radiographers@oxcin.ox.ac.uk)> please include your Calpendo ID and slot length (for booking requests).

### Length of bookings

- The single biggest cause of overruns and delays is due to an insufficient amount of time being booked for a scanning session. Overruns frequently lead to lost data and acrimony between groups and studies.
- **Your scanner booking does not just cover scan time. Pre-scan screening, equipment setup, volunteer setup (explaining the session, earplug fitting, positioning, settling time if required), removing the volunteer from the scanner, equipment removal all must occur within the booked slot.**
- Especially when starting a new study, it is best to err on the side of caution when deciding on slot length. It is much easier to shorten bookings than increase them later.

### Additional time for testing

- When setting up a study or in the early scans, it may be necessary to allow for a bit of extra time on the scanner. Such time can be booked by the radiographers under the TESTING project code. You are encouraged to speak to the radiographers prior to your first booking to arrange this.

## Step 6 – Recruiting Participants

### Initial Screening

- To avoid a scanning slot needing to be cancelled at the last minute, it is essential that you go through each of the screening questions of the entire 3T or 7T Volunteer Screening Form at the initial volunteer recruitment stage.
- Any 'yes' responses that are not covered by the scanner specific Surgery and Implant Safe List (available via <https://www.oxcin.ox.ac.uk/research/research-facilities/3-tesla-human-mri-scanner>) should be checked with the radiographers via <https://mail.fmrib.ox.ac.uk/mrisafety> as soon as possible.
- Submitted tickets **must** follow the ticket submission instructions on the first page of the Safe List.

### Please make your volunteers aware of the following –

- Attire: To ensure your comfort and safety during the scan, you will be provided with pocketless and metal-free "pyjama-style" top and trousers in various sizes. Long-sleeved tops are available.
- Attire Considerations: You may keep your underwear and socks on; however, we kindly ask you to remove underwired bras. If you have a suitable non-wired bra (excluding sports or therapeutic fabrics), you may wear this instead.
- Head Coverings: MRI Safe Hijabs are available for those who prefer or require them.
- Footwear: Disposable slippers are provided for those who prefer not to be barefoot or in socks when moving to the MRI scanner.
- Jewellery: Remove all metal jewellery, including body piercings, before the scan.
- Makeup: Avoid using eye shadow and mascara, as certain types may interact with the magnetic field. If you wish to wear eye makeup, we can provide makeup removal wipes, but please bring your own makeup for reapplication.
- Hairstyles: The way you wear your hair is important for your comfort and safety. Generally, wearing your hair down is recommended, allowing it to be laid flat under your head. Please inform the researcher in advance if you have plaits, braids, cornrows, dreadlocks, additional permanent hair weaves, or hair extensions. Large hair ties and bands are available to assist with hairstyle management in the MRI scanners.
- Women-only or men-only radiographers/scanner operators: If you would like only women or only men as your radiographers/scanner operators, please contact the researcher whose study you are participating in to request this. These requests need to be made at least a week in advance, as many of our staff work at our other locations. Please note that the researcher themselves is also present at the scan.



## Steps to improve participant attendance and completion

Researchers are expected to take appropriate steps to ensure participant attendance and completion. The appropriate steps will depend very much on the participant population, but examples include:

- Clear information to the participant: *Depending on the age of the participant this could be by letter or email. The date, time and location should be clear, e.g., in bold text, and clear directions to the site should be given.*
- A timely reminder: *A reminder by email or phone, a day or so before the scan session.*
- A suitable start time: *Participants should be asked to arrive suitably in advance of the scan slot. This will depend on the age and clinical condition of the participant and nature of the study. This should also allow for participants having transport or parking problems, or difficulty finding us.*
- Safety screening in advance: *Participants should be asked about their suitability to be scanned either by sending them the safety screening form or going through it on the phone.*

## Step 7 – Running the Study: Researcher Preparation

### Magnet Safety Reminders

- Never take an unscreened volunteer, visitor, or researcher into an MR Controlled Area. These are the Control Rooms, Magnet Rooms, and Equipment Rooms (NB there are a few differences with the 7T control room that we will explain to you if applicable).
- Never take a screened volunteer into a MR Controlled Area without first getting the permission of the radiographer or scan-op. This also applies if the participant has left the controlled area during a scan e.g., to go to the toilet.
- Never prop or hold open the Console/Control Room door.
- The Equipment Room door must always remain locked. If you need items from this room, you must lock the door after retrieving them.
- Never take new equipment into the Magnet Rooms without its safety having been checked (usually this will be in the form of an equipment protocol).
- Equipment that has been modified or serviced should be rechecked before being taken into the Magnet Room.

### On Arrival

- When you arrive for your session it's a good idea to check in with the radiographer or scan operator to see if the current study is running on time.
- If there is a free magnet area access card, you may take one.
- Occasionally there are sensitive studies where it's critically important that there are no interruptions. If this is the case, there will be a sign advising of this on the door and we request that you respect this.
- Before starting your session, you need to make sure that you are magnet safe. You may be required to enter the magnet room at any time during your session (e.g., to explain how the button box works or in the event of an emergency).

### Lockers

- Lockers are provided for volunteers and researchers.
- Please do not take any personal belongings or equipment into the MR Console/Control Room unless it is required for the scanning session.
- Personal belongings should be placed in the lockers when you arrive. The only exceptions to this rule are laptops and mobile phones.
- If you haven't used the card key padlocks before, one of the radiographers or scanner operators will be happy to show you how.

### Use of the Testing / Preparation Rooms

- Shared facilities and a busy scanner schedule require some cooperation and flexibility to make the best use of our finite resources.

- The prep room (FMRIB) / change room (OHBA) are reserved for the duration of a scanner booking and are only suitable for screening and changing the participant. If you have pre or post scan requirements, you should book a testing room.
- The FMRIB 3T Prep Room is a dual use room. While some basic pre-scan testing can be done here, please remember that the changing cubicle may need to be used at the same time. The room can be subdivided with curtains and if they are drawn, please remember that someone may be behind them!
- When you finish using the testing/preparation room remember to take all equipment, magazines, cups etc. with you.

### **Stimulus Equipment and Setup**

- There is detailed information on the OxCIN intranet on the stimulus setup and interfaces for both scanners, and the OxCIN Experiment Support team ([sebastian.rieger@psych.ox.ac.uk](mailto:sebastian.rieger@psych.ox.ac.uk) and [andrew.rudgewick-brown@psych.ox.ac.uk](mailto:andrew.rudgewick-brown@psych.ox.ac.uk)) are there to help.
- Stimulus equipment and its setup is wholly the investigator's responsibility. Talk to Experiment Support if you are not sure how to operate the equipment or if you have special requirements.
- The radiographers and scan operators' responsibilities are ensuring the safety of all those involved in the session and operating the MR systems and they cannot debug / trouble-shoot your experiment.
- The golden rule with the stimulus equipment is that you must not make any modifications and leave it as you found it. Even disconnecting a single cable from its correct port could result in days of stimulus data, and therefore scanning data, being lost (this has happened). If you need any additions or modifications to the existing setup, always consult with OxCIN Experiment Support first.

### **End of Session**

- Please check that stimulus setup is returned to its default state (this should be how you found it).
- Used scrubs need to go in the scrubs bins and the trug (bucket) should be returned to the stack.

## **Step 8 – Running the Study: Participant Preparation**

### **Vision Correction**

- If you are using the visual stimuli on the LCD or projector screen, please ask all volunteers if they require glasses or contact lens to see at 100cm (40 inches) for the 3T scanners and 61cm (24 inches) for the 7T.
- We have MR safe glasses and a range of corrective lenses in plus and minus dioptres. Please try to find out the participant's prescription before they attend as it can take some time to find the right combination of lenses without this knowledge (cutting into your scanning time).
- If the volunteer can wear contact lenses for the scan, it is recommended they do so.

### **Getting Your Participant Scan Ready**

- We suggest you give your participants 10 minutes to get changed and an opportunity to go to the toilet before the scan slot.
- The scrubs come in a variety of sizes and the shelves are labelled to indicate which is which. Long sleeved scrub tops are available for those that prefer them.
- When changing participants into scrubs please ask them to remove all their own clothing apart from underpants and socks.
- MRI-Safe Hijabs are available in the scrub cupboards if required
- Disposable slippers are available for those who prefer not to be barefoot or in socks between changing and entering the scanner.
- Please also give your participant a trug (bucket) for their clothing and valuables. We suggest not locking this away until the session is ready to begin.

## Pre-Scan Screening

- On the day of the scan, you need to give the volunteer another screening form to fill out.
- Volunteers must be re-screened for each attendance regardless of how recent their last scan was.
- The radiographer or scan operator will then go over the complete screening form with the participant before they enter the MR Controlled Area.
- This secondary check of the screening form should be done with only the radiographer or scanner operator present to maintain confidentiality.
- It is common for volunteers to omit surgeries or implants that cause them embarrassment but may contraindicate MRI.

## Example Scanning Session

Bringing together all the above an example of a scanning session might look like the following -

1. Ten minutes before your booked scan time you should check in to see if scanning is running on time.
2. If so, select the appropriately sized scrubs for your participant, ask them to remove any eye make-up and change, placing their clothing and valuables into a trug.
3. Lock away the trug, suggest they use the toilet and then ask them to fill out a volunteer screening form.
4. Take the screening form to the radiographer, or scanner operator, and show them the signed study consent form. The radiographer, or scanner operator will register the participant and then screen them, on their own, in the prep room.
5. Once screened the session can begin.
6. At the end of your session, you should retrieve your volunteer's clothing and possessions.
7. Please put used scrubs into the clothing bins and the trug back with the others.
8. You should escort your participant out of the building.

## Step 9 – Accessing Scan Data

### Imaging Data

Access to imaging scan data requires a OxCIN computing account. To request an account visit <https://register.fmrib.ox.ac.uk/accounts/portal/>. If you do not have a SSO you can request an account by contacting Computing Help at [computing-help@oxcin.ox.ac.uk](mailto:computing-help@oxcin.ox.ac.uk).

Image data is accessed through Calpendo via the 'My Scans' button (on the 'Projects' dropdown menu). This will take you to the Scan Retrieval webpage where the projects you are listed as a user in will appear on the left side of the page. Clicking a project will show the Scan IDs in the project and clicking on a Scan ID gives you the option to download the scan in NIFTI or DICOM format. Downloads will appear in your Jalapeno account under /vols/Data/MRdata/<username>/.

To request access to a project that you are not listed on you should use the Calpendo "Project Membership Request" button under the "Projects" menu. Once the project owner has approved the request you will be able to see the scans on the Scan Retrieval webpage.

### Non-imaging Data

Access to non-imaging data e.g., raw spectroscopy TWIX files, scanner parameter PDFs, screenshots etc, will depend on which scanner you are using. NB TWIX files do not contain scan IDs so must be saved into folders or have the scan ID prepended to them.

### FMRIB 3T / 7T

- Data is temporarily stored in /vols/TWIX/data

- Before you can access TWIX data you will need to contact Computing Help and tell them which projects you wish to access, and which OxCIN account(s) you will use.
- **Make a copy of this data, anything older than 7 days can be deleted without warning!**

#### OHBA 3T

- Access the TWIX folder on the Z: drive from a psychiatry networked computer and find the folder with your Calpendo ID
- You will need a password from the Experiment Support Team ([Sebastian.Rieger@psych.ox.ac.uk](mailto:Sebastian.Rieger@psych.ox.ac.uk)) to access the Z: drive initially.
- The Z: drive is intended for data transfer only (not storage), please download your data in a timely manner as it will be deleted when the drive is full.

## Step 10 – End of Study

### Notifying the Radiography Team

It is important that you notify the Radiography Team when you have finished the scanning component of your study. Doing so allows us to

- Send the final versions of study scanning protocol and scanning procedure, both of which are needed for using the OxCIN Protocol Database
- Update the project status on the OxCIN Calpendo to prevent you receiving unwanted automated emails about cancellations and slot availability
- Better assess demand, forward plan, and let other studies know about increased availability in scan time