NHS Greater Glasgow and Clyde

**ID: DR-GGC-RISK-071**

# Risk Assessment Form

Use this form for any detailed risk assessment unless a specific form is provided. Refer to your Summary of Hazards/Risks and complete forms as required, including those that are adequately controlled but could be serious in the absence of active management. The Action Plan and reply section is to help you pursue those requiring action.

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|---|---|---|---|
| **Name of Assessor:** | John McLean | **Post Held:** | MR Safety Expert |
| **Department:** | **Imaging** | **Date:** | **04/09/2019** |

**Subject of Assessment:** E.g.: hazard, task, equipment, location, people

Injury due to the 'missile' effect or forces on metallic implants

**Hazards** (Describe the harmful agent(s) and the adverse consequences they could cause)

The static magnetic field of the MRI magnet is extremely powerful. The magnet will pull ferromagnetic objects towards it with great force. Typically objects will be pulled towards the centre of the magnet which is typically where patients are positioned. The MRI environment has the potential to cause death.

**Description of Risk**

Describe the work that causes exposure to the hazard, and the relevant circumstances. Who is at risk? Highlight significant factors: what makes the risk more or less serious – e.g.: the time taken, how often the work is done, who does it, the work environment, anything else relevant.

All patients must necessarily be placed in the high magnetic field environment for scanning to take place. MRI is a controlled access environment and so only staff familiar with the safety hazards (or under close supervision) must be allowed to enter the controlled area. In the proximity of the scanner itself, the magnet has the potential to pull ferromagnetic objects either internal to the human body or external (such as equipment/tools) towards it with great force and so the potential to cause injury or even death to patients or staff.

**Existing Precautions**

| **Authorised MRI operators must read and sign the local MRI safety rules** | **Describe how they might fail to prevent adverse outcomes.** |
|---|---|
| Other Authorised MRI staff must read and sign the local rules relating to emergency MRI procedures<br><br>MRI is a controlled access environment. Only approved members of staff have free access to this area. Other staff may be allowed to enter under close supervision of an authorised person.<br><br>Authorised staff are trained to ensure they are aware of the risks the MRI environment presents, this includes the risk presented by the static magnetic field.<br><br>Emergency procedures are outlined in the local rules and special care should be taken in these circumstances<br><br>Patients are taken through a comprehensive MRI safety checklist to ensure the neither have unsafe metal objects either as implants or on their person. This checklist is conducted prior to entering the magnet room.<br><br>This checklist will also apply to members of the public accompanying a patient.<br><br>All MR staff are initially provided with a talk by the MRI Safety Expert or MRI responsible person about best practice in MRI.<br><br>As far as possible, ferromagnetic objects should be kept out of the controlled access environment. Where such objects do have to be in the controlled access environment, those items which are portable in nature will be labelled as MRI unsafe objects. | There is always the potential for human error and for a member of staff to inadvertently take a ferromagnetic object into the scanning room. |
| | |

**Level of Risk -** Is the control of this risk adequate?
Give more than one risk level if the assessment covers a range of circumstances. You can use the 'matrix' to show how 'likelihood' and 'consequences' combine to give a conclusion. Also, be critical of existing measures: if you can think how they might fail, or how they could be improved, these are indications of a red or orange risk.

### Risk Matrix

| **Likelihood** | **Impact/Consequences** | | | | |
|---|---|---|---|---|---|
| | **Negligible** | **Minor** | **Moderate** | **Major** | **Extreme** |
| **Almost Certain** | **Medium** | **High** | **High** | **V High** | **V High** |
| **Likely** | **Medium** | **Medium** | **High** | **High** | **V High** |
| **Possible** | **Low** | **Medium** | **Medium** | **High** | **High** |
| **Unlikely** | **Low** | **Medium** | **Medium** | **Medium** | **High** |
| **Rare** | **Low** | **Low** | **Low** | **Medium** | **Medium** |

**Very High** **High** **Medium** **Low**

### Current risk level

Given the current precautions, and how effective and reliable they are, what is the current level of risk? **Green** is the target – you have thought it through critically and you have no serious worries. Devise ways of making the risk green wherever you can. **Yellow** is acceptable but with some reservations. You can achieve these levels by reducing the inherent risk and or by effective and reliable precautions.
**High (Orange) or Very High (Red) risks are unacceptable and must be acted on: use the Action Plan section to summarise and communicate the problems and actions required.**

## Action Plan (if risk level is **High (Orange) or Very High (Red)**

Use this part of the form for risks that require action. Use it to communicate, with your Line Manager or Risk Coordinator or others if required. If using a copy of this form to notify others, they should reply on the form and return to you. Check that you do receive replies.

Describe the measures required to make the work safe. Include hardware – engineering controls, and procedures. Say what you intend to change. If proposed actions are out with your remit, identify them on the plan below but do not say who or by when; leave this to the manager with the authority to decide this and allocate the resources required.

| **Proposed actions to control the problem**<br>List the actions required. If action by others is required, you must send them a copy | **By Whom** | **Start date** | **Action due date** |
|---|---|---|---|
| | | | |

**Action by Others Required - Complete as appropriate: (please tick or enter YES, name and date where appropriate)**

| | |
|---|---|
| **Report up management chain for action** | |
| **Report to Estates for action** | |
| **Contact advisers/specialists** | |
| **Alert your staff to problem, new working practice, interim solutions, etc** | |

### Reply

**If you receive this form as a manager from someone in your department, you must decide how the risk is to be managed. Update the action plan and reply with a copy to others who need to know. If appropriate, you should note additions to the Directorate / Service Risk Register.**

**If you receive this as an adviser or other specialist, reply to the sender and investigate further as required.**

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|---|---|---|---|
| **Date of last review:** | As per Q-pulse record | **Next review date:** | As per Q-pulse record |