NHS Greater Glasgow and Clyde

ID: DR-GGC-RISK-056

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.

Name of Initial Assessor/Reviewer :	John McLean (Sarah Allwood-Spiers)	**Post Held:**	MR Safety Expert
Department:	**Imaging**	**Date (Initial Review):**	**2/4/2015 (03/11/2020)**

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

Scanning pregnant patients in MRI who aren't receiving a contrast agent (Gadolinium based contrast agent, GBCA, or other contrast agent).

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

Scanning pregnant patients who are receiving GBCA's has been addressed in a separate risk assessment. Similarly, noise considerations in pregnant patients undergoing MRI has also been addressed elsewhere.

The hazards of concern in risk assessment are the static magnetic field, the RF field and imaging gradients and their impact on the fetus.

Description of Risk

RF energy deposition causes tissue heating, and elevated maternal body temperature for prolonged periods can cause miscarriage. There is a theoretical risk of developmental abnormality due to exposure to high static magnetic field.

While there has been concern about the effects of MRI on the fetus in the past, to date, there have been no demonstrated adverse effects to mother or fetus as a result of the mother having had an MRI scan during pregnancy.

Multiple retrospective studies of children who had been exposed to MRI in utero provide evidence that the risk of teratogenesis and/or miscarriage is extremely low and likely negligible.

Existing Precautions	**Describe how they might fail to prevent adverse outcomes.**
MHRA guidelines state that pregnant patients can be scanned in normal operating mode. Normal operating mode restricts SAR to 2W/kg, which is expected to result in a maximum temperature increase of 0.5° C. Patients can be scanned in normal operating mode at any stage of pregnancy, including the first trimester. Patients are taken through an MRI safety checklist and are asked about pregnancy or any implants they have.	

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 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.

Date of last review:	As per QPulse record	**Next review date:**	As per QPulse record