

	Policy Title: <b>Practice and Procedures  MRI Screening of Visitors and Personnel Working in  the MRI Unit</b>
	Date Created: Dec 19, 2019 Updated:

**Objective**

The MRI Screening of Visitors and Staff working in the MRI Unit policy must be followed to ensure participant and personnel safety in the MRI Unit.

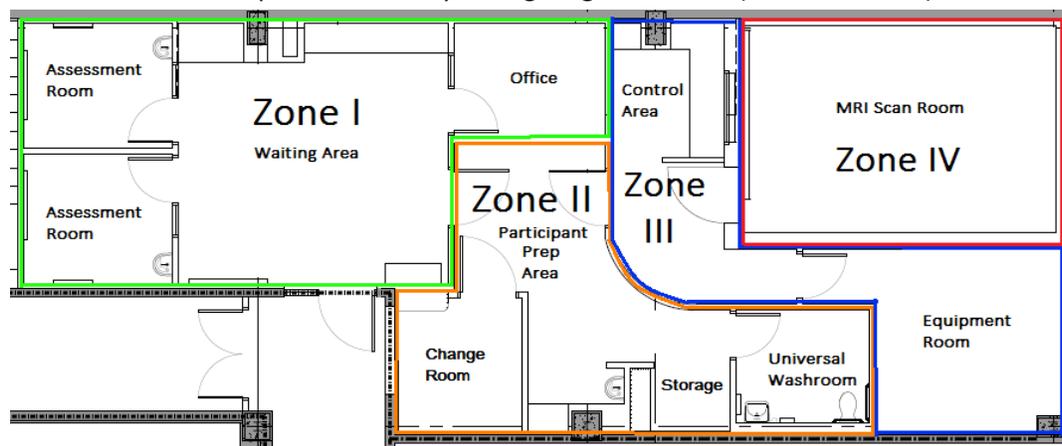
**Definitions**

**Zone I:** Readily accessible areas by the general public outside MR environment (waiting room)

**Zone II:** Area between Zone I and Zone III where individuals are supervised by MR personnel (participant prep area)

**Zone III:** Restricted transition area between Zone II and Zone IV that is supervised and controlled by MR personnel (control room and restricted waiting area)

**Zone IV:** Area controlled and strictly supervised by Level Two MR personnel. This is a potentially hazardous area with presence of very strong magnetic fields. (MR Scan Room)



**Level Two MR Personnel:** Individuals who work in MR environment and have extensive education on MR safety issues that is renewed on a yearly basis (i.e., MRI Technologist, MR Physicist)

**Level One MR Personnel:** Individuals who work in MR environment that have completed and passed minimum MR safety education (administered by a Senior MRI Technologist certified in MR safety) that is renewed on a yearly basis. (e.g., Clinical Coordinators, Research Assistants, Imaging Analyst)

**Authorized non-MR Personnel:** Staff that enter the MR environment occasionally and have completed and passed minimum MR safety education (administered by a Senior MRI Technologist certified in MR safety) that is renewed on a yearly basis. (e.g., building-services staff)

**Visitors:** Any person other than the MR and non-MR personnel specified above

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Access to MRI Unit: The personnel listed above will be provided with electronic and key access to MRI Unit. The MRI Technologist will also have key access to the MR scan room (Zone IV). For emergency access to the MR scan room, a key will be stored in a breakable glass case located in the MR control room

Magnetic Radiation Safety Officer: Level Two MR Personnel designated to develop, manage and execute MR safety practices in MR environment.

**Screening of Visitors and Personnel**

Visitors requiring access to Zone III must be authorized by Level Two MR Personnel and be present under supervision of Level One or Level Two MR Personnel. Visitors entering Zone IV must complete and sign MRI screening form and be screened by Level Two MR personnel. Access to Zone IV is strictly controlled and must be under supervision of Level Two MR Personnel at all times.

Authorized non-MRI Personnel must complete MRI screening form reviewed by MRI Technologist and MRI Safety training before they begin occasional visits to MR Unit. Subsequent visits by authorized non-MRI Personnel require reporting any relevant changes to their medical health that may affect working in the MR environment to their supervisor and the Senior MRI technologist.

Level One and Two MR Personnel must also complete MRI screening form and MRI Safety Training as part of recruitment. Any relevant changes to their medical health that could affect their safe working in the MR environment must be reported to their supervisor and the Senior MRI Technologist. Screening forms and logs of MR Personnel and Authorized non-MR Personnel are to be kept in MRI Unit for the duration of their employment.

**Education of Personnel:**

The Magnetic Radiation Safety Officer is responsible for:

- 1) Defining the safety education requirements for Level One MR Personnel, MR Level Two MR Personnel and Authorized non-MR Personnel.
- 2) Developing and delivering training
- 3) Tracking and maintaining training logs

Documentation of MR Safety education will be recorded and kept in MRI Unit for the duration of personnel’s employment.

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### Visitor Entry

Visitors requiring entry into Zone III must be accompanied by Level One or Level Two Personnel. For Zone IV entry, the MRI Technologist is responsible for reviewing MRI Screening form completed by the visitor to verify they may safely enter Zone IV. If visitor is deemed safe to enter Zone IV, he/she will be required to place all personal items (from their pockets) into designated lockers in changing area. Level Two MR personnel are to supervise visitor for the duration of their time in Zone IV.

### Visitor Entry Restrictions

Any visitors that have had a penetrating eye injury with metal must have further medical investigation before entry into Zone IV. MRI Scan Room (Zone IV) is strictly controlled and no entry is permitted to visitors with implants such as cardiac pacemakers, implantable cardioverter defibrillators, and/or electro mechanical devices.

Emergency first responders and firefighters may not freely access Zone III and Zone IV. They must be accompanied at all times and informed of the hazards in the MR environment by Level Two MR Personnel. If access to Zone III or Zone IV is required after hours for a fire emergency, authorized non-MR Personnel in building services or security services must accompany fire fighters and the MRI Emergency Fire policy is to be followed.

### References

ACR Guidance Document for Safe MR Practices: 2013. JOURNAL OF MAGNETIC RESONANCE IMAGING 37:501–530 (2013)

Shellock, F. G., Magnetic Resonance Procedures: Health Effects and Safety, Pre-Magnetic Resonance Procedure Screening, 2009