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### Objective

The objective of the cleaning and disinfection policy is to maintain a safe and clean environment for all research participants and personnel.

## 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)

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

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

### Policy

All MR personnel involved with participant scans or assessments must follow the hospital policy on Cleaning and Disinfection of Inpatient Areas, Family Accommodation and Non-critical medical equipment. MR staff performing cleaning and disinfection shall also follow infection control guidelines described by Rothschild's 11 Steps for Infection Control in MRI (2008). Any equipment that comes into physical contact with participants must be cleaned and disinfected after each use. Environmental staff performing housekeeping tasks must follow the Sodexo policies for disinfection of surfaces and areas in Zone I, Zone II and Zone III.

### Assessment Rooms (Zone I)

After using assessment equipment that has come into contact with the participant, it must be cleaned with disinfectant wipes by research assistants. Equipment included and is not limited to electrodes, finger cuffs, measuring tapes and surfaces.

# Participant Prep Area Rooms (Zone II)

After participants have finished in the change rooms, equipment that has come into contact with the participant must be cleaned with disinfectant wipes. Dirty linen is to be placed in soiled linen cart along with used gowns. Clean linen to be placed on exam table for the next participant.

# Control Room and Restricted waiting Area (Zone III)

Any furniture surfaces that have come into contact with the visitor must be cleaned with disinfectant wipes.

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## Scan Room (Zone IV)

After each MRI scan, equipment that has come into contact with the participant must be cleaned with disinfectant wipes by MR Personnel. Equipment included and is not limited head phones, call button, coils, scan table and bore interior.

The MR staff and/or Research Assistants shall:

- 1) Have a written infection control policy to include MRI cleaning procedures and the cleaning schedule.
- 2) Hand wash/hand sanitize before and after contact with participants.
- 3) Ask the participant to hand wash/hand sanitize prior to entering the MRI scan room.
- 4) Post scan, clean the MRI tables (or remove linen and place in soiled linen cart, wash hands), inside the magnet bore, and any other items that come into contact with the participant.
- 5) If pillows/pads/positioning rolls are used, wipe with disinfectant wipe prior to use on the next participant. Pillows and positioning rolls should have a waterproof covering that is designed to be wiped clean. Replace pillows/pads/positioning rolls when their barrier is compromised.
- 6) Promptly remove body fluids; then disinfect all contaminated areas and surfaces as appropriate or contact housekeeping for large soiling.
- 7) Used slings shall be placed in the soiled linen cart.
- 8) If a participant has an open wound or any history of MRSA or other infection:
  a) Gloves and gowns should be worn by all staff coming in contact with the participant. These barriers must be removed before touching other areas not in contact with the participant, such as doorknobs, scanner consoles, and computer terminals.

b) The table and all the pillows/pads/positioning rolls should be completely cleaned with disinfectant before the next participant is scanned. It is recommended that these participants are seen at end of day or staff will need to add 10 to 15 minutes to the scheduled scan time to ensure enough time to thoroughly clean the room and all the positioning devices.

- At the end of day, the inside of the magnet bore, table and any other items should be cleaned. The floor shall be mopped/swept using a MRI approved broom/mop.
- 10) Periodically (quarterly depending on usage) inspect the pads with a magnifying glass, particularly at the seams, to identify fraying or tearing. If present, the pads should be replaced.
- 11) Regularly check all padding material with an ultraviolet (black) light, and ensure that any biological material detected on the pads can be removed.
- 12) Post the cleaning schedule in the MRI Unit for all staff to document when cleaning was completed and by whom. This provides transparency to participants and families. This should be placed in an area that participants and infection control can see.

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Housekeeping staff shall:

- 1) Have a written policy that includes training, cleaning procedures and the cleaning schedule.
- 2) Not enter Zone IV. Only clean and disinfect Zones I, II, and III as per standard hospital policies.
- **3)** Be aware of which disinfectant (bleach) should not be used on particular equipment (to avoid damage and/or leaving a salt residue).

### References

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

Holland Bloorview Kids Rehabilitation Hospital. 2019. HB Connect Policies and Procedures. Organizational Policies. Infection Control. Sterilization & Disinfection Cleaning and Disinfection of Inpatient Care Areas Family Accommodation and Non Critical medical Equipment.

Rothschild, Peter (2008). 11 Steps for Infection Control in MRI.