UCSF Health
Department of Radiology and Biomedical Imaging

Standard Operating Procedure

Modality: Magnetic Resonance (MRI)	**Modality Manager:** Craig De Vincent Phone: (415) 502-9776
Location: 1975 4th Street - Mission Bay Hospital - (415) 476-1071 505 Parnassus – Moffitt-Long Hospital - (415) 514-6031	**Approver:** K. Pallav Kolli, David Sostarich, Rebecca Alvino
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	Revision: 2

Title: MRI ER/Inpatient COVID-19-PUI Workflow

Precautions/Isolation Types:

- All equipment entering Zone 4 (Pumps, Vents, Monitors, etc.) must be MR compatible.
- Any Level 1 Personnel (someone with minimal knowledge/training of MR) entering Zone 4 must be screened and their personal belongings must be locked away in Zone 2.
- Level 1 Personnel entering Zone 3 or 4 must be accompanied by an MR Technologist (Level 2 Personnel: someone with advanced knowledge/training of MR) at all times.
- **PAPR gear is _not_ compatible in the MRI environment**
- Asymptomatic patients are being tested for COVID-19; these patients are not considered patients under investigation. **Follow departmental guidance to confirm that the patient is in fact a patient under investigation (PUI) or a confirmed COVID-19 case.**

Novel Respiratory Isolation in MRI	**N95 (**Reusable), **Face shield (**Reusable), **Gown and Gloves**
Respiratory Illness Evaluation Without Negative Pressure in MRI	**Surgical Mask (**Reusable)**, Face shield (**Reusable)**, Gown and Gloves**

References:

Video: Donning/Doffing PPE for Novel Respiratory Isolation
Document: Donning/Doffing PPE for Respiratory Illness Evaluation Without Negative Pressure
Document: UCSF Guidelines on PPE Re-Use

Pre-Imaging Tasks:

- The unit nurse will ensure correct MR order is placed in Epic.
- **Radiologist Triage:** MRI studies ordered in PUIs/COVID-19+ patients should only be performed when the results of the study are reasonably expected to alter a patient's management during the acute phase of illness.

  Workflow
    - Clinical team places order for MRI in APEX on COVID-19+/PUI patient
    - Radiology technologist receives order and brings to the appropriate radiology service attending or trainee MD for review
    - Radiologists will take one of three actions:
        - Approve study as the indication meets the criteria set forth above, OR
        - Initiate discussion with referring team to discussion the clinical scenario and to jointly determine if the imaging study and indication meet the criteria set forth above, OR
        - Escalate the decision-making to an appropriate radiology attending MD

- The MR Personnel will contact the unit RN to confirm the appointment details.
- MR Personnel will complete the Safety Screening form with the patient over the phone.
- If the patient is a minor the parent/legal guardian will be contacted and information about the patient will be gathered from them.
- If the patient is unable to communicate or is incoherent, their family member will be contacted. All pertinent information regarding patient's medical history will be acquired and registered on the MR Safety form. This form is available on the [UCSF Radiology MR website](#).
- If for any reason the screening form cannot be completed, the MR Personnel will relay this information to the appropriate section radiologist.
- Once the patient is cleared for MRI, a scan time will be coordinated with the unit RN.
- Patient should be wearing a mask (without metal) and changed into hospital attire as no street clothes are allowed in Zone 4.
- If a family member or friend needs to be inside Zone 4 during the scan, a separate screening form must be filled out. This family member/friend will lock up their personal belongings in designated lockers in Zone 2 or Zone 3.
- Transport order will be placed by the MR Personnel and this information will be shared with the RN. MRI Personnel will convey isolation precautions in Apex Transport Module.

Imaging Workflow Resources:

- Parnassus Hospital inpatients will be transported to the scanner located on the Third Floor MRLP Rm L300 or MR4 Rm L314 as a backup.

- Mission Bay Hospital inpatients will be transported to the scanner located on the Second Floor MBIOMR Rm C2721.

Patient Monitoring and MRI Safety:

If patient needs monitoring, the inpatient nurse will accompany the patient to MRI.

- RN will need to complete a separate MR Safety Screening form for his/herself.
- His/her belongings will need to be stored/locked away in Zone 2 or 3.

If patient does not require monitoring, transport or MR personnel can transport.

- Patient must wear a mask at all times **(no metal wiring)**
- Staff should wear ALL appropriate PPE when in contact with patient
  Review link for donning/doffing PPE

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Technologists Workflow:

Two MRI Technologist scenario

- One 'clean' Technologist remains in control room (Zone 3) wearing N95 or Mask + face shield (based on isolation precaution above)
- One 'dirty' Technologist enters Zone 4 to prepare patient for scan, wearing ALL appropriate PPE (based on isolation precautions above).

  1. Hand hygiene & appropriate PPE donned prior to patient arrival.
  2. Prepare room with all supplies needed for MRI exam to minimize opening cabinets/drawers while patient in scan room.
  3. Patient enters room - 'dirty' tech preps patient on the MR table. Places appropriate coils and monitors on the patient.
  4. Provide ear plugs to the patient and anyone who remains inside scan room to reduce acoustic discomfort.
  5. 'Dirty' tech doffs gown and gloves in Zone 4, leaves scan room and remains outside scan room until patient's scanning is complete.
  6. 'Clean' tech informs 'dirty' tech to don gown and gloves to enter scan room if there is a need to interact with the patient.

- If the two-personnel staffing is not possible, then one MR Technologist will attend to and scan the patient.
    1. Hand hygiene & appropriate PPE donned prior to patient arrival.
    2. Prepare room will all supplies needed for MRI exam to minimize opening cabinets/drawers while patient in scan room.
    3. Patient enters room- tech preps patient on the MR table. Places appropriate coils and monitors on the patient.
    4. Provide ear plugs to the patient and anyone who remains inside scan room to reduce acoustic discomfort.
    5. Before returning to MR control room (Zone 3), gown/gloves are doffed & hand hygiene performed. The mask/face shield will remain on.
    6. After all the acquired images are obtained, hand hygiene will be performed again. Gown/gloves are donned before entering scan room (Zone 4).
    7. Patient will be transported back to their room.

Post-Imaging Tasks:

- Use Clorox Healthcare Hydrogen Peroxide Wipes (Green Cap) to clean Zone 4 (contact time: 1 minute). If these are not available PDI Sani- Cloth AF3 Wipes (Grey cap) can also be used (contact time: 3 minutes). A list of other approved products in available online.
  Refer to user manuals for cleaning instructions for scanner, coils and other ancillary equipment.

- After scanning patients under **Novel Respiratory Isolation status**, MR scanner will remain out of use with the door closed and leave all dirty items in Zone 4, for a minimum of ONE hour.
    1. Signage with time stamp is placed on the door to indicate the room is being aerated for one hour.
    2. Technologist will clean **all** surfaces in Zone 4 one hour after patient leaves - *while wearing appropriate PPE.*
    3. Technologist should doff gown and gloves in Zone 4 following cleaning.
    4. Technologist will clean all surfaces on the work space in Zone 3.

       NOTE: NO HIGH CLEAN IS REQUIRED

- After scanning patients under a **Respiratory Illness Evaluation Isolation status**, MR scanner and room may be cleaned immediately.
    1. Techs will clean **all** surfaces– *while wearing appropriate PPE*
    2. Technologist should doff gown and gloves in Zone 4 following cleaning.
    3. Remove Zone 4 Trash and linens bag.
    4. Contact housekeeping to help dispose both trash and linens.

NOTE: NO HIGH CLEAN IS REQUIRED