


Name of Policy: Quality Control of MRI Equipment Policy Number: 3364-135-145 Approving Officer: Assistant Professor & Deputy Clinical Service Chief, Director, Radiology Responsible Agent: Director Radiology Scope: University of Toledo Medical Center Radiology		 Effective date: 12/1/2024 Original effective date: 9/12/2014	
Key words: Quality Control, Radiology, MRI, Equipment, Physicist			
<input type="checkbox"/>	New policy proposal	<input type="checkbox"/>	Minor/technical revision of existing policy
<input type="checkbox"/>	Major revision of existing policy	X	Reaffirmation of existing policy

(A) Policy statement

Magnetic resonance imaging (MRI) scanners shall have routine quality control (QC) performed to include daily and/or weekly MRI technologist QC, an annual evaluation by a certified medical physicist, and routine preventative maintenance by a service provider.

(B) Purpose of policy

To ensure the equipment is operating in a safe manner for both the patient and operator(s) and is producing high quality images.

(C) Procedure

- 1) QC by the MRI technologist will be performed in accordance with American College of Radiology (ACR) MRI Quality Control Manual.
- 2) An annual evaluation by a certified medical physicist will be performed in accordance with the ACR MRI Quality Control Manual and Joint Commission requirements. A report will be prepared to summarize the results of the evaluation, and any corrective action needed. The evaluation will include at a minimum the following test:
 - a. Image uniformity for all clinically used volume RF coils
 - b. Signal-to-noise for all clinically used RF coils
 - c. Slice thickness accuracy
 - d. Slice positioning and alignment accuracy
 - e. High contrast resolution
 - f. Low contrast resolution
 - g. Geometric accuracy
 - h. Magnetic field homogeneity
 - i. Artifact evaluation

- 3) Regular preventative maintenance will be performed by Biomedical Engineering or a trained service provider.
- 4) Documentation of all QC activities will be maintained.

<p>Approved by:</p> <p>/s/</p> <hr/> <p>Nathan Egbert, MD</p> <p>12/1/2027</p> <hr/> <p>Date</p> <p>/s/</p> <hr/> <p>Ryan Landis, BSRT (R)(CT) Director, Radiology</p> <p>12/1/27</p> <hr/> <p>Date</p> <p><i>Review/Revision Completed by: Director, Radiology</i></p>	<p>Policies Superseded by This Policy:</p> <ul style="list-style-type: none"> • <i>None</i> <p>Initial effective date: 9/12/2014</p> <p>Review/Revision Date:</p> <p>10/12/2015 10/1/2018 12/1/2021 12/1/2024</p> <p>Next review date: 12/1/2027</p>
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