


Name of Policy:	<u>Quality Control of MRI Equipment</u>		
Policy Number:	3364-135-145		
Department:	Radiology		
Approving Officer:	Director, Radiology - UTMC		
Responsible Agent:	Assistant Professor & Deputy Clinical Service Chief		Effective Date: 12/1/2024
Scope:	Radiology		Initial Effective Date: 9/12/2014
<input type="checkbox"/> New policy proposal		<input type="checkbox"/> Minor/technical revision of existing policy	
<input type="checkbox"/> Major revision of existing policy		<input checked="" type="checkbox"/> 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.

