

Background

Joe DiMaggio Children's Hospital implemented an intraoperative MRI (IMRI) technology which required additional training and competency for perioperative nurses. This led to the creation of an additional role in the intraoperative suite: **The MRI Safety Nurse**. This nurse has distinct roles and responsibilities in the operating room separate from the OR circulating nurse's role. The Safety Nurse focuses on enforcing and ensuring compliance with safety protocols by all members of the team. A meticulous and astute nurse with strong communication skills is an ideal candidate for this position.

Assessment

Knowledge of the risks involved with MRI, the need for compliance with safety protocols and checklists are essential to the safety of patients and staff. To facilitate an easier transition into this role senior nurses were chosen as it was easier to build on existing skills. This expansion to nursing practice necessitated thorough education, training, and support to guarantee success. With the addition of new technology and significant safety considerations, perioperative nursing leadership thought it necessary to create resources to assist OR nurses when working in the IMRI suite.

Outcome

The safety nurse collaborates with the circulator, surgeon, anesthesia provider, MRI and surgical technologist to ensure a safe outcome for patient and staff. Providing care for patients undergoing various procedures using IMRI including an awake craniotomy has added new experience and dimensions to practice. As of December 2025, **thirty cases** were performed in the IMRI suite with **zero safety incidents**. Due to the diligent implementation of the IMRI safety nurse's role two nurses were recognized by MRI leadership and nominated for a patient safety award.

Description of Team

The MRI safety nurse's role, responsibilities and competency development were a collaborative effort among perioperative nursing leadership, nursing education, MRI department leaders, MRI technologist, perioperative nurses and external experts.

Implementation

To facilitate a smooth and efficient roll-out of the first case, an uncomplicated procedure was selected. Initially, cases were done with supervision by the external subject matter experts. Nurses' competencies were determined by demonstration of **knowledge, performance and number of cases done with supervision and independently**. Annual competency checks and MRI safety review were included in the requirements to work in this OR. Two resource binders were created as reference for the clinical nurses. A worklist facilitated appropriate IMRI OR room preparation. Pre-draping and pre-scanning checklists were created to ensure compliance with all safety protocols. The checklists, nursing policy and research articles were included in one binder. The second binder housed photographs and instructions on MRI safe positioning devices.

Implication for Practice

The MRI safety nurse is a **specialized, expanded role** for the perioperative nurse, with focus on preventing injury to the patient, the OR team as well as the equipment within the IMRI suite. This crucial role requires the ability to safely respond to emergencies within the suite, to protect the patient and additional healthcare workers responding to any emergency. Nursing leadership should ensure that a Safety nurse is assigned to every procedure along with a circulator. This project validated how effective collaboration, education and utilization of available resources can result in the implementation of a new role and delivery of safe care in the IMRI setting. This project can serve as a guide for facilities considering implementing an intraoperative IMRI suite and the additional role: The MRI safety nurse.

Preparation and Planning

MRI safety education and staff safety screening were completed by the MRI leadership to privately disclose any potential risk factors that would prevent them from working in IMRI suite. External subject matter experts provided **sixteen** hours of instruction, simulation and practice for the OR, anesthesia and MRI staff. Educating all disciplines together allowed for alignment of goals and improved collaboration on this initiative. Based on the education, training, and resources from professional journals and websites, the policy, competencies, role and responsibilities for the Safety Nurse were developed.



MRI Safety Nurse
Competency

Intraoperative MRI
Checklist and
Worklist

References

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