Avoiding life threatening accidents when using MRI

Magnetic resonance imaging (MRI) has become a respected member of today’s diagnostic imaging modalities. While infrequent, a number of very serious and tragic accidents have occurred over the last decade. Why did these accidents occur? Is it due to the lack of preventative measures? As MRI is a relatively new field, it is not surprising that a careful review of the literature on safety and quality control procedures revealed that little had been published on this specific subject matter, thus drawing my attention to this area. This led me to investigate what should comprise an all-inclusive quality management (QM) program for the safe operation of an MRI department or facility. In order to carry out my study, I used a descriptive exploratory approach to gather my data. By visiting local facilities, I interviewed a representative from each of five target groups that directly influence the MRI department/facility: an MRI technologist, physician, custodian, nurse/allied health professional and a patient. These individuals were asked a series of group-appropriate, open-ended questions regarding safety, MRI education, and quality control procedures at the facility. From a careful analysis of the recorded text from the interviews, a questionnaire of similar questions will be created to send to local MRI facilities. Several trends were found in the interviews. Of the five interviewees, three mentioned that creating visual reminders (i.e. posters, video clips, warning signage and educational sessions) would help to inform the public about the hazards of MRI and enforce safety issues. Proper planning and architecture of the MRI suite were frequently mentioned as directly relating to MRI safety.