AbstractID: 8386 Title: MR Safety for the New Millennium: The New ACR Guidelines

The past few years have seen what appears to be an increase in the number and severity of adverse events associated with MR imaging devices, examinations, and environments that have been published in the lay press. These have included, to name but a few, accidental firearm discharge in an MR magnet room from its inadvertent introduction into the MR imaging environment, injury of a firefighter in Germany when he was pulled at high velocity into the bore of an MR imager by the interaction of the magnetic field of the MR imaging device and the air tank he was wearing at the time of his emergency response, the asphyxiation death an MR service engineer during a cryogenic cool-down stage of a magnet's installation, and the death of a six year old when he was struck in the head by a ferromagnetic oxygen canister that was permitted to be brought into the MR scan room. In August, 2001, immediately following the last incident noted above, the American College of Radiology responded by forming a Blue Ribbon Panel on MR Safety, which has since developed a white paper detailing Magnetic Resonance Safe Practice Guidelines. This document is intended to be used as a possible template by MR facilities who wish to develop their own MR safety program. Key factors of these Guidelines include a) establishing carefully controlled and monitored MR site access restriction, and b) ensuring adequate MR safety education levels and ongoing training among personnel working in and around clinical and research magnetic resonance imaging environments. Key points of these guidelines will be reviewed and discussed in this presentation.

The target objective of this presentation is to increase the level of awareness of the MR practitioner regarding MR safety issues, with the hope that this will help lower the incidence of MR safety related adverse events, injuries, or deaths. Specific objectives of this presentation will address the following questions:

1) What are the key points addressed by the new MR Safe Practice Guidelines?
2) Who should undergo MR Safety educational training?
3) What educational objectives do the new Guidelines place on the MR personnel who are assigned to work at the MR Suite?
4) How might adequate MR site access restriction be accomplished?
5) What MR safety devices are recommended – and not recommended – for every MR site?