

September 16, 2016

To: New Users of University of Wisconsin-Madison CT Protocols

Re: Protocol Review Compliance with Joint Commission Requirement PC.01.0.01 A26

The process of CT scanning protocol development at the University of Wisconsin-Madison has been ongoing since the introduction of the first scanner 40 years ago. Fifteen years ago, the effort became more robust as the UW radiologists incorporated detailed contrast administration instructions into the protocols. In 2005, UW medical physicists became routinely involved in meetings with radiologists and technologists leading to substantial revisions of the technical scan and reconstruction parameters of UW's CT protocols. In addition to all protocol changes being reviewed by at least one radiologist, physicist, and technologist, annual reviews are also conducted for all protocols by both internal and external radiologists, physicists, and technologists to investigate other opportunities for protocol improvements.

The medical physicists' expertise in the technology and the physics of CT has resulted in substantial improvements in image quality and a reduction in patient dose. The contribution of the technologists is also constant and essential. Technologists perform the scans and provide important feedback to the radiologists and the physicists as to the realistic application of any recent adjustments. The technologists also have a better grasp of practical scanning limitations. This process of routine collaboration among the radiologists, technologists, and physicists has led to the development of a very robust CT protocol set. As technology changes and the medical sciences advance, UW's protocols continue to evolve. Running the UW protocols unaltered should help you be in compliance with the above-referenced Joint Commission requirement.

The ultimate objective in our CT protocol optimization process is to produce consistently diagnostic images at lowest doses. The process is now highly codified with robust documentation of all modifications, and image quality is constantly monitored. Our radiologists are routinely prompted to evaluate the individual CT studies that they read, and that feedback is collected and analyzed by the medical physicists. We now have in excess of 70,000 evaluation responses, which are used to validate the proper performance of the protocols and also to guide us in making improvements. The fusion of the clinical expertise of our radiologists, the technical oversight of our physicists, and the practical feedback of our technologists is essential to the success of this entire program.

Sincerely,

The CT Protocol Optimization Team