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PROFESSION

Quality metrics seek to slash unneeded CT scans

Under the measures developed by the AMA and others, tracking patients' radiation exposure would be encouraged as medical imaging of children skyrockets.

By KEVIN B. O'REILLY, amednews staff. Posted April 22, 2011.

A set of 11 performance measures recently released for public comment aims to reduce the potential radiation harm from unnecessary medical imaging. The proposed quality metrics come as new research shows a fivefold rise in computed tomography scans among children seen in emergency departments.

If approved, the measures could be used for pay-for-performance and board maintenance-of-certification programs. The metrics were developed by the American Medical Association-convened Physician Consortium for Performance Improvement, the American Board of Medical Specialties, the American Board of Radiology and the American College of Radiology.

More than 62 million CT scans are ordered annually, compared with 3 million in 1980, according to research cited in the draft measure set. Between 30% and 40% of diagnostic imaging is clinically inappropriate or unnecessary.

The metrics would gauge how well ordering physicians, radiologists, clinics and hospitals do in following evidence-based guidance on when to order CTs and encourage them to track patients' cumulative radiation dose, share data for benchmarking purposes and follow pediatric CT imaging protocols.

The draft measure set is available online (www.ama-assn.org/resources/doc/cqi/radiation-dose-measurement-set.pdf). Public comments can be given online (www.surveymonkey.com/s/radiationdose). The deadline for submission is April 29 at 5 p.m. CDT. Once comments are addressed, the measure set will go to the consortium's 126 voting members for final approval.

"There is a lot of consciousness -- and properly so -- about medical exposure to radiation," said David Seidenwurm, MD, co-chair of the panel that developed the draft measures and chair of the diagnostic division of Radiological Associates of Sacramento in California. "We thought we would address the issue by giving people a suite of possible quality improvement projects that would address what happens before a patient is exposed, during the procedure itself and after the procedure to make sure we get the greatest diagnostic bang for the radiation exposure unit."

Importance of measurement

David B. Larson, MD, said the effort to measure performance represents a step forward in addressing the issue of excess radiation exposure from medical imaging.

"In any practice, be it in medicine or any other field, there's what we think we're doing and then the reality of what's happening," said Dr. Larson, chair for quality and safety in the Dept. of Radiology at Cincinnati Children's Hospital Medical Center. "It's pretty naive to think we can improve something, especially something like CT radiation dose, without measuring what we're doing."

Dr. Larson is lead author of a study, published online April 5 in *Radiology*, which found that the number of pediatric ED visits that involved a CT scan rose from about 330,000 in 1995 to 1.65 million in 2008 (www.ncbi.nlm.nih.gov/pubmed/21467249). A little more than 1% of children going to the ED received a CT scan in 1995. That figure grew to nearly 5% by 2008, according to the study's analysis of data from the National Hospital Ambulatory Medical Care Survey.

The rise in CT use is especially a concern with pediatric patients, Dr. Larson said.

"Children are at an increased risk associated with potential detrimental effects of CT, including potential induced cancer later on," he said. "Their tissues are more radiosensitive, and they have a greater life expectancy during which a potential cancer may form. There is a higher accumulated risk over time."

The radiation risk of medical imaging is low and is nearly always outweighed by clinically beneficial scans, experts say. And no one knows precisely what amount of lifetime cumulative radiation is unsafe. Nonetheless, physicians should seek to improve safety, Dr. Larson said.

"Just because the risk is low doesn't mean we can be lax in monitoring this," he said. "We still need to make an effort to optimize dose and do imaging only when it's appropriate."

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