

Keeping medical radiation safe

By Thomas G. Dehn
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Last month's revelation that over a period of 18 months, 200 patients at Cedars Sinai Medical Center received alarmingly high and unintended doses of radiation when undergoing CT scans contains valuable lessons as to how we must better protect patients.

As many experts, including the Food and Drug Administration, have made clear, the incident that occurred at Cedars Sinai could have happened - and still can happen - in any hospital, outpatient clinic or physician office where imaging services are performed.

To prevent future tragedies of this nature, health care providers at all levels must be more responsible in safeguarding against both unintended incorrect dosages, as well as the far more common incidence of intended but clinically unnecessary use of medical imaging. The Los Angeles episode could have been prevented entirely had the providers adhered to the manufacturer's recommendations for the technology. Failing that, advanced imaging equipment provides the physician interpreting the image with the actual amount of radiation by each patient, important information that could have detected the problem far sooner. Finally, a default threshold can be built into imaging equipment to not allow exposure beyond agreed upon levels without a manual override.

While incidents like this garner headlines, the far more dangerous threat to patient safety lies in the clinically inappropriate use of advanced diagnostic imaging that occurs every day. While the clinical value of the procedures performed at Cedars Sinai is indisputable, our nation's collective rush to scan - in many cases absent strong clinical evidence - carries undesirable side effects for the health of both patients and our health care financing system.

Coincidentally, this revelation comes at the same time Congress and the administration are working to overhaul our nation's health care system, including reforms to address runaway use of advanced imaging procedures like CT, MRI and PET Scans. Every year, the U.S. spends \$100 billion on advanced diagnostic imaging procedures and Medicare utilization is a major driver of this expense. The cost of advanced imaging procedures in doctor's offices more than doubled over a recent six-year period.

The disturbing fact is that very little of this increased utilization can be related to improved clinical outcomes or a healthier patient population. Rather, multiple independent studies have concluded as many as one of every three imaging procedures paid for by Medicare is clinically inappropriate and fails to contribute to a physician's understanding of the patient's condition.

As a radiologist, I have witnessed first-hand the amazing gains in patient care made possible through advanced imaging technologies. Conversely, I've also seen inappropriate use of these technologies for reasons that in too many cases are not supported by medical necessity and that compromises patient safety and our nation's fiscal health.

Medicare - and our health care system more broadly - must take steps to ensure every advanced diagnostic imaging procedure it pays for is clinically appropriate, performed by a qualified provider, and delivered using up-to-date fail-safe technology. By taking the time to ensure providers are properly qualified and trained, that the equipment being used is safe and contains appropriate failsafe thresholds and that every procedure is clinically necessary and beneficial to patients, we can minimize radiation exposure and maximize the value of advanced diagnostic technologies.

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