

## EXPERT OPINION

# The EHR Stimulus Plan: Reaping the Rewards

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The much-talked-about stimulus package has spurred legislation aimed at promoting the use of health care technology. But will the goals of the legislation truly help practicing physicians stem the rising costs of delivering effective care, or will it turn into a financial burden to most practices?

The Health Information Technology for Economic and Clinical Health Act (or HITECH) was signed into law in February. Included in this bill is about \$19 billion to promote the adoption of electronic health records (EHRs) in all physician practices by 2015.

That money is to be spent in a number of ways, including incentives to individual physicians, development of HIT (health information technology) regional extension centers, education of health IT professionals, and state grants to promote health information exchange. As it is currently written, that cash will start flowing in 2011. How can physicians get their hands on some of it? That is where things become a bit vague.

According to HITECH, physicians making "meaningful use" of a certified EHR will qualify for up to \$44,000 in incentives. These incentives will come in the form of Medicare or Medicaid reimbursements paid out over 5 years. Priority will be given to individual physicians or small practices focused on primary care, as well as not-for-profit hospitals and health care centers in underserved

communities. Ostensibly, these incentives are designed to offset the cost of full EHR adoption and encourage the use of high-quality EHR software.

Look a little closer at the definition of "meaningful use," however, and you'll find a complex matrix of objectives and quality measures.

Released in June, the "Meaningful Use Matrix" is organized around five major objectives: improving care quality, safety, and efficiency, and reducing health disparities; engaging patients and families in the care plan; improving care coordination; improving population and public health; and ensuring the privacy and security of health information. Specific objectives are further delineated under each of these headings, with targets set for years 2011, 2013, and 2015. Examples range from basic functions, such as maintaining an updated patient problem list and ensuring computerized documentation, to more complex ones like decision-support tools at the point of care and the reporting of public health data.

Applying these goals will not be straightforward, and as with so many other government publications, there is plenty of room for interpretation.

Another concern: Which vendors will qualify as offering certified EHR systems? The HIT Policy Committee has made it clear that the certification process will differ from that of the Certification Commission for Health Information Technology (CCHIT), the current standard in EHR approval.

This may help open up the playing field for companies offering lower-priced software packages, but it also could lead to yet another set of unwieldy qualifications. The final definition of a certified system could have a profound impact on the true value of the cash incentives offered under HITECH.

For smaller practices choosing a modest, moderately priced EHR package, \$44,000 could represent a substantial sum. However, it may be an insignificant amount if the standards limit the certified options to only high-end EHR products costing \$200,000 or more. Either way, every practice must have the expectation that adopting an EHR is going to be a costly undertaking. Will the initial expense be offset by the perceived convenience benefits or theoretical cost savings? Only time will tell.

Although the cost of compliance may still elude us, the consequences of non-compliance do not. HITECH is clear that providers who are not making meaningful use of a certified EHR will face financial penalties, beginning in 2015. Those providers who have resisted the switch to EHRs because they could not afford it will soon find their reticence unaffordable.

One encouraging sign is that many physicians are already on their way to the goal. According to the National Center for Health Statistics (a division of the CDC), there has been a steady and significant increase in the number of physicians making full or partial use of an EHR. In 2008, the NCHS reported that

approximately 38% of physicians were making some use of an EHR, though about half of those admitted their system is only minimally or partially functional. This is up from 29% making some use of an EHR in 2006, and it seems that, even without government stimulus, progress is being made.

In spite of initial skepticism about government involvement in patient care, it is hard to deny the appeal of a little extra money in your pocket.

In the end, though, the success of HITECH won't be determined by philosophical goals or Medicare reimbursements. Instead, the true value of the program will hopefully be seen in better patient outcomes and improved physician satisfaction. ■



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## Medical Imaging Exposes Many Patients to Radiation, Risk

BY KERRI WACHTER

Medical imaging exposes a significant portion of patients to various doses of ionizing radiation, and in some cases, to substantial doses, potentially increasing the associated risk of cancer, according to findings of a retrospective cohort study.

The results are based on an analysis of 952,420 nonelderly adults who were enrolled in United Healthcare's database between 2005 and 2007, and living in one of five U.S. markets: Arizona, Dallas, Orlando, South Florida, and Wisconsin.

Roughly 70% of the study population underwent at least one imaging exam during the 3-year study period, "resulting in mean effective doses that almost doubled what would be expected from natural sources alone," wrote Dr. Reza Fazel of the division of cardiology at Emory University, Atlanta, and her coinvestigators.

Although most patients received less than 3 millisievert (mSv) per year—which was considered low exposure—there was a sizable minority of patients who received moderate, high, or very high radiation doses, they wrote.

CPT codes for imaging procedures involving radiation were used to identify claims from hospitals, outpatient facilities, and physicians' offices. They excluded procedures in which radiation was specifically delivered for therapeutic purposes, such as high-dose radiation for cancer.

Procedures were categorized by technique: plain ra-

diography, CT, fluoroscopy (including angiography), and nuclear imaging. They also categorized the procedures by area of focus: chest (including cardiac imaging), abdomen, pelvis, arm or leg, head and neck (including brain), multiple areas (including whole-body scanning), and unspecified.

In all, 3,442,111 imaging procedures associated with 655,613 patients were identified in the 3-year period. The average number of procedures per person per year was 1.2 and median number was 0.7 per person per year. The mean effective dose was 2.4 mSv/person per year with a median effective dose of 0.1 mSv/year.

The proportion of patients undergoing at least one procedure during the study period increased with age, from 50% in those aged 18-34 years to 86% in those aged 60-64 years. A total of 79% of women underwent at least one procedure during the study period, compared with 60% for men (N. Engl. J. Med. 2009;361:849-57).

Moderate doses (3-20 mSv/year, the upper annual limit for occupational exposure for at-risk workers, averaged over 5 years) occurred at an annual rate of 199 per 1,000 patients. High (20-50 mSv/year, the upper annual limit for occupational exposure for at-risk workers in any given year) and very high (greater than 50 mSv/year) doses occurred at annual rates of 19 and 2 per 1,000 patients, respectively. "Each of these rates rose with advancing age," noted Dr. Fazel.

"Generalization of our findings to the United States suggests that these procedures lead to cumulative effective doses that exceed 20 mSv per year in approxi-

mately 4 million Americans," the researchers wrote.

By anatomical site, chest procedures accounted for 45% of the total effective dose. Lastly, the bulk of the total effective dose—82%—was delivered in outpatient settings, primarily physicians' offices.

The findings are concerning, particularly for patients who undergo several imaging tests in a short period of time, Dr. Michael S. Lauer wrote in an accompanying editorial (N. Engl. J. Med. 2009;361:841-3).

Despite the cumulative risk associated with radiation exposure, it's generally not something that is discussed with patients undergoing an imaging procedure, noted Dr. Lauer, who is director of the Prevention and Population Sciences Division of the National Heart, Lung, and Blood Institute. "The issue of radiation exposure is unlikely to come up because each procedure is considered in isolation, the risks posed by each procedure are low and seemingly unmeasurable, and any radiation-induced cancer won't appear for years and cannot easily be linked to past imaging procedures."

"The exposure of patients cannot be restricted, largely because of the inherent difficulty in balancing the immediate clinical need for these procedures, which is frequently substantial, against stochastic risks of cancer that would not be evident for years, if at all."

Dr. Fazel reported that she has no relevant conflicts of interest, although several of her coauthors reported significant relationships with pharmaceutical and medical imaging companies. Dr. Lauer reported that he has no relevant conflicts of interest. ■