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Changes proposed to improve research on health information technology

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Studies about the value of health information technology can be improved by broadening the reviews to include both costs and benefits, and lengthening study periods to capture long-term implications, according to a new RAND Corporation analysis.

Researchers say that despite growing use of items such as electronic medical records and computer-based prescription ordering, the existing knowledge base about the value of health information technology is not advancing at a similar rate.

Too many studies intended to evaluate health information technology are limited by incomplete measures of value, and fail to report important details about the context and adoption of the technology.

What is needed are more studies that evaluate the technology over longer periods of time to provide a more-robust picture of the technology's costs and benefits to patients, health providers and those who pay for health care, according to the analysis published online by the *American Journal of Managed Care*.

"About a decade ago, RAND researchers estimated the potential for health information technology to reduce health care costs. Subsequently, the American health system invested a vast amount of money to speed adoption of health information technology. It is now time to thoroughly evaluate the pluses and minuses of those investments," said Robert Rudin, lead author of the study and an associate policy researcher at

RAND, a nonprofit research organization. "We propose a new set of standards for evaluation that will produce results likely to prove valuable to policymakers."

In 2010, the U.S. Congress adopted rules encouraging adoption of health information technology and making as much as $27 billion available to health care providers who demonstrate "meaningful use" of the technology.

The move was motivated by studies suggesting that broader use of information technology in health care could save money by reducing redundant care, speeding patient treatment, improving safety and keeping patients healthier.

However, systematic reviews of health information technology have found that the evidence for value is inconclusive and that existing studies suffer from major limitations.

"We found that few studies include both costs and benefits in their evaluation of value," Rudin said. "In addition, most studies only look at short-term horizons, which ignores many of the downstream benefits of health information technology."

Among the changes advocated by Rudin and his colleagues is for studies to explore who may be "winners" and who may be "losers" when health information technology is adopted.

For example, in the Veterans Health Administration—an early adopter of health information technology—it takes more time for physicians to enter progress notes into the electronic health record than it did when paper records were used, so the physicians lose time to the technology. But the Veterans Health Administration wins by having lower costs for storing and retrieving records, and patients win by getting more

preventive care because electronic health records prompt physicians to prescribe necessary services.

RAND researchers propose a checklist that includes information about the context and characteristics of health information technology that are important to interpret results. Such improvements will make studies more useful to stakeholders, including health providers, patients and policymakers.

Provided by RAND Corporation

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