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FOR IMMEDIATE RELEASE

March 8, 2011

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Review of recent studies shows predominantly positive results for health information technology

A study completed by the Office of the National Coordinator for Health Information Technology (ONC) and published in the journal *Health Affairs* finds growing evidence of the benefits of health information technology (HIT). Using methods that were employed by two previous independent reviews, the new study finds that 92 percent of articles on HIT reached conclusions that showed overall positive effects of HIT on key aspects of care including quality and efficiency of health care.

In addition, the study finds increasing evidence of benefits for all health care providers, not just the larger health IT "leader" organizations (i.e., early adopters of HIT) that have provided much of the data regarding experience with HIT in the past. The previous reviews identified a gap between "leaders" and non-leaders in demonstrating benefits from HIT.

"This article brings us much more up-to-date, both in our confidence regarding the overwhelming evidence of the benefits of adoption and use of HIT, and also in our understanding of problem areas that still need to be addressed," said David Blumenthal, M.D., the national coordinator for HIT and one of the authors of the review. "This review is important because it helps us correct for the lag in evidence that occurs naturally in the dynamic HIT field, where changes in technology and accelerating adoption cause the old literature to become quickly outdated."

The review included articles published from July 2007 up to February 2010, following up on earlier reviews of articles from 1995 to 2004 and from 2004 to 2007. This latest review initially surveyed more than 4,000 peer-reviewed articles, of which 154 were found qualified for the parameters of the study, a number similar to the previous efforts.

The current review found positive results in 96 of the articles (62 percent), and mixed but predominantly positive results in 46 other articles (30 percent). Ten articles were found to have negative or mixed-negative results. In addition to quality and efficiency of care, the authors categorized additional outcomes including access to care, preventive care, care process, patient safety, and provider or patient satisfaction.

The review also reflected a new balance of evidence between HIT "leader" organizations and other entities, especially smaller medical practices. In previous years, much evidence has come from the "leaders." The current review shows increased evidence of benefits for others as well.

"These new findings are very significant in helping to confirm that our Nation has made the right choice in moving aggressively toward adoption of health information technology," said Donald Berwick, M.D., administrator of the Centers for Medicare & Medicaid Services.

Under the Health Information Technology for Economic and Clinical Health Act (HITECH), part of the American Recovery and Reinvestment Act of 2009, as much as \$27 billion Medicare and Medicaid incentive payments will be available to eligible professionals, eligible hospitals, and critical access hospitals when they adopt certified EHR technology and successfully demonstrate "meaningful use" of the technology in ways that improve quality, safety, and effectiveness of patient-centered care.

Positive results highlighted in the article include:

- One study found that at three New York City dialysis centers, patient mortality decreased by as much as 48 percent while nurse staffing decreased by 25 percent in the three years following implementation of EHRs.
- In an inpatient study, a clinical decision support tool designed to decrease unnecessary red blood cell transfusions reduced both transfusions and costs, with no increase in patient length-of-stay or mortality.
- Another study addressing HIT in 41 Texas hospitals found that hospitals with more advanced HIT had fewer complications, lower mortality and lower costs than hospitals with less advanced HIT.

Negative findings in the study were most often associated with provider or staff satisfaction related to difficulties in the process of transitioning from paper-based to electronic-based records and care. According to the article, these findings "highlight the need for studies that document the challenging aspects of implementing HIT more specifically and how these challenges might be addressed," such as through strong leadership or staff participation when adopting and implementing HIT.

Reflecting on the findings, Surgeon General Regina Benjamin, M.D., said, "My own personal experience in switching my practice from paper to EHRs showed that the change requires some initial effort; however, it did not interrupt work flow in the clinic. The results are better care for patients and new opportunities for the physician and staff to improve quality outcomes." Dr. Benjamin switched to EHRs in her Gulf Coast Alabama family practice after two hurricanes and a fire destroyed the clinic's paper records.

At the Agency for Healthcare Research and Quality, where research into health informatics has been supported since 1968, agency Director Carolyn Clancy, M.D., called attention to the importance of rapid information feedback and current evidence as the Nation pursues HIT implementation. "As we have known, and this new review of the available literature shows, HIT holds tremendous potential to improve health care quality. It is important that we continue to use experience from the field and scientific evidence to guide our efforts to improve the quality and safety of health care for all Americans."

The article, "The Benefits of Health Information Technology: A Review of the Recent Literature Shows Predominantly Positive Results," is available on [www.healthit.gov](http://www.healthit.gov)

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Last revised: May 7, 2011

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