The Role of Health Information Technology In Improving Quality and Safety In RI: Can New Money Solve Old Problems?

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On February 17, 2009, President Obama signed into law the $787 billion **American Recovery and Reinvestment Act (ARRA)** of 2009. This legislation allocates approximately $34 billion dollars in stimulus money for health **information technology (IT),** the bulk of which will go to physicians and hospitals. Physicians who are "meaningful users" of **electronic medical records (EHRs)** by at least 2012 are eligible to receive incentive payments from either Medicare or Medicaid (not both). The Medicare incentive provides up to $44,000 each. If at least 30% of a physician's practice are Medicaid patients, the physician may opt for incentives from Medicaid instead, which will total $63,750 each. But the window of opportunity shuts relatively quickly soon after. Physicians who miss the deadline and aren't ready to start cashing in by 2012 will see the dollars slip away year by year, beginning with an initial reduction in the incentive of at least $18,000. Those who are not ready until after 2014 will not be eligible for an incentive payment. After 2016, the government will provide no further incentive payments. It's clear the president believes in the value of health information technology to improve the quality, safety, and value of health care. But do we in Rhode Island also believe in health IT; and if so, how well are we positioned to secure the federal funding for implementing it?

Background

In a 2000 World Health Organization study, the US health care system ranked 37 out of 191 nations in performance, placing us behind Costa Rica and just ahead of Slovenia.[1] The US spends more than twice per capita than any industrialized nation, yet our outcomes do not justify the expenditure.

Many ideas for reform of the system are being advanced such as the Patient-Centered Medical Home model of primary care delivery, public reporting of outcomes, application of evidence-based medicine, and pay–for–performance systems. Yet virtually none of these reforms can reach their full potential as long as health care remains mired in a paper-based system and decades behind other industries in the use of information technology. *The Economist* ranked health care second only to mining in lack of capital expenditures devoted to information technology. While health IT alone isn't the answer to our problems in health care, it is an essential foundation for almost all other promising reforms. Health IT's real value is as a key enabler in the improvement of health care quality, safety, and value.

The vision of currentcare is a secure electronic network that when fully built, and with consumer consent, allows medical professionals access to patients' most up-to-date health information in any provider location.

A RAND Corporation study suggested that full implementation of health IT with interoperability that allows sharing of personal health information across entities has the potential to generate $142 - $371 billion dollars annually in quality and safety improvements.[3] While critics of the RAND study cite the projections and extrapolated figures as significant weaknesses, we are slowly beginning to gather empirical evidence on the impact of health IT. A study of forty-one Texas hospitals reported that mortality rates dropped by 15% when computers replaced paper. This study found that hospitals with sophisticated **computer physician order entry (CPOE)** systems have a 55% lower rate of death for patients undergoing coronary artery bypass grafts, and that hospitals with high scores for CPOE were associated with lower average costs per admission and a 16% lower risk of developing complications across all reasons for admission.

Rhode Island's Positioning to Receive ARRA Funding for Health IT

Rhode Island has been in the forefront of the transformation. This is likely to pay big dividends, vis-à-vis the stimulus funding, as the criteria for receipt of the funding includes becoming "meaningful users" of health IT. The definition of "meaningful user" will evolve, but at this point includes use of certified technology, electronic prescribing, electronic **health information exchange (HIE)** that improves the quality of care, and the ability to submit information on clinical quality measures. RI has made tremendous progress on all fronts in this regard.

RI hospitals ranked #1 in the nation for adoption rates of health IT for medication safety. A recent study examined 4,561 hospitals and RI had the highest adoption rate per hospital—six times higher than the lowest.[5]

RI ranked #2 in the 2009 SafeRx™ Awards sponsored by the National Association of Chain Drug Stores, the National Community Pharmacists Association, and SureScripts. The award honors the top ten e-prescribing states in the nation who have demonstrated outstanding leadership and commitment to patient safety through their use of e-prescribing technology. RI has consistently ranked either #1 or #2 since the awards were initiated in 2006.

RI's work in advancing the adoption and effective use of EHRs has garnered

national attention. Organizations such as the **Rhode Island Department of Health** (**HEALTH**) and **Quality Partners of Rhode Island** (**QPRI**) have led efforts to measure and publicly report on the adoption and use of EHRs in the state. The nation's first-ever public report on the adoption of EMRs by physicians occurred in RI this year. HEALTH and QPRI worked with the **Rhode Island Quality Institute's** (**RIQI**) **Clinical IT Leadership Committee** (**CITLC**) to develop the measurement tool. The CITLC, formed by the RIQI in 2004 and chaired by Reid Coleman, MD, advises statewide efforts to advance EMR adoption. Blue Cross & Blue Shield of RI, a strong advocate for health IT adoption, turned to the CITLC for input in shaping their financial incentives for physicians to adopt EMRs.

The CITLC also initiated a study, done in partnership with COMSORT, which draws upon the scientific research done by Everett Rogers and others that focuses on diffusion of innovation and uses networking and the "communities of practice" theory to advance EHR adoption.

The RIQI study for EHR began in 2008 with an environmental assessment of health information technology innovation, communication channels, timelines, and social systems. Using a specially designed survey tool with RI physicians, quantitative baseline data was collected and analyzed. The results identified thirty-one physician leaders who are viewed as the "innovators" by their peers. The top 10 physicians on the leaders list are Drs. Albert Puerini, Jr., Reid Coleman, Yul Ejnes, Mark Jacobs, Cedric Priebe, Jonathan Bertman, Andrew Snyder, Michael Fine, Joel Kaufman, and Nathan Beraha.

The RIQI is now working closely with these "RI EHR Leaders," to develop strategies for advancing EHR adoption and effective use. The strategies include peer-to-peer sharing of fact sheets and case studies that highlight EHR benefits, costs, selection, purchase, and implementation; arranging for physician leaders to host open houses across RI; developing an EHR user community web site for physicians; hosting conferences, panels, and roundtable discussions to disseminate important information on EHR systems; and recognizing the positive impact that physician leaders make within their communities. The more RI prepares physicians to adopt EHRs now, the likelier that RI physicians will qualify as "meaningful users" to reap the full $44,000 per physician that will be available under the ARRA.

RI has also advanced the **health information exchange** (**HIE**), which will serve RI physicians well as they work to qualify as "meaningful users." In 2004, HEALTH secured a $5 million contract from the **Agency for Healthcare Research and Quality** (**AHRQ**) to begin building Phase I of RI's HIE. HEALTH sub-contracted with RIQI for community governance of this project. In 2008, RIQI was awarded the official designation as RI's Regional Health Information Organization, and the State began transferring authority and accountability to the RIQI for the HIE. RI's HIE is called **current*care***.

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The development of **current*care*** has been guided by very broad-based and deep community involvement. One of the first concerns to arise about the HIE was that of the privacy and security of consumer data. HEALTH and the RIQI brought the community together to address these issues. In 2008, the RI legislature was the first state in the nation to pass a strong set of consumer privacy protections specifically designed for the health information exchange. The *Rhode Island Health Information Exchange Act of 2008* also grants immunity to providers who rely on information from the web site that later proves to be incorrect and results in negative consequences.

For more information on **current*care***, go to www.currentcareri.org.

Conclusion

There is growing evidence of the worth of health information technology in improving the quality, safety, and value of health care. The availability of important clinical information anywhere and anytime is essential to high quality, safe medical care; so much so, that it is inevitable that the use of health information technology will soon be regarded as a community, and perhaps a national, standard of practice. RI is extremely well positioned to compete for the federal funding to implement that information technology infrastructure.

References

1. Health systems: Improving performance. *The World Health Report* 2000 (June 21, 2000).
2. The price of excess: Identifying waste in healthcare spending. *PWC, LLC Health Research Institute* 2008.
3. Amarasingham R., et.al. *Archives Internal Med* 2009;169: 108-14.
4. Hillestad, et al., *Health Affairs* 2005; 24 (5).
5. Furukawa M, et al. *Health Affairs* 2008; 27 (3).

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Disclosure of Financial Interests

The author has no financial interests to disclose.

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