



HEALTH

# **What It Will Take to Achieve the As-Yet-Unfulfilled Promises of Health Information Technology**

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**ANALYSIS & COMMENTARY**

# What It Will Take To Achieve The As-Yet-Unfulfilled Promises Of Health Information Technology

**ABSTRACT** A team of RAND Corporation researchers projected in 2005 that rapid adoption of health information technology (IT) could save the United States more than \$81 billion annually. Seven years later the empirical data on the technology's impact on health care efficiency and safety are mixed, and annual health care expenditures in the United States have grown by \$800 billion. In our view, the disappointing performance of health IT to date can be largely attributed to several factors: sluggish adoption of health IT systems, coupled with the choice of systems that are neither interoperable nor easy to use; and the failure of health care providers and institutions to reengineer care processes to reap the full benefits of health IT. We believe that the original promise of health IT can be met if the systems are redesigned to address these flaws by creating more-standardized systems that are easier to use, are truly interoperable, and afford patients more access to and control over their health data. Providers must do their part by reengineering care processes to take full advantage of efficiencies offered by health IT, in the context of redesigned payment models that favor value over volume.



## **In 2005**

- **Hillestad and colleagues analyzed the potential benefits of widespread adoption of health IT**
- **Using sophisticated modeling, they projected the potential efficiency and safety savings of HIT adoption**
- **Their modeling predicted that HIT could ultimately save more than \$81 billion annually**
- **The article quickly became one of Health Affairs’ “best sellers” and helped energize federal efforts to promote adoption of HIT**

# 7 years later...

- Use of Health IT has increased...some
- Quality and efficiency of care are only marginally better (if that)
- Research on HIT effectiveness is mixed
- Aggregate health expenditures grew from \$2 trillion (2005) to \$2.8 trillion(2013)



## Hillestad et al

**“Here we summarize the methodologies we used to estimate the current adoption of EMR systems and the potential savings, costs, and health and safety benefits. We use the word potential to mean ‘assuming that interconnected and interoperable EMR systems are adopted widely and used effectively.’ Thus, our estimates of potential savings are not predictions of what will happen but of what could happen with HIT and appropriate changes in health care.” [emphasis added]**

Hillestad R et al. Can electronic medical record systems transform health care? Potential health benefits, savings, and costs. *Health Affairs*. 2005;24:1103–17.

## In Our View:

The productivity gains of health IT are hindered by:

- the sluggish pace of adoption
- the reluctance of clinicians to invest the time and effort required to master difficult-to-use technology, and
- the failure of health care systems to implement the process changes required to fully realize health IT's potential

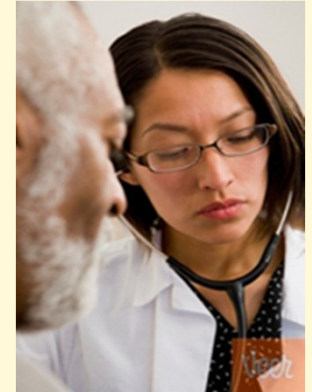


# **Are Modern HIT Systems “Interconnected and Interoperable?”**

- **The proprietary HIT systems that currently dominate the market are not designed to “talk” to each other**
- **Until now, health care systems have had little incentive to acquire or develop interoperable HIT systems**
- **As a result, current EMRs function less as “ATM cards,” than “frequent flier cards”**
- **Some integrated health systems do better – at least inside their network. Others do not.**



# Are Modern HIT Systems “Widely Adopted?”



- Adoption better, but still well behind Western Europe (40% of U.S. MDs and 27% of hospitals are using at least a “basic” EMR)
- Disparate uptake by large vs. small groups and large vs. small hospitals
- Small groups cite cost, fear of obsolescence and changing regulatory environment
- Patient uptake of HIT is even worse...



# Are HIT Systems “Used Effectively?”



- **Considering HIT’s theoretical benefits, it has few fans among physicians**
- **Studies don’t show promised gains in safety and productivity**
- **Few IT vendors make products that are easy for clinicians to use – perhaps because they aren’t the main customer**
- **The best-performing systems were designed by clinicians for clinicians**

# Have Appropriate Changes in Health Care Been Made?



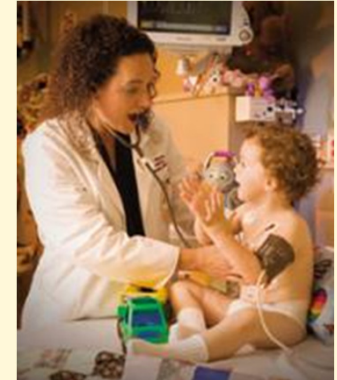
- **Fee-for-service reimbursement remains the dominant model for financing health care**
- **Primary goal of many vendors is to support documentation and billing**
- **At its best, health IT and innovations in care delivery should be symbiotic; each reinforcing the other**
- **As matters stand, Health IT is the latest industry to suffer the “productivity paradox” that plagued industries that were early adopters of IT**

# Essential Criteria

- **Interoperable - standardization needed in 3 dimensions: 1) how messages sent/received; 2) structure and format of data and 3) terms within messages**
- **Patient-centered – locus of control must shift from provider to patient**
- **Easy to use – HIT should facilitate the work of clinicians, not hinder it. This will not only boost productivity, but patient safety. Disclosure of usability ratings and HIT related adverse events would help**

# Conclusion

- **The predictions our RAND colleagues made in 2005 have not yet come to pass. This is not because of shortcomings in their analysis, but to shortcomings in the design, implementation, and use of HIT in the U.S.**
- **When the preconditions Hillestad and colleagues posited in 2005 are realized, the benefits they predicted should be realized as well. It will be well worth the effort.**





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