

Pam Arlotto



healthcare financial management association hfma.org

# accelerating the ROI of EHRs

Healthcare leaders should rethink their organizations' approaches to managing the change associated with implementation of electronic health records to gain greater value from these systems.

Electronic health records (EHRs) are becoming an essential component of the sophisticated value story in tomorrow's system of care.

Soon, health care provided within "bricks and mortar" facilities will give way to patient-centered, connected care, where prevention is emphasized and population health analytics depend on the information gathered at the point of care. The platform for the delivery of such care will be healthcare IT.

It is anticipated that healthcare organizations will spend more than \$34.5 billion on healthcare IT in 2014 to keep pace with healthcare regulations (Pedulli, L., "2014 Health Spending in North America to Surpass \$34.5 Billion,"

*Clinical Innovation + Technology*, Aug. 29, 2013). The federal government has contributed \$16 million in meaningful use incentive payments as of September 2013 (*Progress and Challenges with the Implementation and Use of Electronic Health Records Among Critical Access Hospitals*, Office of the National Coordinator, September 2013). Yet the promised ROI of EHRs has remained elusive for most.

A recently released study conducted by the University of Michigan examined the ROI of EHRs in more than 80 physician practices in three diverse Massachusetts eHealth Collaborative (MAeHC) communities. After reviewing detailed data in 49 of the practices, the researchers concluded that the five-year ROI was negative for most practices and that complying with meaningful use alone was not enough to generate positive returns. They go on to say "losses may have been due in part to the failure of practices to make the operational changes required to realize benefits.... Decisions need to be made by practices to organize and deliver care differently" (Adler-Milstein, J., et al., "A Survey Analysis Suggests that Electronic Health Records Will Yield Revenue Gains for Some Practices and Losses for Many," *Health Affairs*, March 2013).

According to a January 2013 report by the RAND Corporation, the conversion to EHRs has failed so far to produce the hoped-for savings in healthcare costs and has had mixed results, at best, in improving efficiency and patient care.

## AT A GLANCE

Three key strategies can enable an organization to achieve the greatest possible value from electronic health records (EHRs):

- > Meaningful use should be combined with a value realization strategy to ensure that the EHR does more than automate the paper record.
- > Healthcare leaders should work to align IT tools with new business models, care delivery frameworks, and operating processes.
- > Business and clinical goals and desired benefits should drive EHR value realization.

David J. Brailer, MD, PhD, the nation’s first health information czar, said he still believed tens of billions of dollars could eventually be squeezed out of the healthcare system through the use of electronic records. In his view, the “colossal strategic error” that occurred was a result of the HITECH incentive program. “The vast sum of stimulus money flowing into health information technology created a ‘race to adopt’ mentality—buy the systems today to get government hand-outs, but figure out how to make them work tomorrow,” Brailer said (Abelson, R., and Creswell, J., “In Second Look, Few Savings from Digital Health Records,” *The New York Times*, Jan. 10, 2013).

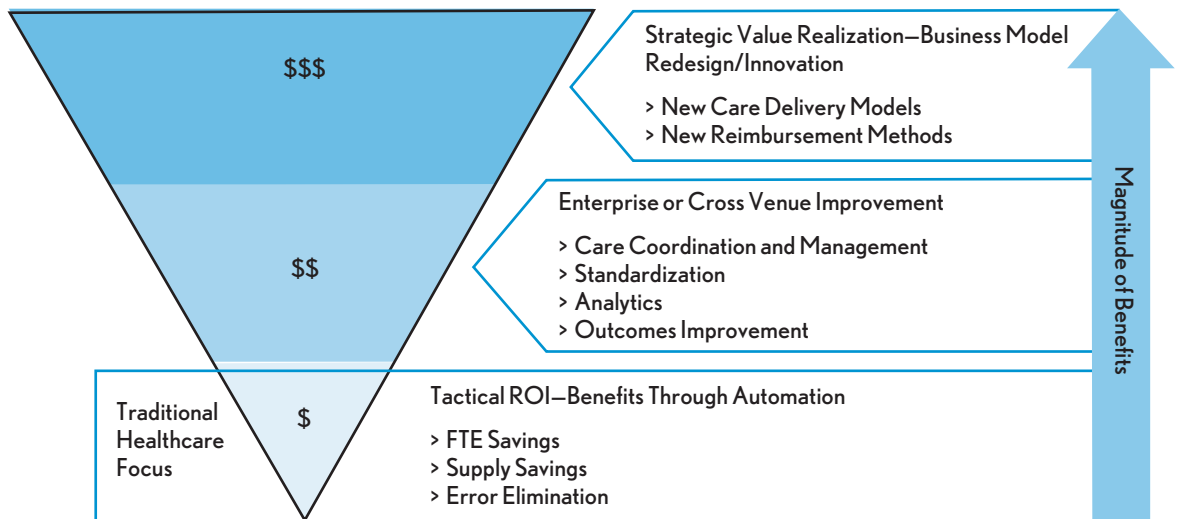
After exploring the concept for more than a decade, research has shown that IT alone does not drive ROI. Health systems and physician groups that implement EHRs and wait for the promised returns will be disappointed. Facing dramatic changes to the healthcare industry such as consolidation, clinical integration, and population health management, we need to accelerate the

impact of our industry’s investment in EHRs, and clearly, that means rethinking the way we define, plan for, and manage the change associated with these advanced IT systems. We should start by recognizing that the *value of IT* is reflected in the ratio between the *total IT and business investment* and the *degree of change in business and clinical outcomes* that is realized from that investment.

**EHR 1.0 and Value Realization**

In recent history, healthcare leaders implemented systems to “comply” with meaningful use, and for the most part, technology investments were considered a “cost of doing business.” If ROI or value was calculated, it was developed as a discrete cost-benefit analysis focused solely on the technology and used to justify the purchase of IT rather than ensuring value was realized over the lifetime of the investment. “EHR 1.0” automated transactions within the silos of traditional healthcare—the hospital and the physician’s practice. This generation of EHRs mirrored the paper record, enabled IT vendors to control a proprietary footprint of applications, emphasized

**ECONOMIC VALUE PATHWAY THROUGH CLINICAL SYSTEM ADOPTION**



Source: Maestro Strategies.

billing and coding rather than quality and efficiency, and engaged the provider, not the patient.

Most EHR system deployments were system-centric rather than business-centric. Although stakeholders and end-users contributed input into system design, the primary focus was on managing the system build, creating and testing interfaces, training end users, and managing issues prohibiting successful implementation. While many organizations have instituted IT governance, launched program management offices, and experienced high rates of technical and meaningful use attestation success, what is clear from the evidence is that increasing the adoption of clinical systems has not generated business value. Value, if identified, often focused on tactical benefits achieved through automation, such as elimination of transcription costs, reduction in paper storage, and FTE savings. The economic value pathway shown in the exhibit on page 2 depicts the full spectrum of quantitative and qualitative value that can be realized by moving from a tactical view of ROI to a strategic value realization perspective.

Recent efforts to catalogue examples of health IT value in the HIMSS Health IT Value Suite ([www.himss.org/valuesuite](http://www.himss.org/valuesuite)) are a step in the right direction. Value stories are captured to demonstrate the progress in key metrics for satisfaction, treatment, electronic information, prevention, and patient education, and the savings for EHR 1.0. Yet we as an industry have a long way to go.

### The Next-Generation EHR

Historically, most IT solutions have mirrored the organization they served. Applications originally were designed to support specific departments. Over time, enterprise healthcare IT vendors emerged to provide comprehensive offerings for the hospital or the physician practice.

Health care is entering a time when its future will look very different from its past. Much like the changes occurring to develop accountable care organizations, patient-centered medical homes, and chronic care networks, EHRs and other advanced IT systems are changing as well. The next generation of advanced clinical systems, or EHR 2.0, is on the horizon and will assimilate a variety of new capabilities:

- > Connectivity across the entire continuum of care
- > Self-service tools that make the systems easier to learn and adapt to new workflows
- > Mobile and cloud-based applications that seamlessly connect the patient and the physician
- > Evidence-based decision support tools that provide real-time information at the point of care
- > Care management tools that help coordinate care, communicate multidisciplinary plans of care, and manage chronic diseases
- > Predictive and prescriptive analytics that can help providers to stratify patients according to risk, individualize treatment modalities and methods, and provide dashboards that provide summary-of-care information

As the industry defines and builds accountable systems of care, IT tools should be aligned with new business models, care delivery frameworks, and operating processes. In addition to EHRs, advanced technologies such as health information exchanges, business intelligence systems, registries, customer relationship management systems, disease management systems, mobile and telemedicine solutions, and more will provide the needed care management platform for value-based health care.

### Next-Generation Value Realization

As the healthcare industry transitions from volume- to value-based payment, successful organizations

already have begun to rethink the role healthcare IT will play in the future value story of the health system. Meaningful use must be combined with a value realization strategy to ensure that the EHR does more than automate the paper record. Five key principles should guide the strategy:

- > Care should be patient-centered and coordinated across provider venues, not just focused on acute episodes such as inpatient encounters.
- > Systematized processes should be developed and driven by evidence-based medicine and reduced variation in practice.
- > Operations should be transparent to ensure clear authority and responsibility for point-of-care decision making.
- > Patients should be involved in their own care, understand the value of wellness and prevention, and have access to care providers
- > Metrics should be developed for key outcomes to drive performance improvement and value realization

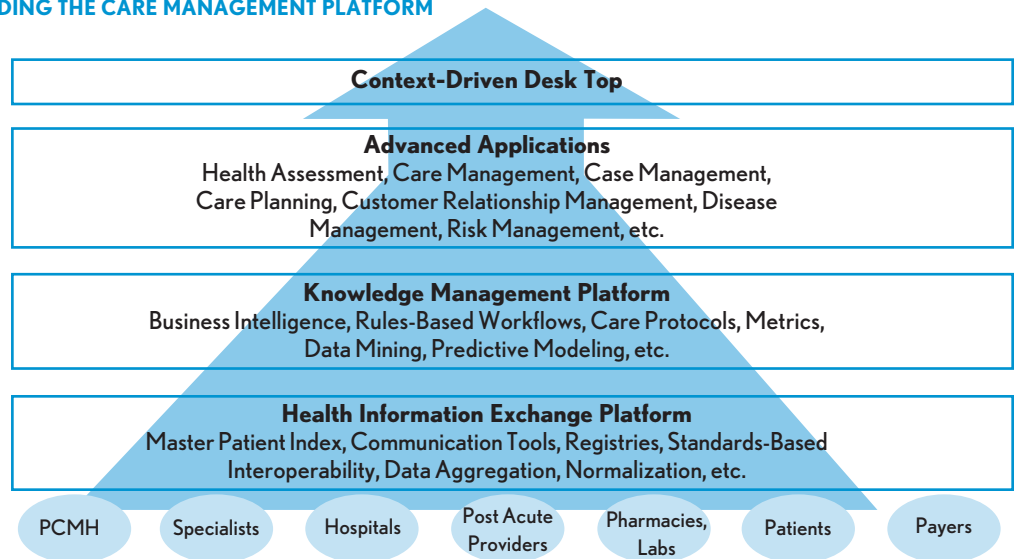
To make this transition, five commonly held beliefs must change.

**Erroneous belief No. 1: Implement the EHR, then optimize.** One of the most common mistaken ideas today is that optimizing the technology guarantees business results. EHR optimization activities often focus on deploying unused or improving suboptimal technical functionality, customizing workflows, and expanding data reporting. Although these are important activities, they are no substitute for considering the business and clinical goals and desired benefits that should drive value realization when planning for and using the EHR.

For many years, IT thought leaders have encouraged linkage of IT strategy with enterprise strategy. Alignment of IT with strategy is not enough. Financial, clinical, and business strategy leaders should define the desired goals more granularly in terms of desired benefits. During the planning process, conversations should ensure that all parts of the organization are working together to meet these common goals. Leaders should be able to:

- > Assess the organization’s progress toward meaningful use

**BUILDING THE CARE MANAGEMENT PLATFORM**



Source: Maestro Strategies.

- > Compare and contrast IT results with the big-picture problems, challenges, and opportunities facing the healthcare system today
- > Adapt the strategies to the specific needs of unique markets, organizations, and environments
- > Work across financial, clinical, and business lines with IT leadership to define expected benefits and value to be realized
- > Design holistic programs and initiatives that integrate strategy, process and organization design, technology, and information objectives

Leaders also should consider attributes of an effective system of care and the potential role of IT to:

- > Enable care coordination and management of transitions of care
- > Ensure accountability for the total care of patients
- > Provide clinically relevant information to all providers at the point of care
- > Engage patients through easy access to appropriate, culturally sensitive, and timely care
- > Encourage team-based, collaborative, high-quality, and high-value care
- > Reduce the cost and variation of care practices
- > Drive innovation and continuous learning to improve quality, value, and the patient experience

**Erroneous belief No. 2: The physician in IT is responsible for making the EHR work.** The chief medical informatics officer (CMIO) and clinical informatics function are no longer new to health care. As part of EHR 1.0, the CMIO has tended to focus primarily on adoption of the acute care EHR and computerized provider order entry. In some organizations, these physicians also chair physician IT steering committees, oversee Meaningful Use Stage 1 attestation, participate in ICD-10 mitigation planning, and support ambulatory EHR deployment. Generally, they serve as the primary informaticists and spend most of their time working one-on-one with physicians

providing encouragement and at-the-elbow support, with limited authority and accountability for results.

As we transition to the next-generation EHR, physician leaders should be responsible for harvesting value from information, analytics, and communication technologies. CMIOs should work with chief medical officers, chief transformation officers, and/or chief strategy and innovation officers as accountable members of the executive team to develop systematic plans for clinician change and standardization across the enterprise.

Organizations should take five critical steps in preparing for the transition from CMIO 1.0 to CMIO 2.0:

- > Develop a strategy for the office of the CMIO.
- > Align the CMIO role and responsibilities with physician leaders responsible for transformation and innovation.
- > Create a development plan for the CMIO with special emphasis in innovation and strategic thinking, as well as financial and business acumen.
- > Assess the clinical informatics organization structure, skills, and capabilities required to support future strategies, and identify gaps and the potential to realign existing informatics functions, which often are distributed across the organization within various areas, such as IT, nursing, pharmacy, and ambulatory settings.
- > Define specific value-realization strategies that will be the responsibility of the CMIO and clinical informatics team.

**Erroneous belief No. 3: Success is measured by “on-time, on-budget” expectations.** Historically, success metrics for IT projects focus on an event—the “go-live.” Vendors emphasize use of features and functionality and the size of the install base (i.e., number of customers on a

specific application). Financial, clinical, and business strategy leaders have had little, if any, input into defining measures of success. As we transition to next generation value management, success will focus on very different criteria, including:

- > The speed to value and the ability to be “on-value” with quality improvements, cost reduction, and risk management
- > The degree to which common practice and best practice are replaced by emerging practice
- > Integrity of data and ability to ensure semantic interoperability (common meaning of the data)
- > The leaders’ clear understanding of how the information will be used and decisions that need to be made
- > Collective agreement on organizational learning, team building, continuous improvement, and innovation initiatives enabled through the project

**Erroneous belief No. 4: Lean Six Sigma is the “silver bullet.”** Lean Six Sigma decreases variation while making process outcomes more predictable and effective. Essentially, Lean Six Sigma helps eliminate waste throughout an organization, which in health care means preventing medical errors,

decreasing mortality rates, reducing length of stay, and improving the quality of patient care. One of the downsides of this movement for health care, however, is that it allows organizations to think small, resulting in only incremental change. The key to true value realization and creation of significant savings often occurs with the strategic transformation of key business models and associated processes, technologies, people, and metrics.

Additional capabilities, tools, methodologies, and techniques can significantly enhance the ability to transform and create significant value.

For example, organizations should strive for increased *agility*, continuously sensing changes in market forces and responding with incremental improvements to the current business model while simultaneously anticipating radical changes in industry dynamics and responding with new or breakthrough business models.

Organizations also should pursue *innovation*, seeking breakthrough solutions that meet new requirements, inarticulated needs, or existing market needs.

**ACHIEVING ROI FROM EHRs: THE VALUE OF VARIOUS APPROACHES**

**Modest ROI**

Organizations implement the electronic health records (EHRs), then optimize.

The chief medical information officer (CMIO) is charged with making the EHR work.

Success is measured by whether the project is “on-time” and “on-budget.”

Lean Six Sigma is the silver bullet.

ROI is difficult to calculate and too time-consuming to determine.

**Next-Generation Value Realization**

Organizations seek to optimize business and clinical results through value realization.

Physician leaders, such as the chief medical officer and the chief transformation officer, work with the CMIO to be accountable for value.

“On-value” and “speed to value” will be critical measures of success.

Lean will be combined with other methodologies to drive breakthrough innovation, performance improvement, and change.

Financial, clinical, business strategy, and IT leaders will work together to create an organizational value management strategy and approach.

Examples of methodologies include *change management*, an approach to transitioning individuals, teams, and organizations to a desired future state, and information design, a multidisciplinary discipline that focuses on presenting information in a way that fosters efficient and effective understanding of it.

Effective tools include *analytics* that promote discovery and communication of meaningful patterns in data for the purpose of describing, predicting, and improving business performance, and *informatics*, which allow for interdisciplinary design, application, and use of IT—and assessment of its impact—based on the relationship between the technology and its use in a real-world setting.

**Erroneous belief No. 5: ROI is difficult to calculate and too time-consuming to determine.** As EHRs become the foundation for medical care, the healthcare industry can no longer afford to invest in IT and simply hope for the promised results. Leaders must become intentional in the way they plan for and manage the value of their investment. Commitment from the top is the first step, yet only a beginning. Financial, clinical, and business strategy leaders should come to an agreement on the shared approach to value realization and measurement and work with the CIO to drive change.

Specifically, the organization should:

- > Establish a *transformation center of excellence* that supports the integration of tools, expertise, and methods, including Lean Six Sigma, agility, innovation, change management, information design, analytics, and informatics
- > Create a shared vocabulary of value-realization terms, concepts, and metrics to enable stakeholders to communicate desired benefits
- > Educate the C-Suite on the role of the care management platform and synchronization of enterprise strategies, IT strategies, and value-realization plans
- > Develop an ongoing program to achieve greater value from EHRs through the use of business cases, reusable value metrics and tracking tools, and ongoing value management throughout the life of the EHR investment
- > Expand governance processes to ensure the promotion, adoption, use, and tracking of value-realization methods and tools

### Achieving Next-Generation Value

As an industry, we can no longer afford to implement systems that produce modest savings and impact on outcomes. We should accelerate value realization by rethinking our approach to managing the value associated with EHRs and other advanced systems. ●

---

#### About the author



**Pam Arlotto**  
is president and CEO, Maestro Strategies, Atlanta, and a member of HFMA's Georgia Chapter (parlotto@maestrostrategies.com).