

The Rising Importance of Quantifying the Value of Health IT

By Bruno Nardone and Andrew Matzkin

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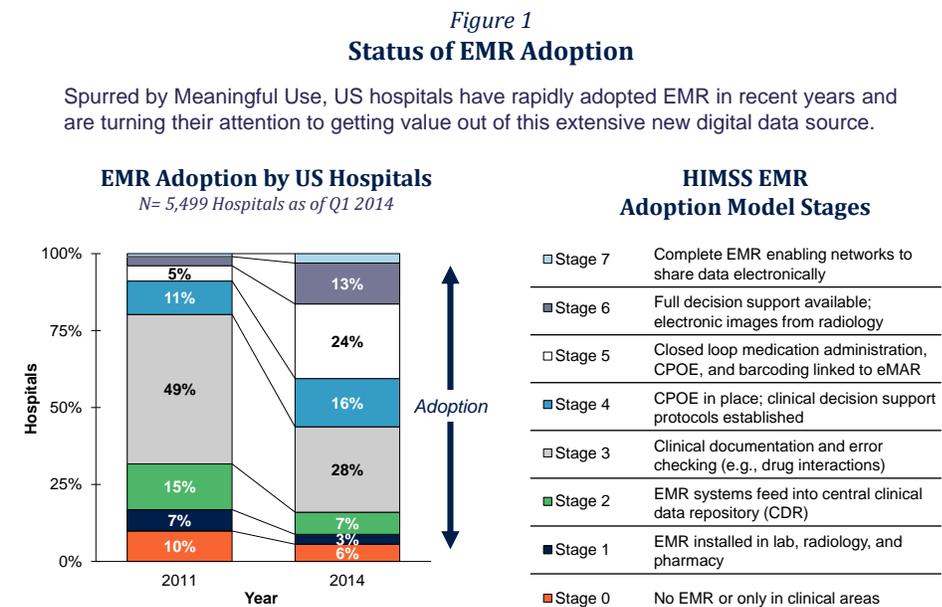
Selling health IT (HIT) solutions to hospitals and other healthcare providers has never been easy. HIT companies have always faced long, arduous sales cycles and the very real risk that growth will never extend beyond a few early adopters to the broader market.

The good news is that many HIT companies have braved those industry challenges and enjoyed unprecedented success over the last few years.

The bad news is that selling HIT solutions may now be harder than ever, especially if a company doesn't have a compelling, data-driven argument for the return on investment (ROI) of their solution.

Recently, many HIT companies have thrived as healthcare providers have raced to adopt HIT in the wake of the HITECH Act and the Affordable Care Act (ACA). Since 2011 the US government has pumped over \$23B into the EHR market, stimulating HIT adoption at a pace that the US healthcare system has never seen. [US Centers for Medicare and Medicaid Services, April 2014.] (Figure 1)

At the same time, the ACA and related efforts by commercial payers are gradually shifting the healthcare system from Fee-for-Service (FFS) to Fee-for-Value (FFV) contracting models, creating stronger incentives for providers to invest in HIT solutions



that support outcomes driven measurements required by these new arrangements. This shift has also created demand for new HIT solutions that help providers accomplish several key goals: tracking and reporting quality indicators, coordinating care more effectively, expanding their reach beyond traditional care settings, and enabling financial success within these new value-oriented models.

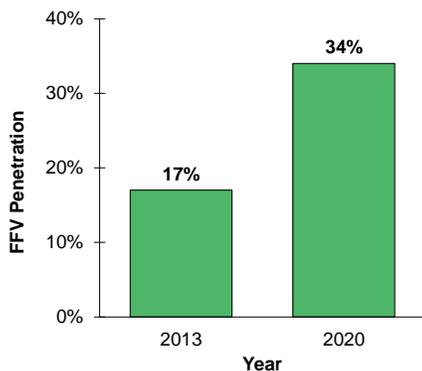
As the prevalence of FFV models increases, providers are looking to the next generation of HIT solutions to support their organizations' needs. This is raising the bar for HIT vendors in two critical ways.

First, most providers understand that even if the shift occurs at a measured

pace, the days of FFS healthcare are numbered. The reemergence of bundled payments and risk-based reimbursement that were experimented with in the 1980's and 1990's is occurring with an emphasis on outcomes in addition to efficiency, and it will require providers to understand and manage their costs related to service value more effectively than ever before. In this new context, most providers are demanding credible evidence of the quality impact and—especially—the financial ROI of any new HIT solution

34% of provider reimbursement is expected to be linked to FFV contracts by 2020

Figure 2
US Healthcare System
Projected Penetration of FFV
Contracting



Source: US Healthcare Distribution and Technology. HCIT: What We Talk About When We Talk About Population Health. Barclays Equity Research; 4 March 2014

as the price of admission into the sales process. Vendors that cannot credibly articulate their value propositions uniquely to individual clients will not be invited to discussions.

Second, and perhaps more important, providers are still licking their wounds from their recent EHR investments and implementations, which were painful and expensive and are perceived to have generated disappointingly little ROI.

In a recent survey, provider executives identified EHRs as the single biggest area of wasted investment in recent years. [HealthLeaders Media Industry Survey 2014.] Related HIT investments in data analytics and integration were not far behind. (Figure 2)

Satisfaction levels are even worse in ambulatory settings, where 58% of buyers are dissatisfied with or feel neutral about their recent investments in EHR systems. [IDN Health Insights Survey 2013.] (Figure 3)

Providers feel burned by the promises made to them by EHR vendors and are more cautious than ever about investing in new HIT solutions with significant value claims which may

take them down the same path of disappointment.

The days of investing in HIT solutions on the basis of blind faith are over.

Questions about value aren't new for HIT vendors. In the past, vendors selling to a new customer could point to hand-picked experiences of pilot or "showcase" customers and extrapolate those results to the target customer, without accounting for the new environment's unique characteristics. This approach was "good enough" to drive sales, in part because it was too complicated for providers to accurately anticipate or track the impact of these HIT solutions. Providers possessed limited documentation about their own processes and cost structures, making it difficult to challenge vendor ROI claims and impossible to hold vendors accountable if promised value did not materialize.

However, things have changed. Today's providers are developing much greater knowledge of their own processes and costs and often have access to data in those areas that they have never had before. These new systems enable providers to tie HIT

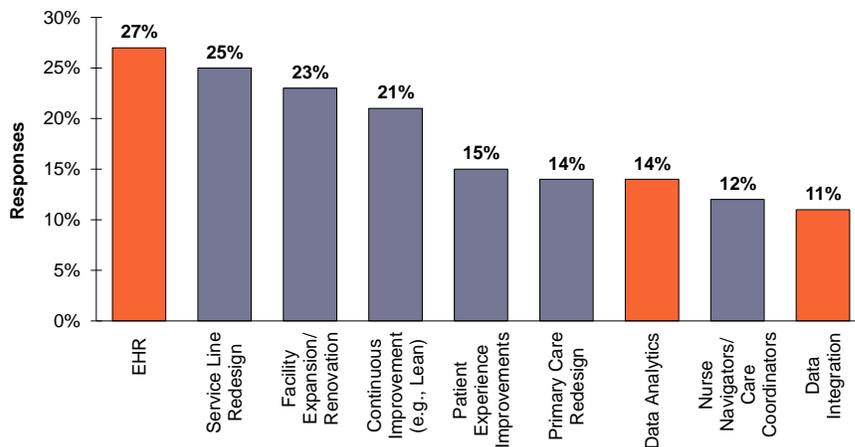
"We hear it all the time. People are questioning the amount spent on HIT initiatives versus the value received. To help clients get past this hesitancy to take on new HIT initiatives we clarify exactly what they are going to gain from the additional investment to ensure it is the right solution for their organization."

*-Eric Demers,
 President, Accreon*

initiatives to specific, measurable performance goals related to quality, efficiency, or both.

As a result of these changes, HIT vendors now face customers that are better informed and more skeptical—a formidable combination. These customers routinely demand credible, data-driven ROI arguments before a sale and expect help from the vendor following the sale to ensure that they fully realize and measure the promised value of the solution. HIT

Figure 3
Provider Opinion:
Largest Areas of Wasted Investment in Recent Years
 N=401



Source: HealthLeaders Media Industry Survey 2014.

HIT Value Drivers

Direct Financial Impact

Revenue Generation
Cost Reduction
Risk Reduction

Clinical Outcomes and Process

Quality of Care
Process Efficiencies
Safety

Data Quality and Availability

Data Access and Reporting
Evidence-Based Medicine

Prevention and Patient Education

Prevention – Disease, Errors
Patient Education – Disease, Treatment

Satisfaction

Patients
Providers
Staff
Others

vendors who embrace this challenge will be best positioned to maximize adoption of their HIT solutions. (Figure 4)

Whether selling on the basis of clinical value, economic value, or both, HIT vendors must start by understanding their customers' care or business processes that will be impacted by their solution.

With that understanding, the next step is to quantify the potential impact of the solution on the key performance indicators (KPIs) that matter most to the customer and then to design the sales pitch, post-sale support, and even solution features around those KPIs.

Health Advances has extensive experience working with clients in all areas of health technology to quantify the value of their solutions and products and to leverage that analysis to drive growth. The firm has developed a framework that HIT vendors can use to approach this challenge. (Figure 5)

Value-driven ROI claims must be grounded in credible, robust data. There are three types of data available to vendors undertaking this exercise, represented by the blue arrows on the left of the graphic. Companies can build a compelling case based on just one of these three sources, but the strongest cases are based on two or even all three sources. The key when evaluating the best approach is for companies to fully explore all three potential avenues and determine which ones can work in their specific circumstances.

Each of these sources offers advantages and challenges that companies must weigh in choosing how to proceed. (Figure 6)

Studies/Pilots

Borrowing a page from the biopharma and medtech industries, HIT vendors can design their own studies to demonstrate and quantify the impact of their HIT solutions. Such studies can range from small, single-site pilots to larger multi-customer studies. These kinds of studies offer some obvious advantages, including the ability to provide direct evidence of impact on metrics selected by the vendor to cast the solution in the most favorable light possible.

Though this approach represents something of a "gold standard", it often entails substantial challenges. First and foremost, a company must find one or more customers willing to



collaborate on the study and to take on the work required to measure costs and impact, while resisting the temptation to customize the solution to a degree that would make the study results irrelevant for other customers. Such studies can also be expensive and time-intensive, especially if they face a bureaucratic approval process. Additionally, many customers lack the systems needed to easily measure quality and cost impact of a specific HIT solution. There is no guarantee however, that results will be favorable, especially if the customer fails to make the process changes that are often needed to realize the full value of an HIT solution.

Figure 5
Building Data-Driven ROI Arguments

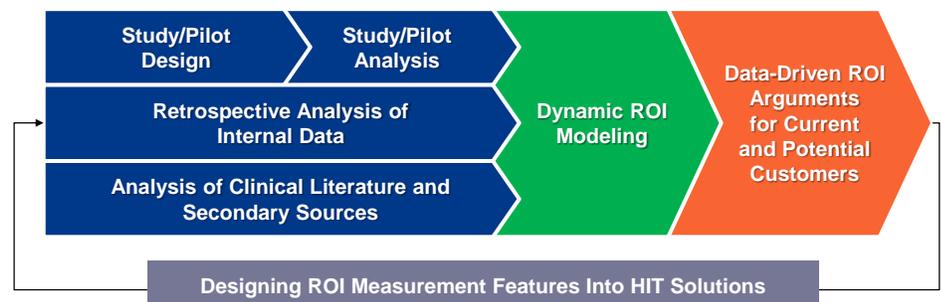


Figure 6
**Source Data Advantages and Challenges
 When Developing ROI Claims**

Data Source	Advantages	Challenges
Studies/Pilots	<ul style="list-style-type: none"> • Provide most direct evidence • Ability to customize analysis 	<ul style="list-style-type: none"> • Long timelines and high cost • Customer bureaucracy challenges • Providers lack reliable cost data
Retrospective Analysis of Vendor Data	<ul style="list-style-type: none"> • Efficient and inexpensive if data is available • Experiential data 	<ul style="list-style-type: none"> • Data often unavailable or incomplete • Not useful for new solutions
Clinical Literature and Secondary Sources	<ul style="list-style-type: none"> • Efficient and inexpensive if data is available • Broadly applicable 	<ul style="list-style-type: none"> • Significant gaps and variability in published cost data • Averages obscure variability

Retrospective Analysis of Vendor Data

Companies fortunate enough to have one or more customers up and running may be able to mine internal data on how customers have used their solution and what value they have realized from the solution. If such data is available, it can provide a relatively inexpensive and easily accessible foundation for an analysis of solution ROI.

The smartest companies will anticipate doing these kinds of analyses and will build features into their solutions that capture the data points needed for these analyses. These features have an added benefit; they can enable customers to track and quantify the value of the solution, improving customer satisfaction and retention and spurring positive word of mouth. Of course, companies marketing a new solution usually do not have user data at their disposal, and if they do, the data can be incomplete or inconsistent.

Despite those challenges, this internal data can be a valuable starting point for any value analysis given its accessibility, and companies can strategically supplement that data through interviews or surveys of current customers and data gleaned from secondary sources.

Clinical Literature and Secondary Sources

Clinical literature and other secondary sources are widely available for free or at a low cost, and these sources can often provide data points that can support key inputs into a value analysis. Fertile areas include:

- Incidence and prevalence of diseases, diagnoses, admissions, procedures, and specific events like hospital acquired infections or 30-day readmissions
- Length of stay by diagnosis and procedure
- Costs associated with episodes of care and specific events such as an additional day in the ICU or a hospital acquired infection
- Spending in certain categories of drugs, devices, or medical supplies
- Reimbursement rates
- Local labor wage rates
- Drug, device, and supply prices

The relevance of published data will vary depending on the nature of the HIT solution and, unfortunately, in many cases data may be inconsistent, unreliable, or unavailable entirely. Despite those limitations, there is often more data available than most companies realize if they are not deeply familiar with these analyses and data sources.

Focus: Client Impact

Health Catalyst is an example of a company that has embraced the concept of demonstrating value in the sales process and post-sale.

“Health Catalyst provides evidence for value analysis as part of the sales process. Most comes from customers, so we’re able to demonstrate value realized from other similar organizations and then apply the model to new clients.

We’ve built an ROI and communications model and we have developed a clinical improvement financial tool. The model and tool helps clients analyze their costs and benefits so they can apply them in their environment and estimate their payback period and ROI.

The biggest error in sales in our industry is to focus on the product rather than the benefits to the client.”

– Mark McCourt, VP Sales, Health Catalyst

Putting It All Together: Dynamic ROI Models

Once a company has generated and collected the right data, the next step is to build an ROI model. The best versions of these models will be dynamic, going beyond simply calculating the value for an average customer and enabling quantification of value for a specific customer based on their unique characteristics, workflow, and infrastructure.

A dynamic ROI model enables a company to customize their sales

pitch for each individual customer, avoiding the “snowflake dilemma” where every customer sees himself as unique. The smartest companies turn value analyses into simple calculators that can be used in sales meetings, in real time, to quantify ROI for that customer based on a small set of inputs provided by the customer.

Keys to Success

The framework described above belies the complexity and challenge inherent in this type of analysis. Companies attempting to build data-driven ROI claims should keep in mind the following Keys to Success:

1. Fully understand how your solution will create value for your customers. Identify each individual value driver and understand how those drivers interact with one another.
2. Identify the metrics or KPIs that customers are most likely to use to assess the value of your solution, and build your story around those metrics.
3. Leverage multiple data sources as inputs into your value analysis, and consider primary research with customers to fill key data gaps –then extrapolate and triangulate to get value out of imperfect secondary data.
4. Go beyond the averages; build a dynamic ROI model that allows assessment of value created for each specific customer.
5. Build features into your solution to track its impact against KPIs and other outputs of your ROI model.
6. Work with users to make sure they fully realize the value of your solution and are measuring the impact so that the value is as visible as possible.

The HIT market is maturing. Customers are smarter, more experienced, and more selective than ever before. This poses a formidable challenge for HIT vendors, but it also offers an opportunity for the HIT companies that offer truly valuable solutions and are willing to go the extra mile to prove that their solutions will create value for their customers. Competitors that fail on either of those dimensions will find themselves on the wrong side of the inevitable shakeout of winners and losers in Health IT.

About the Authors

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Health Advances is a leading healthcare strategy firm advising companies and investors in the health IT, biopharma, diagnostics, device, and healthcare services sectors. Healthcare executives rely on our professionals to help make the most important and challenging decisions they face in the development and commercialization of medical technologies and services worldwide.

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