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## Prescription for change

By Jim Golden, Ann Kieffaber, John G. Edelblut and Kristina L. Gilbert

A new information value chain—built on evidence-based insights—is emerging that could reconcile the divergent interests within the US healthcare industry. The ultimate beneficiary: the patient.

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Consider the following:

- People in Mobile, Alabama, undergo four and a half times as many heart bypass surgeries as those in Pueblo, Colorado.
- Women in Missoula, Montana, undergo over three times as many mastectomies as women in Charleston, South Carolina.
- Residents of Miami, Florida, have 66 percent fewer knee replacements than people in Lincoln, Nebraska.

These examples—drawn from *The Dartmouth Atlas of Health Care*'s analysis of 2005 Medicare data—paint a compelling picture of just how much variability there can be in the provision of healthcare across the United States.

Such inconsistencies within the industry are not only regional, however. Even the practice styles of individual physicians can vary dramatically from one hospital affiliation to another, while research has suggested that some doctors may charge twice as much as others for essentially the same treatment.

More than statistical anomalies, these high levels of variability increase costs, reduce overall effectiveness and impede the performance of the healthcare system as a whole. Unless this unnecessary variability is addressed, other efforts to improve the system are likely to fail.

Industry participants have been aware of this systemwide variability for decades. But until recently, they lacked enough patient data in a format that could facilitate ready analysis; they also lacked the analytical tools to extract insights from that data. Without accessible data that aggregates the actual experiences of thousands or perhaps millions of patients—in other words, without medical evi-

dence—healthcare practitioners today often rely on a mixed bag of training, intuition, personal experience and institutional policies to decide on a course of treatment. The consequences are grave, and include errors, limited access to best practices and a misalignment of cost and quality of care.

However, with the emergence of digitized patient records, coupled with the ability to integrate and analyze external information such as payer data, patient-reported information, physician networks and clinical trials data, the entire industry—doctors, hospitals, drugmakers and insurers—has a new common currency for productive interaction that Accenture calls analytics-driven evidence-based insights (see chart, page 3).

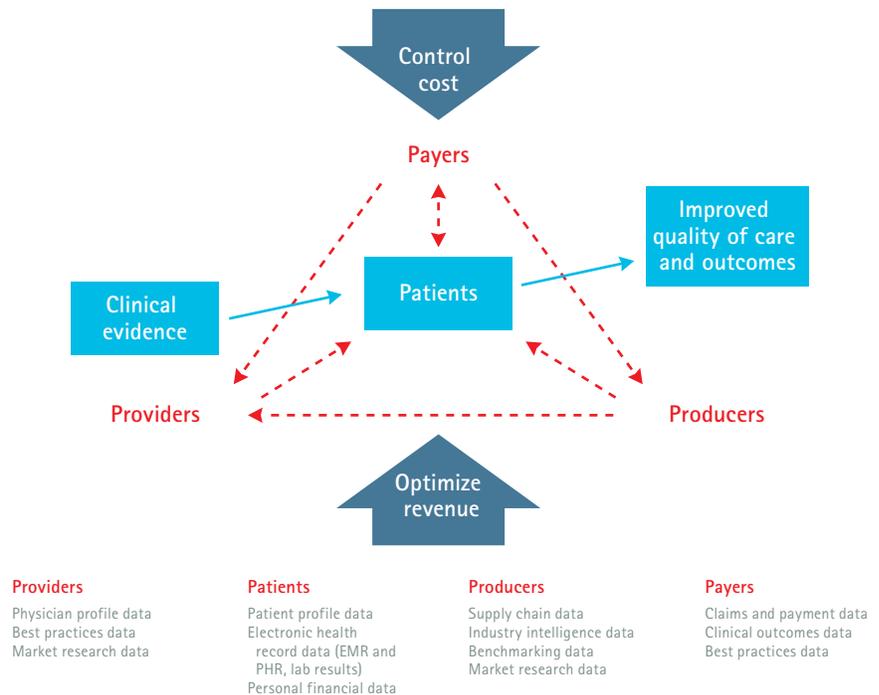
The powerful combination of new information and evidence-based insight tools to leverage it has provided an extraordinary opportunity: to create a healthcare information value chain linking stakeholders in ways that ultimately lay the groundwork for a classic, more symbiotic healthcare value chain.

Currently, the US healthcare industry consists of producers (for example, pharmaceutical companies and medical device makers), payers (insurance companies, HMOs), providers (hospitals, pharmacies and physicians) and government—all working across the system in an uneasy, inefficient and often ineffective alliance. The difficult nature of these relationships reflects conflicting economic interests. To realize business value, each party relies on a limited, highly specific set of data and analyses. Few take a systematic, holistic view of all of the evidence within a standardized framework.

In fact, while some stakeholders might see the potential uses of an expanded data set as an opportunity to collaborate, others view it as a threat to their business interests.

## A new common currency

Doctors, hospitals, drugmakers and insurers will be able to interact using common data from a host of sources that has been integrated and analyzed. The data will come from electronic patient records, payers, patient-reported information, physician networks and clinical trials.



Source: Accenture analysis

A Wharton School study found that the industry does not even have a value chain—in other words, there is no coordinated effort among parties, no broad strategic alliances and no real sharing of knowledge. And given how fragmented the provider universe is, there is little competition to deliver the highest customer value at the lowest possible cost. As a result, payers, providers and producers all act individually to capture as much value as possible—often at the expense of patients.

The new information value chain will reconcile these divergent interests within the industry. Several significant hurdles must be overcome first. But the benefits from the pervasive use of an evidence-based insights approach could be substantial.

Over time, evidence-based insights derived from healthcare data analytics will create a kind of virtual unification of all stakeholders in the industry, with significant benefits for each.

- For producers, an evidence-based insights approach would integrate externally generated data regarding safety, epidemiology and health outcomes with internally derived clinical and discovery information. This would drive better decisions regarding strategic R&D across the pharmaceutical value chain.
- For payers, an evidence-based insights approach would help identify which treatments and therapies work best for which patients, in what context and

As more industry players digitize their healthcare records, the tangible benefits of doing so are becoming clearer.

with what overall economic and outcomes benefits. Reimbursement decisions could be based on such insights; ultimately, treatments and therapies that do not provide demonstrated evidence of effectiveness would not be covered by third-party payers.

- For providers, an evidence-based insights approach would enable stakeholders to determine the clinical protocols that result in optimum health outcomes for patients and that reinforce the establishment of standards of care.
- For patients, who will be the biggest winners, evidence-based insights will help ensure that they receive cost-effective and proven standard-of-care treatments targeted toward specific population groups and outcomes.

As the primary source of public policy and regulation, government involvement is essential for the establishment of an evidence-based insights approach. But it will also play a vital role in the transformation as the largest payer, one of the largest providers and one of the biggest funders for basic research for producers.

#### **Better evidence, better practices**

As the evidence-based insights way of thinking begins to permeate the healthcare system, data coming directly from the healthcare delivery setting will resolve such issues as whether it was compliance with protocol or the protocol itself that determined a medical outcome. Evidence will also determine whether the difference between how a drug performs in trials and in the real world is due to compliance with the prescription or the concurrent presence of other diseases.

Better evidence-supporting best practices will give providers the tools they need to advise patients

on treatment choices and clarity in support of payers' formulary decisions. Once an integrated model that covers evidence-based practice, medication, payment guidelines and other elements based on the data is available across the healthcare value chain, the entire healthcare system will move toward decision making focused more on patient outcomes and less on stakeholder transactions.

Creating and adopting a standardized approach to evidence-based insights in the United States will be a multiyear process. It makes sense to act now, primarily because of both increasing cost pressures and the fact that enactment of broad healthcare reform legislation at the federal level has not quieted the heated public debate over the issue.

Significant advances in health information technology, which allow the secure digital storage and transfer of health information among industry players, will create new sources of healthcare data and can support new ways of using analytics. One major enabler of this process is the Health Information Technology for Economic and Clinical Health Care Act, which was part of the 2009 American Recovery and Reinvestment Act. The HITECH provides incentives to industry stakeholders to convert paper-based files to electronic health records, which will, in turn, improve how data is collected, shared and analyzed.

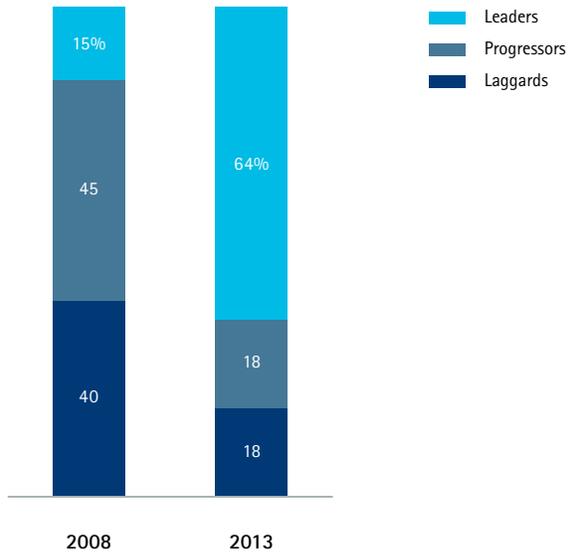
This new push to digitize clinical records should kick-start the process in ways that the current focus on financially oriented data in claims records cannot. Furthermore, as more industry players digitize their healthcare records, the tangible benefits of doing so are becoming clearer.

For example, a recent study of Texas hospitals in urban areas revealed that those with clinical information

## Going electronic

According to Accenture research, 64 percent of large medical institutions—including large hospitals, integrated delivery networks and academic medical centers—will be using electronic medical records in all patient care settings by 2013. At that point, only 18 percent of such institutions will be lagging behind the trend.

Electronic medical record adoption rate for large medical institutions, 2008–2013



Note: *Leaders* have most of their capabilities deployed in all patient care settings. *Progressors* have mostly completed their enterprise implementation and standardization. *Laggards* have fewer capabilities implemented, fewer sites live and less adoption.  
Source: Accenture analysis

technology that automates patient information, notes and records had fewer complications, lower mortality rates and lower costs than those without it. While electronic health records do not by themselves provide insights, the ability to collect, integrate and analyze this information, in addition to other externally generated patient data, makes electronic medical and health records valuable.

While the HITECH drives data requirements on a national level, several nascent examples of success at the local level do exist (see sidebar, above). For instance, Geisinger Health System of Pennsylvania offers elective heart bypass surgery with additional assurance: Any follow-up treatments required during the first 90 days after surgery and provided by a Geisinger clinician or at a

Geisinger facility are included in the flat fee charged for the procedure.

Started in February 2006, Geisinger's ProvenCare program focuses on nine critical care areas and benefits patients by reducing average stay lengths, lowering 30-day readmission rates and cutting the number of cases with complications—while saving money. In 117 heart bypass surgeries performed during the first year of the program, death rates fell to zero from 1.5 percent, readmissions dropped 15.5 percent and hospital charges were down 5 percent. Clearly, the ProvenCare approach significantly benefits the provider network, the payers and the patients. Geisinger's ability to offer ProvenCare results from its decision more than a decade ago to digitize its medical records and

## How evidence-based insights resolved a medical quandary

A major pharmaceutical company wanted to know whether non-medical support services had an impact on patient adherence to cancer treatments. It conducted extensive primary and secondary research into the subject, meeting with researchers and providers and analyzing published literature. The team found that while clinicians had significant anecdotal evidence regarding which factors affected adherence, a shortage of hard evidence prevented any conclusions either way.

To resolve the issue, the company turned to evidence-based insights.

To this end, it asked Accenture to partner with a major private oncology and hematology practice to extract blind patient data from its electronic medical record system and manually abstract non-medical support service data from patient charts. The team conducted a study on 832 patients with stage IV breast cancer who underwent chemotherapy between January 2005 and September 2009. A statistical analysis of the data concluded that non-medical services have a significant impact on treatment adherence, validating the original hypothesis. As a result, the pharmaceutical company used these insights to develop a robust chemotherapy adherence program.

mine the data to identify and implement standards of care.

### Overcoming hurdles

The evidence-based insights framework is not complicated, and its considerable benefits are clear. However, implementation is more challenging than some might anticipate. With no physical healthcare value chain to speak of, it's clear that stakeholders do not voluntarily cooperate; in fact, they often have incentives to work against one another when it comes to cost containment. For example, while pay for performance—which compensates healthcare providers for meeting specific targets—is a lofty goal, it is in conflict with a system in which physicians are often paid for performing multiple procedures.

Given these often adversarial relationships, the industry will need to overcome both cultural and regulatory hurdles before an evidence-based insights approach will be broadly adopted. To get there, players need to work through data sharing and aggregation issues; ensure ways to protect confidentiality and patient privacy; and create standard

definitions of “evidence” that market participants will accept. The industry's willingness to meet these challenges head-on will determine whether an evidence-based insights approach delivers on its promise to unify the industry in a focus on better patient outcomes.

It is likely that the industry will move toward the patient-oriented use of evidence-based insights for several reasons.

First, at its core, medicine is more science than art. Providers seek to deliver care that will result in positive outcomes, and they will gravitate toward approaches that are supported by a substantial body of evidence. In this regard, producers and payers share the same goal: to provide and fund medicine that actually works.

Second, the government, as the largest payer and one of the largest providers, can and will play a leading role in establishing an evidence-based insights approach. Government is at once a source of significant funding for basic research for producers, the engine behind payment

reform and the primary source of public policy and regulation.

In fact, payment reform is already laying the groundwork in a number of key areas that are prerequisites to adopting an evidence-based insights approach:

- Providing funding for digitizing the healthcare economy.
- Accelerating evidence-based insights research through various forms of grants and demonstration projects (for example, establishing the Agency for Healthcare Research and Quality within the US Department of Health and Human Services).
- Creating regulatory structures with the power to drive comparative effectiveness research results into the most significant portion of US healthcare spending: the care funded by the government (43 percent of the \$2.5 trillion, or \$8,086

per person, spent on healthcare flows through Medicare, Medicaid, military/veterans health programs and other services).

- Establishing the concept, through Medicare, of Accountable Care Organizations, which encourage physicians and hospitals to integrate care by holding them jointly responsible for Medicare quality and costs. This accountability will drive the integration of medical record data.

Third, the extraordinary levels of interest expressed by payers, providers and producers—many of which are already investing in the ability to operate successfully in a future built around evidence-based insights—will drive the investments and implementation based on business value. The real desire to move toward an evidence-based insights-driven model is spurring conversations and investments among players throughout the healthcare system.

The US healthcare system's current trajectory—with expenditures projected to be almost 20 percent of GDP in 2019—has become increasingly unstable and unsustainable, both from an economic perspective and in the ways it treats patients. Although the challenge is daunting, creating a common, fact-based way to standardize how patients, payers, producers and providers interact with one another will jump-start the industry's transformation into a more rational, efficient and effective system.

It's a long road, but Accenture believes evidence-based insights will become the common currency—and effectiveness and outcomes the new gold standard—that drives unification across the fragmented US healthcare system.

## About the authors

**Jim Golden** is Accenture's chief management scientist. Dr. Golden's work focuses on the development of data analytics strategy, platforms, offerings and solutions for Accenture's pharmaceutical, payer, provider and government clients. His most recent projects are in the areas of comparative effectiveness research and evidence-based medicine within healthcare R&D, as well as in physician targeting and customer lifetime value for pharmaceutical commercial marketing. Dr. Golden is based in Hartford, Connecticut.

james.golden@accenture.com

**Ann Kieffaber** is a managing director in the Accenture Health & Public Service industry group in North America. In this role, she works with US clients to leverage analytics to help payers, providers and government health agencies improve the quality of care and manage operations. Before joining Accenture, she helped build the global consulting and services capabilities for a health information company. Ms. Kieffaber is based in Washington, D.C.

ann.kieffaber@accenture.com

**John G. Edelblut**, the managing director of Accenture's North American Health Client Services industry group, is responsible for the company's regional work in health services in the payer, provider and public sectors. Previously, Mr. Edelblut was a managing director in Accenture's Global Health and Life Sciences industry group. Since joining the company in 1985, most of his work has focused on clients in the pharmaceutical, consumer products and industrial products industries. Mr. Edelblut is based in Philadelphia.

john.g.edelblut@accenture.com

**Kristina L. Gilbert** is a Philadelphia-based senior executive in the Accenture Life Sciences Strategy group. Ms. Gilbert has 15 years of consulting experience, working with major pharmaceutical companies, emerging biotech firms and startups in the life sciences industry. She has led and delivered projects across a variety of therapeutic areas, brands and commercial operations.

kristina.l.gilbert@accenture.com

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