

Why an EHR can't solve your most urgent healthcare-transformation challenges

by Dan Burton

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“EHRs alone will not provide the intelligence that physicians, group practices, and hospitals need to significantly improve both the effectiveness and efficiency of care delivery.”

The millions of physicians and staff who work at hospitals and clinics across the country have taken large, laudable steps in the right direction. One important step has been the adoption of electronic health records (EHRs). A recent study reported that 44 percent of hospitals now have an EHR, an increase of nearly 19 percent since 2011. This study by the Robert Wood Johnson Foundation, Harvard University School of Public Health and Mathematica Policy Research also shows that by 2012, 40 percent of office-based physicians had adopted at least a basic EHR system.¹

EHR adoption will continue to grow and with it, better access to important clinical information that can be helpful to improving U.S. healthcare. However, EHRs alone will not provide the intelligence that physicians, group practices, and hospitals need to significantly improve both the effectiveness and efficiency of care delivery. Although EHRs provide clinical data, they do not capture financial, patient-experience, or administrative data. Only an enterprise data warehouse (EDW) aggregates and harnesses data from all of these disparate, siloed sources for healthcare analytics that can drive dramatic improvements to the healthcare system.

The Best Health Data Is Real-Time Data: Start Collecting It

A healthcare EDW can offer immediate access to near real-time data that help prioritize and inform those improvement initiatives with the greatest upside potential.

Many health systems have a partial data warehouse, and this is a good start. But without an enterprise-wide platform that incorporates all major data sources, there can be no single source of truth providing comprehensive data that enable breakthrough analytics and significantly improve the cost and quality of care delivery.

There are two prevailing data-warehousing architectures: early binding and late binding. While the first has enjoyed success in financial services, retail, and manufacturing, this early-binding, tightly coupled model has proven incapable of accommodating the complexity and agility required in the healthcare setting. The second architecture is a Late-Binding™, bus-oriented platform used by Health Catalyst. It is meeting the data-warehouse requirements of nearly 100 hospitals, affecting the lives of more than 20 million patients. The primary virtues of a Late-Binding™ EDW are its flexibility, scalability, and time to value. For instance, Health Catalyst's Late-Binding™ data warehouse can be implemented in as little as 90 days and readily adapts to changing data content and new, evolving analytics needs.

Improving Cost and Quality of Care Delivery

At no time in the history of U.S. healthcare has a flexible, scalable platform for delivering data-driven insights been more important than it is today. With healthcare reform have come innumerable approaches to improving both the cost and quality of care delivery. Among these approaches is value-based purchasing, including payment bundling, accountable care organizations (ACOs), and value-based insurance design. More than 300 ACOs—some government-sponsored, but most commercially administered—are underway.² Each of these initiatives requires participating providers to have an unprecedented understanding of what care they deliver, how they deliver it, and the financial ramifications of individual care decisions.

In one example, BlueCross BlueShield of Tennessee collaborated with several of the state's leading orthopedic practices to define and standardize best practices in medical care that health plan members should receive before, during, and after total knee and hip replacements. Partnering providers receive single, bundled payments for agreed-upon medical services provided during these episodes, including pre-operative care, surgery, post-operative care and rehabilitation.³ To succeed in this effort, these providers need to understand how care is currently being delivered, identify the highest-value opportunities for applying best practices, drive adoption of best practices throughout their organizations, and continually monitor outcomes and refine their processes.

An EDW platform makes this possible where an EHR cannot. These platforms harness clinical, patient-experience, financial, and operational data sources across enterprises to help organizations successfully and sustainably adopt emerging models of care delivery.

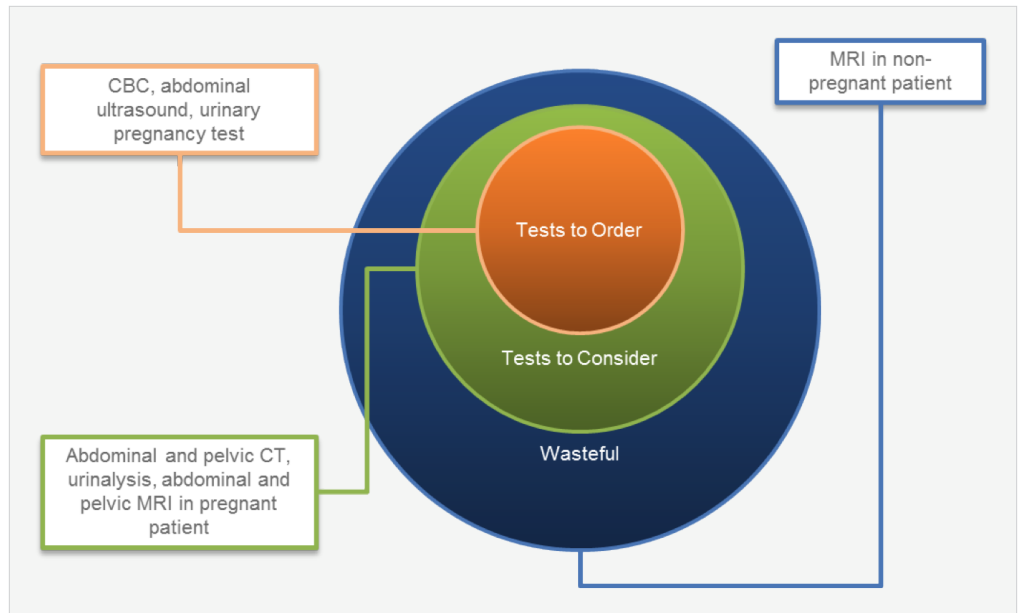


Figure 1 - Example of Acute Appendicitis

Consider the example of acute appendicitis in Figure 1. Certain tests should be ordered every time, others should be considered under certain patient conditions and still others are wasteful and should never be ordered. Functionality in the best data-warehouse solutions allows users not only to see how often various tests are ordered for acute appendicitis, but to evaluate the efficacy of ordering or not ordering the tests in accordance with evidence-based information. The EDW casts light on wasteful, costly activities in the treatment of acute appendicitis. It enables clinicians to identify unwarranted diagnostic tests, procedures, and referrals. It empowers healthcare organizations to eliminate such waste, reduce costs, and improve patient outcomes. And it allows everyone from clinicians on the frontlines of care to finance executives in their offices to see exactly how applying evidence-based practices impacts the cost and quality of care.

Conclusion: Prospering in the Wake of Healthcare Transformation

The benefits of a Late-Binding™ EDW are numerous. It can improve administrative cost-efficiencies by automating the process of harnessing multiple data sources throughout an organization. It can reduce costs by targeting unwarranted treatments and procedures for elimination. It can improve clinical outcomes by empowering a hospital or group practice to identify and then encourage the most effective, evidence-based care delivery by its physicians and staff. More than an EHR or arguably any other information technology offered today, a Late-Binding™ EDW like Health Catalyst's enables healthcare organizations to manage—not just accept—clinical and financial risk and prosper in our country's rapidly evolving healthcare industry. ♀

References:

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About the Author

Dan Burton became involved as an investor and as the business leader of Health Catalyst when it was a three-person startup. Since that time Health Catalyst has realized triple-digit annualized revenue growth, expanded its platform reach to more than 20 million patients and dramatically increased its employee base, product line and access to capital. He is also the co-founder of HB Ventures, the original investor in Health Catalyst. Prior to Health Catalyst and HB Ventures, Mr. Burton led the corporate strategy group at Micron Technology. He also spent eight years with Hewlett-Packard in strategy and marketing management roles, including building and managing a technology infrastructure business. Before joining HP he was an associate consultant with the Boston Consulting Group, where he advised healthcare systems and technology companies. Mr. Burton holds an MBA with high distinction from Harvard University, where he was elected a George F. Baker Scholar, and a B.S. in economics, magna cum laude, from BYU.

About Health Catalyst

Based in Salt Lake City, Health Catalyst delivers a proven, Late-Binding™ Data Warehouse platform and analytic applications that actually work in today's transforming healthcare environment. Health Catalyst data warehouse platforms aggregate and harness more than 3 trillion data points utilized in population health and ACO projects in support of over 22 million unique patients. Health Catalyst platform clients operate 96 hospitals and 1,095 clinics that account for over \$77 billion in care delivered annually. Health Catalyst maintains a current KLAS customer satisfaction score of 90/100, received the highest vendor rating in Chilmark's 2013 Clinical Analytics Market Trends Report, and was selected as a 2013 Gartner Cool Vendor. Health Catalyst was also recognized in 2013 as one of the best places to work by both Modern Healthcare magazine and Utah Business magazine.

Health Catalyst's platform and applications are being utilized at leading health systems including Allina Health, Indiana University Health, Memorial Hospital at Gulfport, MultiCare Health System, North Memorial Health Care, Providence Health & Services, Stanford Hospital & Clinics, and Texas Children's Hospital. Health Catalyst investors include CHV Capital (an Indiana University Health Company), HB Ventures, Kaiser Permanente Ventures, Norwest Venture Partners, Partners HealthCare, Sequoia Capital, and Sorenson Capital.

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