

ACCOUNTABLE CARE ORGANIZATIONS DRIVE DEMAND FOR DATA WAREHOUSING

Developing empirical information management capability is crucial to shifting to evidence-based care.

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“Ultimately, organizations that can use data to implement enterprise-wide improvement initiatives around clinical- and cost-effectiveness and safety will succeed in a healthcare environment that pays and holds them accountable for outcomes.”

Facing the most sweeping payment transformation in history, healthcare systems are struggling to figure out how the shift to a value-based model will impact their operations and bottom line. Simultaneously, they must also address complementary but competing priorities, such as:

- emerging shared-risk payment models such as Accountable Care Organizations (ACOs), patient-centered medical homes (PCMHs) and bundled payments;
- the deployment or upgrade of an electronic health record (EHR) to capture documentation data electronically and qualify for Meaningful Use incentives;
- new reimbursement “carrots and sticks” tied to quality and efficiency outcomes;
- transitioning to a patient-centered care model;
- a shortage of qualified health information technology (HIT) professionals; and
- overall industry consolidation.

Not surprisingly, this has strained internal resources and left many health systems just trying to stay a half-step ahead of regulatory timetables. Unfortunately, this management-by-crisis approach has led to a focus on tactical “point solutions” designed to address immediate needs at the expense of an integrated, strategic plan to address both immediate and long-term needs.

Many CIOs, along with their other C-suite colleagues, are anticipating a catharsis on completing massive EHR deployment projects. Before long, however, they come to the unwelcome realization that the EHR is just one component needed to provide the actionable intelligence health systems need to survive in a value-based purchasing environment.

Analytics packages offered by their EHR vendor and their existing business intelligence/analytics tools are not up to the task of supporting the transformation currently underway. Adaptive data warehouses and the analytical tools now available provide crucial, actionable intelligence that health system clinicians can use to identify opportunities to improve clinical effectiveness, cost effectiveness and safety.

Developing this empirical information management capability is crucial to shifting to evidence-based care required to succeed under the new, shared accountability models of value-based purchasing and risk payment models such as ACOs.

Data Warehouse Benefits

Health Catalyst® deploys a unique Late-Binding™ Data Warehouse that enables healthcare organizations to automate extraction, aggregation and integration of clinical, financial, costing, administrative, patient experience and other relevant data and apply advanced analytics to organize and measure clinical, patient safety, cost and patient satisfaction processes and outcomes. Developing this empirical information management capability is crucial to shifting to evidence-based care required to succeed under the new shared accountability models of value-based purchasing and risk payment models such as ACOs.

For instance, without an agile, adaptable data warehouse, health systems and their clinicians are unable to integrate clinical data with financial, standard costing and patient satisfaction data located in disparate transactional systems, each of which often has its own unique system for identifying patients and providers. That has prevented them from drawing significant conclusions from the insights, which integrated data collocated in a data warehouse and linked together through common linkable identifiers could provide to reduce variation in care delivery and reduce costs by improving efficiency without sacrificing the quality or safety of care.

This evolution is not simple. Healthcare organizations are complex entities. However, an adaptive data warehouse enables organizations to transform into data-driven enterprises capable of aggregating, measuring, analyzing and reporting clinical, financial and patient satisfaction performance and identifying opportunities for improvement. This can be done by department, by procedure, by disease condition, by service line, by individual physician or by any other category for which data are captured electronically

Ultimately, organizations that can produce data at those insightful levels, and use the data to implement enterprise-wide improvement initiatives around clinical- and cost-effectiveness and safety will succeed in a healthcare environment that pays and holds them accountable for outcomes.

Looking Ahead

To succeed in the future, hospitals must demonstrate quantitatively that they operate more effectively, more efficiently and more safely. This requires hospitals to identify and reduce waste in three categories: waste due to variation in the care that is ordered, waste due to variation in how efficiently that care is delivered, and waste due to variation in care delivery that cause preventable complications. Previously, waste elimination wasn't a priority because under fee-for-service (volume-based purchasing), waste generated additional revenue. According to several estimates, including a 2012 report from the Institute of Medicine, approximately 30 percent of U.S. healthcare spending in 2009 was wasteful, including unnecessary services, medical errors, poor care coordination, excessive administrative costs, fraud and other problems.

Now that public and private payers are reducing payments or refusing to pay for poor-quality care, including care that is defective or unsafe, waste is becoming a financial drain on hospital bottom lines. For example, last October the Centers for Medicare and Medicaid Services (CMS) withheld a percentage of Medicare payments

to almost 1,500 hospitals because of high rates of patients readmitted within 30 days of being treated. At that time, CMS also expanded the list of preventable hospital-acquired conditions it won't pay for from nine to 11. Those hospital-acquired conditions include, for example, pressure ulcers; injuries caused by falls; central-line and urinary catheter-associated infections, and surgical infections resulting from artery bypass grafts, bariatric surgery for obesity and certain orthopedic procedures.

Clearly, these new CMS reimbursement policies and other industry quality measures linked to payment are pressuring hospital bottom lines more than ever. To stay profitable and remain competitive, organizations today must make clinical and operational excellence an ongoing priority. This is where an adaptive data warehouse and analytics can provide quantitative support for process improvements to reduce medical errors and the unnecessary use of high-cost services. It can also provide insights into waste tied to excessive diagnostic tests and procedures ordered to minimize exposure to malpractice, as well as other situations where the care provided is neither effective nor efficient. With proper information management support, healthcare systems can provide care that is more effective and safer at a lower cost. 🏡



David A. Burton is Executive Chairman of Health Catalyst, which provides hospitals and health systems with adaptive data warehousing and advanced healthcare analytics to transform clinical, financial, and patient safety outcomes.

Dr. Burton is a former Senior Vice President of Intermountain Healthcare, where he served in a variety of executive positions for 26 years. He spent the last 13 years of his career co-developing Intermountain's clinical process models utilized within the EDW environment. Dr. Burton is the former founding CEO of Intermountain's managed care plans (now known as SelectHealth), which currently provide insurance coverage to approximately 500,000 members.

He holds an MD from Columbia University College of Physicians and Surgeons and did his residency training at Massachusetts General Hospital in internal medicine. He was a charter member of the American College of Emergency Physicians and was Board Certified in Emergency Medicine. He practiced emergency medicine and was president of a single-specialty group of 20 emergency care physicians for nine years before joining the executive team at Intermountain.

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