

## FEATURES

# Business Intelligence and Value-Based Care

**By bringing together data from different sources, hospitals can pinpoint more valuable data elements.**

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At this year's HIMSS conference, to no one's surprise, topics such as data integration, population health and interoperability were the focus of many conversations.

In particular, discussions around the shift from volume-based care to value-based care were a big focus for IT leaders - and rightly so.

Just last year, the U.S. Department of Health and Human Services set a goal of tying 85% of all traditional Medicare payments to quality or value by 2016 and 90% by 2018 through programs such as the Hospital Value Based Purchasing and the Hospital Readmissions Reduction Programs.

As a result, the focus among hospital executives has shifted to how hospitals and health systems can improve metrics and ultimately succeed in a value-based world through gathering and analyzing available data.

### Giving Data Meaning

While several years ago the main focus for hospitals was ensuring that the data in their EHRs was in compliance with government mandates (e.g., [Meaningful Use](#)), that expectation has now evolved to the need for hospitals to actually understand the data and use it to improve outcomes. Rather than hospitals and health systems fearing they will be penalized for failure to comply with Meaningful Use, they are now being held accountable for failing to achieve optimal outcomes.

With this shift in pressure to achieve value-based goals, it is critical that hospitals and health systems better understand how to turn their data into actionable insights. The good news is that 98% of healthcare institutions are already effectively using an EHR which compiles the majority of data needed. However, the next step is determining how to give the data meaning. This requires looking outside of an EHR and into other important health information systems (HIEs) - hence, the substantial focus on interoperability and HIEs at HIMSS.

By bringing together data from different sources, hospitals are able to pinpoint more valuable data elements and have a clear view of the entire picture. Rather than just analyzing operational data, hospitals can focus on the continuum of analysis - or how the data can be used in a multitude of areas to lower costs, gain insights into population trends, and ultimately improve patient care. However, the issue hospitals face is being able to take this sea of data collected within the EHRs and understand how to apply that data to drive better outcomes.

That's where business intelligence comes in.

Business intelligence tools enable hospitals and health systems to get a clear picture of exactly what is going on inside their systems so that they can make better, more informed decisions. By defining the measures needed to track and



trend data over time, hospitals are able to drive valuable insights into where improvements can be made for better outcomes. In addition, healthcare providers can determine how they are performing compared to their peers while identifying opportunities to improve the care they provide to their patients.

### **Bringing Value to the Real World**

As the industry pushes towards a value-based care model and hospitals are focused on increasing quality and reducing the cost of care, the need for business intelligence is greater than ever. One health system in Cumberland, Maryland experienced firsthand how business intelligence can drive improvements in an organization as it underwent the shift to value-based care.

With Maryland being the first state in the nation to be granted a waiver from Medicare rules, the state had the flexibility to implement its own quality-based program under the Maryland Health Services Cost Review Commission (HSCRC). Starting in 2009, the HSCRC initiated payment adjustments to hospitals' rates according to their performance on a set of quality indicators that reflected care quality and patient outcomes.

For the 205-bed Western Maryland Health System, this was a challenging proposition, especially since the health system ranked last out of the 46 hospitals in the state under the first year of the quality-based Maryland reimbursement model. However, Western Maryland turned its system around by being prudent with its resources and gaining insights into what would help it improve performance on the quality indicators that determined reimbursement. This turnaround was due in large part to the implementation of a business intelligence solution which enhanced the integrity of the data submitted.

The implementation goal was to provide Western Maryland with a "one-two punch" of identifying ways to reduce costs while also improving the health of the population it serves. In doing so, the health system set forth on a series of specific projects aimed at using a data-driven approach to improving the quality of patient care. The results of this approach were quickly realized as hospital administrators were able to identify ways to reduce costs while concurrently improving the health of their patients. By tackling care delivery on multiple fronts, Western Maryland was able to realize the benefits of improved patient follow-up care, fewer discrepancies, fewer financial penalties and a positive revenue swing.

The results? For starters, Western Maryland went from last of the 46 hospitals in terms of in quality-based reimbursement measures to first in the state. In terms of return on investment, the health system went from approximately 150 patient mismatches monthly to zero mismatches, shrinking its care gap significantly. In addition, Western Maryland went from losing \$1.2 million in quality-based reimbursements in fiscal year 2012 to gaining \$1.3 million in FY 2014. Perhaps most importantly, Western Maryland's patients benefitted from the improved insight. In 2011, there were 1,972 patients who accounted for \$140 million in costs. By 2014, that number had dropped to 1,300 patients with associated costs of \$80 million.

This example of Western Maryland serves as a proof point to the value of an effective business intelligence solution in the shift from volume to value. So, when thinking about the challenges that come with value-based care, it is important to remember that business intelligence tools provide the foundation needed to succeed in this new world of healthcare.

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