

## Bending the Cost Curve

Laboratories are positioned to generate the diagnostics and business intelligence needed for true value creation

By Lâle White  
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The systems and information infrastructure needed to support value-based healthcare is undergoing a major evolution as the industry shifts to new business models that incentivize quality outcomes. Laboratories are well-positioned to drive this shift, due to the fact that 70 to 80 percent of therapy decisions are based on laboratory diagnostics. When combined with comprehensive financial information, labs generate the data, business intelligence and analytics needed to help optimize patient care and reduce healthcare costs. Let's take a closer look.

### Lab Data in the Value Framework

The Affordable Care Act (ACA) is forcing the move toward value-based reimbursement, and we are seeing collaborative, risk-based efforts throughout the industry to ensure the best health outcomes at the lowest cost. The Blue Cross Blue Shield Association recently announced an estimated savings of about \$1 billion in 2013 across 37 of its companies through the implementation of various patient-centered and value-based programs focused on prevention, coordinated care and giving providers real-time patient data to help transform their practices, among other initiatives. The Department of Health and Human Services (HHS) has stated that 50 percent of all Medicare payments will be based on quality and value metrics by 2018. Moving forward, one of the significant challenges facing the healthcare industry will be developing the quality, cost and outcome measures needed to consistently determine and reward value.



Since diagnostics are the foundation of patient care decisions, labs will play a pivotal role in the value-based framework by helping to ensure the appropriate ordering of diagnostics and the appropriate interpretation of results that lead to the right evidence-based therapies. With the explosion of new diagnostics and the rate of change of diagnostic technologies, the laboratory knows best the circumstances under which a test should be ordered and how to determine the right therapy choices based on the result.

Establishing value will be particularly important in the development and clinical use of new laboratory and molecular diagnostic tests to drive precision medicine. As discussed in the article, [Pay-For-Value Genetic Tests](#): as part of sharing risk, payers will need to collaborate with diagnostic providers to ensure they can provide guidance for physicians, so that appropriate tests are ordered to facilitate actionable results that produce good treatment decisions. There is ample room for improvement, with a staggering \$374 billion in medication expenditures in the U.S. annually - nearly half of which, according to a McKinsey & Company study, was spent in 2008 on drugs and therapies that were ineffective for patient treatment.

Along these same lines, we will also see the continued growth of integrated diagnostics and consolidated reporting between oncology, pathology and radiology services, where results are correlated at the individual patient level to enhance the multi-disciplinary care team's ability to improve diagnosis, treatment and patient outcomes.

As complex data and differing workflows and work schedules have evolved to an environment where curbside conversations are insufficient to collaborate and coordinate care, technology plays a significant role in enabling team members to collaborate, consolidate and share information to achieve optimal results.

### **Clinical Decision Support**

With the continuing evolution of precision medicine and the growing complexity of new clinical and molecular diagnostic tests to support personalized medicine, it will be increasingly challenging for physicians to keep up with the latest information related to specific treatment decisions. Achieving success in healthcare reform will be made significantly easier with the use of clinical decision support tools and technology to help guide the appropriateness of test ordering and treatment decisions.

In a value-based model, clinical decision support will be more important than ever to help improve the accuracy of laboratory test selection and result interpretation early in the treatment process, as well as to provide access to evidence-based protocols and guidelines for effective patient management to help reduce treatment costs. Technology will facilitate the delivery of real-time clinical decision support to the provider's desktop or device anywhere in the care continuum as part of an integrated data platform. Such a platform will also allow providers and other stakeholders to connect electronically to support the information exchange needed for value-based healthcare.

### **Business Analytics and Population Health Management**

Value-based care models encourage keeping a given patient population healthy to reduce costs with a focus on chronic disease prevention, treating the patient at the least costly care setting, monitoring medication and treatment compliance and patient self-management through healthy lifestyle choices.

This changing dynamic requires flexible and integrated information systems and data platforms that capture, manage and interpret information to provide the intelligence needed to help evaluate both populations and individual patients. Specifically, population health management strategies

aggregate clinical, financial and operational data and generate actionable business analytics. These analytics are used at the patient and population level to help evaluate clinical outcomes and costs - not only for the purposes of identifying patients at high risk for disease, but also to improve efficiency and care management. Part of this includes assessing what lab tests were performed, or which tests should have been done to achieve the best outcomes.

Advanced business intelligence or predictive analytics systems can also apply rules to data or patterns of data. These systems automatically compare diagnosis codes with other relevant data to evaluate clinical outcomes, or embed rules to assess measures such as likelihood of complications or patient readmission. Intelligent systems form the basis for healthcare reform by combining large amounts of clinical and financial data to identify the most cost-effective procedures or to help calculate the likely cost of caring for a particular condition or entire population.

Laboratories and the data they produce will always be at the heart of healthcare, and both are now uniquely poised to help organizations thrive in a value-driven health model. Health economic analysis is also heavily reliant on claims data as the baseline to calculate the costs and risks of a particular population. Not only is claims data scrubbed and standardized, but it provides an accurate view of services provided, including the specific lab diagnostics and medications that were administered. When combined with other diagnostic clinical data and value-based measures around quality and outcomes, we have the basis for intelligent decision-making that can be embedded into the care process to help drive favorable patient outcomes and enhanced reimbursement.

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