

How Big Data Is Helping to Re-Shape the Health Care Industry

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As technology continues to permeate our day-to-day lives, nearly every sector of the market is compiling massive amounts of data that they are using to increase efficiencies, customize marketing efforts, and develop innovative new products. Although data analytics within the healthcare sector is still in its infancy, it has already begun to re-shape how the U.S. healthcare system operates.

Historically, the U.S. healthcare system has been driven by a fee-for-service model where providers bill for individual services when rendered. One criticism of this model is the lack of incentive for providers to collaborate with each other, creating significant inefficiencies which lead to unnecessary costs. Our research suggests that current healthcare sector weakness reflects investor concerns stemming from these inefficiencies, and the realization that such practices will likely be unsustainable moving forward.

A New Approach

A bundled payment approach, where care is billed by episode of care as opposed to individual service, was tested during the Clinton administration. However, the initiative failed, largely due to a lack of data that could be used to effectively establish payment guidelines. Such data constraints have since been eliminated, due in large part to the Affordable Care Act which mandated that providers implement electronic medical records (EMRs).

The EMR requirement created a very rapid shift to granular electronic information flow. As such, payers, providers, and the government all soon realized that they now have access to an unprecedented amount of patient data. Since then, the government has used the data to re-visit the bundled payments model through the Center for Medicare and Medicaid Innovation Center's Bundled Payment for Care Improvement (BPCI) initiative. The primary goal of the initiative is to test whether the bundled payment model can be successfully implemented to reduce healthcare costs while maintaining or improving patient care outcomes.

Improved Outcomes

As hospitals and providers are paid in one lump sum under the bundled payment model, they have been faced with the challenge of determining the most efficient way of utilizing the dollars, often across multiple providers, without compromising patient care. As such, they have been looking at big data to determine best practices for treatment based on empirical evidence in an effort to identify the most successful treatments and standardize treatment protocols.

Simultaneously, there has been increased collaboration among providers due to government subsidies promoting information sharing across provider networks. The results



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have included broader access to comprehensive patient data and a reduction in redundant diagnostic tests, offering doctors the ability to make improved judgments in care.

While the BPCI initiative is only in its third year, early results have been promising. Preliminary data suggests this new approach is helping to save lives and increase cost savings, which is good news to Medicare, as well as providers who have been operating in a thin margin environment.

Under the bundled payments model, providers will take on an increasing amount of financial risk, incentivizing them to redesign care in a more thoughtful way. Whether this model is widely adopted remains to be seen. However, we expect the future healthcare marketplace will be led by those companies that are able to navigate the changing environment while continuing to innovate.

Impact on Investing

For long-term investors, finding such opportunities will likely require looking beyond near-term weakness, and identifying companies that can successfully adapt to the new payment model.

- ❖ In the products subsector, we anticipate market leaders will include those companies with risk adjusted advantages in the research and development of value enhancing therapeutics as the uptake of higher priced drugs and devices will require greater justification under the new model.
- ❖ In the services subsector, long-term competitive advantages will likely be driven by the ability to innovate service offerings by utilizing big data. As bundling decreases the absolute value of capital within the healthcare system, payers, like providers, will be looking to determine how to best allocate resources.

As healthcare expenses continue to rise, there is a clear need for change within the sector. Big data has the potential to drive such change, creating value within the sector and improving patient care. With the changing landscape, adaptability and innovation will likely be the keys to achieving long-term competitive advantages.

Finding opportunities within the healthcare space will likely require looking beyond near-term weakness, and identifying companies that can successfully adapt to the changing landscape.

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