



ENSURING THE DATA WAREHOUSE “PATIENT” SURVIVES THE OPERATION

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“**T**he operation was successful but the patient died.” This expression, derived from how surgeons sometimes reference surgical outcomes, is used across many industries to describe all manner of business projects that failed despite all the mechanical aspects being performed “correctly.”

There is a bit of irony in other industries borrowing this expression from healthcare, because one of the buzzword projects in the industry right now – the data warehouse – often falls squarely in the middle of that description.

Many healthcare organizations of all sizes are aggressively pursuing the implementation of a data warehouse. They’re doing it because they’ve been led to believe that a data warehouse is the key to using advanced analytics to take advantage of all the big data they’ve accumulated over the years.

There is some truth in that statement. A data warehouse does make it easier to organize large volumes of data, break down siloes to incorporate multiple varieties of data in a single analysis, and do it all at greater velocity. Those

three Vs - volume, velocity, and variety – have proven their effectiveness across many industries.

Healthcare, however, isn’t many industries. It’s unique in its data analytics needs because unlike manufacturing widgets, where every piece is supposed to be like every other piece, each person is a set of variables unto him or herself. Taking a set of individuals and rolling up their data in a way that can be measured and managed from a population viewpoint requires more than creating a system that is bigger, better, and faster once you flip the switch.

It also requires an understanding of the value of the data that can only come from one place: the business users.

Not just a technology challenge

Where most healthcare data warehouse projects go wrong is that they are viewed, by the vendors and the clients, primarily as a technical challenge. They base their key performance indicators (KPIs) on typical, easily measured parameters such as speed, throughput, and volume. If they hit those numbers, they consider the project a success.

But in healthcare, especially with the transition from fee-for-service to value-based, outcomes-focused care, those traditional measures are not enough. The real value is in things like improving the health of individuals and populations, which requires understanding not only why they are sick but how to keep them well; how to reduce the cost of care while maintaining or improving quality; and how to ensure patients are satisfied with the care they are receiving and what it costs them.

The technical staff can't provide those answers; it's not their area of expertise. It takes physicians, nurses,

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and other clinical staff, as well as financial leaders, supply chain and procurement experts, and other business users who understand the complex day-to-day needs and expectations of their departments.

These experts must be included from the beginning, because they are the ones who can explain what types of reports, dashboards, and



other big data analytics outputs will help them do their jobs better so the organization can achieve its business goals. This means they must be accounted for in the financial planning and timetables for the data warehouse project as well. After all, those business users have rather important day jobs, and since the best answers will come from experienced leaders in those departments the most desirable experts are the ones with the least time to spare. Yet without their input, the likelihood of a successful implementation goes down exponentially.

Achieving value

What all of this means is that before organizational leaders even think about what software or hardware to purchase, or data architects begin laying out the functional design, the first question the organization must ask itself is "What value are we trying to gain from a bright, shiny new data warehouse?"

It can't just be about cutting costs, or getting faster at generating reports no one will read. That's not value. The answer instead will be how the benefits that come with

implementing a data warehouse will help transform the business.

For example, a health payer may need to do a better job of understanding what its members' needs are when they age out of traditional health plans at the age of 65 and become eligible for Medicare. How can they structure their Medicare Advantage plans in a way that will not only keep that member on their books but help them live healthier (and ultimately less costly) lives? Since another 10,000 Americans cross that threshold each day, that's a valuable answer to obtain from a business perspective – and a value-based reason to put a data warehouse in place.

For a provider, it could be gaining an understanding of variations in treatment to help improve quality and reduce costs, or identifying the source (and causes) of network leakage. Those are business issues that will be important to business users – and to the success of the organization as a whole.

Finding the right reasons

Data warehouses are hot IT projects in healthcare right now, and adding the words "big data analytics" to an IT proposal is a good way to get it approved. But those aren't good enough reasons to take on such a time-consuming and expensive undertaking.

By planning for business users to participate in determining the actual value and desired outcomes, and keeping them involved throughout the project, healthcare leadership can decide whether implementing a data warehouse is a good investment of limited resources and can achieve a faster ROI. All of which will not only make the operation successful; it will also ensure the healthcare organization "patient" thrives. 