Build a data-driven health organization with these three considerations

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Data access is increasing, so what do we do with it?

Today, healthcare organizations have access to unprecedented amounts of clinical and operational data thanks to high levels of EHR adoption and transitions to other electronic systems over the last decade. Some organizations have begun to use this data to drive emerging strategies and operational processes, such as those required for value-based care. Health systems 10 to 15 years from now will have new, more complex data that provides even deeper insights, and being a data-driven organization will be necessary to compete and survive.

The transition to the health system of the future demands that healthcare organizations begin treating data as a strategic asset, with processes and systems that allow the right data to inform decision-making and drive actionable results. This data will enable patient centricity and allow organizations to become more responsive to their populations and evolving payment models.

Not all organizations have developed the capabilities to use data to achieve key business goals (as described in figure 1); much less are they planning for the health system of the future. According to HIMSS Analytics, only 30% of US hospitals use a clinical data warehouse, and only 33% of healthcare organizations use business intelligence tools. Experience from other industries shows that organizations emphasizing data-driven decision-making have output and productivity 5%-6% higher than their peers', and top-performing organizations use analytics five times more often than lower performers do. Recent research lends further support to the relationship between data-driven organizations and financial and operational performance. Big data is a major differentiator for high performing organizations as it increases revenue (8%) and can reduce operational costs. In a value-based world where performance and reimbursement are increasingly calculated through comparison to a provider’s peers, as designed under MACRA, striving to be a top performer is a business imperative. Enriching daily operations with analytic outputs can help organizations develop the data-driven decision-making capabilities that are necessary to execute on a variety of emerging strategies and thrive.

Figure 1: Business Goals Supported by Data Analytics
I. Data-Driven Organizations

Data-driven organizations have developed capabilities to use internal and external data to understand the health of their business, achieve operational excellence, and shape competitive strategies. In a Value-Based Readiness Assessment an outside organization, like ECG, looks for systems and tools in place to integrate and analyze data, organizational structure with leadership and staff to support data analysis and interaction with business units, and processes to disseminate data throughout the organization and create a culture where performance data is regularly shared and used to drive decision-making. Across the industry, we have observed trends in these areas.

A. Determining the Right Tools for Your Organization

Data-driven organizations have data warehousing and analytics systems in place that support rapid access to accurate and actionable information. No single analytics or warehousing solution is right for every healthcare organization; there are several options to choose from:

- Claims-based analytic systems
- EHR-based clinical analytic modules
- Population health management (PHM) analytics platforms with integrated data
- Enterprise-wide data warehouses with clinical and business analytical capabilities

The key is to determine which options best fit your organization’s analytics needs, with the flexibility to adjust to meet future needs.

1. Finding Solutions

Selected solutions must be flexible to support integration with up to 50 different source systems that are used across and beyond the enterprise to meet a variety of business, clinical, and/or population health operations. Most organizations do not need highly complex data warehousing and analytics, especially at first. Many may initially support their business needs with targeted solutions that analyze data from just one or two source systems. As organizations mature in their use of data, more integrated and complex data warehousing and analytic solutions are used to support system- or function-wide data integration.

For example, organizations that are transitioning to value-based care may initiate many PHM pro-grams with simple analytics driven from EHR analytic modules or claims data analytic systems only. Using these reports, organizations can develop lean, targeted strategies to realize savings. As contract portfolios, provider networks, and analytic requests become more complex, organizations turn to more robust tools like PHM platforms to integrate the disparate data sources and create longitudinal patient records that support a variety of analytics.

Value-based care is largely dependent on analytics to monitor quality, find appropriate patients for intervention, and determine costs. The popularity of value-based strategies has created a surge in analytic vendor offerings targeting specific value-based goals in the last few years. However, as data-driven organizations begin to incorporate the use of data into all business processes, analytic systems to support other business processes like supply chain and operations improvement are also becoming more popular.

The health system of the future will likely be selecting from a new market of systems and tools with expanded capabilities to store and integrate data for a variety of business needs. The evolving marketplace and the evolution of business strategies further emphasize the need for flexibility in systems strategies.

2. Avoiding Common Pitfalls

A common mistake as organizations develop data-driven processes is overfocusing on the selection of tools without corresponding investments in appropriate talent and processes to derive value from the tools. While tools are critical to transform raw data into information to support the business, tools and systems alone will not transform a business and create performance improvements.

B. Organizing and Leading Analytic Teams

Data-driven organizations have also built organizational structures to conduct data analytics and manage the flow of information across the enterprise. At a basic level, this involves having staff to use analytic tools to meet the most pressing business demands for information. As organizations evolve, this staff will grow, and a more mature structure and departmental organization will emerge to oversee and manage the use of data. This structure can continue to respond to data requests from business units while also focusing around the optimization of systems and data integrity.

1. Developing Teams Focused on Data

The development of teams and departments focused on the optimal use of high-quality data is a relatively new concept, and organizations have taken varied approaches to organizing and leading this work. Traditional technology-focused leadership roles are more prevalent than roles that are more deeply focused on clinical analytics such as the chief data officer (CDO) or chief analytics officer (CAO).

According to InformationWeek, approximately 17% of CEOs planned to hire a CDO by the end of 2014, while over 75% of healthcare organizations have a CIO. Even CMS only named...
its first CDO in 2014. However, most organizations plan to fill the leadership gap: 90% of large organizations plan to have a CDO or CAO by the end of 2019.8

CDOs are becoming more prevalent in part to alleviate the burden the emerging need for data analytics places on CIOs. Changes in the macro environment are driving the perception that transforming data into information is a function integral to business strategy and execution but very separate from the traditional role of the CIO.

The work led by the CDO and CAO requires specialized skill sets, but only 62% of facilities report the existence of a permanent clinical data analysis team to support safety and quality initiatives. Moreover, 40% of CIOs surveyed by Gartner said their biggest talent gap is in the area of information and analytics. Analytic staff remains a challenge for most organizations; it can be difficult to recruit the right skills in rural markets and difficult to compete for the best talent in urban markets.

2. Scaling Analytic Resources
Because demand for this talent is new, most organizations will struggle over the next few years to scale up appropriate staff analytic resources and organize them into an effective operating structure that responds to different departments’ competing demands. As quality and value-based care initiatives grow, so too should the talent analyzing data to ensure results. Thoughtful organizational planning for information management (IM) teams should involve integrating these teams into the business units to support sensitivity to the business requirements driving the IM work. Many effective organizational designs create liaisons between IM and the business units; this is often accomplished through a hybrid organizational structure or a joint committee structure. The health system of the future will be so heavily data-driven that most operational staff will be direct consumers of data outputs and users of analytic systems, which means that norms in organizational structure will continue to evolve.

C. Incorporating Data into Company Culture
In data-driven organizations, stakeholders at all levels can readily quote statistics related to their departmental or organizational performance, and performance dashboards are commonly seen posted on conference room walls. Getting to this point requires significant cultural change. While investment in tools and resources demonstrates leadership’s commitment to transformation, creating transparency regarding performance against measurable strategies can have a much more significant impact on culture.

1. Top-Down Data Initiatives
At the highest level, top-down data initiatives often require that leaders set organizational strategies to include demonstrable measures of success. Additionally, specific tactics and goals must be named that will drive achievement of the strategies. Defining strategies, tactics, and operational initiatives with measures of success can create a top-down cultural transformation that clarifies the staff skill sets needed and where staff at all levels understand their contributions.

2. Bottom-Up Data Initiatives
At the same time, culture can change from the bottom up when targeted, small-scale processes, enabled by new access to data and monitored for effectiveness with a small set of measures, demonstrate significant value in a focus area. This is often the case for value-based initiatives with a focus like quality improvement. Tools and systems must first be enabled to measure quality. Two examples are care gap programs to improve quality performance and improved collections through revenue cycle management. With tools in place, a new workflow can be implemented to contact patients needing services and prepare orders for providers to drive the closure of care gaps. Monitoring quality measures will highlight improvements in scores over time or the achievement of a specific target level. Because of their targeted scope and the immediate visibility of their impact on reimbursement tied to quality performance, care gap programs are prevalent value-based initiatives that often result in expansion of data-driven value-based programming. Using data effectively in support of key business goals and performance targets—even if the wins are small—is the single most important way to advance culture change and continue toward becoming a data-driven organization.

Effective and regular dissemination of data, particularly performance data, can alter individual and departmental behavior toward measurement improvement as well. Such dissemination often increases individual end-user and enterprise-wide appetite for data. Having the appropriate data management structure in place can help put controls on how IM and analytic resources are deployed to respond to this increased appetite. Leaders of the various operational areas should understand and prioritize analytics related to those initiatives that contribute most to achievement of the organizational strategy rather than consuming analytic resources with curiosity-driven requests.

II. Implementing a Data-Driven Culture
Becoming a data-driven organization requires thoughtful planning around:

» The information needed to achieve organizational strategies.
Available data sources.

Gaps in the systems and resources needed to translate raw data into reliable, accurate, clear, and timely information.

Many organizations begin transitioning to a data-driven organization somewhat unintentionally as they quickly prepare for the analytic requirements of value-based care and respond to cost pressures. After seeing the benefits of data-driven decision-making and access to information related to execution of specific strategies, organizations can continue to build more mature IM strategies and staffing and system solutions to support more and more processes over time, as seen in Figure 2.

While fully integrated enterprise-wide solutions to simplify processes around use of a single system may be intriguing, that level of data integration is expensive and isn’t usually necessary. There are analytic solutions available at very low cost levels to support specific business needs and help organizations get started on their transformation to becoming data driven. Organizations should understand their short- and long-term business goals to avoid under- or overinvesting in data analytics solutions (as well as staff to use the systems and execute the business processes). Wise investments in specific small-scale solutions in the early stages of an organization’s transition to data-driven processes for quality measurement, for example, are known to generate significant returns if processes and support are built around the tools to drive changes in daily operations that affect reimbursement. Most organizations should start small, with targeted solutions to address specific business needs, to allow cultural change to happen slowly, with ongoing reinforcement from demonstrated program success. Conducting an assessment of current information needs, as well as the systems and structures available to respond to business requirements, can help an organization design an appropriate strategy to manage the growing demand for data across the enterprise. To be truly competitive, health systems should be planning the integration of data into their organizational strategy 10–15 years in the future. They should consider the tools they will use, the workforce those tools will require, and their organizational design, as well as how they will scale their plans.

Figure 2: Transitioning to a Data-Driven Organization

References