Digitally Driven:
Link Technology to Process Change

By Barry P. Chaiken, MD, MPH

While many organizations recognize the need to become digitally driven to survive in a value-based contracted healthcare marketplace, many providers struggle with creating a provable strategy to achieve success. Measuring digital success via number of dashboards delivered fails to recognize the limited capacity of managers and staff to ingest dashboards and meaningfully act upon them. Digitally driven organizations tie each dashboard to specific objectives of the organization and ensure that users find the dashboards helpful in completing their work.

There are essentially two types of dashboards: point analytics dashboards and surveillance dashboards. Point analytics dashboards, sometimes described as ad-hoc analytics reports, focus on examining data to identify the potential cause of an unwanted outcome. They allow organizations to investigate an out-of-control process and identify potential actions to correct the process and improve outcomes. These dashboards are situated outside normal workflow and are brought into use only when required.

Surveillance dashboards offer organizations a means to monitor processes and identify areas requiring staff attention. They fit within staff workflow and are used regularly to track results delivered by one or more processes. Transactional systems such as electronic medical records (EMR), enterprisewide administrative tools (e.g., finance, human resources), and registries provide the data that feeds these dashboards.

Steps to becoming data driven

Building a data-driven healthcare organization requires many integrated components

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and adherence to a blueprint to achieve success. Organizations must first identify overarching goals and tie specific objectives to those goals. From there, they develop more specific objectives and choose metrics that accurately assess how the objectives compare to actual results.

Next, organizations identify processes impacting those metrics to develop surveillance dashboards that bring together processes and their related metrics. These dashboards become the standard means for staff to monitor processes and identify when further investigation or intervention is required. For example, dashboards that bring together emergency department (ED) wait times with ED staffing metrics may indicate areas where adjusting staff levels can get patients seen faster. Providing the information in one place makes it easier for staff to identify the cause of a problem and take steps to fix it.

Agreeing on goals, objectives, and metrics allows for creation of a solution blueprint that builds a data-driven organization. Components of the blueprint include technology, training, dashboard development, and change management.

Technology
The enormous growth in available transactional data offers a path to

valuable insights. While data analysts may possess the knowledge to investigate these data sets, end-user knowledge workers are equipped to obtain meaning from the data. Therefore, analysts and knowledge workers must work together to build valuable surveillance dashboards.

Technology can help in this work by offering easy-to-use functionality with a focus on visualization of the data rather than dense statistical reports. Dashboards constructed through skillful visualizations tell a story about the data. They effectively utilize end-user functionality such as filtering–used for data stratification–and explanatory windows triggered by hovering over a data point. This allows the knowledge workers to dive into the data in a way that is meaningful to their tasks.

Training

While training data analysts is an obvious path for the deployment of new analytics technology, similar training for knowledge workers is also a key task to successfully deploy dashboards. Analyst training focuses on data management, data governance, and other technical items. Knowledge worker training teaches end users how to think about and visualize data to answer questions and monitor processes.

While knowledge workers may not build sophisticated dashboards themselves, this education allows them to describe to analysts what data they need and how they would like to view it. Training both analysts and end users builds a chain of common-language conversation that enhances the work of both groups.

Dashboard development

Effective dashboard development requires deep understanding of data, data governance, and visualization technology combined with broad healthcare knowledge, both administrative and clinical. Due to the competition for data analysts and scientists, provider organizations struggle to secure these resources. They face great difficulty competing with for-profit organizations in other industries that offer higher salaries with equity incentives. Even large integrated delivery networks offering attractive research opportunities find it hard to compete for talent.

Therefore, securing outside help in dashboard development is the only practical way to become a digitally driven organization within a reasonable time frame. Consulting partners bring expertise gained from working with other like organizations. Their expertise includes working with similar data sources (e.g., Epic EMR) and creating dashboards to address familiar problems such as the management of value-based contracts.

In-house experts, including technologists and knowledge workers, collaborate with partners to build out a blueprint for effective dashboard deployment that helps achieve organizational goals. Dashboards are strategically built with metrics identified to monitor their impact. Once constructed, in-house talent can modify the dashboards as the organization's needs change.

Change management

The final step in becoming a digitally driven organization is implementation of a change management process. Failure to modify processes practically guarantees that observed outcomes will remain unchanged. While dashboards may indicate the need for a change in a process, no changes will occur unless managers first embrace the use of dashboards in their work.

Therefore, organizations must adopt a change management process that makes dashboards integral to each staff member's work. In addition, dashboards must be specific to workers' roles, inform them on their work, and fit within their normal workflow. Once a dashboard becomes part of the manager's workflow, the inherent value of transactional data is released to achieve outcomes and meet organizational goals.

A MEANINGFUL BLUEPRINT FOR A DIGITALLY DRIVEN HEALTHCARE ORGANIZATION LEVERAGES ALL AVAILABLE TRANSACTIONAL DATA THROUGH GREAT TECHNOLOGY, TARGETED TRAINING, PARTNER ENGAGEMENT, AND EFFECTIVE CHANGE MANAGEMENT.

A meaningful blueprint for a digitally driven healthcare organization leverages all available transactional data through great technology, targeted training, partner engagement, and effective change management. This path delivers meaningful improvements in identified metrics, thereby allowing the organization to efficiently deliver patient care while continually monitoring processes to adjust to changes demanded by payers, patients, and the marketplace. ✱

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