KLAS: Business Intelligence Use Varies, Epic Systems Leads Adoption

Providers are using a wide range of healthcare business intelligence vendors for an equally wide range of uses, resulting in BI use and outcomes variation, KLAS reports.

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August 20, 2018 - Health IT giant Epic Systems has the deepest adoption of healthcare business intelligence solutions, but healthcare organizations are also increasingly seeking the advanced data analytics tools offered by Jvion, HBI Solutions, and other newcomers, a new KLAS report showed.

In its "Healthcare Business Intelligence 2018: Who's Advancing Data Analytics & Infrastructure?" report, KLAS interviewed three innovative clients of major and emerging healthcare business intelligence vendors to identify and validate which advanced analytics functionalities healthcare organizations are using and what outcomes they have realized using the tools.

KLAS researchers found that it is a mixed bag with healthcare business intelligence tool adoption and use.

Epic Systems had, "by a significant margin, the deepest adoption of advanced functionalities among their customers with most advanced solution usage," the report stated.

The health IT giant best known for its EHR systems has not historically been a healthcare data analytics leader, KLAS noted. But the report found that Epic EHR users are looking to the vendor for more business intelligence capabilities, including predictive analytics, machine learning, artificial intelligence, embedded analytics, and natural language processing.

"Epic clients are consistently leveraging the vendor's predictive algorithms for best-practice alerts, readmissions, and decision support," the report added.

However, clients told KLAS researchers that Epic's native analytics technology is "still immature." They explained that integration is improving.

But the users still turn to Epic Systems for business intelligence tools because of the vendor's exclusive healthcare focus, support system, and economies of scale. These advantages "suggest that customers will one day bring in Epic to replace older, clunkier, more expensive solutions assuming Epic can make their analytics solutions robust

enough to handle large organizations' needs and establish a cost structure that doesn't leave customers feeling so nickel-and-dimed," the report stated.

Overall, business intelligence solutions from Epic Systems earned 85.6 points out of 100 points from clients.

However, the health IT giant did not score the highest in terms of client satisfaction, solution usability, and the outcomes realized from the tool.

Newcomer HBI Solutions earned the highest overall score with 91.3 points. Although, KLAS noted that the business intelligence tool was only used by less than 15 individuals in the survey.

Other business intelligence vendors new to the healthcare space also ranked high among survey respondents. Jvion's embedded business intelligence solution earned 84.5 points (less than 15 individuals scoring), Qlik earned 81.2 points, and Tableau earned 84.8 points.

"Many healthcare organizations are looking to smaller, focused analytics vendors to supplement their core business intelligence capabilities," KLAS researchers explained.

But again, the use of the business intelligence tools from the newcomers is a mixed bag. KLAS reported that Jvion's and HBI Solutions' tools have primarily helped healthcare organizations prevent patient readmissions, while traditional visualization vendors Qlik and Tableau focus heavily on advanced analytics technologies.

The newcomers tend to be niche-focused vendors. Niche-focused vendors are commercially available, standalone platforms that provide core capabilities for specific types of data (e.g., external, clinical, or financial). The vendors offer one to two core capabilities.

Broad-focused vendors like Epic Systems are commercially available, standalone platforms that provide extract, transform, load (ETL), enterprise data warehouse (EDW), master data management, and reporting & data visualization core capabilities using two to three types of data. The vendors offer three to four core capabilities and are used by a wide range of provider organizations.

Other business intelligence vendors that were ranked above the market average for driving tangible outcomes and meeting organizational needs were Dimensional Insight and Health Catalyst.

Broad-focused Dimensional Insight is delivering value, especially in terms of decision support, pharmacy utilization, and enterprise cost reduction, clients stated. But the solution is still developing its advanced analytics capabilities.

Health Catalyst is another broad-focused vendor with predictive algorithms embedded in its business intelligence tools. Clients reported that the solution helped reduce readmissions, opioid abuse, length of stay, and sepsis mortality, which translated to millions of dollars in savings.

The healthcare business intelligence market is fragmented and healthcare organizations experience substantial variation in their use and associated outcomes of business intelligence tools, KLAS emphasized.

But health IT giants and newcomers alike will face challenges in the near future as healthcare organizations seek open-source technology as part of their business intelligence analytics solutions, researchers stated.

"A consistent theme revealed in this research is the trend of provider organizations turning to open-source technologies like Hadoop, R, Python, and MATLAB to replace poorly performing, overly complicated, or cost-prohibitive technologies," the report explained. "KLAS validated customers from Epic, IBM, Microsoft, Qlik, SAP, SAS, and Tableau using open-source technologies for one of the core capabilities that larger vendors traditionally provide."

Interviewees elaborated that open-source technology allows multiple users within the healthcare organization to access business intelligence insights. The technology also permits healthcare organizations to develop their own algorithms.

"[F]ree tools are really hard to compete with," added an executive director in the report.