BRIDGING THE GAP LEFT BY EHR ANALYTICS

Why Dedicated Data Analytics Solutions Are Vital in the Current Operational Landscape

*A whitepaper for Dimensional Insight by Mark Hagland
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The need for reliable data analytics in order to support population health management and care management under value-based contracts is one of the most fundamental needs, going into value-based healthcare delivery and payment. As it turns out, everything is complex in this area, as the leaders of hospitals, medical groups, and health systems are finding. And yet, as challenging as it is, moving forward to successfully leverage data analytics is essential.

Still, the leaders of patient care organizations across the U.S. are finding themselves regularly frustrated with the analytics capabilities embedded in the electronic health record (EHR) solutions provided by the major EHR vendors. All these vendors claim to offer strong data analytics capabilities, but patient care leaders regularly report that those capabilities are limited, difficult to use, and lacking in robustness.

What are the key issues involved? For provider leaders, success in value-based contracting really does require clear success in leveraging data analytics. Here are some of the critical elements in the mix:

☑ The need for robust data analytics capabilities

☑ The need to be able to link core analytics functions with clinical data

☑ The need to "marry" clinical data from the EHR with claims data provided by payers, whether public or private, as well as other financial or operational data in the organization

☑ The need to be able to move end-users towards as much self-service use of data and analytics as possible

The good news is that the leaders of pioneering patient care organizations are succeeding, and some are sharing their stories.

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> —Narayana Murali, M.D., executive director and president of the Marshfield Clinic Health System

As *Healthcare Innovation* reported on April 11, 2019, in a report on a presentation given at the annual APG Conference, presented by America's Physician Groups, some pioneering multispecialty medical groups are attributing their success so far with value-based contracts to, among other things, successfully leveraging data, under the right circumstances.

Speaking of his organization's position at the dawn of risk-based contracting, Narayana Murali, M.D., executive director and president of the Marshfield, Wisconsin-based Marshfield Clinic Health System, told APG attendees, "We were largely a provider-based institution with a health plan that was contracting with a hospital, and looking to lower cost of care. You can't manage the total cost of care unless you have the acute care, ambulatory care, and health plan—all three legs of the stool," he emphasized.

In his presentation, Dr. Murali cited several critical success factors involved in the Marshfield Clinic Health System's success so far in value-based contracting:

☑ "Congruent access to data"—claims, EHR, and analytics, including baseline cost trends, risk corridors, and attribution

☑ Control of both ambulatory care and acute-care facilities in key markets

☑ Contracts involving business rules that work for all payers

☑ The development of care management programs that help to lower the total cost of care

☑ Among those, successful population risk stratification processes, the inclusion of the management of socioeconomic factors, control over the post-acute spend for attributed patients, and some control over pharmaceutical and procedure spending, especially on the commercial side

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> —*Healthcare Innovation*, Jan. 2, 2020

Similarly, as *Healthcare Innovation* reported on Jan. 2, 2020, "Researchers at the Children's Hospital of Philadelphia (CHOP) found that among more than 93,000 Medicaid-enrolled children, combining technology solutions with interdisciplinary integrated care teams led to 50 fewer hospital admissions each month and 3,600 fewer bed days for these youth in a year." As part of that effort, David Raths reported, CHOP leaders:

☑ Identified high-risk, Medicaid-enrolled children with special healthcare needs

☑ Implemented a set of reporting tools in the EHR that notified clinicians and staff if their patients visited the emergency department or were admitted as inpatients

☑ Set up triggers in the solution for an integrated care team to reach out to families and help them schedule and prepare for follow-up appointments

In a statement describing the study, David Rubin, M.D., director of Population Health Innovation and PolicyLab at CHOP and lead author on the study, noted, "As healthcare systems grow larger, integrated care teams and technology that supports those teams are going to be critically important to ensure we're helping families navigate ever more complex institutions, whether adult or pediatric in nature."

WHERE SINGLE-SOURCE ISN'T HELPFUL

> "*Despite broad deployment and high customer expectations, the PHM solutions from EMR vendors garner only average or, in some cases, exceptionally poor overall satisfaction and are rarely among the top five performers in any vertical.*"
>
> *—Bradley Hunter, Colin Buckley, KLAS report*

The underlying challenge in these situations is connected to the inability of EHR vendors' solutions to provide a level of data analytics sophisticated enough to support population health management in most patient care organizations.

"If there is one thing that the entire healthcare system can agree on—a dubious proposition indeed—it is the idea that taking a data-driven approach to proactive, preventative population health management is likely to produce more positive long-term outcomes for patients," wrote Jennifer Bresnick in an Aug. 25, 2016 article in *Health IT Analytics*. But, she wrote, "How exactly providers can accomplish that, and whether or not they are appropriately incentivized to do so, are topics that are still up for debate."

Further, she wrote, "Given the fact that providers are increasingly acknowledging that they can't escape the shift to pay-for-performance care, they are starting to turn their attention to developing the strategies and programs that will help them make the switch with the least amount of financial and operational discomfort. Population health management is at the top of that list, since it sits squarely at the nexus of health IT implementation, big data analytics, value-based reimbursement, improved operational efficiencies, and increased patient engagement."

But, wrote Bresnick in a January 5, 2018 report in *Health IT Analytics,* which in turn reported on the January 4, 2018 report published by the

Orem, Utah-based KLAS Research, "Notable EHR vendors, including Epic Systems and Cerner Corporation, can't match the user satisfaction scores of more dedicated population health management products, according to the latest KLAS Research market report. A series of user interviews from 2016 revealed that Epic, Cerner, Allscripts, athenahealth, and eClinicalWorks received only average approval for their population health management (PHM) capabilities, such as data aggregation and analytics, patient engagement, and care management."

And she quoted directly a statement from the KLAS report, whose authors, Bradley Hunter and Colin Buckley, had noted that, "Despite broad deployment and high customer expectations, the PHM solutions from EMR vendors garner only average or, in some cases, exceptionally poor overall satisfaction and are rarely among the top five performers in any vertical."

Bresnick wrote that "Lower satisfaction rates stem from concerns about flexibility, access to robust big data analytics tools, and insufficient support for customizing and optimizing systems that meet an organization's unique needs." What's more, she wrote, "Performance for the EHR vendor community has not changed much since last year's assessment, in which dedicated population health vendors outstripped the broader EHR platform ecosystem."

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>
> —Bradley Hunter,
> Colin Buckley, KLAS report

"Provider organizations tend to be more satisfied with their solutions when they know that their vendor will provide the guidance and flexibility they need to be successful as opposed to a vendor that offers a wide range of functionality but might not provide the same level of hand-holding or customization," KLAS had stated.

Further, Bresnick wrote, "For health IT vendors catering to larger customers, these personalized relationships may be difficult to develop and maintain." And she quoted KLAS's Hunter and Buckley as stating, "This partly explains why some large vendors have lower performance ratings as they try to support comprehensive offerings for very large, very complex healthcare organizations. This is especially true for enterprise vendors and EMR vendors, whose customers have high expectations for comprehensive PHM functionality and future development."

To summarize those two reports in *Health IT Analytics:*

☑ A report by KLAS Research published in January 2018 and authored by Bradley Hunter and Colin Buckley, cited major problems with EHR vendor-supplied population health management solutions.

☑ Key deficiencies the report found included lack of functionality and lack of flexibility and customizability.

☑ The report noted that population health management solutions often require intensive vendor partnerships with patient care organization customers, and that this is often lacking with regard to EHR vendors.

THE DATA ANALYTICS JOURNEY, VIEWED UP CLOSE

Meanwhile, in the trenches, senior executives in patient care organizations across the country are working to get things right.

Among those executives is Jim Beinlich, vice president and chief data information officer at Penn Medicine. Asked where the big efforts are playing out, Beinlich said, "What seems to be the prevailing theme right now is how to better guide and provide navigation for data and analytics. People don't seem to be struggling so much with being able to generate reports, dashboards, analytics, whatever, but with how to help end-users navigate their processes. How do I better educate my users, and point them in the direction they need to use data? For example, there are times when someone's looking for data or metrics or whatever, and we should be pointing them to our Dimensional Insight platform, and other times, pointing them to the Epic platform; so that's part of the challenge."

What are the underlying struggles? Are they connected to understanding the data? Manipulating it? Using it? "All the above, and often around context," Beinlich said. "There may be a piece of data around readmission rates, for example. And there may be five different metrics one could look at. If you're trying to understand readmission rates based on a financial perspective, that may involve a metric in one place in a particular context; a clinical perspective may involve a metric in a different place in a

different context. If I can direct the end-user to the right place, that's helpful. A lot of our users and users everywhere spend a lot of time looking in different places to understand data. We could do a better job directing folks."

Importantly, Beinlich said, "The challenge is, we've got one common EMR, Epic, and that's good, but with analytics, there are a variety of different platforms, because there's no Epic for analytics. One is built for finance, one for other purposes, many of them custom. And if there's a readmission rate metric in all those different systems, you need to make sure at the end of the day, that you're using the same number. The number could be slightly different for financial purposes—you may be calculating or counting it differently for financial or clinical purposes. But an end-user who understands—what we're trying to do is to direct people to the right environment for analytics purposes. For example, use this number here, not that number there, that's being used for at-risk contracting with Blue Cross."

A SEARCH FOR ANSWERS IN WASHINGTON STATE

Meanwhile, in Kirkland, Washington, a suburb of Seattle, Jessica Foy, R.N., director of clinical informatics and analytics, is helping to lead her colleagues forward in just that area—the set of efforts focused on harnessing data analytics for population health management.

Like Beinlich and his colleagues at Penn Medicine, Foy and her colleagues at EvergreenHealth have been walking a complex path. She and her colleagues share the challenge of finding viable EHR solutions in the context of analytics development. "Obviously, we serve our entire organization, both our hospital and ambulatory world. We have varying needs across the organization," Foy said. "A lot of it is clinical, but a lot is also operational. The work we're doing to support our value-based contracts, we do a lot of quality-based measurements, looking at a particular measure, and displaying it in a meaningful way. That's really, really important, and that helps our users."

Foy agrees that EHR-based data analytics solutions are fairly limited. "Here's what we need," she said. "We need the flexibility to adjust for the data we have, or for clinicians who want to define a measure in a particular way. So we need to be able to adjust the measurements, and so that's valuable."

Importantly, Foy said, "We're now being asked to marry that quality data with financial data, especially around bundled payments. We get the claims data back from CMS, and we have to marry the financial and clinical data together, and benchmark ourselves on performance."

What are the biggest challenges in regard to marrying clinical and claims data and achieving success in benchmarking? "If we're relying on any type of financial data, it's typically delayed," she said, "while the clinical data is more immediate. So, matching records correctly, and developing that together, that is a challenge."

Further, Foy noted, achieving credibility with physicians remains an ongoing issue for many healthcare organizations to be addressed. And part of the solution to that issue is providing an IT offering that is robust. "We need an IT solution that can quickly get us there, and we need to build the foundation," she said. "And the fact that we are actually the ones developing and building it is important. Then we can explain what's behind the number, to the clinicians, or managers, or directors, and we're not having to put in a call to others. We also have the flexibility, then, to write it down. The ability to customize on the fly is limited, and putting the tools into our hands to make changes, is a barrier, in terms of quickly providing data to end-users. EHR-based solutions lack that flexibility, at least out of the box."

Looking at the needs expressed by provider leaders, here is a summary of their key points:

☑ Educating end-users and helping them to figure out how to navigate data processes are two major needs of data and IT leaders in patient care organizations.

☑ A core problem remains what platform/platforms to use to optimally architect data analytics capabilities for end-users, and to manage them.

☑ Data analytics solutions capable of managing different types of data (clinical, financial, operational) well are also needed.

☑ The capabilities offered by EHR-vendor solutions remain unsatisfying to many patient care organization leaders.

☑ Customization is a very important factor related to the satisfaction of healthcare IT and data leaders in patient care organizations.

PEERING FORWARD INTO THE FUTURE

Going forward, Foy said, "Our needs will vary, and we'll need even more on-demand capabilities, more self-service capabilities for our customers, and we want to empower our customers to react as quickly as possible." What should fellow informatics leaders be doing in this context? "My advice," she said, "would be to have a really clear picture of what you need, and be able to define that well. Plan for what you need in the short term and in the long term as well."

The landscape around data analytics will continue to evolve forward, in some cases with new or shifting needs.

Studies and surveys are finding that the leaders at patient care organizations nationwide are planning to leverage artificial intelligence (AI) and machine learning technologies and strategies to better simplify their organizations' operations, improve the patience experience, and manage care costs. Some surveys, in fact, are finding that at least a significant plurality of hospital-based organizations plan to add social determinants of health data into their analytics processes, and will be working to add mobile device of internet of things (IoT) data to their analytics programs. So the need for vibrant data analytics solutions will only continue to grow and evolve forward.

Healthcare informatics leaders agree: there is no better time than now to invest in robust data analytics solutions that can meet the ever-expanding needs of patient care organizations and help to move the U.S. healthcare delivery system decisively forward in so many areas.

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