

ROUNDTABLE: OPTIMIZING BIG DATA

BIG DATA IS SHAPING HEALTHCARE FINANCE

The most effective, modern healthcare leaders acknowledge the necessity to not only analyze their data, but also understand it. Whether the aim is to be more cost-effective, improve patient outcomes, or gain a head start on the push to value-based care, big data is crucial to their success.

Hospital leaders are no strangers to the obstacles that stand in the way of maximizing their data operation, and they have already begun to explore the most efficient methods of utilizing big data to their advantage.

In this *HealthLeaders* Roundtable, the panel discussed the future of big data, from the opportunities presented by a burgeoning area of the healthcare experience, to the challenges of implementing these measures on a large-scale operation.

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HIGHLIGHTS

HealthLeaders: *Let's start by getting a sense of how big data fits into your health system's strategic goals.*

Neville Zar: As for most large health organizations, it is a big priority for us. We have built our own integrated data sets using the multiple EHRs and different systems to create our own large data sets. But while we have created a data-rich environment, we had been lacking information to perform operations. Over the last few years, we've really invested in the ability to use data and metrics to drive operational discipline. Because at the end of the day, you have these large data sets, but if they don't create this point of accountability for operating 36 hospitals, they're kind of useless.

Jim Heffernan: The data piece is really the third leg of a three-legged stool: First were the ERP systems; second were the clinical and revenue cycle systems; and the third are the data systems. I would say that in an academic setting, it has another challenge. It's not necessarily more difficult, but you have a lot of research databases that have more discreteness than the business systems that we think about. Our goal in the movement was to get everything into structured data fields, but you lose the element of the discreteness in the data or the continuity of the data as you put them into structured fields. And so, the challenge for us is to take advantage of the data that's in registries and research databases as well as the business systems that we have.

Tanya Arthur: Our organization is a patient-centered population



health management organization that provides integrated and coordinated care. As a result, data and analytics become even more foundational to our strategy, which is to drive care coordination across the healthcare continuum to deliver

on the quadruple aim of improving the health of populations, enhancing experience, reducing health-care costs, and creating improved work-life balance of care providers. We've begun the journey of building the architecture around

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that vision and recently implemented visual analytics capabilities.

“ONLY BY SHARING DATA ACROSS SILOS CAN WE UNLEASH THE POWER OF BIG DATA AND ARTIFICIAL INTELLIGENCE.”

HealthLeaders: *If you begin with the strategic priority of maximum value from data, how does that translate into skills and people?*

Lynn Wiatrowski: Maximizing the value of data requires hiring for and/or developing a whole new

skill set. We've added data roles that never existed in the company before, such as "data scientists." We are also working cross-functionally; our technology, operations, and product teams are talking today more than ever to co-develop solutions and ensure maximum access to the skills necessary to leverage our data. Our "data as a service" policy has encouraged this cross-functional engagement and is focused on how we turn these vast amounts of raw data into information that can be turned into insight and then into action. It is all about leveraging data in new ways to create solutions that deliver insights that clients can act upon.

Zar: There's a constant challenge in healthcare, because like the banking industry, we are sitting on

billions of transactions. But it's very regulated in terms of what data you can share and how the data is shared. We have a duty bound by regulations and have earned our patients' trust to protect that data. So you have to figure out how to analyze that data: Do you use third-party software or build it internally? In our organization, we use a mix of both. Those data scientists or those data models typically come from the outside with the view of bringing it in-house over time once our organization is getting the skills around that.

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"IT IS IMPERATIVE THAT HEALTHCARE LEADERS EMBRACE A NEW WORLD VIEW ABOUT DATA, ANALYTICS, AND ITS ROLE IN DEFINING THE FUTURE OF HEALTHCARE."

Arthur: We're in the process of designing an analytics model to create an integrated center of excellence comprised of an ACO, health plan, and delivery. At the center of the model is the ability to leverage the right technology,

a right data governance structure, and ensuring we have the right skills to rationalize data and mine insights across our complex healthcare ecosystem. In order to be successful, organizations must secure the right talent, including data architects, scientists, and analysts with deep clinical financial knowledge.

HealthLeaders: *There is a real philosophical balance between how far privacy limits the ability to dive into the data. How do you begin to structure that balance?*

Wiatrowski: Some data must be intensely protected because it is intensely private. If you think about the personal data most critical to you, it's your health and your financial information.

There are lots of similarities in how we leverage data, such as predictive analytics around loan defaults in banking compared to the risk of hospital readmission in medicine. There are ways to integrate data points but still protect individual or company identity when it comes to analysis of trends or best practices in the market at large.

Only by sharing data across silos can we unleash the power of big data and artificial intelligence, and this must always be done in a compliant and privacy-respecting way.



HealthLeaders: But even with a view of the patient record and a readmission risk score, that's still just part of the picture. Ultimately, the real value would be in having a complete data picture of that patient's health. What are the continuing barriers there?

Heffernan: The disintegration of the systems adds to the data problem, but it isn't a data problem to begin with. The issue is that, like many of us, I have different cards for my medical benefits, pharmacy benefits, vision, and dental. All of those relate to my overall health, so when we start to think about data from a population health management standpoint, you've got four different views that are separated so that nobody has the whole picture. Now, as we start to build vertically integrated systems, we will have a better picture of all the care a patient receives in the long run. It's an advantage that we're starting to learn from population health that we previously didn't observe.

HealthLeaders: Do you have some examples?

Heffernan: We did a Medicare high cost case management pilot. It was 5% of patients that were 50% of the cost—very high-risk

patients. When we discovered that 80% of these high-risk patients had depression, or anxiety, or both related to their conditions, the psychiatrists said, "We've been telling you that for years," but nobody ever had the data in one place.

HealthLeaders: What did that experience teach you?

Heffernan: We did a pilot and shared it with Medicare. It taught us a lot about information, and we had a good opportunity to bring that information together in a useful way. But one of the issues about big data is we still don't know what we don't know. I have hundreds of KPIs [key performance indicators] that we live with. I'm not sure they're really the leading indicators for our business.

HealthLeaders: Where do executive teams have the biggest misunderstandings about how data can transform the organization?

Zar: I think it's the speed to obtain the data and aggregate the data. Our leadership has a strong view that if it's there, it's available immediately, which should be the case. Unfortunately, that's not all the case when you're dealing with disparate EMRs or data systems. The data normalization exercise

takes a little bit longer than we all want it to be. However, we have learned that don't let perfection be the enemy of good.

Arthur: With the rapid advancements in analytics capabilities, leaders don't always appreciate the power and strategic value of their data. Many organizations are experts at creating volumes of operational reports and dashboards, while overlooking the potential for the data itself is to inform strategy, drive growth, and create consumer engagement. It is imperative that healthcare leaders embrace a new world view about data, analytics, and its role in defining the future of healthcare. **H**

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“THERE'S A CONSTANT CHALLENGE IN HEALTHCARE, BECAUSE LIKE THE BANKING INDUSTRY, WE ARE SITTING ON BILLIONS OF TRANSACTIONS.”





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