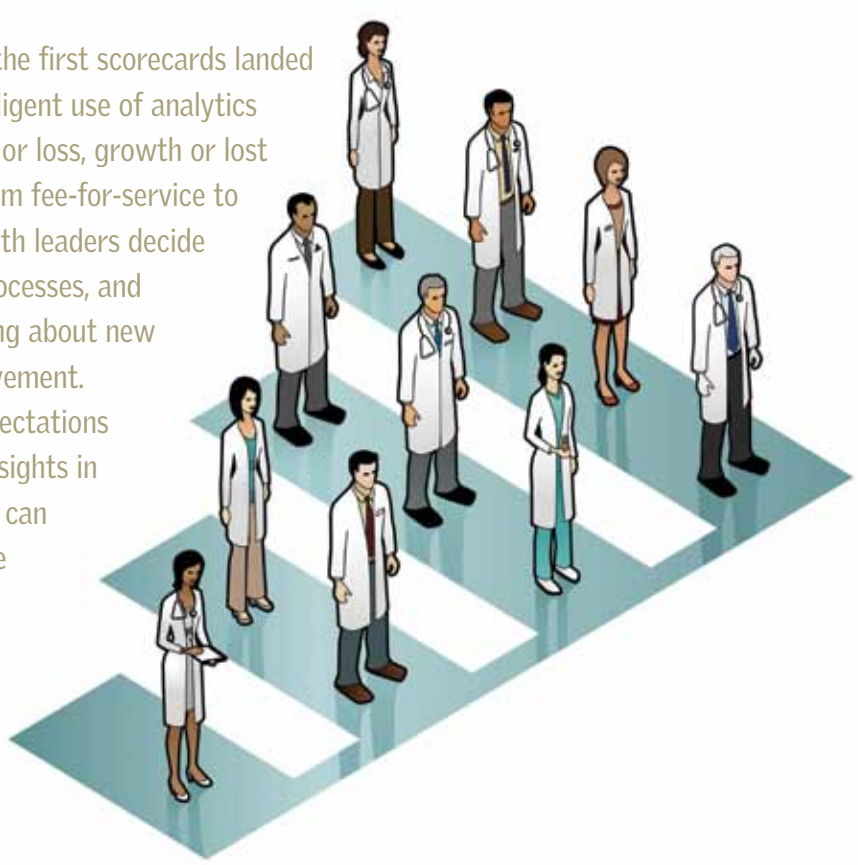
ROUNDTABLE

Innovation Through Analytics

Analytics has come a long way since the first scorecards landed in healthcare enterprises. Today, intelligent use of analytics may be the difference between profit or loss, growth or lost market share as healthcare moves from fee-for-service to accountable care. Analytics helps health leaders decide how to rearrange their businesses, processes, and work flows, and spark creative thinking about new opportunities or areas needing improvement. Part of the challenge is managing expectations in an era where big data is opening insights in all sorts of businesses, many of which can flow into healthcare. Savvy healthcare leaders have to evaluate the cost of implementing agile analytics systems and staff, weighing that cost carefully against real or projected benefits.



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PANELIST PROFILES

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Roundtable Highlights

HEALTHLEADERS: *Is the demand for analytics changing the role of the healthcare CIO?*

BILL SPOONER: Analytics is certainly heightening our awareness, absolutely no question. We can't keep up with the need. It's partly to make better decisions. It's partly to report various indicators, whether it's value-based purchasing or meaningful use or pay-for-performance. And then hopefully you find actionable data out of that and feed it back into the care process. I can't really tell you how much the budget has increased over it, but it has increased. We've added people, and we still have more demand than we can meet, and I think it'll continue.

"In our organization, there is a huge demand to obtain data quickly, and to integrate it with other information and data that is available."

MAGGIE RATLIFF: It's going to become more and more critical for us to be smart about the data we have because of the new healthcare reform laws and the fact that healthcare is changing as a whole. We have to cross the continuum of care, and that means sharing that information across all levels of care, whether it's outpatient physicians or inpatient physicians.

ALEX VAILLANCOURT: In our organization, there is a huge demand to obtain data quickly, and to integrate it with other information and data that is available. It's a topic that is raised almost every day.

HARRY GREENSPUN: In the past a lot of information was held within one part of the organization or another. All of a sudden, the CIO is sort of ground zero of where all this important information is held.

HEALTHLEADERS: *When I talk to any kind of executives, CMOs, or chief operating officers, they all talk about the fact that IT traditionally moves at sort of its own pace. But outside the healthcare world, you look at how analytics has been deployed in consumer packaged goods or retail marketing and people talk about analytics at the speed of business. How fast do you have to turn around the requirements for an analytics solution?*

VAILLANCOURT: IT wants to make sure that the data is accurate, and that it's a repeatable process. From a business perspective, the data needs to be accurate and also provide insights to help us make sound business decisions.

RATLIFF: As we go forward with trying to put together ACOs and I guess more coordinated care, that's when the data becomes more important quickly. Some organizations are trying to get there now. Some are, and obviously some of us have a long way to go.

SPOONER: The other innovation is what's probably a dirty word: standardization. The more that we're able to have a consistent data model and use the data consistently across our organization or across multiple organizations, the more nimble we can be in understanding and utilizing it in lots of areas. The more variation we have, the harder it is to find meaning with the analytics.

HEALTHLEADERS: *Why is standardization a dirty word in the context of analytics?*

SPOONER: We like to pick on doctors, but it isn't just physicians. People are trained to be very resourceful, to finely hone these clinical skills to treat their patients. And then we said, "In order to really do the best care we can at the most economical price, we need you to not only do the best care, but we need you to find a common practice across specialties." Until you get there, there's going to be some gnashing of teeth. Our experiences are you develop habits. You learn these things. You are trained in different ways through different schools, and it's hard to bring them together. While I may grouse about it in the day-to-day work, I can understand why it's happened.

Alex Vaillancourt
VP and CIO
The Christ Hospital Health Network

GREENSPUN: It's fascinating how different industries have a culture of standardization as being critical to their success—in contrast to healthcare, which is typically about individual expertise. The irony is most of these people in healthcare routinely experience standardization in other parts of

their lives. You have plenty of people who are physicians who scuba dive, and they understand the importance of doing the same thing every time for safety. And yet they'll come back and have tremendous variation in their own care. So to really and truly embrace the power of analytics, you also have to have this cultural shift of understanding that standardization and decreasing variation is crucial to quality and safety.

RATLIFF: I agree totally. It's a cultural change for the physicians, and one that's not easy to try to implement, and like he said, not just for physicians, but for nursing. Nurses like to document in certain ways, physicians like to document in certain ways, and it's not easy to change that. Not only do you have the culture of the organization, but you have the egos of the physicians and the egos of the leaders, and as a result it is not always easy to implement that much of a change or to come up with that standard that's acceptable for everyone.

Maggie Ratliff
VP and CIO
Carondelet Health

HEALTHLEADERS: *As I've talked to different executives about analytics, one thing that's come out is variation in the governance of their initiatives of analytics. So in some cases it's coming from the chief medical officer. In some cases it's coming from the CFO. I've talked to people who say it really isn't initiated by the CIO, but I'm here with a bunch of CIOs and I would expect you all to say that CIOs are leading the charge.*

SPOONER: It's a combined effort in our organization. I like to see it within the CMO or another clinical function because they really understand the data. They have the credibility to make convincing arguments out of the use of their findings. But then I find as the CIO I need to bring the discipline into the organization, and I need to backstop the CMO as he is delivering sometimes difficult messages about variation and about change. So it has to be a team process.

> **"We want that drive** for the data or the need for the data to come from the physicians or the clinical staff and IT to be the conduit that they receive that data from."

RATLIFF: I agree. I've tried to implement this philosophy of being clinically driven and IT-enabled. And it sounds so simple, but it's such a hard concept for some to get. We want that drive for the data or the need for the data to come from the physicians or the clinical staff and IT to be the conduit that they receive that data from.

GREENSPUN: A lot of it depends on what your definition of analytics is in the first place, and for so long it's been the data needs of an individual piece of the organization. I think now that we're getting a more holistic view of what's going to be required, it changes the governance model.

SPOONER: We're about to try something different to get better control of this in our organization. We organize our groups in what we call product committees. Each domain like laboratory or pharmacy would be a product committee. And so our analytics product committee is labeled the data warehouse product committee because we built most of it internally, originally. And we always have an end user chairing it, so it's not perceived to be controlled by IT. We recently decided that we're going to assign an executive sponsor to each of the product committees to try to get the link a little bit closer to the top management team. And we chose the CFO to be the executive sponsor or champion for the data warehouse product committee because she will deliver the same message around reducing variation and actually using the data effectively that will be perceived more from an organizational perspective than the IT message, which is sometimes interpreted as "to make my job easier." We're just starting that. We have our first meeting with that in place in a couple of weeks, and we'll see.

HEALTHLEADERS: *You mentioned that you had built your own data warehouse, and that leads into the question of whether everybody needs to do that. Can you simply write a check and have a service provider or a vendor come in and build something for you?*

VAILLANCOURT: We went through the "build versus buy" discussion realizing that we need assistance in developing processes and systems to support aggregating this information. So we're building our own data warehouse, and the buy discussion was really influenced by the clinicians. While the clinicians said they preferred an out-of-the-box approach to buy products, they also

asked questions such as, "If supply chain wants to focus on hip implants, how do I match that to outcomes?" Since there aren't a lot of products that can do that, they started to realize that we'd be better off long-term with a build approach. So that's the path that we're going down.

GREENSPUN: As we move into more accountable care or payment for outcomes, there is anywhere from deep understanding to tremendous paranoia related to "Who's got my data? How is it being managed? How can I get the best information out of it, and will that put me at an advantage or a disadvantage?" In the past it's been very hard to get the clinicians involved in these kind of conversations, so I think they're beginning to wake up to those issues.

SPOONER: In our organization, it isn't buy versus build, it's both. We have a real hybrid solution. It's really challenging. We really started our data warehouse strategy on the physician side in the managed care era in the early '90s, and that was the genesis of what started out as a little SQL Server database under one person's desk, and it now is this huge Oracle/Informatica/Cognos operation that's several terabytes in the data center. But really, it started out with the ambulatory space, but at the same time the hospitals needed something. So we got a cost accounting system for the hospital, and then with core measures for The Joint Commission, we subscribed to another service. And as we see the explosion of reporting indicators, we recognized that we're not sure we can keep up with it. So we've actually subscribed to another outside product. So we're looking at three or four commercial products, but none of them spans the continuum of care, and so I think the in-house data warehouse will be there longer than I will. It's just a couple of companies that are claiming to begin to address both sides, but it is not robust by any stretch of the imagination to be able to go from outpatient preventive medicine all the way to terminal care. It just doesn't come together. So we really see a continued need for creativity in the data warehouse.

RATLIFF: That hybrid model as well exists in a lot of places. A lot start with a data repository and end up with a lot of different third-party apps in the mix, and IT spends a great amount of time trying to figure how to get appropriate, valid clinical and business data out of what we have.

HEALTHLEADERS: *Are you seeing lowered hospital readmissions or other early wins through analytics?*

VAILLANCOURT: We understand analytics will help us become smarter and more efficient with our healthcare resources. Recognizing the increasing value of data, we are currently investing time, money, and energy on a data warehouse strategy. Once this significant strategy is in place, there is tremendous excitement and anticipation on how we can maximize the analytics to make the highest and best use of resources and drive continual exceptional outcomes.

"So we really see a continued need for **creativity in the data warehouse.**"

GREENSPUN: A lot of the value in analytics is not just in the clinical information. If you want to figure out who is going to be readmitted, you need to look at a patient's credit report, to see whether they're having financial trouble and less likely to make their appointments, less likely to get their medications, and those sorts of things.

Bill Spooner
VP and CIO
Sharp HealthCare

SPOONER: In some cases, truthfully, we don't measure it. We develop a program. We sense the results. We've had some little tangible areas, though. On the medical group side in California, the Integrated Healthcare Association has had a pay-for-performance program for a number of years, and the IT indicators are a part of it. Both of our medical groups have gotten significant returns with IT as a big contributor in terms of being able to use the systems to demonstrate the improvement in their performance indicators, diabetic monitoring, things like that. Within the medical groups they've used this data to push back to the primary care provider so that they could use it in an actionable fashion to ensure that all of the preventive care is happening. So we see improved patient care, and we've seen some dollars out of it.

RATLIFF: The challenge was showing the ROI, being able to get down to the granular level of the data that we're collecting, in order for the clinicians to be able to understand it and use it to provide better quality care. We can collect all sorts of data, but putting it in a format that can be understood and used to work toward better patient outcomes—that is the big challenge.

VAILLANCOURT: And to blind it from each other. The other thing we see with clinicians is they want the data to gauge their respective performance. But blinding that data causes some additional challenges or concerns, in that we like to learn from one another based on best practice. In looking closely at analytics to help drive decision-making, it can be challenging to translate that to real actions or data to significantly improve outcomes.

GREENSPUN: There was a recent study showing how most people overestimate the quality of their care, even in the face of impending adverse events. But they just don't have a good sense of their own performance, and largely because they've never had real good feedback on whether they are practicing to any sort of standard.

HEALTHLEADERS: *There is this notion that big data is out there. What about analyzing the patients' purchasing habits or their credit rating? That's not traditional healthcare provider analytics by any stretch of the imagination.*

GREENSPUN: A lot of this is theoretical. If you examine my credit card buying habits and you see where I eat and what kind of food I buy and the fact that I do not have a gym membership and that I don't do a lot of other things related to being particularly healthy, you know, that's valuable data. But then there's actually no really solid and reliable way of tying that back into my medical history. We have the potential for harnessing fantastic information and even tying it back to genetic information. But right now the data on the clinical side is so variable and so weak and unreliable that it will be, at least in the short term, hard to make those kinds of connections to provide real actionable information. But ultimately that's where we'll be able to go.

> "We have the **potential for harnessing fantastic information** and even tying it back to genetic information."

SPOONER: Some of the employee health programs are really approaching that by putting incentives of various sorts for self-reporting of these things. Show us that you walk so many steps a day or a week. Show us that you've done these different weight-reduction contests, smoking-cessation efforts. We're pretty slow in terms of actually making those affect the insurance premiums, but that could come, too. I don't think I'd be very successful in going out to TRW and getting your credit rating, and I don't think I'd want to. But you can report to me voluntarily some of this information that I think is important to your health.

Harry Greenspun
Senior Advisor, Healthcare Transformation and Technology
Deloitte

HEALTHLEADERS: *Cost accounting: How do you pay the bill for the investment you have to make in analytics? Does it come from particular service lines? Does it come from a particular department? So let's say marketing pays for their share, quality pays for their share. How do you account for the investment? Is it an issue?*

SPOONER: There are probably as many answers to those questions as there are healthcare providers in the United States. In our organization, expenses like that are held within the corporate office. System services, we call them. We have an allocation methodology to spread the costs among the hospitals and medical groups, various statistics, not very scientifically; sometimes it's simply net patient revenue. Where we can actually attribute cost, we tend to be a little more exact in using statistics. But it's personal preference. As I talk with people, everybody's got a different twist.

RATLIFF: Primarily it is held mainly through the administrative budgets, and there is no allocation to the departments or the different hospitals.

SPOONER: I've always wanted chargeback, but then somebody said, "Yeah, design it." "Oh, okay. I think I'll let somebody else do that."

VAILLANCOURT: We have a hybrid model—it depends on the business unit and it depends on the engagement. We've had, as an example, a couple areas will say, "Well, I'll give you half of my FTE to your IT data warehousing team if that means I'm going to get more information out of this." We do have one business unit that pays directly for some of the services it receives. In others it's been the data warehousing team trying to figure out, "Why do we have four people manually collecting this information?" and working toward a more efficient model.

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