In September, Modern Healthcare Custom Media visited Boston, Minneapolis and Seattle, hosting 23 healthcare executives for three separate roundtable discussions on one topic: leveraging data to improve outcomes. GE Healthcare sponsored the important dialogue.

Each executive was personally invited by Modern Healthcare Custom Media to participate. While each discussion was unique—see pages 15, 16 and 18 for key takeaways from each city—several recurring themes surfaced. Inside, executives share their organizations’ stumbles and triumphs along their data journey, as well as what’s next in the healthcare information revolution.
When it comes to leveraging data for operational and clinical improvements, healthcare providers are in many different stages. A recent custom survey of Modern Healthcare readers revealed 1 in 5 haven’t even started their journey into big data and analytics, while 47% say they’re already analyzing multiple data sets or beyond. Nine percent aren’t sure what stage they’re in. (View all stages in the graph on pg. 19.)

While disparity exists nationwide, it was not as apparent at our three roundtables this fall, where executives representing some of the nation’s most advanced institutions are knee-deep in data and analytics initiatives that are yielding results. For many, their journey started with electronic medical records.

“Our EMR project allowed us to look at the entire system—four main campuses, 147 sites—to see what standardized data can produce,” said Ed Fisher, chief technology officer of Yale New Haven Health System in Connecticut. “Now we’re talking about other initiatives, such as bringing labs together, to knock down departmental silos and drive change across the entire health system.”

Minnesota-based Allina Health transitioned to electronic medical records eight years ago, and built an enterprise data warehouse five years ago. These transitions were “painful,” said Dr. Tim Sielaff, president of its Virginia Piper Cancer Institute, but now the organization is reaping benefits from laying the groundwork. Allina’s warehouse collects data from 30 potential sources to run daily analyses for potentially preventable complications, readmissions and length of stay. “We’re almost so far upstream that if

“No data is actually better than bad data, because with bad data you think you’re making intelligent decisions, but really you aren’t.”

-Steve Kastin, Department of Veterans Affairs

THE RESULTS.

Modern Healthcare Custom Media surveyed healthcare executives on behalf of GE Healthcare to gauge how the industry is using—and plans to use—data and analytics to improve outcomes. Here’s what they said. Access the entire survey at ModernHealthcare.com/ImprovingOutcomes.
we start intervening with a patient they will say, ‘Why are you calling me? I’m fine.’ But something in that patient’s record suggested they were at risk,” Sielaff said.

The predictive stage is certainly advanced, yet even the most progressive health systems continue to struggle with basics such as data standardization and accuracy. When asked how organizations had set up their data gathering processes to ensure consistency and accuracy, Rulon Stacey, president and CEO of Fairview Health Services in Minnesota, responded, “You say that like it’s accomplished. I don’t know that it has been.”

Indeed, organizations like West Des Moines, Iowa-based UnityPoint Health right now are focused on building processes around standardization because something as simple as a patient’s blood pressure can be entered four different ways. This causes major problems downstream during measurement, research and analysis, said Dr. John Frownfelter, UnityPoint Health’s chief medical information officer. Data consistency and accuracy is the biggest obstacle to achieving optimal clinical and operational outcomes at CHI Franciscan Health System in Washington state. “Having seven hospitals, you get a lot of variety,” CEO Joe Wilczek said. “Standardizing order sets requires a lot of meetings and is a tremendous amount of work—we will always continue adjusting.”

To implement standardization, accuracy and consistency, panelists in Seattle agreed that sound management and careful attention during the groundwork phase are better strategies than searching for a technology remedy. “It’s about standardizing workflows that will allow you to improve accuracy,” said Dr. Gary Kaplan, who has been chairman and CEO of Virginia Mason Medical Center in Seattle for 15 years. “You don’t want to automate bad process—otherwise you’re going to move garbage at the speed of light.”

“We talk about drowning in data now—wait until we start getting your heart rate for 24 hours of the day. How do we use that data?”

-Dan Nigrin, Boston Children’s Hospital

I feel my organization is _____ when it comes to applying analytics to improve decision-making:

- Behind our peers: 31%
- On par with our peers: 37%
- Ahead of our peers: 21%
- Unsure / Don’t know: 11%

The three biggest barriers to getting an analytics project underway are:
- Budget: 43%
- Time commitment: 35%
- Organizational alignment: 30%
Who’s Driving the Bus?

Data and analytics are changing the dynamics in healthcare, yet it’s unclear who is in charge of implementation. This topic generated significant discussion among panelists about strategic organizational planning, clinician engagement and the role of IT in a provider’s mission.

Nationally, providers are split on whether they consider “data and analytics” an initiative: 49% have a specific data and analytics initiative, while 43% say they do not, and 9% are unsure, according to our study of Modern Healthcare readers. The panelists were split, too, as many of their organizations currently view data and analytics as initiatives, though they are working to adjust that mindset for the future. Seattle Children’s Hospital, represented on the panel discussion by CIO Wes Wright, has practiced data-driven decision-making as part of its Lean journey for more than a decade, and no longer considers analyzing data an “initiative.”

“We have a data-driven culture. It is not an initiative, it’s part of how we make decisions,” Wright said. “As CIO, I support the capture and sharing of that data, but it’s the business and clinical functions who own the data value stream.”

That approach—considering data a way of life, not a project—was a goal shared by all executive panelists, chief among them Dr. Eric Poon, who straddles both clinical and IT as the chief medical information officer at Boston Medical Center. Poon believes that data and analytics should be owned by the executive and clinical teams. “I have learned over the years that it’s very dangerous for IT to be the sole owner of these initiatives,” he said.

It’s good news, then, that more than 40% say “data and analytics” an initiative: 49% have a specific data and analytics initiative, while 43% say they do not, and 9% are unsure, according to our study of Modern Healthcare readers.

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MINNEAPOLIS & GREATER MIDWEST REGION

NUMBER OF HOSPITALS

37

LARGEST SYSTEM

MAYO CLINIC

WHAT CAME UP IN MINNEAPOLIS?

KEY TAKEAWAY

The clinician-centric panel highlighted successes in leveraging data to improve patient outcomes, but warned there is “still much to do” to get the basics like processes and standardization right.

Educating the next generation of care teams.

“We have an AMA grant to study how medical students can become part of the care team, and we’re tapping them for real-time analytics and support. While they’re in the corner observing, they also have the data at their fingertips to answer questions like, ‘What is the best practice? What are the costs?’ They seem to be naturally better at the technology, but then also become a valuable member of the team.”

Transitioning care to the home setting.

“We are actively managing patients at home now. They call in their weight each day, or they report from their iPad, so we can spot early indicators and intervene well before they’re readmitted. We’re using health coaches at home, too. That is truly team care.”

Inspiring clinicians to leverage data.

“Our promise is that every patient, no matter where they are in the system, gets reliable, high-value, evidence-based integrated care. If you lead with that, it’s kind of hard for anyone to argue that using data is not the right thing to do.”

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It’s good news, then, that more than any other group, a hospital or health system’s executive team is overseeing big data and analytics, with 40% of providers saying ownership falls with management. However, 29% report IT owns the area, with the rest reporting ownership in operations, service line directors, and other areas. Regardless of whether IT “owns” data and analytics, it is important for IT to be at the table early on and throughout the entire journey. “Because we’re involved in every initiative and discussion, we have unique visibility across the organization,” said Dr. Dan Nigrin, CIO of Boston Children’s Hospital. “We are often the glue between disparate groups when the left hand doesn’t know what the right is doing.”

Across all roundtable discussions, panelists agreed that clinical teams should be driving the cultural change within their organizations. Still a practicing physician, Kaplan said he was recently anxious about presenting rules-based decision-making to physicians when it came to ordering MRIs on patients with lower back pain. “I thought they would go ballistic, but they loved it. As physicians, we want to be evidence-based where there is evidence,” he said.

They also agreed on the best practice of embedding data and analysis into current workflows. This drastically raises frontline engagement and derives greater value from technology already in place. For example, when Yale New Haven Health was undergoing a quality improvement study around appendicitis, it built a tool into its charge capture system that triggered a series of true-false questions. “This literally took clinicians 10 seconds and only popped up when a patient was seen for appendicitis,” Fisher said.

This exemplifies the idea of the user experience, which panelists agreed needs to be seriously simplified across healthcare IT platforms. “Our clinicians...
“As a hospital administrator, we’re trying to flip our orientation from how many beds are filled every day to how many days can a patient spend at home. That’s a very different organization.”

- Carolyn Wilson
Fairview Health Services

Carolyn Wilson, co-president of University of Minnesota Health, might have said it best: “I think we’ve all done fairly well building [data and analytics] within our own systems. But the future has to be sharing data in ways that affects patients, because to really affect outcomes we need to know if patients are filling their prescriptions or being admitted to a different hospital, at the moment it happens.”

The value of these so-called “real-time analytics” can only be possible when all organizations contribute and share their data freely and automatically, whether the data is originating from retail pharmacies, clinics, hospitals or payers. The providers on our panels indicated they were more than willing to do their part—they don’t view data as a competitive advantage—but said there is much work to be done before such a system is operationally functional.

First, there must be an imperative for institutions to contribute their data, and

“Ten years from now—hopefully quicker—we won’t think of data and analytics as an ‘initiative.’ Electricity isn’t an ‘initiative’—it is a support function for what we do.”

- Robert Nesse, Mayo Clinic

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there must be standards as to when and what they share. Second, the data must be interchangeable. The lack of interoperability between organizations, and even within individual health systems, was a tremendous frustration for panelists in all cities. “We have a bunch of hospitals, and a bunch of Epics. And of course every Epic is different and doesn’t talk to the other Epics,” said Lawrence Furnstahl, CFO at Oregon Health & Science University. “Then on the claims data side, you’ve got six or more different payers—some of whom will provide good data, some of whom won’t. So it’s a Tower of Babel trying to get what you need, which is a longitudinal view of the patient in true time.”

In Washington, panelists are hoping the state health information exchange, which rolls out next year with data populated from their EMRs, will help bring attention to the interoperability problem. “We’ll see if the state can start to leverage some of this work and bring us all together,” said Alan Yordy, president and CEO of PeaceHealth in the Pacific Northwest.

Meanwhile, providers are joining collaboratives that offer the sort of data-sharing they crave. Swedish Medical Center in Seattle is one of those, where Dr. Ralph Pascualy, senior vice president of physician services, said he is now able to benchmark his patient population against 20,000 breast cancer patients thanks to a specialist collaborative nationwide. Mayo Clinic in Minnesota is another, taking part in two sizable collaboratives—one covering 7 million patients that studies the cost of care for specific treatments, and another with OptumLabs that combines millions of patient records with commercial data sets to better spot patterns of disease. Others are still looking for opportunities. “We have 10 million patients, but if we shared patient data with Partners and Hopkins and a few others, we’d get a broader spectrum of clinical analytics. We don’t do that yet,” Kastin said.

For now, the most comprehensive patient data might come from payers, panelists warned. “I worry that the health industry is leaving to government that which we should own. If you look outside of healthcare, the most successful standards-based industries—banking, for example, the government didn’t impose electronic banking rules on banks. Those were imposed by themselves, so I tend to think if we just let government drive this, we’re going to end up with a platform that doesn’t work for the broader delivery of healthcare.”

In the end, investing significant resources in data gathering and analysis is supposed to improve outcomes. When
asked how their organizations have benefited so far from applying analytics, 42% of Modern Healthcare readers said it was too soon to tell.

As much work as there still is to do, amazing results are now materializing.

At Mayo Clinic Health System, the 7-million patient collaborative has provided its CEO, Dr. Robert Nesse, with valuable data that he’s applied to bring down costs and improve care. The data compared post-surgery care in knee replacement patients across the country. In group 1, patients were sent home for recovery, and in group 2, patients were sent to a rehabilitation facility. There were no differences in the medical outcomes—but there were certainly differences in cost. Mayo saved “significant resources” by making adjustments as a result of these learnings, Nesse said.

At PeaceHealth, executives used RFID technology to redesign nursing workflow. They discovered that 35% of their nurses’ time was spent with patients, while 65% was spent charting, running errands, and other work. “We were scientific about figuring out why, and redesigned our workflow to raise time spent with patients to 50%,” Yordy said. Some of the changes were as simple as minimizing walk time for nurses—they placed all supplies and pharmaceuticals (except for controlled substances) in the hospital rooms.

Five years ago, Boston Medical Center was in the bottom quartile for hospital mortality, according to data from the University Health Consortium. The CEO at the time decided to make “this ugly fact very visible,” according to Poon, but then did something about it. The organization strengthened its revenue cycle team to ensure coding accurately reflected the expected mortality of patients; developed a set of metrics-driven initiatives using its legacy inpatient medical record to ensure patients were cared for by an attending physician every day; and worked toward more reliable and consistent sepsis, intensive and postoperative care.

In a few years, Boston Medical Center outperformed all its academic counterparts in the city. “It wasn’t done with a lot of resources, it was done through focus,” Poon said.

Looking to the future, executives hope to leverage data and analytics in three top areas, according to the survey: managing costs, improving care and boosting operational efficiencies. Significant work is still needed to get real-time, accurate data that can be transformed into actionable and shareable information. But the goal is clear, Pascualy summarized: “Data and analytics must cause behavior to change. Otherwise it is a completely worthless investment.”

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Photos by Amos Morgan

“Don’t automate bad process. Otherwise, you’re going to move garbage at the speed of light.”

-Gary Kaplan
Virginia Mason Medical Center

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*City denotes event location only, not organization location

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