Data Bank: Using Data Assets to Support Evolving Payment Models and Survive Healthcare Reform

By Mary Butler

Washington, DC, has one of the highest populations of individuals who either have AIDS or are HIV-positive in the US. In an effort to improve early diagnosis rates, treatment compliance, and prevention, researchers are using innovative data analytics methods to track participants in a pilot project funded by a grant from the Centers for Medicare and Medicaid Services (CMS).

Julia Hidalgo, FcD, MSW, MPH, research professor at George Washington University's Milken Institute of Public Health, is working on a project entitled "Prevention at Home: A Model for Novel Use of Mobile Technologies and Integrated Care Systems to Improve HIV Prevention and Care While Lowering Cost." She says one of the IT systems her team is building will allow the project's participants—Medicare and Medicaid beneficiaries with an HIV or AIDS diagnosis—to complete self-assessments of risk behaviors and receive test results and referrals to other specialists through a portal. Another IT application will feed each participant's information into the local health information exchange (HIE) in Washington, DC.

"So if a registered and consented patient is hospitalized, misses a series of appointments, has clinical evidence that they're not taking their medication, or dropped out of care, our care partners are alerted," Hidalgo says.

Hidalgo says the data will tell them not only what's happening to the study's subjects, but give them a basis for comparison against other Medicare and Medicaid beneficiaries who are not involved in the study. That way researchers will get a better sense of which healthcare institutions need to step up their HIV and sexually transmitted disease screening and where to provide better education to providers and health plans.

Hidalgo says this kind of outreach, education, and care management would be laborious, if not impossible, to conduct without the data analytics her team has set up.

"There are many clinicians uncomfortable doing sexual history, and this really helps fill that gap. Without it, we'd continue to have what we have now, which is many physicians missing the clues that the patient really needs to have a STD screening, or if they've had repeated HIV tests," Hidalgo says. "There are considerable gaps where clinicians have to start over again, including identifying treatment trends. Having an integrated information exchange system really helps us improve the quality of care for this population, as well as other patients. It's broader than just our project."

This project is but one of the ways data analytics is revolutionizing how providers are able to offer quality care, as well as stay abreast of payment reform methodologies such as value-based purchasing and pay-for-performance initiatives.

According to the recent CDW Healthcare report "Analytics in Healthcare," more than two-thirds of healthcare decision makers say analytics is one of their organization's top three priorities, but adoption levels vary by organization size. The report predicts that 65 percent of healthcare organizations plan to boost spending on data analytics applications. Health information management (HIM) professionals are well positioned to help providers make the best use of their data due to their intimate knowledge of coded data, clinical documentation processes and capture, and the quality reporting initiatives they're involved with for programs such as the "meaningful use" EHR Incentive Program. AHIMA's recent workforce survey rated data analytics near the top of competencies HIM professionals feel they need to possess in the future.

Even though HIM has every reason to be on the frontlines of this data revolution, there are some barriers, such as a lack of understanding around statistical analysis as well as informatics. But as the healthcare system transitions toward pay for performance and away from volume-based payments, HIM has more reason than ever to engage data analytics.

The Driving Force of Data Analytics

Now that electronic health records (EHRs) are the norm in healthcare, "we finally have the data to do analytics," says Lesli Adams, MPA, director of healthcare strategy at Oracle. "We're just now getting that bolus of information."

And right on time, too. Medicare initiatives that ding providers for high hospital readmission rates—as well as for hospital-acquired infections—are starting to go into effect, and providers are scrambling to figure out how to avoid these penalties. Additionally, in January CMS announced a timeline for its transition to pay-for-performance reimbursement models. CMS said its goal is to begin tying 30 percent of traditional, or fee-for-service, Medicare payments to quality or value through alternative payment models, such as accountable care organizations (ACOs) or bundled payment arrangements, by the end of 2016. It's also aiming to tie 50 percent of payments to these models by the end of 2018.

Shauna Overgaard, MHI, adjunct professor at the College of St. Scholastica, says data analytics are a necessity when it comes to reducing waste within healthcare. "The ability to analyze care across the continuum of clinics, hospitals, and post-acute care settings allows providers to assess the cost and benefit associated with value-based purchases/payments. Further, claim-based analytics can better leverage clinical data in the identification of potentially avoidable complications or variations in care through pattern analysis," Overgaard says.

Jonathan Karl, director for CDW Healthcare, helped put together the "Analytics in Healthcare" report. He says that as it relates to value-based purchasing and pay for performance, healthcare organizations are "starting to be able to validate and justify how they're spending money, and providing different qualities of care. We're moving from assumptions of what the impact is, to being able to show the results. That's driving a lot of the investment or utilization of better analytics," Karl says.

One of the biggest ways that analytics is helping justify costs is its ability to track readmissions data. Analytics help give providers a better understanding of the factors driving readmissions, or what precipitates a spike in readmissions. Uncovering a trend that's manageable can reduce the cost impact of a readmission as well as improve care, Karl says.

Data analytics is the best way providers can get a longitudinal view of a given patient's experience throughout the healthcare continuum. Patients often are treated in multiple locations throughout a state or the country, and in some cases their information feeds into a health information exchange—and clinicians need to be able to make sense of what's happened to them. This is particularly important if a provider is participating in an accountable care organization (ACO).

To participate successfully in an ACO, the provider must be able to prove, through their data, that their patients are improving under their care—and that means gathering more than just claims data on a patient. The provider needs to be able to gather pharmacy records, lab values, hospital admissions records, and length of stay data, all of which give a better overview of the patient's health. Being able to easily gather and analyze all of this data can help providers identify trends with certain conditions, such as heart failure and diabetes, and target interventions more accurately. ACOs are then able to see how well multiple providers are collaborating to improve care and lower costs.

When CDW examined the outcomes of providers who've already implemented analytics programs, 82 percent said they had tracked and improved patient care, and 53 percent successfully used analytics to reduce readmissions.

Other federal initiatives, such as meaningful use, are driving the demand for analytics. Karen Proffitt, MHIIM, RHIA, CHP, vice president of consulting for Just Associates, says analytics are key to helping eligible hospitals calculate reporting metrics and determine compliance rates. For example, there is a core measure that requires 80 percent of unique patients to have a smoking status recorded. "The only way to figure that out is analytics—someone figuring out how to pull that out and get it into a report. There's not a field (in an EHR) that says 'Did you collect a smoking status, yes or no?'" Proffitt says. Rather, the measure asks "is there a smoking status and has it been updated?"

"You have to go back into the metadata and match that to a visit date, and then you can say you're updating your smoking status on X number of patients. There's a similar, even more complex process for providing the patient with educational material relevant to their health diagnosis. Any one of those measures requires analytics," Proffitt says.

Data analytics doesn't just help healthcare organizations meet clinical and regulatory requirements—their use is an increasingly important way to help predict cost impact models, Karl says. Collecting data around workflow and how clinicians move around their environments can help management make better business and clinical decisions, he notes.

High Demand, Low Supply for Analytics Professionals

While data analytics is undoubtedly the future of healthcare, many people in the industry are concerned that there aren't enough healthcare professionals with the right skill set for the job. Karl points to a recent PricewaterhouseCoopers healthcare research report that said 51 percent of CEOs surveyed in the global healthcare space said their staff can't keep up with demand for health IT specialists, especially data analysts.

"The knowledge of an IT shortage is accepted. The demand is not going to slow. To combat those shortages what we're hearing and seeing is that there is a move to start developing more in-house IT skill sets, analytics skill sets," Karl says. "You're seeing organizations start to go back to outsourcing models."

In healthcare settings, both on the clinical and financial sides, a majority of decisions are made using the support of data, which makes it extremely important that HIM professionals in these roles have the proper skills. They need to be able to make predictions and inferences based on data in order to assume leadership positions.

As an informatics instructor, Overgaard says she sees HIM students who are intimidated by statistical methods and the coursework required to gain that expertise. One way to boost data analytics skills is through obtaining the certified health data analyst credential (CHDA), and another is getting a baccalaureate or master's degree in health informatics. But Overgaard admits that the disconnect between HIM professionals and the skills they'll need going forward is due to the fact that technology is changing so fast it can be hard to know where to start. She encourages providers to seek out an analytics tool or application, and offer the training needed to make the most of it.

Proffitt says that in order for HIM professionals to break into the analytics space they need to show interest and express what value they can bring to the table. "We can absolutely help them in determining if their data is quality data. An HIM person can look at, for example, discharge data and say 'I think you have a problem there. You have zero admissions for this DRG and that's not right—we treat this all the time,'" Proffitt says. "I just think whether it's clinical or financial, they still use all this fundamental hospital data… all these decisions are based on that fundamental pocket of information that HIM helps create."

First Steps to Data Analytics Expertise

Providers who don't pursue data analytics are setting themselves up to fail. Bobbi Brown, vice president of financial engagement at Health Catalyst, says the pace with which data analytics is becoming necessary is putting providers at risk for doing it improperly.

"I see a lot of people cobbling stuff together. They'll have an Excel spreadsheet, they'll have a nurse who's clinically very good and shouldn't be pulling data out, or manually pulling data out of charts," Brown says.

Small, rural providers that aren't owned or operated by larger integrated delivery systems might also struggle to keep pace with initiatives that rely on strong data analytics activities. Brown says they should link up with larger providers to the extent that they can and take advantage of some of the data resources Medicare provides in terms of statistics and resources to prevent readmissions.

"Tools are getting easier for people to use. But it's tough in this environment. You have to get your team together in the hospital and say 'We know our readmission rate is high in this area.' And there's so much info out there now, they should be asking, 'What can we do to improve it?'" Brown says.

Organizations that want to tackle data analytics can take a few actions in parallel, says Oracle's Adams. "First, it's a data governance activity," she says. "Say you find 15 analysts or five analysts, what are you going to measure? What's the mission? Do you have an analytics footprint? You have to have an enterprise-wide analytics engine that stores this information or is able to report for you."

Next, you've got to have a hiring plan, Adams says. "Because if you just put people in there and can't get to the data, and if you've got three of them reporting on length and stay and don't have governance on those things," then that's a problem, Adams adds.

HIM professionals and leaders also need to work to overcome their intimidation by analytics. Meanwhile, other departments involved in analytics activities might not even recognize that HIM has the resources and knowledge to help them with projects.

"They [HIM] are leery and insecure in their knowledge and ability to really contribute in those areas, but I think some are absolutely capable. It's just that this wasn't covered years ago in school. If you haven't kept up or been involved in these high-level projects around decision support, or taken other classes recently, it's a little foreign," Proffitt explains. "So I think they're reluctant to say 'I can do that, that should be in my department.' They are willing to assist with data management and analytics but are hesitant to 'own' pieces of it."

Mary Butler (mary.butler@ahima.org) is associate editor at the *Journal of AHIMA*.

Article citation:
Butler, Mary. "Data Bank: Using Data Assets to Support Evolving Payment Models and Survive Healthcare Reform" *Journal of AHIMA* 86, no.10 (October 2015): 22-25.