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The Road to Data-Driven Healthcare

THE RIGHT DATA CAN HELP DRIVE BETTER OUTCOMES FOR PATIENTS AND GREATER EFFICIENCY FOR PROVIDERS

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A healthcare system capable of identifying patients most in need of care or at the greatest risk, where treatments can be personalized and the myriad parties involved are guided by a deeper, more precise understanding of outcomes: that's the vision and the promise of data-driven healthcare.

In practice, however, delivering on that promise has its complexities.

Dr. Keith Dunleavy is CEO and chairman at **Inovalon**, a leading provider of cloud-based platforms empowering data-driven healthcare. The issue, he says, is that effective data-driven care requires more than just data; it also needs connectivity, useful analytics and cooperation between disparate parts of the landscape. "Healthcare as an industry and an ecosystem has many different types of organizations all working to deliver some aspect of care. Health plans, provider organizations and pharmaceutical companies are just a few examples," he says. "And historically, there was very little collaboration between those silos."

Data, Dunleavy notes, must also be given structure so that it can be better understood and put to meaningful use. It's an undertaking made more difficult by the tremendous number of variables and the unique nature of healthcare data. "Unlike many other industries where common descriptors, established sources of validated facts and discrete numbers reflect the majority of important details, healthcare operates on assessing a multitude of both quantitative and qualitative information that may be coming from multiple different persons with differing insight and views," he says. "Absorbing the myriad types and sources of structured and unstructured data that constitutes the many points of a patient's case, and translating it into digestible, meaningful data is no small task."

Leveraging this kind of data effectively requires specialized capabilities. Inovalon, Dunleavy says, empowers large-scale, data-driven healthcare by aggregating data—medical, pharmacy, lab, demographic and clinical from more than 287

million unique patients—through its Inovalon ONE® Platform, a cloud-based system of nearly 100 technology tool sets including AI, machine learning and analytics. "Connecting to the ecosystem in real time and delivering impact at the right time, in the right place, on the right patient, in the right way, is a monumental challenge and something we work to do every day."

Turning Data Into Action

Blue Cross and Blue Shield of Louisiana understands every point of contact between the network and the nearly two million Louisianians it serves. Every doctor visit, bill sent, phone call made or prescription filled tells a story, whether about that individual, the community in which they reside or the practitioners providing care. It's a diverse, challenging state with a high level of poverty and underserved populations with poor access to care.

Serving it effectively is no easy task.

Data—and the technology to utilize it—is making a difference. Tools like AI and machine learning are critical for developing effective predictive models that promote intervention and care before conditions become acute. “It allows us to find, in a very focused manner, perhaps just 1,000 or 5,000 people who need a particular intervention in a very narrow window of time,” says Somesh Nigam, Blue Cross and Blue Shield of Louisiana’s SVP, chief analytics & data officer. “AI allows you to use all of those thousands of variables, and then figure out the likelihood of something happening, like hospitalization or readmission. It allows us to be very focused and timely.”

“This is the new data-driven world,” he says. “Data acts as the glue to bring it all together.”

The Final Piece

Using data effectively in the way Nigam imagines requires more than analytics centered around preventative intervention and a better understanding of the factors influencing outcomes. Innovative thinkers can’t operate without information, and getting that information requires breaking data out of isolation and transforming it into a tool of connection and collaboration. “In a coherent system, we could be learning from everyday practice because the data that’s generated could begin to show us things we haven’t had a hypothesis about before,” says Peggy O’Kane, founder and president of the National Committee for Quality Assurance (NCQA), a leading

accrediting organization dedicated to driving improvement in healthcare. “This kind of learning is happening in some places, on small parts of the population.” To increase the size of those populations, O’Kane places heavy emphasis on forming partnerships with businesses that have expertise in data gathering, storing and synthesizing—capabilities most healthcare organizations weren’t designed to do well. Having partners allows individual organizations to focus on core competencies, while bringing the right experts together to better understand and serve healthcare consumers. “There is complexity of care delivery on one side and then technology on the other,” she says. “The technologists need the patient data and the understanding of how care is delivered, but they can also challenge old norms of how the care is delivered. It’s about different ways of thinking and formulating problems.”

Organization and delivery of data are key functions for businesses like Inovalon. Take, for example, the treatment of rare and complex diseases and the growing field of precision medicine, which involves developing medications tailored to very specific physiological or genetic attributes. In this context, Dunleavy says, “there is a physician sorting through the diagnosis, treatment and side effect considerations, there is a laboratory providing important blood test results, there is a pharmacy working to support the determination of the right dosing and proper coordination of a highly complex medication regimen,

there is a biopharmaceutical company that may need to manufacture or tailor the treatment, there is a health plan working to achieve both quality and economics of care, and there is a patient suffering from an illness while trying to navigate the complexities of our healthcare system.”

The coordination of the relevant data and the associated analytics necessary to convert the data into helpful insights all needs to happen smoothly and quickly. On top of that, the resulting outcomes must be monitored to support a constant focus on value and improvement.

It’s just one example of how different entities across the landscape impact each other, and why interconnectivity is critical. It requires partnerships with scale, capable of touching every corner of the healthcare landscape and allowing data to move freely between them. Inovalon’s platform supports 24 of the top 25 U.S. health plans, 22 of the top 25 global pharmaceutical companies, and 19 of the top 25 U.S. healthcare provider systems, building a dataset of over 48 billion medical events. The result is a virtuous cycle in which new data consistently enriches the old, increasing its capacity to inform as it flows to end users.

“The power of data can substantively and meaningfully improve clinical quality outcomes in healthcare—as well as the economics,” Dunleavy says. “That’s the end goal. That’s why we come to work every day.”