Healthcare Innovation NEWS

Data, Analytics Impact Healthcare

by Emad Rizk, M.D.

With the historic election now behind us, healthcare organizations are wrestling with an uncertain policy outlook in 2017. Key strategic assumptions predicated on the Affordable Care Act—the future of the exchanges, the outlook for Medicaid coverage and reimbursement and the growth of alternative payment models—are being revisited in boardrooms and in 2017 and 2018 budgets.

Going forward, one thing seems certain: The healthcare system will be forced to focus on affordability. The cost of care for the looming wave of aging baby boomers will strain federal and state budgets and create spillover effects in the commercial market. To meet this challenge, it is imperative for healthcare organizations to harness the enormous amounts of data at their disposal to unlock the insights necessary to deliver better care at a lower cost.

The industry is recognizing that analytics will drive innovation. In fact, analytics is filtering down through payer organizations. Conference meetings that focused on analytics used to be sparsely attended; now these same meetings draw scores of people from all areas of organizations. From actuaries and underwriters to nurses and physicians, the role of analytics is changing the way they conduct business. This organizational shift highlights the vital role of analytics, and how it is becoming more deeply embedded into and embraced by healthcare organizations that are looking to position themselves for success.

Four recent trends in data analytics are beginning to make an impact on the delivery of effective healthcare:

1. **Natural language processing (NLP).** NLP techniques extract important information from vast amounts of clinical data and analyze it for enhanced processing and insights. Right now, NLP is at a tipping point in healthcare, allowing for unstructured data to be leveraged more broadly and efficiently. NLP is no longer just a promising advancement but a necessary tool to help organizations bring order to disparate data, find and classify new opportunities to improve care and better understand patterns and trends. It is critical to the future of healthcare.

2. **Connectivity and interoperability.** To be successful, companies must connect all stakeholders in the healthcare ecosystem throughout a continuum of care. Ultimately, what healthcare is trying to do does not differ from other industries; it strives to deliver a specialized service to as many customers as possible. To do this, healthcare needs to establish, cultivate and support connectivity. Securely sharing data and analytics is the key piece to this puzzle.

    Through interoperability, there should be an accelerated uptick in the implementation of application programming interfaces (APIs) embedded into workflows for the seamless movement of information. This will lead to improvement in quality of care. APIs originally emerged in software as a way for companies to share functionalities they built in their application with a wider set of developers. Within the healthcare environment, the cost and complexity of launching APIs were drastically reduced as APIs were granted access to and handled data previously siloed in EMRs.

    Removing this hurdle cleared the way for innovative companies to build data-driven solutions, addressing a variety of healthcare challenges. Only when data can easily and securely travel back and forth throughout the healthcare ecosystem can health plans, providers and consumers be in lockstep toward the common goal of quality care at a reasonable cost.

3. **Lifestyle-based analytics.** A versatile bank of socio-demographic and consumer data develop lifestyle-based analytics and when comingled with medical information, they provide invaluable patient-level insights. Lifestyle-based analytics can help inform providers and health plans about patient lifestyle choices, as well as potential obstacles to care. By including social determinants in the process, organizations can better understand the patients they serve and more effectively reach out to and engage with them.

4. **Visualization.** From the outset, the goal of any successful analytics program is to provide caregivers with actionable insights that are embedded into their day-to-day workflow. In the future, we'll see a more seamless incorporation of dynamic reporting and visualization into workflows with the goal of ensuring that organizations can make important business decisions.

While the future of healthcare often feels uncertain, the necessity of data analytics and innovation remains. While healthcare organizations address an aging demographic, new payment models and the rising cost of care, they are also experiencing increasingly complex clinical and financial risk. Analytics must play an integral role in all healthcare organizations to help manage these risks. Industry leaders stand on a foundation of years of expertise, but armed with innovative analytics, these leaders will emerge as the change makers.

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