

Evolving role of the CIO in data-driven healthcare

CIOs are now expected to be business drivers, almost like technology company CEOs.

The landscape of healthcare analytics continues to change, the opportunities for analytic professionals continue to grow in this arena, and the potential for start-ups persists. Before addressing the leadership transformation within healthcare organizations that these changes and opportunities demand, let's first examine what is happening within various healthcare stakeholders.

The healthcare industry recently received a jolt from a major data breach. Anthem, the second largest insurer in the country, was the victim of a cyber attack that **compromised** the company's IT systems and the personal information of 80 million U.S. consumers over a several-week period.

Healthcare industry players know that their consumer data is rich with details, which makes it valuable. Up until 2012, most of the major healthcare industry breaches that occurred were due to the theft of magnetic media (e.g., unencrypted hard drives) or mobile devices (e.g., unprotected laptops). Only 6 percent of all HIPAA violations were **attributed** to hacking.



BY RAJIB GHOSH

The data breach due to hacking of the magnitude at Anthem caught many organizations by surprise and sent them scrambling for solutions. In November 2014, International Data Corporation (IDC) **warned** that 50 percent of healthcare organizations would experience one or more cyber attacks in 2015, and a third of those would be successful. A closer analysis suggests that this threat should not come as a surprise, given the staggering **40 percent**

growth rate (GAGR) of data in healthcare organizations.

Providers continue to adopt electronic health record (EHR) systems that digitize clinical data. The U.S. Department of Health and Human Services **reported** in 2014 that about 59 percent of hospitals had adopted EHR systems as of 2013. Payer organizations have invested billions of dollars to acquire systems, from health information exchanges to powerful analytics software, that



71%
of data management
professionals admitted they
“have yet to begin planning”
their big data strategies.

SOURCE: “Big Data in Big Companies,” International Institute for Analytics, May 2013



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combines clinical data from provider organizations with claim data to help payers understand high-cost and high-risk populations.

With all this data on individual consumers available inside healthcare organizations, hackers have clear incentives to target it. According to one report, healthcare data is more [expensive](#) on the black market than regular consumer credit card data. The growing appetite for data within healthcare organizations brings greater responsibility for protecting the data from sophisticated hacking attacks. No CEO wants to be caught in the spotlight the way Anthem CEO and President Joseph R. Swedish is right now.

SEARCHING THE DATA FOR INSIGHTS, REVENUE

In the post-EHR world, healthcare organizations are increasingly investing in technologies for capturing multi-channel data, from patient engagement via social media apps to remote patient monitoring. They then layer data-driven analytics on top of that, a global trend. A recent [report](#) forecasted that the global healthcare analytics market will grow more than 25 percent (CAGR) from 2014 to 2019. In addition, IDC [predicts](#) that by 2018, big data issues will become part of the operational IT inside healthcare

organizations. In the pay-for-performance world, maximizing revenue, along with population health management initiatives, depend squarely on the business insights gained from this data. Predictive and possibly prescriptive analytics will take center stage and converge with healthcare delivery in the future.

While data from American Hospital Associations [shows](#) that the financial performance of hospitals across the nation rebounded in 2014, many challenges still loom from the continued impact of healthcare reform. Inpatient care is moving toward outpatient services, and uncompensated care is growing. Better care management is slowly but surely lowering utilization. At the same time, insurance exchanges and low-cost plans are reducing overall dollars paid to hospitals. As hospitals look to reduce their operational inefficiencies in order to improve their bottom line, they will be compelled to move toward a data-driven digital strategy. Hospitals have already invested heavily in health IT, especially EHR systems and data warehouses. The next step is to use actionable analytics to address inefficiencies at every level.

CIOs AS LEADERS OF TECHNOLOGY, DATA-ENABLED BUSINESS MODELS

Data and technology will continue to drive every aspect of the healthcare

business going forward, creating a transformational event for all healthcare organizations, big or small, and definitely for their leadership. No leadership role is undergoing more change than the role of the chief information officer (CIO) in the healthcare industry.

Gone are the days when managing the computing infrastructure and packaged software were the only key CIO responsibilities within healthcare organizations. CIOs are now expected to be business drivers, almost like technology company CEOs. They may be part of healthcare organizations, but they lead new technology product development, facilitate internal customer adoption (which follows the product life cycle curve), drive innovation, protect data in their private cloud, and may also sell their innovations as services outside of their own organizations.

In bigger organizations, sometimes the role gets split between the chief data officer and the CIO. Nevertheless, the profiles for the roles are all about driving business successes. I am thrilled to see this transformation happening

within larger organizations such as Sutter Health and Kaiser Permanente or relatively smaller managed services organizations like [SynerMed](#) and non-profit health insurance corporations like [Cambia Health](#). It means those aspiring healthcare technology and/or data analytics professionals can be assured of a long runway that goes all the way to the boardroom. Of course, the change comes with its fair share of demands, scrutiny and other woes, but I celebrate the fact that CIOs are no less important in the healthcare organizations than the CEO, CFO or COO. |

Rajib Ghosh (rgghosh@hotmail.com) is an independent consultant and business advisor with 20 years of technology experience in various industry verticals where he had senior-level management roles in software engineering, program management, product management and business and strategy development. Ghosh spent a decade in the U.S. healthcare industry as part of a global ecosystem of medical device manufacturers, medical software companies and telehealth and telemedicine solution providers. He's held senior positions at Hill-Rom, Solta Medical and Bosch Healthcare. His recent work interest includes public health and the field of IT-enabled sustainable healthcare delivery in the United States as well as emerging nations. Follow Ghosh on Twitter @ghosh_r.

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