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Results From the 2017 Predictive Analytics in Health Care Trend Forecast

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The Society of Actuaries (SOA) recently conducted a survey[1] of health payer and provider executives to glean insights into predictive analytics trends. As part of its continuing mission to advance the field of actuarial science and the actuarial profession, the SOA is investing resources into understanding how predictive analytics will temper financial pressures and contribute positively toward the Triple Aim of Health Care—improving patient care, patient health and per capita costs.

The majority of health executives have a clear opinion of the future of predictive analytics in their field: 93 percent believe predictive analytics is important to the future of their business. As the industry becomes increasingly focused on value-based care, executives have become more focused on processes and technologies that reduce costs and improve products and services.

For both payers and providers, the top four outcomes identified by the survey as most valuable to predict—cost, clinical outcomes, patient satisfaction and profitability—all directly impact the goals of the Triple Aim. The overwhelming majority of executives surveyed expressed the belief that predictive analytics

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will be extremely cost effective in the future. More than half of executives surveyed expect that predictive analytics will save their organization 15 percent or more over the next five years, and a quarter of executives forecast saving 25 percent or more in that same period.

These results clearly indicate that executives expect predictive analytics to become an essential element of value-based care. Early adopters of predictive modeling have already seen benefits that include easier identification of patient health risks, improvements in helping doctors anticipate patients' health care needs and mitigate their conditions, and even the identification of new solutions to the needs of patients and providers. However, despite the anticipated financial benefits from adopting predictive analytics, 16 percent of health care executives still indicate that a lack of budget is the biggest challenge to implementation within their organization.

Executives concerned about costs aren't thinking about the initial costs of predictive analytics—major organizational changes are almost always necessary for a company to fully implement predictive analytics from scratch. The changes, financially

sound as they are in the long run, can require investment in new infrastructure and systems, as well as granular adjustments that can extend all the way down to hiring for specialist roles, new skills and day-to-day operations changes.

Regulatory issues, specifically compliance with security requirements in the face of recent highly publicized data breaches, were identified by executives as the second most challenging aspect of implementing predictive analytics (13 percent). Other challenges for implementation include incomplete data (12 percent) and a lack of skilled applicants (11 percent).

Health data can easily be used to identify individuals, so the prospect of having records hacked is very concerning for both payers and providers. Incomplete data and the lack of skilled personnel to make use of data are obvious issues as well. The survey found that the top two expectations for the future of predictive analytics are the refinement of data collection methods to increase security (20 percent), and investment in people with the necessary expertise. Nevertheless, the financial benefits that predictive analytics brings to the table outweigh the potential downsides.

Contemporary data sources are much more complete than in the past, and new, better ways of collecting data are being implemented across dozens of industries as technology becomes more accessible and applicable. Traditional sources like health records and nontraditional sources like wearable devices are more available than ever before.

Similarly, health care payers and providers may need to start looking at nontraditional professions when hiring for predictive analytics roles, such as actuaries. After all, predictive analytics is the cornerstone of the actuarial profession, and actuaries have been analyzing complex sets of data since the inception of actuarial science—long before "big data" became popular.

It's clear that executives are confident about the benefits of predictive analytics: 88 percent of respondents said they currently use or are planning to use predictive analytics. These results indicate that executives are confident that the industry will invest in solutions to the biggest present and future challenges for the health care industry. ■

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ENDNOTE

1 See Society of Actuaries, 2017 Predictive Analytics in Healthcare Trend Forecast, https://www.soa.org/Files/programs/predictive-analytics/2017-health-care-trend.pdf (accessed August 11, 2017).