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Data-Crunching Technology Spurs Insurance Dollars

A race to predict and head off emerging threats through data analysis

By **Brian Gormley**

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Prognos co-founders Sundeep Bhan (left) and Jason Bhan (right) PHOTO: PROGNOS

Medical insurers are ramping up the role that data-crunching technology plays as venture-backed startups race to predict the future of its patients.

Health plans have long sought to identify and help people with illnesses such as diabetes. Now artificial intelligence and other data-rich capabilities are making it easier to predict who will develop these conditions—and intervene sooner.

“In the past, we looked at a big haystack for a needle,” says Richard Popiel, chief medical officer of Cambia Health Solutions. Thanks to new analytical models “we’ve reduced dramatically the size of the haystack.”

Cambia, a family of companies that includes six regional health plans, has just launched a pilot program with GNS Healthcare. UnitedHealth Group is expanding its work with Ayasdi, and CignaCorp. is tapping technology from Prognos.

Startups such as Ayasdi Inc., GNS Healthcare Inc. and Prognos are providing insurers with data-analysis capabilities to help them forecast emerging illnesses and deploy resources. This can help them to better manage chronic diseases and improve the overall health of their members.

Health plans historically used claims data to spot and provide resources to people with chronic illnesses. But these efforts were backward-looking and weren't very predictive, according to Dr. Popiel. Through technologies such as artificial intelligence, data analysts predict which members will need help and the interventions most likely to work.

Cambia is working with Cambridge, Mass.-based GNS Healthcare, whose causal machine-learning technology can help match patients with medical interventions. With help from GNS, Cambia has launched a program to identify members of its Medicare population who have serious illnesses and are potentially facing end-of-life decisions.

People who are candidates for palliative care have complex needs. Cambia's goal is to find people it can help and provide them with information that helps them make decisions about their care, Dr. Popiel says.

Similarly, insurers such as Cigna are working with New York startup Prognos, which applies AI to clinical diagnostics, to identify members with a high likelihood of being diagnosed with diseases such as diabetes.

CareSkore, a Mountain View, Calif., company that serves health-care providers as well as insurers, uses various sources of information, including clinical, claims and demographic data, to generate risk stratifications for patients.

Improved data-crunching can also help insurers in other ways. UnitedHealth since 2014 has used AI capabilities from Ayasdi to root out fraud. The insurer seeks to prevent fraudulent claims from being paid instead of trying to recoup funds after the fact, says Patrick Stamm, chief operating officer, shared services, for UnitedHealthcare.

"We think [artificial intelligence] in general is going to continue to make it easier for us to find fraud, waste and abuse," Mr. Stamm said.

Earlier in July UnitedHealth purchased a license to Ayasdi's clinical variation management application aimed at making care delivery more efficient.

Not all startups depend on artificial intelligence. A wristband from Spry Health Inc. collects cardiovascular and respiratory information from patients with chronic illnesses to spot worrisome trends, such as an elevated breathing rate in someone with chronic obstructive pulmonary disease.

The company doesn't need to apply artificial intelligence to the data because the information it captures is fundamentally predictive, according to Spry, which is based in Palo Alto, Calif.

Insurers are also turning to startups for help understanding the risk of outbreaks of infectious diseases, such as Zika or Ebola. This helps them underwrite risk for countries and corporations seeking insurance policies that help them respond quickly to emerging disease threats.

San Francisco-based Metabiota Inc., for example, is launching a platform for estimating epidemic preparedness and risk. Reinsurer Munich Re and In-Q-Tel, the strategic investor for the U.S. intelligence and defense communities, are using the platform to identify, quantify and mitigate infectious-disease risk.

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