IQuity Shifts From Test-Maker To Data Miner And Analyzer

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INTERVIEWS

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Executive Summary

Nashville-based genomics company IQuity is building a data mining and analytics platform that will predict and monitor chronic diseases from public and private datasets from large populations.

IQuity is developing a health-care analytics platform that will mine large databases to predict and monitor chronic disease across large populations, transforming the company from a genomics test-maker to an "integrated data science company."

The Nashville-based genomics company has developed three genomic assays based on its IQIsolate process for multiple sclerosis, for irritable bowel syndrome and irritable bowel disease, and fibromyalgia. "Those tests were each built using about 1,000 patients and we can achieve very high accuracy levels - greater than 90% - but it takes a long time and a lot of money to be able to build-out those tests," IQuity CEO Chase Spurlock told Medtech Insight. "So we asked the question: If we used just a population-level data approach - where we can, with a few clicks of a mouse, capture data on tens of thousands of patients - could we actually have higher levels of accuracy? And can we do this on a broader population in real-time with greater ease? What we found is that we can achieve the same high level of accuracy using a pure data approach and that really complements what we're doing on our lab-test."

The company expects this technology will appeal to self-insured employers, benefit managers, health insurance companies, pharmaceutical companies, and care management companies because it will improve patient outcomes while lowering costs. The potential benefits of IQuity's analytics approach

was demonstrated in a pilot study focused on multiple sclerosis, compiling four million data-points from 20 million people in New York. The study identified both patients who had been correctly diagnosed with MS and patients who had been misdiagnosed and predicted the onset of MS in that population with over 90% accuracy at least eight months before it could be diagnosed with the traditional tools of magnetic resonance imaging, spinal taps, and symptom-monitoring.

The company focused on multiple sclerosis first because it is one of the most expensive-to-treat diseases. But IQuity believes the same approach could be applied to any disease.

"Our core understanding has been in the field of autoimmunity and autoimmune disease. We've got a number of tests that we've put out that address these conditions. MS is going to be the first one up but we're also going to be looking at other autoimmune diseases and their associated comorbidities," Spurlock said. For example, there is increasing evidence that depression is a common, but perhaps underappreciated, comorbidity in patients with multiple sclerosis, Spurlock said. And cardiovascular disease is also seen with a lot of autoimmune conditions like rheumatoid arthritis. "Being able to monitor, not only for a disease target, but the associated comorbidities could [improve outcomes in these patients,]" Spurlock said.

"What we want to be able to offer - to care management companies, to self-insured employers, and even to payers - is an ability to look at their entire population, consider the history, the claims history, or the electronic health record history associated with these patients, and say 'These are the individuals heading toward a potential diagnosis, these are the patients that are potentially misdiagnosed, and here are the patients that also have a high likelihood of a higher disease activity or worse disease trajectory, and we can begin to risk stratify that population,'" Spurlock explained. "We know that we can get on these patients quickly and diagnose them accurately. We can stave-off progression of the disease."

The company formally announced the launch of the new analytics platform last month on July 17 and is now "in the midst of building out a commercial-grade version," Spurlock said. "We're very interested in announcing the results from pilot studies using this analytics platform. We're also interested in expanding the number of partners we have to build this out, so I think there's going to be a lot of growth in the next three or four months."