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Predictive Modeling NEWS

Health Outcomes Sciences Deploying ePRISM, Moving into New Clinical Areas

In an interview, Matt Wilson, CEO at HOS, outlines his company's future plans

Health Outcomes Sciences Inc., a leading healthcare information technology enterprise based in Overland Park, KS, reports it has completed the first close of its Series A Preferred financing round. The company raised $5 million in the first closing, and expects to raise up to an additional $2 million of capital, bringing the round to $7 million. The round, which is led by the Kansas Bioscience Authority and Grayhawk Venture Fund II, also includes "a broad representation of existing angel investors," a statement says. The funds will be used to grow sales of the company's ePRISM clinical decision support software, which, it adds, "provides evidence-based individualized risk models to physicians where they need them most: at the point of care."

HOS "focuses on translating the latest advances in clinical and outcomes research into evidence-based decision support solutions and services" for physicians and their patients, healthcare organizations and other medical software developers, the statement adds. Its solutions, it says, "empower clinicians to see complex relationships between clinical variables and patient outcomes. Better understanding of these relationships enables patient care to be personalized in ways that previously could only be imagined."

HOS CEO and president Matt Wilson says he's "thrilled to have KBA and Grayhawk join us in our pursuit to impact the cost-quality paradox in healthcare," noting that "HOS is among the first to capitalize on a huge market for technologies capable of personalizing patient analytics and applying them in direct clinical care." The round of funding, he adds, will help HOS build on its early success in cardiology and extend its reach to other specialties.

Keith Harrington, KBA managing director, adds that "KBA is delighted to partner with the HOS team to accelerate its sales growth and improve patient outcomes." And GVFII partner Brian Burns says that "HOS is at the leading edge of using 'Big Data' for supporting medical decisions. We are excited to be part of a company that can improve both health outcomes and cost containment in hospitals."

Predictive Modeling News talked to Wilson about the company's plans.

Predictive Modeling News: *Congratulations on the funding. Have you reached the $7 million yet? Are you on track?*

Matt Wilson: Thank you! We have raised $5.25M of our $7M Series A and have several additional investors interested in finishing off the round. Healthcare has proven that it has a tremendous appetite for data utilization, and with the accelerating pace of development around predictive analytics, we seem to draw great interest from the investment community. The fact that we've already created traction in the market, have documented results and are generating revenue certainly helps!

PMN: *What can you tell us about the financing round leaders, the Kansas Bioscience Authority and Grayhawk Venture Fund II? How did they get involved with HOS?*

MW: We feel very fortunate to have connected with both these firms. I first met the Kansas Bioscience Authority folks at the InvestMidwest conference in 2013. It was a great opportunity to meet several high-quality investors and firms in a condensed format. KBA is full of very smart business people focused on developing a world-class life sciences environment in the state of Kansas. There are several exciting projects they've been a part of, and I was very impressed at the hands-on nature of their partners, along with their desire to truly understand our business and the future of our company. Keith Harrington, our board chair from KBA, is a creative young healthcare professional and has been very focused on pushing us to be proactive with go-to-market strategies beyond those on which we were already executing. This outside perspective (and one with a vested interest) will be of great help as we focus on growing up to and beyond our potential.

As for Grayhawk, I was introduced to one of their partners via a mutual (and very helpful!) acquaintance. Grayhawk is a mid-tier firm based in Phoenix. From the very first meeting we had, I was surprised and excited at the partners' ability to zero in quickly on both our market and the key opportunities we have to change healthcare for the better. While they have had some success in healthcare, they are not a healthcare-specific firm. They've had great success with non-healthcare-specific technology companies, which interested our executive team and founders greatly. Brian Burns, the Grayhawk partner who sits on our board, is a terrific financial mind (he chairs our audit committee) -- but cares greatly about our business beyond just the balance sheet. He has been very helpful already in introducing us to useful outside contacts as we consider strategies to help facilitate growth.

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As a team of investor/partners, I could not have asked for a better group than we found in KBA and Grayhawk.

PMN: *Describe the ePRISM clinical decision support software. Where do the data it crunches come from? What kind of information output does it provide?*

MW: ePRISM is a personalized healthcare platform that through software and technology-enabled services allows us to help improve patient outcomes and lower the cost of that care. Whether talking about reductions in percutaneous coronary intervention bleeding rates of greater than 45% in multiple hospitals, improvements in acute kidney injury rates of greater than 50% or the savings of hundreds of thousands of dollars a year from more selective drug utilization, ePRISM has proven its ability to play a role in providing key information to physicians as they make treatment decisions.

The software works with existing software implemented in the hospital to pull data from those systems (EMR, lab, ADT, cath lab, etc.) and "run" those data against individualized predictive risk and appropriateness models we license from third parties. Whether from the American College of Cardiology, research partners, client hospitals and health systems or even models from the public domain, we focus on the delivery of peer reviewed and published research models that hold great promise in improving the way healthcare is delivered.

The output of these models focuses on aspects of individualized risk for a patient undergoing a particular procedure or during the decision making process as multiple therapies are considered. Whether this be a patient's risk of bleeding, risk of TVR based on selection of a bare-metal or drug-eluting stent or even a patient's personal risk of readmission within 30 days after the procedure, ePRISM helps provide data specific to the patient that are nearly impossible to calculate in the routine flow of care.

PMN: *How did HOS start in cardiology? Can you outline the condition-specific development timeline?*

MW: Two of our founders are well-respected cardiologists with a deep interest in improving patient outcomes. Gabe Soto is a brilliant electrophysiologist and played a key role in writing the original version of ePRISM code. It was an impressive effort and gave us a solid foundation to build upon as we've expanded in size and capability. John Spertus, also a founder, is a very-well-known cardiology outcomes researcher and has poured incredible effort into learning how to best deploy and use the solution, along with providing a vision for how ePRISM will continue to change medicine. We are fortunate to have John's insight and his ceaseless dedication to improving patient outcomes.

In addition to these two important ties to cardiology, we have an amazing partner in the American College of Cardiology. Through its support and the exclusive license to distribute its predictive risk models, we've been able to create early and important leadership in our market. The ACC also provides a nearly unlimited ceiling with regard to additional model opportunities within PCI and in other areas of cardiology as well. Heart failure is an obvious target, given the cost of this condition to the healthcare system and the potential to improve treatment. TAVR, A Fib, PVD, ICDs ... the opportunities to help risk stratify patients in these areas make what we are doing an important part of new healthcare innovation.

PMN: *Are hospitals your target market? Is the technology applicable to other sites of care?*

MW: Great question. Today, hospitals represent our primary market. Their desire to seek innovation to meet the challenges of healthcare reform has presented us with a great early opportunity for partnership. As the creation of other predictive and appropriateness models accelerates, though, we fully expect to deploy ePRISM in environments that may include ambulatory, behavioral health, rehab, etc. To the extent that potential clients or partners have models today that would benefit from a more effective means of delivery, ePRISM can be that solution today.

PMN: *Is HOS a fully formed company? Is the ePRISM product available retail? How far along are the company and the product on the development timeline?*

MW: We are fully formed, with resources in all of the functional areas of our business (development, implementation, support, sales, finance, etc.). ePRISM is live in more than 20 sites today and well beyond the "pilot" stage. As a hosted solution, we are capable of scaling for the growth we expect.

PMN: *Is the software always a custom installation? How does a typical user use it?*

MW: I'm always careful with the term "custom." While the solution implementation is always customized to the workflow and needs of our clients, the work effort associated with the project is minimal because of the way we designed the solution. It is compliant with IT industry standards and tends to consume minimal IT resources. Most of the "custom" effort is associated with matching it to the way our clients intend to display and consume the data produced by ePRISM.

While use cases will vary according to the venue of care in which the data will be used, typical use today involves a nurse "running" a model or set of models in a process that adds very little time to his or her current duties and in such a way that it fits his or her current workflow. Once available (usually in seconds), the nurse might print out a patient's individualized risk profile inside of an informed consent document, designed (and proven) to improve the patient's experience and satisfaction through a better means of communicating his or her specific opportunities and risks associated with the procedure or therapy. Another option would be to push the risk data directly into a cath lab, where a physician may reference the patient's

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bleeding risk, safe contrast limit, TVR risk, etc., on a screen in front of the patient as the physician performs the procedure.

The flexibility in the way data are produced and displayed is a significant factor in making the data useful rather than cumbersome to clinicians.

PMN: *What's next for HOS?*

MW: We believe that HOS is poised to become a big and very important part of the healthcare landscape. Our ability to move seamlessly into other clinical specialties gives us great opportunity to impact patient outcomes beyond those we're already improving in cardiology. We are already deploying models that positively affect stroke outcomes and pulmonary readmission rates, and we are actively working with partners in several other areas that will help us accomplish this goal. The partnerships we've created with the ACC, large EMR suppliers and other industry players have improved our ability to capture market share quickly and to continue demonstrating success in ways many young companies can't accomplish. We will also look at opportunities to expand internationally, having already been approached with opportunities in the UK, Canada and China.

Finally, we are very focused on the near-term expansion of our HOS Associate team. We are thrilled to have built a diverse and dedicated group of professionals, and look forward to adding similarly talented and committed people who can help us continue changing healthcare. We are intent on building an innovative and unique culture that incents innovation and pride in what we are doing.

PMN: *Any other comments?*

MW: Nothing other than thanks so much for taking the time to learn about us!

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