

The Big Idea

Q How do you help rural residents manage long-term treatment far from urban hospitals? A Offer access to personalized outpatient care through Community Infusion Solutions.

BY APRIL WILKERSON

People who live in rural areas often travel to hospitals in bigger cities for treatment of diseases like rheumatoid arthritis, lupus, diabetic foot infections or cancer, but return to their home communities for ongoing needs like IV infusions.

Timely infusions are a critical component of the long-term management of these and other diseases, but too often, patients are not compliant with the infusion regimen and end up back in the hospital. That cycle, which is costly in terms of health and finances, drew the awareness of University of Oklahoma Health Sciences Center alumnus Mitchell Berenson, who knew he could provide a solution that combined the latest technology with personal support.

Berenson began his graduate education in the mid-1990s at the OU Hudson College of Public Health, earning a master's degree with an emphasis on health care economics, biostatistics and health care administration. He went on to complete an administrative residency at Johns Hopkins Hospital in Baltimore, then held administrative positions in several health care systems, where he saw the gap in care that delayed patients' recovery and cost insurance companies and other payers billions of extra dollars.

"I realized that rural patients were driving to urban areas

to receive care, but when they were discharged, many of them did not do well. There was no continuity of care," he says. "So, I dedicated myself to developing a company that addressed that problem."

The result is Community Infusion Solutions, which Berenson formed in 2008 with the goal of opening access to outpatient IV infusion at rural hospitals throughout the United States. His

company not only represents a new care model, but also surrounds the patient with the support they need to receive infusions every time they are prescribed.

The process begins with a referral from an urban hospital that is sent to the Dallas home base of Community Infusion Solutions, whose staff prepares the orders and coordinates the appointment with the patient's rural hospital. The company's 20 case managers then begin working with patients to help them over any hurdles that would prevent them from keeping their infusion appointment.

"With our company, it's not enough to create a process so

that the rural hospital is ready for the patients to come in," Berenson says. "We wanted to have case managers who could help patients address any problems in a logical way. We carefully orchestrate the entire patient visit to the hospital from the minute they get up in the morning to when they get their



IV Ensure infusion monitor

In addition, patients have "happy state."



infusion and return home. That focus on process is very different from the norm.”

Berenson’s company works with nearly 50 hospitals and 25,000 patients in 22 states. The compliance rate of their infusion patients is 90%, he says, which leads to better outcomes for patients and generates millions of dollars in revenue for rural hospitals. In addition, hospital readmission rates for those patients have decreased dramatically, in some cases up to 300% for conditions like urinary tract infections, cellulitis and osteomyelitis, he says.

“We have a rule in our company – ‘every patient, every infusion, every time,’” he says. “If patients with diabetes complications, for example, are compliant with treatment, they won’t have leg infections because of blood flow problems and you can prevent an amputation. They won’t have to go to the emergency department or be readmitted to the hospital. They can go back to their lives and their work.”

Community Infusion Solutions continues to grow in the ways it can help patients and in the technology that makes this model work. Berenson and his team received a U.S. patent on a device that aims to increase compliance for patients who are having their infusions at home.

Home infusions represent a large and growing industry, but compliance remains low because there has been no way to monitor and quantify the compliance rate. Berenson stepped into that gap with the creation of IV Ensure, which connects to home infusion equipment and helps patients stay on track with their treatments. The device also assesses the patient’s emotional and psychological status so that case managers can provide support if needed.

When patients are discharged from the hospital, they take the device home and simply connect it to their home IV line. Because IV Ensure is cellular, no internet connection is re-

quired. Its algorithm uses five different compliance elements to determine whether patients have completed their infusions on time. The device also has “happy face” and “sad face” buttons that are used to gauge a patient’s emotional state during brief interactions.

“If a patient is supposed to be infused at 7 a.m. and 7 p.m., the device determines whether that is taking place and shares it with our informatics system,” Berenson says. “Case managers stay in touch and engage with the patient when needed. The psycho-social element is as integral to this device as the technology itself. If patients are distressed, depressed or anxious, the infusion may be the last thing on their minds.”

The company is also expanding into rural cancer care using the same framework: When patients are discharged from an urban hospital, Berenson’s team can coordinate their next stage of treatment at a hospital closer to home. So far, Community Infusion Solutions has developed cancer programs in two locations and is seeking a “Health Care Innovation Award” to further that effort.

Berenson’s time as a graduate student at the OU Hudson College of Public Health deepened his understanding of health economics and epidemiology, he says, and inspired him to improve health by changing the way health care is delivered. But it’s the people, not the data, that push him forward as an entrepreneur.

“Behind all the statistics we analyze are actual human beings. I have a high degree of respect for that data and what it is telling me,” he says. “The OU Health Sciences Center helped me understand how to combine patient advocacy and health care value. The outcome of that is the work that I do today.”

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