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Medical golden glove

MediModules aims to help hospitals stop medical errors with Web-based info system

By Chris Nelson

BROOKLYN, N.Y. — Dr. Abha Agrawal and Dr. Munish Khaneja are on a mission to eliminate the risks of taking prescription medications.

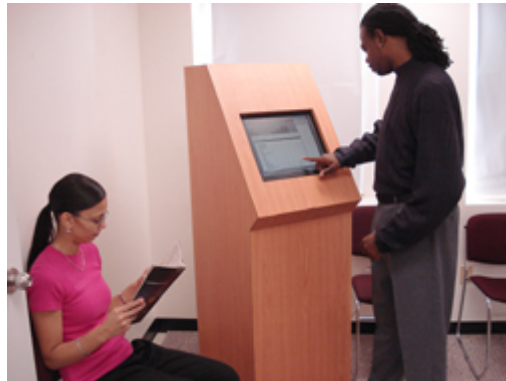
The duo teamed up to launch MediModules Inc., a health information-technology company that aims to reduce the hundreds of thousands of injurious and potentially fatal medication errors that occur yearly in the United States.

Headquartered in Brooklyn, MediModules designs, develops and installs Web-based applications for hospitals, ambulance services and community health centers.

Agrawal and Khaneja founded the business in early 2005 after they became frustrated with the high number of preventable medication accidents that injure or even kill U.S. hospital patients every year.

"Both Munish and I are very passionate about using health to improve patient safety," Agrawal, MediModules' chief executive officer, said. "In 2000, the Institute of Health published a report that said medical errors kill almost 100,000 people per year in this country. We were intrigued by what the [researchers found], but we were also very disturbed by it.

"There are many reasons why these errors occur, yet much of the time they can be easily prevented," Agrawal said. "Munish and I both realized that we could use technology to reduce the frequency of these mistakes."



Middletown Community Health Center in New York's Lower Hudson Valley is using MediModules Inc.'s online medical information system. At the center, patients can access the system via the Web or through computer kiosks, above. The New York-based MediModules was started by Dr. Abha Agrawal and Dr. Munish Khaneja.



Dr. Abha Agrawal, left, and Dr. Munish Khaneja started MediModules Inc. in 2005. The New York-based company designs, develops and installs Web-based applications for hospitals, ambulance services and health centers.

requiring its member institutions to reconcile, or cross-check, all inpatient and outpatient medication regimens.

Reconciliation requires that doctors and pharmacists identify all medications a patient is taking — including name, dosage, frequency, and route — and using this list to provide correct medications for patients anywhere within the health care system.

Since incorporating MediModules last February, Agrawal and Khaneja have already developed a suite of Web-based "medication reconciliation" applications that lets patients view, change or share their medical records over the Internet, while still allowing doctors vital access when they need it. The named the programs MediRecon and MyMediList.com.

"For medication reconciliation to be truly effective, the patient must be a central part of this process," Khaneja, MediModules' chief medical officer, said. "Our suite of applications ensures the patient's active involvement in the medication process. MediRecon and MyMediList.com are the first to provide a [bilateral seamless connection] between patients and healthcare facilities."

The company installed the medication reconciliation program last September at Middletown Community Health Center Inc., a non-profit, federally funded ambulatory health center in New York's Lower Hudson Valley.

Theresa Maloney, the facility's chief executive officer, said the program improved patient care at the company's five locations by engaging the staff and patients in the prescription-writing process. "We feel that this program is a step in the right direction to the delivery of quality care — it removes one more barrier when it comes to patient safety," Maloney said. "It takes the guess work out of medication and allergy history when writing a prescription and [the connectivity] helps to engage the patient in their care process."

Six years ago, the influential Institute of Health made headlines when it issued the landmark report, "To Err is Human," which found medical errors kill as many as 98,000 hospital patients in the United States annually. The study authors concluded that such mistakes are the leading cause of death and serious injury to Americans.

At the behest of Congress, the institute — which is a branch of the National Institutes of Health — followed up its 2000 study on medical errors of all kinds with another report that focused exclusively on medication errors — the most common type of medical error. Issued last July, the report — "Preventing Medication Errors" — estimated 1.5 million Americans are sickened, injured or killed every year by errors in prescribing, dispensing and taking medications. The Institute of Health put the cost to society at \$3.5 billion.

"Let's look at why this is happening," Agrawal said. "Too often, there seems to be a disconnect between the patient and the doctor regarding the type of medications the patient is taking. Maybe the doctor thinks the patient is taking one type of medication, but the patient thinks he or she is supposed to be taking something else — this disconnect occurs 50 to 55 percent of the time," she said.

As a result of the institute's 2000 report, the Joint Commission on Accreditation of Healthcare Organization — an Illinois-based regulatory organization — adopted new legislation in 2005