Patient-centered model calls for intelligent work flow

JOHNSON CITY, N.Y. — With pharmacy embracing a patient-centered model, efficiency is more important than ever. “You’re looking at a redeployment of your existing resources,” says Innovation executive vice president Doyle Jensen. Instead of the traditional focus on counting pills and verifying scripts, pharmacists are incorporating new services — with new revenue streams — through such practices as medication therapy management, he says. The shift calls for a whole process change behind the counter, he notes.

To envision how change and its implications, Innovation has launched Pharmacy Intelligence. Backed by professional services, the modeling reveals the most cost-effective, efficient route to an upgraded pharmacy practice. Built on the super computer at Binghamton University — one of the largest on the East Coast, the software allows pharmacy operators to virtually plug in a new piece of technology or work flow change and see what the return on investment would be.

Much of Pharmacy Intelligence’s appeal lies in its capacity to do away with pilot projects, says Jensen. More than a consulting service, it’s actually a look into the future. It shows how a decision will impact operations prior to the decision ever being made.

“Generally, chains will conduct a pilot,” he says. “But we’ve found that pilots aren’t the best way to see what kind of impact you’re going to get on your operations.”

The service can reveal the impact of a new work flow process, technology install, staffing change, new product line, formulary expansion or even an entry into a new area such as specialty pharmacy. Using store data, Pharmacy Intelligence eliminates the need to absorb a pilot’s integration and implementation costs, Jensen emphasizes.

Also, the modeling can be reused year after year. “Any time an operator wants to look at how something might affect its pharmacies, it can take this asset, put in the new variable, model it and see the impact,” says Jensen. He also notes that the service is customizable to any scenario. It could, for example, assess the effect of a new mid-volume robotic dispensing device on a labor model and patient waiting times, or gauge the impact of central fill. “It is technology-agnostic,” Jensen remarks.

Pharmacy Intelligence can also be applied to both mega-chains and regional players. “It can benefit every size retailer. You don’t need 7,000 stores; you could have seven. It’s wherever you’re looking for that operational improvement.”

A large chain with a major robotic installation might learn how to deploy the automation more efficiently.

To that end, Pharmacy Intelligence will factor in not just how many scripts per day vari-

des stores dispense, but also the availability of personnel and even state regulations on pharmacist to technician ratios.

“Another key component of the service is its ability to model the human side of pharmacy practice. It can simulate how a change will affect pharmacists, technicians, clerks and custom-
ers. For personnel, the altered workload can be precisely fore-
casted. For customers, waiting for another client the service revealed that an existing robot could not keep up with demand at particular times of the day. During those times, wait times rose to 90 minutes. A robot capable of faster throughput, the service revealed, would reduce wait times significantly.

Just as comprehensive as Pharmacy Intelligence’s data analytics, Jensen stresses, are its visuals, which display counters and even animated pa-
tients approaching and leaving. “We’re analyzing everything that counter and the really serious ones of-

ten look the same as some that

Researchers aim to bolster drug interaction systems

TUCSON, Ariz. — A research team from the University of Arizona College of Pharmacy is spearheading a broad-based initiative to strengthen the drug warning systems used in pharmacies and hospitals across the country.

Working with experts from a wide range of fields, the researchers aim to address a widely recog-

ized and potentially danger-

ous weakness of the systems that alert health care providers about dangerous drug interac-
tions (DDIs).

“This is a potentially cata-

strophic situation for patients taking multiple medications,” says Dan Malone, the Univer-

sity of Arizona professor lead-
ing the effort. “It is an easy problem to solve. There are so many factors that go into designing, implementing and using these sophisticated systems.

“We needed to bring togeth-
er everyone involved: leaders from academia, clinical prac-
tice, government agencies, industry and international organizations.”

Soon to be used by thousands of physicians as well as almost every pharmacy and hospital in the country, DDI systems warn health care professionals of potentially dangerous inter-

actions between two or more drugs prescribed for the same patient.

Many notes, however, that the systems are so sensitive that they often send alerts for drug combinations that have a very low probability of causing problems.

As a result, pharmacists are plagued by hundreds of unnecessary alerts every week, slowing down their productivity and causing thumbed delays for patients.

In addition, the frequency of unnecessary alerts has led many prescribers and phar-
macists to develop what Malone terms “alert fatigue” and simply ignore the warn-
ings. Studies have found up to a 90% override rate at some pharmacies.

In May Malone and his team began their quest to revamp DDI alert systems, hosting an invitational conference of ex-

perts in DDI clinical decision support systems at the United States Pharmacopeia and Medi-
cation headquarters in Rockville, Md. The meeting was part of a broader industry-wide effort known as the Drug-Drug Inter-

action Clinical Decision Support Conference Series, which seeks to develop an ongoing, struc-
tured process to improve the quality of DDI alerting systems.

“Drug-drug interactions rep-

resent an important cause of harm, and because providers in the U.S. are rapidly adopt-

ing electronic health records, it will be much easier to pre-

dict them,” says David Bates, professor of medicine at Brigham and Women’s Hospi-
tal and Harvard Medical School who co-chaired the meeting.

“It is critical that we get the settings right,” Bates says. “Many organizations have dis-

played too many interactions, and the really serious ones often go by ignored as some that are not very important in to-

day’s systems.”