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Pharmacies step up automation, integration

NEW YORK — Automation and robotics technology are forever changing the landscape of pharmacy operations. A look behind the counter at the workflow solutions available at any retail pharmacy across the U.S. will reveal devices ranging from robotic dispensers to automated counting machines, all tied together with robust integrated software systems.

"The focus in health care is rapidly concentrating on ambulatory medication therapies that are becoming more powerful, more complex and more expensive. Systems required to survive and prosper in this environment must embody a high degree of automation, integration and flexibility," says Michael Coughlin, president, chief executive officer and chief financial officer of ScriptPro.

He notes that automation, particularly robotic automation, is required to cope with the sheer volume of patients and the multiplicity of drugs. "Complete tasks can be assigned to a robot — tasks such as filling and labeling prescriptions or automatically storing and retrieving bagged prescriptions awaiting pickup. This frees up staff to work on higher-level tasks while having confidence that the robot will do its job with perfect accuracy."

Coughlin points out that integration is required because many tasks are involved in dispensing prescriptions and a collection of interfaced systems will be sorely challenged to stay intact and operational. He adds that the prescriptions can be entered in various ways, either electronic or manual. "The drug utilization review can lead down challenging paths that may require expert analysis and documentation of decisions," he says. "Adjudication complexities may involve preauthorizations and are intertwined with point-of-sale functions, which can be activated and reworked before or during filling or upon delivery to the patient."

ScriptPro takes an "end-to-end solutions" approach that

Synergy Medical's SynMed Ultra robot has a smaller footprint.

spans the entire ambulatory landscape, notes Coughlin. "A pharmacy with almost any significant volume can benefit from ScriptPro's robotic automation, which can be sized to meet the pharmacy's needs," he says. All pharmacies have challenges with third-party payers, and ScriptPro's Third Party Management System can shine a bright light on the cash they are leaving on the table and help them get reimbursed fairly, he adds.

"These primary entry points to more advanced systems technology provide immediate benefits and pave the way for pharmacies to truly manage and grow their business instead of just reacting to problems."

RxSafe's new RxASP adherence packaging automation system, meanwhile, enables pharmacies to produce single- and multi-med strip packaged patient labeled medications more efficiently. "Automatically and dynamically, the RxASP creates a pouch that exactly fits the contents — saving material and time," says RxSafe founder and chief executive officer William Holmes. "No machine configuration is required. With the fastest, most versatile 'hi fidelity' printing, our pouches are the easiest to open and hold the largest dose count industrywide. This means only one pouch per med administration time.

"Our easy-to-use, universal canisters mean no more trays or remote filling stations. No more

RxSafe's RxASP system

waiting for trays to be filled. Plus, no more errors from hand-filling trays."

The company also offers Pak-CheckRx, an integrated, vision inspection system that optically verifies that the medications in each pouch are correct. "More importantly, machine vision inspection happens in real time in a single work-flow step without a secondary machine," notes Holmes. "Unique to Pak-CheckRx is the ability to detect gelcaps and inspect a larger number of pills per pouch while keeping up with the 50 multi-med pouch per minute output of our pouch packager."

For its part, Synergy Medical recently developed a first-of-its-kind robot with its SynMed Ultra. Maintaining a minimal footprint, SynMed Ultra allows a pharmacy or central-fill environment to produce more than 100 multi-dose cards per hour, with two operators. "Most of our pharmacy chain customers view their central-fill blister card operation as a competitive advantage," says Synergy Medical senior director of sales Mark Rinker. "In terms of the SynMed Ultra, our high-volume central-fill customers had asked us to deliver more production per square foot of production space and the Ultra has absolutely delivered on this need."

Doyle Jensen, executive vice president of global business development at Innovation, points out that from its ongoing conversations with retail chains of all sizes, the company has learned that one of their major goals is to differentiate their pharmacies from their competitors. They realize that the key to achieving this is by enhancing their patients' overall experience through the delivery of high-quality, accessible patient services. Thus, they need to find a way to redeploy their pharmacists from their current prescription-filling activities to serving as proactive care providers. And the best way to get there is by centralizing much of their fulfillment workload at a highly automated central-fill facility.

"Most of the chains are either expanding capacity if they have an existing central-fill site, or looking to build their first site," notes Jensen. "And with how central-fill technology has evolved over the past decade, they're aiming to have their central-fill sites handle up to 60% to 65% of their fulfillment."

He adds that Innovation's scalable PharmASSIST High Volume Solutions cover the full gamut of high-volume prescription ranges for central fill and mail order, with systems handling from 1,000 to 80,000 prescriptions per shift. "By deploying our systems, chains can reallocate resources from in-store labor to much cheaper centralization, lowering their prescription processing and labor costs," Jensen says.

Algorithms can help detect opioid misuse

WOONSOCKET, R.I. — The misuse and abuse of prescription pain medications is an epidemic, and the statistics are staggering. Each and every day, more than 1,000 people are treated in emergency rooms as a result of prescription opioid misuse, and drug overdose is now the leading cause of death in the U.S. among Americans under age 50.

Besides treating those already impacted by opioid addiction, one way to help stem this public health epidemic is to identify and stop inappropriate prescribing and misuse of opioids. New research from the CVS Health Research Institute and Johns Hopkins University provides evidence that automated algorithms — or complex calculations — in electronic medical and pharmacy claims data may be useful in screening large populations for nonmedical opioid use as well as identifying those providers who may be writing fraudulent prescriptions.

The systematic review, published in the *Journal of the American Medical Informatics Association*, evaluated 15 algorithms that used electronic prescription and/or medical claims to identify and track habits associated with opioid misuse, including pharmacy or doctor shopping, or visiting multiple doctors or pharmacies seeking prescriptions that are not medically necessary. The authors of the report conclude that algorithmic approaches can help identify patients and providers in need of more intensive screening or intervention — including pharmacy-based outreach — for further evaluation of opioid misuse.

"With the exponential rise in nonmedical opioid use, this research shows the utility of automated algorithms to detect potential misuse," said Dr. Troy Brennan, chief medical officer of CVS Health and coauthor of the study. "As health care payors seek to both improve patients' health and minimize fraud and waste, these data-driven approaches are applicable and beneficial to real-world, population-level surveillance and critical to targeting patient outreach and intervention as well as minimizing provider fraud."