

TECHNOLOGY

Automation aims to boost adherence levels

Tech Talk

NEW YORK — Technology has come a long way since pharmacies began integrating automation into their workflow in the 1980s. Broader use of artificial intelligence (AI) and machine learning, combined with the lower cost of automated systems, has put automation within the financial reach of even smaller pharmacies. Devices that were once too expensive for all but the largest pharmacies are now priced so that smaller facilities can afford them. This has been a boon to pharmacies, allowing them to fill orders more quickly while freeing pharmacists to spend more time consulting with patients.

Samantha Cockburn, marketing director for North America at Synergy Medical, is seeing a number of current trends in the market, including the potential rise of multidose blister packaging in the United States as a way of controlling the cost of medication nonadherence. “Multidose blister pack use is well established in certain markets, such as Canada and the U.K.,” she notes. “Approximately 30% of all oral solid medications in Canada are dispensed in blister packs, whereas the U.S. number is likely less than 2%.”

Cockburn adds that payers want to improve drug adherence to reduce overall medical costs. “Medicare Advantage plans want to improve adherence to improve their quality-based Star Ratings and receive bonus payments,” she says. “PBMs want to improve adherence, because their customers are now considering this a key aspect of a PBM’s performance. Pharmaceutical manufacturers want to improve compliance to increase revenue. For pharmacy, improving adherence means filling more prescriptions, generating more traffic and revenue,

and continuing to evolve as a valuable community health resource.

“The message is finally getting through that multidose blister packs — also known as adherence packaging or compliance packaging — are an important component to any adherence strategy, i.e., grouping a patient’s medications together by day and dose time and making it very intuitive for the patient and/or caregiver to know what needs to be taken when.”

She adds that at a certain volume, producing blister packs by hand becomes onerous and prone to error. Synergy Medical’s SynMed solution “allows pharmacists peace of mind with respect to dispensing accuracy, better planning and workflow, and scalability,” Cockburn says.

She notes that Lewis Drug in South Dakota recently upgraded to SynMed’s Ultra technology. “Lewis Drug Long Term Care was using multidose packaging exclusively for patients serviced via their closed-door pharmacy. Given the time and energy required to produce



Lewis Drug’s SynMed Ultra

ity, Lewis Drug upgraded to SynMed Ultra in April 2019.”

According to Sara Hicks, consultant pharmacist at Lewis Drug, the Ultra has been a game changer, cutting production time in half and allowing for replenishment while the packs are still being filled. Lewis is now providing this invaluable centralized service to 1,300 patients at 21 of its pharmacies.

“In our industry, the only thing constant is change,” says Doyle Jensen, executive vice president of global business development at Innovation. “The most pressing trends right now in the pharmacy space are the continual decrease in margins, DIR [direct and indirect remuneration] fees, lower reimbursements and medication adherence. Additionally, consumer behavior continues to shift from brick-and-mortar to online, for everything from consumables and household products to over-the-counter medications and prescriptions.

“This is driving the biggest trend, which is the development and application of newer, easier-to-use technologies to address those concerns and improve the consumer experience.”

The biggest technology impact is in the centralization of

services and prescription fulfillment, according to Jensen. “Innovation continues to innovate by integrating AI and machine learning into our various technologies, he says. “We also continue to develop new technologies — such as our new high-speed, high-volume dispenser for central fill/mail order pharmacies — based on customer and market demand.

“In addition, we’re always on the lookout for leading-edge technologies with forward-thinking partners with which we can integrate our high-volume prescription fulfillment systems and round out our overall systems.”

Innovation’s new PharmASIST M4XL dispenser fulfills customers’ needs for a higher-speed, higher-volume dispenser, Jensen says. “Innovation’s PharmASIST Model 4 dispenser has been raising industry standards since its introduction into the market in 2013,” he says. “While the Model 4’s accuracy and counting speed were highly touted by Innovation customers, the need for a high-volume version of the dispenser for central fill/mail order sites was evident from discussions with many of our customers.

“The new PharmASIST M4XL dispenser was developed using a combination of existing salient features of the Model 4 dispenser and proven, time-tested concepts such as a vibratory plate, thus making it a true extension of the Model 4 line.”

Jensen adds that the M4XL dispenser boasts an increased hopper capacity that has been designed with the intent of reducing the number of dispenser replenishments and to handle drugs that are responsible for a significant portion of a high-volume pharmacy’s formulary. “As

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hundreds of these packs manually, growth was restricted. The hunt for automation began, and SynMed XF was installed in January 2018.

“Efficiencies were gained immediately, and this allowed Lewis Drug to roll out SmartPack, an adherence-based packaging service for retail customers. Due to the success of SmartPack and the need for greater production capacity,

A look into consumers’ views on retail tech

CHICAGO — When faced with the existing show-and-tell of emerging retail technologies, U.S. consumers report that they’ve heard the “tell” but have yet to see the “show,” according to the “2019 Consumer Retail Technology Survey,” a recent study from A.T. Kearney that looks into consumer knowledge and experience of various emerging in-store technologies.

“Of necessity, brick-and-mortar retailers have had to maintain a relentless focus on keeping up with their pure-play counterparts in e-commerce, and so in-store technology has been the casualty of that single-mindedness,” notes Suketu Gandhi, partner in the digital transformation practice of A.T. Kearney. “But now is the time for physical stores to step back, gain an understanding of their

in-store technology options and develop pilots that support their specific business model.”

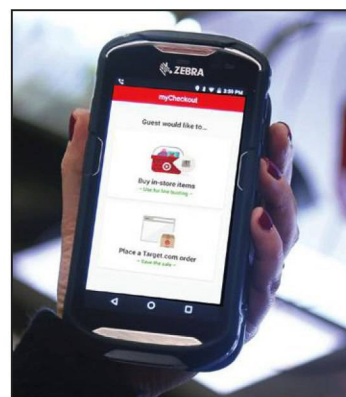
The study found that while 75% of consumers are aware of at least one retail technology, only 33% have experienced any. When it comes to in-store technologies, most retailers are lagging behind consumer awareness of them in terms of providing an experience involving one or more. The survey focused on five critical technologies emerging in physical stores: augmented reality, mobile point of sale, cashierless checkout, interactive screens and 3D printing.

The research also identified a divide in terms of store type: Among survey respondents, 45% reported visiting a big-box store because of a technological aspect of the shopping experience,

in contrast to 24% who said that their visit to a specialty store was motivated by technology.

Consumers are selective and knowledgeable about which technologies resonate with their specific needs in different retail contexts, and retailers must therefore make the right choices in order to provide the in-store technology that is best suited to their particular offering.

Ultimately, retailers should see in-store technology as a means to generate incremental growth, notes A.T. Kearney. The survey respondents clearly agreed: Nearly 50% expect their shopping choices to be more influenced by technology in the future. “This finding suggests that retailers still have the opportunity to address and meet consumer expectations by bridging the awareness/experience gap,”



In-store tech options abound.

says Greg Portell, A.T. Kearney’s global consumer and retail practice lead.

The findings of A.T. Kearney’s study are said to help frame solutions to retailers’ questions, moving them toward an actionable game plan.

• **Kroger Co.** and online grocery retailer **Ocado** have announced plans for a new high-tech customer fulfillment center (CFC) in Forest Park, Ga. The \$55 million investment will create more than 400 new jobs. The Forest Park CFC will be located in the GGM Logistics Center and occupy 375,000 square feet. The CFC is scheduled to break ground later this year and be operational in 2021. “Kroger is incredibly excited to construct one of our industry-leading customer fulfillment centers in Forest Park, a city south of Atlanta, through our relationship with Ocado,” said Robert Clark, Kroger’s senior vice president of supply chain, manufacturing and sourcing. www.kroger.com

• **Albertsons Cos.** is empowering consumers with fast and convenient in-store checkout experiences by implementing **Toshiba Global Commerce Solutions’** self-checkout systems. By leveraging Toshiba’s focus on front-end store optimization, Albertsons Cos. expects checkout times to speed up — from the wait time in line to the point of payment — to improve operational throughput and reduce shopper interventions, with the ultimate goal of improving the customer’s grocery store experience. “We are empowering our consumers to curate their in-store shopping experiences based on their needs and desires,” said Anuj Dhandia, executive vice president and chief information officer at Albertsons Cos. www.albertsons.com

• **TABS Analytics** is collaborating with **CPGToolBox** to deliver an integrated trade promotion and optimization solution for consumer packaged goods manufacturers. The joint venture brings together the two organizations’ best-in-class solutions to forecast, plan, settle and analyze promotions, and then conduct a rigorous analytical overview of the optimal promotional strategies and tactics for clients’ brands. TABS and CPGToolBox can now offer their customers access to CPGToolBox Trade Planner, a cloud-based trade promotion management (TPM) software solution built on the Salesforce.com platform, and the TABS Promo Insights software for trade promotion optimization (TPO). www.tabsanalytics.com

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with the Model 4 dispensers, the M4XL dispenser supports the use of canisters for automated replenishment. The M4XL canisters come in 4-liter and 8-liter variants, thus quadrupling the capacity of the Model 4 dispenser canisters (0.5 liter and 2 liter)."

With its line of PharmASSIST high-volume solutions, Innovation has introduced customers to systems that do not require the use of pucks to fill and transport prescription vials, notes Jensen. "The design of the M4XL dispenser enables our customers to continue enjoying the benefits of puck-free system design by eliminating cross-contamination, increasing patient safety and lowering costs in the long term," he says.

Other key M4XL components were designed to optimize the separation of pills as they are readied for counting by the detection system, notes Jensen. "The presence of precision control mechanisms allows for the pills to be transported at an average rate of six pills per second across drug shapes and sizes," he says. "This is substantially higher than the count speed of the Model 4 dispenser."

Jensen adds that Innovation decided to improve upon the al-

ready stellar pill detection system of the Model 4 dispenser by adding another set of sensors, thus providing double detection and unparalleled accuracy. The M4XL's detection system retains the versatility of the Model 4 dispenser detection, but is enhanced by auto-calibration technology. Auto-calibration allows for the dispenser to adapt to any medication presented to it, and count the new medication without high levels of pharmacist involvement.

Innovation, Jensen says, continues to expand its PharmASSIST Symphony for High Volume

Nonadherence's cost in the U.S. 'is only rising.'

platform, adding numerous enhancements for a true end-to-end pharmacy production control system for central fill/mail order pharmacies. Among the new functions are warehouse management features such as inventory routing, maintenance task management and embedded training modules; cloud-based reporting and dashboarding; and on-the-go mobile dashboards and system visualization screens.

Mike Coughlin, president, chief executive officer and chief financial officer of ScriptPro, feels that many of today's challenges boil down to revenues and costs — "mainly, how to maintain profitability."

Third-party revenues, he says,

are always under pressure, and pharmacies need systems that match the sophistication of what those payers use to minimize what they are paying. Pharmacies also need to be prepared to fight back when they are being taken advantage of. This requires ironclad proof that can only be obtained from effective use of the pharmacy's revenue cycle management systems.

"The other term of this equation is costs," Coughlin says. "This involves everything from minimizing labor cost through use of robotics to automated, opportunity-based purchasing and inventory management techniques."

ScriptPro provides complete solutions that address the key functions that need to work for the pharmacy, he says. "ScriptPro robots operate in pharmacies around the world, saving time and preventing errors. ScriptPro Third Party Management System tracks revenues against contracts and organizes data for effective exception-based action. ScriptPro's pharmacy management system highlights ordering opportunities."

"A primary focus of ScriptPro is to provide two-way interfaces with the many EHR systems in use. This is a very high priority for us."

William Holmes, president of RxSafe, says that reform of DIR fees and nonadherence are the major issues that are weighing on the industry. "The Trump administration has failed to act on DIR reform," he says. "While Congress is considering several different pieces of legislation,

some with bipartisan support, we can't predict what kind of relief will ultimately make its way to pharmacy owners."

"Meanwhile, the cost of non-adherence in the United States is only rising, with the latest estimates at more than half-a-trillion dollars annually. This is a looming crisis, not only for the nation's health care system, but also for 80 million baby boomers who have not saved enough money to comfortably retire. They need to continue working well into their 70s, which means they need to stay healthy and to continue living independently. To do that, they must take their medications properly."

RxSafe's RapidPakRx strip packaging technology helps address our nation's nonadherence problem, Holmes points out. RapidPakRx, he says, is a "first-ever" system for adherence packaging designed specifically for retail pharmacies to fill a 30-day med cycle at the lowest possible cost.

The system's small footprint, low cost of acquisition, low cost of ongoing operation and built-in vision inspection make it an ideal fit for community pharmacies to have an immediate and positive impact on patient adherence in their local communities, he adds.

And for pharmacy owners who want to reduce DIR fees by improving patient adherence, the RapidPakRx is a game changer, notes Holmes, adding that Brett Moore, owner of Moore's Pharmacy in Carthage, Miss., is very happy with its RapidPakRx unit.

"RapidPakRx has changed



PharmASSIST M4XL.

the way we do pharmacy," says Moore. "We've seen our sync program triple in size since installing the RapidPakRx in December 2018. Our CVS Caremark performance scores are through the roof."

"This machine will pay for itself in two years just from saved DIR fees."

Holmes points out that RxSafe will soon be unveiling two new products to improve accuracy and speed in compliance packaging, which will mean a huge leap forward in patient convenience and medication adherence.

"RxSafe continues to be used by more than half of the top 20 health care systems in the country, as well as forward-looking independent pharmacy chains," he says. "Our recent installs include Beth Israel Deaconess Medical Center, Nebraska Health, Cambridge Health Alliance, Partnership Health Center, Best Value Pharmacies and Osborn Drugs/ProRx Network."

QS/1 inks deal with Ricoh USA

SPARTANBURG, S.C. — Pharmacy operating system provider QS/1 has announced a new agreement with Ricoh USA to enhance its end-to-end hardware maintenance support, extending its on-site support coverage nationally. The change will increase QS/1's hardware support personnel to nearly 1,000, allowing expedited service to its customers for all hardware-related matters, from servers to cables and everything in between.

"We saw this partnership as a game-changer and opportunity to add even more value for our hardware maintenance customers," said Kevin Welch, president of QS/1. "And we expect this to result in a substantial cost reduction for our on-site hardware maintenance customers."

"The significant increase in our hardware maintenance support team means QS/1 can provide same-day, on-site technicians no matter where customers are located in the continental United States."

The upgraded service offerings will take effect this month, and current customers can expect no change as they interact with QS/1 client services, sales or account management teams.

Tech sales continue to soar to new heights

ARLINGTON, Va. — The growing popularity of streaming services, artificial intelligence-enabled emerging devices and in-vehicle technology will help drive the U.S. consumer tech industry to a record-breaking \$401 billion in retail revenues in 2019 — 2.2% growth, year over year — according to a new Consumer Technology Association (CTA) report.

"Enthusiasm for AI-powered technologies is skyrocketing — more consumers are discovering for themselves how tech innovation can change their daily lives for the better," said CTA president and chief executive officer Gary Shapiro. "And with 5G delivering the faster connectivity we'll need for anytime/anywhere streaming, smarter home robotics and more advanced vehicles, consumer excitement will only grow, but unnecessary tariffs — taxes paid by American consumers and businesses — threaten to slow down our nation's economic momentum."

The midyear edition of CTA's

flagship, biannual U.S. Consumer Technology Sales and Forecasts report reflects U.S. factory sales to dealers for over 300 consumer tech products and related software and services.

After rapid adoption of AI-enabled, voice-controlled smart speakers including Amazon Echo and Google Home, and increased voice integration in other devices such as TVs, soundbars and smart home devices, smart speaker sales will level off. But they remain a category to watch, with an expected 35.2 million units sold (up 1% over last year) and \$3 billion in revenue (down 1%) in 2019.

Consumer enthusiasm for robots that perform such chores as vacuuming, lawn mowing and floor cleaning is driving double-digit year-over-year growth in the AI-enabled home robotics category, which CTA expects to sell 3.6 million units, a 12% annual increase, and earn \$1.2 billion in revenue, a 19% jump.

Leading devices, including Apple AirPods and Beats by Dre

Powerbeats Pro, are expected to sell nearly 16 million units in 2019 (up 45%) and approach \$2 billion in revenue (a 46% increase). CTA projects double-digit growth for the category over the next few years, as con-

Smart speakers are a category to watch.

sumers pick premium audio experiences featuring true wireless technology.

As consumers gravitate to premium smartwatches, revenue for the category is expected to increase 19% in 2019 to \$5.4 billion. Smartwatches are expected to sell 20.1 million units — a 7% increase over last year — leading the wearables category.

"More than ever, consumers want premium technology experiences — especially within the smartphone, TV, laptop, smartwatch and wireless earbuds categories," said CTA vice presi-

dent of market research Steve Koenig. "The lightning-fast pace of tech means we can upgrade our 'everyday tech' and get extraordinary experiences."

"While this level of quality and efficiency means some replacement cycles are getting longer, technologies such as AI and 5G promise to usher in the next era of innovation, delighting consumers and driving our economy."

Now owned by 91% of U.S. households, smartphones have packed vital features into models at all price points. As a result, the replacement cycle is lengthening, and smartphone unit sales are expected to decline for the first time in 2019, reaching 165.5 million units (down 2%) and ring up \$77.5 billion dollars (down 2%), while still being the largest consumer tech category.

Looking ahead, 2019 marks the launch of the first 5G smartphones. This year, CTA expects 2.1 million units of the 5G-enabled devices to be sold, generating \$1.9 billion in revenue.