Preventing Errors with High-Risk Medications

Plus

- AI in Pharmacy
- New Clinical Services for Pharmacists
- The $2.1 Million Drug
EDITORIAL ADVISORY BOARD

Michael Cohen
RPh, MS, SD (om.), OPS (om.), FSGP
President
Institute for Safe Medication Practices
Havertown, PA

Mary E. Inguinti
RPh, MPH, FASCP
Strategic Customer Vice President; BD
South Windsor, CT

Mohamed A. Jalloh
PharmD
Assistant Professor
In Clinical Sciences Touro University California College of Pharmacy
Vallejo, CA

Perry Cohen
PharmD, FAMCP
The Pharmacy Group LLC
Gloucester, CT

David J. Fong
PharmD
Retail Pharmacy Consultant
Former Senior Executive for Community Chain Stores
Danville, CA

James Jorgenson
RPh, MS
CEO & Board Chairman
Visante, Inc. & Visante Ltd.
St. Paul, MN

Lisa M. Holle
PharmD, BCP, FHOPA
Associate Clinical Professor
UCome School of Pharmacy
Storrs, CT

Perry Cohen
PharmD, FAMCP
The Pharmacy Group LLC
Gloucester, CT

Debbie Mack
BS Pharm, RPh
Director
Pharmacy Regulatory Affairs
Walmart Health and Wellness
Bentonville, AR

Mark Neuenschwander
President
The Neuenschwander Company
Bellevue, WA

Frederick S. Mayer
RPh, MPh
President
Pharmacists Planning Service Inc.
San Rafael, CA

David D. Pope
PharmD, OBE
Chief of Innovation
Co-Founder
Creative Pharmacist
Augusta, GA

Gene Memoli Jr.
RPh, FASCP
Director
Customer Development
Omnicare
Chesire, CT

Brian Romig
RPh, MBA
Corporate Pharmacy Director
Supply Chain
Adventist Health System
Allentown Springs, FL

Stephen W. Schondelmeyer
PharmD, PhD
Director
PRIME Institute College of Pharmacy
University of Minnesota
Minneapolis, MN

Marvin R. Moore
PharmD
Pharmacy Manager & Co-Owner
The Medicine Shoppe/Pharmacy Solutions Inc.
Tom Bishops, WI

CONTENT

PUBLISHING AND SALES
EXECUTIVE VICE PRESIDENT Brian Haug
bhaug@mmhgroup.com

VICE PRESIDENT, GROUP PUBLISHER Williaway Mulderry
732-346-3071 | wmulderry@mmhgroup.com

ACCOUNT MANAGER, PRINT/DIGITAL Patrick Carmody
440-891-2621 | pcarmody@mmhgroup.com

ACCOUNT MANAGER, RECRUITMENT Joanna Shippoli
440-891-2615 | jshippoli@mmhgroup.com

VICE PRESIDENT, MARKETING Amy Erdman

PERMISSIONS Alexa Rockenstein
arockenstein@mmhgroup.com

PRODUCTION
PRODUCTION DIRECTOR Karen Lenzen
218-740-6371 | klenzen@hcl.com

AUDIENCE DEVELOPMENT
VP, MARKETING & AUDIENCE DEVELOPMENT Joy Puzzo
DIRECTOR, AUDIENCE DEVELOPMENT Christine Shappell

AUDIENCE DEVELOPMENT MANAGER Jessica Stariha
612-253-2039 | jstariha@mmhgroup.com

REPRINTS Licensing and Reuse of Content: Contact our official partner, Wright’s Media, about available usages, license fees, and award seal artwork at Advanstar@wrightsmedia.com for more information. Please note that Wright’s Media is the only authorized company that we’ve partnered with for MultiMedia Healthcare materials.

EDITORIAL MISSION: Drug Topics is the top-ranked pharmacy resource for community and health-system professionals. Since 1857, readers have turned to Drug Topics for coverage of issues and trends important to the practice of pharmacy, and for a forum in which they can share viewpoints and practical ideas for better pharmacy management and patient care.
PREVENTING MEDICATION ERRORS

Nearly 7 million patients fall victim to preventable medication errors, costing the U.S. healthcare system $21 billion annually. PAGE 16

SPECIAL REPORT
New Clinical Services
How pharmacists can increase clinical interactions while generating additional revenue streams. PAGE 20
Pharmacists Among Those Fired in Hospital Fentanyl Deaths Case

Twenty-three employees of Mount Carmel West Hospital in Columbus, OH, have been fired in the aftermath of the indictment of William Husel, DO, on 25 counts of murder.

Ron O’Brien, the Franklin County prosecutor, focused on the cases where Husel ordered doses of 500 to 2,000 micrograms of fentanyl to be administered to critical care patients. These were amounts that could have caused or hastened patient deaths and which are larger than doses typically used for postsurgical patients.

Forty-eight pharmacists and nurses were reported to state licensing boards, including 30 who currently remain with Mount Carmel West. The Ohio Board of Nursing has issued notices to 25 nurses saying that they could lose their licenses for their roles in the Husel case. The Ohio Board of Pharmacy has taken no public action as yet.

Walmart Layoffs Impact Senior Staff

Walmart has laid off about 3% of its pharmacy staff in a nationwide action. Nearly half the laid off personnel were senior staff.

“The Walmart actions have been extremely evasive as well as punitive and I sympathize with the horrible experiences that these pharmacists and technicians have because of Walmart’s mismanagement. It’s not the fault of the pharmacists and the techs for not knowing how to operate pharmacies successfully,” Daniel A. Hussar, PhD, FAPhA, professor emeritus at Philadelphia College of Pharmacy and author of PharmacistActivist.com, tells Drug Topics.

Hussar believes that insurers and PBMs’ low reimbursement rates have impacted Walmart’s pharmacy profitability. “An important contributing factor...”

“Called to the back by the DM [district manager] last week 3.5 hours into my shift.

He gave me the talking points, went back to the pharmacy, handed me my license, and I was on my way home in 10 minutes!

I thought our store was doing well!”

—Anonymous former Walmart pharmacist.

CONTINUED ON PAGE 4>
The Trump Administration initially proposed banning discounts on prescription drugs that health insurers negotiate with pharmaceutical companies in January, but has now changed its position. “The Administration’s decision to not move forward on the proposed rule to reform the rebate system in Medicare Part D is a blow to seniors who could have paid less for their medicines at the pharmacy counter,” says the Pharmaceutical Research and Manufacturers of America (PhRMA) in a statement.

“The decision to withdraw the drug rebate rule is a positive for the supply chain, but a setback to drug price inflation agenda and underscores the complexities of passing meaningful healthcare policy,” says Ricky R. Goldwasser of Morgan Stanley.

“Drug-pricing policy initiatives must include pharmacy DIR fee relief,” says Chris Krese, a spokesman for NACDS. “It’s essential for reducing patients’ out-of-pocket drug costs, for advancing pharmacy viability, and for Medicare’s sustainability.”

“PBMs are getting away with another win. They definitely didn’t want the proposed rule to go through,” NCPA’s vice president of pharmacy policy and regulatory affairs Ronna Hauser, PharmD, tells Drug Topics. “Some of our members understand that, if it was implemented, it would be harmful. This seems to be another win or a handshake out to the PBMs. Drug costs are not being lowered at the pharmacy counter. If you fix DIR fees, you would not see the costs [rise at the pharmacy counter],” Hauser says. – By Christine Blank

Visit drugtopics.com for your lastest pharmacy news updates.

---

**DRUG SHORTAGES: IMPACT ON U.S. HEALTH SYSTEMS**

**Drug shortages are costing U.S. hospitals**

$359 MILLION PER YEAR

Wasting an additional 8.6 million hours of peoples’ time

**Respondents**

360 from acute and nonacute care facilities

84% worked in an individual facility

67% pharmacy leadership

25% pharmacy frontline staff

4% health system leaderships

**Weekly Hours Spent Managing Drug Shortages**

9.3 pharmacists

7.6 pharmacy techs

3.8 informatics pharmacists

**How Additional Hour Requirements Are Managed, according to respondents**

10% hire staff

44% staff overtime

46% redistribute workload

Source: Vizient Inc.

Visit drugtopics.com for your lastest pharmacy news updates.
How Pharmacists Assist in Detecting Opioid Diversion

Pharmacists play a pivotal role in detecting drug diversion of opioids and identifying ways to facilitate appropriate prescribing, according to new survey results from the ASHP.

The National Survey of Pharmacy Practice in Hospital Settings analyzed pharmacist actions relating to drug therapy monitoring and patient education. The survey received 811 responses from directors in general and children’s hospitals in the United States. ■

Daniel R. Verdon

Some of the strategies to eliminate opioid misuse identified include:

- 71% Provide clinician education and guidelines
- 65% Use prescription drug monitoring database searches to track prescribing practices and better understand patient behaviors
- 56% Opioid diversion detection programs

Other findings:

- 71% reported that diversion detection played a crucial role in opioid stewardship programs
- 57% Participated in clinical utilization review
- 55% Leadership and accountability
- 33% Of hospitals have pharmacists monitor all medication therapy

CDC Calls on Pharmacists to Aid in HIV Epidemic

While new data from the CDC recommends screening for people between the ages of 13 and 64 years of age, only 40% have ever been tested, according to data in the Morbidity and Mortality Weekly Report (MMWR).

“The new data, released on National HIV Testing Day, underscores the urgent need to scale up HIV testing to end America’s HIV epidemic,” the CDC states. “The analysis of 2016-2017 data from a national population-based survey suggest most people are not getting the recommended screening, even in areas with a high burden of HIV.”

According to the ASHP, pharmacists play a key role in helping to prevent and manage HIV, including:

- HIV testing
- Treatment of HIV infection
- Treatment of HIV in key patient populations
- HIV treatment failure
- Management of HIV disease state complications
- Treatment and prevention of opportunistic infections
- Prevention of HIV infection
- HIV education
- Social services and HIV infection
- Professional engagement. ■

References are available online at https://bit.ly/2NswPrh

Daniel R. Verdon

REPORT: Major Chains to Dominate Expanding CBD Market

In 2019, mass marketing chains are expected to eclipse all other channels for sales of CBD products, which the leading market and consumer intelligence group predicts will reach 57% of sales for this year. By years’ end, the CBD industry is expected to be a $5 billion industry; a 706% increase from 2018. The Brightfield Group also predicts that the total U.S. CBD industry could reach around $23.7 billion by 2023.

The FDA has not allowed CBD supplements nor food additives to be permitted for retail sale, leading to a massive increase in topical product sales.

Currently, The Brightfield Group reports tinctures of CBD still dominate the market, holding 25% of sales; however, these products are losing their lead to mainstream, consumer-friendly products. Topicals currently comprise 17% of the market, and skincare and beauty products comprise 8%. Both have gained tremendous traction in the second quarter of 2019, according to the report. The Brightfield Group likens the success to the ability of mass retailers that have signed on to carry CBD-containing products under the current regulatory limitations.

The group says that topicals and Skincare and Beauty products are separate entities in their report given the ways in which the products are uniquely marketed and positioned, which will likely affect their growth in distinct ways.

In total, The Brightfield Group reports that only 1% of all CBD companies were in the top tier, (ie, earning more than $40 million in sales or selling products in more than 1,000 stores). ■

References are available online at https://bit.ly/2NswPrh

Daniel R. Verdon
By Gary Frisch, RPh

Discount Cards: A Rebuttal

I read the article titled “Discount Drug Cards Flourish with End of Gag Rule” in the June issue of Drug Topics. While the author provided a comprehensive overview of the usefulness and benefits of drug discount cards to consumers, she neglected to provide any negative comments or feelings from individual pharmacies and pharmacists.

Drug discount cards are promoted as tools to make medications more affordable for many patients. Because of lower drug costs, patient adherence is increased. Per the article, many of these cards also offer apps and educational benefits that address barriers to adherence.

“What’s in it for pharmacies?” Richard Saggall, president of Needy Meds, talks about the various fees that pharmacies pay in order to process a drug discount card and gives the reasons why a pharmacy should take them.

About 10% to 15% of all drugs are now purchased by discount plans or coupons. Some programs charge a monthly fee, but others are offered as a benefit to employees or participants.

While spokespersons for these plans offer a rosy picture, many practicing pharmacists see these programs in a different light. More drug discount cards are being used because so many organizations provide them as a free benefit. Pharmacies are pressured to accept these plans just to stay in business. Drug manufacturers, insurers, and other organizations offer these plans in order to hide the root causes of unaffordable drug prices. FamilyWize’s spokesperson states that the drug discount cards have saved consumers billions of dollars, but have not been well received by independent pharmacies. In fact, the savings are realized on the backs of individual pharmacies who absorb these costs. Profitability is being reduced by these cards.

What about the services provided by pharmacies? Nowhere in the article does it mention that a pharmacy offers education that may be replaced by an app, but that studies suggest that apps are not as effective as face-to-face contact. It is implied (by omission) that all we do is dispense a product. Pharmacists make available (but are not limited to) recommendations of OTC treatments, provide immunizations and immunization education, and medication counseling. Also, the pharmacist is many times the only readily available health practitioner.

The real problem to be solved is “Why do patients struggle to buy their prescriptions?” Some reasons are:

- High insurance deductibles and copays
- Restrictive insurance and PBM formularies
- Patients are in the Medicare Part D coverage gap (the donut hole)
- Pharmaceutical manufacturers raising their prices way above the yearly rate of inflation
- Pharmaceutical manufacturers’ rebates not being passed on to consumers
- New drugs that are extremely expensive

Doug Hirsch, CEO at GoodRx, suggests five ways to really fix high drug prices.

- Stop the rebate and card games
- Allow the government to negotiate drug prices
- Reduce and/or eliminate patent exclusivity loopholes
- Tie drug prices to effectiveness
- Government control for crucial rare drugs

He also suggests a single-payer system (Medicare for All) which is used in most countries in the world.

Ultimately, who pays for the business activities of discount drug cards? It is the pharmacy! Perhaps the large chain pharmacies, warehouse clubs, and grocery stores are willing to accept the extra cost to keep patients coming through their doors. At some point pharmacy leaders will stand up and say, “Pay us for the services that we provide in order to improve the lives of our patients.”
Clinician Burnout Is Everyone’s Problem

How can we protect the health of the millions of people who protect our own health? This is a vital question facing the healthcare system, and the issue has not received the attention it deserves.

That is why ASHP has made it a top priority to take steps to assure the health, well-being, and resiliency of our 50,000 members and their colleagues. In doing so, we will help protect the millions of patients they serve every day in the nation’s hospitals and health systems in both acute and ambulatory care settings.

To explore the issue of burnout among clinicians, we commissioned The Harris Poll to conduct a nationwide survey of 2,000 U.S. adults age 18 and up. Our findings reinforce the critical importance of recognizing the causes and possible solutions to the issue of burnout in our nation’s healthcare facilities.

The survey showed high awareness and concern among patients about clinician burnout: 91% of U.S. adults believe it is important that their pharmacists, physicians, nurses, and other clinicians do whatever they need to avoid burnout. About 80% of respondents worry about the impact of clinician burnout on the quality of healthcare, and 77% of patients said they are personally concerned for their own safety if a clinician appears to be experiencing burnout.

In 2017, the National Academy of Medicine (NAM) recognized the impact of burnout on health professionals. ASHP is one of more than 50 healthcare groups to sponsor NAM’s Action Collaborative on Clinician Well-Being and Resilience. The goal is to “raise visibility of clinician anxiety, burnout, depression, stress, and suicide, improve baseline understanding of challenges to clinician well-being and to advance evidence-based solutions to improve patient care by caring for the caregiver.”

Burnout is characterized by a high degree of emotional exhaustion, depersonalization, cynicism, and a low sense of personal accomplishment at work, NAM explains. Clinician burnout can have serious consequences, from reduced job performance and high turnover rates, to medical error and clinician suicide in the most extreme cases.

NAM’s planned four-year effort is cause for hope. Later this year, we expect a preliminary consensus report suggesting solutions that can be implemented in an interprofessional and intergenerational environment. This report will benefit everyone from students to late-career practitioners in all medical fields. Most importantly, it will benefit our patients.

The collaborative is stressing that if we promote the well-being of all clinicians, the result will be improved patient-clinician relationships, high-functioning care teams, and an engaged and effective workforce. When we invest in clinician well-being, everyone wins.

Pharmacist burnout can impact patients. A study in the American Journal of Health-System Pharmacy found that 53% of health-system pharmacists self-reported a high degree of burnout. Pharmacists are experiencing increased workloads, periodic drug shortages, and heavy demands. They report being emotionally exhausted, unsatisfied, detached from their work, and less productive. Just last month, the World Health Organization enhanced its definition of burnout in ICD-11, further demonstrating that clinician well-being requires sustained attention at organization, state, and national levels, and research to advance evidence-based solutions.

The Harris Poll we commissioned showed that patients recognize the inherent challenges for clinicians. One in four respondents were aware pharmacists experience burnout.

Hospitals and health systems must embrace the idea that promoting the well-being of their clinicians benefits their success, their workforce, their bottom line, and, most importantly, their patients.

“ASHP has made it a priority to take steps to assure the health, well-being, and resiliency of our 50,000 members.”

Paul W. Abramowitz, PharmD, is the CEO of ASHP.
Physician Dispensing and the Opioid Crisis

Approximately 130 Americans die every day from an opioid overdose. Although this is mostly driven by illicit opiates like heroin and fentanyl, prescription opiates play a large role. One recent study suggests that 21% to 29% of patients who are prescribed opioids misuse them and 8% to 12% will develop a disorder. Almost all heroin users have a prior history of prescription opiate abuse.

Some pharmacists point to physician dispensing, the practice of doctors providing prescription medication directly to patients in the office instead of writing prescriptions to be filled at a pharmacy, as a driver of prescription opiate abuse. Is this true, or does it reflect the self-interest of pharmacists, who otherwise lose patients if they don’t require a pharmacy visit? What are the implications of physician dispensing on pharmacists?

Doctors who dispense in-office make money by doing so. There are no comprehensive studies that measure whether this incentive skews physician behavior, but many studies have shown that economic incentives impact the decisions some doctors make, including a recent case where doctors were successfully bribed to prescribe opioids to their patients. Another study shows that overprescribing is a major contributor to the opioid crisis. To be fair, these studies relate to opioid prescriptions generally, not to the specific impact of in-office dispensing.

Another risk factor is that clinic staff may not have the training or tools to duplicate the pharmacists’ role in patient education or check for errors and interaction effects. One physician dispensing company advertises that it takes on average two minutes to dispense a prescription. This puts pressure on the doctor’s office to manage this process efficiently without sacrificing patient care.

It’s clear that pharmacists and pharmacy associations should be pushing for further research on the effects of physician dispensing incentives and strict in-office opioid dispensing regulations by state boards of pharmacy and staff training.

Physician dispensing is not going away given the benefits in combating primary medication nonadherence, but studies that look at the specific impact of physician dispensing are desperately needed, as are regulations that require training for in-office dispensing and restrictions around dispensing opioids. Pharmacies must continue to maintain best practices, hold onto their competitive advantage as champions of patient care and safety, and innovate to minimize the convenience gap between physician and pharmacy dispensing.
Reaching a New Generation of Consumers

Independent pharmacies have historically been at the center of every community across America. They go-to place for prescriptions—they were a place where owners looked out for their neighbors and tried their hardest to keep them healthy and strong.

Independent pharmacies still exist, but they’re getting harder to find. Between 2011 and 2017, the number of independent pharmacies in the United States dropped 5.3% to fewer than 22,000, according to NCPA Digest. At present, community pharmacies represent only about 35% of retail pharmacies.

There are a number of reasons for this trend. Independent pharmacies are often overshadowed by pharmacy chains, grocery stores, and discount retailers. Community pharmacists also tend to be older and close their stores when they retire. Pharmacy owners face lower margins from traditional services, which discourages new pharmacists from starting their own business.

As the number of independent pharmacies decline, it’s likely that a portion of younger people have never experienced the high-touch services they provide. To engage these consumers, independent pharmacies must use technology to help them thrive and grow.

Leveling the Playing Field
Connecting with new, prospective customers, regardless of their age, is a major challenge. National chains have seemingly unlimited marketing budgets. They are investing in technology that makes them more efficient and to enhance communications with patients. To set themselves apart, independent pharmacies must employ similar digital technologies to connect with patients, while still providing the personal touch that sets them apart from mega retailers. Tools such as secure text messaging and video chat can help pharmacists acquire new customers, engage existing patients, and collaborate with prescribers to keep patients coming back.

Patients want to receive text and email reminders about refills or the need to follow up with their prescribers. They want tools to reach their pharmacists via text messages or live video if they have a question about a medication or need to leave a message. They want a pharmacy website that makes it easy to find the information they need and stay up to date on the latest offers, services, and trends.

Patients also look to pharmacists for counseling and clinical services. By using technology, independent pharmacies can connect easily and securely with patients to improve their operations.

Differentiating the Independents
Introducing new technology can seem overwhelming. But in a hypercompetitive environment, it is imperative for independent pharmacies to seriously consider integrated solutions to make life easier for everyone.

Here are four questions to ask to determine which digital tools to implement first:

1. How can my pharmacy use this to acquire new patients?
2. Can it be used to engage existing patient populations in a secure way?
3. How much training is required to implement it into the workflow?
4. Does it integrate with the pharmacy management system so it’s easy to use?

Today’s healthcare consumers have higher expectations for care providers. With the right tools and a personal touch, independent pharmacists have the opportunity to introduce themselves to new consumers while changing their business for the good of their communities.

“In my view

Michael Morgan is CEO of Updox, which is a collaboration platform for healthcare providers.

“Patients want text or email reminders about refills or the need to follow up with their prescribers. And they want to be able to reach their pharmacists via text messages or live video.”
These Numbers Count in Your Financial Statements

Cash flow and profitability are the key metrics in analyzing a pharmacy’s performance. You can’t have sustainable cash flow without profitability. Before we get into a few specifics, you must first maintain and support a functioning accounting system that provides timely, accurate financial data you can use to manage your pharmacy business. This is a key issue because, in my experience, many pharmacies do not have the fundamentals in place and are left wondering what is taking place in their pharmacy. Once you have the basics down, you’ll be able to identify your weaknesses and position yourself to rival your peers. Strong fundamentals include an in-depth understanding of these metrics:

1. Third-Party Receivables
Your receivable balance from third parties is likely your biggest unreconciled bank account. Adjudicating and hoping you get paid is what many pharmacies do each day. Although not a best practice, it has worked in the past. But in the age of DIR/GER fees and tighter reimbursements, this principle just doesn’t work. Third-party reconciliation has many benefits such as producing accurate revenues in your accounting system, identifying DIR/GER and other adjudication fees, explaining any payments below adjudication, and providing insight to how long payers are taking to reimburse. Technology opens the door for these systems to add value to your pharmacy. If you haven’t implemented a system using technology to manage your third-party receivables, now is the time to start.

2. Inventory Management
Inventory management has always been a key metric for pharmacies. Even if you think you have this area under control, take a step back and be objective. Better yet, hire an outside inventory specialist. Chances are, you’ll find inefficiencies of which you were not aware. Any excess or idle inventory on your shelf is essentially hundred-dollar bills that are not in your bank. Consider a 12-time inventory turn rate rock bottom, and strive to increase inventory turns from 18 to 22 times a year to add cash flow to your pharmacy. With medication sync and adherence, the use of various inventory management technologies, perpetual systems and next-day delivery from wholesalers, why shouldn’t a pharmacy be closer to 20 turns a year? Enhancing your inventory control, management, and efficiencies should be a serious priority.

3. Gross Margin
Of utmost importance is your gross margin. How does your margin stack up to industry averages? If you are underperforming in margin, then you are limiting your profitability and cash flow. A one-basis-point difference in margin as a percent of your total revenue is significant extra cash flow. Improve your margins by maximizing your adjudications, implementing sync, improving your purchasing, enhancing inventory management, and/or adding diversified revenues such as clinical services or compounding. Adding a couple of percentage points to your gross margin can add value to your bottom line and cash flow fast.

Circling back to the fundamentals, these numbers are vital to your accounting system. Any cash flow or profitability analysis is void without a solid understanding and accounting of these metrics. The value you will see from accurate accounting and understanding of these metrics will be substantial. These are the areas that will make or break your pharmacy. The pharmacy industry is constantly changing, and you can either fight it or adapt and seek opportunity. Getting a handle on these key metrics is required in today’s marketplace.
All hormonal contraceptives are currently available by prescription only, with the exception of levonorgestrel emergency contraception. This prescription requirement creates many barriers for patients. Expanding the pharmacist’s scope of practice to allow prescribing these medications gives our patients the option to make a single trip to the pharmacy for both a clinical visit and birth control supplies.

The role of pharmacists and pharmacies in birth control services has been expanding rapidly. More than 1,100 pharmacies now offer birth control services in seven states: California, Colorado, Hawaii, Maryland, New Mexico, Oregon, and Washington. Several other states are in the process of implementing programs. State policies vary and may allow pharmacists to prescribe birth control pills, patches, vaginal rings, depot injections, and emergency contraception pills. The Birth Control Pharmacist website tracks information about which state policies allow what kinds of birth control services from pharmacists.

Offering birth control services is an opportunity for pharmacies to attract new patients and retain existing ones. With competing pressures from mail order pharmacies and telehealth services, it is important that brick and mortar pharmacies be known as a point of direct access to birth control. Pharmacies are often conveniently located and generally are open longer, which gives additional opportunities for people who can’t make it to a traditional clinic or physician office. The local pharmacy is more accessible than mail or telehealth services for many people.

Pharmacies have always been an important point of access for OTC contraceptives including barrier methods (e.g., condoms), spermicides, and emergency contraception, as well as for pregnancy tests and other reproductive health products. Prescribing more hormonal methods is an important expansion of existing services and offerings. More than 99% of women who have ever had sexual intercourse have used at least one contraceptive method, with oral contraceptives as the most popular.

Patients need to be made aware that these services may exist at their local pharmacy. They need to become common knowledge through public awareness campaigns and promotions in the pharmacy such as posters, bag stuffers, and buttons worn by staff. Market the birth control service online and in the local community to attract new patients.

The Birth Control Pharmacies (https://www.birthcontrolpharmacies.com) website helps patients know what to expect when visiting a pharmacy for birth control and connects patients with participating pharmacies near them. Any pharmacy that is offering birth control services can submit their information (https://bit.ly/2LXPMju) and be added to the website’s directory.

Sally Rafie, PharmD, BCPS, NCMP is a pharmacist specialist at UC San Diego Health and founder of Birth Control Pharmacist, which provides education, training, assistance, resources, and clinical updates to pharmacists. She can be reached at sally@birthcontrolpharmacist.com.
Improving the Consumer Experience

By Fred Gebhart, contributing writer

Successful retailers long ago realized it is faster and cheaper to resell and upsell a repeat customer than to acquire a new one. And in pharmacy, where consumers and patients can choose from big box, chain, mail order, online, and community retailers, improving the customer experience is key to repeat business.

“The whole basis of our business is to lighten our customer’s life, even by five minutes,” says Cliff Holt, PharmD, president of Hurricane Family Pharmacy in Hurricane, UT.

One of the surest ways to lighten customers’ lives is to make it easier to communicate. Amazon and other major retailers have gotten customers accustomed to using mobile applications on smartphones and tablets. Healthcare has been slower to adopt mobile applications, in part because of privacy concerns and HIPAA regulations.

“Mobile apps, mobile refills, and text messaging are a very strong consumer preference,” says Kurt Proctor, RPh, PhD, NCPA senior vice president of Strategic Initiatives and president of the NCPA Innovation Center. “We see that chains are somewhat ahead of some independent pharmacies. In today’s pharmacy marketplace, customer convenience can make a huge difference.”

For Beverly Schafer, RPh, customer convenience for her Ketterman’s Pharmacy in Seattle, WA, includes a full line of immunizations and travel advice. Ketterman’s was the first pharmacy in the country to offer flu shots, she says, and the first to provide routine vaccine administration by pharmacists. The pharmacy administers 20 to 30 vaccines daily.

Vaccinations filled the gap for Ketterman’s Pharmacy when Schafer decided a large contract was unacceptable. “Without that low-ball contract,” Schafer says, “we had the time to come up with ways to allow these families to keep using our store even if we weren’t filling their prescriptions.”

Schafer notes that Washington state gives pharmacists broad scope to prescribe and administer vaccines, but states can set up collaborative practice agreements with prescribers as needed. Almost any pharmacy can boost vaccination rates by 10% or more simply by checking current patients for tetanus boosters, shingles, pneumonia, flu, and other common vaccines.

Providing travel advice is a natural outgrowth of serving patients who might need measles, typhoid, cholera, Japanese encephalitis, and other vaccines for work, school, vacation, and other travel. The need is there, she says, and it takes little more than letting patients know the pharmacy can provide the vaccinations.

Schafer notes that the University of Southern California School of Pharmacy and APhA have solid online modules that help with creating and running a pharmacy-based travel clinic. The CDC Health Information for International Travel, better known as the Yellow Book, updates health advice and precautions yearly.

In Gallatin, TN, Andrew Finney, PharmD, has transformed one of the country’s oldest pharmacies into one of the most modern. Perkins Drugs & Gift Shop opened in 1895. Finney’s latest enhancement is scripClip, an RFID-based will-call system for Rx pickups.

As prescriptions are filled, they go into individual bags hung randomly on the will-call rack. When the technician enters the customer’s date of birth, name, or other identifying information, a light on the prescription bag flashes. Bags can also be set to chirp. The tech scans the prescription package itself to
confirm it is the right product for the right patient.

“For the pharmacy, it’s a patient safety improvement,” Finney says. “One bag, one person, one prescription. And if the patient has more than one script, all of his or her bags light up, so you never miss giving something out. For our patients, it’s convenience and speed because you never have to search for their bag. They notice the time difference.”

The system also helps boost compliance. A tech can sort the filled bags based on fill date, medication type, and other parameters. The selected bags blink for easy identification, which makes it faster to identify and contact patients who have not picked up their scripts.

In Southwestern Utah, Holt built Hurricane Family Pharmacy from one prescription the day he opened to 12,000 scripts a month, 10 years later. There is no lack of competition from chains, big box stores and other independents in St. George County, Holt adds. What the community lacked was a pharmacy focused on improving the customer experience.

“I want to look different, act different, smell different,” Holt says. “Whether it’s using green vials because nobody else was, hiring nurses for immunizations, or including supplements and OTCs in my strip packaging, it is all about making Hurricane stand out and making life easier for our customers.”

Medication synchronization, which he markets as a VIP program to the 70% of his client base that uses the services, also includes a popular free delivery service. In fact, 75% of his delivery service patients have never been to the pharmacy. Hurricane nurses visit patients in their homes, do medication reconciliation around the kitchen table, and set up their medication synchronization. Three days later, a driver drops off their first box of single-use strip packaging. Ten days before the next scheduled delivery, a nurse calls the patient to confirm the order.

“The typical pharmacy does 80% of their business from a three-mile radius,” Holt says. “We do the entire county, a 45-mile radius. We’re not just synchronizing patients and families, we’re medically synchronizing neighborhoods.”

Five Tools

Improving the customer experience starts with mindset, but it takes the right technology tools and services to turn mindset into loyal repeat customers.

Mobile apps for refills and messaging. Pharmacy websites are standard, but consumers today expect mobile, not just online. Amazon and other online giants set the bar for other retailers and service providers, including healthcare.

Full immunization services. Why stop with flu and shingles vaccines? Pharmacists can administer vaccines against more than two dozen diseases from adenovirus to yellow fever. Some pharmacies employ nurses to free up pharmacists for counseling and other pharmacist-only duties.

Travel clinic. It’s a small step from giving travel-related vaccines to providing travel advice on staying healthy and avoiding diseases such as traveler’s diarrhea or malaria for which there is no vaccine. The Centers for Disease Control and Prevention Health Information for International Travel, better known as the Yellow Book, updates health advice annually.

Streamline dispensing with RFID Rx bags, robots, and other technology. Dispensing remains a key part of most pharmacy operations and few things annoy customers more than a long wait. Technology that speeds dispensing improves the customer experience.

Convenience packaging. Why stop at prescription meds? Savvy pharmacists are repackaging prescription meds, supplements, and routine OTCs in blister packs, strips, and other convenience packaging for customer convenience. Putting convenience packaging patients on medication synchronization makes their lives easier as it boosts repeat sales.
Sexual Harassment: Prevalence and Prevention

The #MeToo movement—the social campaign against sexual harassment and assault—has created national dialogue about harassment in the workplace. Since it started in October 2017, the movement has focused the media spotlight on the destructive issues that workplace harassment can cause the victim and organization.

I recently opened up a social media conversation with pharmacists on the subject to find out about their experiences with workplace harassment. I was bombarded with replies.

Although the pharmacists who responded told stories of harassment from a coworker or supervisor, the most common source of harassment was actually from patients.

One pharmacist who worked at night estimated that she has received 60 inappropriate telephone calls over three years.

While many harassing phone calls to pharmacists focused on drugs to treat erectile dysfunction, inappropriate touching or unsolicited comments by patients in the pharmacy were also noted.

One pharmacist who worked at night estimated that she has received 60 inappropriate telephone calls over three years.

To be clear, sexual harassment is a problem that can involve women and men. According to the Institute for Women's Policy Research, 20% of sexual harassment charges brought to the Equal Employment Opportunity Council (EEOC) between 2005 and 2015 were made by men.

Talk About the Problem
Sexual harassment may have nothing to do with the recipient’s age or looks, according to a 25-year district leader for a major pharmacy chain. (Note: Because of the drugstore chain’s policies, we cannot publish the source’s name. The fictitious name of Mary Smith, PharmD will used instead.)

If you are experiencing sexual harassment from a coworker or subordinate, you should discuss the issue with human resources or with your direct supervisor, Smith says.

Many corporations have an “open door” policy, Smith explains, which means you can speak to whomever you feel most comfortable about a harassment problem, whether that is another coworker, a supervisor, or someone in human resources. The goal of this policy is to offer employees several options to talk openly about an incident or concern.

When it comes to reporting harassment, many companies post information about who to contact in the company’s break room. Some corporations also have set up an anonymous employee phone line that employees can use if that makes them feel more comfortable.

With so many options, Smith says that issues can often be quickly resolved. Each of the major pharmacy chains have extensive training modules about sexual harassment and its different forms.

When it comes to harassment, remember that actions or situations can be understood or interpreted differently by different people. One person’s complaint can be another’s unwanted or unsettling remark. The training modules walk employees through the types of scenarios that can occur, and they may be beneficial “in preventing incidents.”

Harassment can be subtle, and anyone who encounters it may wonder: Is it me? Smith stresses that although it may seem easier to ignore the problem and walk away, we need to empower each other and handle the situation.

Often, resolving an incident of harassment may take a simple conversation, one that can perhaps take place to deal with situations when a person does not realize he or she is being insensitive or out of bounds. But if the situation is more serious, it may need to be escalated and investigated by human resources.

“Sexual harassment by someone above you is when it becomes trickier,” Smith says. "In many cases, people don’t feel comfortable complaining, especially when it is a supervisor.” The employee worries about the consequences: “If I complain, is this person going to make my life miserable? Will people believe me?”

Alexis Winsten Mancuso is the assistant executive director of the Jewish Community Center of Pittsburgh. She oversees human resources at the center and has more than 35 years of human resources experience. Regardless of where you work, Mancuso explains, harassment is a form of employment discrimination, which violates Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act of 1967, and the Americans with Disabilities Act of 1990.

What to Do
Anyone who believes he or she has been a victim of sexual harassment in the workplace has the right to file a complaint with the U.S. Equal Employment
Opportunity Commission (EEOC), which covers employers with 15 or more employees. Additionally, most states have a Human Relations Commission, where employees can file a complaint. Although these are not the first options in dealing with harassment, employees should know they have both local and federal rights, regardless of the size of the organization, she says.

To report harassment, start by talking to your immediate supervisor, as well as to your company’s human resources department or representative. The goal is to try to stop the offending or inappropriate actions immediately.

Typically, there is an investigation conducted by human resources. Once the investigation is complete, the human resources department will determine next steps. If punishment is warranted, it can take the form of an apology, more training, or termination, depending on the severity of the harassment.

It is important to note that both sides will be heard during the investigation; everyone is innocent until proven guilty.

Chain pharmacies often have more structured training programs and policies in place against sexual harassment, but it can be a trickier issue at an independent pharmacy. The bad news is that in some cases, you “may just have to leave the job,” Smith says. This happened to her when she was younger, and in that case, the entire staff left the pharmacy because of inappropriate behavior by the owner.

Don’t let the fear of not finding another job stop you, Smith says. You might not find something that works perfectly for you, but there are pharmacy jobs out there.

Mancuso agrees with Smith that one option is to simply leave. You have to take care of yourself and make sure you are in a safe environment. If the environment is led by someone who doesn’t have the same values, chances are that’s not an environment that you would want to work in.”

She also notes that in an independent pharmacy, you can turn to the state level Human Relations Commission to file a complaint, or you can locate your state/local Office of Victim Services, which can help support and guide employees through the process.

**What to Do**

If the inappropriate behavior continues, notify your direct supervisor and work out a plan of action, Smith says. Sometimes, a patient can be banned from the store if he or she persists.

“Part of our job, whether male or female, is to empower ourselves to make it clear to those who are acting inappropriately, and use our voices, advocate for ourselves, say ‘Please stop.’ We have every right to do that,” Mancuso advises.

What about social media like Facebook or Twitter and harassment? Many pharmacists receive friend requests from patients. Mancuso advises declining these requests. “If you accept a request, you’ve just invited someone into your life, and that changes the nature of the relationship.” She assures pharmacists that there is nothing wrong in declining the invite and if asked, say, “Thank you, but I keep my Facebook very private.”

Preventing harassment is key. All pharmacists and organizational should play a role in safely and effectively addressing sexual harassment when it surfaces in the workplace, Mancuso says.

In pharmacy school, prospective pharmacy students should be taught how to deal with situations of harassment from patients or coworkers. Mancuso suggests working within the company, if necessary, to form an employee committee to research and recommend policies.

“Nothing should prevent us from using our voices in a positive way to bring about the right policies, procedures, and approaches,” she advises.
Preventing Errors with High-Risk Medications

By Frieda Wiley, PharmD, contributing writer

Medication errors present a global challenge that threatens the quality of care and patient safety and contributes to continually escalating healthcare spending.

Medication errors result in 2% to 5% of all hospital admissions worldwide—the majority of which experts believe are preventable, according to the Agency for Healthcare Research and Quality. As many as 30% of patients who are hospitalized encounter some degree of medication-related harm, and 7% of these incidents are severe. At least 7 million patients fall victim to preventable medication errors, costing the U.S. healthcare system $21 billion annually.

Moreover, not only is the problem associated with increased lengths of stay in the inpatient setting, but it increases morbidity, mortality, and additional costs to the healthcare system. Despite these statistics, more than 25% of these error incidents are entirely preventable. This presents pharmacists with prime opportunities to prevent these mistakes and ameliorate the problem.

What Contributes to Errors?
Taking on such responsibility can be arduous because any factors increase the risk for medication-related harm. Among these are advanced age, renal impairment, presence of chronic disease and comorbidities, the complexity of the patient’s medication regimen, and the administration of high-risk medications. Each medication added to

Vincent Vidaurri, PharmD, BCOP, clinical oncology pharmacist at the University of Colorado Health in Fort Collins, CO, says, “The pharmacy profession is well-positioned to manage high-risk medication errors, but we have to be willing to convince the leadership of value in this area and step into this role.”

GRANDECO/STOCK.ADOBE.COM
a regimen increases the risk for medication-related harm exponentially. In the inpatient setting, for example, administering two medications carries a 13% risk for harm, but the risk jumps to 82% for patients receiving seven or more medications.  

Additionally, medications that are classified as “high-risk” can vary depending on the practice setting, and may include antineoplastics, anticholinergics, insulin and other hypoglyce- mics, antimicrobials, opioids, potassium and other electrolytes, anticoagulants, and heparin. While medication safety is problematic across the board, pharmacists and other healthcare providers can expect to encounter different and/or additional challenges depending on the environment in which they work.  

“Because all medications work together to optimize treatment, I would say each medication can be considered high-risk,” observes Brenda Doughty, MBA, RN-BC, CVRN-BC, cardiac rehabilitation manager at Texas Health Arlington Memorial Hospital.  

Home Health Care Challenges  
Where a patient receives care plays a critical role in medication-related challenges and the risk for medication errors.  

While the total number of home-bound U.S. residents remains unclear, 3.4 million Medicare patients received home care in 2017. About one-third of older patients who received home health services either take medications inappropriately for older patients or have a potential medication-related problem. Environment and other patient circumstances often create a backdrop conducive to medication-related errors in patients who are homebound—a problem that again becomes exponentially more complicated in the elderly.  

Melissa Morgan-Gouveia, MD, a geriatrician with Christiana Care Health System in Delaware, says older persons often take potentially harmful products such as OTC medications and dietary supplements that do not appear in their medication history. Among these are NSAIDs and anticholinergics—two drug classes that are available OTC and routinely land on the Beer’s List of High-Risk Medications. She encourages home-health providers to alert the patient’s prescriber(s) and pharmacist of any OTC medications in the patient’s regimen that may not typically appear on the patient’s medication list. She also recommends that home-health providers collaborate with pharmacists to update the patient’s medication list, coordinate follow-up, and monitor to assess the effects of medication changes.  

Oncology Challenges  
Managing an accurate list of medications is particularly challenging in oncology, Vidaurri says, especially for patients who see multiple out-of-network providers. There are added complexities for the many patients who receive medications from multiple pharmacies, including traditional community or independent practices and specialty pharmacies.  

Even with the best efforts to reconcile a patient’s medication list and provide education, some errors still occur because of the patient’s medication comprehension and his or her home and social environment. The precarious nature of antineoplastics—many tend to have narrow therapeutic indices and require individualized dosing—raises the stakes even more.  

“Despite all the technology, education, and office visits, there are times when patients take the medication incorrectly because they don’t understand how to take it, they have too many medications to manage, and they lack the outside support system to help them,” Vidaurri says.  

Hospital Challenges  
The combination of medical histories that either are incomplete or absent, intricate monitoring requirements, complexity of the disease state, and other issues create the perfect recipe for medication errors in the inpatient setting. While medication errors may or may not be more common with high-alert medications, Michael Dejos, PharmD, BCPS, says the consequences of errors with high-alert medications may be more devastating to patients. Dejos is medication safety officer at Nemours in Wilmington, DE, and immediate past chair of the ASHP Section of Inpatient Care Practitioners Advisory Group on Medication Safety.  

Some error prevention strategies are universal to many healthcare settings, but he recommends the following in the hospital:  

- Employ a medication safety leader to create guidances and establish a safety program.  
- Standardize and limit the concentrations on the hospital formulary, and use nationally standardized concentrations when available. These help prevent error-prone calculations, reduce waste, streamline inventory, and facilitate the use of premixed IV solutions.  
- Have an action plan for drug shortages. Organizations should have a plan in place for situations where medications may be available only in a different size, dosage form, or concentration. Organizations should develop strategies that examine the implications of product changes for frontline staff, dispensing system automation, and electronic health records.
Preventing Errors

- Standardize the ordering, storage, preparation, and administration of medications. Limit access to high-alert medications, allow use of auxiliary labels, automated alerts, and other redundancies.

Patient and Professional Education

Experts generally agree that mitigating and eliminating medication errors requires interdisciplinary and intercollaborative efforts among healthcare professionals. Pharmacists and other appropriate healthcare providers should invest time in counseling patients, Doughty says. Patients should know the name, frequency, dosage, indication of each of their medications, and the duration of their therapy.

Organizations need to have interdisciplinary meetings and hold people accountable so that all staff is on the same page, explains Marrè Barnette, MSN, RN, CNS, director of operations for Fresenius in Cincinnati. "It's important to reiterate education multiple times over months, especially after new initiatives have come out, to assure the 'stickiness' of the education and training."

Identifying errors presents an opportunity for practitioners and healthcare organizations to use data gathered from external errors to help inform and augment their international safety and continuous improvement efforts and processes.

Michael Gaunt, PharmD, medication safety analyst at the Institute for Safe Medication Practices (ISMP) believes denial and reluctance to learn from external challenges sets the stage for additional errors. "Despite repeated descriptions of harmful and fatal errors in publications, many organizations fail to use this information to decrease the risk of similar errors," he says. "Biases that cloud the way we judge the behavior of others when errors happen often thwart our ability to learn from their mistakes, and unfortunately, recommended actions go unheeded by those who feel they don't apply to them."

Pharmacists and other healthcare professionals can help mitigate medication errors, Gaunt adds, by:

- Creating collaborative, proactive work environments that encourage all staff to track down reports of all errors and risk.
- Using reports of errors as learning opportunities for making targeted improvements.
- Establishing a systematic way to identify and review information about external errors—errors that happened elsewhere—and to assess the organization’s vulnerability to similar errors.
- Identifying reliable sources of information about external errors, such as ISMP newsletters, peer-reviewed journals, and alerts from the FDA.
- Establishing group (practice site level, district level, corporate level) responsibility for reviewing the external errors or events, with standing items on meetings and committee agendas.
- Providing regular safety webinars or safety conferences to keep all staff updated on emerging issues and strategies.

"Accomplishing these tasks requires leadership commitment, an infrastructure for learning, and a willingness to take action," Gaunt says.

Resistence to Collaboration

Pharmacists’ medication-centric training and unique patient relationships empower them to address medication errors. A prospective observational 2017 study evaluating high-risk medication errors in hospital-admitted diabetes patients found that clinical pharmacists identified 3,947 (100%) of medication discrepancies. Of these errors, pharmacists caught 2,676 errors for 904 patients upon admission, and identified 1,271 discrepancies for the 865 who completed the study upon discharge.

However, there may be push-back from other healthcare professionals who fail to share the same perspective regarding potential errors. Pharmacists might uniquely identify. In these situations, Dejos encourages pharmacists to keep patient safety at the forefront in guiding the dialogue. The situation may require stronger courses of action such as escalating issues up the chain of command. Pharmacists should use assertive statements such as, “I am concerned,” “I am uncomfortable,” or “This is a safety issue,” to help get attention and participation.

Pharmacists, especially community pharmacists, will play an increasingly important role in identifying and preventing medication-related errors, Vidaurri adds.

“We need to shatter the assumption that systems are safe until proven dangerous by a tragic event,” cautions Gaunt. “No news is not good news when it comes to patient safety.”

REFERENCES

As a pharmacist, you are trusted to guide optimal drug treatment. But the sheer volume of drugs, new therapies and complex patient conditions raise challenging questions as you make vital decisions. Where can you go for reliable, quick answers backed by deep evidence when you need it?

With continuous content updates from PharmD experts, Clinical Pharmacology powered by ClinicalKey will support you in making swift, confident drug decisions for every patient. Start with a free trial or demo at elsevier.com/cpck
Six New Clinical Services for Pharmacists

By Tzipora R. Lieder, RPh, contributing writer

When I was a pharmacy student two decades ago, I met an acquaintance who asked what I was studying. As I described the pharmacy school curriculum, her response was incredulous: “You need to know all that to put pills in a bottle?”

These days, community pharmacists are far beyond putting pills in a bottle and have many opportunities to use their drug knowledge to provide services for patients. What a pharmacist is allowed to do varies from state to state with differing regulations, but these services allow pharmacists to increase their clinical interactions with patients while generating additional revenue streams.

1. **Point-of Care (POC) Testing for Flu and Strep**

There are many Clinical Laboratory Improvement Amendments (CLIA)-waived tests that can be provided in a pharmacy setting, with strep and flu tests being particularly attractive to patients. In states where pharmacies can set up collaborative practice agreements (CPAs) with physicians to allow them to prescribe antibiotics and antivirals, patients can have these drugs dispensed immediately after positive POC testing.

Erica Burman, PharmD, pharmacist manager at Goodrich Pharmacy in St. Francis, MN, reports that patients are “surprisingly” happy to pay the out-of-pocket fee of $40 for strep tests and $60 for flu tests. “They find that ultimately they are saving money because of the time they save with improved access to care,” she says.

Kevin Day, PharmD, clinical director and pharmacist at Day’s Miami Heights Pharmacy in Cincinnati, which recently implemented POC flu testing, cautions that pharmacists must be mindful of their limitations. The flu test protocol at Day’s Pharmacy’s flu excludes them from testing patients who are at higher risk of developing flu complications, including the very young and very old and those with preexisting lung disease. These patients are referred to their physicians for testing.

2. **Expanded Immunization Programs**

“Immunizations have become a mainstay for community pharmacy,” says Suzanne Higginbotham, PharmD, “but we’re trying to teach pharmacists to not just give a flu shot, but to perform an entire immunization needs assessment on patients.” Higginbotham is the director of the Center for Pharmacy Care, Residency Programs and Continuing Pharmacy Education at Duquesne University in Pittsburgh. According to the National Alliance of State Pharmacy Associations (NASPA), 48 states, the District of Columbia, and Puerto Rico allow pharmacists to administer any vaccine, although some require prescription, and some have limitations by patient age. The exceptions are New Hampshire, New York, West Virginia, and Wyoming, which have limitations on what vaccines are allowed.

Cortney M. Mospan, PharmD, assistant professor of pharmacy at Wingate University School of Pharmacy in Wingate, NC, says that adults often don’t realize that they should be receiving other immunizations in addition to the flu vaccine. At the independent pharmacy where Mospan practices part-time, pharmacists check the state immunization registry as they fill prescriptions and use CDC guidelines to make patient-specific recommendations based on the patients’ diagnoses or inferred from their prescriptions.

Day’s Pharmacy’s expanded immunization program is hampered by Ohio’s immunization registry, which is “not robust,” Day says. His staff has been recommending Shingrix to all patients over
“Patients find that ultimately they are saving money because of the time that they save with improved access to care, so they don’t mind paying for POC testing.”

ERICA BURMAN, PHARMD

3 Long-Acting Injectable Drugs

In states that allow pharmacists to administer intramuscular and subcutaneous injections, pharmacies can serve as alternate injection sites for long-acting injectable antipsychotic agents (LAIAs) and other medications. This can occur under CPAs with mental health practitioners or through partnerships with LAIA manufacturers. Jennifer Helmke, PharmD, pharmacy manager at Breemo Pharmacy in Richmond, VA, reports that manufacturers that partner with Breemo refer patients to the pharmacy to receive their injections and assist with patient reminders. Administration fees are either paid by the manufacturer or the pharmacy charges the patient a $20 injection fee.

Breemo provides other injections as well, Helmke notes. For example, under a protocol developed with a local women’s health center, pharmacists can administer one-time methotrexate injections for women with ectopic pregnancies.

4 Smoking Cessation Counseling

“We see patients monthly, and we see them outside smoking,” says Neil Leikach, RPh, owner of Your Community Pharmacy in Catonsville, MD, “and if they want to stop, we can help them.” There are various ways pharmacies can implement smoking cessation counseling. In fact, several states currently have statutes or regulations addressing pharmacist prescribing of tobacco cessation aids (see Table 1).

Good Day Pharmacy, which has nine locations in northern Colorado, has developed a protocol through which pharmacists provide 30-minute consultations with patients to discuss their smoking cessation options, including OTC nicotine replacement products and drugs the pharmacists can prescribe, reports Vickilee Einhellig, RPh, president and CEO of Good Day. There is a $45 consultation fee paid by the patient, she says, but the prescription drug dispensing is covered by insurance, and a new Medicaid regulation provides payment for OTC nicotine replacement products as well.

Although pharmacists in Georgia do not have prescribing rights, Katie Lord, PharmD, clinical pharmacist at Barney’s Pharmacy in Augusta, GA, has been running the pharmacy’s smoking cessation program for the past five years. She describes the pharmacist’s role as the accountability partner for patients who want to quit smoking. The pharmacy recruits patients for the program using reports of patients who received smoking cessation products the previous month; other patients join by their own request. “We act as a liaison between the patient and physician” if they want to
get a prescription, Lord explains. Pharmacists follow up with patients every month and applaud their successes. The program is provided as a free community service, but Lord hopes that in the future there will be avenues for reimbursement.

5 Contraceptive Prescribing
In an effort to improve access to contraceptives and reduce unintended pregnancy rates, there is a nationwide push to allow pharmacists to prescribe hormonal contraceptives. (See Birth Control Services Help Attract and Keep Patients, page 11.) Colorado is one of 10 jurisdictions with statutes or regulations that allow pharmacists to prescribe contraceptives, according to NASPA. (See Table 2.) Pharmacists at Good Day Pharmacy provide 30-minute consultations, after which the patient can be prescribed and dispensed a contraceptive, says Einhellig. The $45 consultation fee is paid by the patient. Prescriptions can be refilled for up to a year, and patients are required to be seen by a healthcare practitioner every three years, she adds.

In Maryland, where pharmacists have recently started prescribing contraceptives, both Medicaid and a major private insurer have announced that they will be paying pharmacists a separate fee for prescribing contraceptives, Leikach reports.

6 Pharmacogenetic Testing
Pharmacists’ knowledge of pharmacokinetics, drug transport, and drug metabolism make them ideally suited to become involved in the expanding field of pharmacogenetic testing, says Elise Durgin, PharmD, PGY1 ambulatory care resident at University of Minnesota College of Pharmacy and Goodrich Pharmacy.

Genetic differences in metabolism may mean that a patient needs a higher or lower dose of a particular drug or should be prescribed a completely different drug, Helmke says. For patients who are not responding well to certain drugs, particularly mental health drugs, pharmacogenetic screening can identify why this is happening, Durgin explains. Pharmacists perform a buccal swab and send it to a laboratory for testing. They then receive a pharmacogenetic report, which is used for a discussion with the patient and for recommendations for the prescriber. (Pharmacogenetics is also called pharmacogenomics.)

Goodrich Pharmacy provides pharmacogenetic testing to select patients as part of their medication therapy management (MTM) program; in some cases, this is covered by insurance, says Durgin, while other patients pay out-of-pocket at a rate of $65 for the first 15 minutes of counseling and $30 for each additional 15 minutes. The laboratory bills separately. Brems Pharmacy charges patients $399 for pharmacogenetic testing and consultation.

“The nice thing about it is your genes don’t change, so you do it once and you have it forever,” Helmke notes. As more pharmacogenetics studies are completed and more drugs are added to that database, she explains, the information can be added to the patient’s profile.

Implementing New Services
If you are considering adding new clinical services to your pharmacy, understanding local pharmacy regulations is key. “If you don’t keep abreast of what’s happening in your state and other states, you may not realize things have changed,” Leikach says.

You may also need to become involved in advocating for more clinical services in the pharmacy. Leikach encourages pharmacists to become advocates for these new services in their states. “Talk to your delegates, have them come into your pharmacy, write a letter, call them on the phone. Some way or another you have to be involved.”

Before implementing a new clinical service, pharmacists must learn as

---

**TABLE 1** States with statutes or regulations addressing pharmacist prescribing of tobacco cessation products

<table>
<thead>
<tr>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
</tr>
<tr>
<td>Arkansas</td>
</tr>
<tr>
<td>California</td>
</tr>
<tr>
<td>Colorado</td>
</tr>
<tr>
<td>Idaho</td>
</tr>
<tr>
<td>Indiana</td>
</tr>
<tr>
<td>Iowa</td>
</tr>
<tr>
<td>Maine</td>
</tr>
<tr>
<td>New Mexico</td>
</tr>
<tr>
<td>West Virginia</td>
</tr>
</tbody>
</table>

Source: www.naspa.us
much as possible about it from experienced colleagues. Business and work-flow plans are important to ensure the financial feasibility of a service, and Mospan recommends trying out the proposed service on a pharmacy staff member. “Sometimes you don’t realize the issues you’re going to have either in workflow or feasibility until you actually run that service,” she notes.

Proper scheduling of new services is essential. Goodrich Pharmacy initially offered POC testing on a walk-in basis, Burman recalls, but they soon realized that this interfered with workflow, particularly if several patients came at one time. Now POC walk-in hours are scheduled for times when there is pharmacist overlap.

“The whole team has to be on board, from answering the phones for the initial call,” Einhellig says. She stresses the importance of developing protocols so the services are consistent across the pharmacy team. Technicians should be effectively used so that the pharmacist only needs to be with the patient when his/her knowledge is necessary to make the clinical assessment and judgment, Mospan says.

Pharmacy students and residents can also be an important resource. At Goodrich Pharmacy, residents provide many of the clinical pharmacy services, Durgin says. “A resident doesn’t cost as much as a salaried pharmacist, so I have a lot more flexibility to make contact with patients and provide the services,” she notes. Lord involves the pharmacy students she precepts in smoking cessation counseling.

Training requirements for different clinical services vary from state to state. New graduates are quite familiar with many of these services. “In our last year of pharmacy school, we offer certificate programs in enhanced care services,” Higginbotham says. For more seasoned pharmacists, there are many continuing education and certification programs to learn the necessary skills.

**Spreading the Word**

To attract patients for these clinical services, pharmacists need to effectively market them. Many people still have a narrow view of the pharmacy’s role, Mospan says. Marketing methods include social media, on-hold messages, bag stuffers, local media appearances, and even marching in a community parade.

“You really need to use other health-care avenues in your community to drive referrals to your pharmacy,” Mospan says. She visits local independent medical practices to describe the services her pharmacy offers and discuss how they might collaborate to meet their patients’ needs. Day says he spoke to many local prescribers before introducing POC testing to make sure they were on board.

Many physicians are “excited that we can help with flu shots or these types of consultations, because they are so busy too, and have a hard time keeping up with their patients,” Einhellig observes, but she cautions that in small towns, pharmacists should talk to local physicians to ensure they are not stepping on toes. “We’ve done a pretty good job as a profession owning and driving immunizations,” Mospan says, “so I think more and more providers are wanting to get rid of the vaccine business and have pharmacies and other points-of-care take care of that.”

**The Bottom Line**

Are these clinical services a significant source of revenue? Not always—and especially not when they are just starting, experts say. But they are hopeful that new opportunities for reimbursement will emerge as insurers recognize the value of pharmacists’ contributions to healthcare.

Clinical services can attract patients to a pharmacy along with all their prescriptions and other purchases. Although Barney’s Pharmacy provides smoking cessation counseling as a free service, Lord explains, “these patients are hardly ever just here for the smoking cessation, they’re here for the whole picture, and if we can help them quit smoking we’ve got a patient for life.”

POC testing is “definitely not our primary revenue at this point,” Burman says, “but in independent pharmacy a little bit here and a little bit there can help the business grow.”

---

**TABLE 2 States that allow pharmacist prescribing for hormonal contraceptives**

<table>
<thead>
<tr>
<th>California</th>
<th>Colorado</th>
<th>District of Columbia</th>
<th>Hawaii</th>
<th>Idaho</th>
<th>Maryland</th>
<th>New Mexico</th>
<th>Oregon</th>
<th>Utah</th>
<th>West Virginia</th>
</tr>
</thead>
</table>

Source: www.naspa.us
$2.1 Million Drug: A Cure and a Bargain?

By Barbara Hesselgrave, contributing writer

The science of modifying human DNA to correct defective genes has come a long way since the first studies in the late 1970s. More often these attempts were considered failures than successes.

However, the approval of viral vector-delivered Zolgensma (onasemnogene abeparvovec-xioi), for infants with spinal muscular atrophy (SMA), changed everything. It not only targets the defective motor neuron cells, but alters them permanently so they function properly. It is not a treatment, it is a cure, and a new benchmark in gene therapy.

In May, Zolgensma, developed by Illinois-based AveXis, a Novartis company, was approved by the FDA for SMA. With a single one-time infusion therapy costing more than $2 million, it was labeled the most expensive treatment in the world.

Researcher and AveXis president, Dave Lennon, PhD offers some background that lead to the discovery of this unprecedented, life-saving therapy.

“We were studying gene therapy for decades under the assumption that, with the Human Genome Project, gene therapy would be right around the corner. But the reality was it took decades to figure out how to deliver the therapy safely and effectively, and get FDA approval.”

SMA is a disease that affects 1 in 6,000 to 10,000 live births. The most severe form, SMA 1, causes death usually before age 2, but some people with other forms of SMA live to adulthood and, in one form, do not show symptoms until after early childhood. It is caused by a genetic defect in the SMN1 gene that codes for the protein necessary for survival of motor neurons. In its most severe form, SMA Type 1, there is rapid motor neuron loss, muscle degeneration, and a need for permanent ventilation support in the child. Zolgensma is basically the functional gene needed to replace the defective one, Lennon says.

“Delivery is a one-time intravenous infusion, given over an hour. It’s pretty straightforward and uneventful. But you have to get this to patients as soon as they are diagnosed, as loss of motor neurons is permanent.”

Sticker Shock

The life-saving effects of Zolgensma are there, but its price of $2.125 million has added to the media attention and debate about drug pricing for this new gene therapy.

B. Douglas Hoey, RPh, MBA, CEO of NCPA, sees Zolgensma as a call to action for pharmacists.

“When gene therapy becomes mainstream, which I believe it will, then those costs will be absorbed by a wider population. Then there will be less individual expense associated with a respective disease as costs are spread out and borne by employers and insurance companies.”

B. Douglas Hoey, RPh
Then there will be less individual expense associated with a respective disease as costs are spread out and borne by employers and insurance companies.”

Hooey adds that the payer world will need to catch up with these breakthrough therapies.

“They’re used to reimbursement models of chronic, ongoing care, often for the life of the patient. Now, we are looking at a very near future where a high-cost one-time treatment like this drug potentially eliminates or vastly reduces those lifetime costs.”

An Old Price Shock Revisited

The dialogue about Zolgensma’s price harkens back to an earlier, similar scenario.

Dorothy Keville, MEd, recalls when AZT was launched in 1987. Keville, co-founder of the 1995 AIDS Drug Assistance Program (ADAP) Working Group, explains: “This was the first and only treatment for HIV/AIDS at the-then outrageously steep price tag of $15,000. At that time, no one had ever challenged the market, and it took unheard of collaboration with the manufacturer, AIDS activists, and policy makers to create the ADAP program for patient access and drug reimbursement,” she says.

“But we did it, and it wasn’t long before newer and better drugs were approved and a new payer system, ADAP, was in place. Today, reimbursement programs are commonplace, but we were the first to lay that groundwork.”

Alan Wright, MD, MPH, agrees. “The entry of a million-dollar therapy can act as a stressor to the system and will spark a variety of innovations. Wright is the former chief medical officer of Advance PCS/Caremark.

“The stakes are much higher as the investment of time and money to achieve these discoveries is high risk, but the innovations won’t stay isolated to million-dollar drugs, and as more discoveries enter the market prices will be lowered.”

Cure versus Chronic Care

In rare diseases like SMA, Wright points out that a one-time high-cost treatment such as Zolgensma, in effect, eliminates the millions of dollars that would otherwise be spent on chronic therapy. “Which in the case of this disease, could be in excess of $4 million in just the first decade of the child’s life.”

AveXis is partnering with both government and commercial payers to accelerate decisions on how Zolgensma will be covered, Lennon adds.

“We have established outcomes-based agreements with payers because we believe in the long-term value of Zolgensma and are willing to stand behind the therapy.”

One of those partners is the Massachusetts-based Harvard Pilgrim Health Care. Michael Sherman, MD, MBA, and chief medical officer of the health plan, says that Pilgrim’s outcomes-based agreement with AveXis “helps ensure that we balance access and affordability for our members.”

While there would be only a small number of newly-diagnosed patients with the rarer SMA Type 1 disease each year, Sherman adds, “We believe it is our responsibility to provide access to this lifesaving treatment.”

The real-time patient monitoring of a million-dollar drug is essential, says Wright. “Because it really matters that outcome goals are met; payers will be following this very closely.”

Addressing the high price of treatment, Lennon concurs, “In terms of cost, this is cost versus pricing. One question is, ‘what does it take to manufacture this product versus the pricing, which is driven by value?’ In this case, a very severe disease, patients will die if not treated, and the supportive care will be many millions to just stay alive. To produce this live-engineered virus is a huge production process to make enough to treat just one person, let alone hundreds or potentially thousands around the world.”

In partnership with specialty pharmacy Accredo, AveXis is also offering a pay-over-time option of up to five years to help ease short-term budget constraints especially for states, small payers, and self-insured employers. There have now been instances where families have turned to their local communities for financial help. One group in Florida raised $2.2 million for a little girl in a few days.

To help patient families navigate Zolgensma treatment, AveXis has implemented a patient support program called OneGene. This program provides each patient family with a personalized and dedicated support team in matters of reimbursement assistance; coordinates financial assistance for eligible patients; and helps patients, caregivers, and healthcare professionals with any Zolgensma needs and questions.

In the meantime, NCPA’s Hoey says pharmacists must become much more familiar with pharmacogenomics.

“They need to learn more about these specialty drugs; they are not mainstream now, but I foresee the day, not too far in the future, when they will be.”

Because Zolgensma delivery will be handled by specialty pharmacy Accredo, “the likelihood of community pharmacists seeing this is very small, but it is a precedent, and I see this as a harbinger of things to come,” Hooey says.
AI in the Pharmacy

Artificial intelligence can map high-risk admissions (and more)  By Keith Loria, contributing writer

Complex problems that affect the world of pharmacy, such as the opioid crisis and avoidable hospital readmissions, require multidimensional answers. Artificial intelligence (AI) might be one solution. There are currently firms working to use AI, some through the use of machine learning, in the hope that it will contribute to solving these problems or at least minimize their impact. Taken together, AI and machine learning may have a massive multifaceted impact on pharmacy operational efficiencies, patient-centered care, and outcomes.

In today’s world, AI complements human interaction with patients. Adam Beacham, director of business intelligence at PDX-NHIN, a pharmacy software company, believes that 2019 and 2020 will be pivotal years for AI and predictive models to improve patient health from prescribers to pharmacies.

Sadiqa Mahmood, DDS, MPH, senior vice president of medical affairs for life sciences at Health Catalyst, says pharmacists can be empowered by AI to shift from prescription-filling roles to patient engagement and management of disease. Health Catalyst is a data/analytics vendor that has been working to predict and prevent readmissions through a combination of predictive analytics, machine learning, and new intervention strategies.

“Tools like AI and ML are enabling decision-making processes at the point of care; [and] quicker identification of patients who become high risk due to changes in their diagnoses, condition, or care plan,” she says. “Just as important, AI is optimizing pharmacy operations for inventory and supply chain management to enhance pharmacy productivity, and increase patient satisfaction and outcomes.”

Beachum adds, “AI and technology in the healthcare vertical continue to expand their use cases. As more organizations begin to leverage the available data, continuing to predict outcomes and patient adherence will expand its role.”

AI and machine learning are primary drivers within health systems as a way to lower the risk of readmissions among patients. Samir Manjure, CEO of KenSci, an AI-powered risk prediction platform, says the adoption of electronic health records and the availability of patient data sets have made it possible to predict more accurately which patients are at the highest risk of readmission. This not only offers the ability to intervene early but also mitigate the risk of infectious diseases and other health complications for the patient.

“With the Medicare Payment Advisory Committee (MedPAC) stating that 76% of hospital readmissions are potentially avoidable, AI and machine learning play a critical role in enabling hospitals to prevent cost leaks owing to potential cases of readmission,” he says.

Innovative Tools

A challenge to implementing AI is that, in its current state, administrative, clinical and financial systems in healthcare are not integrated, and, in some cases, are handled manually. To deploy AI successfully, a single technology platform that integrates and harmonizes data from disparate sources is critical.

“I Institutions with such platforms are able to deploy AI successfully and offer hospital, health systems, and pharmacy leaders a more ironclad defense against preventable adverse drug events and avoidable care delays, and effective operational management,” Mahmood says.

“Health Catalyst’s Data Operating System is a cloud-based digital platform,
which enables health systems to integrate and analyze data from virtually any software system or other data source."

DOS contains large and comprehensive data assets of its kind with more than 100 million patient records, encompassing trillions of facts sourced from more than 300 distinct siloed sources.

"Because we integrate data from so many highly disparate sources, we’re able to synthesize a single-source-of-truth data feed, and generate high-quality training sets that machine-learning algorithms can use to continuously improve their performance and accuracy," Mahmood says. "We give the health systems the right validated information needed to support any AI-based pharmacy initiative."

PDX offers Explore Dx, software that allows customers to analyze, trend, and drill into specific therapeutic categories, prescriber and patient demographics, and many other areas of interest. With more than 18,000 dimensions and measures available, Beacham explains that Explore Dx helps customers drive patient care today and has the ability to expand into AI to enhance patient care in the future.

"Many organizations struggle to gain access to their own data or provide the resources to become knowledgeable about their data. Explore Dx solves both of those problems," Beacham says. "By providing a self-service data visualization platform and a knowledgeable team of business and data analysts, Explore Dx closes that gap.

KenSci’s AI-powered risk prediction platform delivers a readmission solution built using machine learning models. By aggregating patient data from across medical sources, KenSci’s platform is able to predict which patients are at the highest risk of hospital readmissions, providing insight that enables caregivers and health professionals to act early.

"With KenSci, health systems are able to provide better quality care at lower costs," Manjure says. "Predictive models for identifying patients at risk of readmissions can result in a positive rate of return for organizations by enhancing the patient experience.” Such models improve patient outcomes, including decreased risk of hospital-acquired conditions, complications, and mortality, mitigating costs related to returns to the emergency department, and hospital reimbursement.

Variables used in the prediction are an aggregate of labs, comorbidity history, demographics, and inpatient history from an electronic medical record during the hospital stay. An interactive dashboard provides patient risk scores.

Preparing for What’s To Come
As business intelligence platforms expand in the market and AI grows in popularity, the need for knowledge of the industry and source systems becomes more important. The technology continues to evolve and gather data at a rapid pace, but needs to be structured and applied for real-world scenarios. Without properly using this knowledge, it will be a slow process to improve patient healthcare and adherence.

Patient-centered care can’t achieve its goal of improving outcomes if the mechanisms needed to support that effort aren’t supported with the right technology. For pharmacists in particular, AI and ML is an excellent way to achieve improved medication and care-pathway adherence, and reduce the avoidable adverse drug events at scale.

"AI and machine learning is the right technology to overcome many of the challenges pharmacists face today—and it’s the right moment in time for pharmacy leaders to address those challenges, because doing so will enable them to meet the future expectations that all payers, providers, and regulatory entities are so clearly signaling," Mahmood says. "AI also provides pharmacy an opportunity for more collaboration across many different entities serving the same patient, including clinicians and payers."

With the huge investments that health systems have made in creating electronic medical records, the use of AI in healthcare will usher in the era of systems of insights, where technology uses insights to turn data into effective action.

"This is critical to health systems that are focused on improving their quality of care while lowering costs," Manjure says. "Moreover, with the right insights, healthcare organizations can better align to quadruple aim and drive the ability to forecast and take action based on predictive analytics."

Data and predictive analytics help any industry understand decisions that have been made, the impact of those decisions, and improve the opportunity to make future decisions with more accuracy.

"As more data is captured and created, it creates better relationships between pharmacists and patients, prescribers and patients, and pharmacists and prescribers," Beacham says. "As these relationships strengthen through data patient outcomes, medication adherence should improve rapidly over a short period of time.”
Read back-to-school season is a time of change, renewal, and anticipation. Parents may overlook, however, potential health issues facing their children in the classroom and schoolyard.

Increasing numbers of children and adolescents require medications during the school day for chronic medical conditions, including epinephrine injections for severe allergic reactions, rescue inhalers for asthmatics, and glucagon for hypoglycemia.

Other pupils and students may need short-term medications like pain relievers and antihistamines at some point during the year. Add to that the threat of ever-present bacterial and fungal infections (not to mention lice infestations) that are associated with children and enclosed spaces.

Many school systems have reduced the number of school nurses. The National Association of School Nurses (NASN) reports that only 39% of schools nationwide employ full-time nurses, 35% have part-time nurses, and 25% have no nurse. This means the responsibility for dealing with students’ health needs is often shifted to staff members who have little or no medical expertise.

So who can pick up the ball when the school nurse is overworked? Parents and schools do have access to a most accessible healthcare provider—the local community pharmacist—who can assist them, parents, and children to help ensure that the school year is a safe and healthy one.

Pharmacist-Parent Connection

According to Bethanne Brown, PharmD, BCACP, associate professor at the James L. Winkle College of Pharmacy at the University of Cincinnati, health issues may not always be top of mind with parents during the back-to-school scramble. Pharmacists should try to establish and cultivate relationships with the parents/guardians of school-aged children throughout the year, but particularly during the back-to-school season.

In the run-up to school, Brown advises pharmacists to proactively alert parents and children to the signs and symptoms of common infections and how to prevent them. “If you’re talking about school-age kids, head lice come to mind; be aware of what to look for and how to treat it,” she says.

Kids should also be taught how to cover their mouth and nose when they cough or sneeze by directing the airflow into their arm. “It’s been described as the Dracula sneeze—cover your mouth like Dracula would put up his cape,” she says.

Lucas Smith, PharmD, owner of Buena Vista Drug in Colorado, echoes Brown’s advice. He advocates a proactive approach for pharmacists and parents alike that was reinforced by recent experience.

“As a Health Mart pharmacist, Smith offers its Children’s Free Vitamin Program for children from ages 2 through 11. He also promotes vaccines for children and their parents. “We’ll ask, ‘Have you had a tetanus shot in a while?’ Or we ask about other vaccines that they might need,” he says.

“If you’re talking about school-age kids, head lice come to mind; be aware of what to look for and how to treat it.”

Bethanne Brown, PharmD, BCACP
Building Collaboration
According to the University of Connecticut School of Pharmacy’s publication “The A-B-Cs of Kids and Medication: Re-Schooling Pharmacists and Families for Best Outcomes,” up to 20% of school-aged children suffer from chronic health conditions such as asthma, ADHD, diabetes, or food allergies. Four to six percent of them receive medication for these conditions during a typical school day.

“While various organizations have published guidelines on how to best manage medication in children who attend school, no universal policies exist. This creates opportunities for pharmacists,” the publication notes.

An NASN 2017 position paper states a student’s ability to learn is directly related to his or her health. The student’s capacity to focus on educational tasks may be impaired by unmet medical needs and school absences.

“School-aged children suffering from chronic and acute illness are often poorly-managed,” the UConn publication states. “In the absence of universal regulations, pharmacists have an opportunity to aid caregivers and educate all parties involved in school-day healthcare. Community pharmacists are uniquely positioned to facilitate medication administration at school and prevent it whenever possible.”

In fact, a study of medication management (MM) in Minnesota schools published in the Journal of the American Pharmacists Association confirms the need for these pharmacist-school partnerships.

The vast majority of school nurses surveyed were interested in partnering with pharmacists. Ninety percent thought that a pharmacist could assist with MM, while 80% indicated they would consult with a pharmacist. But only 12% reported that they already had informal access to a pharmacist.

"Interprofessional partnerships focused on MM and education are high on the list of services that school nurses would request of a consultant pharmacist," the study concludes.

Prescription Meds in School
Prescription medications that must be administered while at school present special challenges for pharmacists and parents (see sidebar). Smith says that he often works with parents of children who have chronic medical needs. He begins with a conversation with the school nurse to go over the student’s specific requirements.

When it comes to dispensing duplicate medications for school and home use, Smith goes the extra mile to serve his patients.

“Sometimes it’s us and/or the parent having to call their insurance company in order to approve an additional inhaler or whatever it is that they need so they can have it in both places.” - Lucas Smith, PharmD

Sending Rx Meds to School: A Review
Schools generally have their own medication administration policies that may require written authorization from a student’s parent and the prescribing doctor for all prescription medications dispensed during the school day.

All medications should be brought to the school by an adult and handed to another adult until the child is mature enough to handle the responsibility. A child should not carry their meds during the school day unless the parent, doctor, and school believe it is an emergency medication that requires immediate access.

The meds must be in the original labeled container prepared by the pharmacist and must include the following information or instructions for school staff:
- Child’s name
- Medication name
- Medication dosage
- Reason for Medication
- Administration frequency
- Route of administration, frequency, and any special requirements such as “take with food.”
- Possible side effects
- Physician’s name
- Date of prescription
- Expiration date

Medications that have expired or that are left over at the end of the school year should be returned to the student’s parents by the school.

Source: Healthychildren.org (https://bit.ly/2w3MShc)

"Sometimes it’s us and/or the parent having to call their insurance company in order to approve an additional inhaler or whatever it is that they need so they can have it in both places.” - Lucas Smith, PharmD
have to try to fill the prescription as soon as we can the next time so they can get backstopped.”

**Immunizations**
While all 50 states have immunization requirements for children in preschool and K-12, the recent measles outbreak in the United States, the worst in 30 years, has underscored the reality that many children do not receive the immunizations they need.

Several states have eliminated the religious or philosophical exemptions to vaccinations in response to the outbreak.

“Concerns based on misinformation about the vaccine safety and effectiveness, as well as disease severity, may lead parents to delay or refuse vaccines,” CDC reports. "All parents want to make sure their children are healthy and are interested in information to protect them. We have to work to ensure that the information they are receiving to make health decisions for their children is accurate and credible.”

Walgreens’ vice president of Pharmacy Operations and Specialty, Rina Shah, PharmD, calls this outbreak of measles “alarming.”

“It is a responsibility of every healthcare professional to make sure that all parents have the most up-to-date information as they make those decisions,” she says. "Not only are they helping themselves but, because of herd immunity, they’re helping the community as well.”

Walgreens views the back-to-school period as a time to get all family members current on their immunizations. "Parents take care of their children, but sometimes they forget to take care of themselves,” Shah explains. “It’s critical that before they get exposed to all of the children in school, the entire household is up-to-date with their vaccinations to ensure that they’re preventing any disease that might be out there.”

Approximately 400 Walgreens stores nationwide offer a Healthcare Clinic or other provider retail clinic services. The clinics offer school physicals and routine vaccinations like Tdap, meningitis, and HPV, as well as flu and pneumonia shots starting in late August.

This year, Walgreens partnered with the ME to WE Foundation and Mental Health America to create “WE Teachers,” a nationwide initiative to give teachers access to tools and resources. Through the program, teachers can access online digital training modules to help them identify and assess issues affecting their students, such as youth violence, poverty, bullying, and mental health and wellbeing. The online modules will begin rolling out this fall and will be available to teachers in the United States and Puerto Rico. These educational modules will be available in both English and Spanish.

**Off to College**
Once adolescents reach college age and are able to take more responsibility for their own health, the focus of the advice that pharmacists can provide changes,” Brown says. "With college-age students that are sharing dorm rooms and bathrooms, you have to worry about athlete’s foot and other health conditions that are easily transmitted,” she points out.

College-bound students should assemble a first aid kit with basics like bandages, antibiotic ointment, acetaminophen or ibuprofen, plus instructions for their uses. It should also include a list of emergency contacts and phone numbers (their parents’ number, physician’s number, disc number, the local hospital’s number) and insurance information in the event that the student is incapacitated or has to go to the emergency room.

Students who take prescription medications should be well versed in all the particulars, including the medication’s name, dosage, frequency of use, any food or drink restrictions, and possible side effects. They should also inform their roommate(s), resident advisor(s), and campus health center staff if they rely on an emergency medication like an autoinjector.

Pharmacists can coordinate with students to ensure that they have a sufficient supply of their medications while away from home. “A lot of physicians will write a 90-day supply now, so make sure they’ve got enough to last for a while,” suggests Brown. "If you need to mail their prescriptions, do it in a timely fashion so they don’t run out.”

Even though they may be using their parents’ health insurance, some students who are at colleges far away from home may find it helpful to have a pharmacist in their college town who they can reach out to for assistance when they need it, she adds. Such an option should be discussed with the student and parents.

Pharmacists can also suggest to parents that they have “the conversation” with their college-bound teenager “about illicit drugs, and the pitfalls of alcohol as well as general safety,” Brown says.

**The Bottom Line**
As summer winds down, community pharmacists have the opportunity to focus on the fact that healthy students are better learners. Working together, pharmacists and parents can ensure that they are giving children, adolescents, and young adults the best start to the new academic year.

“There’s a lot of moving pieces when we think about what parents are going through during the back-to-school time frame,” says Walgreens’ Shah. "From a health perspective, we have done quite bit to understand that patient’s journey, how to make it easy for them, and how to increase awareness of all the preventative and precautionary tricks that they need to be aware of to be set up for success.”
Stay informed on issues and events in pharmacy practice

DrugTopics.com

**Drug Topics website delivers**

- Breaking news
- Commentaries and blogs
- Continuing Education – FREE to Pharmacists and Technicians
- FDA actions
- Pharmacy law
- Digital editions of *Drug Topics* for easy reference

**In-depth analysis**

- 2019 Job Outlook
- Provider status update
- Specialty pharmacy update
- Independents carve out their niches

**Take our surveys and see what your peers are saying**

- Should pharmacists have the authority to prescribe?
- Do pharmacists dig into their own pockets to help pay for prescriptions?

Check it all out at DrugTopics.com
Psychotropics for Children
Managing post-summer medication changes

By Jill Sederstrom, contributing editor

As the new school year rolls around, parents, physicians, and pharmacists will once again be re-evaluating children’s medication regimens, including any psychotropic medications needed to treat attention deficit-hyperactivity disorder (ADHD), anxiety, or other conditions.

New treatment options for children diagnosed with ADHD, including stimulant and nonstimulant medications and new dosages, now give healthcare providers more choices than ever to tailor therapy to each child’s own unique needs.

While these medications have been found to be highly effective, they are also accompanied by concerns surrounding misuse, overuse, polypharmacy, and side effects.

Many children may not need to take ADHD medications during summer break, or may need a reduced dosage. As many parents are trying to re-establish their children’s medication regimens for the new school year, pharmacists can play a valuable role in collaborating with physicians, counseling parents and children, and alerting families about any possible medication concerns, whether it is with ADHD medications, antipsychotics, or antidepressants.

Psychotropics in Children
The use of psychotropic medications in children has steadily risen over the last two decades. A 2019 retrospective study evaluating psychotropic medication use in military dependents found that between 2003 and 2015, the number of psychiatric medication prescriptions increased by 3% a year, with larger increases seen in older adolescents. Studies also found that use of these types of medications may also be more prevalent in Medicaid patients. According to data from the Center for Health Care Strategies, the use of psychotropic medications among the pediatric Medicaid population increased 28% between 2005 and 2011.

New Options in ADHD Medications
Prescribers have more treatment options than ever that allow development of a treatment plan based on the unique schedule and needs of the child. “Over the past five to six years there have been more products on the market that are both stimulant and nonstimulant, which is nice because it gives you options,” says Vicki Basalyga, PharmD, BCPS, BCPPS, director of an ASHP of clinical specialists and scientists and council secretary of the Commission on Therapeutics at ASHP.

One of the challenges with stimulant medications is improving a student’s focus during the school day without overstimulating and subsequently disrupting their sleep at night. New dosage forms that have differing durations of action allow prescribers and parents to determine exactly how long the medication works.

“You can tailor these to your particular patient needs,” Basalyga says. “So some people are able to give their kiddo a long-acting version of the drug. They can actually take it to their school nurse and take [the medication] halfway through the day and the nurse will keep the medication [at the school]. That way they are able to go to sleep at night.”

Misuse of Medications
While stimulant medications are highly effective, they also carry a potential for abuse. Nonstimulant medications can be another treatment option with less risk of abuse. A 2018 study examining unnecessary exposure to ADHD medication in children and young adults found that between 2000 and 2014 unnecessary exposure increased by 64%. The study, published in Pediatrics, examined unnecessary exposure (unnecessary ingestion, inhalation, and absorption of these medications), and whether the exposure was intentional or unintentional. The data were compiled from reports to poison control centers in the
United States, and included data for individuals up to age 19.

A 2014 report estimated that more than 100,000 American toddlers 2 or 3 years old were being medicated for ADHD, which is outside the established guidelines for children. Many states are trying to curb abuse of these medications by requiring prior authorization.

Jake Olson, PharmD, president and CEO of Skywalk Pharmacy, a pharmacy with several locations in Wisconsin, served as part of that state’s drug utilization review board that developed a prior authorization policy for antipsychotic drugs for children 6 or younger. “We were seeing a disturbing trend of 4-, 5-, 6-year-old kids getting put on these medications. It was a very high number of foster children,” Olson says.

The Wisconsin policy requiring prior authorization was implemented in 2012, and later adapted to apply to children 8 years of age or younger. “The policies and things that were put in place then have fairly effectively curbed the use of these types of medications in children,” Olson says. Under the policy, authorization for antipsychotics must include information on diagnosis, the prescriber’s credentials, target symptoms, body mass index data, and whether the patient is in foster care, and must also provide a clinical justification if the prescriber is requesting a nonpreferred antipsychotic medication.

**Polypharmacy Concerns**

Polypharmacy can also be a concern with antipsychotic drugs in children.

“One of my biggest concerns regarding the use of psychiatric medications in pediatric patients are the drug-drug interactions that can have a negative impact on growth and well-being,” says Alexis E. Horace, PharmD, BCACP, associate professor at the University of Louisiana at Monroe College of Pharmacy.

“Stronger psychotropic drugs such as aripiprazole (Abilify), used to treat conditions such as schizophrenia, bipolar disorder or depression, have shown to increase a patient’s weight and possibly create diabetes risks, Olson says. It’s important that pharmacists effectively communicate these risks and monitor the patient’s weight.

Antidepressants including the selective serotonin reuptake inhibitor (SSRI) category can also carry risks of suicide ideation. These risks need to be clearly discussed with parents and children and weighed against the benefits of these medications.

“It is important to keep in mind that these drugs may take 6 to 8 weeks before they are effective. If these drugs are discontinued, the dose must be titrated down slowly to minimize adverse effects,” Basalyga says.

**Pharmacists and Counseling**

Experts agree that one of a pharmacist’s critical roles is providing effective medication guidance to parents and patient. Although most of these medications have risk evaluation and mitigation strategy guidelines that may be discussed in the physician’s office, Olson says pharmacists should make sure that the patient understands the material within these guidelines.

“Ask yourself about your counseling techniques and whether you are really covering these areas,” he says. Pharmacists can address lingering questions as well as check in with patients during their first refill.

Pharmacists should also play a role in helping physicians determine the best treatment options for a particular patient. “There are a wide variety of antipsychotics that can be used, and a pharmacist can inform patients and providers on factors such as dosing frequency, side effects and other aspects to help determine what’s best for that particular patient,” Basalyga says.
To identify some of the top managed care pharmacy challenges—and how healthcare executives are solving those problems—Managed Healthcare Executive, a sister publication to Drug Topics, polled more than 200 executives from medical practices, hospitals, large health systems, PBMs, and consulting firms.

The annual poll covers fears about cost and access to pharmaceuticals, the changing roles of PBMs, evolving payment models, and more.

Coupled with the results of the survey are insights from experts in the field, from executives at PBMs to pharmacy consultants, helping to break down the data and give the healthcare industry a path forward to 2020 and beyond.
**Q:** What is the most effective way to reduce pharmaceutical costs (specialty and nonspecialty)?

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhanced point-of-prescribing tools to assist prescribers in identification and encourage use of the most cost-effective treatments</td>
<td>34%</td>
</tr>
<tr>
<td>Adoption and enforced deployment of evidence-based clinical pathways</td>
<td>19%</td>
</tr>
<tr>
<td>Revised benefit design models to further incentivize patient use of lower cost options</td>
<td>12%</td>
</tr>
<tr>
<td>Narrower and/or more exclusionary formularies</td>
<td>5%</td>
</tr>
<tr>
<td>More aggressive and expanded utilization management strategies (e.g., Prior auth, step therapy, and limited initial refills)</td>
<td>3%</td>
</tr>
<tr>
<td>Other*</td>
<td>27%</td>
</tr>
</tbody>
</table>

*Other responses included: Get rid of PBMs, no direct patient advertising, expand 340B, medications must be cheaper, no direct patient advertising, price negotiation

**Q:** What is the biggest opportunity to reduce specialty pharmaceutical costs?

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance-based (outcomes-based) contracting with drug manufacturers</td>
<td>27%</td>
</tr>
<tr>
<td>Governmental pricing regulation</td>
<td>23%</td>
</tr>
<tr>
<td>Aggressive promotion of biosimilars</td>
<td>14%</td>
</tr>
<tr>
<td>More aggressive and expansive utilization management strategies</td>
<td>12%</td>
</tr>
<tr>
<td>Expanded exclusion of specialty drugs from formulary</td>
<td>5%</td>
</tr>
<tr>
<td>ICER-based formulary limits</td>
<td>5%</td>
</tr>
<tr>
<td>Exclusive contracting with a single specialty pharmacy</td>
<td>3%</td>
</tr>
<tr>
<td>Other*</td>
<td>11%</td>
</tr>
</tbody>
</table>

*Other responses included: Allow interchangeability of biosimilars, government negotiations with the industry, restore free enterprise competition, patient-specific care, price transparency

*As our current era of digital and technologic advancement further evolves, it is well-evident from these results that our nation’s key healthcare stakeholders recognize the critical value, and unmet need, related to enhancing communication with the prescribing community at the point of patient care. Unlike other industries, our industry continues to lag behind in the adoption and deployment of more progressive communications mechanisms that can improve the timing, efficiency and quality of service provided to the end-user...in this case the patient. Providing greater transparency for providers into comparative drug prices, utilization management programs, and patient-specific clinical intervention opportunities at point of prescribing not only offers the potential to reduce pharmacy costs, but also increases the likelihood for longer-term improvement in patient outcomes and total cost of care.*

— David Calabrese, RPh, MHP, senior vice president and chief pharmacy officer of OptumRx, a pharmacy benefits firm that provides pharmacy care services for than 65 million lives. He also is an editorial advisor for Managed Healthcare Executive.
**Managed Care Pharmacy Survey 2019**

**Q:** What will be the biggest driver of specialty drug costs in 2019?

- **36%** Growing demand/uptake due to aging population; increased prevalence of chronic disease
- **20%** Shift from traditional (non-specialty) to specialty drugs in high-prevalence disease states
- **16%** FDA-approval of new high-cost specialty drugs
- **11%** Inflation rates for specialty drugs already on market
- **6%** Broadened labeled indications and off-label use of existing products
- **11%** Other*

*Other responses included: A more complex pharma supply chain, direct marketing, lack of physician education in prescribing, lack of patient self-care

“There are many factors that drive specialty drugs costs:
- The high cost of new specialty drugs that are replacing lower-cost therapies.
- New specialty drugs that treat diseases that were untreatable before.
- Price increase of existing specialty drugs.
- Sales and marketing activities to physicians and patients to drive demand for specialty drugs.
- Lack of systems and processes in place to manage drugs covered under the medical benefit.
- Ineffective programs by health plans and PBMs to improve the utilization of these drugs.
- Slow introduction of biosimilars.

“Each patient population (eg, commercial, Medicare, and Medicaid) will feel the rising drug costs differently.” —Perry Cohen, PharmD, CEO of The Pharmacy Group and the TPG family of companies, which provides services to associations, healthcare and information technology organizations, payers, and pharmaceutical companies. He is an editorial advisor for Drug Topics.

**Q:** What is the best long-term approach to addressing the high cost of rare disease (e.g., orphan drug) treatment?

- **28%** A more integrated approach by benefit managers around total cost of care across the healthcare continuum
- **22%** NICE-like or ICER-based limitations around access to such therapies based upon some measure of cost-benefit (e.g., cost/QALY)
- **20%** Deploying more aggressive UM strategies to more routinely (e.g., every 3 or 6 months) assess risk vs. benefit of such therapies and promote discontinuation where possible
- **17%** Use of benefit incentives to drive consumer engagement and higher-value care
- **13%** Other*

*Other responses included: A federal program to develop these drugs and license several manufacturers at a time to produce and market the drugs, decrease the orphan drug loophole, government-funded research development, special re-insured risk pools
Managed Care Pharmacy Survey 2019

Q: What do you believe will be the future of the current drug manufacturer rebate contract to payers/PBMs in the next 3 years?

47% Some will remain, but the majority will be replaced by outcomes-based (value-based) contracts
24% They will largely remain in place, but values will decrease significantly
16% They will go away entirely
13% They will remain as they are today

Q: How do you see the business model of today’s PBM changing in the future?

47% Will shift to a more performance-based, shared savings model
32% Will shift to a much more transparent and pass-through business model
13% Will largely remain as it is today
8% Will shift to more of a full-risk, capitated type model

“I am surprised that almost half of the survey’s respondents feel that the current drug manufacturer rebate contracts to payers and PBMs will be replaced by value-based contracts. Healthcare executives and plan sponsors do not tend to move that quickly, and health benefits are traditionally very slow in terms of adapting to innovation. It’s one thing to say you’re going to adopt value-based contracts, but it’s another thing to actually make that shift, as some organizations are very resistant to change. This also brings up a much bigger question around total compensation; if you start changing how healthcare benefits are structured, members can be very averse to that, and that can be difficult for large-scale organizations to navigate.”

— David Henka, president and CEO, ActiveRADAR, a company specializing in pharmacy cost reduction programs for employers, trust funds, and health plans.

“We’re seeing renewed scrutiny of the PBMs on a large scale, and I think that’s probably why more people predicted that a performance-based, shared savings model will take flight. The overall opacity of the current PBM system is at the root of most of the concerns that purchasers have today. The idea of a true pass-through model is becoming less and less realistic, as there are often contracting provisions buried deep within the documents, charging for things you wouldn’t normally be charged for. This makes it difficult for benefits professionals to see the subtle differences regarding where and how costs are being incurred.”

— Henka

“The business model for today’s PBMs will stay the same for many customers (eg, small employers and small health plans). The large PBMs will discount their services to retain customers. There will be new competitors to PBMs that will provide lower drug costs and better service with creative use of new technology-enabled services. New pharmacy care models will emerge to impact the traditional drug dispensing model. This will impact the role of the current PBMs.”

— Cohen
**Managed Care Pharmacy Survey 2019**

**Q:** What do you believe will transpire at the drug manufacturer level as it relates to drug pricing in the next 3 years?

- **37%** We will see a short period of decrease in annual inflation rates, followed by a return to higher rates.
- **30%** Inflation rates on existing products will continue to grow as they have for the last 5-10 years.
- **19%** We will see a prolonged decrease in annual inflation rates due to increased scrutiny.
- **14%** We will see substantially greater numbers of manufacturers actually decreasing their current list price of their medications.

**Q:** What do you believe is the most effective strategy to increase patient engagement and adherence to key maintenance therapies?

- **34%** Newer benefit designs that reward patients for high-level engagement/adherence.
- **31%** Advancement in digital tools and other technologies to support patient adherence/engagement.
- **14%** Greater outreach, education, and counseling by PBMs/MCOs.
- **12%** Enhanced alerts to providers when their patients fall out of appropriate adherence.
- **9%** Newer benefit designs that penalize patients for poor levels of engagement/adherence.

**Q:** Do you believe that payers should adopt tools like ICER cost-effectiveness analyses to determine whether high-cost medications should or should not be covered?

- **38%** No
- **62%** Yes

> “While ICER cost-effectiveness analyses have been underappreciated in this space, the findings suggest that payers are really starting to understand the value of this organization and its tremendous work. ICER-like tools are the gold standard and what payers should be looking to in order to identify cost-effective pharmaceutical therapies. The next step is to determine how to best integrate these kinds of tools into a benefits package or a purchasing program for a plan sponsor.”

—Henka
Managed Care Pharmacy Survey 2019

Q: What new pharmaceuticals approved over the past 12 months are you most excited about?

27% Epidiolex (first-in-class cannabinoid-based product for treatment of rare, severe forms of epilepsy disorder in children 2 years and older)

26% Erleada (once-daily oral treatment option for patients with non-metastatic, castration-resistant prostate cancer)

23% Aimovig (first-in-class CGRP antagonist introduction for migraine prevention)

15% Biktarya (complete regimen for the treatment of HIV-1 infection in adults who have no antiretroviral treatment history or to replace the current antiretroviral regimen in those who are virologically suppressed)

9% Other *

*Other responses included: Zulresso (brexanolone) for postpartum depression, Spravato (esketamine) for depression, Aristada Initio (aripiprazole lauroxil extended-release injectable suspension) for schizophrenia

Q: What pharmaceuticals in the pipeline—specialty, new, generic, or other—are you most excited about over the next 24 months (choose all that apply)?

63% Crenezumab: monoclonal antibody that binds to amyloid-beta proteins to prevent and break up their aggregation in plaques with Alzheimer’s disease

17% Bempedoic: first-in-class, non-statin oral therapy that significantly reduces elevated LDL-C levels in patients with hypercholesterolemia

12% AVXS-101 (approved May 24, 2019 as Zolgensma): gene replacement therapy that treats root cause of spinal muscular atrophy

9% Ubrogepant: first oral CGRP receptor antagonist for the acute treatment of migraine

8% Obeticholic acid: potentially the first FDA-approved therapy for treatment of nonalcoholic steatohepatitis (NASH)

7% Other*

*Other responses included: Genetic effectiveness-based ADHD medications

“Responses here clearly reflect the strong desire amongst our healthcare colleagues for manufacturers to focus their R&D efforts in bringing about new products that represent true innovation in patient care versus small, incremental clinical advancements and/or more ‘me-too’ type therapies.” —Calabrese

“The overwhelming response here in favor of crenezumab is not surprising. For decades, we have struggled as an industry in identifying and bringing forth meaningful advancements in the treatment of Alzheimer’s in a time of growing disease prevalence. Unfortunately, with crenezumab, those struggles continue as the manufacturer (Roche) in early February announced that it would discontinue its phase 3 clinical trials as an interim analysis found the drug was unlikely to reach its primary clinical end point. Not long thereafter, on March 21, manufacturer Biogen announced that it, as well, was halting two late-stage studies of a similar anti-amyloid compound, aducanumab, after an interim analysis showed that it as well was unlikely to work.” —Calabrese
**NEW DRUG REVIEW**

**Vraylar: Approved for Bipolar I Disorder Depression**

By Wiktoria Bogdanska, PharmD, and Kevin W. Chamberlin, PharmD, FASCP

Bipolar disorder is characterized by episodes ranging from mania to depression, but depressive and manic episodes are treated differently. A single medication for the range of episodes will help with treatment. Cariprazine (Vraylar) had been approved for treating manic or mixed episodes in bipolar I disorder. The FDA approved for bipolar I depression. It acts as a partial agonist at the dopamine D3/D2 receptors and at the serotonin 5-HT1A receptors, and has antagonist activity at serotonin 5-HT2A receptors.

**SAFETY**

In clinical trials, the most common adverse reactions within the recommended doses (1.5 mg/day or 3 mg/day) were nausea (7%, 7%), akathisia (6%, 10%), restlessness (2%, 7%), and extrapyramidal symptoms (4%, 6%). Elderly patients with dementia-related psychosis treated with antipsychotic drugs such as cariprazine are at an increased risk of death. The safety and effectiveness of cariprazine have not been established in pediatric patients and use is not recommended.

**REFERENCES**

**EFFICACY**

Results of one eight-week and two six-week placebo-controlled trials, showed that cariprazine demonstrated greater improvement than placebo from baseline to week six on the Montgomery Asberg Depression Rating scale (MADRS). The total MADRS score in patients (mean age of 41.6 years, range 18 to 65 years) who met DSM-IV-TR or DSM-5 criteria for depressive episodes associated with bipolar I disorder.

In one six-week phase 3 trial, patients who received both 1.5-mg and 3-mg doses of cariprazine had significantly greater improvement compared with placebo at six weeks (P < 0.05). The cariprazine treated groups exhibited 2.5- and 3-point greater reductions in MADRS score, respective to dose, compared with the placebo group after six weeks.

The most recent phase 3 trial, NCT02670538, reiterated that cariprazine showed greater improvement in bipolar depression symptoms than placebo. The study met the primary and secondary endpoints for the 1.5-mg dose group, demonstrating greater improvement in the MADRS total score (P = 0.0417) and the Clinical Global Impression Scale—Severity score (P = 0.0417) than placebo from baseline to week six.

**DOsing**

Cariprazine is available in four strengths: 1.5-, 3-, 4.5-, and 6-mg oral capsules. In clinical trials, doses above 3 mg were not tested for safety and efficacy. The starting dose of cariprazine is 1.5 mg once daily with or without food. Depending on clinical response and tolerability, dosage can be increased to 3 mg once daily on day 15. The maximum recommended dosage is 3 mg once daily.

Strong CYP3A4 inhibitors increase cariprazine concentrations, so a dose reduction is recommended. Concomitant use of cariprazine and a CYP3A4 inducer has not been evaluated and is not recommended because the net effect on active drug and metabolites is unclear.

No dose adjustment is required for patients with mild to moderate (CrCl ≥ 30 mL/minute) renal impairment. Use is not recommended in patients with severe renal impairment (CrCl < 30 mL/minute). Patients with mild to moderate hepatic impairment (Child-Pugh score 5-9) do not require dose adjustments. Use is not recommended in patients with severe hepatic impairment (Child-Pugh score 10-15).
Perish Together as Fools?

Dr. Martin Luther King once said, “We must learn to live together as brothers or perish together as fools.” We know he was referring to society as a whole, but this could easily be extended to the profession of pharmacy.

I’m not much of a philosopher, so I prefer to compare our profession to a cable TV show, Storage Wars. This wildly popular show depicts owners of second-hand shops bidding on storage lockers that they briefly glimpse before the auctioneer starts the bidding.

The drama of this show is not so much the bidders getting the best deal possible, but rather in “putting the screws” to each other. The bidders do not take pride in finding value for their businesses, but in making the other guy pay! With everyone trying to ruin the other person’s business, the only winner is the auctioneer.

I watch this program and compare it to our profession. I see Dave Hester, the “bad guy” who frequently bids up the locker, as the large pharmacy chains. They’ve got the money to make bad business decisions and have enough assets to survive the bumps and bruises of those decisions. Like Dave, their goal isn’t so much in ensuring the viability of their business, as driving the others bidding.

One of my biggest disappointments in our profession is the role of the pharmacist embedded in the PBM or health plan system. I get frustrated to no end when I see my fellow pharmacists working behind the scenes to make the jobs of their colleagues in community practice almost unbearable. Sad to say, I have precepted some of these pharmacists as students. I have seen these pharmacists set up parameters for insulin dispensing that force pharmacists into violating the law, such as opening packages of insulin pens to fulfill the day supply cap set by the managed care organizations.

One local health plan recently changed SGLT2 inhibitors. Only one SGLT2 inhibitor has been proven to prevent death. It was removed from the formulary and replaced with an SGLT2 inhibitor that has no proven cardiovascular benefits. They also removed the only DPP4 inhibitor that does not require renal dosing and replaced it with a DPP4 inhibitor that has three different strengths because of renal dosing. These pharmacy departments took the best drug in each class and replaced it with the worst drug in each class. Their brothers and sisters in community pharmacy must call the physicians’ offices to make changes for these inferior drugs.

I teach my pharmacy students to learn the drug class, indication, mechanism of action, and side effects. Then I tell them to learn the salient differences between these drugs in that class, such as the benefits and dosing parameters. That is what separates us pharmacists from the other healthcare professionals. This subset of pharmacists who work for these managed care organizations has failed the profession and themselves miserably.

The decisions these health plan pharmacists are making are based only on financial criteria. You don’t need a pharmacist to do that; accountants are more skilled at it.

I have a word of caution from this very experienced pharmacist to these health plan pharmacists. Your day is coming when a novice accountant will be sitting in your position simply because you have demonstrated a total disregard for pharmacokinetics and therapeutics.

When we see the recent shenanigans with Walmart, laying off pharmacists and replacing them with younger (and cheaper) pharmacists, we need to be shouting from the rooftops. We need to stand up for our brother and sister pharmacists in hospitals, community practice, clinical practice, and anywhere our profession has such a profound impact on healthcare.

Remember the words of Dr. King: live together or perish together as fools. Picture Dave Hester from Storage Wars in a white lab coat.

Pete Kreckel works in an independent pharmacy in Pennsylvania. You can reach him at editors@drugtopics.com.
Contemplating the Sale of Your Pharmacy?
Select the largest, most experienced advisor to assist you.

- **18 YEARS EXPERIENCE**
  Successful completion of 500 sales
- **KNOWLEDGE and EXPERIENCE**
  Six principals advising our clients
- **NATIONAL COVERAGE**
  Coast-to-coast personalized service
- **STRAIGHT TALK**
  Reality-based valuations; best outcomes
- **COMPLETE CONFIDENTIALITY**
  At all times, for your benefit
- **COMPETITIVE FEES**
  Pay when you sell; no upfront fees

We Work Only For You!

www.buy-sellapharmacy.com  |  877-360-0095

MARKETPLACE CAN WORK FOR YOU!
Reach highly-targeted, market-specific business professionals, industry experts and prospects by placing your ad here!

CONNECT with qualified leads and career professionals
Post a job today

Joanna Shippoli
RECRUITMENT MARKETING ADVISOR
(800) 225-4569, ext. 2615 • joanna.shippoli@ubm.com
BUY-SELL-BROKER

SELLING YOUR PHARMACY?
WHAT YOU DON’T KNOW CAN LOWER YOUR SALE PRICE.

EXPERTISE
Work with a licensed and insured broker, who has personally sold and closed over 140 pharmacy transactions in 42 states.

ADDED VALUE
Our proven, confidential, proprietary process means a higher price, less stress and lower risk for you.

FREE CONSULTATION
Call 888.808.4774 before disclosing any information to a potential buyer.

Daniel J. Lannon, RPh, Broker
Representing pharmacy owners nationwide.
Call 888.808.4RPH (4774)
Text 651.769.4932
Email dan@pharmacycbs.com
Web pharmacycbs.com

CREATE FUTURE VALUE.
Call today for a free Cost of Goods Sold-Profit Analysis.

Leverage branded content from Drug Topics to create a more powerful and sophisticated statement about your product, service, or company in your next marketing campaign. Contact Wright’s Media to find out more about how we can customize your acknowledgements and recognitions to enhance your marketing strategies.

For information, call Wright’s Media at 877.652.5295 or visit our website at www.wrightsmedia.com
Selling Your Pharmacy?

Maximize Your Value

Minimize Your Worry

HAYS LIP & Z OST

Pharmacy Sales Experts Ready to Help You!

www.RxBrokerage.com

Tony Hayslip, ABR/AREP
713-829-7570
Tony@RxBrokerage.com

Ernie Zost, RPH
727-415-3659
Ernie@RxBrokerage.com

Call Hayslip & Zost Pharmacy Brokers LLC for a free consultation. We have helped hundreds of independent pharmacy owners nationwide get the maximum value for their pharmacies. For more information about us, please visit our website.

MARKETPLACE CAN WORK FOR YOU!
Hyper accuracy. Hypo price.

A best in class test strip brand, now available over-the-counter.

Remarkable accuracy\textsuperscript{1,2} for an unbelievable price.

\*Manufacturer suggested retail price. Check with your preferred retailer.


©2019 Ascensia Diabetes Care. All rights reserved. Ascensia, the Ascensia Diabetes Care logo, Contour, No Coding, No Coding logo, Second-Chance and Second-Chance sampling logo are trademarks and/or registered trademarks of Ascensia Diabetes Care.

“I love the way Liberty developed a workflow queue system so we can find where a prescription is in the process.”

JIM HRNCIR, Owner, Pharmacist, Las Colinas Pharmacy

“What I really like about them is if we have something that isn’t working for us, we can call them and say what can you guys do to help us do it better.”

STACHIA BAXTER, Pharmacy Manager, Roanoke Pharmacy

“The system is user friendly and because every pharmacy is different, they will customize it to your needs.”

JUDY HARRIS, Owner, Pharmacist, All-Care Pharmacy

Liberty Software
Revolutionary Pharmacy Software

www.libertysoftware.com or call us at 800-480-9603