WOMEN IN PHARMACY
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Almost 72 million doses of the coronavirus disease 2019 (COVID-19) vaccine have been delivered nationwide and about 55 million Americans have received the vaccine at the time of this publication. These numbers are a staggering reminder of how far we’ve come since March 2020. This time last year, the US was facing its first surge of the virus with no known treatment or vaccine. And while the country still faces hurdles to its vaccination efforts, one thing is clear: Such a massive vaccine rollout could not be accomplished without pharmacists.

As longtime community pharmacist and Drug Topics® columnist Peter A. Kreckel, RPh, writes in his column this month, “Even the leadership in Washington, DC, and our state capitals see the community pharmacist as the answer.” West Virginia, in particular, has emerged as a leader in COVID-19 vaccination rollouts. Instead of turning to pharmacy chains, Governor Jim Justice called on independent pharmacies to carry out its program in nursing homes and other sites. As a result, West Virginia’s efforts have been heralded as a huge success as it is among the leading states for vaccinations.

March is also Women’s History Month, which we celebrate with our cover story on women in pharmacy who are breaking ground in the profession. Elizabeth Gooking Greenleaf, who started an apothecary shop in Boston, Massachusetts, in 1727, is recognized as the country’s first female pharmacist. Today, women are serving as pharmacists behind the counter, in team-based care at the patient bedside, and in boardrooms, as well as tackling the deadly COVID-19 pandemic. Read more about these achievements on page 10.

Last but not least, Drug Topics® is excited to announce the launch of Total Pharmacy® for its audience of dedicated independent pharmacy professionals. Whether you’re already a pharmacy owner or operator or are looking to make an entrance into the world of independent pharmacy ownership, Total Pharmacy® will provide trusted resources and actionable business solutions to effectively maximize profitability, minimize costs, and improve patient experience. Look for us on page 18 for more and visit totalpharmacy.com.

Thank you for reading,

Mike Hennessy Sr
Chairman and Founder
of MJH Life Sciences™
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.
Patients with migraines had a much worse experience with symptoms during the coronavirus disease 2019 (COVID-19) pandemic, according to recent research.

In a study published in the *Journal of Headache and Pain*, investigators reported an increase in migraine frequency and severity among patients compared with the prepandemic period. The investigators administered an online, self-reported survey that included demographic, migraine-related, COVID-19–specific, and overall psychosocial variables between July 15 and July 30, 2020.

During the pandemic, approximately 60% of patients indicated an increase in migraine frequency, 16% indicated a decrease in frequency, and 10.3% indicated a transition to chronic migraine.

Additionally, most of these patients (61.5%) did not communicate with their neurologists during this time. Nearly half (46.9%) reported adherence to treatment and 58.7% said they overused analgesics. Cancellations of Botox injections during the pandemic had a negative effect on 66.1% of those who receive this treatment.

Approximately 80% of patients also reported symptoms of anxiety and/or depression during the pandemic and 78% had sleep disturbances. Long-term strategies should be validated and implemented to deliver quality care for patients with migraine, with emphasis on psychosocial well-being, the investigators concluded.

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Drug Topics® interviewed Naomi Lopez, MA, director of healthcare policy at the Goldwater Institute, on the rollout of coronavirus disease 2019 (COVID-19) vaccines and the importance of allowing pharmacists to practice at the top of their license.

In the interview, Lopez provided recommendations for how to improve COVID-19 vaccination rates, touched on upcoming vaccines in the pipeline, and discussed how states can expand the pharmacist’s scope of practice to support vaccination efforts.

“What I advocate is that states really unleash this workforce [of pharmacists] that’s already educated and trained to do this very task in order to help assist in this effort much sooner,” Lopez said.

To watch the full interview, visit www.drugtopics.com/expert-interviews.

American Heart Association Report Predicts Long-Term COVID-19 Effects on Cardiovascular Disease
By Gabrielle Ientile, Assistant Editor

A recent report released by the American Heart Association (AHA) and titled Heart Disease and Stroke Statistical Update highlighted pandemic-related trends that may affect cardiovascular disease (CVD) mortality for years to come.

Published in the AHA’s journal Circulation, the report showed that the global pandemic will likely have considerable and lasting effects on CVD rates and disease burden. Experts warned that the pandemic has enabled unhealthy behaviors that are known to exacerbate risk of CVD, including poor eating habits, increased alcohol consumption, and reduced physical activity, as well as the mental toll amid social isolation and the fear of contracting, or spreading, the virus.

The report showed that in 2018, CVD was the leading cause of death in the US (42.1%), followed by stroke (17.0%), high blood pressure (11.0%), heart failure (9.6%), diseases of the arteries (2.9%), and other CVD (17.4%).

The report also demonstrated cardiovascular health inequities related to the social determinants of health. In the US, updated data from 2015 to 2018 showed that 58.8% of non-Hispanic (NH) Black women and 80.1% of NH men had some form of CVD. The prevalence of prediabetes was also higher in NH Black adolescents (21.0%) and Hispanic adolescents (22.9%) compared with NH white adolescents (15.1%).

Mental Health Affects Risk Factors for Heart Disease
By Christine Blunk

Psychological health can positively or negatively affect risk factors for heart disease, according to an American Heart Association (AHA) scientific statement.

The statement, published in the journal Circulation, examined research and provided recommendations for mental health and cardiovascular risk. The scientific statement advocates for regular mental health screening for individuals with or at risk for cardiovascular disease (CVD).

Negative psychological health conditions include depression, chronic stress, anxiety, anger, pessimism, and dissatisfaction with one’s life. Those psychological states can produce potentially harmful biological responses, including irregularities of heart rate and rhythm, increased blood pressure, inflammation, and reduced blood flow to the heart, according to AHA.

According to the scientific statement, psychological therapy and mind-body programs can lead to better heart health. The statement also noted that both the cumulative effect of daily stressors and exposure to traumatic events can increase the risk of heart disease and stroke.

On the other hand, studies have demonstrated that positive psychological health may be associated with a lower risk of CVD and death. Individuals with positive psychological health were also more likely to have health factors linked to a lower risk of developing CVD, including lower blood pressure, better glucose control, less inflammation, and lower cholesterol. Additionally, individuals with better psychological health are also more likely to engage in beneficial health behaviors such as smoking cessation, increased physical activity, health eating, increased medication adherence, and regular check-ups and health screenings.
A collaborative pilot project involving community pharmacists and physicians effectively increased adherence to the opioid use disorder (OUD) medication buprenorphine, according to the results of a recent study.

The study, which was supported by the National Institute on Drug Abuse (NIDA), part of the National Institutes of Health (NIH), was published in *Addiction*.1

Providers must complete training and receive a waiver to prescribe buprenorphine to treat OUD. Less than 10% of primary care providers are authorized to prescribe buprenorphine and more than 20 million Americans live in a county without a buprenorphine-waivered physician, according to NIH.2 To help address the lack of access and adherence to buprenorphine, investigators from Duke University studied the transfer of care of 71 participants using buprenorphine maintenance therapy for OUD from waivered physicians to trained community pharmacists.

"Community pharmacists are experts in medication therapy management and are natural partners of physicians, providers, [and] prescribers." LI-TZY WU, ScD, RN, MA

the investigators wrote. In addition, patients noted that “treatment transfer from physician’s office to the pharmacy was not difficult at all” and that “holding buprenorphine visits at the same place the medication is dispensed was very or extremely useful/convenient,” according to the study.1

With the physician-pharmacist collaborative model, nearly 89% of participants remained in the study and 95.3% adhered to the daily medication regimen. During the 6-month trial of the program in 2018, no opioid-related safety events were reported.1

"Community pharmacists are experts in medication therapy management and are natural partners of physicians, providers, [and] prescribers,” Wu said. For this reason, community pharmacists may further help address the physician shortage in the United States, Wu noted.

Larger clinical trials are needed to establish strategies to most effectively implement team-based buprenorphine care and respond to the needs of diverse clinical settings and populations, the investigators concluded.1,2

For references, visit drugtopics.com.

Pharmacist-Physician Collaboration Boosts Buprenorphine Access

Americans in underserved communities face barriers to opioid use disorder treatment. By Christine Blank
In the United States, there were over 67,000 drug overdose deaths in 2018. Of these, about 70% were due to opioids. According to the CDC, from 2006 to 2017, there was a greater than 19% decrease in annual opioid prescribing, suggesting that “health care providers have become more cautious in their opioid prescribing practices.”

As pharmacists, we may immediately start thinking about pharmaceuticals when a patient asks for a recommendation. However, pharmacists can counsel on both OTC and prescription medications, as well as other nonpharmacologic measures. When appropriate, encourage the patient to see a specialist to discuss nonopioid alternatives such as massage, physical therapy, acupuncture, injections, or nerve blocks, or even surgery.

When recommending medication for an adult 65 years or older, it is prudent to check the Beers List to ensure the medication is safe and appropriate. Checking a drug interaction database is also prudent in ensuring safety at any age.

In terms of nonopioid medication for pain relief, acetaminophen or a nonsteroidal anti-inflammatory drug (NSAID) is a good starting point.

Acetaminophen: Acetaminophen can help patients with mild to moderate pain. Counsel patients on maximum dose, avoiding alcohol, and liver toxicity. Caution against combining products that contain acetaminophen, such as cough and cold products.

NSAIDs: NSAIDs are available in many OTC and prescription products and can help patients with mild to moderate pain and inflammation from various conditions. Those with gastrointestinal (GI) concerns may fare better with prescription celecoxib, a COX-2 inhibitor, which has fewer GI adverse effects (AEs). Patient counseling can include the risk of GI bleeds, perforation, and ulcers; hypertension; kidney problems; and cardiac thrombotic events.

Anticonvulsants: Medications such as gabapentin and pregabalin are often prescribed for nerve pain. Counsel patients on the risk of sedation, the possibility of suicidal thoughts and behavior, and the risk of misuse.

Antidepressants: Patient counseling on antidepressants should always include the risk of suicidal thoughts and behavior. In addition to reviewing the drug’s AEs with the patient, it is prudent to mention withdrawal symptoms due to abrupt discontinuation, and the importance of a tapering schedule when the drug will eventually be discontinued.

Also, reviewing serotonin syndrome and drugs that can interact with antidepressants (eg, triptans, opioids, muscle relaxants, St. John’s Wort, and dextromethorphan) can help prevent a life-threatening serotonin buildup.

- Tricyclic antidepressants (TCAs): TCAs can be useful in chronic pain and nerve pain. In addition to the counseling points above, pharmacists can also counsel patients on the anticholinergic AEs including dry mouth, dizziness, sedation, memory problems, orthostatic hypotension, urinary retention, and cardiac conduction abnormalities.

- Serotonin-norepinephrine reuptake inhibitors (SNRIs): SNRIs such as duloxetine or venlafaxine can help various pain conditions, like nerve pain or fibromyalgia, and have fewer AEs than TCAs.

- Selective serotonin reuptake inhibitors (SSRIs): SSRIs such as fluoxetine or escitalopram are effective as antidepressants but have less of an effect on pain relief than other classes of antidepressants.

Other categories of drugs, such as muscle relaxants or benzodiazepines, are sometimes used for muscle pain and spasms. In these patients, counseling on AEs and drug interactions, as well as the importance of short-term use, is essential.

Several community pharmacists shared their experiences in talking to patients about pain relief. “In community pharmacy, there aren’t many things that top the satisfaction
of helping a patient in pain,” Trisha Winroth, PharmD, pharmacy manager at Walgreens in Lowell, Massachusetts, said. “Pain can and does affect a patient’s life in every way, from productivity to personal relationships, from sleep to work capacity. Helping a patient resolve pain will ensure you a trusted patient-pharmacist relationship forever,” she explained.

Winroth finds it helpful to offer solutions that she has personally tried, which adds more trust to the recommendation. Winroth noted that patients with chronic pain “often dislike pharmacies and pharmacists because we’ve been put in the position to police narcotics and pain medications for years. Through corresponding responsibility, good faith dispensing, and a plethora of lawsuits and board of pharmacy cases, pharmacists must act judiciously to ensure prescriptions meet a number of requirements that often remove of us from a true patient care role.”

She reminds pharmacists to remember that caring for patients is of utmost importance. “Spending a few minutes listening and offering suggestions can be the difference between true patient care and merely a dispensing gatekeeper role,” Winroth said.

Anne Henriksen, PharmD, is the pharmacist and owner of Malley’s Compounding Pharmacy in Richland, Washington. For nerve pain, Henriksen recommends a supplement that contains the methylated and active forms of B vitamins. She noted that “since opiates do not work for nerve pain, patients with nerve pain are typically very willing to try alternatives to alleviate their pain,” and this product helps a great deal with nerve pain.

“Our pharmacists often recommend this supplement even before a prescription medication is started,” she said, noting that a local neurologist puts all of his patients on the supplement before starting any prescription medication for nerve pain.

Henriksen finds that many of her patients who take opioids are eager to learn more about OTC options for pain management. “As a compounding pharmacist, I often recommend low-dose naltrexone [LDN] for pain,” Henriksen said. “Naltrexone works with the body’s inflammatory system to reduce pain levels. There is a growing body of evidence to support the use of LDN in pain and other disease states, and a conversation about LDN is worth having with any patient with chronic pain.” Henriksen also recommends that her patients try cannabidiol (CBD) products, especially topicals with menthol, that “provide the familiar cooling relief of menthol but has the added healing and anti-inflammatory benefits of the CBD and herbs.”

Elaine Richer, RPh, CEO of MyCure-All, has 25 years of community pharmacy experience and now focuses her practice on CBD and medical cannabis. “Because cannabinoid receptors, unlike opioid receptors, are not located in the brainstem areas controlling respiration, lethal overdoses from cannabis and cannabinoids do not occur,” she explained. Richer noted that medical cannabis is becoming a popular alternative for patients who do not want to take opioids or cannot tolerate them. Richer advises talking to patients about CBD or medical cannabis. “Studies show that medical cannabis is effective for pain. In combination with opioids, medical cannabis can enhance pain relief and lower the incidence of [adverse] effects and overdoses from opioids. Patients are often able to lower opioid doses or taper to discontinuation.” She indicated that CBD or cannabis can help the patient reduce opioid use without the risk of overdose and relapse, providing a safe alternative treatment for pain and other conditions.

With many treatment options, pharmacists can be a valuable resource to patients who require pain relief. By listening, understanding, and counseling, pharmacists can make a meaningful difference.

For references, visit drugtopics.com.
Minh Dang, RPh, was in high school working as a cashier at an Osco Drug in a suburb of Boston, Massachusetts, in the late 1980s. A friendly kid who loved math and science, she wasn’t sure what career to pursue. One day, the store’s pharmacy manager pulled her aside and asked, “What do you think about a career in pharmacy?”

He was 16 or 17 years old at the time. Although there were doctors and nurses in her family, there wasn’t a single pharmacist. Dang now looks at that conversation as a pivotal point in her life.

Dang credits her success in the pharmacy profession today to the skills she learned working with patients early in her career. For example, during an internship at a pharmacy in Boston, she encountered a patient who insisted on speaking with a pharmacist instead of her. Dang calmly explained that she was the pharmacist, which confused him. Most pharmacists at the time were white men and she doesn’t remember knowing any Asian American women in pharmacy at the time, she said. But Dang took the conversation in stride.

She asked how she could help, and that simple question persuaded the patient to open up to her. Dang’s advice for handling tense conversations with patients? “Be professional and kind and caring. They will convert.”

Since 2013, Dang has served as assistant dean for experiential education and professor of practice for clinical sciences at the School of Pharmacy and Health Sciences at Keck Graduate Institute in Claremont, California. This is a full-circle moment in her career because it’s now her mission to inspire students and connect them with real-world work experiences in pharmacy.

Women Are in the Majority, but Leadership Roles Lag

Dang is one of 5 women pharmacists featured in this story. Unlike her experience with the pharmacy manager at Osco Drug, most of the women featured had a role model in a relative who was a pharmacist. Some attributes shared by all of these women: an early passion and affinity for math and science and a desire to help people.

According to the American Pharmacists Association (APhA), 67% of its members are women. And the industry can look forward to welcoming many more women into its ranks in the future: As of fall 2019, 64% of pharmacy students were women, a metric that has held steady for 20 years, according
to Frank Fortin, CAE, senior vice president for communications, marketing, and media relations at APhA.

Debra Parker, PharmD, dean and associate professor at the College of Pharmacy at University of Findlay in Findlay, Ohio, looks to the 1960s as a decade when things started to change for women in professional roles, including pharmacists. In 1964, the Civil Rights Act was passed. The law made it illegal for most employers to discriminate against women in decisions about hiring and promotions; creating a work environment that’s hostile based on sex and sexual harassment was also rendered illegal. That was preceded in 1963 by the passage of the Equal Pay Act, which made it illegal to pay women a lower wage than their male colleagues when the decision is based on their sex.

That’s when you started to see women become more prevalent in many fields, said Parker, who noted that women represented only 15% to 16% of pharmacists in the mid-1960s.

Although women will likely continue to form the majority of the pharmacist workforce, she said there are more men in leadership roles in pharmacy.

First Female Pharmacy School Dean in Ohio

In 2000, there were 82 pharmacy schools in the United States.¹ Fifteen percent of them were led by a female dean, according to Parker. As of October 2020, there were 143 pharmacy schools, 25% of which have a female dean, she said.¹ That’s at odds with the number of pharmacy school graduates and women working as pharmacists.

The statistics about the percentage of women leading pharmacy schools were “startling” to Parker, she said. Parker is the only female dean among the 7 pharmacy schools in Ohio. She’s also the first female pharmacy school dean in the state. Although her counterparts at Ohio’s other pharmacy schools are all men, 2 of them have recently stepped down from their roles as dean and women have taken on those roles on an interim basis.

Parker didn’t have her sights set on a leadership role in academia. That said, she embraces the “lean in” approach, which, for her, means she doesn’t turn away from opportunities because she’s a mother. Instead, Parker focuses on how to make it work. She also credits her extremely supportive spouse.

While serving as a faculty member and an academic chair at the College of Pharmacy at University of Findlay, Parker was asked to take on the role of interim dean. “That was a little bit scary for me,” she said. “I had never aspired to being a dean, but I also felt that I knew the operations of our program and our university well enough that I could hold down the fort.”

But after serving on an interim basis starting in August 2014, she said to herself: “Why are you selling yourself short here? (You) can do this job.” She applied for it and was named dean in April 2015.

In a story published in a student newspaper at Findlay University after she was named dean, Parker stressed that the pharmacy program’s “family focus” is a distinguishing factor; it also makes her “confident and comfortable” in her role as dean.¹

Inpatient Pharmacy Leader in Boston

Joy Vreeland, PharmD, BCPS, director of inpatient pharmacy at Boston Medical Center, had an uncle who was a pharmacist. That inspired her decision to work as a tech at CVS Pharmacy during her senior year of high school. “I got a little taste of what retail pharmacy looks like,” she said.

“The techs were wonderful. I had a lot of customer interaction. I thought, ‘This seems like it would be a good fit for my long-term interests.’”

That was before she understood the role of a hospital pharmacist. While she was a student at Northeastern University, she had a work experience in the intravenous room at Boston Children’s Hospital, where she helped treat very sick patients. “That was like a whole new world,” said Vreeland, who described the experience as “invigorating.”

She grew more certain about a career in hospital pharmacy in her last year of pharmacy school during a clinical rotation. That’s where
WOMEN IN PHARMACY / COVER STORY

Vreeland witnessed pharmacists working side by side with nurses and doctors in the treatment of patients. Vreeland continues to make an impact at Boston Medical Center. “The easiest way to describe how great Joy is to describe the operation she runs,” said David Twitchell, PharmD, MBA, vice president and chief pharmacy officer at Boston Medical Center. “The [Boston Medical Center] inpatient and clinical pharmacy programs are [in my opinion] among the best in the country by any metric…The [Boston Medical Center’s] team shines because of Joy’s leadership.”

Independent Pharmacy Owner in Florida
Firmly planted in Sebastian, Florida, for 37 years, Bay Street Pharmacy is owned by Theresa Tolle, BPharm, FAPhA, a pharmacist, and her husband, Joe. The pharmacy is a short drive from Walgreens Pharmacy and Sebastian Discount Pharmacy.

When asked how Bay Street Pharmacy thrives in the midst of heady competition, Tolle said she works hard to maintain relationships in the community. She registers the pharmacy to sponsor the American Cancer Society’s Relay for Life, is active in the local chamber of commerce, and serves on the board of the local hospital.

It helps that many of her employees have been at the pharmacy for 15 years or more, Tolle said. Although she followed in her aunt’s footsteps as a pharmacist, she also spent years learning about working with customers at her parents’ feed store.

Tolle is past president of the Florida Pharmacy Association. In March, she starts her term as 2021-2022 president-elect of the American Pharmacists Association before she takes the reins as the organization’s president in March 2022.

Infectious Diseases Pharmacist Tackling COVID-19
Kaitlyn Rivard, PharmD, BCPS, an infectious diseases clinical pharmacist at Cleveland Clinic in Ohio, was 13 years old when she realized she wanted to be a pharmacist. At the time, her aunt had just graduated from pharmacy school. “She was a young professional. I liked that she was able to support herself and be independent, and she always genuinely liked her job. I wanted to be just like her;” she said. She typically fills her days at Cleveland Clinic working collaboratively with physicians to select the timing, dosing, and the right combination of antibiotics to treat patients. Always in Rivard’s sights is making sure that drugs are used safely.

But she hasn’t been doing her day job at Cleveland Clinic since November. That’s when Rivard started leading the health system’s coronavirus disease 2019 (COVID-19) vaccination response from a pharmacy standpoint. At first, she thought her days would be spent managing the vaccine supply. Instead, because inventory is scarce and the need is so acute, she has been plugged into all aspects of the vaccination process, including deciding how many vaccination bays are required and keeping an eye on day-to-day operations.

Looking Back and Ahead
Elizabeth Going Greenleaf, who started an apothecary shop in Boston in 1727, is recognized as the country’s first female pharmacist.1 As a mother of 12, she certainly embraced “leaning in,” as do the pharmacists featured here.

Although there is more work to be done to close gender gaps, women are increasingly breaking ground in pharmacy leadership. According to the 2019 National Pharmacist Workforce Study, of the actively practicing pharmacists who were in management positions in 2019, 58.8% were female, compared with 40.5% in 2009.2 Today, women are serving as pharmacists behind the counter, in team-based care at the patient bedside, and in boardrooms, as well as tackling the logistics to ensure an end to the deadly COVID-19 pandemic.

Surely, Greenleaf would be proud of the accomplishments of women in pharmacy today. But despite strides, a gender gap remains. To further advance women in the profession, continued mentorship and leadership development will be key.

For references, visit drugtopics.com.
As the United States surpasses 26 million coronavirus disease 2019 (COVID-19) infections, immunization against the disease is critical. President Biden has pledged to increase the vaccine supply so that 100 million doses can be distributed during his first 100 days in office, and that means that community pharmacies should prepare to do their share.

But pharmacists still need to offer other immunizations as well, so the addition of these expected COVID-19 vaccinations will only add to the pharmacy’s workload. That’s why pharmacists need to think about how to improve workflow efficiencies and create a stronger system management. Technology is often the answer.

“Technology and automation will be key in streamlining processes for these pharmacies by freeing up time for pharmacists and technicians to focus on the clinical initiative of vaccine efforts and understanding the new waters,” Saad said.

More than ever, pharmacists are seen as frontline medical providers for the vaccine, and as such, they need to be front of house counseling patients. That’s why we are seeing retail pharmacies invest in technology, whether new to automation, or scaling their existing automation.

“Tactically, there are a variety of ways pharmacists can rely on technology for workflow and system management,” Saad said.

These include syncing patient medication regimens to monthly cycles to limit time to dispense/sell in the pharmacy, allowing more time for vaccine discussion and distribution; using Health Insurance Portability and Accountability Act compliant online form submission and preemptively inputting patients before arrival to streamline the vaccination process; and automating the filling process or hiring an additional pharmacy technician, as at least 1 technician will likely be occupied with receiving and inputting patient and vaccine information.

“If possible, have all refills filled via central fill, which allows for the ability to fill prescriptions quickly without using new resources, as this supports the bottom line and returns pharmacists and techs to activities that support patient care,” Saad said.

Innovative Strategies

Jason Turner, PharmD, owner of Moundsville Pharmacy in Moundsville, West Virginia, said a great way to create a strong foundation of efficiencies in a pharmacy is to initiate a medication synchronization program.

“Medication synchronization changes your workflow from being ‘on demand’ workflow, meaning when the patient calls in the prescription, you begin to work on it in a way where your pharmacy team is in control of when you process a large percentage of your prescription volume,” he said.

For example, there are 1800 patients enrolled in Moundsville Pharmacy’s SyncRx program—73% of monthly prescription volume.

“We are able to schedule the work with a strategy to be most efficient in our prescription processing and most available to our patients for clinical services, such as immunization,” Turner said.

Jason Ausili, PharmD, chief clinical officer for FDS, a provider of pharmacy technology solutions for independent pharmacists, noted that tech can help drive immunization efficiencies in numerous ways.

“It can be used for billing the medical benefit for vaccine and/or administration fees in a way that is streamlined
with workflow, provide automated reporting to state registries for reportable vaccine events, and allow a pharmacist to query state registries for vaccine eligibility at the patient level,” Ausili said. “Tech makes clinical documentation easy and efficient and makes the patient scheduling process a more automated and organized experience.”

At Moundsville Pharmacy, there are 2 Kirby Lester units, a ScriptPro SP 200, and a Parata PASS 300VP to increase efficiencies in the staff, workflow, and programs.

Turner recommends using different colored paper for each immunization record, which allows the staff to access and recognize vaccines in the workflow quickly, from billing to vaccinating, documenting, and record storage.

“For larger pharmacy teams, I would create a workflow for your immunization prescriptions,” he said. “This way, if a patient comes in and requests a vaccine, everyone knows how that clipboard is to flow to maximize your efficiency and not disrupt existing workflow.”

Because vaccine billing can be challenging, Turner suggests directing vaccine billing to 1 or 2 vaccine specialists to make sure they are processed timely and identify quickly if you are unable to bill a payer through your pharmacy management system.

**Overcoming Challenges**

Maximizing the features of pharmacy software is no longer an option, as many pharmacies continue to use their software the way they did 5 or even 10 years ago, either not detecting the upgrades in their pharmacy management systems or not knowing how to incorporate them into their workflow.

Too often pharmacies invest in automation, counting technology, or a fancy new bell or whistle for their pharmacy management system, only to find that it doesn’t change the outcome.

“Over the years, in working with and training pharmacy owners in medication synchronization, it has become clear that the physical workflow of the pharmacy—how the prescription moves about the pharmacy—and the processes that support pharmacy workflow really dictate the efficiency of a pharmacy,” Turner said.

The expense of automation technology and lack of cash flow for retail pharmacies are no question the largest barriers for adoption. But Saad said the best way to increase efficiencies with existing staff is by incorporating automation.

“Not only will it allow pharmacists to move to the front of the pharmacy and practice at the top of their license, but it will allow for value-adding activities for patients, all the while technology is handling routine prescription fills quietly in the back of the pharmacy,” he said. “When pharmacies start to hit 200 scripts a day, there will already be ROI from the technology, helping to fix that cash flow problem and making the cost worthwhile almost instantaneously.”

**Distributing the COVID-19 Vaccine**

In 2021, there will be a lot of buzz around the approved COVID-19 vaccines and their availability, and although these vaccines have given pharmacists opportunities, they also have added pressure.

“The most important first step is to train your staff in how to respond to calls and inquiries about the vaccine,” Turner said. “This will help to keep inquiries consistent, concise, and informative for the patient. Utilize your automated attendant to record a manager’s message at the beginning of every received call and your on-hold system to provide additional information.”

The pharmacy management system will be able to record and bill immunizations. However, understanding what insurance you can and cannot bill will be important, keeping in mind that, even if you cannot bill the insurance, you cannot deny the patient the vaccine.

Additionally, when the vaccine supply increases, retail pharmacies will be busier than ever, which means long lines made even longer with social distancing efforts.

Saad said that although billing will be unified, normal business activities, in combination with vaccine efforts, will be hard to manage without relying on assistance, including technology and automation.

“After the pandemic passes, retail pharmacies need to accept what they have known for a decade: Fee for service is no longer viable,” he said. “If they don’t pivot their pharmacist role to one that is more collaborative and clinical in nature, they will be out of business in the next decade. Free up pharmacist time using automation, work to identify clinical services, and start providing.”
Multiple Sclerosis
Treatment Options and Counseling Tips

Pharmacists can play an important role as part of the interdisciplinary care team. By Jennifer Gershan, PharmD, CPh

Multiple sclerosis (MS) is a disease of the central nervous system (CNS) that affects almost 1 million individuals in the United States, according to the National Multiple Sclerosis Society. It is an autoimmune disease in which the immune system attacks the protective sheath (myelin) that covers nerve fibers and causes communication problems between the brain and the rest of the body. Unfortunately, there is no cure for MS but there are medications that can modify the disease course, treat relapses, and manage symptoms. Nonpharmacologic therapies including lifestyle modifications and physical therapy also are an important part of comprehensive care for MS.

### Risk Factors, Symptoms, and Diagnosis

The cause of MS remains unknown, but evidence suggests it is triggered by a combination of environmental and genetic risk factors (e.g., family history). Most individuals are diagnosed between the ages of 20 and 50 years, and women are 2 to 3 times more likely than men to have MS. Infections such as Epstein-Barr virus and certain autoimmune diseases (e.g., type 1 diabetes) may increase the risk of developing MS. Other risk factors that may contribute to an increased risk of MS include living farther from the equator, low vitamin D levels, and smoking.

Signs and symptoms of MS can vary from individual to individual and throughout the disease course (see Table 1).

### Treatment Options and Drug Pipeline

Exacerbations of MS caused by an inflammation of the CNS that lasts at least 24 hours and are separated from a previous attack by at least 30 days are typically treated with high-dose corticosteroids (e.g., prednisone, methylprednisolone). Pharmacists can educate patients that corticosteroids may cause insomnia, hypertension, increased blood glucose levels, psychiatric issues, and weight gain. Exacerbations can range from mild to severe enough to affect daily activities.

Disease-modifying therapies (DMTs) reduce the frequency and severity of relapses, and evidence demonstrates these medications also reduce the development of new areas of damage in the brain and spinal cord and delay disability progression. Treatment options include oral medications, injectables, and infusions. The Multiple Sclerosis Coalition recommends early and ongoing treatment with DMTs. There are a variety of FDA-approved DMTs available and pharmacists can counsel patients about the different options and potential adverse effects.

**Oral Treatments**

Ozanimod (Zeposia; Bristol Myers Squibb) is an oral medication approved in 2020, and it is the only DMT that is a sphingosine-1-phosphate receptor modulator that offers patients an initiation with no genetic test and no label-based first-dose observation required. It is also approved for active secondary progressive disease (worsening condition). Additionally, evidence demonstrates that ozanimod was more effective at reducing the risk of disease relapse compared with interferon beta-1a. Fingolimod (Gilenya; Novartis) is an oral medication and it is the only DMT approved for use in children.
years and older. Other oral treatment options include dimethyl fumarate (Tecfidera; Biogen) and diroximel fumarate (Vumerity; Biogen), teriflunomide (Aubagio; Sanofi), cladribine (Mavenclad; Merck), and siponimod (Mayzent; Novartis).7

**Injectable Treatments**

Injectable DMT treatment options include interferon beta-1a (Avonex; Biogen), interferon beta-1b (Betaseron; Bayer), glatiramer acetate (Copaxone; Teva Neuroscience), interferon beta-1b (Extavia; Novartis), glatiramer acetate (Glatopa; Sandoz), peginterferon beta-1a (Plegridy; Biogen), and interferon beta-1a (Rebif; EMD Serono and Pfizer). On February 1, 2021, the FDA approved a new route of administration for peginterferon beta-1a as an intramuscular injection for the treatment of relapsing forms of MS, with evidence demonstrating fewer injection site reactions than the subcutaneous formulation approved in 2014.10

There are promising MS drugs in the pipeline (see Table 2).11,12

**Safety Considerations**

Pharmacists should educate patients about the black box warnings associated with DMTs. Avonex, Rebif, Plegridy, Betaseron, and Extavia include warnings about depression, suicide, cardiovascular problems, hepatotoxicity, and allergic reactions.7 Injection site reactions including skin infections have been reported with Rebif and Plegridy so it is important to rotate injection sites regularly.7 Aubagio can cause hepatotoxicity, and it is important to have blood tests performed 6 months before initiating therapy and once a month for 6 months after starting treatment.7 Patients taking Aubagio should also use effective birth control and receive a pregnancy test before starting treatment because it can cause birth defects.7 Gilenya, Mayzent, and Zeposia can cause bradycardia, so it is important for patients to have an electrocardiogram before starting the first dose of these medications.7 Certain DMTs (eg, Tecfidera, Vumerity and Tysabri) may increase the risk of a rare brain infection called progressive multifocal leukoencephalopathy which usually occurs in patients who are immunocompromised.7

Other medications used to manage the signs and symptoms of MS may include antidepressants (eg, citalopram), pain management therapies (eg, duloxetine), and bowel dysfunction treatments (eg, docusate).6 Physical and occupational therapy can play an important role with stretching and strengthening exercises, and various devices can help patients perform daily tasks more easily.6

**Lifestyle Modifications**

There is little evidence to support a specific diet for patients with MS, but it is important to eat a well-balanced diet.13 Because evidence suggests vitamin D deficiency may be associated with MS, it is important to ensure that patients have appropriate vitamin D levels.13 Food sources that contain vitamin D include oily fish, beef liver, egg yolks, pork, and fortified foods such as milk and juices. However, most individuals are unable to obtain sufficient vitamin D from diet, so supplementation is usually needed.13 Exercise and physical activity are beneficial in patients with MS and can improve strength, bladder and bowel function, fatigue, mood, cognitive function, bone density, and flexibility. Physical activity can include gardening, household chores, cooking, walking the dog, and taking the stairs. Patients can consult with a physical therapist to help develop an individualized exercise program.13 Because smoking can cause worsening disease progression in patients with MS, pharmacists can play an important role in educating patients about smoking cessation therapy options.14

Pharmacists can counsel patients about the following healthy sleep habits that can help improve MS symptoms: developing a bedtime routine; avoiding caffeine in the afternoon and evening; avoiding screen time before sleep; limiting fluids close to bedtime; practicing relaxation techniques; and making sure the bedroom is cool, dark, and quiet.13 Individuals with MS can experience temporary worsening of symptoms when the weather is very hot or humid, and certain activities such as sunbathing, exercise, and hot showers can also have these effects.13

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**For references, visit drugtopics.com.**

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**TABLE 2**

**PIPELINE MS DRUGS**11,12

<table>
<thead>
<tr>
<th>MEDICATION</th>
<th>DESCRIPTION</th>
<th>MANUFACTURER</th>
<th>STAGE IN DEVELOPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ponesimod</td>
<td>Sphingosine-1-phosphate receptor modulator</td>
<td>Janssen</td>
<td>Submitted NDA to FDA for the treatment of adult patients with relapsing MS based on OPTIMUM phase 3 study results showing reduced relapse rate and reduction of fatigue symptoms</td>
</tr>
<tr>
<td>Ublituximab</td>
<td>Anti-CD20 monoclonal antibody</td>
<td>TG Therapeutics</td>
<td>Positive results from ULTIMATE I and II phase 3 studies demonstrating a reduction in relapse rate over a 96-week period (P &lt; .005)</td>
</tr>
</tbody>
</table>

NDA, new drug application.
Numerous coronavirus disease 2019 (COVID-19) relief funding programs in 2020 gave pharmacies access to extra cash flow but added uncertainty in an already tumultuous year. With most independent pharmacies receiving Paycheck Protection Program (PPP) relief loans, Congress granted these pharmacies a last-minute gift, with the passage of the Consolidated Appropriations Act, 2021 (CAA) on December 27, 2020. This bill changed how the PPP would be taxed and essentially made it nontaxable. Add in other taxpayer-friendly provisions from the CAA, such as the nontaxability of Small Business Administration debt relief and Economic Injury Disaster Loan grants, among others, and pharmacies ended the year with thousands in tax savings potential with the stroke of a pen. Consequentially, many pharmacies optimized their taxes, and cash flow, without having to do anything. For those who may still face a tax liability for 2020, there is little room to limit that tax liability after the tax year has concluded. However, there is 1 last-minute planning idea that, surprisingly, I often see not being used. This strategy can still be implemented before you file your taxes for 2020.

Cash Accounting Method
The Tax Cuts and Jobs Act of 2017 allows pharmacies to report, for tax purposes, on the cash method of accounting instead of the accrual method of accounting beginning in tax years after December 31, 2017. Many pharmacies already take advantage of these new rules but we often see pharmacies still not optimizing this generally easy tax-planning tool. Under the cash method of accounting, income accounts, such as accounts receivable from third parties, are not included in income until constructively received, which essentially is when the pharmacy collects. Additionally, expenses are deducted when paid and not when accrued. Often a switch in accounting methods will result in a write-off or expense, which ultimately lowers taxable income and tax liability. Inventory is excluded and should not be a component of the change in accounting. Therefore, inventory must remain on the books for accounting or book purposes and tax purposes. The IRS has recently clarified how inventory was to be affected by these
changes in accounting. If you have written off inventory in prior years, you will need to consider and work with your advisers to correct and return to compliance with the law. The good news is that the income added back from reporting inventory, in compliance with the law, can be spread out over 4 years, which lessens the tax burden of picking inventory back up into income.

Pharmacies that qualify for the cash method of accounting include those that have average annual gross receipts for the prior 3-year period that do not exceed $26 million. Gross receipts of related entities and those pharmacies under common ownership must aggregate their gross receipts to determine the gross receipts test. Generally, this would include controlled groups with more than 50% common control and affiliated service groups.

Speak with your advisers if you own multiple pharmacies to ensure you can take advantage. Taxpayers must plan with their tax advisers for such an accounting change. This is not an “automatic” strategy when many variables outside the scope of this article should be considered. Also, it is always advised to keep your books and financial statements on the accrual method of accounting for the most accurate financial data as you manage your pharmacy and cash flow month in and month out.

Paying taxes is one of the largest expenses, if not the largest, you’ll pay over your lifetime. Optimize your taxes by any chance the law allows, and if you haven’t already, consider the cash method of accounting. These rules are set to expire in 2025.

North Carolina Pharmacy Boosts Medication Adherence and Revenue

Joe Moose, PharmD, offers insight into the success of his pharmacy’s programs. by Aine Cryts

The winds of change were transforming the pharmacy industry about 10 years ago. One manifestation of that change was large pharmacy chains acquiring smaller independent pharmacies. That forced a pivotal conversation between Joe Moose, PharmD, and his brother, Whit Moose Jr., BPharm. The brothers are co-owners of the 139-year-old Moose Pharmacy in North Carolina.

According to Joe Moose, the Moose brothers looked to the independent pharmacy’s past to develop its mission statement. Moose Pharmacy was started by their great-grandfather A.W. Moose in 1882 and has since expanded to 8 locations in North Carolina. The pharmacy’s mission today: “Take care of the people in the community we serve.”

“When that’s your compass, you practice differently,” Moose said. Two tangible results of that mission are the pharmacy’s Moose Medication Adherence Program (MooseMAP), in which patients with chronic conditions speak with health coaches who help get them on course with their treatment plan; and MoosePacks, which allow patients to receive prescriptions in a box with personalized, labeled packets each month.

MooseMAP launched in 2010, whereas MoosePacks started in 2013. Moose offered insights into the success of his pharmacy’s programs and how other pharmacy owners can implement similar services in their store.

Personalization Makes a Difference

At a quick glance, MoosePacks are indistinguishable from Amazon’s PillPacks. A sample MoosePack on the pharmacy’s website features a clear package imprinted with the patient’s name and details such as day, date, time, and accompanying meal for the package contents. The sample MoosePack contains prescribed medications: glyburide metformin (a yellow tablet), ropinirole HCl (a purple tablet), and a daily vitamin (a red tablet).

But Moose says MoosePacks are different because the personalized packages of medications are connected to the pharmacy’s medication adherence program, so he doesn’t see PillPack as competition.

Another differentiator: Patients receive monthly MoosePacks from a Moose Pharmacy delivery driver. Once in the patient’s home, the delivery driver looks for evidence of loose rugs, which...
could cause a fall, and unopened MoosePacks and other medications.

Patients also meet face-to-face with a health coach in a consultation room at the pharmacy to discuss gaps in therapy and any changes to their medications after a doctor's appointment or an emergency room visit. For example, a health coach could discover that a patient has a new prescription for an angiotensin-converting enzyme (ACE) inhibitor; in addition to a previous prescription for the medication and 3 other prescriptions. In this scenario, the patient hadn't filled the other 3 prescriptions because they didn't know why the medications were prescribed. That presented an opportunity for the pharmacy's health coach to call the patient's physician to determine the appropriate ACE inhibitor and to educate the patient about the reason he was prescribed the other 3 other medications.

Because a health event or a doctor's visit can change a patient's prescriptions, Moose Pharmacy can dispense a partial supply of the new medication in a prescription vial until the next month's MoosePacks delivery; the new medication will be included in subsequent MoosePacks.

When a patient is traveling, Moose Pharmacy can fill their prescriptions for the duration of their travel. MooseMAP and MoosePacks can also cater to the needs of snowbirds who live in North Carolina during the fall and winter and in other parts of the country in spring and summer.

To keep patients on track with their medication adherence plan when they're not nearby, Moose Pharmacy connects them with a pharmacy in the Community Pharmacy Enhanced Services Network.

**Logistics and Quality Control**

Although Moose acknowledged that creating personalized packages for each day a patient takes medications seems labor-intensive, he insisted it requires no more work than handling a patient's prescription in a vial.

At one Moose Pharmacy location, a pharmacy technician uses a packaging machine from Durham, North Carolina-based Parata Systems to put the medications in the personalized strip packs. A photo is captured of every package and an algorithm looks at the pills in the pouch to make sure it contains the correct prescription for the patient. On a computer in a different room, a pharmacist looks at the photos of each package to validate that medications are dispensed accurately, Moose explained.

About 80% of the referrals for the 2 programs come from 20% of the physicians in the area, he said. Physician practices are typically interested because these programs can help them secure higher reimbursement after meeting quality metrics, Moose said.

**Hiring the Right Staff**

Hiring the right delivery drivers and health coaches is important, Moose said. When hiring health coaches, he looks for candidates who are willing to invest in connecting with patients on a personal level. Other skills he seeks are efficiency and good judgment; the pharmacy has a high volume of patients to serve and the health coach must make smart decisions about investing their time while effectively transitioning to the next patient who needs help.

Another vital team member at Moose Pharmacy is the delivery driver who brings the MoosePacks to patients' homes. Moose relies on the delivery driver to spot unused medications in the home; that insight triggers an immediate call to the pharmacy to find out why the patient isn't taking them.

Moose looks for delivery drivers who not only have a safe driving record but who can also serve as a community health worker. Friendliness and a level of technology savvy are 2 other traits he seeks.

A patient typically meets the delivery driver at least once per month when their MoosePacks are dropped off. But if a patient has more immediate needs, the delivery driver could come by a few times per week, Moose explained.

**Positive Outcomes**

Metformin, amlodipine, and atorvastatin are the top 3 medications dispensed in MoosePacks. The top 3 conditions treated include blood pressure, diabetes, and behavioral disorders, Moose said.

MooseMAP includes 2800 patients, and 1400 patients get MoosePacks delivered. Moose said 200,000 medications are dispensed in MoosePacks annually. Combined, the 2 programs generate increased revenue for the pharmacy because patients are filling prescriptions 12 times per year, versus 8 times before they're enrolled, Moose said.

Enrolling complex patients in its medication adherence program and fulfilling medications in personalized packs was not only “the right thing to do” for patients, Moose said, it also resulted in financial benefits for Moose Pharmacy. A 2017 study published in the *Journal of the American Pharmacists Association* examined the financial impact of attributed patients enrolled in the program. According to the results, the yearly profit for each prescription was $10.35 for a combination of chronic, acute, and immunization prescriptions. Further, dispensing the medications strip packaging translated to a mean profit of $1561.82 per year compared with $1208.01 per year with medications dispensed in bottles.

*Pharmacy Today* reported in 2014 that one medical group participating in Moose Pharmacy’s programs realized a reduction of inpatient admissions by up to 47% and preventable admissions by 35%. That should attract the interest of physician groups and payers alike.

For references, visit totalpharmacy.com.
First Financial Bank Podcast Series: Buying a Pharmacy

Financial experts discuss the steps involved in purchasing a pharmacy.

Are you looking to take the plunge and buy a pharmacy or expand your business through multiple locations? In our latest episode of "Over the Counter," the podcast from Drug Topics®, we spoke to Drew Hegi, loan officer with First Financial Bank and pharmacy owner, and Bob Graul, business development with First Financial Bank, to discuss how to succeed when purchasing a pharmacy.

Hegi has been helping First Financial Bank originate pharmacy loans with its pharmacy lending division for the past 9-plus years. Graul, who owned pharmacy stores for 25 years in San Diego, California, previously worked for McKesson and developed their ownership transfer program, RxOwnership. After running First Financial Bank’s Professional Services Division for a number of years, Graul now works as a consultant with the bank.

**Drug Topics®:**
Pharmacy ownership can be an attractive choice for pharmacists looking to advance both professionally and financially, but can also be a daunting next step. What do you first recommend to pharmacists who may be looking to take a leap and buy their own store but don’t know where to start?

**Hegi:**
There are tons of resources out there. If you look around and visit with the right people, they can point you in the right direction. But [the National Community Pharmacists Association (NCPA)] does a great job hosting leadership and pharmacy ownership educational weekends, so participating in one of those would be a great start.

Also...your wholesaler...usually the big ones, and some of the regional ones as well, have great resources for everything you need to know about partners [and] pharmacy ownership, and have transition teams and checklists to sort of work through, which can be very helpful. And then develop your set of industry partners. And whether that be banking relationship, finding a bank that specializes in pharmacy lending, like First Financial Bank, or accounting, there’s specialty groups that only work with pharmacists that would be great resources, [as well as] lawyers and attorneys.

A number of resources like that will be valuable as you work toward getting into ownership and can help you complete due diligence on what you’re looking at. But my advice would be to surround yourself with a good team. Bob, would you have anything to add to that?

**Graul:**
Yeah, just a couple things. As far as the pre loan process, getting ready to look to borrow money. One of the critical things is keeping your credit score up. Drew, I think we look at what, 680 or above?

**Hegi:**
Yeah. 680.

**Graul:**
So, keep your credit score up. If you have student debt, don’t be deterred, we can work with that. And secondly, about finding available pharmacies—broaden your horizons a bit.

I’ve seen a lot of people that are looking to buy a store but they want it within 5 square block radius, and there are no stores, there’s only 1 store that’s not for sale. Be willing to move a bit to find a good available store. And then if you’re in an area with a lot of stores, don’t be afraid to drop in, leave your card, indicate to the owner that if they’re ever looking to sell you’re willing to buy and stress the importance of keeping that store independent. I think that would be, in addition to what Drew said, surrounding yourself with a good team and participating in NCPA and working with your wholesaler.

*This transcription has been edited for length and clarity.*
Seasonal allergies can cause a myriad of physical reactions to environmental allergens, such as eyes becoming red, puffy, itchy, and watery; a runny nose; nasal congestion; throat irritation; and mild fatigue. With allergy season upon us, pharmacists may encounter questions from patients about how to best manage symptoms of allergic rhinitis.

An arsenal of medications exists for symptomatic relief. In recent years, pharmaceuticals that were previously limited to prescriptions became available as OTC products, said Kathy Campbell, PharmD, CEO, and clinical community pharmacist at DrKathy Health, LLC, and owner and CEO of Medicap Pharmacy in Owasso, Oklahoma.

When pharmacists are looking to guide patients with allergic rhinitis on which OTC medication will be best for them, their choices should be based on a patient’s goals of treatment, safety, efficacy, adherence, severity, and preferences, said Suzanne G. Bollmeier, PharmD, FCCP, BCPS, AE-C, professor of pharmacy practice at St. Louis College of Pharmacy at University of Health Sciences and Pharmacy in St. Louis, Missouri.

According to Bollmeier, pharmacists should ask for details about a patient’s symptoms including:

- onset (eg, if symptoms are year-round or worse during a certain season), type, frequency, duration, and severity of symptoms;
- what, if anything, provokes or relieves these symptoms;
- when their symptoms first started,
- whether they or any family members have a history of asthma or allergies;
- sleep problems, such as snoring or repeated sniffling; and
- presence of an allergic salute or shiner.

An allergic salute is a crease that forms across the nose’s bridge. It is caused by repeatedly rubbing the nose upward with the palm of the hand to reduce itching or to wipe secretions. An allergic shiner is a discoloration under the lower eyelids due to vasodilation or venous congestion, Bollmeier said. Chronic mouth breathing due to nasal obstruction can cause dental and orthodontic issues. Many patients with chronic rhinitis have a decreased sense of smell or taste and may also experience ear popping and pressure because of eustachian tube dysfunction. The presence of an allergic salute or shiner, orthodontic issues, or loss of smell and taste indicates moderate to severe allergic rhinitis.

In addition, Laura A. Hart, PharmD, MS, BCPS, BCGP, health sciences assistant clinical professor, Division of Clinical Pharmacy, Skaggs School of Pharmacy and Pharmaceutical Sciences, University of California, San Diego, said it is crucial for pharmacists to ask about a patient’s underlying health conditions, medication allergies, and other medications they take to ensure a selected medication will be safe and appropriate. Ferkhanda Najib, PharmD, pharmacy manager at Community Care RX, a long-term care pharmacy in Hempstead, New York, asks patients if they’re pregnant or breastfeeding or if they have any renal or liver impairment that may necessitate altered dosage.

Pharmacists should also ask a patient’s age, whether they have already tried any medications to relieve their symptoms, and if they are already on any medications that cause drowsiness or dehydration. In addition, it is important to find out if they’re looking to treat active symptoms or if premedication may be beneficial before coming into contact with allergens, Najib said.

**Treatment Options**

Antihistamines, nasal steroids, decongestions, corticosteroids, ophthalmic antihistamines, decongestants, and eye drops are among the options for treating allergic rhinitis. Typically they are either taken by mouth or administered topically and are used either on an as-needed basis or regularly.

Patients with intermittent allergic rhinitis have several OTC options. An OTC intranasal steroid will most
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likely have the greatest effect. Examples include fluticasone propionate (Flonase Allergy Relief, GlaxoSmithKline), budesonide (Rhinocort Allergy; AstraZeneca), and triamcinolone acetonide (Nasacort AQ; Sanofi). Other OTC options for seasonal allergies include intranasal cromolyn, oral and ocular antihistamines, and topical decongestants for short-term use.

Intranasal cromolyn acts to prevent an allergic reaction from happening after exposure to a trigger. “Although safe, it’s less efficacious than other therapies, has to be administered multiple times per day, and can require several weeks to be fully effective,” Bollmeier said. It is wise to reserve cromolyn for prophylaxis before exposure to a known allergen. Children and pregnant women can use it.

Antihistamines are available over the counter in both oral and ocular formulations. Bollmeier recommends second-generation oral antihistamines, which have fewer adverse effects (AEs) of sedation. Examples include desloratadine, fexofenadine, loratadine, and levocetirizine. Counsel patients with seasonal allergies to choose an OTC antihistamine if symptoms include nasal itching, rhinitis, or postnasal drip, but not congestion. Olopatadine, an ocular antihistamine/mast cell stabilizer, can be recommended in patients at least 2 years old but should be reserved for patients who exhibit only eye symptoms such as itching, redness, and drainage.

Oral and topical decongestants are also options for patients with intermittent symptoms as they can reduce congestion. Oral decongestants include phenylephrine and pseudoephedrine. Topical decongestants are advised for short-term use only.

If patients know the season their pollen or dander are most likely to be present, Bollmeier said, they can pre-treat with an antihistamine to prevent symptoms from happening. “If you’re allergic to the pollen or something you know will be bad, it’s good for people to take their antihistamine before they go outside,” Bollmeier said. “That will really help prevent symptoms.”

For patients with persistent or perennial allergies, intranasal steroids are most effective. This is especially true if congestion or troublesome symptoms are present. An oral antihistamine is ideal for patients with mild nasal itching.

**Counseling on Adverse Effects**

Each medication option for treating allergic rhinitis symptoms is associated with different AEs, so it is important to tailor counseling to the specific medication you recommend, according to Hart. AEs associated with OTC intranasal steroids triamcinolone, fluticasone propionate, budesonide, and fluticasone furoate are typically limited to local irritation, burning, stinging, and dryness, with minor nose bleeding as the most commonly reported AE, Bollmeier said. By using the proper technique to administer intranasal steroids, patients can reduce the risk for adverse reactions.

• Tell patients to gently blow their nose before using a nasal spray and directly spray away from the nasal septum. Severe local effects such as septal ulceration are rarely seen but can be prevented with this technique, Bollmeier said.

• First-generation antihistamines such as diphenhydramine, brompheniramine, chlorpheniramine, and clemastine can cause significant sedation, which may be desirable for aiding in sleep. However, they can also cause cognitive impairment. Second-generation antihistamines such as loratadine, fexofenadine, cetirizine, desloratadine, and levocetirizine are typically recommended because they don’t have sedation effects when taken at recommended doses, Bollmeier said. They are safe for small children and elderly patients.

• Advise patients not to use topical decongestants for more than 3 days or rebound congestion can occur.

**Avoiding Allergens**

Pharmacists should recommend reducing and removing allergy instigators. Patients can get rid of seasonal pollen from the environment and body by using artificial tears or saline sinus flush, or by immediately taking off clothing and showering after being outside, Campbell said. High-quality HEPA filtration can remove environmental pollutants from indoor living spaces. Bollmeier said it is best to keep windows and doors shut even in the spring and run the air conditioner instead.

Don’t allow pets in bedrooms, especially at night. Hardwood floors, frequent vacuuming, and washing sheets can reduce pet dander. If visiting a home with a pet that is a known trigger, pretreating with an antihistamine can reduce symptoms as can handwashing after touching a pet, Bollmeier said.

Pharmacists can also ask whether a patient had skin-prick or puncture testing. These tests identify what patients are sensitive to, according to Bollmeier.
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Complementary and alternative medicine (CAM) has grown steadily over the past decade but surged in popularity in 2020—likely because of the coronavirus disease 2019 pandemic. According to the results of a survey conducted by the Council for Responsible Nutrition, users cited overall immune support (57%) and health/wellness benefits (53%) as the most common reasons for increasing their supplement intake. With many individuals seeking additional ways to stay healthy, pharmacists are ideally positioned to help educate patients on the appropriate use of these products.

Despite the uptick in CAM use, misconceptions abound among health care professionals, including pharmacists. Two integrative pharmacists seek to dispel these myths and offer their colleagues tips to improve their ability to assist their patients in navigating CAM. 

**Common Misconceptions**

“The biggest myth about CAM I keep hearing from medical professionals is that CAM and herbal products don’t have evidence behind clinical use,” said Marina Buksov, PharmD, health coach, nutritionist, and clinical herbalist based in Brooklyn, New York. “I think because of the lack of education, health care professionals and patients alike are wary of herbal medicine, and there’s a general consensus that it’s potentially dangerous to use—guilty until proven innocent.”

For Hossein Ejtemai, RPh, owner of Brookville Pharmacy and Wellness Center in Chevy Chase, Maryland, the misconceptions seem to be demographic- and geographic-based. “People often think there’s a [cultural] gap with CAM because people from overseas—especially from the Asian culture—are more likely to use supplements, natural products, and natural remedies,” he said. “The younger generation in this country is also changing to CAM because of access to information [via the internet].”

Pharmacists Offer Key Counseling Points for CAM

To optimize their patients’ experience with CAM, Ejtemai said pharmacists should seek training. “Health care professionals are [generally] aware of CAM but most medical professionals, including pharmacists, lack sufficient training in CAM,” he said. “The 3 credits you get in pharmacy school is not enough to assist your patients.”

Pharmacists looking to expand their knowledge can choose from numerous certifications, many that are available online and take 6 to 18 months to complete. “Get certified to better educate your patients,” Ejtemai said. The Institute for Integrative Nutrition, Duke University, and The George Washington University are among the institutions that offer programs.

After developing their CAM skills, pharmacists should keep several key concepts front of mind when counseling patients on CAM. Most importantly, pharmacists should take the time to ensure patients understand when and how to use these products.

“Natural products have a place in both Eastern and Western medicine, but you have to keep in mind that natural products are generally better for prevention than treatment,” Ejtemai explained. “You cannot treat a disease with natural products in the late stages.”

Ensure patients understand that, unlike many conventional medicines that often show results in a few days or weeks, natural products can take several weeks to months to work.

For reference, visit drugtopics.com.

**Recommendations for pharmacists seeking to educate their patients on CAM use.**

**Use trustworthy sources.**

Buksov recommends Lexicomp, the Natural Medicines database, and About Herbs by Memorial Sloan Kettering Cancer Center.

**Educate patients taking nutrient-depleting medications on the importance of supplementation.**

For example, Ejtemai recommended counseling patients taking metformin about vitamin B12 supplements to potentially ward off diabetic neuropathy.

**Consult with a practitioner, educator, or researcher who is an expert in the topic.**

Conventional medicine has exchanged peer reviews for evidence-based medicine, but the sometimes nebulous nature of CAM can warrant peer consultations.
The coronavirus disease 2019 (COVID-19) pandemic has stretched the capacity of the US health care system, increased demand for lifesaving medications, and exposed disturbing cracks in patient access to care. But the crisis has also shown the nation that health care can and should be a team sport. Over the years, pharmacists have worked hard to establish themselves as core members of a patient’s care team and today, amid the pandemic, how effectively they embrace their role as frontline care providers could change the profession forever.

Answering the Call

The last time the world witnessed a novel viral strain was the H1N1 virus pandemic of 2009. Pharmacists in all 50 states were called upon and granted emergency authorization to administer vaccines. Highly trained pharmacists were empowered to help meet a public health need and demonstrate their ability to serve patients safely and effectively at the point of care. In the years that followed, state legislators took notice and began expanding the pharmacists’ scope of practice for other public health initiatives. Today, pharmacists play a critical role in curbing the nation’s opioid epidemic by providing naloxone directly to patients at risk for opioid overdose. History has shown that, when given the opportunity to meet patients where they are in their communities, pharmacists and pharmacy technicians will have to do to get the notice they deserve.

Pharmacists possess deep clinical skills and are highly accessible within the community and across inpatient, outpatient, and emergency treatment settings in hospitals and health systems. This combination puts them in a unique position to help ease the strain on an exhausted health care workforce and overwhelmed delivery system. Moves from pharmacy giants CVS Health and Walgreens to aggressively recruit thousands of extra pharmacists and pharmacy technicians to prepare for the nationwide administration of COVID-19 tests and vaccines present a ripe opportunity to advance the profession once more. A collective and concentrated effort by the pharmacy profession nationwide to adopt advanced practice roles and embrace educating communities will be key but it’s not all pharmacists and pharmacy technicians will have to do to get the notice they deserve.

Measuring Value for Lasting Change

Pharmacists and pharmacy technicians must capture and accurately document their impact on patient health outcomes and health care efficiencies to drive lasting change and prevent authorizations from sunsetting at the end of the public health emergency. Proactively documenting clinical and efficiency improvements will require additional efforts on the parts of pharmacists and the use of quality measures that demonstrate the value of their services in a quantifiable way. Fortunately, the American Society of Health-System Pharmacists Pharmacy Accountability Measures Work Group provides a framework that pharmacists can use. The group’s focus is identification of medication-related quality measures that health-system pharmacists can use to establish accountability for and demonstrate value in outcomes in inpatient, outpatient, and transitional care settings. The goal is to increase hospital and health-system pharmacists’ awareness, adoption, and implementation of existing measures in order to improve patient care, demonstrate value, and identify future measurement opportunities. The group is applying their vision beyond the COVID-19 crisis and looking toward future service expansion to meet the needs of patients, communities, and the health care system as a whole. The framework contains suggested metrics pertaining to access to care, medication adherence, emergency preparedness, and medication shortages. These mark the start of an important conversation on how pharmacists can benchmark and, ultimately, improve clinical performance. In taking these actions, pharmacists assume true accountability for patient outcomes and are in a stronger position to reinforce the impact of expanded pharmacy services, during the COVID-19 crisis and beyond.

The COVID-19 crisis has also shown the nation that health care can and should be a team sport.

The Pharmacist’s Role Beyond COVID-19

The pandemic could change the profession forever.

By Steve Riddle, PharmD, MSIM, FASHP, BCPS, and Anna Legreid Dopp, PharmD, CPHQ
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Due to a variety of new communication and technology advances, pharmacists now are much better armed to prevent drug shortages. During the initial surge of the coronavirus disease 2019 (COVID-19) pandemic in April 2020, severe drug shortages plagued health systems. Particularly affected was the supply of sedation medications. However, this was not the case during the second surge this winter, according to Emily Pherson, PharmD, assistant director of medication use policy and clinical informatics at The Johns Hopkins Hospital in Baltimore, Maryland. “In this second surge, we are doing much better than back in the spring,” Pherson told Drug Topics®.

Chronic drug shortages have become a much bigger issue in recent years. However, Michael Ganio, PharmD, MS, BCPS, FASHP, senior director of pharmacy practice and quality for the American Society of Health-System Pharmacists (ASHP) in Bethesda, Maryland, said pharmacists now have better software technology for managing inventory control. Typically in hospitals there are seasonal changes, with more respiratory infections in the winter and a greater need for antibiotics. However, centralized inventory allows a pharmacist to better keep track of how specific drugs are being prescribed. This can allow for an immediate alert if a drug is in short supply or headed that way. “The most major thing is communication,” Ganio said, “everything from the purchasers, who may have an early signal that a shortage is going to occur, and then notifying the clinical pharmacist and the providers.”

The COVID-19 pandemic created drug shortages that had not been anticipated. According to Ganio, in April and May 2020, pharmacists experienced a 300% to 500% increase in the use of intensive care drugs and agents for patients on ventilators. “So the whole country was affected because wholesalers made big shifts,” Ganio said. “That was a very scary time for the pharmacists.”

Artificial intelligence (AI) could be potentially useful in helping prevent drug shortages. However, limitations exist due to the inability of AI to predict a problem at a manufacturing plant or other links in the system. “When it comes down to it, there is not a lot of transparency,” Ganio said.

Most drug shortages are caused by manufacturing quality issues. There may be a quality issue identified during an FDA inspection, but the citation may not be posted in a timely matter. “It could be glass, the raw material, or a supply chain issue,” Ganio said. Warning letters can be delayed for months, he noted. AI use may be limited because of these factors and the fact that third parties are involved and often masked.

New drug shortages in general are declining, but the concern among pharmacists is that hundreds of drugs remain in chronic shortage. To address this issue at The Johns Hopkins Hospital, there are weekly task force meetings looking at all drug inventories and stocking practices. One task force examines weekly inventories and the areas of highest need. A second task force is dedicated solely to COVID-19–related treatments. Combined with other strategies, such as analytics solutions, pharmacists work with the providers to restrict drugs to those who are in the most need so each agent can be used the most optimally. “The keys are good management and use of dashboards that can allow for easily pulling data for monitoring and predicting shortages,” Pherson said. “It lets you be more proactive.”

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Women in Pharmacy Are Leading Successful COVID-19 Vaccination Programs

“We don’t start vast projects with half-vast ideas.”

In the late 1970s, I worked at a paper mill for 3 summers while I was in pharmacy school. Of all my lessons learned running jackhammers in steel tanks, shoveling bark in the woodyard, and muscling cast iron boiler parts, I can still see a sign in the personnel director’s office. It was a sheet of paper that read, “Don’t start vast projects with half-vast ideas.” Say it quickly and it really makes sense.

I can’t think of a more lucid example of a vast project that has been implemented with “half-vast” ideas and implementation than the coronavirus disease 2019 (COVID-19) vaccine rollout. There isn’t a community pharmacist whose day-to-day activities have not been altered by this historic event. Patients call incessantly asking when their turn is to get their dose of the precious vaccine. Even the leadership in Washington, DC, and our state capitals see the community pharmacist as the answer.

The news, whether on the internet or television or in your local newspaper, is chock-full of vaccine stories. Patients read the headlines and pick up the phone and call the pharmacy for information. Small community pharmacies can field 100 phone calls or more a day for patients to be put on the “list.” Forget the internet; most patients, especially the elderly, want to speak to a human, a human who can get them this life-preserving shot in the arm.

Women make up about a quarter of Congress and of Pennsylvania’s state representatives in Harrisburg. On the national and state levels, the rollout of the vaccine has been abysmal. Is there any wonder the amazing success of West Virginia and the clinic success in Pennsylvania are led by women pharmacists? There is no doubt their vast ideas are making up for the “half-vast” vaccine rollout on the federal level.

Peter A. Kreckel, RPh, practices community pharmacy in Pennsylvania.

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Heart failure with reduced ejection fraction (HFrEF) is characterized by dyspnea or exertional limitation and occurs when the left ventricular ejection fraction (LVEF) is 40% or less. Treatment for patients with HFrEF includes a diuretic, a beta blocker, and either an angiotensin receptor-neprilysin inhibitor, an angiotensin-converting enzyme inhibitor, or an angiotensin receptor blocker. Ivabradine, hydralazine/isosorbide, and sodium-glucose cotransporter 2 inhibitors have also been shown to provide additional benefit in patients with persistent symptoms. On January 20, 2021, the FDA approved vericiguat (Verquvo; Merck) for use in adults with symptomatic HF and an ejection fraction less than 45% to reduce the risk of cardiovascular death and HF hospitalization following a hospitalization for HF or need for outpatient intravenous diuretics.

The efficacy and safety of vericiguat are based on the results of the VICTORIA trial. This was a phase 3, randomized, double-blind, placebo-controlled trial that randomized 5050 patients with chronic HF (New York Heart Association [NYHA class II-IV]) and an ejection fraction less than 45% to receive either vericiguat 10 mg daily (n = 2526) or placebo (n = 2524), in addition to guideline-based medical therapy. The primary outcome was a composite of death from cardiovascular causes or first hospitalization for HF and occurred in 35.5% of patients in the vericiguat group and 38.5% of patients in the placebo group. The secondary end points were cardiovascular death and HF hospitalization. Cardiovascular death occurred in 12.9% and 13.9% of patients given vericiguat and placebo, respectively. HF hospitalization was reported at 25.9% and 29.1% of patients in the vericiguat and placebo group, respectively. The study investigators concluded based on the efficacy data from this study, that vericiguat reduced the incidence of death from cardiovascular causes or hospitalizations for HF, compared with placebo.

Katelyn Yamartino, PharmD, and Kevin W. Chamberlin, PharmD, FASCP

Vericiguat (Verquvo) for Heart Failure With Reduced Ejection Fraction

Efficacy

The efficacy and safety of vericiguat are based on the results of the VICTORIA trial. This was a phase 3, randomized, double-blind, placebo-controlled trial that randomized 5050 patients with chronic HF (New York Heart Association [NYHA class II-IV]) and an ejection fraction less than 45% to receive either vericiguat 10 mg daily (n = 2526) or placebo (n = 2524), in addition to guideline-based medical therapy. The primary outcome was a composite of death from cardiovascular causes or first hospitalization for HF and occurred in 35.5% of patients in the vericiguat group and 38.5% of patients in the placebo group. The secondary end points were cardiovascular death and HF hospitalization. Cardiovascular death occurred in 12.9% and 13.9% of patients given vericiguat and placebo, respectively. HF hospitalization was reported at 25.9% and 29.1% of patients in the vericiguat and placebo group, respectively. The study investigators concluded based on the efficacy data from this study, that vericiguat reduced the incidence of death from cardiovascular causes or hospitalizations for HF, compared with placebo.

Safety

The prescribing information for vericiguat contains a warning for embryo-fetal toxicity and is contraindicated in pregnant females. If a dose is missed, the patient should take the dose as soon as the patient remembers on the same day of the missed dose. Patients should not take 2 doses on the same day.

Dosing and Administration

Vericiguat is available as 2.5-, 5-, and 10-mg tablets. The initial dose is 2.5 mg orally once daily with food. The dose may be doubled about every 2 weeks until the target maintenance dose of 10 mg once daily is achieved, as tolerated by the patient. The tablets may be crushed and mixed with water immediately before administration in patients who are unable to swallow whole tablets. Vericiguat does not need to be dose-adjusted in patients with an estimated glomerular filtration rate (eGFR) < 15 mL/min/1.73 m² or with mild or moderate hepatic impairment. Vericiguat has not been studied in patients with an eGFR < 15 mL/min/1.73 m², patients on dialysis, or patients with severe hepatic impairment (eg, Child-Pugh C). If a dose is missed, the patient should take the dose as soon as the patient remembers on the same day of the missed dose. Patients should not take 2 doses on the same day.

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