Boost Pharmacy Revenue
Reap rewards from diabetes services

PLUS
BEST STATES TO PRACTICE
AND
MEDICAL MARIJUANA GUIDANCE
PHARMACY SOFTWARE FOR PHARMACY SUCCESS

“"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

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

PHARMACY SOFTWARE FOR PHARMACY SUCCESS

ENHANCE PATIENT CARE
IMPROVE PROFITABILITY
INCREASE PATIENT SAFETY

FLEXIBLE PHARMACY WORKFLOW
PATIENT ADHERENCE AND PERFORMANCE DASHBOARD
TEXT, EMAIL AND VOICE PATIENT MESSAGING
INTEGRATED FACTS AND COMPARISONS
CLOUD POWERED MULTI-STORE MANAGEMENT
PRESCRIPTION READY BOARD
EXTENSIVE REPORTING AND DATA MINING
MODERN PAYMENT PROCESSING INCLUDING EMV
MEDICATION THERAPY MANAGEMENT
SIMPLE DRIVE THROUGH SOLUTIONS
MEDSYNC AND REFILL MANAGEMENT
INVENTORY CONTROL MADE EASY
PROFIT AND INSURANCE AUDIT PROTECTION
FRONT END INVENTORY MANAGEMENT
ADVANCED BIN MANAGEMENT
DELIVERY AND REMOTE SIGNATURE MANAGEMENT
COMPOUNDING TOOLSET
EDITORIAL ADVISORY BOARD

Drug Topics®
Voice of the Pharmacist

Michael Cohen, RPh, MS, SoD(Pharm), LifES(twice), RGP
President
Institute for Safe Medication Practices
Hershey, PA

Mary E. Inguanti, RPh, MPH
Strategic Customer Vice President
BD
South Windsor, CT

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

David D. Pope, RPh, CIE
Chief of Innovation, Co-Founder
Creative Pharmacist
Augusta, GA

Perry Cohen, PharmD, FMCP
The Pharmacy Group LLC
Glastonbury, CT

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

Gene Memoli Jr., RPh, FACP
Director
Customer Development, Omnicare
Cheshire, CT

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

Mark Neuenschwander, RPh
President
The Neuenschwander Company
Bellevue, WA

CONTENT
EDITORIAL DIRECTOR Aubrey Westgate
EXECUTIVE EDITOR David Frabotta
440-626-2822 | david.frabotta@ubm.com
MANAGING EDITOR Valerie DeBenedette
203-523-7024 | valerie.debenedette@ubm.com
ASSOCIATE EDITOR Drew Boxler
440-891-2630 | drew.boxler@ubm.com
DESIGN DESIGN DIRECTOR Robert McGarr

PUBLISHING AND SALES
VP GROUP PUBLISHER William Mulderry
732 346-3071 | william.mulderry@ubm.com
DIRECTOR, NATIONAL ACCOUNTS PRINT/DIGITAL Dan Gallo
203-523-7037 | daniel.gallo@ubm.com
ACCOUNT MGR., PRINT/DIGITAL Patrick Carmody
440-891-2621 | patrick.carmody@ubm.com
ACCOUNT MGR., RECRUITMENT Joanna Shippoli
440-891-2615 | joanna.shippoli@ubm.com
SALES DIRECTOR, DIGITAL MEDIA Don Berman
VICE PRESIDENT, MARKETING Amy Erdman
PERMISSIONS Jillyn Frommer
732 346-3007 | jillyn.frommer@ubm.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 Advanstar UBM materials.

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 MGR. Jessica Stantha
612-253-2039 | Jessica.Stantha@ubm.com

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.

DRUGTOPICS.COM | NOVEMBER 2018 | DrugTopics 5
SPECIAL REPORT

Telepharmacy Predictions
How telemedicine is changing pharmacy practice

PAGE 12

COVER STORY

BOOST PHARMACY REVENUE
Reap rewards from diabetes services

PAGE 27

Small Doses
PAGE 9
New Drug Review: Andexxa
PAGE 16
Medical Marijuana
PAGE 17
Helping Seniors Manage Their Meds
PAGE 20
The Best States to Be a Pharmacist
PAGE 22
Be an Effective Manager
PAGE 26
Make Health Literacy a Priority
PAGE 31
Enhance Your Services
PAGE 32
Get Started with Compliance
Packaging
PAGE 33
The Barriers to Increasing Vaccinations
PAGE 34
Protect Patient Privacy
PAGE 35

Seven Tricks for Memorizing Drugs
PAGE 38
21 Important Drug Approvals You Need to Know
PAGE 39
Antimicrobial Stewardship Programs
PAGE 42

COMMENTARY
Not Just Drug Experts
PAGE 8
Remember What Matters
PAGE 44

Drug Topics (ISSN# 0012-6616) is published monthly and Drug Topics Digital Edition (ISSN# 1937-8157) is issued every week by UBM LLC 131 West First St., Duluth, MN 55801-2065. One-year subscription rates: $61 in the United States & Possessions; $109 in Canada and Mexico; all other countries, $109. Single copies (prepaid only) $10 in the United States; $10 in Canada and Mexico; all other countries, $15. Include $6 per copy for U.S. postage and handling. Periodicals postage paid at Duluth, MN 55806 and additional mailing offices. POSTMASTER: Please send address changes to Drug Topics, P.O. Box 6079, Duluth, MN 55806-6079. Canadian G.S.T. number: R-124213133RT001. Publications Mail Agreement Number 40612608. Return undeliverable Canadian addresses to: IMEX Global Solutions PO Box 25542 London, ON N6C 6B2 CANADA. Printed in the U.S.A.

© 2018 UBM All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including by photocopy, recording, or information storage and retrieval without permission in writing from the publisher. Authorization to photocopy items for internal/educational or personal use, or the internal/educational or personal use of specific clients is granted by UBM for libraries and other users registered with the Copyright Clearance Center, 222 Rosewood Dr. Danvers, MA 01923, 978-750-8400 or email: info@copyright.com. Microform or microfiche copies of issues are available through Koehler Micrographics, 1100 S. First St., Dubuque, IA 52001, 319-589-2141. For information on the availability of back issues, write to Advanstar Marketing Services, (800) 225-4569, Ext. 839. Unsolicited manuscripts, photographs, art, and other material will not be returned. Publisher assumes no responsibility for undelivered manuscripts, photographs, art, and other material. Drug Topics provides certain customer contact data (such as customer names, addresses, phone numbers, and e-mail addresses) to third parties who wish to promote relevant products, services, and other opportunities that may be of interest to you. If you do not wish UBM to make your contact information available to third parties for marketing purposes, simply call toll free 866-529-2922 between the hours of 7:30 a.m. and 5 p.m. CST and a customer service representative will assist you in removing your name from UBM Medica’s lists. Outside the U.S., please phone 218-748-8457. Drug Topics reserves all rights to any claims or other information appearing in any of the advertisements contained in the publication, and cannot be held responsible for any losses or other damages incurred by readers in reliance on such content. Drug Topics welcomes unsolicited articles, manuscripts, photographs and other materials but cannot be held responsible for their safeguarding or return. LIBRARY ACCESS Libraries offer online access to current and back issues of Drug Topics through the EBSCO host databases.

To SUBSCRIBE, call toll free 866-529-2922. Outside the U.S. call 218-748-8457.
A simple phrase with profound meaning. It means your supplements went through rigorous testing and meet high quality standards for identity, potency and purity. It means, USP (U.S. Pharmacopeia), an independent third-party is making sure that what it says on the label is what’s in the bottle. Nothing more. Or less. Look for the USP verified mark when you’re buying supplements and have confidence in quality.

USP Verified. Trust in Quality.

www.USPverified.org

USP has tested and verified select dietary supplements for their ingredients, potency and manufacturing process. USP does not verify efficacy claims. See www.USPverified.org.
Generations of pharmacists had been taught that we are drug experts, and we still are in today’s healthcare systems. But we are also becoming more involved and active in health promotion, health education, disease prevention, and disease management.

One of the major areas in which we are becoming more involved is diabetes care. Since July 2015, as a clinical pharmacist, I have been a member of an interdisciplinary diabetes team, the DREAM (Diabetes Research Education and Management) Team, at Touro University California College of Osteopathic Medicine in Vallejo.

Our team takes an interprofessional approach to tackle diabetes our area, from conducting clinical trials and educating healthcare students and practicing clinicians, to leading community outreach efforts in diabetes prevention and providing comprehensive diabetes consultations and clinical care.

In providing comprehensive diabetes clinical care to patients, I:

- Offer medication therapy management focusing on diabetes and cardiovascular risk reduction;
- Choose the most clinically sound and appropriate antidiabetic agents with the team;
- Offer education on pen devices during the initial visit, discuss a treatment plan for each consultation, titrate medications, and offer insulin pump education and support.

The two diabetologists feel their treatment plans for patients are more complete with a clinical pharmacist on the team. Discussions that lead to treatment plans reflect what the pharmacy profession is trying to achieve: optimizing the safe and effective use of medications.

Touro University California has created and created a community-based outreach program, Mobile Diabetes Education Center (MOBEC). I serve as program evaluator and have developed a needs assessment and a mechanism to collect, analyze, and interpret data. A registered dietitian and I have been leading efforts to create a series of five-minute, mini-diabetes self-care management modules using the American Association of Diabetes Educators (AADE)

“More pharmacists are now being trained and working in healthcare systems, academic institutions, and governmental entities.”

Self-Care Behaviors as its backbone. Diabetes is not the only area where pharmacists have expanded roles. Other settings of care include:

- The acute care setting in hospitals, where clinical pharmacists round with the healthcare team to provide drug recommendations;
- Skilled nursing facilities and long-term care facilities, to monitor medication regimens;
- Poison control centers, to handle potentially life-threatening medication overdose situations;
- Outpatient disease management services settings, where pharmacists work in an interprofessional chronic care model, etc.

Those expansions require additional training and/or education beyond a Doctor of Pharmacy degree, leading to an emphasis on postgraduate education, residency/fellowship training, and board certifications. More pharmacists are now being trained and working in healthcare systems, academic institutions, and governmental entities, which have provided us with opportunities to expand our practice capacity as integral members in healthcare.

Pharmacy practices include research pharmacists in pharmacy informatics who analyze data and patterns in healthcare systems, and public health pharmacists who help tackle public health issues such as diabetes, smoking cessation, and HIV prevention and treatment.

The roles of pharmacists in the healthcare sector have changed tremendously with patients’ needs at the heart of our daily practices. One core principle remains constant: It is the pharmacist’s passion and duty to optimize the safe and effective use of medications and improve the health of the society.
New Campaign Aims to Raise Pharmacists’ Profile

A new campaign that has the support of several pharmacy organizations will educate consumers about the value of pharmacists.

The American Association of Colleges of Pharmacy (AACP), which represents the 143 accredited schools of pharmacy, recently launched the Pharmacists for Healthier Lives public awareness campaign.

“This is a critical time for healthcare in the United States. People are concerned about access, coverage, and medication management. Pharmacists play a vital role on the healthcare team, and yet most people are not aware of all they do to promote healthier, better lives. We need to change this,” Maureen Thielemans, AACP’s director of communications, tells Drug Topics.

Most people are familiar with their local community pharmacist, but are unaware that many pharmacists hold doctorates and are important members of a patient’s healthcare team, Lucinda Maine, PhD, RPh, executive vice president and CEO of AACP, says in a statement. “They work in a variety of settings such as hospitals and clinics, and make tremendous contributions in the advancement of medicine.”

ASHP, the Academy of Managed Care Pharmacy, the Accreditation Council for Pharmacy Education, the National Alliance of State Pharmacy Associations, the Georgia Pharmacy Association, and PrescribeWellness, are partnering with AACP.

While groups like NCPA and APhA are not yet involved, “as the campaign builds, we anticipate that other pharmacy and related organizations will join the coalition,” says Thielemans. The campaign will last several years.

Partner organizations have access to an online toolkit of key messages and branding resources to use in personal and professional communications. The general public can also engage with Pharmacists for Healthier Lives on its Facebook page and through the campaign’s website. AACP is encouraging the use of the hashtag, #Indispensable to promote the campaign on social media.

Pharmacists for Healthier Lives will also be supported with earned media outreach nationally and in key markets. “Next year, we anticipate exploring additional media outlets to include online, transit, print, and broadcast,” Thielemans says.

Last Flu Season: About 80,000 Deaths and a Spike in Outpatient Visits

Weekly share of outpatient visits for flu-like illness
By flu season, October to June of each year

Note: Data represents share of outpatient visits to U.S. clinics. Outpatients Influenza-like Illness Surveillance Network (ILINet); Data: Centers for Disease Control; Chart: Chris Canipe/Axios, Courtesy of Axios.

CONTINUED ON PAGE 10
Could Walgreens Buy Kroger’s Pharmacies?

A new partnership between Walgreens and Kroger could mean Kroger will eventually sell its pharmacy business to Walgreens, according to an analyst.

The two massive retail chains recently announced that customers in 13 initial stores in northern Kentucky can order Kroger grocery items online and pick up orders at participating Walgreens locations. Plus, Kroger’s Our Brands grocery items will be available at participating Walgreens locations. “The diversified shopping assortment will complement Walgreens products and services across health and wellness, pharmacy and beauty,” according to the companies.

Edward Kelly, retail analyst for Wells Fargo, believes the partnership will have various effects. “Opportunity for future collaboration could include the cross-selling of each company’s leading own brands, sourcing agreements, supply chain efficiency, proprietary preferred/restrictive pharmacy networks, or possibly even the sale of [Kroger’s] pharmacy business to [Walgreens],” Kelly says in a research note he provided to Drug Topics. “We recommend investors pay careful attention to the evolution of this partnership and other potential avenues of value creation.”

Kelly believes an in-store pharmacy arrangement, similar to Target and CVS Pharmacy’s partnership, is likely for Walgreens and Kroger. “Pharmacy is particularly tough for anyone other than the key scale players as preferred/limited networks are becoming more prevalent, the generic cycle has slowed, reimbursement rates are getting squeezed, and more complex specialty pharmacy is the growth driver,” Kelly wrote. “The front-end of the drugstore is also challenged given its lack of differentiation and poor value proposition. Now that we know [Kroger] and [Walgreens] have been talking, it’s obvious to us that future collaboration is possible.”

Jim Cohn, a spokesperson for Walgreens, however, tells Drug Topics that the current partnership has “no impact to pharmacy.” In addition, a partnership such as Target and CVS’ arrangement “is not a part of the pilot project, and our plans at this time are … to continue to listen to customer feedback in the coming months, while also gathering learning and insights to help determine any future steps.”

This new concept is an opportunity to test and learn, as the companies determine how to best work together to further elevate their customer offering, Stefano Pessina, executive vice chairman and CEO of Walgreens Boots Alliance, said in a joint statement from the companies. “We continue to evolve our offerings to meet the changing needs of our customers and provide a more differentiated shopping experience.”

New Opioid Law Impacts Pharmacists

Opioid abuse prevention legislation, signed into law by President Donald Trump, is being praised by pharmacist organizations.

Both NCPA and NACDS say they are pleased with the passage of the SUPPORT for Patients and Communities Act (HR 6) by the House of Representatives and its companion Senate bill that was also passed. The legislation was signed into law on October 24.

Key provisions of the new law include:


In addition, the use of electronic prior authorization for covered Part D drugs will be required starting January 1, 2021, Ronna Hauser, PharmD, vice president of pharmacy policy and regulatory affairs at NCPA, tells Drug Topics.

“These requirements may change some pharmacy work flow aspects,” Hauser says. In addition, pharmacists may see Medicare Part D lock-in programs grow, as lock-in provisions for Medicare patients that are at risk for opioid abuse will be required by 2022, and will be an option for plans starting January 1, 2019, according to Hauser.

The Medicare Part D provision “maintained provisions to exempt long-term care patients in nursing facilities and to ensure that patients’ choice of pharmacy is protected,” NCPA says in a statement.

- Provides federal grants to states to assist drug disposal authorized collectors with the cost to purchase, install, and maintain drug take-back kiosks; the cost to dispose of collected unwanted prescription drugs; and the cost to train staff in operating the kiosks with the goal of improving take-back programs and participation in the states, NACDS says in a statement.

- Strengthens prescription drug monitoring programs. The legislation takes “important technical steps to facilitate a collaborative and interconnected system that provides meaningful prescribing information to healthcare providers that can help prevent fraud, waste, and abuse,” NACDS says.
Social Media: A Doorway to Illegal Prescription Drugs

Social media sites often lead consumers to websites that sell prescription drugs illegally, according to a new report.

During a recent four-week study, the National Association of Boards of Pharmacy (NABP) performed keyword searches on multiple social media sites and easily found posts leading to websites selling commonly counterfeited and/or abused medications. Keywords and terms used included “Viagra,” “ciprofloxacin” (Cipro), and “Xanax for sale online.”

On Pinterest, for example, NABP found 66 posts promoting sale of medications; 38% provided links to websites selling prescription medicines illegally. Similar keyword searches on Instagram, Facebook, Twitter, Reddit, and eBay garnered similar results.

Characteristics of these sites include selling products not FDA approved, not requiring a prescription, and selling controlled substances.

“This review of social media sites was a subset of NABP’s ongoing study of online drug sellers, which has found that 95% of websites selling prescription drugs online are doing so illegally,” says NABP in a statement.

Twitter and Snapchat require that advertisers of pharmacies and pharmacy products be verified by NABP. Pinterest executives say they are taking steps to further reduce the number of illicit “pins” that slip through their filters, according to NABP.

“As Americans’ reliance on social media platforms for news and information has grown in recent years, it is expected that the prevalence of rogue online pharmacies in these spaces will also increase. The goal is for social media companies to take steps and use available resources to screen and monitor their platforms for harmful content linking to illegally operating websites,” NABP says.

Christine Blank is a contributing editor.

Study Links ADHD Drugs and Parkinson’s

A large new study linking some ADHD medications to Parkinson’s could affect ADHD prescribing. In the study, published in the September in Neuropsychopharmacology, researchers found that ADHD patients were more than twice as likely to develop early onset (21 to 66 years old) Parkinson’s and Parkinson-like diseases compared to non-ADHD individuals.

The estimated risk was six to eight times higher for ADHD patients prescribed the stimulant drugs methylphenidate (Ritalin, Concerta, and other brand names), mixed amphetamine salts (Adderall), and dextromethylphenidate (Focalin).

“The study could lead some physicians to take a pause before writing a prescription for stimulant-based ADHD drugs. Parents and adult patients may be asking many more pointed questions about whether the medications are necessary,” John Matthews, strategy leader for healthcare and life sciences at KPMG, tells Drug Topics.

While it is possible the study’s findings could dampen sales of Ritalin and other ADHD drugs, additional studies are needed before there is a dramatic swing in prescribing trends, Matthews says.

“There has been a great deal of attention dedicated to how frequently these medications are prescribed and the necessity for certain patients to use them,” Matthews says. “Borderline cases are where there can be an impact on prescribing. For example, the risk might not be worth it for an adult using ADHD drugs for weight control or the child who might be able to function in class without the medication.”

Do Pharmacists Get Vaccinated for the Flu?

While many pharmacies offer vaccinations, do pharmacists themselves receive the flu vaccine?

The CDC found that the answer is a resounding yes. Ninety-two percent of pharmacists say they received influenza vaccinations for the 2017 season, according to Morbidity and Mortality Weekly Report.

Physicians were the most common healthcare personnel to receive the flu vaccine at 96%, while 90.5% of nurses received the vaccine. Overall, 78.4% of healthcare personnel received the vaccine.

Vaccine coverage was highest among personnel who were required by their employer to be vaccinated (94.8%) and lowest among those working in settings where vaccination was not required, promoted, or offered on-site (47.6%), according to MMWR. “As in past seasons, the highest coverage was associated with workplace vaccination requirements,” the authors write.

Healthcare workers in hospital settings were the most likely to receive the vaccines (91.9%), followed by ambulatory care settings at 75.1%, other clinical settings at 74.9%, and long-term care settings at 67.4.
At the Shoshone Pharmacy in Shoshone, ID, a patient arrives to pick up his prescription. The technician asks him to wait, explaining that the pharmacist would like to discuss potential drug interactions with him. The patient is ushered into a private room where he sits across from a 20 inch video screen. Before long, the pharmacist, who is at another pharmacy, appears on the screen, and the discussion commences.

Telepharmacy scenarios, like that take place regularly at Shoshone Pharmacy, and are becoming more common at chain, retail, and health-system pharmacies nationwide.

Currently, 23 states allow telepharmacy, though requirements vary, according to the National Association of Boards of Pharmacy. Several other states have telepharmacy pilot programs in place.

“Telepharmacy can help bring back pharmacy services to areas that are underserved, such as rural areas,” says Lisa Schwartz, PharmD, senior director, professional affairs, NCPA.

In fact, the first state laws surrounding telepharmacy started with a pilot program in North Dakota in 2001. The program brought pharmacy services to 80,000 citizens in medically underserved, remote, and rural communities.

Following the success of the pilot program, the North Dakota Board of Pharmacy established permanent rules in 2003 that allowed telepharmacy to be practiced on a broader scale.

In Idaho, the Shoshone pharmacy operates as a satellite pharmacy to R&R Pharmacy in Jerome, ID, about 18 miles away. Shoshone serves a community of 1,500 people who were previously without pharmacy services. While a community of only 1,500 wouldn’t justify a fully-staffed pharmacy, the staffing by technicians, along with the videoconferencing, ensures that those in the community are not deprived of pharmacy care.

How it Works

The pharmacy is set up like a regular pharmacy, but is staffed by technicians, explains Jason Reading, PharmD, owner of the two pharmacies. Prescription orders are transmitted to the pharmacist at the main pharmacy for verification. “We have a good system of checks and balances in place,” says Reading. “Setting up a remote pharmacy makes sense from a business standpoint, from a pharmacy professional standpoint, and from a patient care standpoint.”
SPECIAL REPORT

Kathleen Gannon Longo

From a business standpoint, a satellite location can bring a pharmacy up to capacity in terms of filling prescriptions. “If a pharmacy has the capacity to fill 300 scripts a day, but is only filling 200 based on patient volume, why not get paid for the additional 100 scripts?” he says. From a professional standpoint, a pharmacy staffed by technicians frees the pharmacist to perform clinical interventions.

In addition to Shoshone Pharmacy, Reading recently opened a small satellite pharmacy at North Canyon Medical Center in Gooding, ID, about 26 miles from Jerome. It operates mainly as a discharge pharmacy, but provides other services to the community, such as immunizations. As a further reach toward the provision of patient care, Reading recently placed a pharmacist on site at a local medical clinic with physicians, which would not have been possible had the remote pharmacies not been staffed by technicians.

In the Chains

In chain pharmacies, CVS Health has innovated by allowing patients to consult with a healthcare provider via a mobile device through the CVS App. The MinuteClinic Video Visits are geared to patients ages two and older who use the app seeking treatment and advice for a minor illness, minor injury, or a skin condition, according to the company.

After completing a health questionnaire through the app, patients are matched to a board-certified community-based healthcare provider in their state, who reviews the questionnaire and proceeds with the video-enabled visit via the patient’s smartphone. When relevant, the physicians call prescriptions into the patient’s pharmacy or refer patients to providers in their community. The program, which has been in place since August, has recently expanded.

Hospital Telepharmacy

Videoconferencing can be a powerful tool in a discharge setting, says Brian Roberts, CEO of PipelineRx, a San Francisco-based provider of cloud-based telepharmacy services, primarily in the hospital setting. In addition to allowing pharmacists to consult with patients, videoconferences may take place between nurses and pharmacists, and physicians and pharmacists. Videoconferencing may also be arranged with pharmacists once a patient is home, helping to ensure continuity of care, he says.

“While some health system pharmacists may find outsourcing to be threatening, it is empowering,” Roberts says. Rather than eliminate pharmacists, pharmacists are deployed to other areas of the hospital. “Pharmacists are able to work at the top of their game,” he says.

Patients Are Happy

Telepharmacy seems to be well-received. During the pilot phase of its Video Visits program, CVS conducted a study which demonstrated that 95% of patients who opted to receive a telehealth visit were highly satisfied with the quality of care they received. Read more at https://bit.ly/2JjAcLt

Telepharmacy Legislation in the United States


› PILOT PROGRAMS THAT WOULD ENABLE TELEPHARMACY INITIATIVES: Connecticut, Kansas, Michigan, New Jersey, Virginia, Washington

› WAIVERS THAT WOULD ENABLE TELEPHARMACY INITIATIVES: Arizona, California, Maine, Massachusetts, North Carolina

› NO RULES OR LEGISLATION AUTHORIZING TELEPHARMACY USE: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Maryland, Mississippi, Missouri, New Hampshire, New York, Ohio, Oklahoma, Pennsylvania, South Carolina, Rhode Island.

In the inpatient setting, telepharmacy usually involves order entry from a remote site, generally during the hours when the regular pharmacists aren’t on duty. Delta County Memorial Hospital, in Delta, CO, a 50-bed rural hospital, has 24/7 pharmacy coverage since pharmacists from PipelineRx process orders overnight. “We’re able to offer outstanding seamless care when the pharmacy staff is not able to be physically present,” says Philip Neary, PharmD, a clinical pharmacist at the facility.

The remote pharmacists also perform services such as pharmacokinetics, renal assessments, therapeutic interchanges, and IV to oral changes. The overnight pharmacists also check for duplication of therapies, do medication reconciliations, check for patient allergies, and evaluate laboratory results. The PipelineRx platform allows the hospital to collect data, perform clinical interventions, and track cost-savings, says Neary. “These are all activities we might not have been able to justify at a smaller facility.”

In a similar scenario, at Memorial Hospital of Salem County in Salem, NJ, telepharmacists take over when the inpatient pharmacy closes at 10:30 pm., says Jon Margolin, MS, director of pharmacy at the facility. In addition, the telepharmacists answer questions from nurses and other practitioners. “Basically, the remote pharmacists mimic what we do during the day,” says Margolin. “The screening they do allows us to catch more errors in real time. This is huge.”

Margolin hopes telepharmacy will allow the hospital’s pharmacists to expand the services they provide. “It is our goal for pharmacists to be more involved in inpatient counseling, discharge counseling, and be able to go on rounds and respond to hospital emergency codes with other members of the healthcare team,” he says.

Pushing Back on Telepharmacy

Convincing directors of pharmacy in hospital settings to use telepharmacy can be a challenge, says Roberts. “They tend to have more of an entrepreneurial approach. They want the pharmacy to grow bigger with the hiring of more staff, but bigger is not necessarily better.”

There is resistance in the retail setting, as well, says Reading. “There are those who say we’re killing the profession by staffing the pharmacies with technologists expanding to nursing homes, psychiatric facilities surgery centers, and hospital outpatient pharmacies.

Reimbursement for telepharmacy services, and lack of it in many cases, is another barrier. Currently, many of the telehealth payment models involving pharmacists have been implanted in managed care organizations such as Kaiser Permanente.

As the private sector shifts away from fee-for-service in favor of value-based care, there is likely to be increased interest from insurance payers to explore telehealth models, according to the study. “Pharmacists providing care in the outpatient setting through telemedicine models: a narrative review,” published in Pharmacy Practice in 2017.

Legislation is another impediment to telepharmacy. “Since the telepharmacy concept is still in its early growth stages, in many cases, the legislation is not keeping up with the technology,” says Neary.

Roberts agrees. “Our pharmacists are licensed in multiple states and work across multiple sites,” he says. “We need to comply with individual state regulations, some of which are more stringent.”

Convincing directors of pharmacy in hospital settings to use telepharmacy can be a challenge, says Roberts. “They tend to have more of an entrepreneurial approach. They want the pharmacy to grow bigger with the hiring of more staff, but bigger is not necessarily better.”

There is resistance in the retail setting, as well, says Reading. “There are those who say we’re killing the profession by staffing the pharmacies with technologists expanding to nursing homes, psychiatric facilities surgery centers, and hospital outpatient pharmacies.

Reimbursement for telepharmacy services, and lack of it in many cases, is another barrier. Currently, many of the telehealth payment models involving pharmacists have been implanted in managed care organizations such as Kaiser Permanente.

As the private sector shifts away from fee-for-service in favor of value-based care, there is likely to be increased interest from insurance payers to explore telehealth models, according to the study. “Pharmacists providing care in the outpatient setting through telemedicine models: a narrative review,” published in Pharmacy Practice in 2017.

Legislation is another impediment to telepharmacy. “Since the telepharmacy concept is still in its early growth stages, in many cases, the legislation is not keeping up with the technology,” says Neary.

Roberts agrees. “Our pharmacists are licensed in multiple states and work across multiple sites,” he says. “We need to comply with individual state regulations, some of which are more stringent.” Some states, for example, require that a call center be set up; others require that prescriptions be saved for seven years.

On the health system side, telepharmacy is still an underpenetrated market, so has plenty of room to grow, says Roberts. Currently, it is in about 20% of U.S. hospitals, he says.

Down the road, he sees the technologies expanding to nursing homes, psychiatric facilities surgery centers, and hospital outpatient pharmacies.

Kathleen Gannon Longo is a contributing editor.
Invest in something your pharmacy uses all day, every day.

Now, THIS is a Will Call!

And it sends a message to your patients and customers:
- We are organized.
- We care about your safety and privacy
- We use the best technology to serve you better

scripClip™ Will Call – right med, right bag, right patient everytime!

tm

It’s “179” Time!

Don't give your money to Uncle Sam!
Andexxa for Reversal of Factor Xa Inhibitors

Overview
Direct oral anticoagulants (DOACs) have revolutionized the drug market. They allow for less frequent INR sticks, consistent dosing regimens, and food choice flexibility. DOAC bleeding risk occurs at an annual rate of 2.1% to 3.5% and increases during surgical interventions.1

Andexanet alfa (Andexxa, Portola Pharmaceuticals) was approved by the FDA in May for emergency reversal of two direct factor Xa inhibitors, rivaroxaban and apixaban.2 The recombinant coagulation factor Xa protein sequesters their anticoagulation effect. Reversal of edoxaban and the indirect inhibitor enoxaparin is also feasible with andexanet,1 but further data on safety and efficacy is needed.

Efficacy
Andexanet is effective in decreasing the activity of rivaroxaban and apixaban within 2 to 5 minutes of administration. It competitively inhibits the factor Xa active site, blocking obtainable receptors for anticoagulation. It also binds directly and seizes apixaban and rivaroxaban in the vasculature.1

In a two-part randomized controlled trial, anti-factor Xa was decreased 94% and 92% for apixaban- and rivaroxaban-treated patients, respectively, compared to 21% and 11% in the placebo arm. Thrombin generation was more than 95% restored in both populations compared to less than 11% (rivaroxaban) and 7% (apixaban) during placebo restoration.1 In the Andexxa-4 trial, 79% of patients were considered at hemostasis and 18% experienced thrombotic events 12 hours postinfusion. Reinitiating anticoagulation therapy following homeostasis is essential, especially in high thrombotic-risk patients.1

Safety
Evidence of clinical toxic effects is minimal; however, the safety of administering more than one dose has not been evaluated.4 Andexanet alfa is associated with thromboembolic events, ischemic events, cardiac arrest, and sudden death.2 Therefore, its use should be restricted for emergency situations due to life-threatening or uncontrolled bleeding.4

Dosing
Andexanet alfa must be administered intravenously. Dissolution for each vial is approximately 3 to 5 minutes and requires coordination between providers, pharmacists, and nursing staff.4

The effects of andexanet alfa are sustained when dosed as a bolus following an IV infusion.1 Bolus doses are targeted at 30 mg/min followed 2 minutes later by an infusion.4 Effective dosing regimens include:

- **Low dose**: 400 mg IV bolus followed by 4 mg/minute IV infusion for up to 120 minutes.2 Low dose requires 4 vials bolus plus 5 vials for infusion.
- **High dose**: 800 mg IV bolus followed by 8 mg/minute IV infusion for up to 120 minutes.2 High dose requires 8 vials bolus plus 10 vials for infusion.4 See the Supplementary Table for more information.

Dissolution for each vial is approximately 3 to 5 minutes and requires coordination between providers, pharmacists, and nursing staff.4

The effects of andexanet alfa are sustained when dosed as a bolus following an IV infusion.1 Bolus doses are targeted at 30 mg/min followed 2 minutes later by an infusion.4 Effective dosing regimens include:

- **Low dose**: 400 mg IV bolus followed by 4 mg/minute IV infusion for up to 120 minutes.2 Low dose requires 4 vials bolus plus 5 vials for infusion.
- **High dose**: 800 mg IV bolus followed by 8 mg/minute IV infusion for up to 120 minutes.2 High dose requires 8 vials bolus plus 10 vials for infusion.4 See the table for more information.

Dissolution for each vial is approximately 3 to 5 minutes and requires coordination between providers, pharmacists, and nursing staff.4

The effects of andexanet alfa are sustained when dosed as a bolus following an IV infusion.1 Bolus doses are targeted at 30 mg/min followed 2 minutes later by an infusion.4 Effective dosing regimens include:

- **Low dose**: 400 mg IV bolus followed by 4 mg/minute IV infusion for up to 120 minutes.2 Low dose requires 4 vials bolus plus 5 vials for infusion.
- **High dose**: 800 mg IV bolus followed by 8 mg/minute IV infusion for up to 120 minutes.2 High dose requires 8 vials bolus plus 10 vials for infusion.4 See the table for more information.


Erin E. Emonds, PharmD, is a PGY-1 pharmacy resident at UConn John Dempsey Hospital at UConn Health, Farmington, CT

Kevin W. Chamberlin, PharmD, is associate clinical professor and assistant department head of pharmacy practice, UConn School of Pharmacy, Storrs, CT

“**Andexanet alfa is effective in decreasing the activity of rivaroxaban and apixaban within 2 to 5 minutes of administration.”**
Medical Marijuana

The role pharmacists should play with marijuana and cannabinoids.

The closest exposure most pharmacists have to medical marijuana products in their day-to-day practice is likely to be with cannabinoids, such as dronabinol (Marinol, Syndros, THC) or the newly approved cannabidiol (CBD; Purified CBD, Epidiolex), according to William Kirchain, PharmD, CDE, Wilbur and Mildred Robichaux Endowed Professor at Xavier University of Louisiana College of Pharmacy. True medical marijuana, he says, refers to herbal products, which are sold through either marijuana dispensaries or specialty permitted marijuana pharmacies.

CBD and tetrahydrocannabinol (THC) are two natural compounds found in Cannabis, the marijuana plant. CBD does not cause the “high”; that comes from THC, which is the primary psychoactive component of marijuana.

While pharmacists must counsel patients thoroughly when they dispense Epidiolex or Marinol, all pharmacists should also be discussing medical and recreational use of marijuana with all their patients because marijuana can interact poorly with certain prescription medications and over-the-counter medications.

Studies indicate that more Americans are trying marijuana for recreational use and medicinal purposes as laws surrounding marijuana use have become more liberal. At press time, 31 states, and Washington, DC, allow comprehensive public medical marijuana and cannabis programs. Of those, nine have approved marijuana for recreational use.

Each state has its own laws about how patients can access medical marijuana.

In a controversial move, back in June 2018, Oklahoma voters voted to make it legal to use, sell, and grow marijuana for medicinal purposes in a referendum (State Question 788). The referendum passed despite pushback from conservative politicians and law enforcement groups.

Medical marijuana can be marketed and sold in a variety of forms, as the properties of THC and CBD are used to produce a desired therapeutic response, Scott Tomerlin, PharmD, APhA spokesperson. Some of the latest trends in medical marijuana include the use of CBD oil in a variety of topical and oral preparations, he says.

“Other products that have gained popularity over recent years have included the use of hemp seed oil as well as the use of products containing CBD for veterinary use. E-cigarettes and other products which allow CBD to be inhaled in a vapor form, otherwise known as ‘vaping,’ are becoming increasingly popular on the marketplace as well,” he says.

There are more than 40 compounds in common CBD oils and extracts, and these products may vary in potency by a substantial amount even batch to batch. Some states allow use of “low THC, high CBD” products for medical reasons in limited situations.

Marijuana Interactions

Marijuana is metabolized through the liver, primarily through the CYP450 enzyme system, specifically 2C9, and 3A4 pathways, according to Deborah A. Pasko, PharmD, MHA, senior director for Medication Safety and Quality with ASHP.

“Drugs that undergo these same metabolic pathways are at risk of having a drug-drug interaction with marijuana. If the non-THC drug is an inducer it will lower concentrations of THC. If the non-THC drug is an inducer it will lower concentrations of THC. If the non-

Medical Marijuana Use is Increasing

Estimates of past-year marijuana use has increased for middle-aged and older adults, according to a study published in Drug and Alcohol Dependence. The analysis comes from data gathered in the National Survey on Drug Use and Health from 2015 and 2016. About 9% of U.S. adults between ages 50 and 64 used marijuana in the previous year, according to survey results. About 3% of people over 65 used the drug in that time period.

In the 2016 study, almost one-quarter of Americans over age 65 who had used marijuana in the previous year said they received permission from their physicians. A January 2017 research overview published by the National Academies of Science, Engineering, and Medicine, showed that a still small but growing number of studies suggest that marijuana may be helpful in treating pain, nausea, and spasticity.
THC drug is an inhibitor then it will elevate concentrations of THC,” Pasko says. Knowing if a patient is being treated with medical marijuana establishes the opportunity for pharmacists to identify any potential drug interactions, especially if the patient may present with adverse effects that could be attributed to any recent changes in medication or over the counter use,” says Tomerlin. “It is always a good plan for the pharmacist to be fully equipped with as much information that is necessary to provide optimal patient care.”

Shital Mars, CEO of Progressive Care Inc., a healthcare and technology company with services that include medication therapy management, prescription pharmaceuticals, and compounded medications, says marijuana is generally well-tolerated in patients with mild to moderate risks of serious adverse side effects and/or dependence.

However, marijuana does have some notable drug interactions to consider before use. They include:

**Benzodiazepines:**
- Alprazolam (Xanax)
- Diazepam (Valium)
- Lorazepam (Ativan)
- Chlorzoxazone (Librium)
- Triazolam (Halcion)
- Oxazepam (Serax)
- Clonazepam (Klonopin)

**Barbiturates:**
- Mephobarbital (Mebaral)
- Pentobarbital sodium (Nembutal)

**MARIJUANA PRODUCTS**

Smoking is the most common method of consumption of marijuana, but eating food products that contain marijuana (known as edibles) is quickly becoming a popular way to consume the drug. Although still illegal under federal and many state statutes, food products containing marijuana or marijuana extracts are currently common in states that either permit or that have declined to prosecute medical or recreational marijuana, according to the DEA.

“The differences of these products vary considerably based upon who and how the end product is manufactured,” Pasko says. “Marijuana scientists can alter the potency depending upon the section of the plant that is used, and also the total dose of THC in the compound.”

The marketplace for edible and smoked medical marijuana products is continuing to expand, with a plethora of options for patients to consider for use, according to Tomerlin. “Edible marijuana products may have the potential to be more potent than inhalable versions, but these products and the concentrations of THC and CBD can vary widely,” he says.

Smoked/vaped products will produce a more immediate effect on the body because the route through the lungs provides direct access to the blood, Mars says. “However, these effects should generally wear off much quicker than edible products and produce a less-intense psychologic effect even though the absorption of cannabinoids is higher than in edible products.”

Edibles take longer to achieve an effect because of the route through the gastrointestinal tract, according to Mars.

“Generally speaking, the issue is less that the person may die from ingesting too much through an edible, but rather they will be more impaired and may feel ill and experience nausea, vomiting, diarrhea, headaches, dizziness, etc.,” she says. “Pharmacists and physicians should be on the lookout for these side effects so that they can counsel their patients on how to avoid or handle them safety.”

Beyond the inhalable or edible route, topical preparations such as creams containing CBD oil, as well as other products—including lip balms and aromatic incense wicks to name a few—are readily available, according to Tomerlin.
Protease inhibitors:
- Saquinavir (Invirase)
- Ritonavir (Norvir)

Anticoagulants and NSAIDs:
- Ibuprofen
- Diclofenac
- Naproxen (Aleve)
- Aspirin

PDE5 inhibitors:
- Sildenafil (Viagra)

Antihistamines
- Brompheniramine (Dimetane)
- Cetirizine (Zyrtec)
- Chlorpheniramine (Chlor-Trimeton)
- Clemastine (Tavist)
- Diphenhydramine (Benadryl)
- Fexofenadine (Allegra)
- Loratadine (Alavert and Claritin)

Antipsychotics:
- Aripiprazole (Abilify)
- Asenapine (Saphris)
- Cariprazine (Vraylar)
- Clozapine (Clozaril)
- Lurasidone (Latuda)
- Lanzapine (Zyprexa)
- Quetiapine (Seroquel)
- Risperidone (Risperdal)

**WHAT IS EPIDIOLEX?**

Epidiolex is first FDA-approved drug comprised of an active ingredient derived from marijuana. It was approved in June 2018 for treatment of two rare severe forms of pediatric epilepsy.

The DEA gave a Schedule 5 classification to the antiseizure drug, the classification with the lowest degree of restriction, indicating the DEA believes it has a low potential for abuse.

Epidiolex is a purified CBD oil extract, says Kirchain.

Just because there is a drug interaction, however, does not mean that the two substances cannot be used in combination, Mars says. With drug interactions, “it’s important that the doctor and pharmacist monitor harmful side effects or therapy inefficiencies. In many cases with the medications listed above, medical marijuana acts on the enzymes that either inhibit or induce the metabolic rate of the medication, meaning that interaction with medical marijuana can either increase the potency and effectiveness of the medication or decrease it.”

Kirchain says pharmacists should be aware of adverse reactions associated with marijuana use. These include: central nervous system depression, worsening of depression and other psychiatric illnesses, weight gain, and xerostomia.

There can be interactions with contaminants of marijuana products. “Smoked products may increase the risk of respiratory illness, and there have been reports of food-borne illness such as salmonella,” Kirchain says.

Other serious but rare adverse events associated with marijuana use include cannabis hyperemesis syndrome, characterized by recurrent nausea, vomiting, and crampy abdominal pain; cannabis-associated arteritis; and Takotsubo cardiomyopathy (also known as Takotsubo syndrome), a serious condition that includes sudden onset cardiovascular symptoms,” says Kirchain.

Talking to Patients
Pharmacists should use the same approach with THC that they would counseling for any other medication, including discussing risks associated with impairment, toxicities, and long-term side effects, Pasko says.

When counseling patients who are using medical or recreational marijuana, pharmacists should also:

- **Tell patients that it should not be used by pregnant women or women who are breastfeeding.**
- **Warn patients about the use of marijuana, medical or otherwise, in minors.** “In some cases, medical marijuana has been prescribed to children with certain nervous system conditions,” Mars says. “In children, it is important to use medical marijuana with proper supervision and medical professional follow up. Used without such controls can subject a child to risk of psychotic and cognitive impairment conditions later in life.”
- **Be wary of promises that are too good to be true.** “It’s not magic,” Mars says. “There are many places that talk about the medicinal benefits or marijuana; however, one should be wary of promises that are too good to be true. Marijuana does have medicinal benefits that are now being confirmed through controlled clinical trials, but it should not be used a cure-all or catch-all for any condition a patient may have.”
- **Keep a complete medication profile for patients including all OTC, herbal, illicit, and prescription medications.** “Medication management services should be conducted when dispensing any medication,” Pasko says. “There should be a discussion about any other medication that they may be taking that could interact with the medical marijuana.”

Tracey Walker is content manager for Drug Topics’ sister publication, Managed Healthcare Executive.

---

**CLINICAL PRACTICE**

Tracey Walker
Help Seniors Manage Their Meds

The elderly population is growing, and pharmacists need to step up to help them with their healthcare.

Senior patients have unique needs that require a hands-on approach from pharmacists. Perfecting that approach is becoming even more important, as the number of elderly patients who are cared for by pharmacists grows. An estimated 10,000 people turn 65 every day in this country, and by 2030, 18% of the nation will be at least 65, according to the Pew Research Center.

“When you look at the older adult population, they represent about 15% of the U.S. population, but they consume 39% of prescription medications,” says Chad Worz, PharmD, BCGP, CEO of the American Society of Consultant Pharmacists, an organization focused on advancing senior care pharmacy.

“So not only is this population rapidly increasing in numbers, but they are the population that consumes the most medications.”

This translates to a significant opportunity for pharmacists to help patients better manage their medications, and to demonstrate their value as critical members of the healthcare team, Worz says.

“A pharmacist is a great resource for people who are struggling with how many medications they are taking, the cost of the medications they are taking, and the need for an overall manager of those medications.”

Senior Challenges

Jeremy Blais, PharmD, district leader in Connecticut for CVS, says previous research suggests that the average senior patient takes between 13 and 19 medications daily—a figure that’s three times the average for younger patients. Blais says patients, especially those who develop ability issues or visual impairments as they get older, have difficulty keeping track.

Steve MacNeill, RPh, owner of Winchester Pharmacy in Winchester, MA, says pharmacists need to take a highly personalized and customized approach for medication management strategies to be effective for each senior patient. Pharmacists need to fully understand a patient’s living conditions—including issues like whether they are a hoarder, have little outside support, or struggle with memory issues—when designing care plans, he says.

“You have to try to understand where they are coming from first and try to incorporate the program to meet their needs, not telling them how to do it and say you have to follow our process,” he says.

Jeff Kirchner, RPh, CEO of Streu’s Pharmacy Inc., says compliance can be another challenge with this patient population. Most of the elderly population he works closely with believe they are fully adherent; however, they may skip doses from time to time without realizing it.

Senior patients are often also living on a fixed income and may struggle to pay for costly medications, particularly once they’ve reached the doughnut hole, he says.

Strategies to Better Serve

CVS has developed a program called ScriptPath that analyzes a patient’s medication, including chronic and acute medication, and helps pharmacists develop a prescription schedule for patients.

This schedule uses redesigned prescription labels with bright, color-coded instructions that clearly indicate when the medications should be taken.

“The way we designed it, people can actually line their bottles up in their medicine cabinet by time (of dose),” Blais says, adding that the program helps pharmacists set time aside to have more in-depth conversations with patients.

MacNeill uses weekly Omnicell blister cards to help improve medication management for his patients.

“It’s fully customizable, so I can have a patient who takes their meds at 7 a.m., 10 a.m., and noon time, and then a bedtime dose,” he says. “We can put them all on the same card.”
The packaging helps highlight compliance issues and allows for the pharmacist to work closely with a doctor to address any compliance issues that may occur.

For instance, if a patient always forgets to take their 5 p.m. medication, the pharmacist could work with the doctor to discuss changing the dose and having the patient take the medication at 8 p.m. with her other medications instead.

MacNeill says the compliance packaging is hugely successful, with about 85% of patients using the service and an average of 10 new patients a week adding it. Although it’s labor intensive for the pharmacist, he believes it’s a valuable addition.

Kirchner, who also offers blister packaging, saying it helps promote a pharmacy’s value not only to the caregiver, who may not have to spend time each week preparing medications, but to nurses or staff at assisted-living or long-term care centers.

Reducing the number of trips a patient or caregiver needs to take into the pharmacy, whether it’s through a medication synchronization program or compliance program, is also beneficial for those juggling multiple prescriptions.

A Walgreens spokesperson says their patients can take advantage of prescription refill reminders that can be delivered to a cell phone or email address. Walgreens also provides easy-open caps to patients who need them due to arthritis or other joint conditions.

“We also offer our prescription labels in large print to make it easier for patients to read and adhere to vital prescription information such as directions and warnings,” the spokesman says.

Counseling Issues
Kirchner says pharmacists should conduct a comprehensive medication review to determine what medications a patient is taking and which medications they have been prescribed.

“I think in general, when you are starting to deal with people who are older, there’s a little resistance to change. There’s just a lot of anxiety around change, and I think you need to understand that as a pharmacist. Sometimes it’s going to take more than a couple touches to get somebody to do something. It’s probably going to take more time than you think in terms of conversation,” he says.

Conducting a comprehensive medication review also opens the door for a longer conversation between the pharmacist and patient to learn more about their current habits, lifestyle factors, and level of retention that can help pharmacists better prepare a treatment plan.

It also might bring to light whether the patient is struggling to pay for medication, so that the pharmacists can intervene and try to find programs to help with drug costs or reach out to physicians to suggest lower cost options.

To gain an accurate sense of a patient’s understanding regarding medications and current habits, it’s important for pharmacists to ask probing questions such as what kind of side effects a patient is experiencing, how often they take the medication, when they take their medication, and even how long they’ve been on a drug regimen, says Blais.

Pharmacists need to become the quarterback of complex drug regimens, managing multiple prescriptions and multiple providers to be one central hub where a patient or caregiver can come for complete and clear guidance about their treatment plan.

“That really is what sets our profession apart from a pill dispensary,” Blais says “At the end of the day what makes pharmacists special is they are the front lines of healthcare, nobody in the healthcare system sees a patient more than a pharmacist.”

Jill Sederstrom is a contributing editor.
The Best States to Be a Pharmacist

High salaries, low stress, and a good quality of life push Minnesota to No. 1.

There are 3.797 million square miles in the United States of America, and—as of the Bureau of Labor Statistics’ (BLS) last count in May 2017—308,390 pharmacists. Those pharmacists can work anywhere, but not all states are equal when it comes to how well their pharmacists are treated.

We’ve compiled data from several sources to identify the best states for pharmacists. We created rankings for mean annual wage, the number of pharmacists working in the state, the location quotient (the concentration of pharmacists compared to national average, a good indicator of how large the professional community is), the cost of living, overall state crime statistics, pharmacy robbery rates (including armed robbery, employee pilferage, and night break-ins), well-being (how the state stacks up as a whole on a combination of happiness, security, and comfort), state health insurance rates, pharmacy job openings, financial savviness (how well people in the state manage their money), stress levels (including stress related to work, family, money, and safety), and the state’s average education levels.

To make this list, we ranked how each state performed compared to the other 49 states based on the 12 different metrics. The best states ranked #1, the worst ranked #50.

We then added up those numbers for a total score, with the best states getting the lowest total scores.

**10. New Jersey**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean annual wage:</td>
<td>42 ($115,110)</td>
</tr>
<tr>
<td>Number of pharmacists:</td>
<td>9</td>
</tr>
<tr>
<td>Location quotient:</td>
<td>17</td>
</tr>
<tr>
<td>Cost of living:</td>
<td>40</td>
</tr>
<tr>
<td>Overall state crime statistics:</td>
<td>4</td>
</tr>
<tr>
<td>Pharmacy robbery rates:</td>
<td>28</td>
</tr>
<tr>
<td>Well-being:</td>
<td>23</td>
</tr>
<tr>
<td>State population’s health insurance rates:</td>
<td>25</td>
</tr>
<tr>
<td>Pharmacy job openings:</td>
<td>47</td>
</tr>
<tr>
<td>Financial savviness:</td>
<td>5</td>
</tr>
<tr>
<td>Stress:</td>
<td>10</td>
</tr>
<tr>
<td>Education:</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total:** 252

New Jersey is in the bottom 10 for total salary, but the state’s financial savviness indicates that New Jersey residents know how to stretch a dollar. Overall crime statistics are low, and pharmacy robbery rates are in the middle of the pack.

Allan Ginsberg, RPh, MHA, CMTM, a retired pharmacist who worked in New Jersey, says that his state’s connections are what make it thrive. “New Jersey has a diverse working environment. North Jersey relates more to New York; South Jersey is more closely associated with Philadelphia; while the lower part of South Jersey relates to Delaware. However, what New Jersey has in common is the relative proximity to miles of beautiful beaches. New Jersey is also the link between historical and cultural places in Pennsylvania and New York.”

**9. Nebraska**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean annual wage:</td>
<td>47 ($113,720)</td>
</tr>
<tr>
<td>Number of pharmacists:</td>
<td>36</td>
</tr>
<tr>
<td>Location quotient:</td>
<td>10</td>
</tr>
<tr>
<td>Cost of living:</td>
<td>5</td>
</tr>
<tr>
<td>Crime statistics:</td>
<td>27</td>
</tr>
<tr>
<td>Pharmacy robbery rates:</td>
<td>23</td>
</tr>
<tr>
<td>Well-being:</td>
<td>15</td>
</tr>
<tr>
<td>Health insurance rates:</td>
<td>29</td>
</tr>
<tr>
<td>Job openings:</td>
<td>17</td>
</tr>
<tr>
<td>Financial savviness:</td>
<td>12</td>
</tr>
<tr>
<td>Stress:</td>
<td>6</td>
</tr>
<tr>
<td>Education:</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total:** 233

Pharmacists in Nebraska are toward the bottom of the national rankings for their annual salary, but a good cost-of-living, a low stress level, and higher education levels secure its rank of number nine position on our list.

**8. Connecticut**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean wage:</td>
<td>14 ($123,610)</td>
</tr>
<tr>
<td>Number of pharmacists:</td>
<td>32</td>
</tr>
<tr>
<td>Location quotient:</td>
<td>48</td>
</tr>
<tr>
<td>Cost of living:</td>
<td>43</td>
</tr>
<tr>
<td>Crime statistics:</td>
<td>8</td>
</tr>
<tr>
<td>Pharmacy robbery rates:</td>
<td>1</td>
</tr>
<tr>
<td>Well-being:</td>
<td>35</td>
</tr>
<tr>
<td>Health insurance rates:</td>
<td>7</td>
</tr>
<tr>
<td>Job openings:</td>
<td>17</td>
</tr>
<tr>
<td>Financial savviness:</td>
<td>3</td>
</tr>
</tbody>
</table>

Robert Elsenpeter
Like several other states, Connecticut had no pharmacy robberies in 2017 and overall crime statistics are relatively low. Education levels are high and stress levels are somewhat low.

Lisa Holle, PharmD, BCOP, FHOPA, associate clinical professor at the University of Connecticut School of Pharmacy, says her state offers pharmacists many opportunities to practice at the top of their license. “Pharmacists working in Connecticut have many opportunities because of the long history of active involvement in healthcare legislative advocacy. This advocacy helps not only for the role of the pharmacist, but also to ensure appropriate reimbursement for pharmacy services and access to healthcare for Connecticut’s residents. Connecticut has shown its commitment to allowing pharmacists to play an active role in delivering healthcare. Legislation allows collaborative practice agreement with providers, the ability of pharmacists to order and dispense naloxone to any member of the community, and a mandate that pharmacists be the dispensers of medical marijuana. Activities like these are some of the many reasons why Connecticut is one of the best states to practice pharmacy.”

Pharmacists in New Hampshire earned $15,000 more than pharmacists in Iowa and came in No. 2 with financial savvy, which means that they can do even more with that extra money.

6. Iowa (tie)
Mean wage: 49 ($112,390)
Number of pharmacists: 30
Location quotient: 30
Cost of living: 3
Crime statistics: 16
Pharmacy robbery rates: 31
Well-being: 19
Health insurance rates: 5
Job openings: 17
Financial savviness: 11
Stress: 3
Education: 8
Total: 222

Though they have the second-to-worst salary in the nation (Utah is last), pharmacists in Iowa enjoy a low cost-of-living, low stress rates, and a relatively high level of health insurance.

5. South Dakota
Mean wage: 39 ($115,370)
Number of pharmacists: 43
Location quotient: 3
Cost of living: 11
Crime statistics: 28
Pharmacy robbery rates: 1
Well-being: 3
Health insurance rates: 32
Job openings: 17
Financial savviness: 25
Stress: 4
Education: 13
Total: 219

While salaries in South Dakota are somewhat low, the rest of its metrics boost it into the top 10. For instance, there were no pharmacy robberies reported in 2017, the overall state’s well-being is number three, and stress levels are reasonably low.

4. Massachusetts
Mean wage: 36 ($116,820)
Number of pharmacists: 12
Location quotient: 21
Cost of living: 47
Crime statistics: 7
Pharmacy robbery rates: 20
Well-being: 13
Health insurance rates: 1
Job openings: 45
Financial savviness: 1
Stress: 14
Education: 1
Total: 218

Massachusetts is the highest-ranked state in our list where the salary is less than $120,000 per year. Education, financial savviness, and health insurance rates are high enough to put Massachusetts in the number four position.
It might be cold in Minnesota, but there is a lot going on in terms of quality-of-life and professional opportunity. The state boasts the lowest amount of stress, and pharmacists enjoy a salary in the top 10.

Stephen Schondelmeyer, PharmD, PhD, director of the PRIME Institute College of Pharmacy at the University of Minnesota, boasts about not only his state’s working conditions, but the great impact Minnesota pharmacists have had on pharmacy as a whole. “Pharmacists in Minnesota not only shaped the definition of pharmaceutical care and medication management, but they have also put the pharmacist’s patient care process into practice. The University of Minnesota College of Pharmacy (the only pharmacy school in the state) teaches pharmacy practice based on the pharmaceutical care model and integrates it throughout the PharmD curriculum. As Minnesota graduates have entered into practice in community pharmacies, health systems, long-term care, managed care, and other settings, they have implemented and practiced medication management and they have expanded the role of the pharmacist in serving the needs of patients. As other pharmacists have come into Minnesota for residencies or to practice, they are welcomed and engaged in institutional, corporate, and professional settings that have established the pharmacist’s patient care process as the way of pharmacy practice.”

Sources for the Metrics:
BLS: Mean wage, number of pharmacists, and location quotient; U.S. News & World Report: Cost of living, overall crime statistics, well-being, health insurance rates, and education level; DEA: Pharmacy robbery statistics; Pharmacy Demand Indicator: Job openings; WalletHub: Financial savviness, stress.

Robert Elsenpeter is a freelance writer from Minnesota.
Stay informed on issues and events in pharmacy practice

DrugTopics.com
Voice of the Pharmacist

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

- 2018 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
Remember that class in pharmacy school about how to be an effective manager? No? Neither do I.

Typically, pharmacists have very little (if any) real training for the demands of managing a pharmacy. While pharmacy school does a great job preparing us for clinical questions related to drug therapy, there’s typically no course on the basic skills and habits needed to be a real-life manager.

I have been in pharmacy management and leadership roles for 20 years. While it is impossible to condense down all I have learned into a brief article, here is some advice I have for every pharmacy manager.

1. Learn New Skills. In your role as manager you will learn a lot of your responsibilities on the fly. These may include reporting, scheduling, conference calls, annual reviews, inventories, audits, and corrective actions. Take each of these responsibilities as they come and begin to work them into a management routine.

2. Delegate. If I failed in one area early on in my pharmacy management career, it was this. I wanted to do it all myself. But delegation shows you trust your team, allows others to contribute, and is a useful way to determine who your star performers are. Be clear when you delegate, and follow up.

3. Have One-on-Ones. This can be very hard in certain pharmacy settings, like retail. Scheduling doesn’t typically provide much room for sit-down conversations. But I assure you that even brief, well-planned, regular one-on-ones with your team will prevent and solve more problems—and will also position you as a great leader.

4. Measure Your Team’s Success. Some things, like employee or patient satisfaction, are less tangible than others. But most of the metrics that constitute a well-run pharmacy can be measured in some way. How many prescriptions were transferred out versus in this month? What was your average prescription volume? Determine the most critical performance indicators for your business and start to track them.

5. Build Relationships. Management is about much more than getting certain things done. You are a leader. And leaders build great relationships both internally and externally. You should get to know the community you serve in, get to know key stakeholders within your company and in the area you work, visit local doctors, and develop great opportunities for collaboration with them.

6. Inspire Others to Excel. Pharmacy can be a draining, exhausting, and sometimes frustrating profession. As a manager, people will look to you as the one who sets the emotional tone for the pharmacy. Are you constantly complaining, grumpy, and angry? Expect the staff to be the same. But if you focus on the positive, give praise, aim high, and remind everyone that you are involved in an important work, then the mood of the pharmacy will improve. Positive attitudes tend to be more productive as well.

7. Find a Mentor. Finally, and maybe most importantly, get a mentor. Find someone, ideally within the organization, who has been a model manager and leader. Ask them to serve as a mentor and bounce questions and scenarios off of them on a regular basis. Be respectful of their time, but don’t be too shy either. Learn from them and your pharmacy management career will develop rapidly.

Jason Poquette, RPh, is a director of outpatient and specialty pharmacy services at St. Vincent Hospital in Worcester, MA.
Independent community pharmacies are operating under what may appear to be perfect storm conditions. Squeezed by rising drug costs, declining reimbursement rates, and increasing competition, they’re battling choppy seas in search of new and diverse revenue streams.

But there is a ray of sunshine. As the healthcare system shifts to value-based payments, the role of the pharmacist as a dispenser of prescriptions is evolving to one of total healthcare provider.

It’s a logical extension of what pharmacists already do, and an opportunity they need to take advantage of, says Patrick Devereux, PharmD, RPh, president of Family Medical Services (FMS) Pharmacy in Bessemer, AL.

“The pharmacies that are going to be sustainable in business—and this applies to chains and independents—are the ones that embrace a model of clinical services to improve patient outcomes and not solely rely on dispensing,” he says.

For Devereux and many other community pharmacists, adding diabetes education to the clinical services they offer to patients is a particularly compelling option.

**Diabetes by the Numbers**
One-and-a-half million Americans are diagnosed with diabetes every year, according to the American Diabetes Association (ADA), and 30.3 million are already living with it, either knowingly (23.1 million) or unknowingly (7.2 million). Another 84.1 million Americans have a diagnosis of prediabetes. That’s roughly 116 million potential candidates for either diabetes self-management education and support (DSMES) or a diabetes prevention program (DPP).

Translating those statistics into dollars and cents is an eye opener. Earlier this year the ADA announced that diabetes is now the most costly chronic illness in the country, with expenses totaling...
The pharmacies that are going to be sustainable in business—and this applies to chains and independents—are the ones that embrace a model of clinical services to improve patient outcomes and not solely rely on dispensing.”

PATRICK DEVEREUX
PHARMD

Studies Show Diabetes Self-Management Education Works

A 2016 review of medical literature published in *Patient Education and Counseling* found that diabetes self-management education works for people with type 2 diabetes. The review looked at 18 unique interventions and found that 61.9% of them reported significant changes in A1c levels. Overall mean reduction in A1c was 0.74 and 0.17 for intervention and control groups, with an average absolute reduction in A1c of 0.57. The largest decreases in A1c (0.88) were seen with a combination of group and individual engagement. Interventions that had 10 or more contact hours were associated with a greater proportion of significant reduction in A1c (70.3%). In patients with persistently elevated glycemic values (A1c>9), a greater proportion of studies found statistically significant reduction in A1c (63.9%). The study can be found at https://bit.ly/2NAZMfr.

A study of an interprofessional program in a community pharmacy setting looked at 309 patients with diabetes who were seen over a 16 month period. Of these, 120 patients completed a 10-hour diabetes training program. Clinical outcomes showed an improvement in A1c from 9.1 before enrollment to 7.5 after the program, and a drop in body mass index from 35.7 before enrollment to 32.4 after the program. The pharmacy was also able to increase its reimbursement for the services provided. The study appeared in *Innovations in Pharmacy* and can be found at https://bit.ly/2A6wAte.

$327 billion in 2017. Medical expenses for people with diagnosed diabetes average $16,752 per year, with $9,601 of that directly attributed to the condition itself.

“The data indicate one of every four healthcare dollars is incurred by someone with diagnosed diabetes, and one of every seven healthcare dollars is spent directly treating diabetes and its complications,” the ADA says.

Many of those dollars are already being spent in independent pharmacies, where statistics from the Hamacher Resource Group show that diabetes care is the top-selling category, garnering almost 40% of sales.

The 2017 National Standards for Diabetes Self-Management Education and Support states that DSMES is a critical component of diabetes clinical services. Pharmacists have medication expertise that makes them key players in helping patients manage their health. Several studies have revealed the significant impact pharmacy-based DSMES programs can have on lowering A1c levels. Unfortunately, only 5% to 7% of individuals eligible for DSMES through Medicare or private insurance take advantage of it, according to the ADA.

**Getting Started**

Pharmacists considering adding diabetes clinical services to their offerings should apply the same due diligence they would to any important business decision. DeAnn Mullins, BPharm, RPh, CDE, the owner/operator of Mullins Pharmacy and WeCare Diabetes Education Program in Lynn Haven, FL, offers a list of questions to get started:

- Why do you want to provide diabetes clinical services?
- What are your goals?
- What are the needs in your community?
- Are there established and successful DSMES programs in your area?
- Is the local health department offering an accredited program for free?
- How can you work with health departments and local hospitals?
- Are you going to bill Medicare, or will you offer classes for free?

“Some pharmacists say they want to get into the diabetes niche when they really just want to have a sugar-free candy aisle, a wall of brochures, maybe beef up their counseling at the counter, or counsel individual patients one at a time,” Mullins says. Other pharmacists want a program that’s recognized by the ADA or accredited by the American Association of Diabetes Educators (AADE). There are more than 2,000 ADA-recognized and AADE-accredited DSMES program sites in the U.S.

“Accreditation shows that you have a formal structure in place, that you are using evidence-based guidelines in the delivery of your program and content, that you’re following quality standards, and that you’re doing continuous quality improvement,” she says.
improvement,” explains AADE Director of Accreditation Jodi Lavin-Tompkins, MSN, RN, CDE, BC-ADM.

David Pope, PharmD, CDE, a Drug Topics editorial advisor and a cofounder of Strand, a company that helps community pharmacists launch clinical services, notes becoming certified can take a long time.

Before starting the accreditation process, there are many ways pharmacists can engage with and gauge the interest of patients and physicians. “If a patient comes in and you check an A1c, you can do a blood sugar or blood pressure test, set goals for that patient, and communicate that directly into the electronic health record of the physician,” Pope suggests.

If patient and physician feedback is positive, the next step—actually getting reimbursed for diabetes education—requires accreditation through ADA or AADE. “Before you can bill anyone, you have to be able to show that you have a standard in place, that you have structure and organization, that you have a means of being able to reach outside your organization to receive feedback through an advisory committee, and other specific steps with documentation and education,” explains Pope. He emphasizes the importance of establishing a standard of quality upfront since that’s what healthcare pays for now.

The path to accreditation includes completing paperwork, creating a teaching manual, taking one patient through an educational program, documenting appropriately, and communicating to the provider. The pharmacist then completes the ADA or AADE application and interviews with the appropriate organization.

“It’s arduous—it can be up to a two-year process—but it can be done,” says Pope.

**Diabetes Education in Practice**

Ryan Lindenau, PharmD, coordinates an AADE-accredited diabetes education program. Out of the 40 patients, we might successfully bill only 25. But we’re potentially gaining some new customers who don’t normally fill their scripts at our pharmacy.”

---

**Top 4 Misconceptions About Pharmacy-Based Diabetes Education Programs**

- **You must be a Certified Diabetes Educator (CDE) to be accredited or bill for diabetes education.**
  The standards for diabetes education set by the ADA and AADE are very clear that a CDE designation is not required. Medicare is not as clear, according to many frustrated pharmacists. Devereux reports that initially it took months to sort out payment with Medicare because he wasn’t billing under an NPI number like a CDE would. He notes that pharmacies and hospitals go through the same accreditation process, but pharmacies consistently have problems with reimbursements.

- **A diabetes education program requires a team of experts (RN, CDE, RPh, nutritionist) to be recognized or accredited.**
  Not true. In fact, Lavin-Tompkins of AADE says the only requirement is that there is at least one pharmacist, nurse, or dietician as an instructor. However, she admits that having a CDE onboard adds a certain cachet to the program. “It shows that you have a certain level of expertise and skill,” she explains.

- **Local physicians will automatically refer patients to your program.**
  On the contrary, it is critical to develop good partnerships with local physicians and educate them about the services you’re offering. Mullins recalls that she was recruited by a group of physicians in 1999 to teach an ADA-recognized diabetes education class for their practice. Eventually, it led to her becoming a CDE. “The more collaborative practice opportunities you have, the sooner you can act on clinical decision making,” she says.

- **Patients will pay out of pocket.**
  Not necessarily, so pharmacists need to decide whether they will charge patients who are uninsured. “We do not because we don’t turn anyone away and we want to make sure that we’re offering care to everybody who needs it,” says Lindenau. In fact, Pope suggests that one way to initially engage with people with diabetes is to offer a simple, regularly-scheduled diabetes class inside the pharmacy and not bill for it. “Focus on being the subject matter expert in your area,” he recommends.
tion program out of Middleport Family Health Center in western New York State. It serves about 40 patients a year in four different locations. The four-week sessions are based on the pharmacy’s own curriculum adapted from AADE resources.

“If we have somebody who wants to take diabetes classes, the first thing we do is send a provider information sheet to their doctor to explain the class. They sign the form and fax it back to us for our files,” Lindenau says.

Pharmacists don’t have provider status in New York, and collaborative practice agreements are restricted to teaching hospitals, so Lindenau says developing strong relationships with local providers is important to the success of the program. Doctor referrals account for about 25% of class participants, with an equal number coming from word of mouth. The other half of the class is typically made up of customers who learn about the program from pharmacy staff.

Before classes begin, Lindenau or one of the two PGY1 residents who work with him meet with the patient one-on-one to review lab work, do a medication therapy review, set testing goals, and make recommendations to their doctor.

The classes, which run two hours each and meet four times, are taught by Lindenau, a clinical pharmacist, or one of the residents. Topics include background information on diabetes, including treatment goals, self-monitored blood glucose testing goals, and education; underlying diabetes pathophysiology and common comorbidities; healthy lifestyle coaching that covers diet and exercise; medication management, including a review of diabetes medications on the market with an emphasis on therapies the students are currently taking and an adherence assessment; a review of diabetes complications and risks; and a discussion of diabetes, depression, and stress management.

Once students have completed the class, they are contacted by an instructor for follow-up sessions at six months and one year to assess their progress.

Return on Investment
Lindenau reports that the program, which began in 2012, has delivered a good return on the pharmacy’s investment, in part because using PGY1 residents cuts down on some of the operational costs. The rate of return runs about $50 to $60 per insured person per class, and Lindenau says it usually takes only five to 10 successfully billed patients each year to come out ahead financially. Billing is done directly through a patient’s medical benefit, the same as for any other covered DME.

“Out of the 40 patients, we might successfully bill only 25,” he says, explaining that not all patient managed care plans are contracted with the pharmacy to bill for DME that include diabetes disease state education. Because pharmacists in New York lack provider status, some commercial plans deny claims because they don’t recognize pharmacy as a place of service for DSMES.

“But we’re potentially gaining some new customers who don’t normally fill their scripts at our pharmacy,” Lindenau says. “And there’s not a class that goes by that one or more patients aren’t asking the pharmacist about a vitamin or supplement or moisturizer. They usually buy something, so we’re profiting from that perspective.”

Trickle-down Effects
All pharmacists interviewed for this article agree that reimbursement for diabetes education programs is still low compared to the quality of the services they deliver. However, they also concurred that it’s enough to offset the costs of developing the program.

Devereux advises pharmacists who are on the fence to look at the big picture and not to underestimate the power of branding.

“You have to look at it from a revenue perspective and from a branding and customer loyalty perspective,” he says. “The argument I used to hear was, ‘You don’t want patients to get off medicine, right? That’s your business.’ Well, maybe, but then again wouldn’t you rather have sustainable revenue coming in that doesn’t depend on dispensing a prescription? Patients are healthy and they’re coming to you for things to prevent other health issues and to eat healthy and take vitamins—things that you sell that don’t involve a drug.”

After almost 20 years in diabetes education, Mullins has developed her own perspective on what makes a successful program. “Your curriculum and belief about education are just as important as financial viability unless you are in a health system or other type of market where patients and referring providers don’t have a choice [of which pharmacies they visit],” she says. “But if you’re really out there as an entrepreneur, you better have good outcomes, and curriculum is a huge piece of that. Your approach to how you help people along this journey and how you personalize it make it meaningful.”

Beth Longware Duff is a contributing editor.
Simply handing over a sheet of dense safety information or quickly firing off a list of medication instructions isn’t going to be enough for many patients. The National Assessment of Adult Literacy, which was published in 2006—and is the only national data on health literacy skills, according to the CDC—found that only 12% of U.S. adults were proficient in health literacy. The assessment also found that more than one-third of adults would have difficulty with common health tasks, such as following the directions on a prescription drug label.

No matter how you present patients with information, using simple communication techniques can help them understand the important tips you have for them. Here are a few easy tips to help improve your ability to communicate in plain language.

**Use an Analogy**
For example, when I first began practicing, my director of pharmacy told me he always used the idea of holding his thumb over a firehose and altering its position to explain the concept of high blood pressure and how diuretics work to lower blood pressure. Another example would be comparing how a bacteriostatic antibiotic fights infection to running defense on a football field: You can keep the offensive line (bacteria) at bay, but it doesn’t necessarily make them go away.

**Explain the Why**
We all have a natural tendency to misunderstand something because we stop listening if we don’t see the value in the topic presented. Would you pay attention to your pharmacist’s instructions on how to take that new green pill if you didn’t know what it was for or how it could help improve your health? It’s much easier to hold a person’s attention and help them grasp concepts once you establish the importance or the need.

**Take the Makeup Artist’s Approach**
Less is more. If you give the patient too much information at one time, no matter their level of competency, you will lose them and may even confuse them. Focus on illustrating the big concepts and provide important details sparingly based on your assessments of the patient’s level of engagement and understanding.

**Make it Kid Friendly**
Ask yourself, “Would my third-grader understand this concept given my current word choice?” If not, you probably need to scale back and consider using simpler language. Imagine explaining the concept to your neighbor or to one of your friends and apply a similarly casual approach to communicating with your patient. Just make sure you talk to the patient and not at them.

**Be Culturally Sensitive**
Whether you are speaking to a patient in English, Spanish, or another language, it’s important to consider how cultural habits and communication may affect a patient’s understanding of your information. It may also alter the information you choose to focus on during your consultation.

Plain Isn’t Bad
Understand that communicating in plain language does not mean you are dumbing down your speech or your own intellect. In fact, some data show that the higher the level of education, the more likely people are to want to read content in plain language.

At the end of the day, communication is about human connection.

---

Frieda Wiley, PharmD, BCGP, is a writer living in the Cincinnati, OH, area.

---

**Image Description:**
The image contains a pie chart titled “Health Literacy in America.” The chart categorizes the population into levels of health literacy: 12% Proficient Health Literacy, 53% Intermediate Health Literacy, and 35% Basic Health Literacy. The chart is labeled with “101% due to rounding.”

---

**Source:** “The Health Literacy of America’s Adults,” based on the National Assessment of Adult Literacy by the U.S. Department of Education.
Community pharmacies can improve how well they care for their patients and their bottom line by providing enhanced services. These services can help keep patients out of the emergency room or hospital, and, in some instances, the pharmacist can be reimbursed for them.

There are nine ways community pharmacies can profitably implement enhanced services, says Bruce Kneeland, a community pharmacy consultant based in Prescott, AZ, who presented at the NCPA 2018 Annual Convention in Boston in October. “If you don’t do this, other healthcare providers will,” he notes. Other pharmacies, nursing services, and telephone-based providers are already on board with these services, he adds.

The nine services are:
- Enhanced delivery
- Immunizations
- Medication therapy management (MTM)
- Medication synchronization
- Adherence or convenience packaging
- Medicare plan selection
- Point-of-care testing
- Nutrition
- eCare capability

During his talk, Kneeland gave examples of how real pharmacies are providing each of these services. The Community Pharmacy Enhanced Services Network uses a similar list of services it considers enhanced, such as enhanced coordination between the pharmacist and other healthcare providers and additional monitoring of patients.

Many of these services, notably MTM and medication reconciliation, are already doing with many of their patients, Kneeland says. “Most independent pharmacies would qualify without needing to do too much.” Medicare reimburses for MTM, he notes.

Some enhanced patient care services are extensions of programs a community pharmacy may already have in place. For example, enhanced delivery means that not only is the prescription delivered to the patient, but the delivery person speaks with the patient or caregiver to see if there are any issues regarding the prescription or other problems. The delivery person may even carry a mobile phone or tablet that allows the patient to speak with the pharmacist, Kneeland says. And the car or van used for delivery has the pharmacy logo on the side and serves as a rolling advertisement, he adds.

Immunizations are another area where pharmacies can enhance patient care and their revenue stream, he says. Although one in four vaccinations are now done in a pharmacy, most pharmacies miss 70% of their vaccination revenue, he notes. “Year-round vaccinations could earn your pharmacy an extra $38,000 per year.”

Medicare plan selection

Pharmacists should also consider helping customers with Medicare Part D plan selection. Kneeland says. The pharmacist or pharmacy staff can plug information about the person’s medications into a computer program and the program shows the customer which locally available plan will offer him or her the best coverage, he says. There are 41 million people on a Medicare plan, with the average enrollee having a potentially confusing choice of 26 Part D plans and 16 Advantage plans, he notes. Enrollees often choose a new plan each year, which means they would be repeat customers for this service.

Some pharmacies are already offering point-of-care testing as an enhanced service, including tests for strep throat or the flu. But Kneeland notes that pharmacogenomics testing is now being offered in pharmacies, as well as saliva tests for hormone levels. Pharmacogenomics testing allows pharmacists to advise physicians on what drugs might not work or carry greater risk of adverse reactions for a given patient.

Almost all pharmacies carry lines of vitamins and dietary supplements, but nutrition is an area where pharmacists can offer greater levels of advice and counseling, especially when it comes to drugs that might deplete levels of certain nutrients, Kneeland says. Pharmacists can become a patient-focused practice rather than product-focused one, he adds, by combining testing, counseling, and clinics for diabetes nutritional advice or weight loss.

What can help tie all these enhanced services together is pharmacy e-care, which can tie pharmacists into patients’ electronic health records, he says. Pharmacy e-care can bring in the patient’s information, including prescription records, payer information, medical history, medication therapy problems, care coordination, and the patient’s own goals.
Whether you call it convenience packaging, compliance packaging, or adherence packaging, community pharmacies should consider offering this service to their patients, and marketing it to other healthcare providers, patients’ caregivers, and to health facilities. A panel discussion on convenience packaging, held at the NCPA 2018 Annual Convention in Boston in October, looked at three aspects of the subject: the common types of packaging, marketing the service, and best practices.

Convenience packaging prepacks a patient’s medications into blister packs or packets, portioned out and marked with the time of day they should be taken. It can be a profitable opportunity because it allows the pharmacy to make a complex regimen of medications easier for patients and caregivers, presenter Steve MacNeill, RPh, told Drug Topics in an interview before the meeting. MacNeill is owner of Winchester Pharmacy in Winchester, MA.

Packaging systems for medications include hot seal, cold seal, robotic technology, daily dose packs, and multidose bubbles, said presenter Carlie Traylor, PharmD, associate director of strategic initiatives. Systems are available that seal the pills and capsules into card-backed blister packs, either as daily dose packs or monthly packs, with some allowing for multiple pills in each blister. Other systems place medications into small packets that are labeled and sealed, with some creating a continuous strip of packets.

Staff training and equipment required varies with the type of system, ranging from smaller systems taking up part of a counter to some larger robotic systems taking up floor and office space. Robotic systems might be best suited for pharmacies that have already been doing compliance packaging on a smaller scale, she said.

MacNeill agreed, noting that there are many systems out there and no one system is right for every pharmacy. He also stressed that a community pharmacy has to start slowly with convenience or adherence packaging, noting that pharmacists should consider:

- The potential impact on their daily work flow,
- The cost,
- The appearance of the software interface,
- How the staff will be trained, and
- State and federal guidelines.

Benjamin McNabb, PharmD, owner of Love Oak Pharmacy in Eastland, TX, noted that his patients who get prepacked medications take an average of 11 prescriptions a month and are often willing to pay the nonpreferred pharmacy copays at his pharmacy because of the extra value they are getting. As patients with complex conditions, they often need other products and services from the pharmacy, he adds.

Jeff Kirchner, RPh, CEO, Streu’s Pharmacy Bay Natural, Green Bay, WI, noted that he provides convenience packaging for children because local schools have rules against kids having a whole bottle of medications with them.

The packaging service does not sell itself, McNabb noted. It has to be marketed to patients and the community at large with a compelling message. A promotional video he created for his pharmacy’s blog ended up being used on a Texas television station after a Cowboys football game. Within days, the number of people asking for the service multiplied.

Kirchner recommends creating a brochure about compliance packaging, along with samples of the packets or blister cards. His pharmacy offers single-dose, multidose, weekly, and monthly compliance packs.

There is a time element that has to be built into this kind of packaging, Kirchner added. You have to synch all medications, bill seven to 10 days before the start date of the next pack, check for any needed refills 20 to 30 days before the next pack, and fill meds five to seven days ahead, he said. Then home delivery should be done three to five days before the patient needs to start that pack.

Valerie DeBenedette is managed editor of Drug Topics.
Patient visits with physicians are jam-packed with things to discuss and interventions to perform; adult vaccinations can be missed in this process. Pharmacies can fill the gap, but a new report highlights barriers that need to be addressed first.

The study, published in the July issue of *Vaccine*, reviewed the role of U.S. pharmacies in administering vaccines and what barriers exist to their administration in pharmacies. Nearly 2,000 community pharmacies were studied 2016, and 79.5% reported offering at least one type of vaccine.

Pharmacies most commonly offered influenza vaccine, followed by pneumococcal 13-valent conjugate vaccine, herpes zoster vaccine, and pneumococcal polysaccharide vaccine. Two-thirds of the pharmacies polled also provided vaccination to teens in addition to adults.

Common Barriers
The report revealed several reasons why patients often had to be referred outside the pharmacy for vaccination, including the patient’s insurance not covering pharmacy administration, and patient age not being approved for pharmacy administration.

Brandon J. Patterson, PharmD, PhD, manager of U.S. Health Outcomes and Epidemiology at GSK and coauthor of the study, says the findings highlight the progress that has been made in advancing pharmacy-based immunizations as an additional access point for patients.

Pharmacists play an important role in vaccine education and vaccine recommendations, providing access to immunization services, and administering vaccines, says Patterson and coauthor Philip Buck, PhD, MPH, head of U.S. Health Outcomes and Vaccines at GSK.

The scope of what pharmacies are able to offer varied by pharmacy and location, the report noted, particularly when it came to the maintenance of immunization registries. Insurance policies affecting coverage of vaccines and different rates of copay between pharmacies and physician offices continue to act as barriers, according to Patterson and Buck.

“Barriers to vaccination are often due to cost to patients or lack of insurance coverage. Additional strategies are needed to remind patients about the value and importance of vaccinations, especially for vaccines with multiple doses,” Patterson says. “Increasing the use of immunization registries within and accessible across states is also needed to improve the services.”

Communication Is Key
Pharmacies can help increase vaccine rates by reinforcing vaccine recommendations to patients and by helping to complete immunization series, say Patterson and Buck. Physicians can help by communicating to pharmacists how they would like to receive documentation of vaccine administrations.

“Ideally, communication between pharmacists and other providers should be a two-way process with physicians providing a referral to the pharmacy and the pharmacy closing the loop documenting and sending confirmation back to the patient’s primary care provider,” Patterson says. “Both groups need to report vaccinations administered to the immunization registry and utilize the registry in assessing patient immunization status.”

Patterson and Buck say they hope the report will motivate additional efforts to address provider and patient barriers that hinder the optimization of the pharmacist’s role in immunization.
When the Health Insurance Portability and Accountability Act (HIPAA) of 1996 was first enacted, federal and state governments made little effort to enforce the rules. But in recent years and as related legislation has been passed, more covered entities—including pharmacies—are being held accountable for upholding the act’s requirements.

Pharmacies may be subject to an audit or investigation by the Office for Civil Rights (OCR) that could result in significant fines or corrective actions. Pharmacies that violate HIPAA and expose protected health information (PHI) could open themselves up to a costly lawsuit.

“One thing we have seen over the last three or four years is these investigations have led to multimillion dollar fines,” says Joshua Potter, director of compliance for PRS Pharmacy Services, a pharmacy consulting company. “We’ve also seen patients actually suing covered entities, pharmacies included, when there has been a breach.”

More than ever, pharmacies need to evaluate their policies and procedures, learn how to avoid potential violations, educate pharmacy staff, and implement policies that dictate a course of action if a violation occurs. “The major concern with HIPAA is, in today’s environment, health information is considered highly protected,” says Angelo J. Cifaldi, RPh, an attorney at Wilentz, Goldman and Spitzer P.A., a law firm based in Woodbridge, NJ. “In light of HIPAA and all the responsibilities pharmacists have, they have to be cognizant of everything they do to make sure they are protecting that information.”

**Financial Consequences**
OCR has received more than 186,453 HIPAA complaints since 2003. The office has investigated and resolved 26,152 cases that required corrective actions or changes to privacy practices, and has settled or imposed fines for violations in 55 cases, totaling more than $78 million.

In 2010, Rite Aid Corporation and its 40 affiliated entities agreed to pay $1 million to settle potential HIPAA violations after a joint investigation by the OCR and the Federal Trade Commission found it had been improperly disposing of pill bottle labels that contained health information about patients.

If a suspected violation occurs in a pharmacy, Cifaldi says HHS issues a complaint that the pharmacy must respond to. “The agency is very concerned when they get a complaint, and they exercise it through, so pharmacies better have good policies in place for HIPAA,” he says.

Pharmacies can also be sued if patients believe their health information has been breached. In 2014, an Indiana Court of Appeals upheld a $1.4 million verdict against Walgreens after a pharmacist admitted to viewing the prescription records of her husband’s ex-girlfriend.

Cifaldi says most malpractice insurance policies for pharmacies don’t cover such lawsuits, which means pharmacies often could have to cover the legal expenses themselves.

Many pharmacies may incorrectly believe that simply having a notice of privacy practices (NPP) is sufficient, Potter says. “The notice of privacy practices is really just a document to let the patient know we have things in place to help ensure the privacy of protected health information,” he says. “There needs to be policies and procedures behind that, so just having that notice of privacy practices is not enough.”

For guidance on what the NPP should include, and how it should be provided to patients, visit: http://bit.ly/HHS-NPP.

“One thing we have seen over the last three or four years is these investigations have led to multimillion dollar fines. We’ve also seen patients actually suing covered entities, pharmacies included, when there has been a breach.”
The major concern with HIPAA is, in today’s environment, health information is considered highly protected. In light of HIPAA and all the responsibilities pharmacists have, they have to be cognizant of everything they do to make sure they are protecting that information."

If a HIPAA violation occurs, a pharmacy could face a costly legal battle. Cifaldi shared with Drug Topics a recent case his firm handled to give an inside look at how easily violations can occur.

A husband and wife both filled their prescriptions at the same New York pharmacy. One day, the wife arrived at the pharmacy to pick up her prescription and asked whether she could pick up her husband’s prescription at the same time. The pharmacy agreed and handed both prescriptions to the woman.

But the husband, who had AIDS, hadn’t divulged this information to his wife and she was shocked to learn of his health status. The man claimed he had told the pharmacy not to ever release the prescriptions to his wife.

He sued the pharmacy claiming he endured significant emotional distress after the mistake occurred.

The case was ultimately settled for an undisclosed amount, but Cifaldi says it’s an example with an important lesson for pharmacists.

“If a husband or wife does want to limit access, the pharmacy has to comply with it, because obviously that resulted in a really allegedly traumatic experience for the husband and the wife, and that could have been avoided.”

If ing electronic records, they must first understand when the most common potential violations occur and what they can do to avoid them.

**Subpoenas or Other Requests for Information**

When a pharmacy gets a subpoena from a law enforcement agency or court, it can be intimidating, and often a pharmacy owner may be tempted to just hand over their records rather than appear in court, but Cifaldi recommends pharmacies first consult with an attorney.

“When pharmacists just respond to these things on their own and don’t consult their legal counsel, they end up sending more [information] than is required, which always creates an issue,” he says. Before providing information, pharmacies must first make sure the subpoena is enforceable and then determine if they need to seek consent before they release the information.

Potter says most subpoena requests will come from a state court, which means individual state laws determine what a valid subpoena is in that state.

Pharmacists also need to be aware of rules regarding requests for information, such as how quickly they need to provide it. Under federal law, Potter says, if a patient requests their own information, pharmacies have 30 days to provide records and can get an additional 30-day extension if necessary. However, these requests are often also subject to state laws which may have shorter time frames. “There’s all kinds of things that the states also have in place that make HIPAA a little more strict,” he says.

**Information to Spouses**

Allowing spouses to pick up medications for their significant other is a common practice, but in certain situations it can lead to sticky situations.

For example, Erica Lindsay, PharmD, MBA, a practicing healthcare attorney in Chicago, had a client whose wife was picking up her prescription at a grocery pharmacy when she was asked if she wanted to pick up her husband’s prescription, too. The woman was unaware her husband had a prescription for Viagra.

Lindsay believes this example was a violation of HIPAA but says it could also be argued that it falls under one of the law’s exemptions.

According to Cifaldi, under the HIPAA rules a spouse has authority to pick up a prescription, unless the patient has given specific instructions that the spouse is not to do so. Pharmacies need to have clear mechanisms in place to track such requests to ensure prescriptions aren’t erroneously handed out.

**Spoken Violations**

Lindsay says pharmacies need to be equally aware of potential HIPAA vio-
lations they make while they speak, whether it’s counseling a patient about a sensitive medication within hearing of other patients, a technician loudly announcing the patient’s name and medication name while they ring up the prescription, or providing automatic counseling to a patient who doesn’t want it.

While Lindsay says some attorneys may argue these aren’t true HIPAA violations, they are inappropriate and could open a pharmacy to a potential complaint. Because of potential privacy breaches, she believes a pharmacist should always ask a patient if it’s all right to counsel them before they begin.

“Under HIPAA, if the patient refuses to allow the practitioner to reveal her PHI, that practitioner must stop—not should, must,” Lindsay says.

Using silent methods to communicate information, such as pointing to the drug name on a computer screen or a printout, may improve patient privacy. Other strategies include giving patients a number rather than calling their last name when a prescription is ready.

Experts agree pharmacies also need to engage in regular training and education for employees who come in contact with patient data.

**Electronic Violations**

Electronic PHI, or EPHI, isn’t always something that is stressed as frequently at HIPAA trainings and conference sessions, but it’s equally important and could expose a pharmacy to a potential violation, says Cifaldi.

Potter recommends that pharmacies conduct a risk assessment to identify potential vulnerabilities that may exist in a pharmacy’s technology infrastructure. This includes making sure computers use updated antivirus software and making sure operating systems are current and secure.

Pharmacies need to think about who has access to electronic data and install policies and procedures that dictate its safe use, Potter says. These policies include making sure security software is current—to prevent unwanted data breaches from hackers—and instituting policies that prevent employees from removing electronic devices from the pharmacy.

In one case in New York, Cifaldi says someone took a laptop home from a hospital and lost it. Although the laptop was eventually recovered, it exposed the hospital to unnecessary risk.

**Disposing of Records**

Pharmacies must also consider how they dispose of patient information. For example, computer hard drives and other electronic equipment shouldn’t just be tossed in the trash. They need to be destroyed and the drives erased before they are disposed of. This extends to paperwork and labels that may have patient data, which need to be shredded or destroyed before being placed in the garbage.

**Reporting a Breach**

Even with preventative steps, it’s possible a data breach can occur. If a breach does occur, Cifaldi says pharmacies should first contact an attorney.

“I would highly recommend they consult with a lawyer who has knowledge, because there may be an obligation to report, but how you report could lead to a whole host of problems if you don’t report properly.”

**Jill Sederstrom** is a contributing editor.
As a pharmacist, you’re probably familiar with the insider adage that “Doctors know about 10 to 20 drugs, nurses know about 50 drugs, and pharmacists know more than 200.” But with all the new drugs, biologics, and vaccines hitting the market, sometimes even we medication specialists could also use a little help committing those drugs to memory. Here are few tricks to make memorizing drug names and information easier.

1. Make crossword puzzles out of the names, indications, side effects, and other drug features. Take new fluoroquinolone delafloxacin (Baxdela), for example. Note: The acronym “ABSSSI” is the frequently used abbreviation for bacterial skin and skin structure infections.

2. Tweak the crossword technique to help distinguish lookalike/sound-alike drugs. An example would be Accupril and Aciphex: You can remember that Accupril works for blood pressure because it has a “p”, while the “c” and “i” in “Aciphex” create an “s” sound for “stops acid.”

3. Make up an acronym for the drugs. For example, to memorize atypical antipsychotics that cause weight gain, think about something you would associate with weight gain. Since overeating causes weight gain, I created an acronym from the word “croq” (short for crockpot) for quetiapine to help me remember. C- for clozapine

R- for risperidone
O- for olanzapine
Q- for quetiapine

4. Make up a jingle or rhyme. For example: “Silver sulfadiazine kills those germs and keeps burns clean.”

5. Use alliteration. Take a chemotherapy drug as an example: “Busulfan kills bone marrow, causes a blue tan, bad cough, black diarrhea…” Using alliteration can also help distinguish between two look alike/sound-alike drugs, for example, sulfadiazine and sulfasalazine. Since sulfasalazine has more “s” than sulfadiazine, think of “slippery stool,” ulcerative colitis, and Crohn’s disease.

6. Use word association. Sulfasalazine has the letters “a-s-a” in the middle—the old abbreviation for aspirin. Aspirin is a salicylate, while sulfasalazine is a salicylate as well as a sulfa drug (as its name implies).

7. Practice. This may sound simple, but even if you apply any of the previous tricks, you’ll still have to practice them with the appropriate drugs to remember your tricks and to commit them to memory.

---

Frieda Wiley, PharmD, BCGP, is a writer in the Cincinnati, OH, area.
FDA Commissioner Scott Gottlieb’s tenure at the agency has seen an explosion in the number of drug approvals—2017 had the greatest number of generic approvals in a single year and saw the largest number of new molecular entities (NMEs) approved since 1996 (46), according to the Regulatory Affairs Professionals Society.

That pace hasn’t slowed in 2018. At this writing, the FDA has approved 43 NMEs, putting it well above last year’s pace.

Here’s what you need to know about 21 of the bigger drug approvals since we last covered approvals in June.

**MOXIDECTIN** (Medicines Development for Global Health)

**Indications:** Treatment of onchocerciasis (river blindness) due to *Onchocerca volvulus* in patients aged 12 years and older.

**Dosage:** 8 mg (four 2-mg tablets) as a single oral dose, with or without food.

**ZEMDRI** (plazomicin, Achaogen)

**Indications:** Treatment of patients aged 18 or older with complicated urinary tract infections (cUTI) including pyelonephritis.

**TIBSOVO** (ivosidenib tablets, Agios)

**Indications:** Treatment of adult patients with relapsed or refractory acute myeloid leukemia (AML) with a susceptible IDH1 mutation as detected by an FDA-approved test.

**MEKTOVI** (binimetinib, Array BioPharma) and **Braftovi** (encorafenib)

**Indications:** In combination, for treatment of patients with unresectable or metastatic melanoma with a BRAF V600E or V600K mutation, as detected by an FDA-approved test.

**Dosage:** 45 mg binimetinib orally twice daily in combination with 450 mg encorafenib orally once daily.

**TPOXX** (tecovirimat, SIGA Technologies)

**Indications:** Treatment of human smallpox disease in adults and pediatric patients weighing at least 13 kg.

**Dosage:** Adults: 600 mg twice daily for 14 days.

**KRINTAFEL** (tafenoquine, GSK)

**Indications:** Radical cure (prevention of relapse) of *Plasmodium vivax* malaria in patients aged 16 years and older who are receiving appropriate antimalarial therapy for acute *P. vivax* infection.

**Dosage:** 500 mg orally once daily with or without food until disease progression or unacceptable toxicity.

The FDA is not slowing down on its brisk pace of drug approvals.
**DRUG ROUND-UP**

Nicholas Hamm

< CONTINUED FROM PAGE 39

**Dosage:** Single dose of 300 mg administered as two 150-mg tablets taken together.

**Contraindications:** G6PD deficiency or unknown G6PD status. Breastfeeding by a lactating woman when the infant is found to be G6PD deficient or if G6PD status is unknown. Known hypersensitivity reactions to tafenoquine, other 8-aminoquinolines, or any component of Krintafel.

**ORILISSA** (elagolix, AbbVie)

**Indications:** The management of moderate to severe pain associated with endometriosis.

**Dosage:** 150 mg once daily for up to 24 months or 200 mg twice daily for up to 6 months for patients with little no hepatic impairment; 150 mg once daily for up to 6 months for patients with moderate hepatic impairment.

**Contraindications:** Pregnancy, known osteoporosis, severe hepatic impairment, strong organic anion transporting polypeptide (OATP) 1B1 inhibitors.

**OMEGAVEN** (fish oil triglycerides, Fresenius Kabi)

**Indications:** A source of calories and fatty acids in pediatric patients with parenteral nutrition-associated cholestasis (PNAC).

**Dosage:** The recommended daily dose (and the maximum dose) in pediatric patients is 1 g/kg/day.

**Contraindications:** Known hyper-sensitivity to fish or egg protein or to any of the active ingredients or excipients. Severe hemorrhagic disorders. Severe hyperlipidemia or severe disorders of lipid metabolism with serum triglycerides greater than 1,000 mg/dL.

**POTELIGEO** (mogamulizumab-kpkc, Kyowa Kirin)

**Indications:** The treatment of adult patients with relapsed or refractory mycosis fungoides or Sézary syndrome after at least one prior systemic therapy.

**Dosage:** 1 mg/kg as an intravenous infusion over at least 60 minutes on days 1, 8, 15, and 22 of the first 28-day cycle and on days 1 and 15 of each subsequent cycle.

**ONPATTRO** (patisiran, Alnylam Pharmaceuticals)

**Indications:** The treatment of the polyneuropathy of hereditary transthyretin-mediated amyloidosis in adults.

**Dosage:** For patients weighing less than 100 kg, the recommended dosage is 0.3 mg/kg every 3 weeks by intravenous infusion. For patients weighing 100 kg or more, the recommended dosage is 30 mg.

**Contraindications:** None.

**OXERVATE** (cenegermin-bkbj, Dompé)

**Indications:** Treatment of neurotrophic keratitis.

**Dosage:** One drop of Oxervate in the affected eye(s), 6 times per day at 2-hour intervals, for eight weeks.

**Contraindications:** None.

**TAKHZYRO** (lanadelumab-flyo, Shire)

**Indications:** Prophylaxis to prevent attacks of hereditary angioedema (HAE) in patients 12 years and older.

**Dosage:** 300 mg every 2 weeks. Dosing every 4 weeks may be considered in some patients.

**XERAVA** (eravacycline, Tetraphase pharmaceuticals)

**Indications:** Treatment of complicated intra-abdominal infections in patients 18 years of age and older.

**Dosage:** 1 mg/kg by intravenous infusion over approximately 60 minutes every 12 hours for a total duration of 4 to 14 days.

**Contraindications:** Known hypersensitivity to eravacycline, tetracycline-class antibacterial drugs, or any of the excipients in XERAVA.

**PIFELTRO** (doravirine, Merck)

**Indications:** Indicated in combination with other antiretroviral agents for the treatment of HIV-1 infection in
adult patients with no prior antiretroviral treatment history.

**Dosage:** One tablet taken orally once daily with or without food in adult patients. Dosage adjustment with rifabutin: One tablet taken twice daily (approximately 12 hours apart).

**Contraindications:** Contraindicated when coadministered with drugs that are strong cytochrome P450 (CYP)3A enzyme inducers as significant decreases in doravirine plasma concentrations may occur, which may decrease the effectiveness of Pifeltro.

**LUMOXITI** (moxetumomab pasudotox-tdfk, AstraZeneca)

**Indications:** Treatment of adult patients with relapsed or refractory hairy cell leukemia (HCL) who received at least two prior systemic therapies, including treatment with a purine nucleoside analog

**Dosage:** 0.04 mg/kg as an intravenous infusion over 30 minutes on days 1, 3, and 5 of each 28-day cycle.

**AJOVY** (fremanezumab-vfrm, Teva)

**Indications:** Preventive treatment of migraine in adults.

**Dosage:** 225 mg monthly, or 675 mg every 3 months (quarterly)

**Contraindications:** Serious hypersensitivity to fremanezumab-vfrm or to any of the excipients.

**COPIKTRA** (duvelisib, Verastem)

**Indications:** Treatment of adult s with relapsed or refractory chronic lymphocytic leukemia (CLL) or small lymphocytic lymphoma (SLL) after at least two prior therapies, or relapsed or refractory follicular lymphoma (FL) after at least two prior systemic therapies.

**Dosage:** 25 mg orally, twice daily.

**Contraindications:** None.

**EMGALITY** (galcanezumab-gnlm, Lilly)

**Indications:** Preventive treatment of migraine in adults.

**Dosage:** 240 mg loading dose (administered as two consecutive injections of 120 mg each), followed by monthly doses of 120 mg.

**Contraindications:** Serious hypersensitivity to galcanezumab-gnlm or to any of the excipients.

**VIZIMPRO** (dacomitinib, Pfizer)

**Indications:** First-line treatment of patients with metastatic non-small-cell lung cancer (NSCLC) with epidermal growth factor receptor (EGFR) exon 19 deletion or exon 21 L858R substitution mutations as detected by an FDA-approved test.

**Dosage:** 45 mg orally once daily.

**Contraindications:** None.

**LIBTAYO** (cemiplimab-rwlc, Regeneron)

**Indications:** Treatment of patients with metastatic cutaneous squamous cell carcinoma (CSCC) or locally advanced CSCC who are not candidates for curative surgery or curative radiation.

**Dosage:** 350 mg as an intravenous infusion over 30 minutes every 3 weeks.

**Contraindications:** None.

**NUZYRA** (omadacycline, Paratek)

**Indications:** Treatment of adult patients with community-acquired bacterial pneumonia (CABP) or acute bacterial skin and skin structure infections (ABSSSI).

**Dosage:**
- For injection: 100 mg. Tablets: 150 mg.

**Contraindications:** Known hypersensitivity to omadacycline, tetracycline-class antibacterial drugs or any of the excipients in NUZYRA.

Nicholas Hamm is editor at Drug Topics’ sister publication, Managed Healthcare Executive.
As pharmacists continually build their scope of expertise, hospital antimicrobial stewardship programs (ASPs) are just one more avenue for putting their experience and knowledge to work.

Anna Legreid Dopp, PharmD, director of clinical guidelines and quality improvement at ASHP, says pharmacists have a responsibility to take a prominent role in antimicrobial stewardship programs by:

- Promoting the optimal use of antimicrobial agents;
- Reducing the transmission of infections;
- Decreasing adverse events associated with antibiotic use; and
- Participating in formulary management and educating health professionals, patients, and the public.

Joel Hennenfent, PharmD, system director, Pharmacy Services at Truman Medical Centers, a healthcare system in Kansas City, MO, says all its pharmacists are credentialed and privileged by the medical staff so that they can adjust dosage, frequency, and labs without consulting a doctor. “A pharmacist is positioned as the practitioner who has a touch point in each aspect of the program,” he says.

The History of ASPs
Although ASPs have been around since the 1940s, it wasn’t until 2006 that the CDC outlined procedures for managing multidrug-resistant organisms in healthcare settings, followed two years later by guidelines for developing an ASP from the Infectious Diseases Society of America.

The CDC’s introduction of seven core elements in 2014, set the tone for more formal requirements. The elements include drug expertise realized by appointing a single pharmacist leader responsible for improving antibiotic use.

As many as 92.5% of hospitals have an ASP, according to ASHP.

Advancements in information technology and a proliferation of antibiotic-resistant organisms have put ASPs on the radar. These organisms account for more than 2 million Staphylococcus aureus and Clostridium difficile infections and 23,000 deaths in the United States, as reported in The Joint Commission Journal on Quality and Patient Safety in 2018.

Pharmacy-Led Teams
Truman Medical Centers, the University of San Francisco (UCSF) Medical Center, and the University of Pittsburgh, among other hospitals nationwide, have built their ASPs around a collaborative multidisciplinary team of pharmacists and clinicians, infectious diseases expertise, and information technology.

The ASP team at Truman works closely with Cerner, which combines EHRs and clinical decision support systems. These technology tools, along with an antibiogram, biomedical research, and metabolic and blood profiles, provide ASP pharmacists 24/7 with recommendations based on patient-specific information in real time. These suggestions help clinicians choose appropriate therapy, dosage, and frequency; avoid preventable errors; and share data on previous antibiotic treatments, diagnostic tests, and culture results.

By using Cerner, Truman also has developed flexible, automatic protocols for pharmacists, which minimizes calls to physicians, and has identified and prioritized the top 10 interventions for initial EHR integration.

“Our primary goal is to conserve antibiotics for those who need them and if possible, use fewer antibiotics or a narrower spectrum that is effective. Every exposure changes bacteria that can adapt and become drug resistant,” Hennenfent says.

Compared to a 2009 benchmark, Truman has consistently used 10% fewer antibiotics, increased streaming to a narrow spectrum antibiotic by 457% with a corresponding reduction in broad-spectrum antibiotics, and has maintained the program at 80% of the cost.

Alexandra Hilts-Horeczko, PharmD, clinical infectious diseases pharmacy specialist at UCSF, says its ASP has
evolved into a more formal program primarily managed by the medical director, a pharmacy resident in infectious diseases, and her. The team works collaboratively with infection control, the microbiology department, and data management, which oversees tracking and utilization review. It follows the standard national requirements for such a program, including the core elements and incorporating a multidisciplinary team. Hilts-Horeczko points out that pharmacists are key to the success of an ASP because of their drug knowledge and understanding of the appropriateness of medications.

“Pharmacists have a finger on the pulse of antibiotics,” she says. “They not only have access to medications, but they also are in the best position to evaluate the use of antibiotics and whether a patient should change antibiotics, or continue or discontinue treatment.”

Since the enhancement of its ASP program in 2015, UCSF has realized a 10% decrease in the use of targeted antibiotics for *Clostridium difficile*/10,000 patient days.

The University of Pittsburgh Medical Center’s program started in 2002 and is one of the country’s longest running ASPs, says Brian Potoski, PharmD, associate director of the Antibiotic Management Program there. “Our hospital is well positioned to treat infection because of a sufficient number of dedicated pharmacists and the use of technology.”

With the help of TheraDoc, which provides clinical decision support software, the Pittsburgh ASP is able to streamline broader drugs into narrower spectrum options, curtail antibiotic use, minimize resistance, eliminate redundant coverage, and make changes in therapy if necessary. It also relies on blood tests that can determine what organism is present and what its resistance profile is.

To track results, Potoski studies a variety of markers, including how long it takes to find the most effective antibiotic, mortality, lengths of stay, days in an ICU, and total cost.

**Achieving success**

Hennenfent says the success of his ASP rides on the full complement of clinicians on the program’s team. This includes an infectious diseases pharmacist who is the day-to-day ASP manager, an information technology pharmacist, a clinical pharmacy manager, and an infectious disease physician.

Hilts-Horeczko agrees that a collaborative team is the key to success, along with the incorporation of ASP core elements and support from the hospital’s administration, which she says understands the ASP’s need for additional resources.

To be successful, ASP programs must be realistic about a hospital’s specific issues and understand where problems, such as using the wrong antibiotic, exist and how they can be solved, Potoski says. It’s also important to use rapid diagnostics to determine the kind of infection and its profile for resistance, he says.

**Jumping Over Barriers**

The three ASPs share many of the same challenges. At Truman, Hennenfent says he is concerned about potential drug and antibiotic mismatches, transitioning patients out of a hospital, converting from IV to oral administration of antibiotics, and streamlining antibiotics.

The biggest challenges of antibiotics, Hilts-Horeczko says, are overuse—prescribed but not needed, which causes resistance and overuse—and choosing a drug too broad to treat a specific infection. “Manufacturers just are not developing antibiotics fast enough so we are turning to older drugs or combinations of these drugs,” she says.

Another challenge is improving triage of patients with infections. At press time, Hilts-Horeczko is monitoring 153 patients with infections at the medical center’s 782-bed, Parnassus campus. A new module recently added to UCSF’s current EPIC system is developing a scoring system to rate severity.

Potoski’s frustration lies with a loss of autonomy when pharmacists have to call a physician if a change in an antibiotic is needed.

Mari Edlin is a contributing editor.
We all have that uncle, the one who most consider the “black sheep” of the family. Back when I was a teenager, my parents loaded us teen-aged kids into the 1969 Ford Galaxie 500 to visit my uncle in his rundown apartment, about an hour away from our home. We walked into his place and there he sat on a case of beer, with his artificial leg sitting in the corner. His wife was stirring a pot of soup on the stove, and his kids were running around the house.

He said to my Dad, “You know our brothers—the pipefitter always shows us his big union paycheck, the other brags about his boat at the lake—well, I’ve got it pretty good, too. I have all this, and my kids like me.” It struck me as kind of strange that he was perfectly content, even though he had so little compared to all of us.

This Thanksgiving I’ll be sitting down with my family at my daughter Elizabeth’s house. In attendance will be four pharmacists: my wife Denise who works at an underserved clinic in State College, PA; my other daughter Gretchen and her husband Mark, who are assistant professors at West Virginia University School of Pharmacy; and me.

Elizabeth is a bilingual middle school teacher who teaches English as a second language. She works with displaced kids from Puerto Rico, Dominican Republic, and Cuba. Her language skills allow her to communicate with parents who bring their kids here for a shot at a better life. The parents are relieved when Miss Kreckel can communicate with them at parent-teacher conferences.

My son Phil will also be joining us for Thanksgiving. He is a data scientist at a major bank where he develops algorithms to prevent check fraud.

So, with a teacher, a data scientist, and four pharmacists, what will the conversation be like?

Certainly, we can’t discuss the benefits of tenofovir alafenamide versus tenofovir disoproxil fumarate!

Like every other family gathered that day we will discuss our family and friends, which for my family, includes sharing cute stories about our grandchildren. I’m sure I’ll be reminiscing about the Thanksgivings at my home as a kid. Like my Grandpa Joe, I seem to

“I’ll be thinking how blessed I am to be a pharmacist, how everyday I get to help a lot of people who are indeed thankful for all that I can provide them.”

PETE KRECKEL, B.S.Pharm, practices independent community pharmacy in Altoona, PA. He welcomes your e-mails at pharmcanoe@aol.com

Remember What Matters

Use Thanksgiving as a time to reflect.
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!

---

**SIX REGIONAL SPECIALISTS PROVIDING PERSONAL ATTENTION**

---

**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

Medical Economics Careers
www.modernmedicine.com/physician-careers

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

---

**PRODUCTS & SERVICES**

**BUY-SELL-BROKER**

---

**GENERIC DISTRIBUTOR**

November Virtual Tradeshow
PUTS AN EXTRA 10-25% IN YOUR POCKET!

Every business day we will be offering select items at a substantial savings, as well as Auburn swag with every Trade Show purchase!

VISIT www.AUBURNGENERICS.COM OR CONTACT YOUR ACCOUNT MANAGER FOR MORE DETAILS!

---

www.buy-sellapharmacy.com | 877-360-0095
Selling your pharmacy? WHO YOU WORK WITH MATTERS

Considering using an unlicensed, uninsured or inexperienced consultant or broker? Considering working with your wholesaler or directly with a chain?

INDEPENDENT PHARMACY OWNERS BEWARE!

I represent YOUR BEST INTERESTS.
I bring in MULTIPLE BUYERS.
I will get you the HIGHEST PRICE.

Daniel J. Lannon, RPh, Broker
Pharmacy Consulting Broker Services
888.808.4RPH (4774)
dan@pharmacycbs.com
• Experienced • Licensed • Insured

We represent pharmacy owners NATIONWIDE.
We can handle ANY SIZE transaction.
CALL TODAY!

Content Licensing for Every Marketing Strategy

Marketing solutions fit for:
Outdoor
Direct Mail
Print Advertising
Tradeshow/POP Displays
Social Media
Radio & TV

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

H & Z

Minimize Your Worry

HAYSLIP & ZOST

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.