Pharmacist involvement: At a University of Washington outpatient pharmacy in Seattle, Tess Nishida, a pain pharmacist, holds a vial of naloxone, which can be used to block the potentially fatal effects of an opioid overdose.

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In Patient Safety Efforts, Pharmacists Gain New Prominence

As health care becomes more complex, health systems have sought to enlist those who can engage patients outside the hospital walls.

BY REBECCA GALE

As a pharmacist in Springfield, Missouri, Morgan Miller encounters patients at every point of care, from those who have just been discharged from the hospital to those with chronic conditions whose faces she now recognizes.

Miller served as a retail pharmacist before transitioning to a director of specialty pharmacy for a local independent pharmacy. In her new role, she is part of a team that includes a physician who does physician assessments and counselors for mental health needs. Being part of this team enables Miller to help patients overcome addiction, while still allowing her to remain in a retail pharmacy setting, where she interacts with patients coming in for refills and new prescriptions.

It is from this perch that Miller saw firsthand the complex risks caused by the recent surge in opioid prescriptions. Fortunately, Miller says, pharmacists can play an important, unique, and multifaceted role in making sure that patients are using the drugs safely. Her work includes speaking to patients about the potential risks of opioids; speaking up or making a note in patients' records, if possible, about potential issues surrounding high doses; documenting details in her state's prescription drug monitoring program; and knowing when and how to suggest that a patient obtain naloxone.

In her position, she serves as the bridge between a patient seeking treatment and receiving it, and she can watch for red flags to spot addiction; call a doctor if she believes a medication amount is too high; administer an injection for Vivitrol (also known as naltrexone), the long-acting monthly injection for opioid dependence; or connect a patient with a rehabilitation facility. Miller believes that the pharmacy's retail facade is part of its appeal—that patients have an easier time walking into the local pharmacy where she works than they would have checking into an inpatient facility. Studies now show that pharmacists are the most-visited health care professionals,[1] with patients visiting pharmacists almost ten times as much as they do primary care providers.

"I want more pharmacists to become part of the care teams," she says. "These patients need lots of touch points, and pharmacists are poised to play a larger role."

Changing Roles

The opioid epidemic is a high-profile and acute challenge for pharmacists, and it also shines a light on the potential for them to play a big role in patient safety—the prevention of errors leading to patient harm—more broadly.

Photograph by AP Photo/Ted S. Warren

Pharmaceutical experts such as Laura Cranston, the CEO of the Pharmacy Quality Alliance, believe that the evolving health care system means the role and authority of pharmacists are likely to expand.

One of the emerging issues in patient safety is what happens after a patient leaves the traditional hospital setting or doctor's office. Who is watching out for the patient's safety then? New models, such as accountable care organizations (ACOs)—groups of doctors, hospitals, and other health care providers who work together to coordinate care for Medicare patients—and community-based care teams like the one Miller is part of, have created new opportunities for pharmacists to assume larger roles and take more responsibility for patient safety.[2] This is particularly acute with issues surrounding prescription drug therapy, often the cornerstone of the management of most chronic conditions, in which pharmacists are placed into the role of medication managers.[3]

Medication nonadherence and misuse are central causes of hospital readmission.[3] Adherence to prescription medications has a profound impact on overall health, chronic disease management, and resultant medical expenses.[4] Nonadherence represents nearly a $300 billion problem annually in the US,[5] primarily through high hospital readmission rates.[6] Roughly half of all prescribed medications are not taken according to directions, and nearly 25 percent are never initiated,[7] even when offered at no charge[8] to the patient.[7] There are different types of nonadherence: In some instances, a patient isn't complying with a medication's instructions (perhaps because they don't want to or can't afford to). And in other instances, problems stem from patients' misunderstanding of how and how often they should be taking the medication.

This is a key gap that the pharmacist, who dispenses medications and advises patients on medication regimes, can fill. Pharmacists are trained in medication management for high-risk patients[2] and drug interactions, which is particularly important as more complex drugs have been developed to treat chronic ailments. Pharmacists are also able to monitor patient purchasing data to identify patients who do not adhere to therapy and intervene to communicate with patients and physicians when concerns arise or abrupt changes occur.

"The actual patient counseling is the treatment that pharmacists are trained to do," says Eleanor M. Vogt, a professor at the University of California San Francisco School of Pharmacy. "The pill counting side is almost incidental and can be done by technicians or technology."

An example of this is medication synchronization, in which a pharmacist will synchronize a patient's medications so they can pick all of the medications up on the same day and then make an appointment with the patient to go over the medications, discuss the risks of and opportunities for vaccines, or offer other clinical services.

Evidence[2] also suggests that pharmacists can be essential contributors to team-based approaches to improving adherence.[3,9] Following acute episodes of care, patients pick their medications up at community pharmacies—which, as Miller observed, puts community pharmacists at a critical point of contact between patients and the health system.

Pharmacists have a role to play in disease prevention, too. By regularly screening populations for evidence of nonadherence or safety concerns, they can proactively target outreach to patients before adverse events occur. The major chains CVS and Walgreens are offering a number of programs to reduce readmissions, from bedside delivery of prescription drugs at hospital discharge to promoting safe and appropriate use once a patient leaves the hospital, home-based or telephonic pharmacist visits for medication reconciliation after discharge, and helping vulnerable patients navigate changes in therapy.[3]

Cranston believes that leveraging pharmacists and their expertise on medication management has the potential to create national shifts. She cites an effort championed by pharmacists to add a prescription for beta-blockers upon discharge from a hospital after an acute myocardial infarction.[10] Beta-blockers have been clinically proven to reduce the risk of additional heart attacks in the twelve months following the initial attack.[11]

The addition of a beta-blocker prescription began as a two-year, mixed-methods, interventional study conducted in ten US hospitals,[12] which determined the medication's utility—but implementation relied heavily on pharmacists. This was often through medication reconciliation at discharge, which is typically provided by a pharmacist, or subsequent medication reconciliation or medication therapy management. In those instances where a hospital had integrated a pharmacist into the team, the beta-blocker prescription was added as part of predischarge counseling.

Originally, according to Cranston's estimates, hospitals prescribed the medication 75–78 percent of the time, but within three to four years of education and intervention, the rate of beta-blocker prescriptions upon discharge increased to 98 percent.

Persistent Challenges

Pharmacists face several challenges that can prevent them from fully using their skill sets in interacting with patients. One key obstacle is the lack of payment mechanisms that explicitly provide for pharmacist services.[13] Currently, pharmacists are not recognized by Medicare with "provider status," which limits their ability to be reimbursed for services delivered.[3] This has brought pharmacists to a gray area within ACOs, where the role of the pharmacist remains undefined. The Centers for Medicare and Medicaid Services and policy makers are reconsidering ACO regulations to stimulate the greater integration of prescription drug use into delivery system reform,[3] and pharmacists are lobbying for changes. Vogt argues that for ACOs to be fully effective, they need systems in place to support patients in the community. "Because that is where their system falls apart, out in the community," she says.

Excluding pharmacists from ACOs also overlooks the cost of pharmacy services in the measurements of total cost of care.[3] A small number of practices may have contractual arrangements with commercial payers for pharmacist services, and several states now have a system in place whereby Medicaid covers pharmacist services for medication management.[13] A physician's familiarity and experience with collaborative practice agreements[14]—formal practice

relationships between pharmacists and prescribers—can influence their ideas on how to have a close working relationship with pharmacists.

Among pharmacists, there is no uniform method of payment for their services. Instead, payment often depends on the sizes and structures of the pharmacy, prescribing entity, and payer, some of which may overlap. Some payment structures (notably, salaried employment) allow pharmacists to spend more time with individual patients. Some pharmacists own their own stores. If they're employees (such as community pharmacists, who serve outpatients), they're likely paid an hourly rate for services that often include medication management, counseling patients, and dispensing medication. And over half of the nearly 800 ACOs do employ or contract with a pharmacist, to provide both medication counseling and dispensing.[15]

The other major challenge for pharmacists is the lack of information. Pharmacists often interact with patients without getting the complete patient record, and access is usually limited to the details provided on the patient's prescription. Without access to the full medical record, pharmacists cannot fully counsel patients on the risks that come with the diagnosis or interactions with other medications, or even set up medication synchronization.

"We call it the brown bag: Put all your medications in a brown bag and bring it in. We simply don't know the other products you're taking. How can we give advice and monitor what is happening without that information?" Vogt asks. She's been part of lobbying efforts with other pharmacists to get a written diagnosis on the prescription, since products can be used for many different reasons. And she points to the success of Walgreens, which has been working with health systems and patients (particularly cardiac patients) in targeting "transitions of care" from acute hospital care to community- or home-based chronic care.[16,17,18]

Kurt Proctor, senior vice president of strategic initiatives and president of the Innovation Center at the National Community Pharmacists Association, says that electronic health record systems are being designed with the prescription drug record in mind. "All of pharmacy is working on this collaboratively to create a pharmacist eCare plan," he says, referring to the standardized document/transaction that can be sent between health care providers.[19] "That is moving toward approval through the medical standard-setting process."

As long as patient safety, reducing hospital readmissions, and combating the opioid epidemic remain nationwide concerns, the role and authority of pharmacists within our health care system are likely to expand.

Vogt dismisses privacy concerns about pharmacists' having access to patients' medical records: "In actual practice, people want to know."

Policy Change

Seeking to address these challenges and expand their role in patient care, pharmacists have looked to legislative changes, with which they have had moderate success.

"There is very little federal legislation that would expand the role pharmacists can play in working with patients and medication management," says Loren Kirk, director of stakeholder engagement for the Pharmacy Quality Alliance. Kirk points to the Pharmacy and Medically Underserved Areas Enhancement Act, which—if it became law—could speed a payment fix by allowing pharmacists to bill for any service their state's laws allow them to perform.

Pharmacists have had more success in focusing their efforts on state regulations. California, Idaho, North Carolina, Tennessee, and Washington have all implemented statewide changes that allow pharmacists to have a higher level of integration into a team-based care model so they can play a greater role in medication authorization and patient safety. Proctor cites the state-by-state effort to amend state scope-of-practice laws so pharmacists can immunize patients—changes that came about in recent years.[20] In some states pharmacists are now able to prescribe oral contraceptives. "It's a small number," says Proctor of those states, "but it will continue to grow."

The American Medical Association has recently developed a training module for physicians that includes specifics on how to add a pharmacist to a medical practice.[21] Yet the reaction of state medical boards to increasing pharmacists' scope of practice has been mixed.

This tension suggests that whether or not a pharmacist can play a full role in advancing patient safety depends in part on the steps taken by policy makers. In an article published in this issue of *Health Affairs*,[22] Gordon Schiff and coauthors identify six areas for improving the quality and safety of outpatient computerized prescribing. In each case, solutions to current error-prone processes exist, but policy efforts will be required to advance their implementation and ensure their safety and effectiveness.

Morgan Miller, the pharmacist in Springfield, Missouri, is optimistic. If she's learned anything from her front-row view of the nation's opioid epidemic, it's that for patients taking complex medications, the deliberate, watchful support and guidance of a skilled professional can make all the difference in the world. As long as patient safety, reducing hospital readmissions, and combating the opioid epidemic remain nationwide concerns, the role and authority of pharmacists within our health care system are likely to expand. ■

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NOTES

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