

Manuscript title: What can your pharmacist do for you?: The time is now to embrace the pharmacist as part of the primary care team

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Abstract:

Pharmacists' roles and training have evolved to prepare pharmacists to provide clinical patient care services as part of interdisciplinary teams in primary care settings. Especially now, amidst a global health crisis such as COVID-19, patients may become more aware of their health status and be exposed to increased medical information in the media. Additionally, some patients may have delayed routine care, which may result in exacerbations of chronic disease states.

Pharmacists can help alleviate the burden on primary care providers by serving as a drug information resource for patients and staff while providing patient education on management of chronic disease states.

The Association of American Medical Colleges (AAMC) estimates that by the year 2032, there will be a shortage of 21,100-55,200 primary care physicians in the United States.

According to AAMC, addressing this shortage requires a multipronged approach, including efficient use of health professionals on the care team.¹ Pharmacists are health professionals that can be utilized to ensure patients receive adequate care in primary care settings.

The traditional role of the pharmacist has evolved such that pharmacy graduates are being trained to provide patient care services that are not directly associated with medication dispensing, including interprofessional, collaborative medication management services such as medication therapy management (MTM) or comprehensive medication management (CMM).²⁻³ In fact, the American Association of Colleges of Pharmacy (AACCP) is aiming for at least 50% of primary care medical practices to have pharmacist-provided CMM services integrated into their care models by the year 2025.⁴ Furthermore, the American Medical Association (AMA) has provided direction to providers on how to embed pharmacists into practice to improve patient outcomes.⁵

Despite these initiatives, it appears pharmacists have not yet been fully incorporated as part of primary care practice teams. A survey of over 11,000 family physicians in 2016 revealed that pharmacists were present in fewer than 20% of family physician practice teams.⁶

What can a pharmacist do for you?

Pharmacist education and training

Pharmacists are highly trained medication experts. A traditional Doctor of Pharmacy (PharmD) program consists of a four-year curriculum, including three years of didactic education followed by one year dedicated to clinical clerkships. Many pharmacy graduates also seek advanced clinical training through one or two years of post-graduate residency training.

Generally, a post-graduate year 1 (PGY1) residency provides advanced general training while post-graduate year 2 (PGY2) residency programs are more specialized in one area of practice. Specifically, PGY2 ambulatory care pharmacy residencies provide advanced training to create clinical pharmacy practitioners that can manage patients with a variety of chronic disease states. Compared to other available PGY2 residency opportunities, ambulatory care pharmacy residency positions have grown exponentially in recent years⁷, demonstrating an increased supply of pharmacists that are trained to practice within primary care settings. Even without the completion of post-graduate training, pharmacists may have other credentials that allow them to care for patients with chronic disease states. The Board of Pharmacy Specialties (BPS) establishes criteria for pharmacists to earn certification in various practice areas including ambulatory care practice (BCACP), pharmacotherapy (BCPS), geriatric pharmacy (BCGP), and cardiology pharmacy (BCCP), among other specialties.⁸ Additionally, state-specific legislation may expand pharmacists' scope of practice so they may enter into collaborative practice agreements (CPAs) and provide clinical services under the supervision of a licensed physician.⁹⁻¹⁰

Patient care services that can be provided by pharmacists

Pharmacists can bring value to primary care practice teams through a variety of activities aimed to optimize medication use. High rates of chronic disease in the U.S. has contributed to increasing prevalence of polypharmacy.¹¹ Prescribing medications in this context can be complicated for providers, due to increased potential for drug interactions, adverse drug reactions, and potentially inappropriate prescribing, such as under- or over-prescribing.¹²

Published literature evaluating the effectiveness of pharmacist services in primary care practice has demonstrated that pharmacists can improve management of chronic conditions as well as the quality of prescribing and medication appropriateness.¹³ As each practice team has

unique medication-related needs and patient populations, it is important for them to evaluate how pharmacist contributions can add value to the practice.¹⁴ Providers can begin by prioritizing patients who could most benefit from pharmacist services, which include those with uncontrolled chronic disease states and those with polypharmacy issues.⁴ Additionally, teams may want to consider how pharmacists can help them attain quality measures, such as those delineated by the Centers for Medicare & Medicaid Services (CMS).¹⁵⁻¹⁷ In a study by Brummel and colleagues evaluating pharmacist-led MTM services for complex patients with diabetes within an ACO, patients who received pharmacist care were more likely to achieve better diabetes control as measured by changes in hemoglobin A1c, blood pressure, low-density lipoprotein levels, aspirin use, and no smoking.¹⁸ Quality metrics related to diabetes control, statin use, hypertension control, and tobacco use are currently included as part of the Medicare Shared Savings Program Quality Measure Benchmarks.¹⁷

Pharmacists may also assist practices with delivery of clinical services to potentially increase practice revenue such as chronic care management (CCM), transitional care management (TCM), and annual wellness visits (AWVs). In collaboration with providers, pharmacists can act as clinical staff to complete some components required to bill for these services (e.g., post-discharge telephone call for TCM, medication reconciliation and management for CCM).¹⁹⁻²¹ Finally, pharmacists can assist with delivery of MTM services required as part of the Medicare Part D Medication Therapy Management program.²²

Provider perceptions of pharmacist integration

The primary care physician shortage along with an evolving health care landscape can lead to burnout among providers. It has been estimated that over half of physicians are

experiencing burnout, with highest rates among family medicine and internal medicine practitioners.²³ Studies assessing provider perceptions of pharmacist integration in primary care settings show that most providers felt that pharmacists are valuable members of the team and increased efficiency of patient care by allowing them to focus on medical concerns while pharmacists managed medication-related problems.²³⁻²⁵ Satisfaction with pharmacist integration also extended beyond providers in a study by Kozminski et al, in which non-clinical office staff felt that pharmacists provided a valuable service to patients and served as a drug information resource for staff.²⁴

Why now?

Pharmacy education and training has evolved to prepare pharmacists to provide patient care services to support the interprofessional team in primary care settings. Additionally, pharmacists have long been recognized as one of the most accessible and frequently visited health care professionals. In recent months, the coronavirus pandemic has significantly affected individuals in the U.S. and brought our nation's health care industry and workers into the national spotlight. Pharmacists are essential in caring for patients affected by COVID-19 across a variety of health care settings. Notably, in April 2020, the U.S. Department of Health and Human Services authorized licensed pharmacists to order and administer FDA-approved COVID-19 tests.²⁶

During a global health crisis, patients have many questions regarding their health, medications, and immunization status. In the case of COVID-19, patients have access to an abundance of information through the media regarding potential treatments for the virus. For example, some reports raised potential safety concerns regarding the use of non-steroidal anti-inflammatory drugs (NSAIDs) and angiotensin converting enzyme (ACE) inhibitors.^{27,28}

Additionally, medications such as hydroxychloroquine, azithromycin, remdesivir, and famotidine have been reported as investigational treatments for the disease.^{29,30} Pharmacists on care teams can help alleviate the burden on providers to answer patient questions regarding these topics by serving as a resource for patients and staff during times of crises while helping to maintain continuity of care for patients. For example, during the pandemic, pharmacists at the University of Florida supported physicians by triaging patients telephonically and scheduling telehealth appointments with physicians.³¹ At Livingston HealthCare hospital in Montana, pharmacists assisted with drive-up anticoagulation services to ensure patients were receiving regular international normalized ratio (INR) monitoring while minimizing the potential exposure risk associated with entering the hospital.³² These serve as examples of services that could also be provided by a pharmacist in a primary care setting.

Furthermore, as a result of COVID-19, the delivery of health care in primary care settings has significantly changed. Providers may defer preventive visits or convert to telemedicine visits. Patients may also avoid visits due to fear of being exposed. An April 2020 report showed that the number of visits to ambulatory practices decreased by nearly 60% in mid-March 2020 and remained low through mid-April 2020.³³ As a result of patients not receiving routine care, it is possible that primary care providers may observe an increased rate of poor control and/or exacerbations of chronic disease states as patients return to primary care offices in the future. Patients who may not have been able to obtain essential chronic medications from their pharmacies or who had safety concerns related to their medications (i.e., ACE inhibitors) may be especially at risk of having worse outcomes due to poor medication adherence. As patients begin returning to primary care settings, pharmacists can be utilized to address gaps in care that may have occurred during the pandemic as well as to provide patient education on how to manage

chronic disease states and medication regimens in the event that regular in-clinic follow-up cannot be achieved. As CMS loosened restrictions related to the delivery of telehealth services because of the pandemic, pharmacists can deliver these clinical services and provide patient follow-up through telehealth modalities that can be billed incident-to a licensed physician.³⁴

Barriers to pharmacist integration

One of the biggest challenges to integration of pharmacists in primary care settings is sustainable funding to support pharmacist salaries. Pharmacists may bill for some services through incident-to billing, however, revenue generated solely from this is unlikely to support a pharmacist salary.³⁵ Partnerships with colleges and schools of pharmacy may be developed to allow clinical pharmacy faculty and trainees to integrate within primary care clinics and pilot pharmacy-led services.³⁶ Primary care practice groups may also consider hiring one or a few pharmacists that can provide services within multiple offices on various days of the week.²⁵ Cost savings to the practices as a result of implementing pharmacy services may justify and support the addition of a pharmacist to the staff. In the study by Brummel and colleagues, a pharmacist-led MTM program resulted in an estimated 12:1 return on investment (ROI) during a one year period when comparing health care costs of patients receiving MTM services when matched to patients who did not receive these services. Additionally, total annual health expenditures decreased from \$11,965 to \$8,197 per person.¹⁸ Finally, practices may consider developing partnerships and business agreements with local community pharmacies such that pharmacists can deliver remote and/or on-demand clinical services.⁵ This may be a more cost-effective option for practices and an opportunity to pilot pharmacy services on a smaller scale, especially during the COVID-19 pandemic when practices may not be able to justify additional spending to hire a pharmacist.

In conclusion, during these difficult times and beyond, pharmacists can be essential as members of the primary care team to support the provision of optimal patient care through disease state education, medication optimization, and medication adherence counseling.

Pharmacists are ready to help you.

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