Optimizing the Role of Community Pharmacists in Managing the Health of Populations: Barriers, Facilitators, and Policy Recommendations

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SUMMARY

The shift to a value-based health care system has incentivized providers to implement strategies that improve population health outcomes while minimizing downstream costs. Given their accessibility and expanded clinical care models, community pharmacists are well positioned to join interdisciplinary care teams to advance efforts in effectively managing the health of populations. In this Viewpoints article, we discuss the expanded role of community pharmacists and potential barriers limiting the uptake of these services. We then explore strategies to integrate, leverage, and sustain these services in a value-based economy.

Although community pharmacists have great potential to improve population health outcomes because of their accessibility and clinical interventions that have demonstrated improved outcomes, pharmacists are not recognized as merit-based incentive eligible providers and, as a result, may be underutilized in this role. Additional barriers include lack of formal billing codes, which limits patient access to services such as hormonal contraception; fragmentation of Medicare, which prevents alignment of medical and pharmaceutical costs; and continued fee-for-service payment models, which do not incentivize quality.

Despite these barriers, there are several opportunities for continued pharmacist involvement in new care models such as patient-centered medical homes (PCMH), accountable care organizations, and other value-based payment models. Community pharmacists integrated within PCMHs have demonstrated improved hemoglobin A1c, blood pressure control, and immunization rates. Likewise, other integrated, value-based models that used community pharmacists to provide medication therapy management services have reported a positive return on investment in overall health care costs. To uphold these efforts and effectively leverage community pharmacist services, we recommend the following: (a) recognition of pharmacists as providers to facilitate full participation in performance-based models, (b) increased integration of pharmacists in emerging delivery and payment models with rapid cycle testing to further clarify the role and value of pharmacists, and (c) enhanced collaborative relationships between pharmacists and other providers to improve interdisciplinary care.

J Manag Care Spec Pharm. 2019;25(9):995-1000

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The ongoing shift from volume to value in the U.S. health care system incentivizes providers to improve population health outcomes and reduce downstream medical costs through an enhanced focus on chronic disease prevention and management. Traditionally, primary care physicians (PCPs) have provided most of these clinical services; however, the rapid aging of the population coupled with growing physician shortages has created a need for interdisciplinary, team-based approaches to optimally manage the health of populations.^{1,2}

Among health care practitioners, community pharmacists are particularly well positioned to deliver these services. With 92% of Americans living within 5 miles of a community pharmacy,³ high-risk patients visit their community pharmacists 10 times more often than their PCPs.⁴ In addition, community pharmacists have evolved their care models to offer a multitude of clinical services that include chronic disease management, disease prevention, transition-of-care coordination, and other pertinent disease-monitoring and management interventions.⁵ Published literature provides substantial evidence that community pharmacist-led services can be an effective strategy for improving important population health outcomes.⁶⁻¹⁵ For example, community pharmacist-led services have increased immunization rates,¹¹ promoted smoking cessation,¹⁵ improved access to hormonal contraception,¹² advanced identification of patients at high risk for certain diseases,^{9,14} reduced hemoglobin A1c (A1c) and low-density lipoprotein, and mitigated cardiovascular risk.^{6-8,10,13}

The growth of value-based payment schemes has made way for new care models that aim to transform health care delivery by emphasizing care coordination and nontraditional health care services to support population health management and cost reduction.¹⁶ In these new models, there is a burgeoning role for pharmacists as health care professionals capable of managing populations. One such example is the instatement of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), which restructures Medicare payment through incentivizing clinicians to focus on value over volume.¹⁷ Under MACRA, payment models have taken the form of merit-based incentive payment systems (MIPS) and alternative payment models (APMs). Payment models are centered around many quality-based metrics that pharmacists can influence.

Medication-based quality metrics account for 18%-23% of total MIPS scores, and pharmacists have the opportunity to improve other quality measures that are not based on medication, such as pain management, care plan development, and transitions of care.¹⁸ With an estimated \$528 billion spent on suboptimal medication therapy,¹⁹ the role of pharmacists in optimizing medication use will be central in realizing a vision of higher quality and lower cost care.²⁰

However, barriers persist to expanding clinical service delivery by community pharmacists. In this commentary, we address challenges to expanding community pharmacists' clinical roles and explore emerging models of care and payment to promote pharmacist engagement in care delivery. Finally, we offer several recommendations that could advance our collective efforts to better manage population health.

Barriers

Several barriers of different natures limit the uptake and delivery of clinical services by community pharmacists, including payment methods, provider recognition, technology (IT) systems, pharmacy training, and lack of evidence on return on investment (ROI).

Traditional Payment Models and Lack of Provider Status

Current payment methods and lack of pharmacist designation as providers critically impede the ability of community pharmacists to participate in interdisciplinary, team-based efforts designed to more effectively and efficiently manage population health.

First, pharmacists are not incentivized to provide clinical care services. Pharmacy payment is almost exclusively based on the costs of prescriptions and dispensing fees²¹; however, dispensing fees are generally low, and most compensation received by pharmacies do not reflect clinical services offered.²² While pharmacists can administer influenza and pneumococcal vaccinations and provide medication therapy management (MTM) through Medicare Part B and Part D,²² any additional reimbursement outside of these services can only be negotiated through separate payor and/or provider contracts that outline specific covered services.²² Furthermore, unlike other health care professionals, such as dietitians or clinical psychologists who will soon be recognized under the new MIPS expansion,²³ pharmacists are not recognized by the Centers for Medicare & Medicaid Services (CMS) as providers or MIPS-eligible clinicians. As a result, their participation and uptake in these new payment models have been limited.

Second, most pharmacy services do not have formal insurance billing codes,²² which can complicate reimbursement and limit patient access to services. Likewise, expanded legislation permits pharmacists in some states, such as California, Oregon, Washington, and New Jersey, to prescribe oral contraception without physician consultation. However, without the presence of formal billing codes for this preventive service,

pharmacists have to directly bill patients, which limits uptake and patient access.^{24,25}

Third, the majority of pharmacist reimbursement continues to take the form of fee-for-service payment,²² which does not incentivize value over the volume of care provided. Nevertheless, new payment models are increasingly incorporating pharmacists who assume accountability for certain medication-based outcomes, as we will describe.

Fourth, the fragmentation of medical and pharmacy benefits in Medicare creates a misalignment of financial incentives. Specifically, since stand-alone prescription drug plans are not responsible for the medical costs of their enrollees, they are not incentivized to save downstream medical costs through optimizing medication use.²⁶

IT Infrastructure

IT systems pose challenges that prevent the expansion of the role of community pharmacists in the delivery of clinical services. Community pharmacy IT management systems primarily contain data limited to medication dispensing and MTM interventions.²⁷ Most systems cannot document, store, and share clinical data. For example, if a pharmacist performs point-of-care testing for a patient, documentation of testing and results may not be transferred to other providers due to lack of interoperability with electronic health record (EHR) systems.²⁷ Creating health information systems that allow the exchange of patient health information is crucial in the integration of community pharmacists into multidisciplinary care teams.²⁸

Training

The Accreditation Council for Pharmacy Education has focused on incorporating quality improvement (QI) and population health concepts in all curricula for doctor of pharmacy degrees.²⁹ These concepts are recommended as required didactic coursework in order to improve patient care and care coordination between practice settings.²⁹ Despite these efforts, uptake is heterogeneous among schools, and the depth and breadth in which these principles are covered varies. Development of standardized training in QI and population health management can help community pharmacists contribute to patient care.²⁷

Lack of Evidence on ROI

With community pharmacy moving toward value-based initiatives, it will be important to identify the ROI of community pharmacist involvement in care. Recent research has shown that, while there is extensive evidence on the role of pharmacists improving immunization rates, adherence outcomes, and early disease detection, few studies have evaluated economic outcomes of pharmacists interventions.¹⁴ Studies that estimate economic outcomes associated with community pharmacist interventions and quantify their ROI will be important in

the further adoption of these services and, particularly, in the willingness of payers to develop new payment models to incorporate them.

Emerging Models of Care Delivery

Patient-Centered Medical Home

The patient-centered medical home (PCMH) model focuses on team-based, coordinated care and has been increasingly adopted by primary care practices to more effectively manage the health of their populations. Although PCMHs do not universally integrate pharmacists, their incorporation can be achieved through collaborative drug agreements, which are arrangements between pharmacists and physicians that authorize pharmacists to manage drug therapy for specific patients.³⁰

Pharmacist-based services support PCMHs by improving team-based care, care continuity, patient engagement, and access to care.³⁰ In fact, patients who are seen at PCMHs that include pharmacist-led medication management services are more likely to meet clinical goals such as A1c reduction, hypertension control, and statin adherence.³¹ In Cincinnati, Ohio, a community pharmacy contracted with a PCMH to receive capitated payments for providing care to high-risk patients. PCMH-embedded community pharmacists worked with physicians and other health care professionals to coordinate care. Pharmacists managed a diverse portfolio of patients with multiple comorbidities, low adherence, poorly controlled diabetes, and cardiovascular markers who were referred by physicians and/or identified in the EHR. Pharmacists were given access to the EHR and provided comprehensive medication reviews and patient education. Their incorporation in the PCMH improved such clinical outcomes as A1c, systolic blood pressure, and vaccination rates.³²

In North Carolina, the Center for Medicare & Medicaid Innovation (CMMI) and Community Care of North Carolina established the Community Pharmacy Enhanced Services Network (CPESN), where community pharmacies are accountable for population health outcomes in collaboration with a PCMH.³³ While final results are still pending, preliminary results suggest that this program has generated meaningful savings in the Medicaid population and resulted in decreased hospitalizations.³⁴

As PCMHs acquire greater accountability for the costs and outcomes of their patient populations, their integration of community pharmacists through collaborative drug arrangements can improve quality and value of care.³⁵

Accountable Care Models

An accountable care organization (ACO) is similar to a PCMH in its aim to improve quality, reduce costs, and coordinate care; however, rather than addressing care at the practice level, it focuses on aligning financial incentives and care coordination across a broader system of provider networks and institutions to

manage the health and health care costs of shared populations.³⁶ In ACOs, groups consisting of providers, hospitals, health systems, and other health care entities assume shared financial risk and responsibility for quality of care in their populations.³⁷

ACO quality metrics involve many medication-based measures that pharmacists can help address. Existing evidence has shown that expanded clinical roles of pharmacists have had a positive effect on total cost reduction and quality within ACOs,^{38,39} and ACOs have recognized the importance of appropriate medication use in achievement of quality and cost benchmarks.⁴⁰ In fact, studies indicate that while 70% of ACOs poorly rate their preparedness to manage medication costs,⁴⁰ half of ACOs have established formal relationships with community pharmacies,³⁸ and over the last 5 years, ACOs have progressively increased pharmacist involvement in their models.^{39,40} For example, community pharmacies that provide MTM services in an integrated setting have demonstrated improved medication management and collaboration with physicians to enhance care for shared populations.^{41,42}

While evidence is mounting on how ACOs can effectively integrate community pharmacists, there is opportunity to learn from established integrated care networks that include pharmacist-led medication services. Although not formally ACOs, physician-led provider organizations such as Advocate Physician Partners Health System provide pharmacists with EHR and health plan drug data. This data-sharing agreement equips pharmacists with valuable and necessary information to lead medication management for their populations.⁴³ ACOs can look to these models to determine how to best leverage community pharmacy services in population health management. Likewise, CVS Health, Walgreens, and Rite Aid have all designed partnership models to share data and encourage improved population management in conjunction with providers. Given the need to improve the coordination across health care providers in the outpatient setting, it is time for providers and community pharmacists to partner in the delivery of outpatient services and population health management.

Incorporation of Community Pharmacists in Other Value-Based Models

Pharmacists have also been incorporated into other value-based models that better align financial incentives. Most of these payment structures focus on improving medication adherence and became increasingly popular in response to CMS triple-weighting medication adherence to oral antidiabetics, statins, and renin-angiotensin system antagonists in star ratings calculations since 2012.^{44,45} Payors such as Medicare Advantage insurers, pharmacy benefit managers, and CMMI's CPESN have developed high-value pharmacy networks that reward pharmacies for effectively improving adherence.^{46,47} Health plans such as Inland Empire Health Plan, Healthfirst of New York, and Caremark-SilverScript have formed pay-for-performance

pharmacy networks to align incentives with improvement in adherence and other outcomes. Moreover, the latest enhanced MTM model rewards Medicare stand-alone prescription drug plans for improved medication adherence for specific chronic conditions, and plans that demonstrate sufficient cost savings are awarded premium subsidies in subsequent years to promote membership growth.⁴⁸ Early results suggest that 50% of plans received this performance-based reimbursement.⁴⁹

There have also been examples of community pharmacists involved in value-based models focused on more broader outcomes than adherence. For instance, various CMMI-funded pharmacy practice models include community pharmacists as drug therapy coordinators who are responsible for medication-related outcomes and costs.⁵⁰ Pharmacists have also been incorporated into provider teams to help manage chronic diseases, reduce health care utilization, and deliver medication management services in specialized populations.⁵⁰ For example, a CMS-funded team of physicians, payers, and community pharmacists in Wisconsin provides care to high-risk populations (i.e., those with chronic comorbidities, multidrug regimens, or recent hospital discharge).^{51,52} Early results of this collaborative model suggest that pharmacist-provided medication management services demonstrate a positive ROI.⁵³

These examples demonstrate that the incorporation of pharmacy services in payment and value-based models is feasible and could result in quality improvement and cost reduction. With the variety of payment models used, future research should assess which payment and delivery models most effectively optimize community pharmacist roles in population health management and incorporate pharmacists as valued members of the health care delivery team.

Recommendations

Enhancing the integration of community pharmacists into interdisciplinary, collaborative teams focused on improving the health of populations and reducing health care costs offers an important opportunity for enhancing care value. Based on the barriers to and facilitators of expanding the role of community pharmacists in the provision of clinical services, we offer the following policy recommendations:

1. *Recognition of pharmacists as health care providers.* Formal recognition of pharmacists as providers under the Social Security Act would help to facilitate pharmacist provision of clinical services and promote the inclusion of pharmacists as fully participating members of care teams. Furthermore, this recognition will allow pharmacists to fully participate in performance-based models, such as MIPS and APMs, which in turn will support achievement of comprehensive quality metrics.

2. *Increased integration of pharmacists in emerging health care delivery and payment models.* Routinely involving pharmacists in the implementation of new service delivery and payment models will demonstrate and further clarify the value of pharmacist-provided clinical services and promote their full participation in clinical care teams. This will allow for the provision of coordinated high-value health care services, increase accountability for reduction of medical and pharmacy related costs, and formalize incorporation of pharmacists in team-based care.
3. *Development of care models with pharmacist integration.* To identify the most effective models for pharmacy collaboration, rapid cycle testing of model implementation, rigorous summative evaluation, and widespread dissemination of lessons learned should be actively supported. In the absence of provider status, CMS or other key stakeholders can lead by developing shared learning and dissemination of pharmacist-based models. There is a need for the development of a synthesis function to support this activity and to optimize the role of pharmacists in health care delivery.
4. *Enhanced collaborative relationships.* As pharmacy services are incorporated into innovative service delivery and payment models, community pharmacists will increasingly become members of interdisciplinary care teams. There must be agreement between pharmacists and other providers on clinical tasks that can be optimally performed by pharmacists. Inter-professional education will be particularly important in facilitating this transformation.
5. *IT infrastructure, pharmacy training, and ROI.* In order to advance community pharmacy efforts in value-based care, it will be important to develop and implement IT infrastructure that allows for the sharing of medical records between pharmacists and other providers. In addition, it will be important to incorporate standardized quality improvement and population health training in the doctor of pharmacy degree curricula and in continuing education and interprofessional development courses. Finally, to foster the development and adoption of payment models that incorporate clinical services provided by community pharmacists, it is necessary to conduct robust studies that collect economic outcomes and estimate the ROI of these services.

Conclusions

Community pharmacists have expanded their practice care model to include clinical services focused on improving population health. In order to sustain and leverage these services, key barriers need to be addressed in order to solidify their role as an integral part of the health care team.

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DISCLOSURES

This article was funded by the National Association of Chain Drug Stores. The authors have no potential conflicts of interest to report.

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