



# Opportunities to Enhance Community-Based Medication Management Strategies for People with Complex Health and Social Needs

**CHCS** Center for  
Health Care Strategies, Inc.

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## ABOUT THE CENTER FOR HEALTH CARE STRATEGIES

The Center for Health Care Strategies (CHCS) is a nonprofit policy center dedicated to improving the health of low-income Americans. It works with state and federal agencies, health plans, providers, and community-based organizations to develop innovative programs that better serve people with complex and high-cost health care needs. For more information, visit [www.chcs.org](http://www.chcs.org) and follow [@CHCShealth](https://twitter.com/CHCShealth) on Twitter.

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## IN BRIEF

Improper or insufficient management of prescription medications results in an estimated 119,000 deaths in the United States annually.<sup>1</sup> In one recent study, 26 percent of readmissions were caused by preventable medication-related issues, with patients in rural areas at higher risk.<sup>2</sup> Among people with complex health and social needs, there are often significant challenges around medication adherence; risk of medication errors; failure to accomplish treatment goals resulting from inadequate or inappropriate drug regimens (therapeutic failure); and avoidable complications or harm caused by drug interactions (adverse drug events). Now, there are efforts underway by health systems and other providers to fill these gaps in service delivery through community-based approaches, particularly for low-income populations. The Center for Health Care Strategies conducted a literature review as well as interviews with experts across the country to understand promising community-based medication management strategies for people with complex needs and uncover opportunities to support these models in community settings.

## INTRODUCTION

Over the last decade, pioneering health care organizations have sought new approaches to improve health outcomes for low-income individuals with complex medical, behavioral health, and social needs. While innovative efforts to enhance care for these high-need, high-cost populations are emerging across the country, there are still significant gaps in the field. Among these gaps is the issue of *medication complexity*, a concept encompassing: (1) the number of medications an individual is prescribed (polypharmacy); (2) challenges around adherence and risk of medication errors; (3) failure to accomplish treatment goals resulting from inadequate or inappropriate drug regimens (therapeutic failure); and (4) avoidable complications or harm caused by drugs or drug interactions (adverse drug events or ADEs). National studies point to opportunities for improvement:

- Approximately 75 percent of adults take at least one medication and 29 percent take five or more.<sup>3</sup>
- ADEs cause over one million emergency department visits and 280,000 hospitalizations each year.<sup>4</sup>
- Older adults living in the community are the largest consumers of medications today with approximately 20 percent actively taking 10 or more different medications.<sup>5</sup>
- Prescription-related medication problems result in an estimated 119,000 deaths in the United States annually<sup>6</sup> and a recent study found that 26 percent of readmissions were caused by preventable medication-related issues, with patients in rural areas at higher risk.<sup>7</sup>

Medication complexity can be difficult to address within low-income populations with complex medical, behavioral health, and social needs for a variety of reasons, including geographic and social isolation, health literacy challenges, difficulties procuring reliable transportation, and other sequelae of poverty. Effective management of medication complexity requires a high level of organizational integration, and individuals with complex health and social needs are at particularly high risk of being harmed by fragmented health care delivery.<sup>8</sup> The Center for Health Care Strategies (CHCS) conducted a literature review as well as interviews with expert stakeholders to understand promising community-based medication strategies for people with complex needs and uncover opportunities to support these models.

## OPPORTUNITIES FOR ADDRESSING MEDICATION COMPLEXITY

**M**edication complexity presents particular challenges among adults with physical and behavioral health comorbidities, seniors, and those dually eligible for Medicare and Medicaid, all of whom often face social determinants of health (SDOH) challenges that make medication management more difficult. There is a clear link between medication regimen complexity and non-adherence.<sup>9</sup> An increased number of medications and complicated schedules or special instructions (e.g., time of day, food interactions, consuming before or after meals) can contribute to greater patient difficulty or disinterest in following treatment recommendations.<sup>10</sup> Overly complicated regimens can lead to missing doses, not taking medications at the correct time, or not following the correct administration instructions, all of which can result in ADEs and/or substandard clinical outcomes. Medication complexity remains one of the major factors that contributes to patients' non-adherence. Lack of medication adherence has been estimated to cause at least 10 percent of hospital admissions in the United States.<sup>11</sup>

In order to effectively manage prescription regimens patients must: (1) have a firm understanding of the purpose of their medications and dose; (2) develop a medication schedule that is efficient and manageable on a day-to-day basis; (3) have the ability to problem solve around the regimen and make changes as they occur; and (4) maintain consistency over time.<sup>12</sup>

Another risk of medication complexity is therapeutic duplication, also known as polypharmacy. This occurs when a patient is prescribed multiple drugs from the same class or multiple drugs with similar side effects and can result in increased risk of ADEs and intensified side effects. Patients with multiple chronic conditions who are being managed by multiple providers are at particular risk of therapeutic duplication, especially when none of the patient's providers are aware of the patient's entire drug regimen.<sup>13</sup>

### **Seeking to Improve Medication Safety for Complex Populations through the *Community Management of Medication Complexity Innovation Lab***

The *Community Management of Medication Complexity Innovation Lab*, led by CHCS through support from the Gordon and Betty Moore Foundation, is a national initiative aimed at identifying community-based strategies, to improve medication safety among adults with complex medical, behavioral health, and social needs, seniors, and those dually eligible for Medicare and Medicaid.

The *Innovation Lab* includes five competitively selected sites — **University of Minnesota College of Pharmacy and Fairview Health Services, Northwestern University Health Literacy & Learning Program, Pharmacy Society of Wisconsin, ThedaCare Health System, and Towncrest Pharmacy** — which have existing community-based medication management programs for individuals with complex health and social needs. Over two years, the pilot sites, representing a range of delivery systems and populations, will enhance or expand existing programs with a focus on reducing medication errors and improving outcomes.

To learn more about the Innovation Lab, visit [www.chcs.org/medication-complexity-lab](http://www.chcs.org/medication-complexity-lab).

## Defining Community Management of Medication Complexity

This lack of coordination among prescribers and providers, who often do not have the specialized medication expertise required to oversee complex regimens, disproportionately harms individuals with complex health and social needs. Community management of medication complexity is a paradigm shift that moves from the traditional model of “dispensing” medication, to a patient-centered approach that extends care beyond the walls of a clinical setting to help people safely and effectively use their medications. Community management of medication complexity involves:



**Mastering the basics of medication management;**



**Leveraging the workforce to maximize the scope of practice and capacity of pharmacists;**



**Deploying innovative health technologies to optimize care and outcomes;**



**Adopting appropriate quality measures;** and



**Building advanced payment models.**

Although providers, health plans, pharmacies, and health systems are in various stages of building community management strategies, experts interviewed by CHCS shared their insights on the fundamental elements of the strategies outlined above. The following examples for each of these strategies were gleaned from conversations with providers, pharmacy associations, and health plans from Alaska, California, Iowa, Massachusetts, Minnesota, Montana, Oregon, Tennessee, and Wisconsin.

# MASTERING THE BASICS OF MEDICATION MANAGEMENT



**R**esearch undertaken by the American College of Clinical Pharmacy supports a standard of care in which a patient’s care team works together to ensure that each patient’s medications — including prescription and non-prescription — are routinely assessed to determine that each medication is appropriate for the patient, effective for the medical condition(s), and safe given the comorbidities and other medications being taken.<sup>14</sup> This recognized standard of care also includes taking a full account of the disease being treated and the patient’s medication history as well as understanding the primary medical problem, other comorbidities, and the pharmacologic effects of the medication regimen.

Interviewees noted important foundational components for pharmacists to master the “basics” of medication management including: (1) providing patients and their caregivers with comprehensive education and counseling; (2) improving medication adherence; and (3) proactively identifying potential ADEs and medication misuse<sup>15</sup> prior to moving toward more enhanced community-based approaches. One important element includes having pharmacists conduct a comprehensive review of a patient’s medication and health history, known as a drug utilization review, before, during, and after dispensing medication in order to make appropriate therapeutic decisions and achieve positive patient outcomes. These prospective, concurrent, and retrospective reviews of drug use allow pharmacists to lower medication error rates and maintain the appropriate and effective use of medications.<sup>16</sup>

Comprehensive medication management, a pharmacist-led, evidence-based, preventive clinical service that aims to ensure optimal use of medications, is a valuable approach for medically and socially complex patients.<sup>17</sup> If therapeutic duplication or a potential drug interaction is identified through comprehensive medication management, pharmacists may employ “deprescribing,” a mechanism by which unneeded or duplicative medications are removed from a patient’s regimen to avoid polypharmacy, reduce regimen complexity, and minimize side effects.<sup>18</sup> Another approach involves systematically identifying prescribing problems by matching each of the patient’s conditions with their medications.<sup>19</sup> Specific areas of mismatch can point to drugs that are being overused, underused, or misused.<sup>20</sup>

Pharm2Pharm is one potential solution that aims to improve care and reduce costs for complex patients by using the expertise of pharmacists during care transitions and for up to one year post-discharge from an inpatient stay.<sup>21</sup> The program addresses: (a) medication problems that often occur with complex patients due to lack of coordination among providers and care team members; and (b) lack of medication expertise about co-occurring conditions.<sup>22</sup>

# LEVERAGING THE WORKFORCE



## ‘Carving’ Pharmacists into the Health System

Pharmacists are responsible for the provision of safe, effective, efficient, and accountable medication related-care for hospital and health-system patients.<sup>23</sup> They receive extensive education, training, and credentialing that culminates in a four-year professional PharmD degree.<sup>24</sup> In addition to this extensive clinical training, pharmacists have significant interactions with patients when dispensing medications, often assisting patients with insurance-related problems and/or concerns regarding medication costs.<sup>25</sup> In one North Carolina-based community pharmacy, for example, individuals with complex needs interact with their pharmacist 10 times more often than their provider.<sup>26</sup>

This argues for the ‘carving in’ of pharmacists into the health care system—including a spectrum of integration from coordinated care, to co-located, and fully integrated care—to improve communication, coordination of care, and outcomes. In addition, the Community Preventive Services Task Force, an independent panel of public health and prevention experts that provides evidence-based findings and recommendations about community preventive services, found strong evidence that team-based care, which includes a pharmacist on the team, can improve patients’ blood pressure control.<sup>27</sup> One interviewee described key steps for integrating pharmacists into care teams, including: (1) meeting with other providers early on to clearly define the role of pharmacists as team members who can handle medication-related issues; (2) establishing clear workflows for warm hand offs and referrals that allow pharmacists to step in “on demand” to address medication-related issues; and (3) using risk algorithms or individual chart reviews so pharmacists can identify patients prior to medical appointments to coordinate pharmacist “drop ins” to assist primary care providers with medication-related issues.<sup>28</sup>

The University of Southern California (USC) School of Pharmacy provides one example of an integrated pharmacy model. It partners with 19 federally qualified health centers to provide comprehensive medication therapy services aimed at improving medication adherence and safe and appropriate use of medications for people with complex health and social needs.<sup>29</sup> The care team includes two pharmacists, two pharmacy residents, and two clinical pharmacy technicians who work collaboratively with providers within the clinic to provide medication therapy services. USC’s results to date include: (a) 75 percent reduction in annual medication costs to the clinics; and (b) reductions in formulary costs from \$2 million to about \$400,000 annually for one of the clinics.<sup>30</sup>

***“The pharmacists should live in the same place as the doctor. We do this with mental health. If housed in the same place, then it is possible to have more of a collaborative approach and have conversations between providers and pharmacists.”***

**Doug Eby, MD, Vice President, Medical Services Division,  
Southcentral Foundation**

## Strengthening the Workforce

Repurposing other workforce members such as pharmacy technicians, community health workers (CHWs), family caregivers, community paramedics, among others, is a strategy that many providers are using to enhance community medication management services. Pharmacy technicians can serve a complementary role to pharmacists and other licensed providers by taking on certain non-clinical tasks, freeing the pharmacist to perform higher-level duties as listed in Exhibit 1.

### EXHIBIT 1: Enhanced Medication Management Services Pharmacists Can Deliver

#### **Scheduling/Planning**

- Appointment-based scheduling
- Coordinated discharge planning

#### **Direct Services/Referrals**

- Vaccinations
- Testing (e.g., flu, strep, HIV)
- Long-acting injections
- Health screenings
- 24-hour emergency services
- Telepharmacy/telehealth services
- Referrals to quitlines, counseling services

#### **Medication Review/Tailored Packaging**

- Comprehensive medication reviews
- Adherence support and medication synchronization services
- Compounding
- Bubble packaging to help people manage multiple medications

#### **Consultation/Education**

- Pharmacotherapy consults
- Disease management consultation/coaching
- Preventive health education programs targeting chronic conditions

*\*Sample list of activities obtained from interviews*

Below are several activities that specially trained pharmacy technicians can perform to assist providers under a Tech Check Tech model, which involves the checking of a technician's order-filling for accuracy by another technician rather than a pharmacist.<sup>31</sup> Under a Tech Check Tech model, pharmacy technicians are provided with specialized training and are empowered to:

- Perform vital checks (e.g., blood pressure, pulse);
- Mine claims data to identify patients who may be at risk for medication errors;
- Conduct follow-up calls to patients; and
- Verify that medication fills are correct for non-controlled medications.<sup>32</sup>

An additional benefit that pharmacy technicians offer is that they often come from the same community and match the background of populations being served and thus have a keen understanding of the population.<sup>33</sup> This enables them to effectively communicate with patients and work in collaboration with providers to address gaps in care.<sup>34</sup>

Workforce members such as CHWs, community paramedics, and family caregivers can also serve an important role as “eyes on the ground” for pharmacists and primary care providers given their ability to observe and interact with people in their homes. They can help monitor how medications are being taken, look for potential risk factors in complex medication regimens, identify financial barriers to taking medications, and find low-cost pharmaceutical programs.



For example, ThedaCare Health System in Appleton, Wisconsin created a home-based community paramedicine program for people who are at risk for repeat inpatient stays and emergency department (ED) visits. ThedaCare partners with Gold Cross Ambulance Service to deploy community paramedics to: (1) reinforce the patient’s individual care plan; (2) assist with tasks such as determining

whether a patient has had their multiple prescriptions filled following a hospital stay; (3) assess people’s unmet social needs (e.g., lack of transportation to pick up medication, financial barriers); (4) determine if the appropriate medication dosage is being taken with the frequency prescribed by their physician; and (5) provide health education to patients and family members for condition-specific issues.<sup>35</sup>

Family caregivers can also serve as vital non-traditional workforce members in delivering enhanced medication management services to people in their homes. One interviewee noted the importance of educating caregivers about what constitutes reasonable adherence in the community and providing help so that they can understand when precise adherence to a medication (e.g., with blood thinners or thyroid medication) is most important and when some variability can be safely tolerated.<sup>36</sup> To support family caregivers, the AARP and University of California’s Family Caregiving Institute developed the Home Alone Alliance,<sup>37</sup> a partnership of public, private, and nonprofit organizations that aim to change the way health care organizations and professionals interface with family caregivers. The Alliance developed six videos that provide practical guidance for family caregivers on topics such as how to effectively manage medications and administer non-oral medications (e.g., topicals, eye drops).

Another approach is the Los Angeles County STAR program, which deploys CHWs, also referred to as *promotores de salud*, to work with the most vulnerable Medi-Cal (California’s Medicaid program) homeless beneficiaries. The CHWs provide services like medication education, often addressing patients’ misconceptions about the addictive nature of medications or the effects of cultural fasting that can affect medication schedules or interfere with drug absorption.<sup>38</sup>

Given this patient population, it is critical for providers to have regular training that addresses complex medication issues as well as SDOH. LA County trains its Intensive Care Management Service providers (aka CHWs), pharmacists, and other team members in motivational interviewing, harm reduction techniques, and trauma-informed approaches to effectively engage patients. These skills are especially important to help

***“Patients are often stripped from their individuality, are observed, and given medication recommendations out of context with their daily life. Community health workers go to their home and can see what is happening. The act of witnessing has allowed a lot of honest dialogue.”***

Heidi Behforouz, MD, Physician Lead, Los Angeles County Department of Health Services’ Care Connections Program

***“Caregivers often ask what they should do in delivering care to family members. One example is when an older adult with dementia refuses medications. The current health care system doesn’t use a common sense approach — such as what are the most important medications for that day. For example, maybe we should start by giving pain medication, as opposed to vitamins. We need to better prepare families.”***

Theresa A. Harvath, PhD, RN, FAAN, Executive Associate Dean, School of Nursing, University of California Davis and Director, Family Caregiving Institute UC Davis Family Caregiving Institute

people experiencing homelessness and those with substance use disorders who may experience barriers such as lack of transportation or refrigeration and to develop solutions such as medication home delivery, financial assistance for medication costs, or transportation assistance. ThedaCare emphasizes that its use of motivational interviewing and trauma-informed care are not simply techniques, but rather foundational principles embedded across their community paramedicine program. Using motivational interviewing has allowed ThedaCare's team to engage with patients, and increase its understanding of the underlying behavior, motivation, and needs of patients.

## **Scope of Practice and Collaborative Practice Agreements**

Scope of practice refers to the activities that providers, including pharmacists and pharmacy technicians, are legally permitted to deliver in practice settings. It is important to examine the impact of scope of practice laws and regulations as they have the potential to advance or stall the capacity of pharmacists and other team members to deliver enhanced medication management services. Collaborative practice agreements (CPAs) create formal relationships between pharmacists and physicians or other providers that allow for expanded services the pharmacist can provide to patients and the health care team.<sup>39</sup>

CPAs allow pharmacists to practice at the top of their licenses while providing essential public health services to patients.<sup>40</sup> CPAs may include activities such as administering influenza and other vaccinations, smoking cessation consultations, and therapeutic interchange of specific medications. These arrangements enable pharmacists to be more efficient in providing functions like comprehensive medication reviews that are within the scope of their practice, while streamlining communication with physician offices. Collaborative drug therapy management agreements are a type of CPA that exist between one or more providers and pharmacists in which qualified pharmacists work within the context of a defined protocol that permits them to assume professional responsibility for a set of activities such as performing patient assessments, counseling, and referrals; ordering laboratory tests; administering drugs; and selecting, initiating, monitoring, continuing, and adjusting drug regimens.<sup>41</sup> The Pharmacy Society of Wisconsin, for example, developed the Wisconsin Pharmacy Quality Collaborative (WPQC), a network of pharmacists who provide medication therapy management (MTM) services such as comprehensive medication reviews to complex patients. The Wisconsin-based program provides quality-based accreditation for pharmacies and certification processes for pharmacists.<sup>42</sup>

# DEPLOYING INNOVATIVE HEALTH TECHNOLOGIES



**P**oor communication at care transitions contributes to about 50 percent of all hospital-related medication errors and 20 percent of adverse drug events.<sup>43</sup> Interviewees stressed the importance of well-established workflows that clearly delineate the medication management chain of command. This includes care team members responsible for delivering specific services, the types of activities, and the steps in the process. Towncrest Pharmacy in Iowa City, Iowa entered into a pilot partnership with Wellmark Blue Cross and Blue Shield, transforming its pharmacy from a retail service delivery approach to a patient-centered care model that uses technician-driven dispensing, Tech Check Tech, automation/technology (e.g., tablet-counting machines), medication synchronization, medication therapy management, deprescribing, and health coaching from an interdisciplinary care team.<sup>44</sup> Towncrest hired additional pharmacy technicians, provided additional training, and repurposed pharmacists to enhance the services that are provided to patients such as home deliveries and regular medication reconciliations. A Wellmark analysis found that Towncrest’s workforce and service transformation resulted in \$298 per member per month (PMPM) lower costs for its patients in comparison to non-Towncrest patients.<sup>45</sup>

Developing simple strategies to address common medication issues can save valuable provider and patient time, as well as streamline workflow processes. CareOregon, Oregon’s largest nonprofit safety net health plan, which serves Medicaid and dually eligible special needs plan beneficiaries, developed a simple tool for patients who may be uncomfortable discussing medication issues with their provider because they feel intimidated, or do not have sufficient time during their medical appointment. CareOregon’s MEDS (My Easy Drug System) Chart System allows patients to mark each of their medications with a happy or sad face sticker. CareOregon has found that both members and providers feel more comfortable using the chart to discuss medication problems.<sup>46</sup>

Robust patient health information systems are critical to enhancing community-based medication services. This information can be used to develop algorithms to identify high-risk patients or to find patients with chronic conditions who may benefit from disease management programs. Additional tools include pharmacy-driven electronic health records (EHRs) and e-care alerts that notify pharmacists of changes to a patient’s medication regimen.

*“We should work to understand patients’ lives and goals of care and then see how diseases and medications are getting in the way of that.”*

James Slater, PharmD, Executive Director of Pharmacy Services, Care Oregon

*“When working with a privately insured population, it is easy to talk about medications, proper diet, and exercise. When working with patients who are homeless, where do they walk? Where do they store vegetables? No one has a refrigerator. Those barriers are very significant to managing something like diabetes.”*

Steve Chen, PharmD, FASHP, FCSHP, FNAP, Associate Dean for Clinical Affairs, University of Southern California School of Pharmacy

Telehealth and videoconferencing can also help manage complicated medication regimens for patients in rural areas or without reliable transportation. In Montana, people with complex needs often live hundreds of miles from their providers. In response, CHWs and nurses at one Montana health plan conduct home visits using HIPAA-compliant tablet technology to manage complex medication regimens, monitor medication adherence, deliver medication, and assist people with understanding complicated dosage instructions.<sup>47</sup>

# ADOPTING APPROPRIATE QUALITY MEASURES



**A**lthough there are few national standards for quantifying medication-related problems,<sup>48</sup> it is important to assess an approach's ability to meet patients' needs and evaluate the impact on health outcomes, resource utilization, and net costs/savings. This requires adopting measures that directly relate to appropriate and consistent medication use and can be influenced by community management of medication interventions, for example:<sup>49</sup>

- Intermediate outcomes (laboratory measures, number of medication adverse events, treatment goals achieved);
- Patient-centered outcomes (disease-specific outcomes, mortality, patient satisfaction, quality of life); and
- Resource utilization outcomes (health care cost and utilization).

Traditional quality measures for pharmacies focus primarily on patient medication adherence. Medication possession ratio, also referred to as proportion of days covered (PDC), is a measure of how regularly patients fill their medication, or more specifically how many days of medication patients possess compared to the total number of days in the measurement period. This measure is commonly used as a proxy for medication adherence. This is an imperfect measure of medication adherence, since possessing the medication does not necessarily mean that the patient is taking the medication, and perhaps more importantly, it does not measure whether the medication is actually improving the patient's health. Furthermore, focusing on improving medication adherence without comprehensive medication review can be dangerous. If a patient stops taking some or all of his or her medications without notifying the provider, the provider may assume that the reason the patient's clinical situation is not improving is because the dosage is insufficient and may increase the dose, which could lead to an ADE if the patient starts taking the medication.

National Quality Forum (NQF) quality measures can potentially serve as a foundation for monitoring progress on medication management interventions. There are other quality measure sets such as the Healthcare Effectiveness Data and Information Set: Statin Therapy for Patients with Cardiovascular Disease; Controlling High Blood Pressure; Comprehensive Diabetes Care; Antidepressant Medication Management; and Diabetes Screening for People with Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications. Additional measurement tools include the Morisky Medication Adherence Scale, an eight-item scale that has been validated among patients with type 2 diabetes to assess patients' medication attitudes and beliefs.<sup>50</sup>

More recently, pharmacy quality measures have begun to focus on patient outcomes.<sup>51</sup> For example, while Medicare's STAR ratings focus on both process and outcomes, outcome-focused measures have three times the scoring weight of process measures.<sup>52</sup> This is a promising shift toward rewarding health plans for activities that have a positive impact on patient health. In addition to cost and utilization measures, many pharmacies that specialize in community-based pharmacy interventions have developed custom quality measures for their programs (see *Exhibit 2, next page*).

**Exhibit 2. Pharmacy-Related Quality Measures by Source**

<b>Source - Medicare Star Ratings</b>
<b>Measures</b>
Medication Reconciliation Post-Discharge
Getting Needed Prescription Drugs
High Risk Medication
Medication Adherence for Diabetes
Medication Adherence for Hypertension (RAS antagonists)
Medication Adherence for Cholesterol (Statins)
Medication Reconciliation Post-Discharge
<b>Source - Community Pharmacy Enhanced Services Network</b>
<b>Measures</b>
Smoking Cessation Consultations Completed by Pharmacists
Naloxone Candidate Referrals
Number of Care Plans Created/Updated
<b>Source - Pharmacy Quality Alliance</b>
<b>Measures</b>
Proportion of Days Covered: Diabetes All Class (PDC-DR) (NQF #0541)
Proportion of Days Covered: Renin Angiotensin System Antagonists (PDC-RASA) (NQF #0541)
Proportion of Days Covered: Statins (PDC-STA) (NQF #0541)
Proportion of Days Covered: Beta Blockers (PDC-BB)
Proportion of Days Covered: Calcium Channel Blockers (PDC-CCB)
Proportion of Days Covered: Biguanides (PDC-BG)
Proportion of Days Covered: Dipeptidyl Peptidase (DPP)-4 Inhibitors (PDC-DPP)
Proportion of Days Covered: Sulfonylureas (PDC-SFU)
Proportion of Days Covered: Thiazolidinediones (PDC-TZD)
Adherence to Non-Warfarin Oral Anticoagulants (PDC-NOAC)
Adherence to Long-Acting Inhaled Bronchodilator Agents in COPD (PDC-COPD)
Proportion of Days Covered: Antiretrovirals (PDC-ARV)
Non-infused Disease Modifying Agents Used to Treat Multiple Sclerosis (MS) (PDC-MS)
Treatment of Chronic Hepatitis C: Completion of Therapy (HCV)
Primary Medication Nonadherence (PMN)
Diabetes Medication Dosing (DOS)
Statin Use in Persons with Diabetes (SUPD) (NQF #2712)
Medication Therapy for Persons with Asthma (MTPA)
Cholesterol Management in Coronary Artery Disease (CMC)
Drug-Drug Interactions (2017 Update) (DDI-2017)
Antipsychotic Use in Persons with Dementia (APD) (NQF #2111)
Antipsychotic Use in Persons with Dementia: MDS (APD-MDS)
Antipsychotic Use in Children Under 5 Years (APC) (NQF #2337)
Use of High-Risk Medications in the Elderly (2017 Update) (HRM-2017)
Use of Benzodiazepine Sedative Hypnotic Medications in the Elderly (BSH)
Polypharmacy: Use of Multiple Anticholinergic Medications in Older Adults (POLY-ACH)
Polypharmacy: Use of Multiple CNS-Active Medications in Older Adults (POLY-CNS)
Concurrent Use of Opioids and Benzodiazepines (COB)
Use of Opioids at High Dosage in Persons Without Cancer (OHD) (NQF #2940)
Use of Opioids from Multiple Providers in Persons Without Cancer (OMP) (NQF #2950)
Use of Opioids at High Dosage and from Multiple Providers in Persons Without Cancer (OHDMP) (NQF #2951)
Completion Rate for Comprehensive Medication Review (CMR)

## BUILDING ADVANCED PAYMENT MODELS



**E**ffective community-based management of medication complexity for complex populations requires appropriate levels of reimbursements.<sup>53</sup> Although many health plans are moving toward alternative payment models (APMs), and have experience with MTM programs, these payment models are not necessarily promoting the integration of pharmacists into health care teams. It is important to recognize the value of community pharmacy services as part of high-performing networks. State Medicaid agencies and managed care organizations should consider reimbursing pharmacists for the delivery of community-based medication management services for complex populations, possibly through performance incentives.<sup>54</sup> Various payment models can be used to drive new community medication management activities. For example, Inland Empire Health Plan in California initiated a Pharmacy Home Program, which assigns dually eligible Medicare and Medicaid members with complex needs to a local, community pharmacy where pharmacists work 1:1 with members on MTM activities such as medication reconciliation. Pharmacists receive a consultation fee if they have at least one contact with a member per month. Pharmacists are expected to follow members for 12 months, and if at the end of that time the members achieve clinical outcome targets, the pharmacy receives an additional \$1,000.<sup>55</sup>

In Wisconsin, the state Medicaid agency reimburses pharmacies for providing comprehensive medication review and assessment (CMR/A) services for Medicaid beneficiaries. The services must be delivered in person and may be provided upon discharge from the hospital or long-term care facility or in the member's home. Under this program, pharmacies receive \$85 for an initial CMR/A and \$40 for each of three follow-up CMR/As annually thereafter.<sup>56</sup> This reimbursement approach encourages pharmacists to actively manage patients' medications. The United Way of Dane County also supports WPQC pharmacists to provide CMR/A services at community and senior centers. Case managers identify older adults at risk of falls and ADEs and intervene by scheduling pharmacist-provided CMR/A services and referring patients for free in home-safety assessments.<sup>57</sup>

## RECOMMENDATIONS AND CONSIDERATIONS FOR ACTION

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**P**roviders, pharmacies, health systems, or pharmacy associations implementing enhanced community management of medication complexity services for people with complex needs often face challenges both systemic and cultural, many of which are based in the medication service delivery system. The following section outlines recommendations for addressing several common challenges, including: (1) delivery system, regulatory and reimbursement issues; (2) cultural norms and provider capacity building; and (3) health information technology and quality measures.

### Developing Delivery System and Financing Mechanisms

The U.S. has a fragmented delivery model in which pharmacists and drugs are often “carved out” from other medical services. Under a carve-out, pharmacy benefits are funded and managed through a separate vendor from the medical benefit. Because the managed care organizations that manage the medical benefit and the pharmacy benefit respectively have their own separate data systems, the carve-out model makes it more difficult for data to be shared, and makes clinical integration more difficult. This siloing effect is particularly problematic for medically and socially complex patients who take multiple medications that require close monitoring, coordination, and communication across providers. States generally use carve-out models as a cost-saving measure, but an America’s Health Insurance Plans report comparing the 28 states with pharmacy carve-ins to seven with carve-outs found that drug costs increased more for carve-out states than for carve-in states.<sup>58</sup> Following are approaches that health plans and providers may consider to enhance community management of medication complexity:

- ***Integrate medication management services and pharmacists into care delivery and care coordination models.*** Pharmacy services are often carved out, or delivered and reimbursed separately from other health care services. Well-designed approaches can integrate medication management into complex care delivery models, workforce, interdisciplinary care teams, and payment approaches. Pharmacists on interdisciplinary care teams can lend their expertise on medication-related issues. With responsibility for managing Medicaid and Medicaid-Medicare dually eligible beneficiaries, CareOregon developed a home-based primary, palliative, and hospice care model that includes innovative benefits such as pharmacy management services to comprehensively care for patients with advanced illnesses.<sup>59</sup>
- ***Examine scope of practice laws and regulations that may prevent providers from delivering enhanced medication services.*** State laws and regulations do not always reflect pharmacists’ specialized training and skills.<sup>60</sup> This can create real obstacles to enhancing medication management services. Minnesota enacted collaborative practice authority in 1999 to remove barriers preventing partnerships between primary care providers and pharmacists.<sup>61</sup> These CPAs have resulted in further integration of pharmacists on care teams, and enabled pharmacists to work more efficiently.



- **Identify reimbursement challenges and explore alternative payment approaches and incentives to enhance medication management services in community settings.** Barriers to implementing value-based purchasing arrangements for community management of medication complexity include: constraints in fee-for-service payment models, such as lack of physician or pharmacist infrastructure to implement and manage services; and difficulty in collecting timely, accurate data to assess outcomes of programs.<sup>62</sup> In developing incentives, it is important to examine current performance on measures such as medication adherence, and completion of medication-administration records as a starting point, using pay-for-performance arrangements to encourage models to strengthen quality measures, improve patient outcomes, and maintain provider accountability. Once there is demonstrated capacity, providers can move to more advanced APM models with associated risk and opportunities to increase financial incentives. The Community Pharmacy Enhanced Services Network program is an advanced payment approach that focuses on building the capacity of pharmacies to provide patient-centered enhanced pharmacy services. It uses an APM that includes a PMPM payment based on patient risk score and pharmacy performance.<sup>63</sup> The payment rate, which is based on Medicare chronic care management codes, is designed to reward providers who are high performing and care for more complex patients who may need home delivery, monthly medication reconciliation, patient education, and other services.<sup>64</sup>

## Addressing Cultural Norms and Workforce Capacity Building

Pharmacists may be the only highly trained health professionals who are not recognized in national health policy as health care providers or practitioners.<sup>65</sup> In addition, deep-rooted cultural norms in the health care field may lead to pharmacists' function being viewed as "just" dispensers of medication. At the other end of the continuum in terms of training, family caregivers are also overlooked as care team members who can play a role in the management of medications and monitoring of doses. Following are considerations for addressing cultural norms and capacity-building issues for both of these key care team member roles:

- **Support credentialing opportunities to advance the role that pharmacists can play in the delivery of services within their scope of practice.** California created an advanced practice pharmacist license<sup>66</sup> that enables those with credentials to:
  - » Perform patient assessments;
  - » Order and interpret drug therapy related tests to maximize treatment;
  - » Participate in the evaluation and management of diseases and health conditions in collaboration with other health care providers; and
  - » Initiate, adjust, or discontinue drug therapy for a patient, as long as the advanced practice pharmacist notifies the diagnosing prescriber.

- **Create sustainable funding models to support alternative workforce arrangements and training programs for pharmacy technicians, CHWs, community paramedics, and others.** Pharmacists often cite overwhelming prescription workloads and insufficient help as barriers to enhancing the care they deliver to patients. The tasks that burden pharmacists include prescription order entry, filling prescriptions, final product verification, or communicating with insurance companies to adjudicate rejected claims. These activities can be delegated to trained technicians, working at the top of their own licenses. Towncrest Pharmacy in Iowa transformed its patient care process at the community pharmacy level. This process required multiple remodels of the pharmacy, hiring and training support staff (technicians), and repurposing pharmacists.<sup>67</sup> Additional care team members such as CHWs and community paramedics can also be considered when developing medication management models.
- **Move from a sole reliance on utilization and cost data toward assessments that account for SDOH.** Current methods for identifying people with complex needs often rely solely on health care utilization and cost data, which fall short in accounting for other risk factors such as behavioral health disorders, lack of stable housing, and economic barriers. Identifying other data tools such as social determinant assessments can help providers identify SDOH needs that impact as much as 40 percent of health outcomes.<sup>68</sup>
- **Train family caregivers in effective medication management.** There are few resources for family members on how to manage complex medication regimens. The UC Davis Family Caregiving Institute has found that having a dedicated medication management system for family caregivers, with uninterrupted time to focus on preparing medication, is an effective strategy.<sup>69</sup> Family caregivers can serve a role in monitoring complex medication regimens and assisting people with limited health literacy. In addition, providing family members with education on how to address issues such as when a family member misses a dose of medication and looking for warning signs can be effective.

## Supporting Quality Measurement and Health Information Technology

Although there has been some progress among innovative providers, as outlined in Exhibit 2, in developing quality measures, to assess the community management of medication services, the field is still in the nascent stages. When selecting quality measures and health information technologies, decision-makers may wish to consider the following:

- **Identify the gaps in quality measures.** There are a variety of measures for assessing medication-safety and adverse drug errors, but there are few that relate specifically to medication services that are being delivered in the community. The majority of those measures are process oriented and fail to accurately measure the impact of enhanced community management of medication services, particularly for complex populations. By identifying quality measures that capture the types of services being delivered outside the walls of a medical setting, it allows providers to assess the impact of their interventions to identify what is working as well as opportunities for mid-course corrections to achieve outcomes.

- ***Create shared accountability outcome measures that define and reward effective medication management.*** As additional providers and plans develop enhanced medication management programs, it would help the field if entities could agree upon outcome measures that are adapted from hospital settings to community settings. This would require scanning the menu of measures currently included in these programs, establishing specific criteria to separate out measures that advance this goal from those that do not, and replacing poorly performing measures with better ones.<sup>70</sup>
- ***Advance the adoption of pharmacy technologies — including patient portals and e-care plans — and EHRs to increase coordination, education, and monitoring of people with complex needs by providers and pharmacists and achieve optimal outcomes.*** Adopting systems such as EHR medication reconciliation and regimen surveillance tools will allow providers, pharmacists, and care teams to better communicate patient-specific medication instructions, answer questions, reconcile medications, and conduct medication regimen monitoring activities.

## LOOKING AHEAD

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**T**here is increasing interest among pharmacies, health care delivery systems, and health plans to enhance, scale, and spread the adoption of community-based medication management strategies for people with complex medical, behavioral health, and social needs. This momentum is being driven by community pharmacies and other health care providers to partner with plans, community-based providers, and payers to increase system capacity to provide comprehensive medication management services. Although many plans and providers are in the nascent stages of developing advanced approaches that integrate medication services into care models, there are significant lessons from those that have pioneered these efforts. There are several opportunities in this brief that can inform the design and implementation of community-based medication management interventions. These include adopting advanced payment models, maximizing the scope of practice and capacity of pharmacists and non-traditional workforce members, developing outcome-driven quality measures, and implementing pharmacy-driven health information technology. The value of investing in community-based medication management strategies should not be overlooked by policymakers, health plans, and providers who are seeking to transform the delivery system and to improve care for people with complex needs.

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