

## A PROGRAM GUIDE FOR PUBLIC HEALTH



### Partnering with Pharmacists in the Prevention and Control of Chronic Diseases

## Acknowledgments

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## Executive Summary

New ways to expand team-based health care are needed to protect the health of Americans. Many chronic diseases, which are increasing with the aging U.S. population, are preventable or manageable. The role of the pharmacist has expanded beyond just dispensing medications and is evolving into active participation in chronic disease management as a part of team-based care. Programs addressing chronic diseases in state health departments and communities can build team relationships through public and private partnerships. We intend for this guide to serve as a starting point for Centers for Disease Control and Prevention (CDC) grantees to build these relationships with pharmacists and other strategic stakeholders.

The objectives of this guide are to provide the following information:

- Basic definitions for medication therapy management, comprehensive medication management, and collaborative drug therapy management.
- A description of the role of the pharmacist in team-based health care.
- Evidence to support maximizing pharmacists' engagement in team-based health care.
- An overview of pharmacist scope of practice policies at the federal and state levels.
- A description of how chronic diseases are addressed in community pharmacies.
- Examples of medication therapy management from state health departments.
- Strategies for working with pharmacists.

### Core Elements of a Medication Therapy Management Service Model (MTM) in Pharmacy Practice\*

1. Medication therapy review (MTR) is a systematic process of collecting patient-specific information, assessing medication therapies to identify medication-related problems, developing a prioritized list of medication-related problems, and creating a plan to resolve them.
2. Personal medication record (PMR) is a comprehensive record of the patient's medications (prescription and nonprescription medications, herbal products, and other dietary supplements).
3. Medication-related action plan (MAP) is a patient-centric document containing a list of actions for the patient to use in tracking progress for self-management.
4. Intervention and/or referral includes provision of consultative services and interventions to address medication-related problems; when necessary, the pharmacist refers the patient to a physician or other health care professional.
5. Documentation and follow-up include consistent documentation of MTM services and scheduling of follow-up MTM visits based on the patient's medication-related needs or when the patient is transitioned from one care setting to another.

\* American Pharmacists Association and National Association of Chain Drug Stores Foundation.

[Medication Therapy Management in Pharmacy Practice: Core Elements of an MTM Service Model](#) Version 2.0. 2008.

## Purpose of This Guide

The National Center for Chronic Disease Prevention and Health Promotion is working to transform CDC's chronic disease activities by focusing national and state efforts on the '4 Domains' listed below:

1. **Environmental Approaches:** Make healthy behaviors easier and more convenient for more people.
2. **Health Systems:** Improve delivery and use of quality clinical services to prevent disease, detect diseases early, and manage risk factors.
3. **Community-Clinical Linkages:** Ensure those with or at high risk for chronic diseases have access to quality community resources to best manage their conditions.
4. **Epidemiology and Surveillance:** Provide data and conduct research to inform, prioritize, deliver, and monitor programs and population health.

Within the Community-Clinical Linkages domain, CDC's Diabetes Prevention and Control Program (DPCP) and Heart Disease and Stroke Prevention (HDSP) Programs both include a focus on enhancing the role of community pharmacists in team-based care as outlined below:

- DPCP Core Diabetes Interventions and Strategies: "Expand the role of allied health professionals by replicating and scaling evidence-based programs founded on the principles of the Asheville Project and the Diabetes 10-City Challenge."
- HDSP Programs Strategies for States to Address the "ABCS" of Heart Disease and Stroke Prevention: "Promote use of pharmacists as health care extenders to promote control of hypertension and high blood cholesterol."

## Basic Definitions

### Medication Therapy Management

As defined by the American Pharmacists Association, medication therapy management (MTM) is a term used to describe a broad range of health care services provided by pharmacists, the medication experts on the health care team. A consensus definition, adopted by the pharmacy profession in 2004, defines MTM as a service or group of services that optimize therapeutic outcomes for individual patients. Pharmacists provide MTM to help patients get the best benefits from their medications by actively managing drug therapy and by identifying, preventing, and resolving medication-related problems. MTM services are independent of, but can occur in conjunction with, the provision of a medication or medical device.

## Pharmacist Education

As you seek pharmacists as partners, understanding their background may be helpful. Today, pharmacists graduate with a Doctor of Pharmacy degree, commonly referred to as a “PharmD.” Some longer-practicing pharmacists may not have a PharmD but have a Bachelor of Science (BS) in pharmacy. Because the BS was more focused on drug distribution and dispensing, in 2004, the American Council of Pharmaceutical Education made the PharmD the required degree for accredited pharmacy programs in an effort to provide more clinical education.

Presently, pharmacists also have the opportunity to complete one or two years of optional residency training after graduation. Residency training can occur in hospitals, community pharmacies, or other sites and prepares the pharmacist for more advanced practice in those areas.

Additionally, pharmacists may choose to complete certificate programs focused on the management of specific disease states or other certifications that demonstrate competency and expertise in a certain area. The Board of Pharmaceutical Specialties offers certification in six areas of specialty in pharmacy, designated by credentials after the PharmD. Some pharmacists may seek credentials that cross professional boundaries to further differentiate themselves, such as becoming a Certified Diabetes Educator.

Pharmacists provide **MTM services** in all care settings in which patients take medications. Although pharmacists in different settings may provide different types of services, the goal of all pharmacists providing MTM is to make sure that the medication is right for the patient and his or her health conditions and that the best possible outcomes from treatment are achieved.

## Comprehensive Medication Management

In **The Patient-Centered Medical Home: Integrating Comprehensive Medication Management to Optimize Patient Outcomes**, the Patient-Centered Primary Care Collaborative defines comprehensive medication management as the standard of care that ensures each patient’s medications—whether they are prescription, nonprescription, alternative, traditional, vitamins, or nutritional supplements—are individually assessed to determine that each medication is appropriate for the patient, effective for the medical condition, safe given the comorbidities and other medications being taken, and able to be taken by the patient as intended. Within this system, each medication is assessed for the medical condition or indication for which it is taken. To produce clinically useful data, the indication must be electronically linked with the product, dose, duration, manner in which the medication is taken, therapy goals, clinical parameters that determine progress toward these goals, and actual outcomes. The clinical status of the patient must be determined for each drug and each condition (e.g., current blood pressure level and cholesterol levels for patients with high blood pressure and high cholesterol). Without knowledge of the current clinical status of a patient, the indication, appropriateness, and effectiveness of most medications cannot be determined.

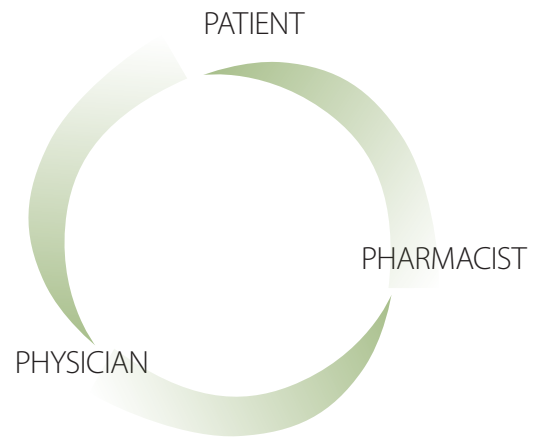
Comprehensive medication management includes an individualized care plan that achieves the intended goals of therapy with appropriate follow-up to help the pharmacist determine actual patient outcomes. The pharmacist evaluates the outcome parameters against the patient’s individualized therapy goals and re-evaluates the patient to identify any new medication-related problems that might interfere with the safe and effective use of medications in the patient’s care plan. These follow-up evaluations occur in a time frame that is clinically appropriate for the specific patient as well as his or her medical conditions and drug therapy plan. Evaluation time frames vary with each patient and are triggered when major transitions—such as hospitalization—occur or at the request of the patient’s providers/prescribers.

## Collaborative Drug Therapy Management

As defined by the **American College of Clinical Pharmacy (ACCP)**, collaborative drug therapy management (CDTM) is a “collaborative practice agreement between one or more physicians and pharmacists wherein qualified pharmacists working within the context of a defined protocol are permitted to assume professional responsibility

for performing patient assessments; ordering drug therapy-related laboratory tests; administering drugs; and selecting, initiating, monitoring, continuing, and adjusting drug regimens." CDTM is best used when providing an advanced level of service whereby the pharmacist not only has access to a patient's medical record but has dedicated clinical time as well.

Although MTM is often conducted through a collaborative relationship with patients and other health care professionals, it is already within the scope of pharmacy practice and does not require a formal collaborative practice agreement. CDTM laws vary by state, and pharmacists must comply with the requirements of the state in which they practice.



### Team-Based Care

According to the proposed definition from a working group of the Institute of Medicine, team-based health care is the provision of health services to individuals, families, and/or their communities by at least two health providers who work collaboratively with patients and their caregivers—to the extent preferred by each patient—to accomplish shared goals within and across settings to achieve coordinated, high-quality, and patient-centered care.

### Self-Insured Employer

A self-insured employer is a company that provides health, disability, and/or worker's compensation insurance benefits to employees on its own, with claims to be paid by the company, rather than pay premiums and file claims through a third-party insurance provider. Self-insurance is also referred to as "self-funded" health care. Employers can administer insurance plans internally or hire a third-party administrator to provide assistance only.

## Role of the Pharmacist in Team-Based Care

The role of pharmacists in providing patient care services is compatible and synergistic with the patient-centered medical home model and other innovative models of team-based care. Pharmacists extend the health care team to the local community, providing patients with the resources and care they need. In addition, pharmacists are some of the most accessible health care professionals and have a broader knowledge

of medicines (prescription and over-the-counter) than any other member of the health care team. Research shows real value in pharmacists' management of diabetes and heart disease. For the millions of Americans with uncontrolled diabetes, the risk for heart disease, stroke, kidney failure, blindness, and amputation are significant. Engaging pharmacists as members of the health care system can significantly improve treatment of diabetes, better control high blood pressure, improve management of cholesterol, and reduce overall health care costs.

## Evidence to Support Maximizing Pharmacists' Engagement in Team-Based Care

The booklet, *Pharmacists and the Health Care Puzzle: Improving Medication Use and Reducing Health Care Cost*, developed by the American Pharmacists Association, describes how pharmacists have demonstrated value and savings to the health care system. It further explains how services such as MTM affect health outcomes and gives examples of services pharmacists provide to improve chronic care management for cardiovascular risk factors, such as diabetes and hypertension.

A recent report to the U.S. Surgeon General, entitled [Improving Patient and Health System Outcomes through Advanced Pharmacy Practice](#), uses objective data to demonstrate how models of innovative care involving pharmacists can ultimately help alleviate demands on the health care system (e.g., access, safety, quality, cost, provider shortages, etc.) and improve patient outcomes. The report describes existing, accepted, and successful models of health care delivery and patient care using pharmacists as health care providers and essential members of the health care team.

The report provides a thorough, evidence-based discussion of the comprehensive MTM services that pharmacists currently provide. For nearly 50 years, federal pharmacists have been able to practice collaboratively with physicians and other health care providers in expanded scopes, delivering comprehensive disease management, health promotion, disease prevention, MTM, and other cognitive clinical services. The report presents public- and private-sector models and calls for health leadership and policymakers to support and implement existing, evidence-based, and cost-effective pharmacist-delivered patient care models as the demands within the nation's health care system escalate.

One way to measure the cost-efficiencies of pharmacist-delivered CDTM is to consider the calculated return on investment (ROI), which reflects the value of the service based on the cost of delivering the service. The data collected from CDTM demonstrated an ROI of as high as 12:1 and an average between 3:1 and 5:1. This value is based on the ability of medication management services to reduce hospital admissions, use of unnecessary or inappropriate medications, emergency room admissions, and overall physician visits.





For example, in the [Asheville Project](#), employees of the city of Asheville with conditions such as diabetes, asthma, hypertension, and high cholesterol received intensive self-management education through the Mission-St. Joseph's Diabetes and Health Education Center. The employees teamed up with their local pharmacists, who ensured they were using their medications correctly. The project found that pharmacists improved the clinical outcomes of diabetes patients and reduced overall health care costs. This MTM model provided chronic care management through ongoing education, monitoring, follow-up, and referrals for patients with diabetes. An expansion of the Asheville Project to other chronic conditions demonstrated that after six months, 69% of participants with high cholesterol achieved their cholesterol goal versus 33% at baseline, and 81% of participants with hypertension reached their blood pressure goal versus 30% at baseline. Employers who supported these projects also benefited substantially from increased productivity and fewer employee sick days.

## Pharmacist Scope of Practice Policies

Federal and state policies have advanced the role of pharmacists in direct patient care through MTM reimbursement, pharmacy service definitions, and advanced pharmacy models to achieve optimal medication use and patient and therapeutic outcomes.

### Federal Policies

At the federal agency level, the Indian Health Service (IHS) has been engaged in an advanced pharmacy practice model whereby pharmacists deliver direct patient care services with physician collaboration since the early 1970s. The Veterans Health Administration implemented a similar program in 1995 that updated the granting of prescribing authority for clinical pharmacy specialists. Interestingly, the basic level of pharmacy care that IHS provides falls under general MTM (medication review, counseling, and monitoring of therapeutic outcomes) that is more commonly seen in the private sector. These advanced models have increasingly diffused into the private sector over the past two decades, mainly within hospitals, clinics, and educational facilities.

On a federal policy level, the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003, Public Law 108-173, was enacted to control health care costs and improve the quality of care. This law required Medicare Part D prescription drug plan sponsors to offer pharmacist MTM services to beneficiaries with multiple chronic diseases (e.g., diabetes, hypertension). Medicare Part D plan sponsors are required to reimburse pharmacies for MTM services, but rates and eligibility criteria may vary and, in many cases, are inadequate and lack feasibility.



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### State Policies

As of January 2011, 31 states have laws that allow physicians and pharmacists to collaborate in providing advanced services (such as those outlined in the CDTM definition above) that could occur in a community pharmacy setting, for conditions such as hypertension and high cholesterol. Eleven additional states allow pharmacists to provide these CDTM-type services under limited conditions, such as for hospitalized patients only, or solely to administer vaccinations and emergency contraception. Several other states have since enacted laws authorizing CDTM.

Policies requiring reimbursement by insurers and Medicaid for pharmacist services are not widespread. As of January 2011, only three state Medicaid programs (Minnesota, Missouri, and Oregon) reimburse for MTM services provided by a pharmacist through individual, face-to-face assessment and intervention.



## Addressing Chronic Disease in Pharmacies

### Medication Adherence

Medication adherence is the degree to which patients take medications as directed by their physician or licensed health professional. Medication non-adherence is the degree to which patients do not take medications as directed, which is costly and dangerous. One report estimated that 18% of unresolved drug-related issues involved medication non-adherence. Poor adherence to medications increases overall health care costs as patients become sicker faster and require more costly interventions. Data show that as many as half of all patients do not adhere to their prescription-medication regimens, and the result is more than \$100 billion spent each year on avoidable hospitalizations. Non-adherence to medication regimens also affects quality and length of life; for example, one study estimated that better adherence to antihypertensive treatment alone could prevent 89,000 premature deaths in the United States annually. Patients do not adhere to medication regimens for a variety of reasons, including side effects, timing, not understanding the benefits of the medication, and not wanting to take “so many pills.”

### Lifestyle Modification

The Diabetes Prevention Program study has shown that a chronic disease such as diabetes can be prevented or managed with appropriate changes or modifications to a person’s lifestyle. For example, the risk of developing diabetes and heart disease may be reduced with good nutrition, weight loss, and regular physical activity; once diagnosed, these conditions can be managed with medication and behavior modification. A pharmacist in a community setting (e.g., the local drug store) should consider the need for an appropriate counseling area for privacy, additional personnel

to assist with dispensary and other customer needs, time to provide counseling, professional training, and employer support.

## State Health Department MTM Project Examples

Additional information for each example is provided in Appendix A.

- The Maryland P<sup>3</sup> Program (Patients, Pharmacists, Partnerships)<sup>TM</sup> is an example of comprehensive medication management that improves chronic disease-related health outcomes. The Maryland P<sup>3</sup> Program<sup>TM</sup> uses trained pharmacists to assist patients with proper use of medications, diagnostic testing, counseling, and overall disease management. Pharmacists work in collaboration with patients' health care providers to improve medication adherence and clinical and economic outcomes. The program currently works with self-insured employers.

**Program Contact:** Adelline Ntatin, [antatin@dhhm.state.md.us](mailto:antatin@dhhm.state.md.us)

- The Montana Pharmacist Blood Pressure Management Program targets state of Montana employees, spouses, and retirees who are active health plan members. Members are offered face-to-face counseling with a pharmacist and provided blood pressure resources.

**Program Contact:** Crystelle Fogle, [cfogle@mt.gov](mailto:cfogle@mt.gov)

- The South Carolina Stroke Belt Project replicates the Asheville Model in counties with high rates of stroke mortality. Employees with chronic health problems, such as diabetes, hypertension, high cholesterol, and asthma, receive face-to-face coaching by a care manager who may be a community pharmacist or nurse educator.

**Program Contact:** Joy Brooks, [brooksjf@dhec.sc.gov](mailto:brooksjf@dhec.sc.gov)



## Working with Pharmacists to Build Chronic Disease MTM Programs

### Planning Your Project

There are many ways chronic disease prevention and control programs can work with and support pharmacists in their efforts to improve patient outcomes for heart disease and diabetes. Below are some suggestions for how you might get started in partnering with the pharmacist community.

1. **Partner** with an organization or group that understands this area well. First, look within your state health department to determine if another program is conducting a similar project. Some communicable disease, immunization, or maternal-child health programs already may be engaged with pharmacists. It might be more appropriate to add a focus area to an existing project rather than develop a new one. An ideal partner in any pharmacist-based intervention is the

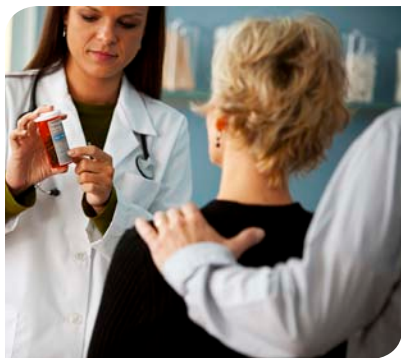
**state Medicaid program.** This program works to reduce costs and improve access and delivery of care, and pharmacist-based programs have been shown to do that.

When looking for external partners, consider a **college or school of pharmacy.** Management of chronic disease is an area of interest for many schools, so they may be able to offer a great deal of assistance. Another potential partner is the **state pharmacy association.** These groups work to improve quality of care, promote medication adherence, and enhance patient safety.

Because resources and financial support are often a barrier to successful program implementation, engaging the business community in your state is critical. For example, the Maryland P<sup>3</sup> Program™ has shown that partnership with the Mid-Atlantic and the Virginia Business Groups on Health (representing self-insured companies in the region) is an important component of the program’s success. For more information on what business health coalitions exist in your state, visit the **National Business Coalition on Health.**

It is important to work with self-insured employers in your region because at this time, they are the leading model for supporting and sustaining the work of pharmacists in helping patients achieve blood pressure, cholesterol, and A1c management, thereby improving outcomes for heart disease and diabetes.

2. **Learn** what pharmacists can and cannot do in your state—what is their scope of practice? The Council on Credentialing in Pharmacy provides an overview of the topic in **Scope of Contemporary Pharmacy Practice: Roles, Responsibilities, and Functions of Pharmacists and Pharmacy Technicians.** This resource details the types of practices open to pharmacists and pharmacy technicians and describes the scope of each.



Before beginning a pharmacy-related intervention, be sure to know and understand the regulations for the pharmacy scope of practice within your state. This information is usually available from the state **Board of Pharmacy.** The regulations tend to be lengthy, and each state may limit the scope of pharmacy services by either commission or omission. MTM as defined by the **Model Pharmacy Act** and the **MMA Act of 2003** does not require a collaborative practice agreement. In addition, pharmacists may adjust or modify drug therapy pursuant to verbal orders from the prescribing health care provider.

3. **Explore** model programs including those listed above and, together with partners, decide which model will work best for the program. A pilot project in a specific region or with a specific large employer may be an option to consider. Be sure to build in a rigorous evaluation for the project at the beginning of the planning stage. Demonstrating effectiveness will help scale up and spread the initiative to other regions or employers over time. Aggregate, rather than individual, health outcomes

are more easily collected. Additionally, project costs and return on investment should be included as a part of the evaluation. Issues for all parties to explore when choosing an intervention include:

- a. **Recruiting and engaging participants:** Determine how to select pharmacists for the project and how to recruit employers.
  - b. **Informing and training pharmacists:** Determine what curriculum will be used, who will provide the training, where and how the training will be conducted, and who will pay for the training.
  - c. **Reimbursement:** Determine how pharmacists will be paid for their services. Is there a role for health plans or other payers in the project? Will a session with the pharmacist be a covered benefit? Will you work with community health centers where the pharmacist is a salaried employee with expanded duties?
4. **Focus** on policy and/or systems changes to support the program's sustainability. Look for opportunities to influence or change systems or support policies as you move ahead with program development:
- a. Does the pharmacist scope of practice within the state need to be clarified to facilitate provision of chronic disease patient care services or work as part of the health care team?
  - b. Can community health centers ensure that the employed pharmacists provide MTM or more advanced chronic disease management services for patients?
  - c. Can these services become a routine part of the health benefits provided by health plans or large self-insured employers in the state?
5. **Design** your program with your partners. Research shows that in various sectors, pharmacists are already integrated into primary patient care as health care providers. Pharmacists may be very interested in helping state and community-based programs achieve blood pressure control and cholesterol management for participants, thereby improving outcomes for heart disease and diabetes. The goal for expanding or introducing MTM services in your state should be developing a program that is achievable, scalable, and sustainable. The science of program development and collaboration with the right partners can increase your success. The following resources may be useful in helping you and your partners plan and evaluate your program and its success.
- The [State Program Evaluation Guides](#) are a series of technical assistance tools developed by the CDC Division for Heart Disease and Stroke Prevention for use by state HDSP programs. The guides clarify approaches to and methods of evaluation, provide examples specific to the scope and purpose of state HDSP programs, and recommend resources for additional reading.

- The [Community Tool Box](#) is a global resource for free information on essential skills for building healthy communities. It offers more than 7,000 pages of practical guidance in creating change and improvement.
- [Redesigning the Health Care Team: Diabetes Prevention and Lifelong Management](#) from the National Diabetes Education Program describes six steps to building a health care team that includes pharmacists.
- CDC's [Framework for Program Evaluation](#) provides a systematic way to approach and answer evaluation questions using a set of 6 steps and 4 standards.



The average adult fills about 12 prescriptions, new and refills, each year; after 65 years of age, he or she fills more than 30 prescriptions annually.



### Choosing the Right Partners

**Patients (includes participants and employees):** Individuals whose chronic diseases require a significant amount of self-management, such as diabetes or high blood pressure, need to understand how pharmacists can assist them in managing their conditions through coaching and MTM. For many patients, pharmacists are the easiest health care professionals to access. The opportunities to interface with community pharmacists are plentiful for most Americans. The average adult fills about 12 prescriptions, new and refills, each year; after 65 years of age, he or she fills more than 30 prescriptions annually.

**Providers (includes physicians and pharmacists):** Physicians and pharmacists are joining forces through a number of collaborations between some of the nation's largest physician groups and retail drugstore chains. Similarly, Maryland's P<sup>3</sup> Program™ has demonstrated an effective collaboration between the Maryland Department of Health and Mental Hygiene, the University of Maryland School of Pharmacy, the Mid-Atlantic and Virginia Business Groups on Health, the Maryland Pharmacists Association, and the Maryland General Assembly. Throughout the nation, these types of collaborations and partnerships vary, but there appears to be a trend in which the pharmacist's role is expanding from drug dispenser to medication therapy manager and chronic disease coach. Data indicate that the average person with chronic disease is taking his or her medication 60%–70% of the time. In a coordinated collaborative approach with pharmacists and physicians, many believe that this percentage can increase to about 90%.

When beginning this work, be aware of the various sectors within the pharmacist "world." To help with orientation to these different types of pharmacists and learn about their respective roles, see Appendix B for a list of national organizations that represent various pharmacist sectors at the state and local levels. Included in this list are links to the organizations' websites, which provide more information about different types of pharmacists, their missions, and various perspectives within the health care arena.

As part of the interdisciplinary team approach to care promoted by the patient-centered medical home model, other providers also are essential partners in preventing

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and managing chronic diseases. The key roles are that of the physician as primary care provider and the pharmacist as medication therapy manager and chronic disease coach.

**Payers (includes employers and health plans):** Until pharmacist-administered patient care services become a covered benefit, self-insured companies and employers who participate in local or regional business coalitions on health will be the primary groups currently paying for this service. In some cases, these groups also deliver services to their employees. Self-insured employers/companies are particularly interested and positioned to work with pharmacists because these employers assume much of the health risk of their employees and other beneficiaries.

Similarly, health plans are key stakeholders as they serve as pharmacy benefits managers or third-party administrators for self-insured companies. From its inception, the Asheville Project had a strong business case associated with the use of community pharmacists as chronic disease coaches. As the [Diabetes Ten City Challenge](#) has shown, pharmacists increase delivery of critical control measures such as A1c tests, eye and foot exams, flu shots, and lipid measurements; significantly improve patient satisfaction; and reduce health care costs overall. Members of numerous business health coalitions (e.g., Mid-Atlantic, Midwest, Pittsburgh) are committed to the support of this work, and in many cases, the worksite serves as the main location where services are delivered. For a full listing of business health coalitions throughout the United States, visit the [National Business Coalition on Health](#).

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## APPENDIX A

### Summary of Three State Health Departments' Work with Pharmacists

Program	Maryland P <sup>3</sup> Program (Patients, Pharmacists, Partnerships) <sup>TM</sup>	Montana Pharmacist Blood Pressure Management Program	South Carolina Stroke Belt Project
Scope of the Practice	By statute, Maryland authorizes a licensed physician and pharmacist to enter into a written physician-pharmacist agreement (CPA) that specifies the disease states and treatment protocols the pharmacist may use to provide patient drug therapy management (MTM).	Pursuant to Mont. Code Ann. §37-7-101, the scope of pharmacy practice in Montana through a written collaborative pharmacy practice agreement with one or more providers allows pharmacists to initiate, monitor, and modify drug therapy; administer vaccines; and provide patient care as defined by protocol.	South Carolina Code of Laws §40-43-10 states "the practice of pharmacy shall center around the provision of pharmacy care services and assisting the patient to achieve optimal therapeutic outcomes."
Partners	University of Maryland School of Pharmacy, business community, local pharmacies, Maryland Pharmacists Association, and Mid-Atlantic and Virginia Business Groups on Health.	State of Montana Health Care and Benefits Division, University of Montana Skaggs School of Pharmacy, Montana Association of Health Care Purchasers, It Starts With Me (ISWM)—health screening vendor for state of Montana.	Municipal Association of South Carolina, South Carolina Pharmacy Association, pharmaceutical representatives, South Carolina Hospital Association, South Carolina Public Health Regions, South Carolina Department of Health and Environmental Control's Bureau of Community Health and Chronic Disease Prevention.
Method of Reimbursement	Self-insured businesses; also looking for third-party payers, Medicaid, and state employees.	Pharmacists are given a one-time participation incentive of \$800.	Self-insured businesses.
State Responsibility	<ul style="list-style-type: none"> <li>• Fund pharmacists training and education programs.</li> <li>• Support program infrastructure at the University of Maryland School of Pharmacy.</li> <li>• Strategic planning, technical assistance, and guidance.</li> <li>• Marketing and promotion to businesses and other public health stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>• Fund pharmacists training.</li> <li>• Provide blood pressure kits consisting of educational materials on blood pressure management/lifestyle, a pillbox, pedometer, and an electronic blood pressure cuff for eligible employees.</li> <li>• Enroll participants in the pharmacy program.</li> <li>• Contract with a health screening vendor who customizes lab reports and provides screening data.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify fiscal and human resources.</li> <li>• Recruit stakeholders and worksites.</li> <li>• Procure vendor/contract management and technical support to administer project.</li> <li>• Collaborate, develop, and market project and evaluation expertise.</li> </ul>
Incentive Programs	Participants receive reduction or elimination of co-payments on medication. There is no cost to participants.	There is no cost to participants.	Participants receive waived medication co-payments, waived laboratory co-pays, and free care management. There is no cost to participants.

Program	Maryland P <sup>3</sup> Program (Patients, Pharmacists, Partnerships) <sup>TM</sup>	Montana Pharmacist Blood Pressure Management Program	South Carolina Stroke Belt Project
Collaborative Practice Agreement (CPA)	The CPA covers medication therapy management (MTM), diagnostic testing, counseling, and overall disease management. After entering into a CPA, a licensed pharmacist with a PharmD or equivalent training may provide MTM to an individual patient as specified in a therapy management contract.	Pharmacists currently are not using a collaborative practice agreement.	N/A
Linkage with Physicians	The pharmacist communicates verbally or in writing to the primary care provider and health care team. In addition, pharmacists document care notes in a Health Information Portability and Accountability Act–compliant web-based documentation system.	The pharmacist communicates in writing to the primary care provider after each interaction with the participant.	The pharmacist/care manager communicates verbally or in writing to the primary care provider and health care team. The care manager documents care notes in a Health Information Portability and Accountability Act–compliant Digital Outcomes Communication System.
Barriers	<ul style="list-style-type: none"> <li>• Initial resistance from medical community.</li> <li>• Low recruitment of businesses.</li> <li>• Lack of third-party reimbursement, which prevents program expansion into the larger communities.</li> <li>• Most self-insured employers are national in scope and require the program to be offered to other out-of-state locations.</li> <li>• Maryland Collaborative Practice Law.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of reimbursement for consults affects pharmacist recruitment.</li> <li>• Lack of direct access to employee data, such as screening data and medical/pharmaceutical claims.</li> </ul>	<ul style="list-style-type: none"> <li>• State procurement process.</li> <li>• Low recruitment of businesses with small- and medium-sized budgets.</li> <li>• Locating an experienced vendor.</li> <li>• Most self-insured employers are national in scope and require the program to be offered to other out-of-state locations.</li> </ul>
Outcomes	The core success of the Maryland P <sup>3</sup> Program <sup>TM</sup> is the patient's improved health and clinical outcomes through better self-management and reduced overall costs of health care. The program has shown cost savings of \$918 per employee annually, a reduction in absenteeism, and employee savings of \$400–\$600 per year on average through incentives.	Less than one year in implementation.	Less than one year in implementation.

## APPENDIX B

### National Organizations Representing Various Pharmacist Sectors at the State and Local Levels

**Academy of Managed Care Pharmacy (AMCP)** is a national professional association of pharmacists and other health care practitioners who serve society by the application of sound medication management principles and strategies to improve health care for all. The Academy's more than 6,000 members develop and provide a diversified range of clinical, educational, and business management services and strategies on behalf of the more than 200 million Americans covered by a managed care pharmacy benefit. The Academy observed its 20th anniversary in 2009.

**American Association of Colleges of Pharmacy (AACP)** is a national organization representing the interests of pharmacy education and educators. Comprising 120 accredited colleges and schools of pharmacy, including more than 6,096 faculty, 54,700 students enrolled in professional programs, and 5,400 individuals pursuing graduate study, AACP is committed to excellence in pharmacy education.

**American College of Clinical Pharmacy (ACCP)** is a professional and scientific society that provides leadership, education, advocacy, and resources enabling clinical pharmacists to achieve excellence in practice and research. ACCP's membership is composed of practitioners, scientists, educators, administrators, students, residents, fellows, and others committed to excellence in clinical pharmacy and patient pharmacotherapy.

**American Pharmacists Association (APhA)**, founded in 1852 as the American Pharmaceutical Association, represents more than 62,000 practicing pharmacists, pharmaceutical scientists, student pharmacists, pharmacy technicians, and others interested in advancing the profession. APhA, dedicated to helping all pharmacists improve medication use and advance patient care, is the first-established and largest association of pharmacists in the United States. APhA members provide care in all practice settings, including community pharmacies, health systems, long-term care facilities, managed care organizations, hospice settings, and the uniformed services.

**American Pharmacists Association (APhA) Foundation** is a not-for-profit 501(c)(3) organization headquartered in Washington, DC, and is affiliated with APhA, the oldest and largest national professional society of pharmacists in the United States. The APhA Foundation looks to create a new medication use system in which patients, pharmacists, physicians, and other health care professionals collaborate to dramatically improve the cost-effectiveness and quality of consumer health outcomes. The mission of the APhA Foundation is to optimize the role of pharmacists in improving people's health. The APhA Foundation will accomplish this through research, recognition, and resources.

**American Society of Health-System Pharmacists (ASHP)** believes that the mission of pharmacists is to help people make the best use of medications. The mission of ASHP is to advance and support the professional practice of pharmacists in hospitals and health systems and serve as their collective voice on issues related to medication use and public health.

**National Alliance of State Pharmacy Associations (NASPA)** promotes leadership, sharing, learning, and policy exchange among pharmacy leaders nationwide and provides education and advocacy to support pharmacists, patients, and communities working together to improve public health. NASPA was founded in 1927 as the National Council of State Pharmacy Association Executives.

**National Community Pharmacists Association (NCPA)** represents America's community pharmacists, including the owners of more than 23,000 independent community pharmacies, pharmacy franchises, and chains. Together, they represent an \$93 billion health care marketplace, employ more than 62,400 pharmacists, and dispense more than 40% of all retail prescriptions.

**U.S. Public Health Service (PHS) Pharmacist Professional Advisory Committee (Pharm PAC)** provides advice and consultation to the U.S. Surgeon General and Pharmacy Chief Professional Officer on issues related to the professional practice of pharmacy and the personnel activities of the more than 200 Civil Service and more than 1,000 Commissioned Corps pharmacists. Pharmacists have played a vital role in the PHS during the last 100 years. Although most pharmacists have been clinicians, many also have served in regulatory, administrative, or research roles.

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