



# Medication Adherence Practice Module May 2023

*Implementation of Quality Improvement Initiatives to  
Improve Diabetes and Hypertension*



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## Purpose of Module

This module provides a high-level overview of evidence-based information related to medication management and adherence. It is designed to promote and supplement current quality improvement efforts of practices with whom Quality Insights partners.

Sections are highlighted using the medication adherence ABCs:

- **Assessment**
- **Barriers**
- **Care Teams and Communication**



*Note: Guidelines referenced in this module are provided in brief, summary format. Full recommendations should be reviewed in the original publication(s) and utilized with physician/clinician judgment, with consideration given to a patient's unique needs and circumstances.*

## Medication Adherence: An Invisible Obstacle

Medication nonadherence is a problem that has a great impact on patients, providers, and the health system in the United States. The well-documented evidence is clear:

- One-fourth of new prescriptions are never filled ([Kleinsinger, 2018](#)).
- Even when filled, adherence rates for most medications for chronic conditions such as diabetes and hypertension are only 50 to 60% ([Kleinsinger, 2018](#)).
- Up to 25% of hospitalizations each year are related to medication nonadherence, costing the American health care system up to \$300 billion ([Sullivan, 2020](#)).
- An estimated 125,000 deaths per year are attributable to medication nonadherence ([Kleinsinger, 2018](#)).

Despite these statistics, medication nonadherence is largely an invisible problem. According to an [article](#) by Fred Kleinsinger, MD, published in *The Permanente Journal*:

“Medication nonadherence is usually invisible to patients, their families, and the medical profession. It does not appear on the death certificate of a patient who has died of a myocardial infarction after not taking his antihypertensive medication or an antiplatelet agent to protect his stent. ... Practicing physicians remain largely unaware of this problem. To the extent that they do, they see it as the patient's responsibility to correct this problem.”

### Medication Nonadherence Video

Watch patients describe their experiences with medication nonadherence in this video from the American College of Physicians, [We Didn't Ask: They Didn't Tell](#).



The American Heart Association's (AHA) [policy statement on medication adherence](#) (2021) acknowledges that nonadherence is one of the greatest challenges faced by medical providers in the management of chronic illness; however, it is often not directly addressed primarily due to time constraints.

**How can busy medical providers address medication adherence without extending patient visits and significantly impacting their workload?** This practice module aims to provide workflow modifications, practical strategies, and tools to improve medication adherence and patient outcomes by adopting the medication adherence ABCs outlined in this module: Assessment, Barrier Identification, and Care Teams and Communication.

## Assessment

[Ho et al.](#) (2009), as cited in the AHA's policy statement, defines adherence as the "active, voluntary, and collaborative involvement of the patient in a mutually acceptable course of behavior to produce a therapeutic result."

$$PDC = \left( \frac{\text{Number of days in period covered}}{\text{Number of days in period}} \right) \times 100\%$$

Source: [Do You Know the Difference Between These Adherence Measures?](#), *Pharmacy Times*, 2015

According to the [Pharmacy Quality Alliance](#), a patient is considered adherent if they take 80% of their prescribed medication. Patients may be nonadherent to their medications intentionally or unintentionally; in the chart below, characteristics of both are provided.

Characteristics of Intentional and Unintentional Nonadherence	
Intentional (Active)	Unintentional (Passive)
Side effects	Forgetfulness
Experience	Lack of understanding
Fear	Cost
Stigma	Underlying disease
Denial	Health literacy
Health belief system	Miscommunication

Adapted from "[Medication Adherence: Importance, Issues and Policy: A Policy Statement from the American Heart Association](#)," by Piña et al., 2021.

## Assessing Primary Nonadherence: The Adherence Estimator®

**Primary nonadherence**, also known as initiation, occurs when a provider prescribes a new medication and the order is never dispensed by the pharmacy or picked up by the patient.

[The Adherence Estimator®](#) is a unique tool that can be easily integrated into practice workflow to assess possible primary nonadherence when discussing a new medication.



The Adherence Estimator® is:

- Validated and patient-centered. Learn more by reviewing this 2009 study titled, [The Adherence Estimator: a brief, proximal screener for patient propensity to adhere to prescription medications for chronic disease](#).
- Designed to help gauge a patients' likelihood of adhering to newly prescribed oral medication for certain chronic, asymptomatic conditions.
- Responses to just three brief survey questions provide a score (high, medium or low) indicating the probability of medication nonadherence to a newly prescribed oral medication for certain chronic asymptomatic conditions.

**Incorporate the Adherence Estimator® into your workflow in one or more of the following ways:**

- Quickly assess adherence at determined intervals by utilizing the [online assessment link](#) during medication reconciliation and enter results in a structured data field.
- [Print a copy](#) of the Adherence Estimator® for patients to complete in the waiting room or during their office visit. Document results and scan the form to the patient record.

## Assessing Secondary Nonadherence

Secondary nonadherence develops over time as a patient misses doses, prematurely discontinues therapy, or takes inadequate amounts of doses required for the desired therapeutic effect. Here are a few strategies to mitigate barriers that may arise due to secondary nonadherence:

- Use pre-visit planning and an enhanced medication reconciliation process.
- Initiate front office staff visit reminder calls to remind the patient to bring all their medicines (including supplements, medications from other providers and discontinued medication) to their visits in their original containers.
- Provide paper bags to patients in previous visits and conduct a [Brown Bag Medication Review](#) as part of their upcoming visit.

## Medication Adherence Office Protocol from Quality Insights

Quality Insights developed a sample [Medication Adherence Office Protocol](#) that incorporates all of the suggestions above for addressing primary and secondary nonadherence. Health care practices can utilize this protocol to enhance practice workflow and patient care.

### Barrier Identification

Barriers to medication adherence are complex and challenging to identify and mitigate. A [2020 article](#) published in *American Journal of Cardiology* looked at the prevalence and impact of having multiple barriers to medication adherence in nonadherent patients with poorly controlled cardiometabolic disease and found:



- A large proportion of patients with cardiometabolic disease experience multiple barriers to optimal adherence to chronic medications, leading to gaps in adherence compared to those with fewer barriers.
- Over 30% of nonadherent patients have more than two reasons for nonadherence.
- The most common single barrier is forgetfulness, cited by more than 25% of patients.
- The study suggested that people may voluntarily suppress recall for activities that make them uncomfortable.
- The most common co-occurring barriers are forgetfulness and health beliefs, in which patients do not believe the medications are important and therefore purposefully do not integrate them into daily routines.
- The study noted that the strongest interventions appear to be those that are multicomponent interventions targeted toward patients' specific barriers based on clinical need and predicted benefit.

[Medical Economics Journal](#) also cited forgetfulness and lack of symptoms as barriers to adherence. In addition, it cited cost concerns according to a recent consumer survey:

- High out-of-pocket costs for prescription drugs are a significant barrier for many patients.
- A total of 48% of respondents reported not filling a prescription due to cost.
- Even a 10% rise in copay increases the likelihood of prescription abandonment by as much as 19%.
- One in seven Americans reported they would avoid seeking care for potential COVID-19 symptoms because of cost concerns.



## Care Teams and Communication

Communication with patients is key to promoting medication adherence. It is difficult for an individual physician to manage this given the time demands of busy practices. Other health care workers (such as nurses, medical assistants, and case managers) or disease management programs can help fill the gaps to support patients and providers. Recruiting and extending the care team not only shares the work; it also emphasizes the importance of medication adherence to patients.

Examples of ways care teams can collaboratively promote medication adherence are provided in a [2018 Healthcare Communication article](#), *The Unmet Challenge of Medication Adherence*:

- Administrative staff can query the EHR to identify patients at risk, such as those with a given diagnosis who have poor control, few visits, or insufficient refills.
- Ancillary staff such as medical assistants can reach out to patients who are nonadherent or who have poor control, encouraging them to make appointments.
- Chronic condition case managers are especially helpful for patients with congestive heart failure or diabetes.
- Integrated or community-based health education, such as:
  - [Healthy Heart Ambassador Blood Pressure Self-Monitoring Program](#)
  - [Diabetes Self-Management Education and Support](#)



Access additional guidance for developing and utilizing your care team by reviewing Quality Insights' [Care Teams Practice Module](#).



### Engaging a Pharmacist as Part of the Care Team

A [2020 Research in Social and Administrative Pharmacy article](#) suggests the contribution of community pharmacists in facilities to manage chronic conditions and promote medication adherence during the COVID-19 pandemic will be essential in easing the burden on already strained health systems.

Incorporating pharmacists in team-based care models increases patient awareness of the importance of medication adherence and further encourages and supports behavior change and self-management of many chronic illnesses and diseases. The

expanding role of pharmacists and their position to have greater impact can be reviewed further in the CDC Grand Rounds presentation, [How Pharmacists Can Improve Our Nation's Health](#).

Here are three ways pharmacists can add value to your patients and practice:

**1.** **Medication Therapy Management (MTM)**  
The [American Pharmacists Association \(APhA\)](#) describes MTM as a broad range of health care services provided by pharmacists. A pharmacist may provide MTM services in all care settings (e.g., pharmacies, health care clinics, and community settings) and seek to ensure that the medication is optimal for the patient and that the best possible outcomes from treatment are achieved. Pharmacists use MTM to help patients get the best benefits from their medications by working with them to actively manage drug therapies and by identifying, preventing, and resolving medication-related problems.

**2.** **Team-based Care**  
Because they often work in the local community, pharmacists extend the health care team from the health care setting into the community. Consequently, pharmacists are some of the most accessible health care professionals. [Research shows](#) real value in pharmacists' management of diabetes and heart disease, resulting in contained or reduced overall health care costs.

Engaging pharmacists as members of the health care team can help relieve provider workload, increase efficiency and help care team members stay updated on best practices. For initial action steps related to incorporating a pharmacist in your care setting, visit the [Primary Care Team Guide website](#).

### The Benefits of Pharmacy-Based Interventions



Community Preventive Services Task Force finds that [tailored pharmacy-based interventions to increase medication adherence](#) are cost-effective for cardiovascular disease prevention. When used for cardiovascular disease management, these interventions can lead to a favorable return on investment. The systematic review of economic evidence included 38 studies published through May 2019.

**3.** **Partnering to Provide Optimal Patient Care**  
Interested in learning more about ways you can work together with a pharmacist to improve patient medication adherence outcomes? **In Delaware, you can refer certain patients (conditions vary) for FREE MTM through a partnership with the Delaware Division of Public Health and the Delaware Pharmacists Society (DPS).**

Learn more about who and how to refer, as well as the supporting science for MTM, by taking the EDISCO by Quality Insights e-course, Medication Therapy Management: Evidence-Based Collaboration for Improved Blood Pressure Control. Download the [course flyer](#) to learn more.

You can also provide your patients with an informational brochure from [Delaware Pharmacists Society](#) so they can understand the benefits of MTM and how to get connected.

### Make the Most of Your On-site Care Team Pharmacist

If your practice engages an on-site pharmacist, adapt this [workflow](#) from Quality Insights to optimize the collaboration for patients with hypertension.



## Delivering Effective Communication

### Teach-Back Method

According to the [Institute of Healthcare Communication](#), patients' perceptions of the quality of the health care they receive is highly dependent on the quality of their interactions with their health care clinician and team. The connection that a patient feels with his/her clinician can ultimately improve their health, mediated through participation in their care, adherence to treatment and patient self-management.

#### Teach-Back Works

A [November 2020 article](#) published in the *Journal of the American Board of Family Medicine* found that at the one-year follow-up, patients whose care providers used teach-back with them were 20% less likely to have diabetes-related health complications, including heart disease and kidney or eye issues.



How can we more effectively engage with patients and families?

One evidence-based method to achieve this goal is through **use of the teach-back method**. This communication can be an effective method for health care providers to:

1. Ensure they have explained medical information clearly, and;
2. That their patients understand what is communicated to them.

The Agency for Healthcare Research and Quality (AHRQ) offers a [suite of helpful resources](#) to assist health care providers and staff in journey to implementing the teach-back method, including:

Care Team Role	Resource	Description
Clinicians	<a href="#">Teach-Back Quick Guide - Full</a> <a href="#">Teach-Back Quick Guide - Pocket</a>	Job aid that contains tips and examples of plain language, which can be handed out as pocket card or posted at workstations.
	<a href="#">Conviction and Confidence Scale</a>	Self-assessment for clinicians to evaluate confidence in using teach-back.
Practice Staff	<a href="#">Teach-Back: A Guide for Staff</a>	Handout that explains the goal of teach-back, the teach-back process, and the role of practice staff in implementation.
	<a href="#">Are You Using Teach-Back? Survey</a>	Short survey for all members of the practice (clinicians and staff) to assess the use of teach-back.
Patients and Families	<a href="#">A Patient's Guide to Teach-Back</a>	Poster, flyer, or handout that explains the goal of teach-back and the patient and family role in teach-back.

## The Value of Assessing Health Literacy, Cultural Competency, and Language Barriers

A [2019 article](#) featured in *Harvard Public Health Review* identifies three main components to effective communication in the health care setting:

1. Health literacy
2. Cultural competency
3. Language barriers

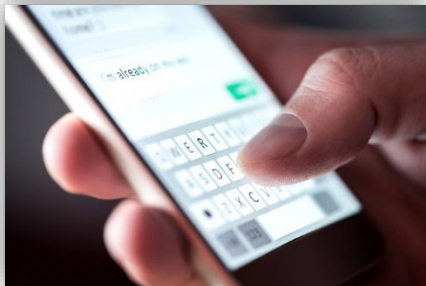
**“Nearly 9 out of 10 adults struggle with health literacy.”**

Source: [NNLM](#), 2021

Ineffective communication occurs when there are deficits associated with any of these components. Two factors affecting health care literacy are the patient’s ability to comprehend and the complexity of the health system. Patients are expected to understand or navigate health care costs; reimbursement; insurance plan requirements; multifaceted treatment plans; the impact of comorbidities; medication tier plans; evidence-based information; self-management of one or more disease processes; differences between emergency, urgent, and routine care; and how to make maintainable lifestyle changes ([Ratna](#), 2019).

There are a variety of resources available to health care providers and staff to help them develop and provide quality health care communications in their clinical setting. Refer to Quality Insights’ [2022 Social Determinants of Health Practice Module and Health Literacy Supplement](#) for additional health literacy content and support.

## Text Messaging for Increased Patient Engagement



Do you ever get the feeling that patients are ignoring your phone calls? If so, you’re not alone. While phone communication may have been the best option in the past, [most patients ignore 90% of the phone calls they receive](#). Practices may leave voice messages if they can’t reach the patient by phone, but often times these messages also go unnoticed or unheard.

Utilizing a texting solution can be a convenient option for health care practices and patients alike. Systems can be integrated with the existing patient management system, to make it conducive for providers to keep a record of text messages sent and received with the patient’s other medical records. They can also be managed from the practice’s desktop computer, making it easy for office staff to see when a text has been received, and respond quickly.

Review these resources for more information:

- [13 Stats on Why Text Messaging Should be Next for Your Practice](#)
- [Text Messaging in Healthcare Research Toolkit](#): Developed by the University of Colorado, this extensive toolkit was developed for medical and health services researches who are planning to use text messaging as part of a health care intervention.
- [Pledge to Take Your Meds Medication Reminder](#): Patients can sign up on the website to receive medication text reminder messages.
- Learn more about how [BPMED](#) text messaging system has been used to improve the quality of medication management through increasing medication adherence in African Americans with uncontrolled hypertension.



## Support for Patients: Education and Cost Reduction Resources

### Patient Resources

#### Phone Apps to Improve Medication Adherence



Most patients today have easy access to a smartphone—why not encourage them to use a free medication tracking app to help them manage their medicines at home?

The options below are provided for informational purposes only and do not imply endorsement by Quality Insights.

- [Free Apps to Help You Better Manage Your Medicines](#)
- [Keep Hypertension Under Control with these Smartphone Apps](#)
- [Free Apps to Help You Better Manage Your Diabetes](#)

## Medication Cost Reduction Resources

If your patients experience financial challenges affording their medications, consider the following options:

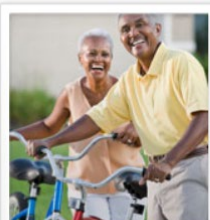
- Coupons for medications
- Increasing the prescription to a 90-day supply instead of 30-day supply, to reduce co-pays
- Checking their insurance plan to see if a mail-order service is covered to prevent trips to the pharmacy (if costly transportation is part of the issue)
- Suggesting other cost-reduction resources, such as:
  - [Findhelp.org](https://findhelp.org) (formerly Aunt Bertha)
  - [United Way 2-1-1](https://www.211.org)
  - [Needy Meds](https://www.needymeds.org)
  - [Partnership for Prescription Assistance: Medicine Assistance Tool](https://www.partnershipforprescriptionassistance.org)
  - [Benefits Checkup](https://www.benefitscheckup.org)
  - [Eldercare Locator](https://www.eldercarelocator.org)
  - [HealthWell Foundation](https://www.healthwellfoundation.org)
  - [Family Caregiver Alliance](https://www.familycaregiveralliance.org) (support and resources for family caregivers of adults)
  - [Insulin Cost Savings Toolkit](#): Developed by Dr. Diana Isaacs, PharmD, BCPS, BC-ADM, BCACP, CDCES in collaboration with the Association of Diabetes Care and Education Specialists, this document provides ready access to patient assistance programs, specific to manufacturer and product.
  - [ADCES Affordability Resource](#): Find detailed information on manufacturer patient assistance programs, cost savings programs, discount cards and more.



## Script Your Future: Pledge to Take Your Meds

Led by the National Consumers League, [Script Your Future](#) is a national initiative to raise awareness about medication adherence, which includes the patient campaign known as “Pledge to Take Your Meds.” In partnership with over 130 public and private stakeholder organizations, the campaign offers adherence resources to help patients and the health care professionals who care for them.

Here is a sample pledge:



**I WILL**  
grow old with my wife.

Patients can participate in the campaign for free by [visiting the website](#), where they will find easy-to-understand medication adherence resources, including a medication [wallet card](#) (available in multiple languages), signing up for [medication text alerts](#) and creating their own [personal pledge](#) to take their medications.

## BeMedWise Program at NeedyMeds: Free Printable Resources

BeMedWise Program at NeedyMeds, formerly the National Council on Patient Information and Education (NCPIE), encourages health care professionals and community groups to foster patient–professional communication about medicines. Visit its extensive [patient resource library](#) to access relevant patient medication adherence resources, including:

- Your Medicine. Be Smart. Be Safe.: Available in [English](#) and [Spanish](#)
- [Must Ask Questions: What You Need to Ask Your Healthcare Provider and Pharmacist about Your Medications](#)
- [Do's and Don'ts of Medicine Disposal](#)
- [Drug Discount Card](#)

## Provider Resources: Podcasts and Webinars

### Quality Insights CME Webinar - Medication Therapy Management: Evidence-Based Collaboration to Improve Blood Pressure Control

During this course, you will explore the methods, goals, and benefits of MTM, as well as evidence that supports its effectiveness. You will also learn how to facilitate physician-pharmacist collaboration and how to refer certain Delaware patients for no-cost, pharmacist-provided MTM.

This course offers one hour of CME/CNE. Download the course flyer [here](#) to learn more.



[illegible]

- Medication Adherence Video: Tips for Taking Blood Pressure Medicines as Directed (available in [English](#) and [Spanish](#))
- [Improving Medication Adherence for Patients with Hypertension: A Tip Sheet for Health Care Professionals](#)
- [Patient Visit Checklist: Supporting Your Patients with High Blood Pressure](#)

Learning objectives for this module include defining medication adherence and its importance for patient health, recognizing the importance of developing a routine process for inquiring about medication adherence, identifying top reasons for patients' intentional nonadherence to medications, and explaining the importance of a personalized approach to medication adherence and patient involvement in treatment plans. The American Medical Association (AMA) designates this enduring material activity for a maximum of .50 AMA PRA Category 1 Credit™. [Access the module here.](#)

This National Forum for Heart Disease and Stroke Prevention webinar discusses ways to bring physicians, pharmacists, social workers, and public health together to inform, discuss and encourage use of pharmacists in the team-based Medication Management Therapy Model and work to identify innovative reimbursement methods. [Listen to the recording here.](#)



In this webinar, Jenny Glennon, PharmD, RPh, will discuss the top struggles with medication adherence in populations and how to use predictive analytics, tailored outreach, patient engagement, and behavior change programs to overcome them. [Listen to the recording here.](#)





### Podcast: Building Trust to Support Medication Adherence

In an episode of the “AMA Moving Medicine” podcast, AMA Chief Experience Officer Todd Unger is joined by Marie T. Brown, MD, a geriatric and internal medicine specialist at Rush University Medical Center, in Chicago, to talk about creating connections with patients to support medication adherence. [Read the transcript of their conversation here.](#)