



Medication Adherence

innovative strategies

Clinical Solutions



Medication is not taken as prescribed **50 percent** of the time.¹

Medication adherence has an enormous impact on improving quality and length of life and health outcomes and can be instrumental in lowering overall healthcare costs.

Despite the known health and economic benefits associated with adhering to a treatment plan, medication nonadherence remains a problem and significant contributor to avoidable healthcare costs in the United States.

Medication nonadherence contributes approximately \$100 to \$300 billion in unnecessary healthcare costs annually and can account for 50% of treatment failure and 125,000 preventable deaths each year.²

Understanding the factors that lead to nonadherence combined with innovative strategies to address these factors and engaging patients with education about their treatment plan are critical elements for success. While there is not a fail-safe solution to improve adherence, experts agree a collaborative approach tailored to address a patient's specific adherence challenges will equip patients with the understanding and tools they need to foster ownership, responsibility and empowerment of their medication regime.

Barriers to Medication Adherence

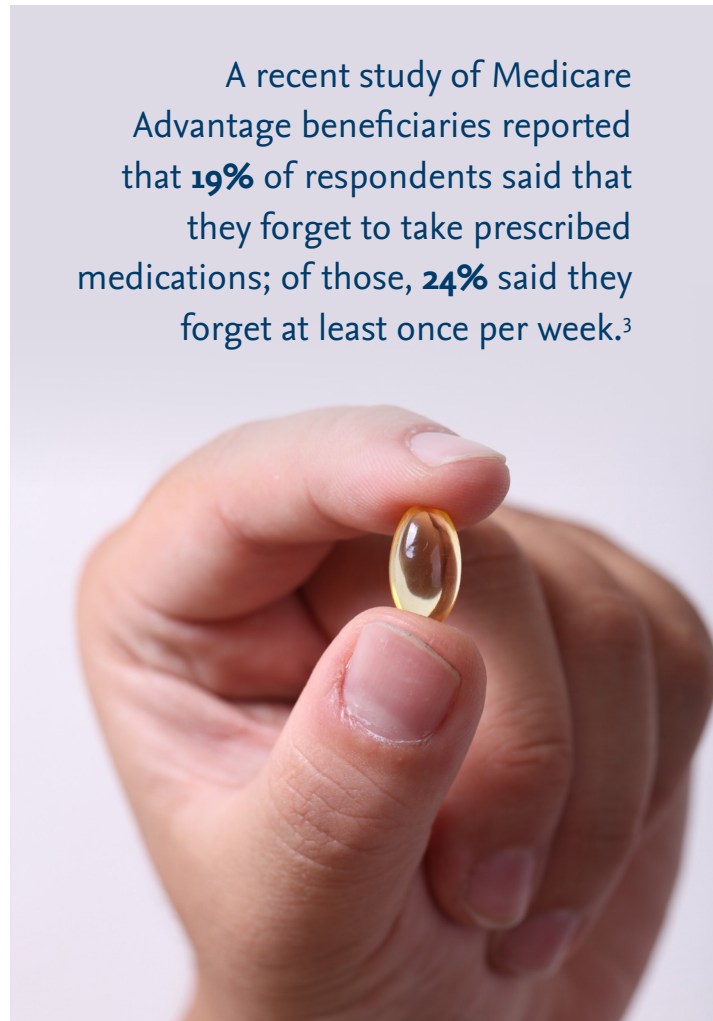
There are five factors or dimensions as defined by the World Health Organization that lead to a patient not following a recommended treatment plan.


Social and economic factors such as poverty or financial stress, transportation challenges, cultural beliefs, medication costs and inadequate insurance are significant drivers of medication nonadherence.

Patient-related factors like forgetfulness, physical impairments, beliefs about medication and low health literacy also impact the ability to optimize medication therapy. Lack of knowledge about the disease and the reasons the medications are needed, lack of motivation and substance abuse also are associated with poor medication adherence.

A study by Health Policy Institute notes that **prescription drug use increases with age**. For example, 75% of those age 50 to 64 use prescription drugs, compared to 91% of those age 80 and older. The average number of prescriptions filled also increases with age. An average of 13 prescriptions are filled for those age 50 to 64, increasing to 22 for those age 80 and older.⁴

A recent study of Medicare Advantage beneficiaries reported that **19%** of respondents said that they forget to take prescribed medications; of those, **24%** said they forget at least once per week.³






Nearly **70%** of Americans are on at least one prescription drug, and more than half take two. Furthermore, **20%** of people are on five or more medicines.⁵

Therapy-related factors like complex therapy regime, taking different medications at different times of day, frequent changes in medication regime or long duration of treatment and side effects of medications are also major barriers to adherence.

Condition-related factors can be strong determinants to adherence and are related to the level of disability (physical, psychological, social and vocational), rate of progression and severity of disease.

Health care team and system-related factors like overworked healthcare workers, lack of training on chronic diseases, poor communication between the physician and patient regarding the benefits of the medication, instructions for use and medication side effects can adversely affect medication adherence. Conversely, developing strong provider/patient communication is an important step in obtaining optimal medication adherence.



Six in 10 adults in the United States have a chronic condition; four in 10 have two.⁶ Add to that research that shows that within six months of being prescribed medications for chronic diseases, the majority of patients reported taking less medication than prescribed or stopping altogether, and it is easy to see the damage done with the confluence.⁷

... the rise of new technologies gives the industry a potentially powerful way to improve medication adherence. Providers and pharmacists can now watch patients from afar and intervene when they aren't following directions.⁸



Smart Options

The rise of new technologies gives the industry powerful new ways to improve medication adherence.

- **Pharmacy incentive programs**, such as Walgreens' Balance Rewards for Healthy Choices, which provide a set of web, app and text-based programs designed to improve medication adherence, promote engagement and encourage immunizations.
- **In-home telemonitoring** that utilizes remote patient monitoring programs to monitor medication adherence in high risk patients.
- **Innovative medication packaging** as offered by PillPack, designed to help patients manage multiple medications through convenient packaging, modern technology and personalized service.
- **In-home dispensing devices** that create reminders and pre-packaged, unit-dose medications in conjunction with a clinician portal and caregiver app to enable providers to quickly flag non adherent patients and connect them to a healthcare professional, as needed.
- **Mobile apps** that periodically remind patients to take their medications, connect patients and pharmacists for collaborative care and initiate notifications to a patient's family and friends if the person has not taken prescribed medications.
- **"Smart Bottle Caps"** that fit standard drugstore containers. The lids register when they're removed and log each event in an app to provide real-time oversight by specialty pharmacists and care coordinators, who can contact the patient if there's a problem.
- **"Smart Pills"** such as those under the AbilifyMyCite label that incorporate sensors that track ingestion and send a signal to a wearable patch. The data transfers to a cloud-based health record to track adherence, with patients deciding who receives their information.
- **Real-time benefit checking** at the point of care, which allows providers to look at the cost of the proposed medication and alternatives in conjunction with an individual's payer coverage and deductible status. This allows the patient and provider to have an immediate conversation as to whether the medication cost is reasonable or if a lower cost alternative is available.
- **Interactive "gamification" solutions** that tap into the psychological aspects of game mechanics to create high-value interactions with patients by rewarding patients for engaging in health activities.

All this said, there are still some fundamental adjustments that can have impact. For instance, according to data from Kaiser Permanente, a switch to home delivery can significantly improve adherence over drugs that must be picked up personally.⁹

Performance Under the STARS

The Centers for Medicare and Medicaid Services put medication adherence front and center with their “Five-Star Quality Ratings System,” or STARS, created to measure the experiences Medicare Advantage beneficiaries have with their health plans and healthcare systems. Once reported, this data is intended to enable beneficiaries to choose high-quality organizations, thereby improving the quality of care and coverage.

Under this pay-for-performance system, three medication adherence measures – cholesterol, diabetes and hypertension – are triple weighted and figure into several Part D measures and Part C disease management measures.

The financial implications of the ratings are significant, as 4- and 5-star plans receive bonuses and rebates, and rewards also accrue to hospitals that meet the threshold. In addition, high ratings can mean greater market share for both payers and providers.

Payers seeming to underperform in this system can expect punitive action, including fines and potential removal of contract.¹⁰ Hospitals, too, can face penalties.

Strategies for Improving Medication Adherence

Financially responsible for the medical costs of their populations and focused on costly downstream consequences of non adherence, health plans are looking at a variety of strategies to cure their part of the problem.

Examples include Humana, which urges pharmacists to consult with beneficiaries face-to-face or over the phone regarding drug adherence and safety. It also has initiated RxMentor, a medication therapy management (MTM) initiative that keeps a central list of a patient’s drugs and provides advice about them. Cigna offers MTM services through its CoachRx program, which provides guidance for beneficiaries at high risk for non adherence and their physicians. United Healthcare, for its part, provides its participating providers with various tips and suggestions on how to improve adherence literacy of their patients.¹¹

Addressing affordability, some payers have implemented subsidies and reduced co-pays as a method to improve adherence, with some looking at the idea of value-based insurance, which would bring select drug co-pay costs down to zero or nearly zero for patients covered.¹²

Cost issues have driven payers to also look at risk-sharing contracts with pharmaceutical manufacturers, linking coverage and payments to outcomes, factoring in potential reductions in the downstream costs that adherence can produce.

It also has been found that interventions, including team-based or coordinated care, increase adherence rates. In one study, patients assigned to team-based care were significantly more adherent, with patients reporting that the approach improved their comfort in asking clarifying questions, raising concerns about their medication regimen and collaborating in developing their treatment plan.¹³

All these efforts will be supported and propelled by health information technology, the foundation for patient-facing interaction, monitoring, interpolation of analytics, assessment of risk and all other pieces of this multi-faceted puzzle.

The Impact of Pharmacy on Medication Adherence

Pharmacists are an integral part of the healthcare team and are among the most trusted and accessible healthcare professionals. Standing at the intersection of prescribers, payers and patients, they are poised to be both hubs and catalysts.

Often, the pharmacist is the last healthcare professional that patients see before taking their medications, and this interaction can impact their perception of the therapy. At this juncture, pharmacists can influence and manage patient expectations, while getting an undistorted picture of the patient's condition, including dexterity, vision and cognition, that could factor into use and misuse.¹⁴

As healthcare moves to value-based payments, pharmacy will continue to change, especially in areas such as Medication Therapy Management (MTM). Pharmacists also have a crucial role in planning and leading medication safety programs and improvement initiatives within healthcare organizations – no small task given the increasing complexity of medication therapy.

And more changes are to come, according to the Pharmacy Quality Alliance, which reported that the prioritizing of value-based care principles and patient engagement outcomes will heighten integration of the pharmacist as a key healthcare team member – noting that pharmacy care is already set up to deliver by measuring patient outcomes, making patient satisfaction a priority and driving medication adherence.¹⁵

CVS Health Research Institute found that medication reconciliation programs, in which pharmacists review patients' medication regimens and provide adherence counseling during the patient's transition from hospital to home, reduced risk of hospital readmission by 50 percent, and helped avoid unnecessary healthcare costs.¹⁶





Elsevier: Prediction, Prevention, Education and Intervention

Whether engaging and educating patients or ensuring the right decisions are made or enabling efficiencies that leave more time for patient contact, Elsevier solutions seek to break down the barriers to medication adherence.

- The **Gold Standard Drug Database** delivers manufacturer-reported data, as well as trusted clinical content – all more efficiently and faster than its competitors, enhancing productivity and informing decision-making. Our **patient education** suite provides consumer-friendly medication information in 21 languages, and disease/condition information in up to 17 languages.
- **Clinical Pharmacology powered by ClinicalKey** is a trusted source of current, accurate drug information tailored for the pharmacist, enabling quick and informed response to both in-the-moment decisions and research of complex cases. A focus on patients' unique needs supports an optimal treatment experience and outcomes.
- Our **Patient Engagement** Solutions engage, educate and empower patients by giving them quick access to the same evidence-based information clinicians trust, delivered in interactive and patient-friendly ways. This turns patients into active participants in their healthcare, even at home, where most of their care will take place and, surveys show, where they want it.
- **LexisNexis® Socioeconomic Health Solutions** leverage the industry's largest collection of public record and other proprietary sources, providing healthcare organizations with a powerful view of the social determinants of an individual's health risk.
 - **LexisNexis Socioeconomic Health Score** powers population health management work streams with an independent and unique score that uses clinically validated socioeconomic data to predict health risk.
 - **LexisNexis Socioeconomic Health Attributes** is a unique package of validated socioeconomic attributes that are correlated to health outcomes.
- **ClinicalKey AI** bridges the gap between trusted medical content and advanced artificial intelligence. Designed specifically for clinicians, it revolutionizes decision-making at the point of care. This innovative solution offers a natural language interface, allowing pharmacists to swiftly access evidence based information. Curated content in ClinicalKey AI is constantly refreshed to ensure clinical accuracy and pharmacists can validate information efficiently, aligning with guidelines and clinical responsibility. Trusted content powered by responsible AI.

Improving medication adherence requires a continuous multifaceted approach that is tailored to the specific needs of the patient and disease state. Maintaining optimum medication adherence requires a collaborative approach with multiple touch points to accurately assess non-compliance and the factors that influence it.

Resources

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