

# Adherence:

## The Cost of Health Care and What to do About It

Drugs don't work in patients who don't take them.

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It's difficult to pick up any health care journal these days without at least 1 article or mention of adherence, or as *The New York Times* once referred to it, the world's "other drug problem," and for good reason.

Research shows that 25% of people given an initial prescription fail to get it filled. Half the people on chronic medications stop taking them within a year. Clinical trials involving chronic conditions report adherence rates of between 43% and 78% while the World Health Organization reports that medication adherence rates in the United States remain at around 50%. To put it another way, most of our patients with diabetes are taking their medications wrong or not taking them at all about half the time.

The cost to the health care system for this behavior is staggering. According to a meta-analysis published in *Annals of Internal Medicine*, poor medication adherence is costing anywhere between \$100 billion to \$289 billion a year in excess emergency room visits and hospitalizations annually, often manifested as increased episodes of diabetic ketoacidosis (DKA), hyperglycemic hyperosmolar nonketotic coma (HHNK), hypertensive crisis, myocardial infarction (MI), or stroke. A recent study published by *Health Affairs* found that diabetes patients who took their medicine according to their physicians' orders had a 13% lower chance of hospitalization than patients who did not adhere to their medications.

Armed with this knowledge and knowing that the population of patients with type 2 diabetes and other chronic conditions in the United States will only grow larger, it seems reasonable that there is a lot of emphasis

being placed on increased adherence in chronic care patients taking their medications.

The cost of bringing the newer, more sophisticated drugs to market is now estimated to be over \$1.3 billion. Logic suggests that this type of investment should be supported by whatever methods possible so that the patient is actually taking the medication in the way that will give maximum effectiveness. As is often said in the pharmaceutical field, "the most expensive drug to prescribe is the one that's never taken."

### How Do We Address This Issue?

A good start is to remind ourselves of the difference between "compliance" and "adherence." Most health care providers use the term *compliance* instead of or interchangeably with *adherence*, although these concepts are completely different. *Compliance* is primarily a judgmental term used by health professionals. *Adherence* reflects a more collaborative effort between the patient and the care provider.

The patient who is "noncompliant" is often labeled as not trying, lacking will power, forgetful, or just lazy. A health care visit becomes a lot like a trip to the principal's office. The patient receives little encouragement and is often rebuked, presented with scare tactics, or even threatened with dismissal if advice that is given is not followed. This traditional encounter between patient and a care provider often creates resistance and mistrust, and it just does not work in most cases.

So what does work? Taking a moment to step back and reminding ourselves to look at the world through the patient's eyes is useful. Using motivational interviewing techniques to find out what possible barriers exist with a patient's regimen, expressing empathy, being nonjudgmental, and establishing rapport with the patient in a trusting environment all lead to the patient becoming more adherent with medications as well as other behavior change.



Adherence is defined by the World Health Organization (WHO) as “the extent to which a person’s behavior—taking medication, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendations from a health care provider.” The concept of adherence establishes that the patient has choices, is involved in the mutual setting of goals that are achievable, and agrees to the implementation of the medication regimen. Once specific barriers are identified and goals are set, the use of motivational interviewing techniques, monitoring, and follow-up should help to create a greatly improved adherence rate as true behavior change occurs.

### Overcoming Barriers

Successful adherence programs are based on the premise that diabetes is a progressive *individualized* disease that requires progressive medication changes. The same can be said about the barriers that create poor adherence. They are also progressive, ever changing, and completely individualized in nature. What worked today in getting all doses of medications taken properly may not work tomorrow as changes in work, lifestyle, physical conditions, economics, and stress change the way patients view this behavior. Good communication between patient and provider is essential, and addressing any possible problems with medications should be part of every patient visit.

The most common reason patients state for not adhering to a given medication regimen is cost. In the world of effective but expensive medications to treat diabetes, patients are rarely asked if they can afford a prescribed medication regimen. Insurance coverage and co-pays change and donut holes appear, often making it difficult for patients to purchase drugs that were affordable only a month or 2 ago. Periodically checking in with patients about the affordability of their prescriptions allows changes to be made if necessary. Patients often say “I didn’t think anyone could help” and, more importantly, “No one ever asked me,” when asked why they didn’t bring up the matter.

### Finding Solutions

In many, if not all cases, adherence can be improved by establishing a conversation using open-ended questions that directly address the

issue of being able to follow a medication regimen in the most effective manner. Asking “Are you taking all of your medications?” or “Are you missing any doses?” is likely to result in a less than accurate answer. Possibly a better way is to ask “In a given week (or month) how many times would you say you missed taking your medications?” Another way of approaching the subject is normalizing a question such as “A lot of times when people have to take several medications they have a hard time getting all the doses in. How many times in a week (or month) would you say you miss taking your medicine and can you tell me which ones those are?”

Once you identify an adherence problem, then the process of helping solve the problem can begin. Discussing issues such as work schedules, eating patterns, and family environments can help uncover specific issues. Often the solution can be straightforward, such as using a long-acting medication once daily to replace a drug that is taken 2 or 3 times a day. Reducing the number of doses of a drug from 4 times a day to once daily increases adherence by approximately 30%, while reducing the dose from 3 times a day to once daily increases it by approximately 15%.

Simplifying a medication regimen, such as using combination products to reduce the number of tablets taken per day, has shown to be effective in increasing adherence. It also may save money on insurance co-pays. Connecting medicine doses with daily activities such as brushing the teeth, a meal or meals, or just prior to any other important activity is another way to increase adherence without adding complexity to a regimen (if the medication allows).

### Making a Difference

Poor adherence is a major concern and a costly problem in helping people manage their diabetes. As one of the AADE 7 Self-Care Behaviors™, taking medications should be incorporated into all self-management training by diabetes educators as part of their initial assessment and conversation with patients. Regular follow-ups with patients in which specific barriers and goals regarding medication adherence are addressed should be an ongoing part of the patient-provider relationship. ■

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Various studies and health care journals have listed several factors that could affect a person’s ability to adhere to a specific medication regimen. Among the most common are:

- the patient’s perception of the benefits of the prescribed medications versus the perceived severity of the disease;
- the inability to read the prescription labels;
- adverse side effects such as hypoglycemia, weight gain, edema, and erectile or orgasmic dysfunction;
- complexity of the regimen;
- social stigmas;
- depression;
- dosage frequency;
- busy lifestyle;
- medication costs (possibly most important of all).