

Medication Adherence in Specialty Pharmacy

The latest data as well as tools and techniques
for improving patient compliance.



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Introduction

In 2014, specialty medications represented only 1% of prescriptions written by American health-care providers but accounted for nearly 32% of overall drug spending.¹ Moreover, according to the latest reports, these medications are likely to continue their meteoric rise to the top of the spending charts.²

As a result of these high costs, payers want to know that the large sums of money they're spending are actually helping patients, and drug manufacturers want to know that their drugs' efficacy continues to justify the high prices. Unfortunately, neither payers nor manufacturers can prove results if patients don't utilize their medications as prescribed, and surprisingly, some 50% of patients fail to adhere to their drug therapies.³

At the center of all of this is the specialty pharmacy, which dispenses the high-cost medications to patients and reports outcomes to payers and manufacturers. Because medication adherence is critical to patient health and to protecting relationships with payers and manufacturers, pharmacists must play a significant role in the process.

Top 5 Factors Related to Medication Nonadherence

1. Affordability

Patients who feel they can't afford their medications are most likely to be nonadherent. As the affordability of medications improves, the risk of nonadherence declines.

2. Medication concerns

The more concerns patients have about their medications—such as worries about side effects, uncertainties about whether they truly need the medications, etc.—the more likely they are to be nonadherent.

3. Perceived need

Patients who aren't convinced they need their medications are more likely to be nonadherent.

4. Patient-provider relationship

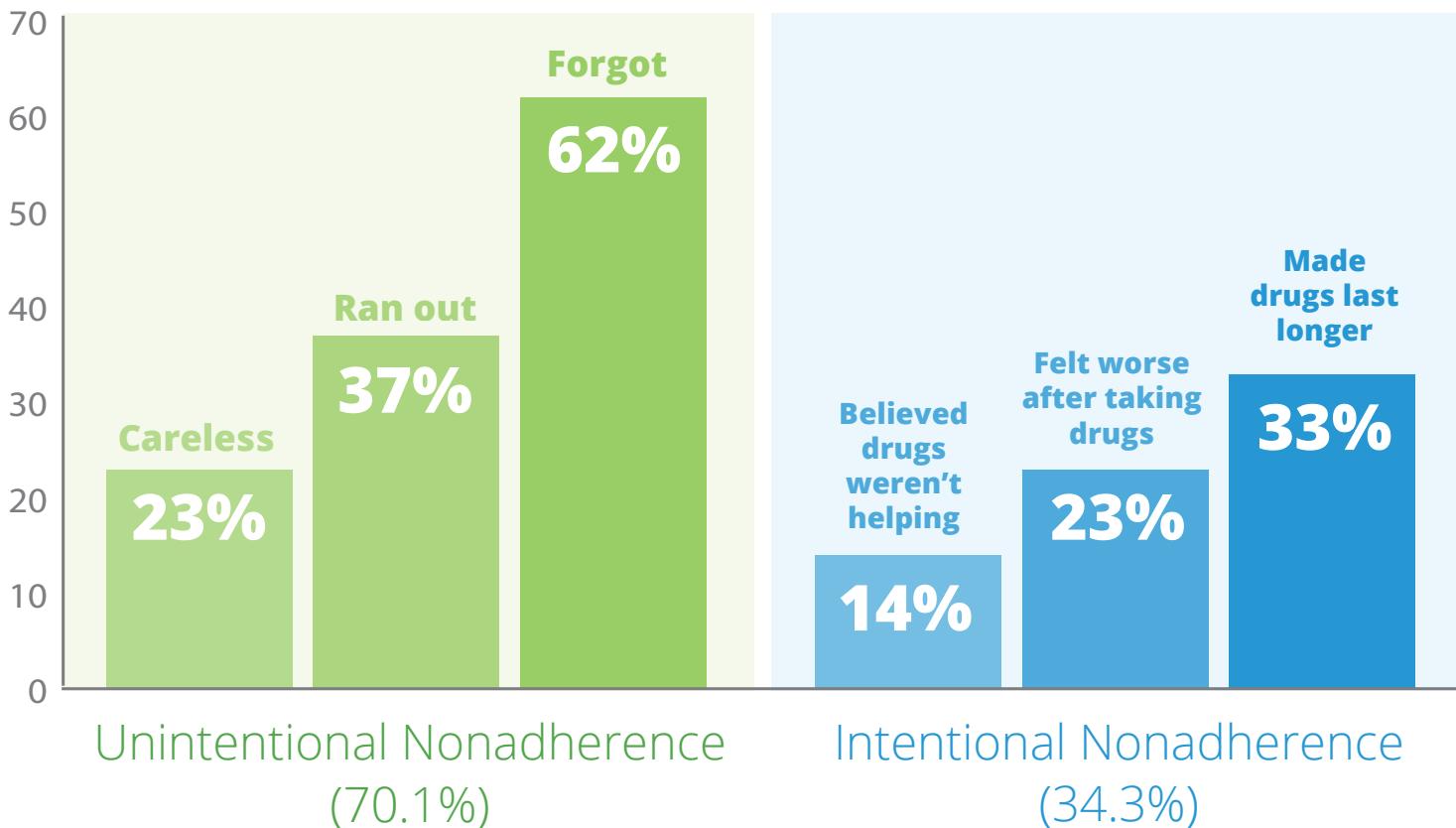
Several components of the patient-provider relationship can affect adherence. Common issues include misunderstandings and lack of communication; these are commonly related to nonadherence.

5. Complexity of treatment

Adherence declines as the daily doses increase.

Sources: A. Gadkari and C. McHorney, *BMC Health Services Research*, 2012; L. Osterberg and T. Blaschke, *New England Journal of Medicine*, 2005; A. Claxton, J. Cramer, C. Pierce, *Clinical Therapeutics*, 2001.

When asked why they were nonadherent, most respondents indicated at least one of the following:



Source: A. Gadkari and C. McHorney, *BMC Health Services Research*, 2012

While ensuring 100% adherence is likely to be impossible, particularly if the disease states you typically treat require complex medication regimens, your pharmacy should be able to exceed the 50% average. In fact, with the tools available to help monitor medication usage and increase adherence, you may be able to achieve 95% or higher.

Serious changes required

As early as 2007, the National Council on Patient Information and Education (NCPIE) expressed concern about America's low medication adherence rates, calling adherence the nation's "other drug problem" because of the relationship between nonadherence and "disease progression, disease complications, reduced functional abilities, and preventable deaths." In 2013, the NCPIE again reported poor levels of adherence, which the organization says will "only be compounded in the

days ahead by an aging society and the looming epidemic of age-related chronic diseases."⁴

Patients are considered adherent with their medication regimens when they act "in accordance with the prescribed interval and dose of a dosing regimen."⁵ This means that, to be in full compliance, patients must:

- Fill their prescriptions
- Consume medications at the correct times, in the correct manner (with or without food, etc.), and in the prescribed frequency
- Refill prescriptions before they run out
- Repeat the cycle until prescribers alter or discontinue therapy

Failing in any of these areas is considered nonadherence, most of which is unintentional. In fact, more than 70% of patients are unintentionally

nonadherent while just over 34% of patients report intentional deviation.⁶

The most common reasons cited for unintentional nonadherence include forgetting, running out, and occasional carelessness. The most common reasons cited for intentional nonadherence include attempting to make the medication last longer, feeling worse after taking the medication, and believing that the medication is not helping.

Measuring adherence

If patients never use the refills indicated on their prescriptions, or if they don't refill before the medication should have run out, you know they're not following their doctors' orders. But checking refill history alone doesn't tell you everything you need to know about your patients' adherence.

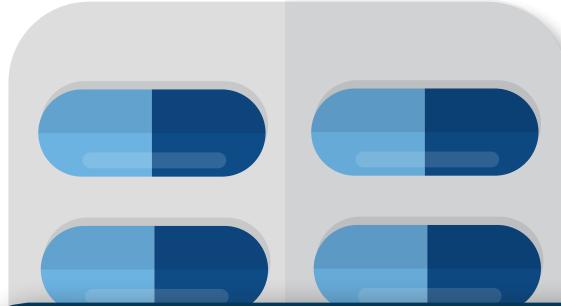
Instead, you can get a more clear picture of adherence with a few simple calculations using the refill data you have in your system. And if your software system is designed for specialty pharmacy, it may have these calculations built in for you.

Medication possession ratio (MPR)

This is a common formula for calculating adherence based on refill history. Simply divide the total days' supply for all fills in a period by the number of days in that period, then multiply the result by 100 to get an adherence percentage.

$$\text{MPR} = \left(\frac{\text{Sum of days' supply for all fills in period}}{\text{Number of days in period}} \right) \times 100\%$$

One drawback with MPR is that it overestimates adherence when patients refill prescriptions early. While MPR results are commonly requested by payers and drug manufacturers, another method, PDC, is becoming the more widely accepted adherence measure.



Predicting Adherence for New Patients

To help you focus your efforts on patients who are most likely to need reminders and other adherence assistance, consider using one of the many available tools to predict likelihood of nonadherence. Here are two of the most common.

Morisky Medication Adherence Scale (MMAS)

This is a simple yes/no questionnaire that asks four questions (an 8-question version is also available), such as "Do you ever forget to take your medication?" Each "yes" answer earns one point, and patients are predicted to have low, intermediate, or high adherence based on their scores.

Adherence Estimator®

This online questionnaire, designed by Merck, asks three questions about commitment, concern, and cost, such as, "I feel financially burdened by my out-of-pocket expenses for my prescription medication." For each question, patients check "agree completely," "disagree completely," or something in between, such as "agree somewhat." An adherence score is derived from the answers, and the probability of adherence is based on the score. Those who score from 8 to 36 are estimated to have a 32% or lower probability of adherence and are considered "highly likely" to be nonadherent.

High-Tech Tools

While many are still in development, there are several tools that could prove to be adherence game changers.

1. Apps for mobile devices

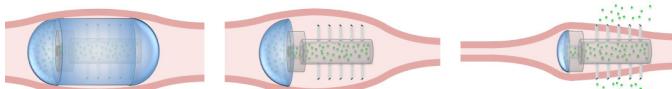
Whatever the device, your patients' mobile marketplaces are likely to have hundreds of applications available to help them remember to take their medications.

2. Smart pill bottles

Some glow and beep at the assigned dosage time and won't stop until the caps are opened. Others monitor medication usage, and transmit the data wirelessly, so patients can be reminded as needed.

3. Microneedle pill

For drugs that need to be injected, an ingestible capsule covered with tiny needles can make the process easier. Once swallowed, the pill injects medication into the stomach lining and then easily passes through the digestive system.



4. Ingestible sensor

At least one such device was approved by the FDA in 2012. When combined with a medication, which can be done during drug manufacturing, the sensor notes ingestion time and communicates with a patch worn on the body, which then sends the data to a mobile app.

5. Wearables

In addition to the wearable health monitoring devices already on the market, some new devices are being designed specifically for medication adherence, with features that focus on dosing regimens.

Proportion of days covered (PDC)

This is a similar formula that also calculates adherence based on refill history, but this one uses the number of days that are "covered" by the prescription rather than the days supply. Therefore, to calculate PDC, divide the number of days covered by the number of days in that period, then multiply the result by 100 to get an adherence percentage.

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

While MPR will be skewed when patients refill prescriptions early, PDC avoids double counting the days from the end of one supply to the start of another. It's also better suited for treatment regimens, such as for HIV, that involve multiple medications.



Correcting unintentional nonadherence

Achieving 100% medication adherence would be ideal, but that's obviously not realistic, and many consider around 80% to be reasonable for common disease states. However, for serious conditions such as HIV, 95% adherence is often cited as critical for patient health.⁷

That sounds like a lofty goal, but it's possible. However, you may have to implement a system to help your patients do their part. Remember, the vast majority of nonadherence is unintentional, and a great portion of that is simply due to patients forgetting, so a reminder system could dramatically impact your overall rates.

Reminders

Many patients realize they need help remembering to take their medications at the right times and may have already tried some systems, such as daily pill boxes or multi-dose envelopes. Oftentimes, however, these aren't enough to achieve high-levels of adherence.

For better results, you could suggest that all your patients opt in to receive:

- Text messages
- Phone calls and voice mails
- Emails

These could remind patients to take their medications at the right intervals each day and could also remind them when the time for refills is approaching. According to a study conducted in 2011, those who subscribed to text message reminders improved their overall PDC by 8% compared to those who didn't utilize texted reminders.⁸

As important as it is, a manual text reminder system would be cumbersome and inefficient. Therefore, a software system that can automate the process is recommended. All you have to do is set it once, and let the system do the work for you.

Patient portal

Most likely, you have access, often via your software vendor, to a site that you can set up for your customers to use for prescription viewing, refill requests, and delivery monitoring. Using this portal may help your patients avoid lapses in their supplies, especially if your pharmacy delivers the drugs directly to your patients' doors. And if your software application tracks your deliveries, you can be sure the medications arrive on time.

Help for intentional nonadherence

Working to improve nonadherence among patients who intentionally stop their medications or intentionally disregard their prescribers' instructions can be more of a challenge than simply helping patients remember to take their meds. But if you understand why patients are making these intentional choices, you may have better results.



Ease the sticker shock

Through copays and coinsurance, many payers shift a sizable portion of specialty pharmacy cost onto patients. So it's no surprise that 33% of the intentionally nonadherent said they wanted to make their medications last longer.⁹

Therefore, helping your patients access funding assistance programs could help increase your pharmacy's overall adherence rates. And if your software system can monitor each patients' program funding, you can help patients take advantage of these financial resources.

Manage side effects and expectations

Among the patients who admitted that their non-adherence was intentional, some 14% said they stopped treatment because they didn't think it was helping. Another 23% reported that they felt worse after administration.¹⁰ In these cases, communication and education can have a positive effect.

But your patients may not communicate their uncertainties about the regimens to you. You may have to reach out to ask how they are feeling and what side effects they're experiencing. Once you are aware, you can help patients better manage side effects and treatment expectations. These types of proactive, patient-centered consultations have been shown to improve adherence.¹¹

Strive for steady progress

Finding ways to help patients change their behaviors is not likely to be a simple task. However, failing to do your part to monitor and improve adherence could prove harmful to your relationships with payers and providers.

The first step, though, is monitoring your data, so you know which patients need assistance. Then, work toward incremental improvements. Over time, the end result will be positive patient outcomes.



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