

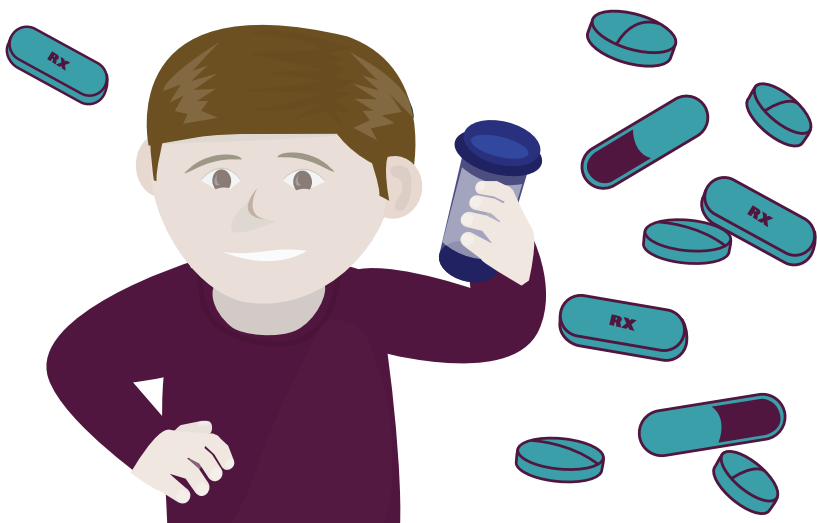
Taking Medication is No Fun, and That's a Big Problem

Improving Adherence Requires Addressing Psychological Barriers



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Overview

Medication non-adherence is one of the most significant problems in healthcare. The fact that so many people fail to take—or even fail to fill—their prescription medications for chronic conditions is the source of an estimated \$290 billion in “otherwise avoidable medical spending” in the US per year, due to complications from chronic disease that could have been prevented.¹

Not only is non-adherence a significant problem central to poor outcomes and increased healthcare spending, it is also a widely misunderstood problem. A commonly held assumption is that cost and forgetfulness are the major driving forces behind a failure to stick with important prescription medications, and that implementing reminders and cost reductions would go far towards solving the problem.

However, reminders and even giving medications away for free have been implemented as interventions, and tend to make a relatively small dent in the problem. What this assumption overlooks is the motivational or psychological challenge that must be overcome in order to stick with medications that tend to offer no short-term benefits and must be taken for years on end, if not a lifetime. Cost reductions and reminders are not motivational tactics and are, therefore, insufficient in addressing this fundamental challenge.

“FOR MANY PEOPLE THERE IS A NEGATIVE PSYCHOLOGICAL OVERLAY TO TAKING MEDICATION,”

In an effort to better highlight the psychological barriers that need to be addressed to have a more significant impact on the problem, we designed a survey that focused on how people feel about taking their medications. The results are enlightening.

Methodology

The HealthPrize Medication Non-Adherence survey was fielded by independent panel research firm Research Now from March 8 to March 15, 2013. The responses were generated from a survey of 1,021 people who self-identified as taking prescription medications regularly for a chronic illness or serious medical condition. All respondents are age 18 or older and living in the continental United States. The margin of error for the survey is plus or minus 3.1 percent.

I'd Rather Take Out the Trash

We asked people about a list of other mundane and even unpleasant tasks or experiences as compared to the act of taking a medication. Forty-seven percent of respondents answered that they would rather take out the trash than take their medication. Twenty-seven percent would prefer getting a shot in the arm, and ten percent actually responded that they would prefer to get a cavity filled! What's the bottom line here? For many people, the deceptively simple act of taking a medication is a dreaded act.

In other words, for many people there is a negative psychological overlay to taking medication, a barrier that is likely not in play for other equally simple daily routines such as brushing one's teeth or taking a shower, routines that are rarely forgotten and that do not require external interventions to prompt adherence.

The Invincible Millennials (or So They Think)

Although the concern of forgetfulness often focuses on the elderly (and rightly so, at least selectively for patients with memory loss) it turns out that medication non-adherence is actually a greater problem among younger people, again pointing to a motivational barrier beyond simple forgetfulness. Our survey found that 60 percent of 18- to 34-year-olds admit to not taking their medication as prescribed in the past year, which was double the rate of senior citizens aged 65 and over.

Even more worrisome, 56 percent of 18- to 34-year-olds admitted to stopping their medication altogether or simply not filling a prescription at all, which was almost four times the rate of seniors, who had a rate of only 16 percent. These particular forms of medication non-adherence (primary non-adherence, or failure to fill a prescription at all, and non-persistence, or quitting the medication altogether) are, by far, the most serious threats to health outcomes, much more so than the relatively less concerning non-adherence of an otherwise motivated patient who continues to fill long-term but accidentally forgets a dose here or there.

Why do younger patients have greater difficulties with medication adherence than do other age groups? Our survey points toward a value, or motivational, issue. For example, nearly half (47 percent) say that paying for gas is more important than paying for their prescription medication, and 33 percent say they'd be more willing to persist with a prescription for their pet than for themselves.

A quite plausible explanation here is what a behavioral economist would call "present bias," or our strong preference for short-term rewards over long-term rewards. In younger patients with high cholesterol or hypertension, for



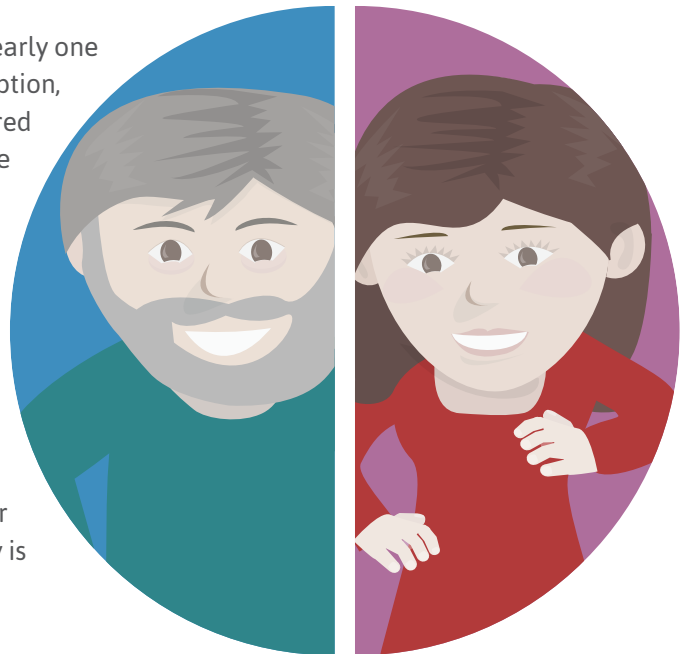
example, the health benefits of medication—prevention of heart attack or stroke, among others—are likely years or decades in the future, making it difficult to truly appreciate or recognize the benefits now. Similarly, people in this same age group are recognized as having tremendous difficulty in saving for retirement, and not simply due to a lack of funds, but equally due to a failure to appreciate the distant future need on an emotional level.

In contrast, sixty- or seventy-year olds are typically far more cognizant of the reality of their own mortality and the potential for (or even current existence of) poor health and are, therefore, naturally more intrinsically motivated to stick with important prescription medications. In this demographic group, the benefits are not so distant or abstract.

Yet Another Gender Gap

But the young are not the only ones avoiding their medication. Nearly one third (32 percent) of women say they've decided not to fill a prescription, or have quit taking a prescription medication altogether, as compared to only 20 percent of men. In response to the question, "Have you, on occasion, not taken your medication as prescribed," 45 percent of women answered "yes" as opposed to 36 percent of men. Although our survey was not designed to uncover possible causes, we believe that one possibility points to the realities of women as primary caretakers within the family, in which case the immediate needs of other family members often trump the personal needs of the caretaker, including healthcare needs.

Again, in the face of this "caretaker" barrier, a simple reminder or cost reduction is unlikely to suffice. A more effective approach, for some, might be to emphasize that one's own health and longevity is critical to maintaining the role of effective caregiver long-term.



In Doctors We Trust? Not So Fast.

In addition to the central underlying issues of motivation, value perception, and present bias that contribute to poor medication adherence, a patient's perception of their physician plays an important role as well. The now largely extinct model of the paternalistic and all-knowing physician has given way to the empowered and increasingly internet-educated patient who is more likely to question a physician's advice, for better or for worse.

In our survey, 23 percent of respondents said that they don't trust, or don't always trust, their physician and the medication they prescribe. Age-wise, this mistrust is highest among the 35- to 54-year-old age group, in which 30 percent said they experience those trust concerns. And logically, among people who say they don't always take their medication as prescribed, trust is particularly poor: 46 percent of this group say they don't trust, or don't always trust, their doctor and the medications they prescribe.

Recent studies have pointed to a number of possible factors at play in the physician-patient relationship that can exacerbate adherence problems: too little time spent with patients, lack of training in adherence counseling, insufficient attention paid to "bedside manner," and even a lack of knowledge on the part of the physician that a patient is not taking their medication. Patients are often not truthful with their physicians or even themselves as to their extent of non-adherence.

Improving the Efficacy of Adherence Interventions

Clearly, effecting significant and lasting improvements in medication adherence rates will require a multi-faceted approach. Although the traditional mainstays of reminders, cost reductions, and patient education have demonstrated modest successes in the past and will persist going forward as helpful and reasonable interventions, they are fundamentally limited in helping patients to overcome the more complex psychological and motivational barriers that often exist even among patients who can verbalize why they need to take their medication.

“MODERN APPROACHES, THEN—WE BELIEVE—MUST SOMEHOW ADD AN ELEMENT OF POSITIVITY AND EVEN ENJOYMENT TO THE ACT OF TAKING A MEDICATION,”

Equally important is the realization that the name of the game in improving outcomes is improving persistence—keeping people on therapy. An otherwise motivated patient who continues to refill faithfully over time but simply occasionally forgets a dose or two here or there is not likely to suffer poor outcomes as a result, or be the culprit of increased healthcare spending. Paradoxically, however, this patient type is the typical target of reminder-based approaches, another reason why such interventions alone are insufficient—they are barking up the wrong tree.

The reality that this HealthPrize survey uncovers is this: most people do not enjoy taking their medication. Although not a surprising conclusion, it is a critical reality to highlight in the quest to diminish the problem. Digging deeper based on our survey results, we can infer that there is nothing fun about having a chronic condition, nothing fun about being tied to some form of therapy on a daily basis, and certainly nothing fun about being a “patient.” In other words, there is nothing inherently positive. Modern approaches, then—we believe—must somehow add an element of positivity and even enjoyment to the act of taking a medication (adding the “fun factor,” if you will). It is no longer adequate to claim that non-adherence is simply a problem of forgetfulness, or of cost, or even of poor health knowledge.

So how can positivity and even the “fun factor” be infused into the otherwise mundane and often dreaded task of taking a medication? For certain, there are many ways, and different people will respond to different motivators. However, consider the following possibilities:

- Add immediate gratification in the form of rewards: given that the true reward of health or complication avoidance is often too far away or too abstract for many people—especially the young—to appreciate, offering rewards for taking and refilling medications can be a way of “tiding people over”
- Add gaming dynamics to online or mobile adherence programs: leaderboards, instant wins, sweepstakes, and other tactics can make a program more exciting and boost engagement
- Add a social element: being labeled as a patient and having a chronic illness can be isolating; being a part of a group can help with motivation

And finally, improving medication adherence is a win-win for everyone in healthcare: the patient, insurer, employer, PBM, pharmacy, and pharmaceutical company, among others. All constituencies should have a hand in testing and deploying more innovative strategies to improve adherence and, ultimately, clinical outcomes.

About HealthPrize

HealthPrize Technologies provides an innovative approach to addressing the problem of medication non-adherence with an online and mobile-based program that is fun, educational and rewarding. The HealthPrize system leverages gaming dynamics, behavioral economics and proven concepts from consumer marketing to maximize engagement while also using education to strengthen the intrinsic motivation required for long-term persistence to prescribed medications. For more information, visit www.healthprize.com or follow us on Twitter at [@HealthPrize](https://twitter.com/HealthPrize).

References:

1. New England Healthcare Institute, **Thinking Outside the Pillbox: A System-wide Approach to Improving Patient Medication Adherence for Chronic Disease**. August 12, 2009.



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