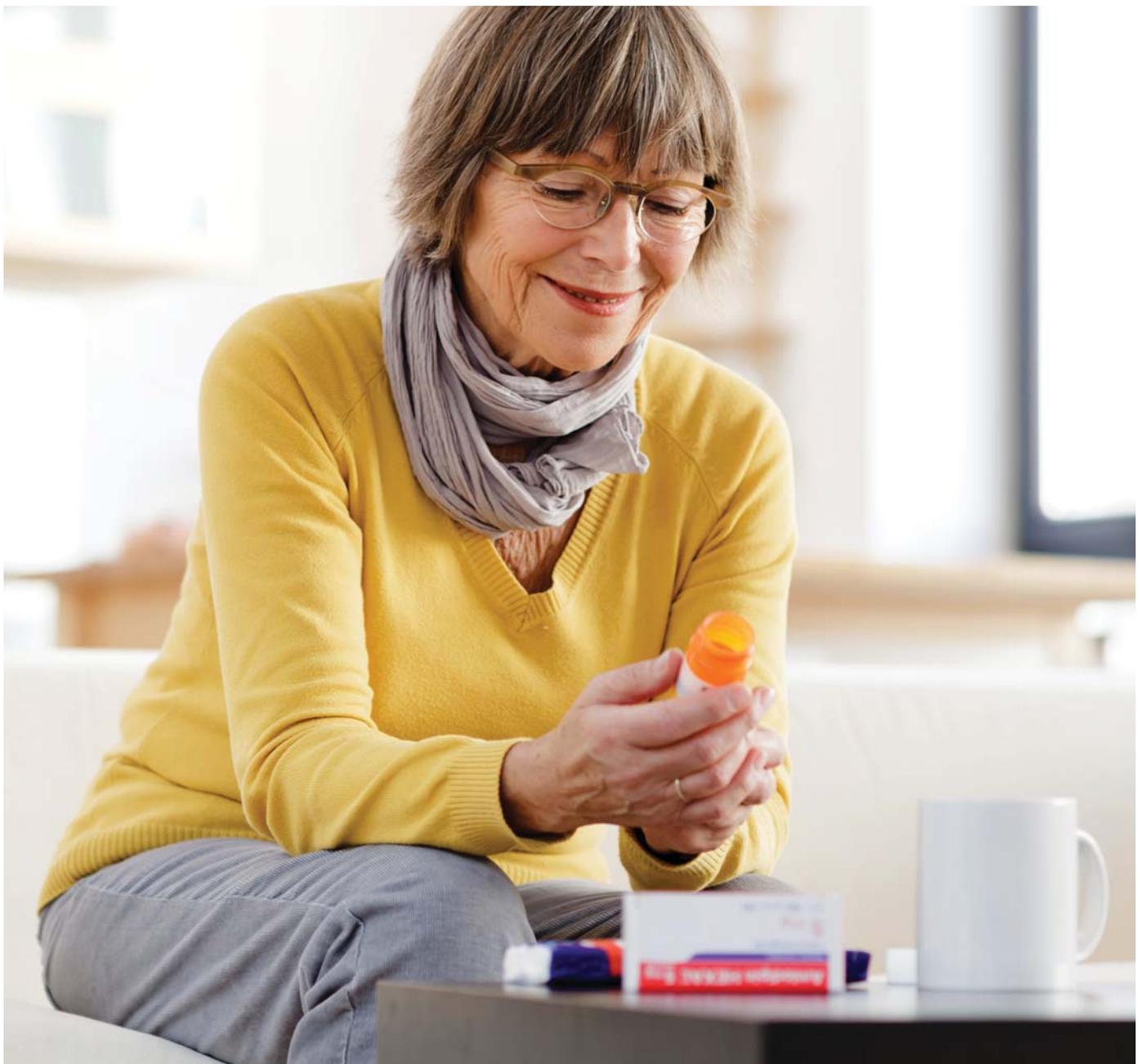


FDB ISSUE BRIEF

Medication Adherence



OVERVIEW

Today, 145 million Americans suffer from chronic diseases and yet, only one-third are taking their medications as prescribed. The consequences are devastating, including on-going health problems and higher use of costly acute care, such as hospitalizations and surgeries. **Many of these consequences are avoidable if we can get patients to adhere to their prescribed medication regimens.** This brief explores the cultural and practical issues surrounding the medication adherence challenge and looks at technology solutions that are affecting positive behavior change leading to improved outcomes.



INTRODUCTION

In the wake of healthcare reform, policy makers, clinicians and front-line workers alike are trying to figure out how to achieve “value”—or, most effectively produce the best clinical outcomes for patients in the most cost efficient manner. **High up on the list of strategies: Zeroing in on the patient.** Indeed, according to the *26th Annual HIMSS Leadership Survey*, about three-quarters of respondents indicated that considerations such as patient engagement, satisfaction and quality of care would be the business issues that would most impact their organizations over the course of the next two

years.¹ With this focus, leaders are latching onto a variety of strategies to get patients more involved in their own care. Here’s one that is worthy of bubbling to the top of the list: **Making sure that patients become actively engaged in their medication therapy by taking their prescriptions as directed.**

Indeed, medication adherence could go a long way in producing the value that is so sorely needed in today’s healthcare environment. The challenge, however, lies in finding a means to optimize medication adherence—ideally customized to each patient’s needs.



THE CHALLENGE: Finding a means to optimize medication adherence—ideally customized to each patient’s needs.

MAKING MEDICATION ADHERENCE PART OF THE CONVERSATION



When patients adhere to prescribed medication regimens, outcomes—**BOTH CLINICAL AND FINANCIAL**—dramatically improve

To start, elevating awareness around the importance of medication adherence can make this strategy a star in the quest toward value-based care. There are many reasons why medication adherence needs to be front-and-center in this evolving patient engagement conversation.

Consider the following facts: When patients adhere to prescribed medication regimens, outcomes—both clinical and financial—dramatically improve. However, when patients don't use medications optimally, the drugs' effectiveness and health outcomes suffer. And, overall costs rise as well, a real lose-lose situation.



The healthcare industry can **AVOID BETWEEN \$100 AND \$300 BILLION IN ANNUAL COSTS** by improving medication adherence.⁴

What's more, medication adherence becomes especially important when dealing with chronic conditions. If a patient truly understands their condition and the role that proper medication adherence plays, they can better control the

disease, enjoy improved health, and spend more time at home and less time in the emergency department or hospital.

For instance, a patient who has severe asthma or emphysema might wind up in the emergency department six or seven times a year. However, if the same patient truly understands their disease, its environmental triggers, how to monitor the condition and how to use medications and flow meters properly, they might only access the emergency department one or two times per year. Moreover, a sizable number of patients have not just one, but multiple chronic conditions.

The benefits hit the bottom-line as well. For example, research has shown that **taking drugs as prescribed lowers total healthcare costs by an amount that exceeds the costs of the drugs themselves and their lab or medical monitoring costs.**² In addition, lower spending on prescription drugs typically results in higher medical services costs.³

Most telling: The healthcare industry can avoid between \$100 billion and \$300 billion in annual costs by improving medication adherence, according to statistics cited in a 2014 article that was published in the *Journal of Risk Management and Healthcare Policy*.⁴

MEDICATION ADHERENCE: THE DISCONNECT



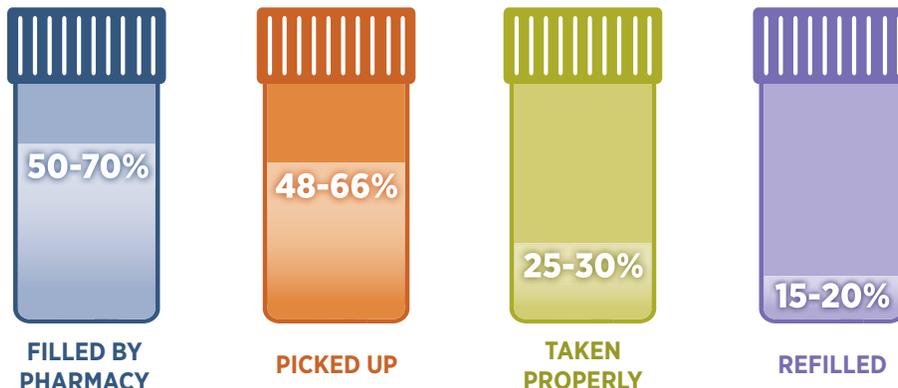
In theory, the fact that medication adherence can help enhance care while also reducing costs should get patients to buy into the concept whole-heartedly. When the rubber meets the road, however, things don't always pan out.

Unfortunately, approximately one-half of patients in the United States do not take their medications as prescribed.⁵ The problem is significant considering the fact that about 81 percent of adults aged 65 and older take one or more prescription drugs a day, and 29 percent take five or more medications on a regular basis.⁶

Moreover, for every 100 prescriptions written, only 50-70 are filled by the pharmacy, 48-66 are picked up, 25-30 are taken properly, and 15-20 are refilled.

To truly get patients on board and engaged, healthcare providers ideally need to think of “adherence” well before medications are actually prescribed. For example, if patients are engaged in health and wellness activities, then they are much more likely to follow their medication routines when drugs are needed to improve their care.

Out of every **100 PRESCRIPTIONS** written, only:



MEDICATION ADHERENCE: THE DISCONNECT (*cont.*)



Healthcare professionals need to find ways to make it easy for patients to “WALK THE WALK”

In addition to reeling patients in early, healthcare professionals also need to assess the chronically ill patient and provide adherence solutions—such as personalized education—which address various obstacles that could hamper medication adherence such as:

- **Urban myths** that falsely perpetuate the idea that specific medications do more harm than good
- **Cultural biases** that steer some populations away from certain medications (e.g., it might not be considered “macho” to take a medication in some cultures)
- **Difficulties with medication synchronization**, making it arduous for patients with multiple prescriptions to stay on top of refill schedules
- **Asymptomatic diseases**, such as high blood pressure, which make it possible for patients to skip their medications without feeling any pain or discomfort
- **Low literacy**
 - Limited English proficiency
- **Failing vision** with increasing elderly population
- **Cost** of medications
- **Barriers to care** or inadequate follow-up
- **Complexity** of medication regimen
- **Psychiatric disorders** (e.g., depression, schizophrenia, bipolar, dementia)
- **Substance abuse**

Additional solutions include simplified regimens—such as conversion to once-daily oral dosing when appropriate—as well as a major emphasis on effective treatment and monitoring of psychiatric disorders. Such disorders can have a ripple effect in terms of poor overall self-care.

Healthcare professionals need to find ways to make it easy for patients to “walk the walk.” To start, healthcare professionals need to work with patients to go beyond simple compliance and truly *engage* in their medication regimens. With such adherence, patients fully understand their chronic disease, the proper use of medications, potential side effects as well as the interventions to take regarding such side effects, and also if doses are missed.

The key to success: **Creating bi-directional partnerships that make it possible for patients to take an active role in their medication management.**

Under such scenarios, healthcare professionals provide both the one-on-one counseling that will get patients on board, and specific written instructions that can guide patients to take their medications as directed.

In essence, healthcare providers need to continually educate patients on the in-and-outs of medication adherence. To do so, clinicians need to provide relevant, easily understandable instructional and educational materials at various touch points along the patient journey. This should include continually offering personalized provider-patient interaction that supports written educational materials.

TECHNOLOGY SOLUTIONS THAT ADDRESS ADHERENCE

EVERY DAY: Medicine you need to use every day.					
	 Morning	 Noon	 Evening	 Bedtime	
Aspirin Enteric Coated Tablet 81 mg	1				Take by MOUTH. For heart.
Accupril Tablet 10mg	1				Take by MOUTH. For high blood pressure.
Humalog Insulin Solution 100 IU/mL	12 units	14 units	16 units		INJECTION medicine. For diabetes.
Biaxin Oral Suspension 125mg/5 mL	10 mL		10 mL		Take by MOUTH. For infection. Use for 10 days.
Lipitor Tablet 40 mg				1	Take by MOUTH. For high cholesterol.

Sample of Meducation® personalized patient medication instructions.

©Polyglot Systems, Inc.

Meducation, a cloud-based solution, accessible to healthcare providers within their clinical workflow via the EMR system, can help by delivering medication instructions that especially target individuals considered to be “high risk” due to low health literacy, impaired vision and language barriers. **The solution enables providers to dynamically create fully personalized, simplified patient medication instructions**, in more than 20 languages—written at a 5th to 8th grade reading level with large font sizes, pictograms and videos—to make understanding how to take medications intuitive and simple. A more detailed medication instruction piece complements the highly-concise Meducation information.

In addition, various online and mobile technologies and applications could add some punch to medication adherence efforts. For example, smart phone apps could remind patients when it is time to take a medication; alert patients when refills are needed; and even support pharmacy efforts to synchronize patients’ multiple medication orders, making it more convenient to obtain needed refills.

One company is taking the concept even further by creating a digital pillbox that tracks patients’ medication schedules and alerts patients and providers when a medication is missed. The pillbox actually uses sensors to track when pills are removed. If the patient misses a dose, the pillbox leverages connected software and cellular radio to send patients an alert, by text message or phone call. The pillbox also compiles and sends data to clinicians—as needed. As such, this technology goes beyond simply reminding patients to take a medication and actually monitors and prompts adherence.⁷



As developers continue to create solutions that promote adherence, they should remember that to ultimately succeed, these mobile apps need to:

- **Support the ability** for patients and providers to share information
- **Actually be prescribed** by clinicians
- **Qualify for** financial reimbursement
- **Allow patients to access** useful, reliable personalized information on chronic medical conditions including specific disease FAQs, advisories and personalized drug therapy information
- **Resonate with the patients** who rely on medications the most—specifically geriatric patients
- **Reach underserved patients** who often have poor health literacy or English proficiency

MEDICATION ADHERENCE: A CONSIDERABLE UNDERTAKING

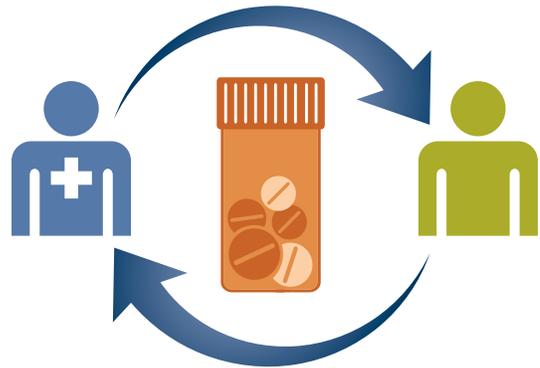


The goal of pharmacists providing **MEDICATION THERAPY MANAGEMENT** is to make sure that the medication is right for the patient

Even with these tools, however, medication adherence is a formidable job. Unfortunately, physicians often do not have the time to check all the boxes. As a result, medication adherence initiatives or efforts sometimes fall through the cracks.

Pharmacists, however, are in a great position to offer medication therapy management (MTM) services—a role that is becoming more and more common. The goal of all pharmacists providing medication therapy management is to make sure that the medication is right for the patient and his or her health conditions, and that the best possible outcomes from treatment are achieved.⁸

Under such scenarios, for example, a diabetic patient would have an initial visit with a physician with a disease assessment. Drugs would be started in consultation with a pharmacist in terms of what the best choices might be—especially if they also suffer from kidney disease or liver disease. The pharmacist would also adjust medications as the therapy moves along, changing to different medications and fine tuning as needed—operating under physician-pharmacist approved therapeutic protocols.



Pharmacists typically HAVE THE OPPORTUNITY FOR A LOT OF CONTACT WITH PATIENTS as patients need to pick up their medications frequently

Indeed, pharmacists are in the perfect position to perform medication therapy management (MTM)—including Medicare-reimbursable Comprehensive Medication Review (CMR)—because they are the clinicians with the most training in terms of medication use, adverse events and the mitigation of unwanted events. In addition, pharmacists typically have the opportunity for a lot of contact with patients, as patients need to pick up their medications frequently.

MEDICATION ADHERENCE: A CONSIDERABLE UNDERTAKING (cont.)



The simple fact of the matter is that patients who take their medications experience **BETTER HEALTH AT REDUCED COSTS**

Another common MTM scenario has a patient periodically consulting with a pharmacist when picking up synchronized monthly medication refills.

The pharmacist confirms the patient's medical conditions and current medications—providing disease and drug-specific education. Medication regimens are optimized in concert with the primary care provider. Unneeded or duplicative medications are discontinued. Once-daily medications are used when feasible. Less expensive, equally effective drugs are leveraged—and rational, appropriate drug therapy is the result. An online chat service—staffed by a clinical pharmacist—may be another potential option.

Recently, a study compared the drug therapy outcomes between Medicare patients diagnosed with chronic heart failure or chronic obstructive pulmonary disease who received MTM services and those who did not. Researchers found that beneficiaries receiving MTM had higher odds of being adherent to their medications compared to the beneficiaries who did not receive MTM.⁹

CONCLUSION

Certainly, getting patients actively involved in their own medication therapy is a formidable task that involves heightened awareness of the medication adherence issue in light of emerging value-based care models; significant patient educational efforts; the development and adoption of innovative technologies; and the ability to shift medication adherence tasks to various professionals, specifically pharmacists.

Addressing medication adherence, however, is well worth all this effort as the simple fact of the matter is that patients who take their medications experience better health at reduced costs. And, that's exactly what makes the endeavor so valuable.

There is some good news to report on this issue, however.

The National Council on Patient Information and Education (NCPIE) has recognized the need to address this public health challenge. In 2013, NCPIE created a national action plan—the Adherence Action Agenda or the “A³ Project,” bringing together almost two dozen professional societies, consumer and patient groups, voluntary health organizations, government agencies and industry leaders to identify the major gaps in current adherence efforts and create a collaborative national Adherence Action Agenda. As a result of their activities, medical schools will soon be incorporating a formal Medication Adherence training and accreditation component within their educational curriculum. Read more about this project at <http://www.bemedicinesmart.org/>

Continue this conversation online. Read *KnowHow: The FDB Blog* and let us know what you think at www.fdbhealth.com/blog

For more info on Meducation, please visit www.fdbhealth.com/solutions/meducation

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