FACTS

A Tough Pill to Swallow

Medication Adherence and Cardiovascular Disease

OVERVIEW

The statistics are startling - an estimated three out of four Americans do not take their medication as directed.[1] This could range from not following the intensity of the drug regimen or failing to continue to take the drugs through the duration of the prescription as prescribed by the healthcare provider. There are a variety of potential reasons for this including forgetfulness, a person not being convinced of the medication's effectiveness, fear of the side effects, or high medication costs.[1]

This failure to take medications as directed, or poor medication adherence, is particularly common among patients with chronic illnesses, including those with cardiovascular disease.[2] For example, research suggests that 24% of patients who suffer a heart attack do not fill their medications within seven days of discharge,[3] and 34% of heart attack patients with multiple prescriptions stop taking at least one of them within one month of discharge.[4]

These patients do so with serious consequences to their health. For example, non-adherence to medications that protect the heart increases risk of cardiovascular hospitalizations (from 10% to 40%) and mortality (from 50% to 80%).[5] Non-adherent patients are also more likely than their medication adherent counterparts to have adverse health events that incur additional costs to them and the health care system.[6]

Unfortunately, the problem of medication non-adherence is likely to grow, particularly as the population ages and more individuals are prescribed prescription drugs. Currently, more than three fourths of adults over the age of 65 take two or more prescription drugs,[7] and the number of older Americans is expected to double by 2030.[8]

BARRIERS TO MEDICATION ADHERENCE

There are a number of reasons why a patient may not take medications as prescribed, and often it may be a combination of factors. Some causes of medication non-adherence include:

- Fragmentation across the health care system, which can limit care coordination or make it difficult for physicians to easily access patient information across different care settings.
- The complexity of the drug therapies, which may lead to a patient's perceived fear of side effects from the medication(s) or general confusion about the regimen.
- Poor communication between a provider and a patient about the medications, or difficulty explaining and understanding the benefits and adverse effects of complex drug therapies.[9]
- Unintentional patient behavioral factors, such as forgetfulness.
- Patients' physical or cognitive impairments.
- Socioeconomic factors, such as low health literacy, and high medication costs, as well as lack of transportation to fill their prescriptions at a pharmacy.[6]

The variety and potential combination of barriers that result in medication non-adherence means no single solution will close the adherence gap. Additional research, education, and awareness on medication adherence can increase our understanding of best practices and interventions that ensure patients take their medicines as prescribed. Policy changes in Medicare could also help improve medication adherence for this important patient. Whatever the vehicle, improving medication adherence, will require a multifaceted approach.

IMPACT OF MEDICATION NONADHERENCE

The prevalence of medication non-adherence is difficult to assess since no one measure captures the total picture. It is known, however, that when individuals do not take their medications as prescribed, they face greater health risks and worse health outcomes.

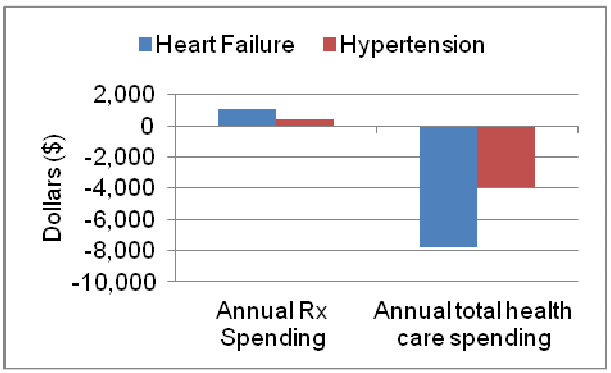
- Medication non-adherence causes 30%-50% of treatment failures and results in approximately 125,000 preventable deaths a year.[1]
- 46,000 deaths may be avoided each year if 70% of patients with hypertension got the treatment they need.[10]
- The risk of hospitalization, re-hospitalization, and premature death among non-adherent hypertension patients is more than five times higher compared to hypertension patients who adhere to taking their medicine.[11]
- Patients with high cholesterol who do not adhere to their medications have a 26% greater likelihood of a

cardiovascular-related hospitalization compared to patients who adhere to their prescriptions.[12]
- Poor adherence to heart failure drugs is associated with an increased number of cardiovascular-related emergency department visits.[6]

In addition to the health impact, medication non-adherence results in increased health care costs for individuals and a health care system already under stress.

- Non-adherence costs the health care system nearly $300 billion a year in additional doctor visits, emergency department visits, and hospitalizations.[1]
- Health care costs associated with mismanaged multiple medications by seniors was estimated to be $1.3 billion in 2012, $1.1 billion of which was spent on inpatient treatment, and the rest on emergency room and outpatient visits.[13]
- 11.4% of stroke survivors – or approximately 543,000 individuals – reported facing higher health care costs as a result of their medication non-adherence. This was mostly among the uninsured and 45-64 year old category.[5]
- Adherence in patients with congestive heart failure and hypertension reduced average annual total health care spending by $7,823 and $3,908, respectively, per individual.[14]

Impact of Medication Adherence on Health Care Spending Per Person[12]



THE ASSOCIATION ADVOCATES

The American Heart Association/American Stroke Association is committed to advocating for innovative approaches to help improve medication adherence. This includes approaches that would:

- Advance research to understand how different medication adherence interventions affect health outcomes and which combinations of approaches are the most successful.
- Advance our understanding of the link between medication adherence, patient health care spending, and health care costs.
- Promote greater awareness among patients and healthcare providers about the importance of medication adherence in order to identify, address, and overcome adherence barriers.
- Establish uniform quality measures of medication adherence.
- Provide incentives for medication adherence through delivery system reform.
- Ensure medication adherence is included as a component of quality improvement activities.
- Help enact legislation that would expand eligibility for medication therapy management programs under Medicare to include beneficiaries with a single chronic condition that have been proven to respond positively to improved medication adherence, like cardiovascular disease.

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