MEDICATION ADHERENCE AND CARDIOVASCULAR DISEASE

Overview

Up to 50% of patients do not take their blood pressure medications as prescribed and only 50% of treated individuals reach their blood pressure goals.[1] Unfortunately, poor medication adherence is particularly common among patients with cardiovascular disease. Potential reasons for this vary and may include lack of communication between healthcare providers and patients, fear of side effects, medication costs, and simple forgetfulness. [2]

Studies demonstrate that almost one-third of patients were nonadherent as early as 90 days after having a heart attack and approximately 25-30% of patients with high cholesterol failed to pick up medications within one to two weeks of receiving the prescription.[3,4] These scenarios may lead to negative health consequences and complications. Nonadherent patients are more likely to have adverse health events that incur additional costs to both themselves as well as the health care system.[5] The problem of medication nonadherence is likely to continue growing, particularly as the more individuals are prescribed medication and the population, in general, continues to age. This aging population is projected to more than double from 6.5 million in 2017 to 14.4 million in 2040 (a 123% increase).[6] The potential combination of barriers that may lead to medication nonadherence indicates there is no one true solution to a multi-layered problem. A combined effort promoting education, additional research, and awareness on medication adherence can help grow our knowledge of interventions and best practices to ensure patients adhere to therapy regimens. Another solution may include 90-day fills. Improving medication adherence, therefore, will require a multidisciplinary approach.

Impact of Medication Nonadherence

Poor adherence to cardiovascular medications is highly prevalent across patient populations and cardiovascular drug classes, unrelated to differences in how and when adherence is measured.

Poor medication adherence has been associated with numerous adverse health outcomes:

- 46,000 deaths may be avoided each year if 70% of patients with hypertension got the treatment they need.[8]
- Studies show that survivors of acute myocardial infarctions (MIs) who were nonadherent to statins had an increased risk of mortality compared to survivors with high adherence.[9]
- The risk of suffering from myocardial infarction and stroke among nonadherent hypertension patients is more than two times higher compared to hypertension patients who adhere to taking their medicine. Additionally, the risk of hospitalization for heart failure among these patients is almost three times higher.[10]
- Poor adherence to heart failure drugs is associated with an increased number of cardiovascular-related emergency department visits and inpatient hospital days.[5]
- Unfortunately, clinicians may often be unaware of how poor adherence underlies the uncontrolled risk factor. This may lead to unnecessary treatment intensification and the potential for adverse effects of overtreatment if patient begins to follow medication regimen.[11]

Poor adherence is also a contributor to increased health care costs.

- Up to $300 billion in avoidable costs is spent annually on medication nonadherence, which represents approximately 10% of all healthcare costs in the U.S.[10]
- Between 1999 to 2010, 11.4% of stroke survivors – or approximately 543,000 individuals – reported facing higher health care costs as a result of their medication nonadherence.[9]
- 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.[10]
- Health care costs associated with polypharmacy in seniors was estimated to be $1.3 billion in 2012. $1.1 billion of that money was spent on inpatient treatment and the rest on emergency room and outpatient visits.[11]

Barriers to Medication Nonadherence

There are many reasons why a patient may not take medications as prescribed, and often it may be a combination of factors.[13] Some causes of medication nonadherence include:

- Fragmentation across the health care system, which can limit care coordination and possibly make it difficult for physicians to access patient information across different care settings.[12]
- Poor communication in the provider/patient relationship about medications, or difficulty explaining and understanding the benefits and adverse effects of complex drug therapies.
- A patient's perceived fear of side effects or general confusion about the regimen.
- Unintentional 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 prescriptions at a pharmacy.

What Can Be Done?

Finding innovative methods to help patients improve medication adherence has the vast potential to improve health outcomes while potentially reducing health care costs.

- Use available data sources (such as prescription fill history within the electronic health record) to proactively identify nonadherent patients.
- Collaborate with pharmacists and other members of the care team to assist with enhanced counseling techniques such as motivational interviewing and the teach-back method.
- Establish uniform quality measures of medication adherence and participate in incentives that promote adherence such as 90-day medication fills.[7]
- Renew all of the patient's maintenance medications at the same time at their appointments, and send to the pharmacy as 90-day supplies (for maintenance medications).
- Assist patients in selecting tools and techniques to improve their adherence; some may include pillboxes, smartphone apps, Alexa reminders, and putting medication in a visible place (such as by the toothbrush) where they will see it every day.

Sources

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