

Improving Medication Adherence through Graphically Enhanced Interventions in Acute Coronary Syndromes Study (IMAGE-ACS)

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Abstract

Approximately 25 – 50% of adults do not take their medications as prescribed. Non-adherence limits the effectiveness of proven medical therapies, including agents prescribed for the prevention and treatment of coronary heart disease (CHD). CHD is the leading cause of death in the United States, resulting in over 900,000 deaths annually. A particularly high-risk population of CHD patients are those admitted to the hospital with acute coronary syndromes (ACS). They are more likely to suffer another cardiac event and are at increased risk of death. Despite their higher risk, patients with ACS commonly do not adhere to their medical treatment plan. Furthermore, the transition from hospital to home is a vulnerable time for many patients, one in which medication mismanagement and non-adherence are common. Prior research has shown an association between non-adherence and CHD-related mortality. Interventions to improve medication adherence among CHD patients hospitalized with ACS could yield significant improvements in patient outcomes.

Low health literacy is a widespread and generally under-recognized risk factor for non-adherence. Health literacy is defined as “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.” Approximately 90 million adult Americans lack the literacy skills needed to function in the modern health care environment. Adults with low health literacy demonstrate less understanding of medication instructions, have 4 times the odds of non-adherence, and cite confusion about the regimen as a reason for improper medication use.

This proposal describes the IMAGE-ACS study (Improving Medication Adherence through Graphically Enhanced interventions in Acute Coronary Syndromes) – an innovative, randomized, controlled trial to test the effectiveness of a low-literacy intervention designed to improve medication adherence among inner-city patients following hospitalization for ACS. Patients in the intervention group will receive literacy-sensitive medication counseling by a pharmacist at the time of hospital discharge, augmented by the use of an illustrated pill card that shows the patient’s medication regimen. The intervention is based in Social Cognitive Theory and is intended to improve patients’ understanding of the medication regimen, self-efficacy, and adherence. Patients in the usual care group will receive the routine nurse-delivered discharge medication instructions, without the use of the graphic aids. The primary outcome is six-month cardiovascular medication refill adherence, as determined by the continuous medication gap measure. Secondary outcomes assessed by follow-up interventions include patients’ understanding of the medication regimen, self-efficacy, and self-reported adherence. Control of hypertension, hypercholesterolemia, and diabetes will be determined by medical record review. In addition to examining the overall effect of the intervention, we will examine the effect of health literacy on observed outcomes.