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Review

Patient-centered interventions to improve medication management and adherence: A qualitative review of research findings

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ABSTRACT

Objective: Patient-centered approaches to improving medication adherence hold promise, but evidence of their effectiveness is unclear. This review reports the current state of scientific research around interventions to improve medication management through four patient-centered domains: shared decision-making, methods to enhance effective prescribing, systems for eliciting and acting on patient feedback about medication use and treatment goals, and medication-taking behavior.

Methods: We reviewed literature on interventions that fell into these domains and were published between January 2007 and May 2013. Two reviewers abstracted information and categorized studies by intervention type.

Results: We identified 60 studies, of which 40% focused on patient education. Other intervention types included augmented pharmacy services, decision aids, shared decision-making, and clinical review of patient adherence. Medication adherence was an outcome in most (70%) of the studies, although 50% also examined patient-centered outcomes.

Conclusions: We identified a large number of medication management interventions that incorporated patient-centered care and improved patient outcomes. We were unable to determine whether these interventions are more effective than traditional medication adherence interventions.

Practice Implications: Additional research is needed to identify effective and feasible approaches to incorporate patient-centeredness into the medication management processes of the current health care system, if appropriate.

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1. Introduction

Nearly 70% of Americans are prescribed at least one prescription drug, and 20% use five or more [1]. Medications have become a central component of the treatment of many diseases; however, 20% to 30% of prescriptions are never filled, and of those prescriptions that are filled, roughly half are not taken as prescribed [2]. These gaps in adherence result in an estimated $100 billion to $290 billion annually in avoidable health care costs [3–6]. Patients do not take prescribed medications for many reasons, including poor prescribing practices that create burdensome and complex regimens, concerns about cost and side effects, doubts about the benefit of medications, and low health literacy [7].

Interventions have attempted to increase medication adherence and related outcomes using a variety of approaches. Recent reviews of this literature found that the most effective medication adherence interventions adopted comprehensive approaches, involved several strategies, were high-intensity, and were tailored to individual patients [8–10]. However, these reviews also noted the low strength of evidence for many interventions and a need for more research to establish value and show improvements in health outcomes as a result of improved adherence [8–10]. Patient-centered approaches may represent a foundation upon which to develop new medication adherence interventions and enhance those that exist, but with the intent of also improving clinical outcomes, patient experience, and satisfaction with medication use.

The Agency for Healthcare Research and Quality (AHRQ)-funded Centers for Education and Research on Therapeutics (CERTs) program conducts research and provides education to advance the optimal use of drugs and medical devices, and biological products; increase awareness of the benefits and risks of therapeutics; and improve quality while cutting the costs of care. In 2012, the CERTs focused on how patient-centered care could be incorporated into efforts to improve medication management and related outcomes among chronically ill patients. This initiative culminated in a workshop that brought together patients, providers, researchers, and other stakeholders to identify innovations, successes, and needs in the research and implementation of strategies to improve medication management through patient-centered approaches (McMullen, 2013, submitted in parallel—citation forthcoming). These approaches included four domains of the medication management process: shared decision-making, methods to enhance effective prescribing, systems for eliciting and acting on patient feedback about medication use and treatment goals, and support for medication-taking behavior (the traditional scope of adherence research). As part of this effort, we undertook a review of the literature to describe the current state of scientific research on patient-centered approaches to medication management. This paper summarizes the results of our review.

2. Methods

2.1. Design

2.1.1. Patient-centered medication management framework

This literature review outlined for attendees of the workshop the "state of the science" in patient-centered approaches to improving medication management. Prior to the workshop, drawing on the scientific literature and their own expertise, a steering group of CERTs researchers who have worked on adherence but have diverse backgrounds (medicine, pharmacy, informatics, epidemiology) as well as two patient representatives developed the "Patient-centered medication management (PCMM)" framework to serve as the foundational concept to guide this literature review, as well as the workshop's agenda and prioritization process. The PCMM framework sought to describe a process through which patient-centered care – defined as care that is respectful of and responsive to individual patient preferences, needs, and values and that ensures patient values guide all clinical decisions [11] – is incorporated into practices that support medication prescribing and use. This framework outlined a number of activities related to medication management that included (1) shared decision-making, (2) methods to enhance effective prescribing, and (3) systems for eliciting and acting on patient feedback about medication-taking and treatment goals, and (4) medication-taking behavior.

Within the PCMM framework, *shared decision-making* refers to a process that results in decisions that are shared by providers and patients, informed by the best evidence available, and weighted according to the specific characteristics and values of the patient. The shared decision-making approach has been linked most frequently with therapeutic and screening decisions. However, in this context, shared decision-making refers to engaging the patient in prescribing decisions by communicating why a medication is indicated, its risks and benefits, and the likely impact on the patient's health.

Effective prescribing includes discussion of solutions to patients' perceived barriers to obtaining and taking medications that are part of an agreed-upon treatment plan. The ultimate goal of effective prescribing is to have the patient understand how and when the medication is to be taken.

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