Medication Adherence in Older Adults

The Pillbox Half Full

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KEYWORDS

• Medication adherence • Older adults • Aged • Medication interventions
• Reminder systems

KEY POINTS

- Medication nonadherence is a common concern for nurses and family members who care for older adults.
- Understanding the reason for nonadherence is essential in achieving the desired clinical and behavioral outcomes.
- Traditional interventions, such as educational and behavioral interventions, must often be combined to be successful.
- New technologies offer nurses opportunities to explore interventions for the baby boomers, who are now tapping into Medicare.

Drugs don't work in patients who don't take them.[1(p487)]
—C. Everett Koop, MD, former Surgeon General.

Nurses and family members are often perplexed at finding a patient or loved one's pillbox still half-full at the end of the week. What are the reasons for medication nonadherence? What strategies can support adherence to taking medications, especially in older adults? Nurses need to appreciate and address adherence concerns for the present population of older adults, and nurses need to be proactive in researching ways to help baby boomers to adhere to medication regimens. Baby boomers officially became Medicare beneficiaries in 2011. The purpose of this article is to explore the reasons for medication nonadherence, research the literature for interventions that have demonstrated effectiveness in improving adherence, provide a framework for organizing and applying this knowledge, review research for new directions, and conclude with implications for nursing practice and research.

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NONADHERENCE AS A PREVALENT AND COSTLY PROBLEM

The 2008 national population projections estimated that there were 40.2 million Americans aged 65 and older in 2010; this number is projected to rise to 88.5 million older adults in 2050.[2] Between 2000 and 2002, a typical patient receiving Medicare saw a median of 7 physicians per year, 2 for primary care and an additional 5 specialists.[3] This creates the potential for older adults to have numerous prescriptions, with the potential for duplications and unintended interactions. In a survey of medication use in 3500 community-residing older adults (age 57–87 years), researchers found that 81% of respondents reported having 1 medication prescription, with 29% reporting a total of 5 or more prescriptions.[4]

Data suggest that 50% of patients with chronic illnesses do not take medications as prescribed, with 20% to 30% of prescriptions never even filled.[5–7] In older adults, systematic reviews cite nonadherence as between 40% and 75%, cautiously noting that this large range reflects the variety of methods used to measure adherence as well as the effects of different illnesses, medications, and settings.[8,9] The financial costs of nonadherence is staggering, estimated from $289 billion[1,7] to $310 billion annually.[7] The Centers for Disease Control and Prevention reports the human toll of nonadherence to cause between 30% and 50% of treatment failures and 125,000 deaths annually.[5,10]

DEFINITIONS

The World Health Organization (WHO) defines adherence as "the extent to which a person's behavior—taking medication, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendations from a health care provider."[11(p3)] The Agency for Healthcare Research and Quality (AHRQ) defined medication adherence as "the extent to which patients take medication as prescribed by their health care providers."[7(p1)] The AHRQ and an International Society for Pharmacoeconomics and Outcomes Research Medication Compliance and Persistence working group distinguish between medication adherence and medication persistence. *Medication adherence* relates to the timing, dosage, and frequency in the day-to-day routine; *medication persistence* relates to the consistency in taking a prescribed medication for a prescribed length of time.[7]

INTENTIONAL VERSUS UNINTENTIONAL NONADHERENCE

One consideration when discussing adherence is differentiating between intentional and unintentional nonadherence.[12] *Intentional nonadherence* is an individual's premeditated decision to not take a medication. A patient may even choose not to fill a prescription, as discussed previously; this is termed *primary nonadherence*. Intentional nonadherence may occur because of an individual's belief system, such as a belief that medications are overprescribed. Intentional nonadherence may also occur based on an individual's analysis of the risk-versus-benefit profile, such as side effects outweighing perceived benefit from the medicine. In either case, the individual is specifically choosing to not take the medication. *Unintentional nonadherence* arises when an individual fully intends to take a medication but fails to do so for a variety of reasons, including most often forgetfulness. Other barriers include expense, transportation concerns, and even physical constraints, such as vision and dexterity.

Some health care providers might label intentional nonadherence a compliance issue, which tends to assign blame to patients. Osterberg and Blaschke[1] first used the AHRQ definition of medication adherence interchangeably for both medication