



Indian Health Service
National Pharmacy and Therapeutics Committee
Formulary Brief: Medication Adherence
-August 2015-



Background:

Over the last 50 years there has been a worldwide shift in disease burden from acute infectious illness to chronic diseases. While substantial progress has been made in developing treatments for chronic health conditions, the full impact of such treatments has been hindered by medication non-adherence. Evidence points to the fact that fully half of patients with chronic disease fail to comply with a recommended treatment plan regardless of age, disease category, or characteristics of treatment. The result is preventable adverse clinical outcomes as well as substantial economic impacts both in terms of direct and indirect costs of disease.

Discussion:

Medication non-adherence has been called the next frontier in quality improvement. According to the World Health Organization, increasing the effectiveness of adherence interventions may have a far greater impact on the health of the population than any improvement in specific medical treatments. Developing an effective strategy to improve adherence can benefit patients and health systems by improving clinical outcomes and reducing economic burden. Providers also benefit by realizing improvements in outcome metrics tied to performance indicators.

Medication non-adherence is defined as taking less than 80 percent of prescribed doses. One additional component of adherence behavior is persistence, which refers to taking medication long-term for a chronic condition.

Patients who fail to take prescribed medication are sometimes labeled as non-compliant. While the terms are sometimes used interchangeably, adherence and compliance differ in one key respect. Adherence refers to patient behavior related to a management plan to which they have agreed, versus compliantly following a plan dictated by another. It has been recognized that a paternalistic approach to prescribing treatment fails to engage a patient in the crucial therapeutic alliance and also fails to recognize a variety of patient and treatment factors that may adversely impact adherence behavior.

The measurement of adherence is challenging. It has been shown that providers typically overestimate adherence to medication. Moreover, patient reporting about medication use has been found to be accurate only regarding admitted non-adherence. Other indirect measures of adherence such as pill counts and mining data from electronic pharmacy databases have all been reported in the literature with variable degrees of accuracy. Each of these methods have their own unique limitations. Medication event monitoring systems and directly observed therapy may be effective but are often impractical.

The list of potential factors influencing medication adherence is extensive. The World Health Organization identifies five dimensions of adherence, including patient-related factors, therapy-related factors, condition-related factors, social-economic factors, and health system factors. Patient health beliefs and health literacy, acceptance of their diagnosis, and motivation for treatment are essential to compliance with recommended therapy. Mental illness, cognitive impairment, and physical factors such as poor visual acuity may negatively impact adherence to medication.

Factors related to medication side effects, drug interactions, duration of therapy, and complexity of the medication regimen should be considered at each stage of treatment. Efforts to reduce polypharmacy, especially in the elderly, should be regularly pursued. System factors which have been found to influence medication adherence include provider workload, provider communication skills, and lack of communication across the continuum of care.

In November 2014, the Cochrane Collaboration published its review of interventions to enhance medication adherence. Common interventions included education in self-management skills, patient counseling using motivational interviewing, and daily treatment support. Few studies showed improvements in both adherence and clinical outcomes. The review identified that most interventions were complex with few common characteristics. The heterogeneity of adherence studies limited the strength of conclusions.

Findings:

Despite lack of evidence in support of a particular intervention or combination of interventions, providers should consider an individualized approach to the problem of medication non-adherence in daily practice.

Promoting adherence begins with respecting patient autonomy and forming a therapeutic alliance with the patient. A paternalistic approach to the treatment plan is likely not effective. Treatment decisions should address the patient's goals. Patients are more likely to adhere to a treatment plan when they understand it, agree to it, believe that it will benefit them, and believe that they have the support of their provider.

A multi-disciplinary approach may be beneficial. Care teams should work to educate patients and their caregivers about their treatment plan and provide counseling, using techniques such as motivational interviewing. Collaboration among partners including providers, pharmacists, case managers, public health nurses, community health representatives, and patient caregivers is important. Communication across all levels of care, including medication reconciliation, is critical both to safety and adherence.

Consideration should be given to potential medication side effects during ALL stages of treatment. Medication regimens for patients should be individualized based on appropriate indications, taking into account the potential for harm. Serial review of the medication list is essential. Lastly, whenever possible, medically complex regimens should be avoided, especially in the elderly.

If you have any questions regarding this document, please contact the NPTC at IHSNPTC1@ihs.gov. For more information about the NPTC, please visit the [NPTC website](#).

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