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## TRENDS IN MEDICATION ADHERENCE

### Introduction

Medication adherence is one of the most challenging – and seemingly intractable - issues in health care. Non-adherence leads to poor health outcomes and more frequent hospitalizations. It is also a major driver of the \$290 billion spent annually on drug-related morbidity in the U.S.— representing approximately 13% of total national health care expenditures (New England Health Institute, 2010). Research suggests that one-third to one-half of people in the U.S. do not take their medications as instructed. Medication non-adherence is considered responsible for:

- 33%-69% of medication-related hospital admissions
- 23% of all nursing home admissions
- Increased use of expensive, specialized medical resources
- Unneeded medication changes
- Unexplained treatment failures
- Repeat office visits (Center for Technology and Aging, 2009)

Non-adherence exacts a devastating toll on the quality and length of life. A 2007 study involving Tamoxifen (a breast cancer medication), indicated that patients filling 70% or less of their Tamoxifen prescriptions had an increased risk of death compared with patients who took the drug as prescribed (Thompson, et. al, 2007). It has also been estimated that better adherence to antihypertensive

treatment could prevent 89,000 deaths annually in the U.S. alone (Cutler & Everett, 2010).

Few providers have formal mechanisms for monitoring medication adherence. One recent survey of U.S. cancer centers indicated that 25% of respondents had no formal process in place for monitoring patient adherence with oral chemotherapy (Weingart, 2007). Moreover, current health care payment structures offer few incentives for providers to address adherence in a systematic way. The current fee-for-service payment model is not designed to reward providers for patient outcomes – of which medication adherence may qualify as either a means toward that end or an endpoint itself.

### The Crux of the Adherence Dilemma – Treatment of Chronic Disease

Individuals with chronic conditions, such as heart disease, diabetes, hypertension, depression or cancer, are most likely to rely on prescription medications and are among the groups at highest risk for non-adherence. Indeed, more than half of all insured Americans are now taking prescription medicines regularly for chronic health conditions (Medco Health Solutions, 2008). Treatment of chronic disease now accounts for 75 percent of U.S. health care spending – and is fueling the nation's growing adherence problem.

### Barriers to Medication Adherence

Barriers to adherence exist at both the individual and systemic levels. At the individual level, adherence is impacted by lifestyle challenges, psychosocial issues, low health literacy, linguistic and communication differences, insufficient support systems, and medication side effects.

Medication costs and insurance coverage also represent significant adherence barriers for many individuals. A recent survey of oncology social workers demonstrates how financial hardship due to the cost of medication complicates a patient's experience with cancer:

- 63% of social workers believe financial issues reduce patient adherence to cancer treatment
- 46% of patients who have experienced a financial burden from their cancer have cut back on necessary expenses such as food, to pay for cancer treatment
- Many patients reduce their intake of cancer oral medications to save money
- 40% of patients reported depleting their savings to cover the cost of care (Association of Oncology Social Work, 2009).

A 2007 study involving heart disease patients showed that medication adherence was greatest among patients with full coverage health insurance policies, compared to those patients whose policies included co-pays and co-insurance. The same study also revealed that sudden changes in out-of-pocket spending (such as reaching a medication benefit coverage limit) almost doubled the risk that patients would stop taking their medication altogether (Schneeweiss, 2007).

### Promoting Adherence in the Health Care Reform Era

Addressing adherence has taken on renewed importance in the health care reform era. Policy makers are examining the huge gap that exists between the potential of today's advanced medical treatments – realizable if people took their medications faithfully – and the costs of non-adherence in terms of wasted taxpayer dollars and worsening health indicators. Employers are also taking notice of the role of medication non-adherence in spiraling health care costs. For a typical mid-size employer with \$10

million in annual health care claims, it is estimated that poor adherence results in an additional \$1 million in avoidable health care spending each year (New England Health Institute, 2010).

Promising solutions have emerged as a result of health care reform, which may promote medication adherence:

- **Greater Emphasis on Care Coordination:** For patients with co-morbidities, who take multiple medications prescribed by different doctors, care coordination is particularly important in promoting adherence. Certain elements of care coordination – namely medication reconciliation and electronic data sharing among practitioners – should impact adherence in a positive way. Care coordination for patients with complex chronic conditions requires a team approach – involving the physician, nurse, pharmacist and social worker, as well as other professionals – who can provide adherence “checks” at each patient encounter.
- **Addressing Low Health Literacy:** Low health literacy is often a barrier to good medication adherence. Recent research documents both the prevalence of low health literacy among adults in the U.S., as well as the links between low health literacy and health outcomes and medical expenditures. People with low health literacy (defined as those who have difficulty reading and understanding basic medical advice, such as prescription instructions) span all cultures and ages (Pfizer 2002). However, groups that are especially vulnerable to low health literacy include older patients, recent immigrants, people with chronic conditions, and those with low socioeconomic status. Addressing the problem of low health literacy within the context of national health reform can be expected to result in cost savings, as well as better health outcomes. Beyond strengthening health insurance coverage, which appears to be a key factor associated with improving health literacy, health policy experts recommend that both public and private insurers build costs into their payment systems that promote health literacy. These may include translation and interpreter services, and oral and written patient education materials that can be understood by all patients regardless of reading level (Vernon, et. al, 2010).

- **Payment Reform:** Reform of the health care payment system – shifting *away* from payment based on volume of services and *towards* payment based on good health outcomes – would go a long way to improving medication adherence. The renewed emphasis on “medical homes,” “accountable care organizations” and care transition planning are trends that should support improved medication adherence. However, experts recommend that to ensure adherence actually improves, goals for medication adherence should be explicitly written into the performance measures for these service delivery models (Cutler & Everett, 2010). As importantly, payment reform should involve reducing the financial barriers to chronic disease medication, especially copayments and co-insurance.
- **Investment in Health Information Technology:** Medication adherence may benefit from the recent influx of nearly \$1 billion in federal Recovery Act funds to build capacity to enable widespread use of health information technology (White House Press Office, 2010). This assistance at the state and regional level will facilitate the development of electronic health records (EHR), which will be particularly important for individuals taking multiple medications prescribed by different providers.

### Emerging Technologies to Improve Adherence

Medication adherence technologies have been expanding in both variety and sophistication (Center for Technology and Aging, 2009). Technologies can assist patients and caregivers with medication organization, dispensing, dosing reminders, and overdose safeguarding. Mobile phones have become a common source of electronic medication reminders. Verizon recently launched the “Pill Phone” — a new technology that enables people to adhere to their medication regimens through text message reminders. EMedMobile is developing a phone that interfaces with “smart labels” on prescription medication bottles, whereby drug data are stored and alerts are sent to caregivers and providers when a dosage is missed. Other innovations include medication kiosks, online personal medication records, and wireless point-of-care testing devices to monitor medication use (Center for Technology and Aging, 2009).

### Social Work Interventions to Improve Adherence

**Improve Screening and Assessment:** Adherence experts recommend greater use of proven screening and assessment tools to identify and target individuals at greatest risk for non-adherence – and social workers are ideally suited to conduct such assessments. Treatment guidelines for chronic conditions, for instance, should recommend screening for depression, which can be an indicator of poor adherence (Osterberg & Blaschke, 2005). Social workers involved in the development of treatment guidelines for chronic conditions should ensure that adherence measures are included.

**Promote Use of Adherence Tools:** When appropriate, social workers should encourage the use of new electronic adherence technologies. However, low-tech, inexpensive tools, such as pill containers and medication organizers, which are available in most drug stores for under two dollars, should also be promoted with clients and caregivers.

**Address Financial Barriers:** Strategies for addressing financial barriers to adherence include: encouraging patients and caregivers to speak with their physician and pharmacist about the availability of lower-cost, therapeutically comparable medications; assisting clients in obtaining free or reduced priced medications from pharmaceutical manufacturers; seeking general financial assistance for families affected by high medication costs; and supporting legislative solutions to the high cost of medications, at both the state and national levels.

**Strengthen Patient Education:** Social workers can advance medication-taking skills with their clients:

- With the client, discuss a typical day – and determine the best time of day for medication-taking
- Work with the client to identify cues, reminders and current activities (e.g., television or radio programs or daily self-care tasks, like teeth brushing) to correspond with medication-taking
- Develop an action plan for unexpected and special events, like weekends, vacations and celebrations
- For complex medications, ask clients to “teach back” medication instructions

- For patients with low health literacy or cultural/linguistic challenges, make sure to use plain language instead of medical jargon when discussing medication-taking, and if necessary, arrange for a professional interpreter
- Advise clients to understand medication side-effects, as well as how their medications interact with food and other medications they may be taking, and encourage them to speak with their pharmacist and doctor about this issue if necessary
- Encourage clients to be open and honest with their health care providers about their adherence challenges and concerns about their treatment regimens.

Most importantly, social workers should use a strength-based focus with their clients, and acknowledge that medication adherence is difficult and that everyone makes mistakes.

### Resources

**NASW Web-Ed course:** Promoting Adherence to Cancer Oral Medications: The Social Worker's Role. Earn 2.0 free social work CE credits by taking the course. [www.naswwebed.org/](http://www.naswwebed.org/)

**The National Transitions of Care Coalition:** NTOCC has excellent tools (provide in multiple languages) for providers and consumers, to help individuals manage their medications and health care:

- **Transitions of Care Checklist:**  
[www.ntocc.org/Portals/0/TOC\\_Checklist.pdf](http://www.ntocc.org/Portals/0/TOC_Checklist.pdf)
- **My Medicine List:**  
[www.ntocc.org/Portals/0/My\\_Medicine\\_List.pdf](http://www.ntocc.org/Portals/0/My_Medicine_List.pdf)
- **Taking Care of My Health Care:**  
[www.ntocc.org/Portals/0/Taking\\_Care\\_Of\\_My\\_Health\\_Care.pdf](http://www.ntocc.org/Portals/0/Taking_Care_Of_My_Health_Care.pdf)

**NASW.** 2005. Health Section Connection. What Health Care Social Workers Should Know About Adherence Issues.

**NASW.** 2004. Practice Update: Medication Adherence and Older Adults.

**NASW.** HIV/AIDS Spectrum Project Workshop: The Role of the Social Work In Medication Treatment Adherence. [www.socialworkers.org/practice/hiv\\_aids/siteInfo/NASW%20ADHERE%20Abstract.pdf](http://www.socialworkers.org/practice/hiv_aids/siteInfo/NASW%20ADHERE%20Abstract.pdf)

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