

Motivational interviewing: A tool to improve medication adherence?

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Nonadherence to prescribed medications threatens the health and well-being of patients and has costly financial implications. Medication nonadherence causes the death of nearly 125,000 Americans every year and has been linked to an estimated 10% of hospital and 23% of nursing-home admissions.¹ Adherence is defined as the extent to which a person's behavior (in terms of taking medications, following diets, and executing healthy lifestyle changes) coincides with medical or health advice. The term adherence is meant to be nonjudgmental, a statement of fact rather than of blame cast on the prescriber, patient, or treatment.² Adherence also assumes collaboration between the patient and provider regarding the patient's health care and health-related decisions.

The problem of medication nonadherence is pervasive. Adherence rates for prescribed medications vary considerably, depending on the disease and study methodology, with an average rate of 40–50%.^{2,3} Claxton et al.⁴ reviewed studies that evaluated adherence rates for patients with 10 different disease states and demonstrated that mean adherence rates ranged from 51% to 80%.

Pharmacists can encourage patients to adopt healthy behaviors, including adhering to medication regimens, increasing activity levels, eating health-

ier foods, and quitting smoking.⁵ To improve adherence rates, pharmacists may employ a variety of behavioral or educational interventions. In a meta-analysis, Peterson et al.¹ found that interventions made to improve medication adherence resulted in an increase of 4–11% in adherence rates. No one intervention consistently enhanced adherence for all patients, perhaps because so many variables affect a patient's decision to take a medication. Further, it was concluded that a combination of interventions might best address patients' needs.¹

Despite the recognition that medication adherence is important, effective strategies to improve adherence are not routinely incorporated into clinical practice.⁶ Motivational interviewing, a method not widely incorporated into pharmacy practice, as an alternative method to improve medication adherence is described herein. The purpose of this article is to present the concept of motivational interviewing as it relates to drug therapy, provide pharmacists with information to better

understand the model, and encourage practitioners to consider motivational interviewing as a new strategy to improve medication adherence.

Transtheoretical model for change. To facilitate an understanding of motivational interviewing, a brief discussion of the transtheoretical model for change (TMC) is provided. Patients can be classified in one of five stages of readiness based on the TMC.⁷ Patients often cycle through these five stages of change, or readiness, before they can maintain and sustain long-term change.^{7,8} In the first three stages (precontemplation, contemplation, and preparation), patients are thinking about the change and weighing the pros and cons of making the change. In these stages patients also make decisions about whether they think they have the skills or resources to make the desired change.⁷ Strategies that increase awareness about the problem and help the patient resolve ambivalence about making the change are very appropriate during these stages.⁵ In the last two stages (action and maintenance), strategies are developed to help the patient put the plan into action. To help patients change their behavior, providers must match a patient's level of readiness with a strategy appropriate for that specific stage.⁹ Johnson et al.¹⁰ evaluated the use of the TMC on adherence to oral contraceptive therapy in a communi-

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ty setting and found that the TMC stage was a significant predictor of adherence to therapy. The authors developed a questionnaire to help classify women into different stages of adherence and found that the constructs of the TMC surpassed both demographic and sexual history variables as a strong predictor of adherence. For example, women in the maintenance stage were less likely to miss pills or take them late, and women in the precontemplation or contemplation stage were more likely to report nonadherence.¹⁰

Patients' willingness to change their health behavior varies greatly. Several methods are available to assess a patient's readiness to change.¹¹ One option is to ask the patient to assess his or her willingness to change by using a numerical scale. For example, the patient could be asked, "If a score of 0 indicated that you were not ready and 10 meant that you were ready to change, what score would you give yourself?" The patient's response indicates how to proceed with the conversation. If the patient responds with a score of 3, an appropriate follow-up question to emphasize positive progress would be "Why did you choose 3 and not 1?" An additional question promoting a stepwise progression in the change process could be "What would need to happen for you to choose a score of 5?" Assessing the patient's readiness is particularly helpful when the patient shows resistance to change.

What is motivational interviewing? Motivational interviewing was developed by William R. Miller, Ph.D., after studying clinical- and research-based provider-patient interactions.⁵ It is a skillful clinical method and style of counseling and psychotherapy designed for assisting patients to commit to change.¹² Motivational interviewing trains health care providers to explore a patient's understanding and concerns and determine his or her readiness for

change. The fundamental premise for motivational interviewing is that patients are often ambivalent to change, and ambivalence affects a patient's motivation and readiness to alter behavior.¹²

The "motivational" part of the term underscores the fact that motivation is fundamental to change. An individual must be ready, willing, and able to change. The word "interviewing" differentiates this method from treatment or counseling and enables patients and providers to examine events together. The concept can be likened to two people sitting side by side, paging through an album of family pictures. The storyteller turns the page; the listener wants to learn and understand and, as such, may ask questions.⁸

Motivational interviewing focuses on an individual's current interests and concerns, respects and honors a person's autonomy to choose his or her own care, and is a collaborative, not prescriptive, approach in which the counselor evokes the person's internal motivation and resources for change.⁸ Motivational interviewing differs significantly from the traditional method health care providers use to communicate with patients and requires training and practice (Table 1).

Key principles of motivational interviewing. The key principles of motivational interviewing can be described by the acronym READS: roll with resistance, express empathy, avoid argumentation, develop discrepancy, and support self-efficacy.^{5,8,12-14} In motivational interviewing, the provider does not directly oppose resistance or argue the point with a patient, but rather rolls or moves with it.¹² Motivational interviewing is like dancing; rather than struggling against each other, the partners move together smoothly.⁵ The fact that one person is leading the other is subtle and not apparent to someone watching.

Expressing empathy requires skillful and reflective listening and perspective without judging, criticizing, or blaming the patient.⁵ Motivational interviewing requires providers to develop a rapport with and earn the trust of the patient.¹³ Arguing or forcing patients to defend their behavior will damage provider-patient rapport and increase patients' resistance rather than increasing motivation to change.^{8,12} Using empathy and rolling with resistance are effective strategies to avoid argumentation.

Motivational interviewing is a client-centered method intended to initiate change by creating disso-

Table 1.
Comparison of Motivational Interviewing with Traditional Counseling^{7,8,13}

Traditional Counseling	Motivational Interviewing
Practitioner is the health care expert, assumes patient lacks knowledge, tells patient what to do, and hopes patient follows instructions.	Practitioner develops partnership with patient and exchanges information to facilitate an informed decision. Patient has the right to decide own care.
Practitioner provides information to patient.	Practitioner provides information to patient for the purpose of developing discrepancy.
Practitioner dictates health care behavior.	Practitioner and patient negotiate behavior and reach agreement.
Goal is to motivate the patient.	Goal is to access motivation and elicit commitment to change behavior.
Practitioner persuades patient to change behavior.	Practitioner understands and accepts patient's action.
Practitioner expects respect from patient.	Practitioner must earn respect from patient.
Practitioner saves patient.	Patient saves self.

nance between a patient's current status and the target behavior, without making the patient feel threatened or pressured.^{8,12} By creating discord and amplifying the discrepancy between the current situation and the patient's goals, the patient may feel uncomfortable but is provided with the choice of overcoming the inertia of the status quo. This approach allows patients to analyze their behavior, present arguments for change, and draw their own conclusions.

Self-efficacy refers to a person's belief in his or her own ability to implement and succeed with a specific task. Patients must believe they have the knowledge and confidence to implement treatment plans.¹² Providing encouragement and positive feedback and praising efforts to change behavior support self-efficacy.

Conducting a motivational interview. A general approach to implementing motivational interviewing is to use the "elicit-provide-elicit" or "ask-provide-ask" format.^{5,11,14} Start by asking the patient general questions to build rapport and obtain pertinent information related to therapy. The use of open-ended questions is recommended. Next, specific information should be given to patients, who should be asked if they have new concerns. Throughout the process the provider may offer a new perspective and solution and use the patient's own responses to reinforce and trigger behavior change.⁸

Pharmacists could start using motivational interviewing by applying the principles to selected patients or implementing pilot programs for patients with specific diseases. However, educational programs would be required to teach interested pharmacists how to apply motivational interviewing to their practice. The application of such techniques to one's daily practice requires little additional time and can be very effective.¹⁵ A skilled provider can use motivational interviewing for 5–10 minutes per

session per patient.¹² Because motivational interviewing is a structured process, with the provider reinforcing selected statements, pharmacists may find it to be an efficient method to communicate with patients.⁵

Applying motivational interviewing to drug therapy. Motivational interviewing has been applied to the treatment of various health-related behaviors, including alcohol abuse, drug addiction, smoking cessation, diet, and exercise.¹⁵ Limited published information is available describing the direct application of motivational interviewing to improving medication adherence rates.^{16–21} To our knowledge, the direct application of motivational interviewing by pharmacists to improve medication adherence has not been described in the literature.

A pilot study was conducted to evaluate the impact of a nursing intervention on patient adherence to antiretroviral medications.¹⁶ Twenty patients were randomly assigned to a control or an intervention group. Patients in the intervention group received three counseling sessions by trained nurse counselors using motivational interviewing. Participants in the intervention group had higher self-reported adherence scores; however, statistical significance was reached for only one measure of adherence, possibly due to the small sample size. Another study demonstrating improved adherence with antiretroviral medications involved a clinician using a single-session intervention with 56 patients. The intervention involved the use of motivational interviewing along with cognitive-behavioral and problem-solving techniques.¹⁷ Patient responses to a questionnaire at two weeks postintervention showed a significant increase in adherence scores for patients in the intervention group ($p < 0.001$). Adherence scores for patients in the control group did not significantly differ from baseline. The results of that study are limited by its

small sample size and self-reported adherence data.

A small, randomized pilot study of 25 adult patients with asthma found that patients assigned to a single session of education plus motivational interviewing were more likely to show a stable or increased level of readiness to adhere to medication regimens over time, compared with patients receiving education alone.¹⁸ The motivational interviewing was provided by two trained therapists who were knowledgeable about asthma. Again, the small sample size and lack of a direct measure of medication adherence limit the utility of the results. The authors of this study suggested that additional research be conducted to determine if a change in attitude is reflected in a corresponding change in medication-taking behavior.

The use of motivational interviewing has also been studied in patients with schizophrenia.^{19,20} A small, randomized controlled study of 21 hospitalized patients with schizophrenia or affective disorder was conducted to evaluate the effects of motivational interviewing on adherence to antipsychotic medication.²¹ Patients in the intervention group received two or three sessions on medication self-management conducted by a trained therapist. Compared with controls, patients receiving the intervention showed improvements in their attitudes toward medications; however, these improvements were not statistically significant. The study was limited by the small sample size, and adherence was evaluated subjectively by physicians.

It has also been proposed that motivational interviewing be added to other interventions to improve medication adherence. Rosen et al.²² described the concurrent use of motivational interviewing and a microelectronic monitoring system to improve medication adherence. The authors concluded that it was unclear whether the combined use of

motivational interviewing and a microelectronic system was more effective in improving adherence than either individual intervention.

Summary. Traditional patient counseling has not been consistently effective and new interventions to improve adherence to medications are needed. Motivational interviewing is a patient-centered method that can be used to improve medication adherence.

References

- Peterson AM, Takiya L, Findley R. Meta-analysis of trials of interventions to improve medication adherence. *Am J Health-Syst Pharm.* 2003; 60:657-65.
- McDonald HP, Garg AX, Haynes RB. Interventions to enhance patient adherence to medication prescriptions. *JAMA.* 2002; 288:2868-79.
- Nichols-English G, Poirier S. Optimizing adherence to pharmaceutical care plans. *J Am Pharm Assoc.* 2000; 40:475-85.
- Claxton AJ, Cramer J, Pierce C. A systematic review of the associations between dose regimens and medication compliance. *Clin Ther.* 2001; 23:1296-310.
- Scales R, Miller J, Burden R. Why wrestle when you can dance? Optimizing outcomes with motivational interviewing. *J Am Pharm Assoc.* 2003; 43(5, suppl 1):S46-7.
- Miller NH, Hill M, Kottke T et al. The multilevel compliance challenge: recommendations for a call to action. A statement for healthcare professionals. *Circulation.* 1997; 95:1085-90.
- Berger BA. Change is a multistep process. *US Pharm.* 1999; 24:68-77.
- Miller WR, Rollnick S. *Motivational interviewing*, 2nd ed. New York: Guilford; 2002:201-16.
- Berger BA, Suchanek H. Readiness for change: implications for patient care. *J Am Pharm Assoc.* 1997; NS37:312-9.
- Johnson SS, Grimley DM, Prochaska JO. Prediction of adherence using the transtheoretical model: implications for pharmacy care practice. *J Soc Adm Pharm.* 1996; 15:135-48.
- Rollnick S, Mason P, Butler C. *Health behavior change: a guide for practitioners.* Edinburgh: Churchill Livingstone; 1999:65-9.
- Berger BA. Motivational interviewing helps patients confront change. *US Pharm.* 1999; 24:88-95.
- Case Management Society of America. Case management adherence guidelines, version 1.0. www.cmsa.org/cmagg (accessed 2005 Mar 30).
- Pfizer, Inc. Adhere Rx. Motivational interviewing tips. www.adhererx.com/motivational_interviewing_tips.asp (accessed 2004 Jul 20).
- Burke BL, Arkowitz H, Menchola M. The efficacy of motivational interviewing: a meta-analysis of controlled clinical trials. *J Consult Clin Psychol.* 2003; 71:843-61.
- Di Iorio C, Resnicow K, McDonnell M et al. Using motivational interviewing to promote adherence to antiretroviral medications: a pilot study. *J Assoc Nurses AIDS Care.* 2003; 14:52-62.
- Safren SA, Otto MW, Worth JL et al. Two strategies to increase adherence to HIV antiretroviral medication: life-steps and medication monitoring. *Behav Res Ther.* 2001; 39:1151-62.
- Schmaling KB, Blume AW, Afari N. A randomized controlled pilot study of motivational interviewing to change attitudes about adherence to medications for asthma. *J Clin Psychol Med Settings.* 2001; 8:167-72.
- Coffey M. Psychosis and medication: strategies for improving adherence. *Br J Nurs.* 1999; 8:225-30.
- Zygmunt A, Olfson M, Boyer CA et al. Interventions to improve medication adherence in schizophrenia. *Am J Psychiatry.* 2002; 159:1653-64.
- Hayward P, Chan N, Kemp R et al. Medication self-management: a preliminary report on an intervention to improve medication compliance. *J Ment Health.* 1995; 4:511-7.
- Rosen MI, Ryan C, Rigsby M. Motivational enhancement and MEMS review to improve medication adherence. *Behav Change.* 2002; 19:183-90.

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