



# Motivational interviewing for medication adherence

Marissa C. Salvo and Michelle L. Cannon-Breland

## Abstract

**Objective:** To familiarize pharmacists with motivational interviewing as a way to engage patients in discussions about medication adherence.

**Summary:** Motivational interviewing is a collaborative, patient-centered communications skill set that can increase behavior change by stimulating a patient's own internal motivation for change.<sup>12,14</sup> Pharmacists using motivational interviewing can explore factors associated with medication nonadherence, assess patient ambivalence and/or resistance, and educate a patient to promote medication-adherent behaviors.<sup>11-13</sup>

**Conclusion:** Pharmacists can use motivational interviewing to effectively engage patients in a conversation that addresses medication adherence.

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**Marissa C. Salvo, PharmD, BCACP,** Assistant Clinical Professor, University of Connecticut School of Pharmacy, Storrs, CT

**Michelle L. Cannon-Breland, MEd, NCC, PhD,** Student Education and Support Coordinator, Truman State University, Kirksville, MO

**Correspondence:** Marissa C. Salvo, PharmD, BCACP, Assistant Clinical Professor, University of Connecticut School of Pharmacy, Storrs, CT; e-mail: marissa.salvo@uconn.edu

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### Learning objectives

- Describe the impact medication nonadherence has on patient and economic outcomes.
- Identify the key components and skills of motivational interviewing.
- Describe ways to use motivational interviewing effectively when addressing medication adherence with patients.

### Preassessment questions

Before participating in this activity, test your knowledge by answering the following questions. These questions will also be part of the CPE assessment.

1. Which of the following describes “adherence”?
  - a. Patient-centered
  - b. Patient passively engaged
  - c. Health care provider-centered
  - d. Health care provider-directed
  
2. Which of the following represents development of the internal motivation necessary to facilitate medication adherence?
  - a. Inpatient experience of psychiatric patients
  - b. Ambivalence of caregivers
  - c. Shift in perspective regarding a behavior’s cons to the pros
  - d. The decision to accept the inconvenience of a medication regimen
  
3. Which of the following describes how a pharmacist can use motivational interviewing to have a positive impact on medication adherence?
  - a. Stress the need to take the medication(s).
  - b. Point out why the patient’s current behavior is inappropriate.
  - c. Address a patient’s resistance to engage in medication use.
  - d. Explain the role of medication treatment.

### Medication adherence

Adherence is defined as the extent to which a patient’s health behavior(s) coincides with the plan developed and agreed upon by the patient in partnership with his or her health care provider.<sup>1</sup> On the other hand, compliance, often used in place of adherence, refers to the patient following the medical plan as determined by the health care provider alone. It is important to recognize that adherence is a patient-centered approach, and compliance is a health care provider-centered approach. The connotation of each word, also an important aspect, is different. Adherence implies a partnership, whereas compliance implies judgment. Additional differences between adherence and compliance are noted in Table 1.<sup>2</sup>

Medication adherence focuses specifically on the extent to which patients take their medication(s) as prescribed. Medication nonadherence is a failure to take or use medication(s) as prescribed, which can be intentional or unintentional. Nonadherence takes many forms, including not filling an initial prescription or not refilling an existing prescription, discontinuing a medication before the course of therapy is complete, or not following dosing instructions (taking more or less medication or medication at the incorrect time).<sup>3</sup>

A recent telephone survey assessed nonadherent behaviors of 1,020 adults aged 40 years and older who had one or more ongoing prescriptions for at least one chronic condition.<sup>4</sup> About 75% of the adults surveyed had engaged in a minimum of one nonadherent behavior in the past 12 months, and more than 50% had engaged in multiple nonadherent behaviors. The most commonly reported nonadherent behavior was missing a dose. Other reported nonadherent behaviors, in decreasing reported percentage, were forget-

**Table 1.** Adherence versus compliance

Adherence	Compliance
Patient-centered	Health care provider-centered
Collaboration between patient and health care provider	Domination by health care provider
Exchange of information	Dictate information
Patient engaged	Patient passive
Discuss, negotiate	Persuade, coerce

Source: Reference 2.

ting if the medication was taken, not refilling the medication on time, taking a lower dose than prescribed, not filling a new prescription, or stopping a prescribed medication without first consulting the prescriber. Additional nonadherent behaviors—taking an old prescription for a new health problem without first consulting with a medical professional, taking more medication than prescribed, and taking someone else’s prescription medication—were reported by fewer than 7% of the adults surveyed.<sup>4</sup>

Medication nonadherence is prevalent, as three out of four Americans report not taking medications as directed.<sup>5</sup> This is further supported by findings in which for every 100 prescriptions written, 50 to 70 make it to the pharmacy, and 48 to 66 are filled and leave the pharmacy. Of those in patients’ possession, 25 to 30 are taken properly, and only 15 to 20 are refilled as prescribed.<sup>6</sup> It is critical for pharmacists to recognize the gaps in medication adherence and use this information to tailor the discussion for each patient.

Medication nonadherence results in a 33% to 69% increase in medication-related hospitalizations, 89,000 to 125,000 premature medicine-related deaths, and an additional \$2,000 per patient in medical costs and medical provider visits. All are preventable; however, until prevention is achieved, direct and indirect health care costs will increase annually by \$300 billion.<sup>5,7</sup> Studies indicate that suboptimal management of chronic medication conditions, such as diabetes, hypertension, and asthma, is related to medication nonadherence. Adherence to long-term chronic treatment averages 50%.<sup>8</sup> With nonadherence, medical and psychosocial complications may arise and further reduce patient quality of life.<sup>8</sup> Regardless of the medical condition, when patient self-management is required, nonadherence is possible.

Causes of medication nonadherence vary and are due to a number of factors. The World Health Organization identifies The Five Dimensions of Adherence, which include social and economic, health care system, condition-related, treatment-related, and patient-related. These dimensions may exist alone or in combination.<sup>8</sup>

Social dimensions include support and influence of family, friends, or the media; an individual’s schedule; and his or her living conditions. Cultural dimensions, including health literacy, English proficiency, and patient attitudes toward

medication(s) and/or medical condition(s), also influence adherence. Economic dimensions include not only cost of the medication but also the lack of or high cost of transportation to obtain the medication.<sup>3,8,9</sup>

The patient's relationship and communication with his or her medical provider are classified as health care system dimensions. Additional limitations in accessing health care, such as difficulty in scheduling appointments or lack of provider continuity, can also adversely affect adherence.<sup>3,8,9</sup>

Many aspects fall under condition-related dimensions. These include treatment of asymptomatic conditions, preventive therapy, chronic medication use, and the presence of developmental disabilities, depression, or psychotic disorders.<sup>3,8,9</sup>

### Ongoing learning activity

Evan Homer, a 68-year-old Caucasian male, is a new patient of your pharmacy. In the few times you have met him, he has always been pleasant and interested in conversing.

His past medical history is significant for hypertension (20 y), hypothyroidism (11 y), erectile dysfunction (3 y), back pain (8 y), osteoarthritis (4 y), and overactive bladder (6 y). He is taking a number of medications, including vardenafil 10 mg by mouth as needed 60 minutes prior to intercourse, levothyroxine 75 mcg by mouth daily, amlodipine 10 mg by mouth daily, lisinopril 20 mg by mouth daily, oxybutynin extended release 15 mg by mouth daily, celecoxib 200 mg by mouth daily, acetaminophen 500 mg three times daily by mouth as needed for pain, and aspirin 81 mg by mouth daily.

Throughout this CPE program, the patient will ask questions or make statements that will allow you to practice your motivational interviewing skills.

Treatment-related dimensions include complexity of the medication regimen, number of medications, duration of therapy, actual or potential adverse effects, lack of immediate benefit, treatment concerns, and medication schedules that interfere with an individual's lifestyle. As with the other described dimensions, these too have been associated with decreased adherence.<sup>3,8,9</sup>

Patient-related dimensions encompass physical, psychological, and behavioral factors. Physical impairments include visual, hearing, mobility, dexterity, swallowing, and cognition. Psychological and behavioral factors include knowledge about the medical condition(s) and/or medication(s), motivation to incorporate a change, and self-efficacy in the individual's belief to carry out a change.<sup>3,8,9</sup> Pharmacists can use motivational interviewing to positively influence a patient's medication adherence, specifically those pertaining to patient-related dimensions.

## Motivational interviewing

Motivational interviewing (MI), originally developed in the context of addictions treatment,<sup>10</sup> is a patient-centered communications skill set used to address negative health behaviors such as medication nonadherence, which is known to increase medical complications and health care costs.<sup>11,13</sup> This collaborative method of communication<sup>12</sup> and information

### Prompt 1

During your encounter with the patient, he shares with you, "I want as many medications as possible filled as generics." This limits his out-of-pocket spending. He also shares, "I live in a retirement home and do not own my own car; therefore, I want all my medications filled on the same day." He reports taking the weekly shuttle bus to complete his errands and doesn't want to rely on other forms of transportation.

On the basis of the information provided, which of the following dimensions of adherence applies best to the patient?

- Health care system
- Condition-related
- Patient-related
- Economic

exchange<sup>14</sup> enhances intrinsic motivation and commitment to change by facilitating constructive patient sense-making about health.<sup>14</sup> MI has an established evidence base for its role in affecting patient outcomes in health behavior change, even during brief encounters.<sup>11,13</sup>

MI is used to assess a patient's readiness to act on a specific behavior by applying specific skills and strategies that respect the patient's autonomy and facilitate patient confidence and decision-making.<sup>11-13</sup> The MI-consistent patient counseling session is designed to increase behavior change by stimulating a patient's own internal motivation for change by using a patient-centered, nonjudgmental, and empathic approach.<sup>11,12</sup>

### Spirit of MI

The "spirit of MI" refers to the underlying perspective or interpersonal relationship within which one practices MI.<sup>10</sup> Four interrelated elements comprise the spirit of MI: partnership (collaboration), acceptance, compassion, and evocation.<sup>10</sup>

The first element, partnership (collaboration), describes the active collaboration that occurs between the health care professional (HCP) and the patient—a meeting of the experts. The HCP is the expert in disease states, medications, and treatment options, and the patient is the expert on his or her life. Since the relationship between the HCP and patient is viewed as a partnership, MI is done "for" and "with" a person, not "to" or "on" a person.<sup>10</sup> When using MI, the interactional flow should resemble dancing, not wrestling.<sup>10</sup>

We refer to the interaction as a dance because the HCP seeks to move with the patient, not against him or her, as would be the case in wrestling. In wrestling, one person seeks to gain control over the other person to claim a victory. When using MI, the HCP works with the patient in a respectful and smooth interaction, one that might resemble a well-choreographed dance. Partnership provides the HCP the opportunity to stimulate a patient's own internal motivation for change by identifying resources for change.<sup>10</sup>

The second element, acceptance, refers to profound acceptance of the patient as he or she is and presents him or herself to you. Acceptance is valuing the inherent worth and potential of each individual, while recognizing and supporting the individual's autonomy to make the best decisions

for his or her life and situation.<sup>10</sup> Acceptance is also having a genuine interest in and putting forth the effort needed to understand the other individual's perspective without any judgment, and affirming the individual's strengths and efforts.<sup>10</sup>

The third element is compassion. According to Miller and Rollnick, to be compassionate is to actively promote another person's welfare and to give priority to his or her needs: "Compassion is the deliberate commitment to pursue the welfare and best interests of others."<sup>10</sup>

The final element is evocation. Through evocation, the HCP seeks to understand and focus on the patient's strengths and resources.<sup>10</sup> The HCP draws out the individual's thoughts and ideas instead of imposing his or her opinions and ideas on the patient. The thought here is that the patient has what he or she needs and will identify it by working with the HCP.<sup>10</sup>

### Difference between provider-centered and patient-centered interactions

Traditionally, HCPs have used the biomedical model for communicating with patients. In this provider-centered approach, information is provided to patients, but little or no exchange of information occurs. The HCP expects respect from his or her patient and compliance to a prescribed care plan, regardless of the patient's desire or lack of desire to engage in the plan. Resistance is considered bad and not tolerated; when a patient resists, the HCP seeks to persuade or even argue with the patient until the patient complies or acquiesces. However, often a patient agrees to comply just to get the HCP to move on to a different topic. Patients will even say they understand how to take a medication or use a medical device without truly comprehending, just so they are not judged and/or ridiculed by the HCP.

#### Prompt 2

During another encounter with you, the patient provides some additional information about his medication use. You inquire about his concerns and daily medication use. The patient provides open and honest responses, including the noteworthy point, "Sometimes it is difficult for me to stick to my routine in taking medications."

Throughout the discussion, you focus on the patient and his goals, as well as gleaning information from his resistance statements.

Using the given information, which communication model is described?

- Biomedical model
- Sociobehavioral model

In direct contrast, the sociobehavioral model uses a patient-centered approach, in which information is exchanged between the HCP and patient instead of a unidirectional flow of information from the HCP to the patient in the biomedical model. HCPs seek to understand the patient, recognizing that resistance is information that can be used to better assist the patient. In this model, mutual respect is presumed since the HCP is an expert in disease states, medications, and treatment options, while the patient is the expert on his or her life,

what he or she can and is willing to do, and what his or her treatment goals are. Using the sociobehavioral model, HCPs negotiate behaviors with the patient and seek adherence to the prescribed patient care plan that the HCP and patient have created together specifically for the patient and his or her circumstances.

### Key components of MI

#### RULE

MI has four guiding principles, represented by the acronym RULE, that embody the spirit of MI. "R" stands for "resisting the righting reflex." The righting reflex occurs when you immediately point out risks or problems with a patient's current behavior.<sup>10-12</sup> It's important to resist the urge to immediately point out risks or problems, because a patient may become defensive and continue the current behavior, an outcome you wish to avoid. In forcing a patient to defend current behavior and verbalize the disadvantages of change, he or she becomes more committed to maintaining the current behavior. Instead of using the righting reflex, use a nonjudgmental approach when discussing a patient's current behavior.

"U" is for "understanding your patient's motivations"—his or her own reasons for change. The patient's personal reasons for change will be influenced by his or her perceptions, concerns, and values and will affect his or her decision to change. It is important to understand why the patient wants to make the change and how he or she might make the change.

"L" stands for "listen." Listening involves more than merely using one's ears to hear the words the patient is saying, and listening is not the same as asking.<sup>12</sup> Listening is an active process in which the listener is paying attention to the information the patient is conveying—both verbally and nonverbally. Nonverbal gestures include eye contact, facial expressions, and body language, among others. It's important to be aware of nonverbal gestures because they may indicate incongruence with the information the patient is conveying verbally. Patients who feel their concerns are actually heard are generally comfortable with their HCPs and are satisfied with the care they are receiving. They may also be more likely to adhere to their care plans and feel more comfortable discussing problems and issues with their HCP as they arise.

"E" stands for "empower your patient"—exploring the patient's ideas about changes he or she can make to improve his or her health. You can empower patients by encouraging them to engage in positive health behaviors and make behavior changes that will have a positive effect on their life and health.

#### Empathy

Empathy is a crucial skill in MI. Empathy is nonjudgmental: it does not indicate that you agree with how your patient thinks or feels; it simply means you seek to genuinely understand how your patient is feeling and thinking at the time.<sup>12,14</sup> The

**Prompt 3**

On the basis of the medication use information provided during your encounter with the patient, which of the following would be an appropriate empathetic response?

- "It sounds like you are feeling overwhelmed with all the medications you are taking."
- "It sounds like it is difficult for you to take your medications as prescribed."
- "It sounds like you do not want to take your medications anymore."
- "It seems like you are saying that you no longer want to take your medications."

more formal definition of empathy is "an objective identification with the cognitive and emotional state of another person."<sup>10-12</sup> You can express empathy by repeating or paraphrasing a patient's words along with the emotion the patient is feeling.<sup>12,14</sup> For example, a patient states, "I just don't know how I am going to take these new medications, cut back on fast foods when I don't even have time to cook, and exercise for 30 minutes basically every day of the week. It's impossible!" An empathetic response could be, "You sound overwhelmed with all the changes you have been asked to make."

**MI skills****OARS**

The general approach of MI is represented by the acronym OARS: open-ended questions, affirmations, reflective listening, and summaries. Let's discuss each of these in greater detail. Open-ended questions are unstructured and do not suggest a response; instead they ask the patient to think, reflect, and provide his or her opinions and feelings. Open-ended questions usually begin with who, what, when, where, and why. Asking open-ended questions allows the patient to provide more information or details than a closed-ended question. Examples of open-ended questions include, "What brings you here today?" and "What's been going on since we last met?"

Affirmations are statements that recognize a patient's strengths and assist you in creating rapport with the patient. For affirmations to be effective, they must be genuine and congruent.<sup>10,11</sup> Affirmations can be viewed as a way to support the patient's self-efficacy. For example, you may recognize that a patient is doing great with an aspect of his or her behavior. An affirmation for a patient whose lab results have just come back and show that his or her cholesterol numbers are down might be, "Your lab numbers are looking good. You are doing a great job in lowering your cholesterol!"

Reflective listening or reflections is another crucial MI skill. It is imperative to listen carefully and attentively to a patient. Using reflections allows you to convey your understanding of the patient's situation and make the patient feel understood.<sup>10-12,14</sup> For example, a patient tells you that her daughter used to come with her to doctor's appointments, but now, since her daughter moved away to college, she rarely sees her. A reflective response might be, "Your daughter isn't living at home anymore, and this has been difficult for you."

If your reflection is correct, the patient will let you know, and this may increase the emotional intensity of the interaction. If you are not correct or if the patient is not ready to discuss this issue, he or she will let you know, and you will need to move the conversation forward.<sup>10,11</sup>

A summary is used to reflect back to the patient the information he or she has been telling you. Summaries are an effective way to communicate your interest and concern about a patient, build rapport, bring attention to salient points from the conversation, and if needed, shift attention and/or direction.<sup>10,11</sup> The summary should begin with an explanation that you are about to summarize or highlight certain parts of the conversation, along with an offer to add anything that was left out, and usually ends with an open-ended question.<sup>10</sup> Let's consider the following example: "Let me take a moment to recap what we have just talked about. You are not really sure that you want to make the changes that your doctor told you to make, and you feel overwhelmed at the thought of making these changes. Did I miss anything? What are your thoughts about these changes?"

**Prompt 4**

During the same encounter, the patient states, "Well, sometimes it is difficult for me to remember my medications since I take so many each day."

On the basis of the information provided, which of the following would be the most appropriate MI-consistent open-ended question?

- "Why are you having difficulty remembering to take your medications?"
- "What are your thoughts about using a reminder to help you remember to take your medications?"
- "How can you forget to take your daily medications?"
- "How many medications do you take each day?"

In this example, the HCP is not making any judgment, just summarizing the important information the patient has provided. Asking the patient an open-ended question at the end of the summary provides the patient the opportunity to offer his or her understanding of the issue or situation and to clarify any information the HCP might have misunderstood.

**Change talk**

Change talk is any patient comment that either mentions or implies a real or possible change in feelings, attitudes, beliefs, and/or behaviors.<sup>12,14</sup> Asking the patient to discuss the pros and cons of both changing and not changing a behavior can assist in identifying a need for change; this is called exploring the patient's decisional balance. The patient must be able to identify more pros than cons of engaging in a behavior change to affect his or her viewpoint about the change. Change talk will occur after a positive shift has occurred in the patient's perspective on the pros of a behavior change. Any time a patient engages in change talk, it is imperative to recognize and reinforce it. You can recognize change talk by praising the patient's actions, thinking, and/or feelings about the need for change, reinforce the change talk by affirming the efficacy of the change, explore the positive aspects of the

change, and get the patient to talk about the change. When the patient verbalizes the need for change, it reinforces his or her commitment to change.

Indicators of change talk include desire, ability, reason, and need.<sup>10–12,14</sup> When hearing small change talk from a patient, do not push for a larger commitment. Doing so can scare the patient, who may respond defensively with all the reasons he or she should not make a larger commitment. This is not what you are trying to accomplish.

Let's look at an example. A patient shares that he thought a little more about needing to cut back on eating salty foods. Asking him, "So, when are you going to cut back on those foods?" may result in his stating that he has only "thought" about needing to cut back, not that he is actually planning to cut back. It may also result in the patient becoming defensive about positive reasons for eating salty foods. Of course, one does not want to force the patient to defend eating salty foods. Instead, the goal is to explore the patient's thoughts about cutting back. Consider asking, "Tell me more about why you think you need to cut back on eating salty foods." Then listen to the reasons for the need to change before empathizing and reinforcing them.

### MI and medication adherence

More than 200 clinical trials have been published that describe the benefit of using MI across a broad range of behaviors that require a change.<sup>15,16</sup> Results of a meta-analysis focusing on communicating with patients about medication adherence found a 19% increase in nonadherence among patients whose health care provider communicated poorly.<sup>17</sup> Given that poor communication is a modifiable factor that can be improved to enhance medication adherence, practicing effective communication techniques—especially MI, which engages the patient in the process—is essential.

Pharmacists are accessible health care providers who are well positioned to identify patients who are nonadherent to their medication(s) and/or self-management of their medical condition(s). Using MI is an efficient way to communicate with patients.<sup>18</sup> MI allows pharmacists to collaborate with patients in developing motivation, commitment, and plans for change.<sup>19,20</sup> Pharmacists using MI explore the patient's understanding of the illness(es) and/or treatment(s), determine how the treatment plan fits with the patient's goals for health, and address the patient's ambivalence and/or resistance to engage in medication-adherent behaviors.<sup>11–13</sup> Throughout the process and despite any frustrations, pharmacists need to remember and practice the spirit of MI.<sup>10</sup> When using MI, pharmacists guide the patient's motivation toward positive health behavior changes.<sup>20,21</sup>

While there may be concern about the time necessary to incorporate MI into a pharmacist's daily routine, MI has been shown to be effective in the same timeframe as traditional counseling.<sup>15,22</sup> Accordingly, pharmacists can use

MI in their daily practice, since implementing MI requires very little additional time and can be very effective.<sup>15</sup> For example, a pharmacist can use MI at the beginning of a discussion by asking open-ended questions to glean information from the patient.<sup>19</sup> The pharmacist can then provide specific information to address the patient's concerns.

To stay true to the "spirit of MI," pharmacists should provide information in an unbiased, nonjudgmental manner. This approach will help a patient not feel pressured into movement toward a particular action or behavior. Keeping one's opinions to oneself about the treatment or medication options being presented is necessary to avoid bias. Checking with the patient to ascertain his or her thoughts about the information provided is crucial before moving the conversation forward. This ensures that 1) you have listened to the patient, and 2) the patient understands the information and currently has no questions/concerns about it. If the patient has questions or concerns, be sure to address them before continuing the conversation.

Using MI can provide structure to the conversation. It is helpful to present options for the discussion at hand. For example, "I would like to answer any questions you may have about the medications your doctor has prescribed for you. We can discuss how to take these medications, when to take them, what to expect from them, and more." Next, ask the patient which option he or she would like to discuss first. Doing so provides the patient the ability to lead the discussion in the direction that he or she desires, thus respecting patient autonomy and helping to build rapport.

Once the discussion about the patient's first topic choice has ended, and time permitting, you can provide the list of options again, minus the option discussed, to let the patient determine which option he or she would like to discuss next and so forth, until the conversation is concluded. Always remember to thank the patient for his or her time in speaking with you, and offer a method of communication (phone, e-mail) whereby the patient can speak with you if additional questions or concerns arise.

Practicing MI during all pharmacist-patient interactions is valuable not only for patients but also for the pharmacist. Continual incorporation of MI will allow the pharmacist to become more comfortable and efficient when using MI while promoting health-behavior change and enhancing the pharmacist-patient relationship. Pharmacists should remember that not all elements of MI must be used during all sessions. It is essential to focus the discussion on the patient's needs at that time. While MI is an effective approach to address medication nonadherence, pharmacists may need to use additional resources, as necessary, to assist the patient in improving his or her adherence. Some helpful resources are found in Table 2.

Last, pharmacists are encouraged to complete an intensive MI training to enhance their current skill set.

**Table 2.** Useful medication adherence resources for pharmacists and patients

Organization	Website
Script Your Future	<a href="http://www.scriptyourfuture.org">www.scriptyourfuture.org</a>
Safe Medication	<a href="http://www.safemedication.com/default.aspx">www.safemedication.com/default.aspx</a>
National Council on Patient Information and Education	<a href="http://talkaboutrx.org/index.jsp">http://talkaboutrx.org/index.jsp</a>
American Society on Aging and American Society of Consultant Pharmacists Foundation	<a href="http://learning.rxassist.org/sites/default/files/Adult_Meducation%20All.pdf">http://learning.rxassist.org/sites/default/files/Adult_Meducation%20All.pdf</a>

## Conclusion

There is a need to develop health care practices that reduce expenditures, improve patient outcomes, and enhance the quality of care provided by health care providers.<sup>23,24</sup> Addressing medication adherence is a key responsibility of today's pharmacists. MI is one way for pharmacists to engage patients while addressing medication adherence.

MI is a patient-centered communications skill set with evidence supporting its role in positively affecting patient outcomes, even when used during brief encounters.<sup>11-13</sup> MI assesses a patient's readiness to act on a specific behavior. It applies specific skills and strategies that respect the patient's autonomy and facilitates patient confidence and decision-making.<sup>11-13</sup> An MI-consistent patient counseling session increases behavior change by stimulating the patient's own internal motivation for change.<sup>11,12</sup> Pharmacists can use MI to explore factors associated with medication nonadherence, assess patient ambivalence and/or resistance, and engage a patient in medication-adherent behaviors.<sup>11-13</sup>

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**CPE assessment**

Instructions: This assessment must be taken online; please see “CPE information” for further instructions. The online system will present these questions in random order to help reinforce the learning opportunity. There is only one correct answer to each question.

1. **Which of the following describes “adherence?”**
    - a. Patient-centered
    - b. Patient passively engaged
    - c. Health care provider-centered
    - d. Health care provider-directed
  2. **Which of the following is a dimension of adherence according to the World Health Organization?**
    - a. Genetics
    - b. Medication belief
    - c. Health care system
    - d. Environmental
  3. **Medication nonadherence results in which of the following outcomes?**
    - a. Increased medication use
    - b. Decreased adverse events
    - c. Decreased health care costs
    - d. Increased medication-related deaths
  4. **Which of the following is classified as a patient-related dimension?**
    - a. Medication knowledge
    - b. Visual impairment
    - c. Access to medication due to income
    - d. Use of medication without discernible benefit
  5. **What is the average adherence to long-term medications?**
    - a. 20%
    - b. 30%
    - c. 40%
    - d. 50%
  6. **Which of the following represents development of the internal motivation that is necessary to facilitate medication adherence?**
    - a. Inpatient experience of psychiatric patients
    - b. Ambivalence of caregivers
    - c. Shift in perspective regarding a behavior’s cons to the pros
    - d. The decision to accept the inconvenience of a medication regimen
  7. **Empathy is which of the following?**
    - a. A judgmental process
    - b. Not used in motivational interviewing
    - c. A skill that helps reduce patient suffering
    - d. A nonjudgmental process
  8. **Which of the following is true about “change talk”?**
    - a. Engage patient in talking about the barriers to making a change.
    - b. Engage patient in talking about the benefits of making a change.
    - c. Engage patient in talking about past failures in making the change.
    - d. Engage patient in talking about successes in making a change.
  9. **Which of the following is true of motivational interviewing?**
    - a. It started as a way of dealing with addictions.
    - b. It is based on the practitioner-centered model.
    - c. It teaches how to effectively persuade patients to change.
    - d. The primary focus is on motivating patients.
- Complete the dialogue listed below by choosing the MOST appropriate motivational interviewing-based answer.**
10. **Patient says: “I know I need this medication; I just don’t like the thought of having to take it every day.” Pharmacist responds:**
    - a. “What’s wrong with needing to take the medication?”
    - b. “You don’t understand why the medication is necessary.”
    - c. “You don’t like having to depend on taking medication.”
    - d. “It’s really up to you to take the medication or not.”
  11. **Patient says: “I know I need to exercise more often, but 3 to 5 days a week seems like too much ... especially 30 minutes of walking each day. I am already so tired when I get home. ... how am I supposed to do it?” Pharmacist responds:**
    - a. “I think you will see that it really isn’t too much exercise. Your thoughts?”
    - b. “Sounds like being tired is going to be a barrier for you to exercise.”
    - c. “Maybe you won’t feel so tired if you exercise. You know you need to do this.”
    - d. “Would you be willing to exercise 2 to 3 days a week?”
  12. **Patient says: “I am only willing to cut back on a few cigarettes a day. That’s all I think I can do right now.” Pharmacist responds:**
    - a. “Well, I must say, I am a little disappointed that you are not completely quitting.”
    - b. “Cutting back on cigarettes would be a great start. Let me know how it’s going.”
    - c. “Well, okay ... I guess I can accept your cutting back on cigarettes for now.”
    - d. “It is your choice. Would you consider quitting by the end of the month?”
  13. **Patient says: “I do not want to change the foods I eat; I just don’t think I can.” Pharmacist responds:**
    - a. “Okay, it is your decision. You can do what you want.”
    - b. “I really wish you would reconsider; it’s not that difficult.”
    - c. “What would you be willing to do right now?”
    - d. “Changing the foods you eat could help you so much.”

14. **Patient says: "I will take the medication the doctor gave me; I just really don't like having to take it."**  
**Pharmacist says:**
- "You do need to take the medication; it will make you feel much better."
  - "Taking the medication is for your own good; you will see."
  - "You will need to take the medication each day."
  - "Taking the medication will certainly help control your diabetes."
15. **Which of the following statements uses motivational interviewing?**
- "It is great that you are considering quitting smoking. Tell me more."
  - "I know changing is difficult, but it is necessary for you to be healthier."
  - "Tell me about the reasons you don't want to quit smoking."
  - "Anyone who smokes needs to quit smoking to become healthier."
16. **Which of the following describes how a pharmacist can use motivational interviewing to positively affect medication adherence?**
- Stress the need to take the medication(s).
  - Point out why the patient's current behavior is inappropriate.
  - Address a patient's resistance to engage in medication use.
  - Explain the role of medication treatment.
17. **Motivational interviewing includes which of the following components to stimulate a patient's own internal motivation for change?**
- Use of a judgmental tone of voice
  - Use of empathetic responses
  - Use of a provider-directed discussion
  - Use of close-ended questions
18. **Mr. Blakely comes into your pharmacy to pick up his refill for paroxetine, and you notice that he is 2 weeks late in refilling this prescription. As the pharmacist speaking with this patient, you ask, "Mr. Blakely, about how many pills did you miss in the last week?"**  
**This question**
- Has a judgmental tone for assessing medication adherence.
  - Is an appropriate probe to assess medication adherence.
  - Is not an appropriate probe to assess medication adherence.
  - Is too brief to determine if it uses the "spirit of MI."
19. **Which of the following is incorporated in a motivational interviewing-consistent patient encounter?**
- Ignoring the patient's concerns
  - Spending little time with the patient
  - Thanking the patient for his or her time
  - Selecting the discussion topic for the patient
20. **Which of the following statements uses a motivational interviewing-consistent approach to assess a patient's nonadherence?**
- "You should be taking this medication daily."
  - "What concerns you about taking this medication?"
  - "Why are you not taking this medication as prescribed?"
  - "Don't you understand the importance of taking this medication?"

### CPE information

To obtain 2.0 contact hours (0.2 CEUs) of CPE credit for this activity, you must complete the online assessment and evaluation. A Statement of Credit will be awarded for a passing grade of 70% or better on the assessment. You will have two opportunities to successfully complete the assessment. Pharmacists who successfully complete this activity before June 1, 2018, can receive CPE credit. Your Statement of Credit will be available upon successful completion of the assessment and evaluation and will be stored in your 'My Training Page' and on CPE Monitor for future viewing/printing.

### CPE instructions

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