Motivational Interviewing and Diabetes: What Is It, How Is It Used, and Does It Work?

Garry Welch, PhD; Gary Rose, PhD; and Denise Ernst, MA

Motivational interviewing (MI) has recently become a topic of great interest in the diabetes behavioral field, having been the focus of workshops and research presentations at national meetings such as the Society of Behavioral Medicine, the American Diabetes Association, the North American Association for the Study of Obesity, and the Behavioral Research in Diabetes Exchange. The Motivational Interviewing Network of Trainers (MINT) was founded in 1995 and sponsors a website (www.motivationalinterviewing.org) through which MI trainers and researchers share information and ideas. This site provides information, research findings, and training opportunities and is a good starting point for further exploration of MI.

According to Miller and Rollnick,[1] MI has been applied to the management of a wide range of target behaviors, including addictive behaviors, HIV risk reduction, eating disorders, criminal justice case management, fruit and vegetable intake, exercise, and major psychiatric disorders.

MI is a coherent, teachable, evidence-based approach to behavior change counseling that serves as an amalgam of philosophies, principles, and techniques drawn from several existing models of psychotherapy and health behavior change theory.[2] For example, its patient-centered approach and focus on empathy and strong reflective listening skills are principally drawn from the client-centered therapy of Carl Rogers and his belief in the "force of life," the natural self-actualizing tendency of healthy people.[3] Other theoretical influences include Bem's Self-Perception Theory,[4] Janis and Mann's Decisional Balance Theory,[5] and the Transtheoretical Model of Prochaska et al.[6] The handbook *Motivational Interviewing: Preparing People for Change*[1] provides more detail for those interested in the theoretical underpinnings of MI.

Hettema et al.[7] have cogently reported on the emerging theory of how MI affects behavior change. They reviewed evidence suggesting that practitioners who practice MI elicit increased levels of verbalization in support of change, known as "change talk," and decreased utterances of resistance. Both of these factors, more change talk and less resistance talk, are predictive of subsequent behavior change.

Further work is being conducted to tease out how the increase in change talk is related to outcome. The work of Amrhein et al.[8,9] indicates that both the content and strength of the change talk may be important. Nevertheless, the focus on client speech and the shaping and reinforcing of change talk given by clients is seen as a crucial theoretical component.

Thus, in a successful MI session, the patient is doing most of the talking. The patient is discussing a specific behavioral target, and the practitioner is focusing on problem recognition, a teasing out of ambivalence regarding change, and the "what, when, and how" of any change that the patient might be ready for. Helping the patient work through normal ambivalence around change is also a key focus.

One practical value of MI to health care professionals working in today's busy clinical settings is that the basic elements of MI can be learned and successfully applied in brief, practical medical interventions to reduce clinician frustration with "noncompliant" patients. Direct questioning, persuasion, education, and advice-giving have been the workhorse techniques of our acute care–based health care system. However, these strategies have proven to be of limited effectiveness in the management of chronic illnesses and a source of frustration to patients and clinicians alike, according to Anderson and Funnell.[10]

Patients struggling with chronic illnesses such as diabetes that require adherence to complex daily regimens appear to be only weakly motivated by other people's suggestions as to what lifestyle and self-management issues they should address and how these improvements should be achieved. A clinician might say something helpful to a diabetes patient struggling with poor blood glucose control, such as "Why don't you trying eating smaller portions to lose weight or, alternately, try walking every day?" Or, a clinician might say, "Your severe lows are worrying me; the hospital has a new hypoglycemia group starting in the evenings that you should think about attending." A typical patient response to these well-meaning suggestions may be ambivalence, "Hmm, I'm not sure," or resistance, "Yes, but. . . ," or there may be some face-to-face agreement from the patient but weak follow-through with the clinician's plan.

MI focuses on providing opportunities to help patients assess for themselves what might be important or possible and how change might be achieved. This is a clear shift away from the current, unenviable professional position of feeling responsible for fixing "broken" patients. While

the latter view makes sense with regard to the management of acute care problems, such as broken bones or infections, this clinician-centered strategy is unrealistic for chronic care conditions, for which the daily work of self-management must be done by patients in the face of competing life priorities and practical obstacles. The "spirit of MI" (discussed more below) is thus closely linked to the Patient Empowerment Model well known in the diabetes field.[10]

Key Elements of MI

Four elements of MI address both what clinicians discuss with patients and how they discuss it: 1) express empathy, 2) roll with resistance, 3) develop discrepancy, and 4) support self-efficacy. The first two elements pertain to the practitioner-patient relationship.

Reflective listening (accurately understanding a patient's story through open questions, reflections, gentle probing for more details, and use of summaries) is fundamental to MI because it provides the means for understanding patients' unique connections to the targeted health behavior and develops rapport. Frequently, patient education delivered in the medical setting is "top-down." As such, it creates a challenge with respect to providing collaboration. To counter this natural noncollaborative tendency, clinicians can make use of menus of options regarding the day's topic of discussion and blend these with their own agenda items.

Clinicians can also employ a simple but effective empathy technique by asking permission before giving advice or information if a patient hasn't asked for it. ("Do you mind if I ask you a few personal questions?" or "With your permission, I'd like to propose a plan." or "If you don't mind, may I share a bit of information?") Asking permission is similar to the ubiquitous knock on the door of health care practitioners just before entering the examination room; it is a very simple, inexpensive tool for communicating respect and empowerment. It certainly can be overdone as a technique and can then become awkward for patients. But MI practitioners have found that the simple asking of permission frequently allows

them to provide expert information and advice without falling into the "expert trap," wherein patients stop listening not out of disinterest but rather because of the experience of being lectured or talked down to.

"Rolling with resistance" is a specific type of empathy, wherein arguing is avoided and attempts are made to thoroughly understand a patient's reluctance to change. The key MI element, "developing discrepancy" (between a patient's current behavior and his or her own goals, interests, and values) through effective listening, is considered the main driver of patient behavior change. In MI, the goal is to increase intrinsic motivation for change ("I will change because I want to.") by helping patients become aware of the discrepancies between their current behaviors and their highly cherished personal values and goals.

Finally, "supporting self-efficacy" acknowledges that wanting to change is only half of the behavior change battle. Patients need to also believe (have the confidence) that change is possible, that there is a way to succeed and persist with health behavior change when roadblocks arise. Empowerment and offering choice are critical to the development of patient self-efficacy. Potential solutions are elicited from patients rather than prescribed by clinicians. There is a working assumption in MI that patients, with good medical and educational expertise and support, are in the best position to figure out the focus of change and the best way to proceed.

MI, then, is an approach to health behavior change consultation that employs high-quality listening to discuss the whys and hows of change, with the goal of increasing patients' readiness for and commitment to the adoption of a healthier lifestyle. For many professions, this approach to behavior change and counseling is very different from traditional practice.

The skills of MI, including the use of reflective listening and the avoidance of MI-inconsistent behaviors, such as confrontation or unsolicited advice, are typically initially taught in 2-day experiential workshops. A recent large, randomized, controlled trial of MI training strategies[11] con-

firmed that workshops alone will not provide adequate MI skills training. This early workshop grounding needs to be supported with subsequent individualized and tailored feedback and coaching over time with a trained coach, based on the review of coded audiotapes of clinical consultations with consenting patients. The MINT can help identify qualified people to conduct this coaching.

Spirit of MI

MI as a style of health behavior change consultation is built on a theoretical/attitudinal foundation called the spirit of MI, according to Rollnick and Miller,[12] that has its roots in Rogerian psychotherapy. Embracing the spirit of MI often yields significant changes in the manner in which practitioners engage with their patients, including increased collaboration and the avoidance of over-reliance on direct persuasion as a motivational technique. Having said that, experience has shown that implementation of specific techniques without incorporating the spirit of MI generally misses the mark and results in ineffectual counseling.

The spirit of MI has three components: 1) collaborate and empower the patient ("Let's put our heads together and review the options."), 2) support and respect patient autonomy and problem-solving capability, and 3) develop intrinsic motivation by eliciting change talk from the patient regarding the target behavior and behavior change.

Stewart et al.[13] found that, consistent with the patient-centered method in medicine, MI promotes practitioner-patient collaboration and the sharing of power. Traditional health care consultation is top-down, with a power differential in favor of the "expert practitioner." Rather than a practitioner-knows-best relationship, in the spirit of MI, the concept of "dual expertise" is used.[14] Thus, clinicians are considered experts in medical care and education, and patients provide expertise in self-change and in the whys and hows of their own health behavior. This position respects the fact that only patients have the depth of understanding as to what might work and what might not work given their own lifestyle and priorities.

One perceived barrier to the adoption of a dual-expertise relationship is lack of time. Busy, time-constrained practitioners often fear that collaboration and empowerment will just take too much time. Furthermore, there is a pervasive fear among health care clinicians that to ask an open-ended question is to initiate a runaway conversation or open a Pandora's box of problems. However, those experienced in the MI counseling style have found that patients typically need only 3–4 minutes of good active listening to communicate their concerns regarding a target behavior and that the act of talking about one's health often strengthens one's motivation to change.

Understanding Ambivalence
Ambivalence is a normal attribute of the behavior change process because most patients have conflicting feelings about changing familiar routines or habits. From the MI perspective, the goal is to understand and facilitate resolution of patient ambivalence in the direction of a healthier lifestyle. This focus on helping patients understand their own ambivalence regarding change is one of the key factors that distinguishes MI from other forms of psychological counseling. MI counselors work from the principle that understanding patient ambivalence about behavior change and helping patients clarify their own goals and values related to that behavior will increase readiness to change.

The decisional matrix of Janis and Mann[5] is a helpful tool for understanding the concept of ambivalence as it pertains to health behavior change. Figure 1 shows the schematic tool diabetes educators are using in our National Institutes of Health (NIH) study in progress. This is a 4-year randomized, controlled trial exploring the clinical usefulness of an MI protocol delivered by certified diabetes educators providing diabetes education to patients with poorly controlled type 2 diabetes.

Typically, the decisional matrix conversation in an MI counseling approach starts with an open question about the status quo for the target behavior ("Tell me what you like about [problem behavior]."). A series of reflections and further open ques-

---

Thinking About The Costs and Benefits of Change

What specific behavior change are you considering? _____

	STAY THE SAME	MAKE SOME IMPROVEMENT
BENEFITS	I like:	I will like:
COSTS	I don't like:	I won't like:

Create some ideas and reflections for each of the four boxes above. This will help clarify your thoughts about what you want to do next.

Figure 1. Decisional balance tool

---

tions from the clinician are then used to understand the benefits of current behavior from the patient's view. Then, the other side of the problem behavior is tactfully addressed ("And what about the not-so-good things about [target behavior]? What can you tell me?"). Again, a series of reflections and further open questions are used to explore and clarify the downside of the target behavior. By this process, the clinician identifies the personal and idiosyncratic reinforcers and barriers to change. Also, the patient is delivered a clear and direct message ("I am not simply going to tell you what to do. Instead, I would like to discuss your mixed feelings here."). Lastly, by avoiding falling into a "righting reflex," the practitioner allows the patient freedom to safely discuss concerns about the present and hopes for the future. The discussion is then summarized, acknowledging all aspects of the ambivalence but with an emphasis on the downside of staying the same and the benefits of behavior change.

From the perspective of MI, the next challenge is one of increasing intrinsic motivation, the desire to change because the patient thinks it is a good idea, by exploring the patient's goals and making connections between current behaviors and valued goals or ideals. Examples include an obese teenage boy who is only willing to change his diet and exercise routine when he sees its connection to his becoming a better wrestler or a renal dialysis patient who is willing to mod-

ify fluid intake so that she might have the energy posttreatment to walk her grandchild home from school. Another example is a smoker who willingly discusses quitting not because she wants to live to be 90, but because personal discipline is a core spiritual value. These are examples of people who have identified a connection between healthy behavior and a value they prize or a personal goal to which they aspire.

It is this discrepancy between current behavior and personal goals, values, and desires that pushes healthiness further up the list of daily priorities. If clinicians can help patients identify this discrepancy, they will become more open to conversations about change. Discrepancies are discovered through skillful use of evocative questions and careful listening. Those discrepancies are strengthened by the reinforcement of patients' change talk and commitment language.[1,8]

Exchanging Information
One challenge regarding effective medical education is the need to keep information relevant and succinct. Consistent with the spirit of MI, we follow the formula, "elicit-provide-elicit" to effectively exchange information. Rather than delivering a chunk of information based on our a priori assumptions of what patients need to know, we begin by simply eliciting from patients questions and concerns, followed by careful listening ("What do you know about . . .

insulin pumps?") This is similar to the "empty bucket" theory described by Anderson[15] with regard to diabetes education.

After eliciting a short list of patient ideas and concerns, practitioners are then challenged with the task of providing information in a manner that maintains rapport and patient involvement, in other words, instructing in the spirit of MI. Three keys to success are: *1*) offer a menu of choices; *2*) take "reflection breaks," small bits of listening interspersed with the instruction; and *3*) use conditional language.

What could be called "wiggle words," conditional language is fundamental to MI-spirited information exchange. Substitute "I think" and "You should" with phrases that empower patients by allowing for personal choice, such as "One option you might consider. . . ." or "Perhaps you could start with. . . ." Deliver information in the third person. Rather than "I recommend," try "Experts suggest. . . ." For "You should. . . .," substitute "Some of my patients have found. . . ." Words that allow choice empower patients and maintain their interest in conversations about change.

A range of other MI techniques can structure MI conversations and clarify ambivalence and barriers to change. Two helpful techniques involve using agenda-setting and the "importance-confidence ruler."

Agenda-setting: opening the door
Agenda-setting, a concept from Rollnick et al.,[14] provides a means to both actively engage patients and increase the effectiveness of health care consultations. Using a simple chart (Figure 2), practitioners elicit from patients preferences regarding the focus of the consultation.

The goal of the agenda-setting technique is to provide patients with the opportunity to discuss that which they are most ready to change and practitioners with the opportunity to deliver a dose of more tailored education to interested individuals. Where there is a pressing clinical concern that must be addressed or another issue of importance to the practitioner, the patient's concerns are tackled first, followed by the concerns of the
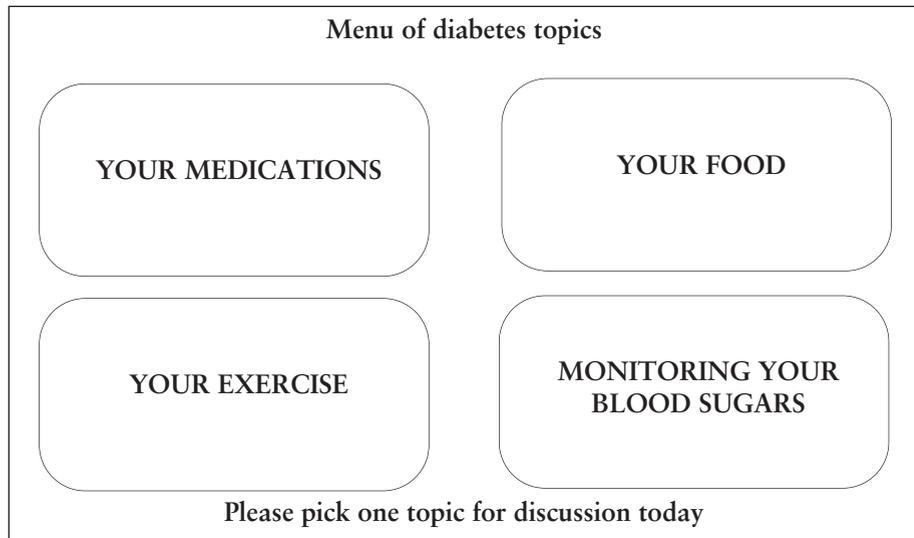

Figure 2. Menu of diabetes options tool

practitioner, in a negotiated fashion.

Agenda-setting is easily adapted to briefer interventions by limiting the choice to a fixed list of two or three topics. A visual aid is not necessary, however, and patients can simply be presented verbally with a menu of options or prompted for their own topics of interest.

The importance-confidence ruler
The importance-confidence ruler technique incorporates many of the basic elements of MI: listening carefully, appreciating ambivalence, eliciting change talk, empowering, and collaborating. Furthermore, the ruler exercise yields for practitioners a clear sense of how ready patients are for change and how to be most helpful. Importance and confidence reflect two conceptually independent dimensions that underlie patient

readiness to change ("Why should I?" [importance] and "How can I?" [confidence]).

Clinicians typically open with the importance ruler (Figure 3), by asking "How important is it for you right now to change [target behavior]? On a scale of 0 to 10, what number would you give yourself?" Patients then provide a number (X). The next questions follow, "Why are you at X and not at 0?" and "What would need to happen for you to get from X to X + 1 or X + 2?"

Once the importance of change has been explored in this manner, the conversation can shift to questions regarding self-efficacy or confidence around change, using the confidence ruler. "If you did decide now to change [target behavior], how confident are you that you could do it?" Patients again provide a number (X).

Figure 3. Importance-confidence ruler

And clinicians follow with the same questions as before: "Why are you at X and not at 0?" and "What would need to happen for you to get from X to X + 1 or X + 2?"

After these tool-assisted conversations, clinicians should take a reflection break, summarizing patients' barriers to change and emphasizing the disadvantages of staying the same as well as the benefits of change. Using the importance-confidence ruler, clinicians can quickly obtain a good idea of patients' readiness to change a target behavior and whether to focus initially on exploring the importance of changing or building confidence in their ability to change. A patient with high initial importance can be moved quickly to a discussion on building confidence and overcoming practical barriers. A patient with low importance around change can be helped to think through the pros and cons of the status quo with the decisional balance tool (Figure 1) to increase importance before tackling confidence.

What the Research Shows
In 2002, Zweben and Zuckoff,[16] in their review of the impact of MI on treatment adherence, identified 21 studies from 1988 to 2001, including interventions targeting alcohol and drug abuse, dual psychiatric diagnoses, diabetes, weight control, exercise, HIV prevention, and eating disorders. Despite problems with internal validity seen in many of these studies (i.e., small samples, lack of control group, limited description of interventionist training or the intervention, and insufficient precautions to ensure treatment fidelity across conditions), overall, the adding of MI produced significant adherence effects and helped patients move from one level of treatment adherence to a higher one.

It is important to note that there are multiple models for using MI in a clinical trial. MI can be used as a stand-alone treatment, usually with one to four sessions that can be conducted in person or via telephone. More commonly, MI is seen as an adjunct to an already-established treatment.

A more recent review by Hettema et al.[7] shows that > 400 articles on MI have been published to date, including ~ 70 outcome trials. The authors

observed that the effect of MI is enhanced and maintained over time when MI is added to or precedes a standardized treatment. They noted that one of the primary benefits of MI seems to be promoting treatment engagement and adherence. Generally, findings of Hettema et al.[7] provided empirical support for MI as a behavior change approach for clinicians. Those interested are encouraged to explore this comprehensive review for more detail.

It should be noted that there have recently been dramatic improvements in the standards of interventionist training and treatment fidelity, including now routine coding of audiotapes of interventionist-patient interactions, using standardized coding tools of key MI counseling attitudes and behaviors. (See the 2004 review by Belg et al.[17]) These are just starting to be seen in clinical trial methodologies, including our own randomized, controlled trial involving diabetes educators managing poorly controlled type 2 patients.

Smith West et al.'s[18] recent important randomized controlled trial demonstrated the usefulness of group sessions for type 2 patients led by clinical psychologists. To evaluate the incremental benefit of MI, 217 overweight (average BMI 37 kg/m^2) women (38% African-American) with type 2 diabetes were randomized to a group-based behavioral weight control program with supplemental individual MI sessions or the same weight control program with health education sessions (attention placebo control). Women in the MI condition lost significantly more weight than those in the control condition at 6 months (-4.7 vs. -3.1 kg, $P < 0.02$).

This superior weight loss was mirrored by enhanced adherence to the treatment program on all process variables examined over the initial 6 months: session attendance (19 vs. 17, $P < 0.006$), number of weekly self-monitoring diaries submitted (17 vs. 14, $P < 0.002$), average diary rating (1.4 vs. 1.2, $P = 0.002$), and changes in caloric expenditure in moderate-to-vigorous exercise ($+ 955$ vs. $+ 742$ kcal, $P < 0.04$). Weight losses were strongly associated with attendance, diary submission, and diary ratings (Pearson $r = 0.45$–0.52, $P < 0.001$) and modestly

associated with increased caloric expenditure ($r = 0.21$, $P < 0.03$), suggesting that enhanced engagement in the treatment program accounted for superior weight losses in the MI condition at 6 months.

The pattern remained consistent in the 12 months of follow-up. Women receiving MI had greater weight losses at 12 months (-4.7 vs. -2.7 kg, $P < 0.02$) and had attended more sessions (7 vs. 6, $P < 0.03$), completed more diaries (8 vs. 6, $P < 0.002$), and had higher quality ratings on their diaries (0.9 vs. 0.5, $P < 0.004$).

At 18 months, weight losses still favored the MI condition (-3.5 vs. -1.7 kg, $P < 0.04$), as did some of the adherence parameters (diaries completed [7 vs. 4, $P < 0.008$] and average diary rating [0.75 vs. 0.27, $P < 0.001$]). Thus, MI appears to facilitate adherence to weight loss maintenance efforts as well as weight loss induction and as such merits consideration for inclusion in standard behavioral weight control programs.

Overall, the empirical evidence regarding the impact of MI, particularly as an additive to other effective treatments, is promising, although the next wave of MI intervention studies will tell us more and correct some of the methodological weaknesses of many articles to date. Future studies will be informed by recent methodological position statements (e.g., Belg et al.[17]) and will involve enhanced MI training and treatment fidelity strategies and a focus on measuring hypothesized mediators, such as patient ambivalence regarding change, perceptions around importance of change, self-efficacy around change, and patient change talk. These enhancements, as part of an overall strengthening of the evaluation research in MI studies, will likely lead to clearer evidence regarding the clinical utility of MI. They may also help elucidate what type and doses of MI are required for what patients and in which clinical contexts to produce maximal health benefits.

MI Training With Diabetes Educators
We are in the 2nd year of a 4-year randomized controlled trial examining the usefulness of MI in the management of 296 patients with poorly controlled type 2 diabetes. In this study,

the MI spirit and MI strategies have both been woven into the usual educational activities. A standardized protocol for the delivery of education in an MI-consistent manner was developed. Patients receive seven MI-based sessions over a 1-year period and a 1-year follow-up. Outcomes include blood glucose control, quality of life, self-management behaviors, and health care utilization.

The study involves four certified diabetes educators, two of whom are randomized to receive a comprehensive MI training program over the course of the study. These two educators were exposed to an initial series of 2-day workshops to explain the basic theory and practice of MI and were then were coached to achieve a minimum standard of MI skills over a period of several months, using the Motivational Interviewing Treatment Integrity (MITI)[19] coding system during audiotaped patient sessions.

Our criteria regarding MI proficiency were that the MI educators should achieve a rating of 5 or better on the 1–7 MITI coding scale for both empathy and MI spirit dimensions of the MITI. Behavior counts were also tracked for MI-adherent behaviors (i.e., asking permission before providing advice or information if not already given, use of affirmations to acknowledge strengths or effort, emphasizing patient control, and providing patient support) and MI-nonadherent behaviors (i.e., advise without permission, confront, and direct). Also, we tracked with MITI coding the frequency of open and closed questions and the use of simple and complex reflections that foster patients' change talk and that strengthen motivation.

Entering the 2nd year of the study, educators receive a 2-hour training session every 2 weeks and a full-day workshop every 3 months. We use digital voice recording units to capture educator-patient sessions and download these recordings directly onto a computer for review, using a desktop interface.

Our experience with the MI training program to date is that MI-trained educators were successfully brought up to our skills criteria after the initial 6 months of training were completed.

They scored a mean of 5.1 ± 0.7 versus 3.0 ± 0.6 for non-MI educators on empathy ($t = 6.5$, $P < 0.0001$), using the 1–7 scale, where higher scores show higher skill level. Also, the MI educators scored 4.5 ± 0.5 versus 3.3 ± 0.6 for non-MI educators on MI spirit ($t = 5.1$, $P < 0.0001$). The MI educators asked more open-ended questions (6.6 ± 3.6 vs. 0.5 ± 1.1, $t = 4.3$, $P < 0.0001$) and had greater use of simple reflective listening (24.4 ± 14.1 vs. 8.0 ± 5.7, $t = 2.96$, $P = 0.009$). Also, they were giving less unsolicited advice and providing about one-third as much general information. These are indicators that the model of integration is working as expected.

We will continue to track both the general MI skills and specific behavior counts based on our initial criteria, but we are becoming more aware of subtle differences, reflected in the closed question scores, between MI used in a counseling conversation and MI used in an education-oriented conversation. On completion of the study, a more comprehensive coding analysis, using the MISC (Motivational Interviewing Skills Code,)[20] will be conducted on study educator sessions for all educators to examine trends in patient and educator interaction and examine study outcomes.

Conclusions

MI instructs us to appreciate the limits of a direct-persuasion, advice-giving model of clinician influence, guides toward a strong appreciation of the role of ambivalence in behavior change and the value of eliciting patient change talk, and models the use of effective listening skills to build rapport, engage, understand, and facilitate behavior change. The spirit of MI shares much with the established Empowerment Model already used in diabetes education training. Whether one has the luxury of extended patient contact or must work within the parameters of a brief scheduled or opportunistic exchange, there are opportunities to integrate elements of the MI guiding style into everyday practice.

Training in this approach takes time on the part of clinicians, and an important feature of training is the use of global ratings and counts of

counseling behaviors based on MI principles. Clinicians interested in learning MI will need a supportive system of feedback and guidance from a member of the MINT network of trainers. It is critical that the MI trainer is fully immersed in the realities of the day-to-day life of the clinical team and works within the clinical team to build a practical MI intervention protocol that meets the needs of patients and staff.

Much more research needs to be done, but there is encouraging empirical support from a recent meta-analysis by Miller and Rollnick[21] that MI can be taught in busy clinical settings and is effective. We look forward to reporting the findings of our current study evaluating an intensive MI intervention comprising individual MI sessions run by certified diabetes educators with the goal of improving patient medical and quality-of-life outcomes.

References

[1]Miller WR, Rollnick S (Eds.): *Motivational Interviewing: Preparing People for Change*. 2nd ed. New York, Guilford Press, 2002

[2]Resnicow K, DiIorio C, Soet JE, Borrelli B, Ernst D, Hecht J, Thevos AK: Motivational interviewing in medical and public health settings. In *Motivational Interviewing: Preparing People for Change*. 2nd ed. Miller WR, Rollnick S, Eds. New York, Guilford Press, 2002, p. 251–269

[3]Rogers CR: *On Becoming a Person.* Boston, Mass., Houghton Mifflin, 1972

[4]Bem DJ: Self-perception theory. In *Advances in Experimental Social Psychology*. Vol. 6. Berkowitz L, Ed. New York, Academic Press, 1972, p. 1–62

[5]Janis IL, Mann L: *Decision-Making: A Psychological Analysis of Conflict, Choice, and Commitment*. New York, Free Press, 1977

[6]Prochaska JO, Velicer WF, Rossi JS, Goldstein MG, Marcus BH, Rakowski W, Fiore C, Harlow LL, Redding CA, Rosenbloom D, Rossi SR: Stages of change and decisional balance for twelve problem behaviors. *Health Psychol* 13:39–46, 1994

[7]Hettema J, Steele J, Miller WR: Motivational interviewing. *Ann Rev Clin Psychol* 1:91–111, 2005

[8]Amrhein PC, Miller WR, Yahne CE, Palmer M, Fulcher L: Client commitment language during motivational interviewing predicts drug use outcomes. *J Consult Clin Psychol* 71:862–878, 2003

[9]Amrhein PC: How does motivational interviewing work: what client talk reveals. *J Cog Psychother* 18:291–298, 2004

[10]Anderson RM, Funnell M: Facilitating self-care through empowerment. In *Psychology in Diabetes Care*. Snoek FJ, Skinner TC, Eds. New York, John Wiley & Sons, 2000, p. 69–97

[11]Miller WR, Yahne CE, Moyers TB, Martinez J, Pirritano M: A randomized trial of methods to help clinicians learn motivational interviewing. *J Consult Clin Psychol* 72:1050–1063, 2004

[12]Rollnick S, Miller WR: What is motivational interviewing? *Behav Cogn Psychother* 23:325–334, 1995

[13]Stewart M, Brown JB, Weston WW, McWhinney IR, McWilliam CL, Freeman TR: *Patient-Centered Medicine: Transforming the Clinical Method*. Thousand Oaks, Calif., Sage Publications, 1995

[14]Rollnick S, Mason P, Butler C: *Health Behavior Change: A Guide for Practitioners*. London, Churchill Livingstone, 1999

[15]Anderson RM: The personal meaning of having diabetes: implications for patient behavior and education, or kicking the bucket theory. *Diabet Med* 3:85–89, 1986

[16]Zweben A, Zuckoff A: Motivational interviewing and treatment adherence. In *Motivational Interviewing: Preparing People for Change*. 2nd ed. Miller WR, Rollnick S, Eds. New York, Guilford Press, 2002, p. 229–319

[17]Belg AJ, Borrelli B, Resnick B, Hecht J, Minicucci DS, Ory M, Ogedegbe G, Orwig D, Ernst D, Czajkowski S: Enhancing treatment fidelity in health behavior change studies: best practices and recommendations from the NIH Behavior Change Consortium. *Health Psychol* 23:443–451, 2004

[18]Smith West D, DiLillo V, Greene P, Bursac Z, Phillips M: Motivational interviewing increases adherence to a behavioral weight control program. Presentation at the North American Association for the Study of Obesity Annual Meeting, Las Vegas, Nev., 14–18 November 2004

[19]Moyers TB, Martin T, Manuel JK, Miller WR: *The Motivational Interviewing Treatment Integrity (MITI) Code: Version 2.0 Manual*. Albuquerque, N.Mex., Center for Addictions, Substance Abuse, and Alcoholism, University of New Mexico, 2003. Available from www.motivationalinterviewing.org.

[20]Miller WR, Moyers T, Ernst D, Amrhein PC: *Treatment Manual for the Motivational Interviewing Skills Code (MISC)*. Albuquerque N.Mex., Center for Addictions, Substance Abuse, and Alcoholism, University of New Mexico, 2003. Available from www.motivationalinterviewing.org.

[21]Miller WR, Rollnick S: Talking oneself into change: motivational interviewing, stages of change, and therapeutic process. *J Cogn Psychother* 18:299–308, 2004

Garry Welch, PhD, is director of Behavioral Medicine at Baystate Medical Center, in Springfield, Mass. Gary Rose, PhD, is a clinical psychologist in private practice in Chelmsford, Mass., and an instructor in the Department of Psychiatry at Tufts School of Medicine in Boston, Mass. Denise Ernst, MA, is a behavioral health counselor at the University of New Mexico Family Practice Clinic in Albuquerque.