Motivational Interviewing in Health Care Settings
Opportunities and Limitations

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Abstract: Motivational interviewing (MI) has been well studied in specialist settings. There has been considerable interest in applying MI to community health care settings. Such settings represent a significant departure from the more traditional, specialist settings in which MI has been developed and tested.

The purpose of this paper is to provide a brief overview of MI and to identify and discuss the key issues that are likely to arise when adapting this approach to health care and public health settings. This paper provides an overview of important issues to consider in adapting an effective counseling strategy to new settings, and is intended to begin a dialogue about the use of MI in community health care settings.

Medical Subject Headings (MeSH): behavior; community health services, health behavior, health services, interviews, public health (Am J Prev Med 2001;20(1):68–74)

Introduction

Much of the research literature on chronic disease prevention has focused on behavioral outcomes (e.g., smoking cessation, weight loss, increase in physical activity). Because such health behaviors are predictors of decreased risk, behavior change is an important outcome in prevention efforts. A number of theories of health-behavior change provide important perspectives on the factors that promote behavior change and maintenance, including Social Learning Theory,[1] the Health Belief Model,[2] the Theory of Reasoned Action,[3] the Transtheoretical Model,[4,5] and the Precaution Adoption Model.[6] All of these theories recognize the importance of motivation to change behavior, and highlight the importance of strengthening the factors or processes that prompt behavior change. Although different theoretical perspectives posit different precursors to change, self-efficacy, social support, decisional processes, and perceived relevance or vulnerability have been identified as important.

Behavior change research in the 1970s and 1980s focused on the application of these theoretical models for the development of the skills needed to change behavior. In the past decade, the importance of motivation for health-behavior change, in addition to skills, has been recognized, and efforts to enhance motivation have received increased research attention. An important contribution to the literature about health-related behavior change has been made by Miller et al.[7–11] Miller's programmatic research has investigated the impact of therapist behaviors on clients' motivation for and participation in behavior change. Of particular note has been the development of motivational interviewing (MI), a directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve ambivalence.[9,11] Because of its focus on preparing people for behavior change, MI has an important role in health behavior interventions (Dunn C, DeRoo L, Rivara F, University of Washington, Seattle, unpublished observations, 2000).

Given the challenge of achieving and sustaining health-behavior change, it is not surprising that there has been considerable interest in the application of MI to a wide variety of behaviors (e.g., smoking, medication compliance, diabetes management, AIDS risk reduction), and to health care settings. The purpose of this paper is to: (1) provide a brief background on MI; and (2) identify and discuss the key issues likely to arise when adapting MI for use in health care/public health settings. This article is intended as an overview and conceptual discussion that provides one perspective to be considered in the use of MI in health care settings.

MI: A Brief Overview

MI was developed by specialists in the addictions field who were focusing on problem drinking. In traditional

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Table 1. Inappropriate assumptions regarding behavior change[a]

This person *ought* to change.
This person *wants* to change.
This patient's health is the prime motivating factor for him/her.
If he or she does not decide to change, the consultation has failed.
Patients are either motivated to change, or not.
Now is the right time to consider change.
A tough approach is always best.
I'm the expert. He or she must follow my advice.
A negotiation-based approach is best.

[a] Adapted from Rollnick et al.[12]

alcoholism treatment, it was common for counselors and clients to fall into disagreement over the nature and extent of the client's problems, as well as their treatment. A persuasive statement from the counselor such as, "Can't you see that your drinking is seriously damaging your marriage?", was typically met by a response like, "Yes, but it's not my drinking that's the problem, it's because my wife (husband). . . ." Traditional treatment paradigms viewed this kind of interaction as a function of client characteristics, such as being in denial or being resistant. Inherent in this approach were several incorrect assumptions regarding behavior change that threaten to jeopardize the quality of a therapeutic interaction.[12] (See Table 1.)

William R. Miller, the originator of MI, began to critically examine the causes of such disagreements between clients and counselors. Utilizing a more client-centered analysis,[7] he suggested that client resistance was in fact a product of the interaction with a counselor who utilized a confrontational interviewing style. Miller suggested that rather than trying to convince clients to change, counselors would be more effective if they elicited arguments for change from the clients themselves. A key component of such an approach is an empathic therapeutic style. Several studies have supported this contention that therapist behaviors influence treatment outcome.[7,8,13] For example, it has been found that the more counselors confront clients about their drinking, the more clients drink at follow-up.[8] This work raises the hypothesis that confrontation may have a deleterious impact on self-efficacy, whereas an empathetic style may support and build self-efficacy.

Key Principles

MI, which has been described in detail by Miller and Rollnick,[9] has been defined as a directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve ambivalence.[11] It is guided by a number of general principles: (1) expressing empathy, by use of reflective listening; (2) developing discrepancy between client goals and current problem behavior by use of reflective listening and objective feedback; (3) avoiding argumentation by assuming that the client is responsible for the decision to change; (4) rolling with resistance, rather than confronting or opposing it; and (5) supporting self-efficacy and optimism for change.[9]

Although MI is based on using nondirective counseling skills such as reflective listening, the counselor nevertheless directs the discussion to focus on ambivalence and its resolution. The technical aspects of MI include three elements: (1) client-centered counseling skills, based on Rogerian counseling; (2) reflective listening statements, directive questions, and strategies for eliciting internal motivation from the client, operationalized in the form of self-motivating statements from the client. These skills are used to encourage the client to explore ambivalence about change and make their own decisions about why and how to proceed; and (3) strategies for ensuring that client resistance is minimized. Good rapport is achieved by avoiding argument with skills such as reflective listening, and strategies such as shifting focus and reframing, which allow the counselor to come along side the client and conduct a constructive conversation about change.

MI often includes feedback about a number of objective parameters (e.g., physiologic, neurologic, psychosocial) in order to enhance motivation to change. A clear distinction is made between providing facts, which is the practitioner's job, and interpretation of the personal implications of those facts, which is elicited from the client. This approach influences the decision-making process by actively engaging clients in an evaluation of their behavior, and likely promotes an evaluation of one's behavior that changes the balance between the positive and negative aspects of change.[5,6] This varies significantly from traditional health education approaches that focus on advice given by the therapist, in which facts and their interpretation are combined in a single message provided by the practitioner. Traditional approaches put the therapist in the "expert" role, and place the client in the position of accepting the advice being imparted, or resisting it either directly or indirectly through lack of adherence to the recommendations. In contrast, the MI approach places the client in the role of expert, in that s/he must decide how to interpret and integrate the information that is received, and whether or not it is relevant for his/her own situation.

Critical Components

It is important to consider which of the ingredients of MI are critical, so that these can be included in briefer adaptations for nonspecialist settings. There is evidence to suggest that feedback from test results, when provided in a particular way, can be a powerful motivator.[10,14–17] Furthermore, some available data suggest that avoidance of resistance might be a critical task

Table 2. The spirit of motivational interviewing[a]

Readiness to change is not a client trait, but a fluctuating product of interpersonal interaction.
The therapeutic relationship functions best as a partnership rather than an expert/recipient relationship.
Motivation to change should be elicited from the client, not imposed by the counselor.
It is the client's task, not the counselor's, to articulate and resolve his or her ambivalence.
The counselor is directive in helping the client examine and resolve ambivalence.
Direct persuasion, in which rational arguments for change are presented to the client by the expert, is not an effective method for resolving ambivalence.
The counseling style is generally a quiet and eliciting one.

[a] Adapted from Rollnick and Miller.[11]

related to the effectiveness of MI.[8] The concept of readiness to change has proved clinically useful in guiding practitioners to avoid resistance: If the practitioner assumes that the client has greater readiness to change than he or she actually has, resistance will be a predictable outcome. Monitoring of readiness on an ongoing basis can thus form the platform for any derivative of MI.

Although MI was conceptualized as having several key technical components, Rollnick and Miller[11] have argued that the quality of the client-therapist interaction, or the "spirit" of MI, may be the key to behavior change (see Table 2). They have raised this argument in response to their observation that clinicians and trainers can become too focused on matters of technique and lose sight of the style that is central to this approach. Rollnick and Miller[11] argue that it is inappropriate to think of MI as a technique to be applied to a group of people. Rather, it is an interpersonal style, shaped by the guiding principles of what triggers the behavior change process.

A key distinction between MI and other clinical approaches is that, in whatever form it takes, MI will not work well if conceived as a cookbook approach, or as a set of techniques that is applied *to* clients. The most important issue is whether the spirit of the method is being adhered to, particularly related to allowing clients to express their own arguments for change.

Adaptation of MI to Health Care Settings

Health care practitioners have begun to show an interest in MI, in part because of successes reported with this technique in specialist settings (Dunn C, DeRoo L, Rivara F, University of Washington, unpublished observations, 2000). This interest may also stem from the significant challenges posed by behavior change efforts in health care settings, such as neighborhood health clinics, where resources are minimal and client motivation for health-behavior change may be low. Although MI has great potential for use within health care settings, this channel represents a significant departure from more traditional, specialist settings in which individuals who are interested in changing their health behaviors seek out intervention programs.

As is often the case with diffusion of innovations, there are necessary modifications to an approach or technique that must be made in order to utilize it in a setting other than the one it was originally designed for. Attempts to adapt MI to community health settings are likely to encounter a number of unique challenges. These issues are addressed in the following sections.

Dealing with Time Constraints

The requirements for brief applications vary considerably across settings. For example, a physician in an emergency room might have 1 to 2 minutes in which to address the issue of alcohol or drug use. A family physician might have 7 to 10 minutes with the client, with the possibility of further contact over the subsequent weeks with the opportunity for repeated visits over time. In these circumstances, it is possible to provide ongoing support for behavior change goals. A nurse or dietitian in an in-patient medical setting might have up to an hour available for a one-time consultation during the hospital stay. In contrast to a specialist counseling setting (e.g., alcohol treatment facilities) in which counselors see clients for an extended period of time, most encounters in public health settings are brief and will require different forms of MI.

Brief Adaptations of MI for Health Care Settings

Regardless of how creative one might be in the adaptation and simplification of MI, effective applications are likely to take more time to deliver than the simple advice-giving approach that is typically delivered in many medical and public health settings. This is not unique to MI; a number of studies across health behaviors have shown that intervention effectiveness typically increases with contact time.[16] Models have been developed to deliver a 30-minute intervention based on a clear framework taught to practitioners in a relatively brief training period. For example, Rollnick et al.[12,18,19] used brief MI in a study of heavy drinkers and found that those who were less ready to change were more responsive to this method than to a skills-based approach. This method is characterized by the use of a menu of concrete strategies, in which the practitioner selects a strategy using an implicit judgment about the individual's readiness to change. Senft et al.[20] have developed a much briefer 10-minute intervention among heavy drinkers that focuses on feedback about alcohol-related problems and advice giving.

Rollnick et al.[12,21,22] have developed a 5- to 10-minute smoking intervention that is based on the spirit of MI, and centers around the quick assessment of impor-

Table 3. Components of a brief negotiation interview[a]

Goals	Intervention component	Suggested strategies/questions
Understand client's concerns and circumstances.	Establish rapport.	Use open-ended questions that demonstrate concern for client as a person. ⇒ "How are you feeling today? Are you comfortable?" ⇒ "If I could see the situation through your eyes, what would I see?"
Get client agreement to talk about topic.	Raise subject.	Request permission to discuss topic. ⇒ "Would you mind spending a few minutes talking about [topic] and how you see it affecting your health?"
Understand readiness to change behavior and to accept treatment/evaluation referral.	Assess readiness.	Use an assessment tool to assess readiness, and discuss results with client. ⇒ "How do you feel about [topic]?" ⇒ "How ready are you to change your use of [topic]?"
Raise client awareness of consequences of the behavior, and share provider's concerns.	Provide feedback.	Use objective data from individual's medical evaluation if possible, and then elicit reactions from client. ⇒ "What do you make of these results?"
Assure client that ongoing support is available.	Offer further support, targeted to client's level of readiness to change.	For clients who are "not ready" to change: ⇒ "Is there anything else you want to know about [topic]?" ⇒ "What would it take to get you to consider thinking about a change?" For clients who are "unsure" about change: ⇒ "What are the good things you like about [topic]? What does it do for you?" ⇒ "What are the things you don't like about [topic]? What concerns do you have about it?" For clients who are "ready" to change: ⇒ "Here are some options for change. What do you think would work best for you?" ⇒ Provide support and referral.

[a] Adapted from D'Onofrio, et al.[23]

tance of quitting and confidence to succeed. The practitioner uses a ten-point rating scale to verbally elicit the client's numerical judgments of importance and confidence, and then targets further questions and strategies at whichever dimension is the most salient. Rollnick et al.[12] argue that for someone to be ready to change, they must feel both confident and that change is important to them. However, having a high level of confidence but not feeling that the change is important, or feeling that the change is important but not being confident, are presumed to be insufficient for successful change.

D'Onofrio et al.[23] developed a brief negotiation interview (BNI) that incorporates elements of MI, and evaluated this intervention strategy with alcohol and drug abusers in an urban emergency room setting. The goals and principles of the BNI are consistent with those of MI, and focus on increasing intrinsic motivation to change. The components of BNI and sample intervention strategies are outlined in Table 3.

Adjunctive Strategies for Supplementing Brief MI Strategies

As a strategy for dealing with the time pressures of public health settings, many MI studies conducted to date have simply reduced the length of the intervention. Briefer methods may be useful in jump-starting motivational processes, but repeated contact may be required in order to initiate the behavior change process, to shape new behaviors, and to provide the ongoing support central to behavior change. Briefer approaches may be strengthened by providing adjunctive materials that provide ongoing support, and build on the relationship that was initiated in person. Mailed print materials and supportive videotapes are commonly used. Computer-generated expert systems are now also being used to deliver prevention interventions,[24–26] although it is not clear how the efficacy of automated interventions compares to approaches such as MI, which are interpersonally based. If clients are not actively engaged in the change process, it is likely that computer-based approaches will be less effective. Studies evaluating the comparative efficacy of computer-delivered and interpersonally based interventions are needed.

Telephone counseling has also been advocated as a time-efficient adjunct to self-help and other less intensive intervention approaches,[27–29] and may lend itself to use with MI. However, the applicability of telephone counseling in community health care settings is likely to be limited by access to telephones. A relatively large percentage of clients in these settings do not have telephones, and therefore may not be reachable through this mechanism.[28,30]

Client vs Practitioner Priorities for Change

Client and practitioner agendas are not always matched. Practitioners' agendas may be influenced by their field of specialty, and/or by reimbursement systems. For example, a medical specialist with little training in health behavior counseling, and who does not receive reimbursement for such counseling, may be more interested in discussing screening procedures for other health conditions than discussing a client's alcohol use. Alternatively, while smoking may be the focus of a particular program in a health clinic, for example, participants may be more concerned about social and economic factors, such as poor housing, employment, and safety. Similarly, health care providers may be tracking health conditions and altering medication and other treatments, which in turn may have important effects on target behaviors. How to negotiate through such potentially complex situations can be a challenge for both parties. The solution to the juxtaposition of client and therapist priorities for change, we believe, is not to ignore the client's concerns. Rather, a more appropriate response is to be honest about one's motives, to acknowledge other issues if at all possible, and to then seek permission to talk about the matter at hand. If the client shows resistance, this is a sign of damaged rapport, possibly resulting from misunderstanding the client's readiness to talk about a particular topic. Miller and Rollnick[9] have outlined several strategies for handling resistance that may be particularly useful in these situations. It is also important to acknowledge, however, that efforts to target behavior change in isolation from the social context in which that behavior occurs (e.g., poverty, unsafe living circumstances, high unemployment) are likely to be limited.[31,32] Efforts to broaden MI strategies to incorporate an array of behavioral and social contextual concerns are needed, as are evaluations of such approaches.

Strategies for Setting of Priorities

Some progress has been made in developing user-friendly aids to help in the process of determining priorities for the consultation. For example, an agenda-setting chart has been constructed, using drawings inside oval shapes, to help practitioners and clients to decide whether eating, smoking, drinking, exercise, medication, or weight should be discussed in a consultation about the control of diabetes.[12,33,34] Evidence from audiotaped consultations reveals that practitioners taught to use this method are more likely to keep to the principles of client-centered negotiation than those in a control group.[34]

In health care settings, practitioners are also likely to encounter individuals with an array of problems, including those with both multiple health behavior issues and co-existing psychiatric disorders. Strategies for adapting MI for work with individuals who have comorbidities or dual diagnoses have been suggested.[35] In particular, it has been suggested that treatment approaches with these types of clients may need to focus on a harm-reduction approach,[36–38] which is highly compatible with the self-determination philosophy of MI. As suggested by Social Learning Theory, client involvement in goal setting, regardless of the nature or number of presenting issues, is likely to be key to an effective therapeutic working relationship.[1]

Training Generalist Practitioners in MI

We believe that explicit, formal training in MI is important for practitioners in health care settings, particularly given the challenges in adapting this intervention strategy to this setting. Given that relatively limited training time is typically available and that trainees often do not have a background in counseling and communication skills, training can be a considerable challenge. Indeed, it might be argued that the behavior change of practitioners is as big a challenge as that of their clients. More often than not, a trainer will be faced with a group having a wide range of abilities. Competence in using skills such as open/closed questions, reflective listening, and summarizing of client statements would appear to be essential. It is also important to remember that MI is directive. Carried out properly, the practitioner will be directive in focusing on particular questions and be client centered in eliciting a response to them. Details of specific exercises for training in these skills are available in the literature.[9] Handmaker et al.[39] have evaluated a videotaped alcohol-counseling, MI training program for obstetric providers. They found that the 20-minute videotape training was effective at teaching providers MI counseling skills.

The importance of training cannot be underemphasized. In health care settings where there are many other priorities, training in behavior change methods may be considered a "luxury." In developing trainings for health care providers, we have experienced pressure to consolidate the experience into as little time as possible. We have also found that it can often be difficult to ensure ongoing supervision and follow-up with trainees. This is of concern, because it is only with practice and experience using MI strategies that practitioners will be able to consolidate and refine their counseling skills. The value of training in MI can be enhanced by emphasizing that it is applicable to a wide variety of problems encountered in health care settings, from encouraging compliance with medication to specific work on health behaviors. When placed in this context, it may be possible to secure significantly more time for training and follow-up.

Challenges in the Design and Evaluation of MI for Community Health Care Settings

Experience of conducting trials with MI in public health settings has given rise to new challenges for those wishing to evaluate such methods. On the one hand, MI is an individually tailored, client-centered method. By tailoring an intervention to the individual, the effectiveness may be enhanced, compared to intervention approaches that target specific characteristics of a population, but do not tailor the intervention to the specific individual.[40] On the other hand, researchers are required to develop a standardized and replicable intervention method by which to evaluate its efficacy. While a too tightly structured method will fail to honor the uniqueness of the individual, one that is too loosely structured will be difficult to evaluate and will probably leave many practitioners floundering.

This tension between science and clinical practice will not be resolved by asking practitioners to deliver the method as a dose of intervention to be used in a perfectly standardized manner. Based on our experience, we believe that there is a middle ground where intervention and the training can be designed to meet the needs of all parties involved, as outlined below.

1. Researchers must be very familiar with the population being served and the setting in which the services are being provided. With adequate preparation and knowledge, the investigator should be able to develop an intervention framework that will be appropriate for the setting under investigation.
2. Pilot work with the target client group is essential. The initial framework should be adapted by obtaining feedback from clients themselves. Individuals from the target group can provide insight into the priorities that clients may have, and as a result provide critical input into the intervention design.
3. Pilot work with target practitioners is also essential. The final intervention product should be a method that suits the setting, the uniqueness of clients, the variation in competence among practitioners, and the need to construct rigorous evaluation. The competing priorities of providers must be considered, and opportunities for ongoing supervision and follow-up of MI skills need to be provided.
4. Better studies will include a comprehensive process evaluation. The importance of process evaluation is increasingly being recognized.[34] Process evaluations provide evidence of both skill acquisitions that occur in the training of staff, and detailed information about what actually happens in the course of intervention delivery. For example, did staff actually gain a minimum level of competency in MI and did their skills improve over time? Was MI actually implemented in the field setting or was there drift over time in the strategies used? What percentage of clients received the entire intervention as planned, and what percentage did not receive a minimal intervention dose? Evaluations should include refined hypotheses about the particular circumstances and clients most suited to different forms of intervention. Attention should also be given to understanding the process of skills acquisition among practitioners, the satisfaction of both clients and practitioners, and the feasibility of widespread application of method within public health care delivery systems.
5. Consideration should be given to the appropriate outcomes for MI trials. It may be too ambitious to expect a brief intervention targeting motivation to yield powerful intervention effects on behaviors that are as recalcitrant as smoking, particularly among the low-income and underserved populations that are often seen in public health settings.[31] For some behaviors, it is possible that MI has the strongest effect on motivation, and thus could become a cornerstone of stepped-care approaches in which motivation is first addressed, followed by skills-based interventions for those who are ready to change.[29]

Conclusions

The aim of this paper has been to discuss the key issues that will arise in the translation of MI from specialist method to public health application. Common to all of these applications is the fact that MI is based on the often delicate task of encouraging change within a constructive working relationship.

There will clearly be variations in the adaptation of MI for health care settings. While such developments are generally healthy, refinement and adaptation can lead to confusion. Practitioners and researchers will need to be careful when describing a method as "motivational." A distinction should be made between methods specifically derived from MI, where the spirit characteristics described above have been adhered to, and a method, not connected to MI interviewing, which might enhance motivation merely as a result of its use. For the researcher, the adaptation of MI is complicated further by the need to have a standardized intervention that can be rigorously evaluated. The intervention, being based on a therapeutic relationship, must be evaluated on two levels: skill acquisition of practitioners and behavior change of clients. Neglect of the former will render the latter unlikely to take place. Put bluntly, MI is a counseling style. Failure to train practitioners in this style, however the method itself is framed, will fall far short of an adequate adaptation of MI.

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