Substance use disorders: Motivational interviewing

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INTRODUCTION

Motivational interviewing is a counseling style that guides a person through a patient-centered conversation to help the person consider whether there is a health-related behavior (or set of behaviors) to change, how to do it, and most importantly, why to make a change. Motivational interviewing is used to enhance intrinsic motivation to change by exploring and resolving ambivalence [1]. Motivational interviewing has been found to reduce substance use among individuals with substance use disorders (SUDs) [2].

This topic describes the theoretical foundation, indications, assessment, practice, efficacy, and administration of motivational interviewing. Brief intervention for unhealthy alcohol and other drug use and other treatments for SUD are described separately.

- (See "Brief intervention for unhealthy alcohol and other drug use: Efficacy, adverse effects, and administration".)
- (See "Alcohol use disorder: Psychosocial management".)
- (See "Acute opioid intoxication in adults".)
- (See "Opioid use disorder: Pharmacologic management".)
- (See "Cocaine use disorder: Epidemiology, clinical features, and diagnosis".)
- (See "Stimulant use disorder: Treatment overview".)
- (See "Stimulant use disorder: Psychosocial management".)

OVERVIEW

Motivational interviewing is a counseling approach in which clinicians use a patient-centered stance paired with eliciting techniques to help patients explore and resolve their ambivalences about changing behaviors that are not healthy or optimal. It has a collaborative, autonomy-supporting, and evocative style (known as “motivational interviewing spirit”) in which clinicians seek to understand patients’ perspectives on substance use, while directing them toward considering changing one or more behaviors. Sometimes this may involve building awareness of a discrepancy between the patient’s current and hoped-for self. The clinician avoids confrontation, and supports patients’ optimism about the possibility and value of change.

People with unhealthy substance use often have mixed feelings and thoughts about their smoking, drug, and alcohol use. While they may be aware of negative consequences associated with substance use, they also get pleasure from it (eg, intoxication, disinhibition, and socialization). They often remain conflicted or ambivalent about changing their behavior until their perception of the risks and benefits of substance use shifts. Understanding and resolving this ambivalence is central in motivational interviewing.

Key processes in motivational interviewing include engagement, focusing, evoking, and planning (see 'Specific techniques' below) [3]. Clinicians using motivational interviewing build rapport and engage the patient with a warm, nonjudgmental attitude. They elicit the patient’s ideas and feelings about a range of current behaviors, how these fit with the patient’s hopes and values, and whether the patient can imagine better options than the current behaviors. During this process, they focus on particular changes that the patient wants to make and match the agenda to the patient’s priorities. The clinician elicits the patient’s own reasons and rationale for possible changes, referred to as “change talk.” Simultaneously, the clinician manages “sustain talk,” or arguments for staying the same, by attending to it only as much as needed before pivoting back to strengthening change talk. A key skill for the clinician is to pay more attention to change talk than sustain talk by evoking, reflecting, and strengthening it. Once people are resolved to change, they can often do it on their own. Thus, while not essential, motivational interviewing can include processes of planning for and activating changes. The motivational interviewing clinician may continue to assist the person as they make changes, especially as motivational interviewing is focused more on discussing the “whether” and “why” to change than the “how.”

THEORETICAL FOUNDATION

Conceptual model — A conceptual model of motivational interviewing has yet to fully emerge, but components can be described. The "motivational spirit" stance (see 'Overview' above) is maintained across sessions, demonstrating empathy for the patient while providing enough direction to guide the patient toward considering a change. The developing model suggests that if the clinician shows motivational interviewing spirit and provides both empathy and direction, patients will show higher engagement, lower resistance, and higher change talk in motivational interviewing sessions. This should translate to better outcomes.

Two active components have been proposed as leading to the efficacy of motivational interviewing [4].

- A **relational component** that includes empathizing, collaborating, evoking patient talk about their perspectives, and supporting patient autonomy.
- A **technical component** that includes evoking and reinforcing change talk, while reducing the patients' sustain talk. These components may or may not be unique to motivational interviewing.

Psychological theory — Principles of motivational interviewing [1,5] are grounded in psychological theory and models, and in some cases, research evidence. The clinical implementation of these principles is described later in the topic. (See 'Principles' below.)

Motivational interviewing facilitates behavior change partly by accepting the patient's current level of readiness for change and refraining from pushing for change that the patient is not ready for. This respectful approach is consistent with the transtheoretical model (TTM) [6], which outlines how people make deliberate changes, especially eliminating unhealthy behaviors and beginning new, healthier behaviors. In the TTM, behavior change is seen as a process that progresses from low awareness and no intention to change, through high awareness and active efforts to initiate or maintain change. Readiness to change is discussed in more detail separately. (See "Brief intervention for unhealthy alcohol and other drug use: Goals and components", section on 'Readiness to change'.)

Motivational interviewing techniques foster a different vision of the self and desired behaviors, consistent with modern emotions theory and self-determination theory (SDT) [7]. The focus of this process is building internal motivation to change and eliciting the patient's propensity for positive growth. These are the central sources of motivation according to SDT. SDT suggests that motivational interviewing focuses on autonomous motivations for behaviors that lead toward desired outcomes, including intrinsic rewards, extrinsic gain, or increased consistency between one's values and identity.

Resolving ambivalence is usually viewed as a cognitive task done to make a choice. It also has critical emotional elements that should not be overlooked. Motivation can be described as a process of opening up to new experiences while actively creating resources to support change [8,9]. Evoking a positive emotion such as interest may lead to greater openness. When patients experience interest, wonder, or curiosity, their cognitive focus broadens to consider novel options. Increased flexibility in conceptualizing situations may then facilitate resolution of ambivalence, increase openness to engage in activities that lead toward change, and inspire action.

When taking action in the new direction, patients may improve certain skills and increase the likelihood of achieving a desired outcome, consistent with social cognitive theory. This increases confidence, sense of accomplishment, self-esteem and positive mood, and creates more resources for the person to use for even more profound changes, consistent with the "broaden-and-build theory" of emotion [8].

Rolling with resistance is supported by interpersonal theory, which has shown that a friendly style elicits reciprocal friendly responses, while a hostile style elicits a hostile response [10]. Interpersonal theory also suggests that a dominant interpersonal style pulls for submissive behavior (or sometimes, for reciprocal dominant behavior), while submission pulls for dominant behavior. For many people in a leadership role, it is natural to default to a more dominant style. Warm dominance includes being outgoing, encouraging, praising, and suggesting, while cold dominance includes directing, warning, confronting, or disapproving.

Studies have found that patients reduced substance use after making verbal commitments to change [11,12]. Explanations for this relationship have been derived from several theories:

- Self-perception theory focuses on the patient noticing their own speech and making their behavior consistent with what they have said [13].
- Implementation intentions theory emphasizes processes underlying making a commitment and taking action on it [14].
- Social cognitive theory emphasizes both observational learning and experience as informing the development of self-efficacy and success in changing behavior [15].

Conceptualization of unhealthy substance use — In the context of motivational interviewing, whether or not a patient has a substance use disorder (SUD) is less relevant than the patient's perception that they should make some changes in their lives. Clinicians using motivational interviewing in patients with a history of substance dependence may elect to gain the patient's permission to provide evidence-based advice to avoid drinking and drug use altogether; but in a

motivational interviewing approach, the patient's perspective on their addictive behaviors is more important than the clinician's perspective.

Rather than conceptualizing the patient as having an SUD, they would be understood as being stuck in unhealthy behaviors, and thus, can become unstuck. Unhealthy behavior patterns are seen as the result of competing motivations to make changes and to remain the same. When the benefits of changing outweigh the costs, and when remaining the same is less desirable than changing, the model suggests that people proceed with attempting to add new behaviors inconsistent with the current SUD behaviors, and directly changing or eliminating SUD behaviors.

INDICATIONS

Candidates for motivational interviewing include people across the continuum of unhealthy substance use, from at-risk drinking or drug use to those with severe alcohol and other substance use disorders (SUDs). Motivational interviewing has been used for varied age groups, diverse settings (including in the criminal justice system), varied substances, and associated behaviors, with varied goals.

There are no data indicating that certain subgroups of patients with an SUD are more or less likely to benefit from motivational interviewing. A meta-analysis suggested that motivational interviewing appears to be no more effective when patients and clinicians are matched on the basis of racial, ethnic, or cultural characteristics [16].

There are no absolute contraindications to motivational interviewing. Patients with cognitive impairments or reduced abilities to think abstractly might have difficulty imagining the potential benefits of change or deciding among potential strategies for change.

ASSESSMENT

Assessment is less formal and less structured than a typical psychological or psychiatric interview. We gather information about the individual's experiences throughout the process.

Open-ended questions and reflective listening — We use open-ended questions and reflective statements to develop an understanding of the patient's perspective and context.

- **Reflective listening** – This technique involves careful listening, followed by hypothesizing what the patient might mean, then feeding back this hypothesis to the patient in the form

of a statement. As an example, if a patient says, "I have tried to quit using drugs so many times," we would hypothesize that the patient is discouraged, and state, "It hasn't been easy to stick to your plans to quit using." The patient can then agree, usually signified by continuing the conversation, or may clarify their statement. In this way, reflective listening is iterative and self-correcting.

- **Open-ended questions** – Open questions are preferred in motivational interviewing because they get the patient talking. A goal in motivational interviewing is to increase patient speech while reducing clinician speech so that the patient's perspective is elicited fully. As an example of an open question, we might say, "Tell me about your use of alcohol and drugs." A clinician asking a closed question might ask, "How many times have you used alcohol or other drugs this week?" Open questions generally evoke more responses than closed questions. Open questions about the patients' own concerns or thoughts about their issues tend to evoke the most change talk.

In conducting an initial interview with motivational interviewing, we seek to understand the patient's perspective as fully as possible. We do not have a specific list of assessment questions or domains in mind at the start of motivational interviewing for substance use disorder. We typically query content areas such as the patient's:

- Concerns and reasons for coming to the session
- Concerns about substance use patterns and benefits from the substance
- Hopes for the future, including whether the patient wants to consider reducing or ceasing substance use

Many clinicians using motivational interviewing defer reviewing any formal patient assessments (eg, from other clinicians, from law enforcement authorities) until after the initial session. This allows them to focus on the patient's perspective during the first session rather than that of others. It can be useful to elicit the patient's perspective on what is likely to happen with their spouse, probation officer, boss, or others if they choose one or another behavioral path.

Readiness to change — We assess the patient's readiness to change and customize the strategies used in treatment by focusing on the patients concerns and ideas about change. Readiness to change is discussed above and in greater detail separately. (See 'Psychological theory' above and "Brief intervention for unhealthy alcohol and other drug use: Goals and components", section on 'Readiness to change'.)

As an example, in response to a patient who states, "I'd like to cut back further on smoking, but the withdrawal really gets to me," we might offer, "You've already made progress towards quitting by cutting back, but giving it up completely, and the withdrawal you experience, are

tough." In this way, we address the ambivalence so common in the contemplation stage of change.

Patient readiness for change can fluctuate within a single discussion in the same clinical encounter. By maintaining a patient-centered perspective and eliciting patient readiness to change, rather than using pressure to motivate change, we can avoid evoking resistance by getting "ahead" of the patient in readiness for change. The patient then feels understood and respected, and is more willing to engage in a consideration of change. Stages of readiness to change and their assessment are described in detail separately. (See "Brief intervention for unhealthy alcohol and other drug use: Goals and components", section on 'Readiness to change'.)

Motivational enhancement therapy — Motivational enhancement therapy (MET), a four-session variant of motivational interviewing, includes structured, specific assessment of the patient's substance use (including quantitative assessment of consumption) and personalized risk feedback based on results of the assessment [10]. In addition to structured assessment of consumption, some forms of MET incorporate measures of the harmful effects of a patient's substance use.

MOTIVATIONAL INTERVIEWING

Style — The practice of motivational interviewing has a "quiet and eliciting" style in which the "therapeutic relationship is more like a partnership… than expert/recipient roles" [17]. The patient has intimate knowledge of themselves; the clinician using motivational interviewing has skill in managing a constructive conversation about change. We provide direct and indirect support for the patient's autonomy to make choices about alcohol and drug use. This may include continued harmful use, using while reducing harms, or abstinence from using alcohol and/or drugs.

While motivational interviewing has a directive component, leading the patient to explore and resolve ambivalence and initiate change, this directive process is not interpersonally dominant. The clinician using motivational interviewing remains an ally of the patient rather than of the behavior change.

The spirit of motivational interviewing is evocative. We ask questions and reflect the patient's perceptions in such a way that a new understanding or commitment is evoked through the conversation. We elicit the patient's perspective to define which behaviors are relevant to their substance use and consequences, explore the patient's concerns about these behaviors, and

elicit the patient's intention to change or optimism about change (eg, change talk). Many motivational interviewing practitioners believe that the spirit of motivational interviewing, which reflects a unique collaboration between two experts, may be more important than specific techniques.

Providing education about addiction concepts, or using persuasion to change may provoke resistance or reluctance. Using motivational interviewing, clinicians elicit more information than they provide. The patient does more of the talking, explaining, exploring, and considering. Clinicians using the motivational interviewing approach tend to ask rather than tell, and listen rather than advise. Clinicians using motivational interviewing show curiosity about the patient's use of substances rather than content expertise.

In general, if the clinician wants to provide information, it is best to first elicit what the patient already knows, then ask permission to add a bit more information, followed by eliciting the patient's reaction to it. If a clinician chooses to provide advice, it is only after asking permission (ie, "I have some suggestions for you to consider about this if you'd like to hear them"). This is known as the "elicit-provide-elicit" strategy or more simply, "ask, share, ask."

In learning about the patient's experiences and perceptions, we occasionally reframe the patient's perspectives to evoke interest in change. As an example, when the patient states that they can "really hold [their] liquor," rather than providing information about tolerance, we might reframe the patient's statement in this way: "You've noticed you can drink more than others without it affecting you as much. I'm wondering if this might actually be a risk for you." If the patient asks for clarification we might say, "it sounds like you may not have the internal sensor sending your brain a signal of when you've had enough. At the levels you can drink comfortably, there can be some damage to organs and tissues. Those are the risks I mean."

We maintain a deliberate focus on the goal of exploring and resolving ambivalence, whether the patient is choosing between abstinence and continued use, or between continued unhealthy or reduced-harm use.

Motivational interviewing practice is a collaborative relationship with a basic communication style (known by the acronym OARS) that is used throughout consultation or counseling sessions.

- **O**pen questions that encourage further elaboration and consideration
- **A**ffirmations of positive thoughts, actions, or ideas of the patient that foster positive feelings in the consultation

- **R**eflections that indicate that the clinician has heard and accurately understood the patient

- **S**ummaries that extend the basic reflections to include a sense of momentum or build interest in changing direction

These techniques are used to build rapport and gain understanding of a patient's issues, to mend rifts in the treatment relationship, to redirect patients to more useful areas of consideration, and to solidify commitment to change in an established relationship where therapeutic alliance is strongly present.

The motivational interviewing style requires a clinician-patient relationship that is inherently nonhierarchical and centered on the patient's experience. We sometimes introduce this conversation by asking stating the following: "I'd like to spend a few minutes talking about your drinking so I can understand you better. Instead of you telling me about your symptoms or problems like I might if you came in with a cold, please tell me a little bit about your typical day, and how drinking fits in."

Principles — Principles of motivational interviewing include expressing empathy, developing discrepancy, rolling with resistance, and supporting self-efficacy [1,5]. The theoretical foundation for these principles is described above (see 'Psychological theory' above). More recent constructions of motivational interviewing have not specified these principles and thus they are less often taught to clinicians.

Express empathy — We build rapport with patients and engage them by seeking to understand their perspective, expressing empathy with their situation, and assessing readiness to change. As an example, in a patient with a long history of opioid addiction we might say: "Your use of both heroin and prescription narcotics have brought you to a really scary place, yet you're here now to consider what to do about it."

Develop discrepancy — Eliciting the patient's perceptions of how well their current behaviors match up with their hoped-for behaviors can be a means of collaboratively identifying discrepancies between the two. As an example, we might ask (taking care to avoid any sarcasm), "Tell me more about how drinking in this pattern fits with your plans to take your education further." These discrepancies can illustrate negative outcomes if the patient's behavior does not change. They help the patient focus on a particular behavior-change target and build motivation to change it. Developing discrepancy can also result from eliciting the patient's perceptions of their current good qualities and how they could be expanded, and the likely positive outcomes if such a change was made. For example, we might say, "So you've been successful at keeping hard drugs out of your life for quite a while now. You're proud of what you've done there. How does that apply to your cigarette smoking?"

Roll with resistance — Rather than arguing for change (ie, confronting the patient's resistance), we roll with the resistance, letting the patient make the arguments for change.

As an example, if the patient says: "I'm not even the one with a problem. My wife nagged me to come in, but my drinking is not an issue." We might say, "It was important for you to soothe your wife by coming in. Still, you're not sure that your drinking is any kind of problem. Tell me a little bit about how drinking fits in your life." Once the patient begins discussing drinking, and potentially the positive effects of drinking, he may naturally present the "other side," or the negative effects.

If the patient does not offer this information, we might reflect the patient's comments and then ask about it. "So you really enjoy having a drink to relax after a hard work day, and it seems that having four to six beers a night is okay for you. What about the other side? Are there any downsides to your drinking, from your perspective?"

This approach sometimes encourages the patient to discuss conflicting or ambivalent feelings about drinking (or other substance use) but in a neutral manner in which the patient does not feel judged. Using these techniques, clinicians using motivational interviewing evoke the patient's ambivalence about substance use, and the discussion typically provides momentum toward resolution of ambivalence, once the patient becomes aware of it.

Support self-efficacy — Self-efficacy is the belief that one can accomplish a specific behavior. As an example, a patient may have self-efficacy that they can avoid drug use while at home, even if they are less confident that they can avoid using at a friend's house. The clinician should keep in mind that it is the patient's responsibility to decide to change, to make a plan to achieve change, and to implement the plan; the clinician's role is to guide and encourage these processes. We might support self-efficacy by reflecting it, then asking a key question, as in this example: "So you've decided you want to cut back or even eliminate using cocaine. At home, you have gotten rid of all your paraphernalia and are not planning to bring any more drugs there. So the main area that's still a little tempting is when you are visiting a friend and they might have some and offer it to you. What do you want to do about that temptation?"

Specific techniques — The flow of motivational interviewing has been characterized as involving four processes [3]: engaging, focusing, evoking, and planning. Specific techniques are applied in each process.

Engaging — Engaging with the patient thoughtfully can set the stage for rapid and rewarding progress, while failing to build a relationship built on mutual respect and collaboration can result in frustration for both clinician and patient. Several procedures can contribute constructively to a patient interview, such as:

- Setting the agenda collaboratively for the conversation
- Providing information in a respectful manner
- Eliciting the patient's strengths

A vignette compares the engagement process using a motivational interviewing approach with a nonmotivational interviewing approach (table 1). In the motivational interview, the clinician uses reflective listening throughout, with open questions and affirmations to keep the conversation positive and meaningful. These techniques place the patient in the position of arguing for change (smoking cessation) and empower her to consider the options that would help her move toward change. The clinician is nonjudgmental, curious, and patient-centered.

The following steps provide a template for using OARS to facilitate the process of engagement, setting the stage for a constructive conversation about change.

- What are your concerns about your [health issue]?
- Reflect what you hear.
- Affirm the patient's thoughts, actions, or feelings about the issue.
- Tell me more. (Open questions.)
- Reflect what you hear.
- Summarize the main points.

Focusing — The next process is focusing, or developing a single focus to discuss in the current conversation from among the many potential issues on a broad health agenda. Because most patients have multiple life issues, and sometimes several health issues, there are usually many possible topics on which to focus. Helping the patient to focus on one or two specific changes to make is more likely to lead to actual change than developing a longer list of changes that can be overwhelming.

In order to build motivation, we help patients focus on a change they can make, typically on small steps that can succeed quickly. Once patients have some success, they are often encouraged and energized to try even bigger changes.

A vignette compares a motivational interviewing approach to a patient with a nonmotivational interviewing approach, illustrating motivational interviewing techniques for engaging the patient in behavioral change after experiencing a myocardial infarction (table 2). In the motivational interview, the clinician reflects the patient's concerns and elicits his thoughts and

feelings about what to focus on in order to get his heart healthy. Rather than the clinician advising which changes to make from among the many options, the patient selects the two behavior targets he is ready to change (drinking and exercise) and enlists the clinician's help and expertise in planning for success.

The following steps provide a template for using OARS to facilitate the process of focusing:

Tell me about one part of this [health issue] you are most interested in changing now (open question, narrowing agenda).

- Reflect what you hear.
- Affirm the person's thoughts, actions, or feelings about the issue.
- Explore values related to the one part (develop discrepancy between current behavior and values). (See 'Develop discrepancy' above.)
- Reflect what you hear.
- How would things be different once you've made this change? What would be the best thing about making this change? (Open questions.)
- Summarize the main points.

Evoking — The next process is evoking. While motivational interviewing seeks to elicit the patient's perspectives throughout the conversation, here evoking refers to eliciting a specific part of the patient's perspective: the thoughts that move them towards change. Statements of reasons to change, ability to change, need to change, desire to change, steps already taken toward change, and commitment to change are considered "change talk."

During the process of evoking, we seek to understand the patient's thoughts and feelings consistent with healthy change. As an example, if the patient says, "I'd like to quit smoking soon," our reply would be "what are some of your reasons for wanting to quit? How might you go about it?"

In a vignette (table 3), the clinician using motivational interviewing employs scaling rulers and key questions to evoke change talk. Scaling rulers are a technique designed to elicit a numeric value ("on a scale of 0 to 5, with 5 as the highest") for importance, confidence, or readiness, followed by a question such as, "What makes it a 5 and not a 0?" A patient cannot answer that follow-up question without providing some level of change talk. Key questions are questions with momentum built in, such as in the template below (ie, "Where does this leave

you? What's the next step?"). When the patient expresses change talk, the clinician should reflect or restate it back to the patient as a way of underlining its importance. These steps can help solidify the patient's motivation to make changes, and prepare the patient for the planning process.

The following steps provide a template for using OARS to evoke change talk:

- Tell me about why this change would be good for you. (Open question.)
- Reflect what you hear.
- What makes this change important to you? What might happen if you don't make this change? (Open questions.)
- Affirm the patient's motivations, and reflect the patient's vision for the future. (Affirmation and summary.)
- Where does this leave you? What's the next step? (Key questions – open questions with built-in momentum.)

Planning — The last process in a motivational interviewing conversation (or series of conversations) is planning. While formal change planning may not always be part of motivational interviewing, most motivational interviewing conversations contain at least conceptual aspects, and maybe some practical aspects, of planning to change. Planning includes exploring specific barriers to and facilitators of change, and is essentially a problem solving process in which the patient considers how to make changes, how to deal with challenges, and how to measure success. A vignette (table 4) illustrates a motivational interviewing-consistent example of the planning process.

We typically begin the planning process with a summary of the conversation to date, which includes a mention of a past success. Helping patients to recall past successes can stoke their fire for change. Instead of evoking "reasons," using change talk, we evoke commitment using a 0 to 5 scale to assess the patient's confidence in making the change. Using reflections and short summaries, we support the patient's autonomy and plan for change. We also offer support if needed.

The following steps provide a template for using OARS to develop a change plan:

- What is the change you want to make?
- What are the important reasons to make this change now?

- What's the first step? What else?
- Who could help you?
- What might get in the way?

EFFICACY

Motivational interviewing appears to reduce substance use for as long as 12 months versus no treatment. However, trials included in meta-analyses are often of low to moderate quality.

For example, in a meta-analysis of 59 randomized trials with a total of 13,342 adult participants motivational interviewing resulted in a reduction in substance use postintervention (standardized mean difference 0.79, 95% CI 0.48-1.09) and at subsequent follow-up for up to 12 months (standard mean difference 0.15, 95% CI 0.04-0.25) versus no treatment [2]. No difference in substance use was seen when motivational interviewing was compared with treatment as usual for substance use disorders (SUDs), other active treatments, and receiving an assessment for substance use disorder. The meta-analysis was limited to trials that reviewed audio or videotapes of treatment sessions to assess fidelity to the motivational interviewing model. Substance use was reported using different measures across trials (eg, drinks per drinking day, number of abstinent days, proportion of participants who were abstinent); outcome data were converted into standardized mean differences for comparison in the meta-analysis.

In another motivational interviewing was compared to counseling as usual in 461 individuals with SUD [18]. Motivational interviewing led to reductions in use compared to counseling as usual that were sustained subsequently over 12 weeks. However, there was no difference between groups in the percentage of urine samples positive for substances.

Few trials have been conducted comparing the combination of motivational interviewing and an SUD treatment intervention to the intervention alone, but initial results are promising. A randomized trial of 105 outpatients with the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) cocaine dependence compared detoxification and a motivational interviewing intervention with detoxification alone [19]. Patients who received the motivational interviewing intervention increased their use of behavioral coping strategies and had fewer urine samples positive for cocaine at the start of subsequent treatment.

Other systematic reviews and meta-analyses have found motivational interviewing to be effective in treating substance use disorder in adolescents [20] and college students [21], and in smoking cessation [22]. Additional findings include:

- With training, motivational interviewing can be delivered effectively by physicians, counselors, and other clinicians; professional role does not appear to affect the efficacy of motivational interviewing [23].
- Motivational interviewing typically achieves its effects in one to four sessions [23]. Motivational interviewing appears to require a "minimum dose" of approximately 20 minutes. More sessions have been associated with greater efficacy.

Mechanisms of improvement — A review article analyzing the association between therapist behaviors, patient behaviors, and subsequent patient outcomes in 19 controlled trials of motivational interviewing found three motivational interviewing constructs to be associated with patient outcomes [24]:

- Patient change talk or intention language is related to better outcomes.
- Patient perceptions of discrepancy are related to better outcomes.
- Motivational interviewing-inconsistent behaviors, such as providing advice without permission or warning, are related to worse outcomes.

ADMINISTRATION

Motivational interviewing is generally provided in one to four one-on-one sessions of 15- to 45-minute duration. A minimum duration of 20 minutes appears to be needed, with greater efficacy associated with more sessions. (See 'Efficacy' above.)

Motivational interviewing in a group format is an emerging method [25] that has been less well studied. In a trial including 118 veterans with alcohol use disorder, group motivational interviewing was found to have a positive effect on frequency of alcohol use and attendance in treatment [26]. Findings included lower rate of heavy episodes (relative risk 0.74, 95% CI 0.59-0.91), fewer alcohol use days (0.79, 95% CI 0.67-0.94), and increase in the number of substance use disorder treatment sessions (2.53, 95% CI 1.99-3.22) and 12-step meetings attended (1.64, 95% CI 1.35-1.98) at three-month follow-up compared with treatment as usual (ie, no motivational interviewing). (See 'Efficacy' above.)

TRAINING

Like many other clinical skills, motivational interviewing requires time and practice to learn to do well. A systematic review of training methods in motivational interviewing found that while most methods promoted motivational interviewing skills, those using an objective system of evaluation and feedback (coding specific motivational interviewing skills followed by behavioral coaching) promoted broader, deeper learning with persistent effects on practitioner skills [27]. Studies suggest that for many practitioners, motivational interviewing skills-development can be effectively facilitated through [27-29]:

- Reviewing motivational interviewing concepts either by reading or participating in a workshop
- Followed by practicing motivational interviewing skills and recording sessions
- Subsequent clinical supervision and coaching based on ratings of skills

A systematic review and meta-analysis of 21 studies of motivational interviewing training workshops suggested that providing coaching and feedback to participants after the workshop's completion prevents erosion of their motivational interviewing skills at three and six months, compared to workshop participants who did not receive the subsequent interventions [30]. There was a strong association between frequency and duration of the feedback/coaching and its effectiveness. Three to four coaching/supervision sessions over a six-month period were sufficient to sustain motivational interviewing skills after workshop participation.

Several studies of training medical practitioners have found that the use of web-based learning, standardized patients, workshop-based learning, and clinical supervision can all foster learning of motivational interviewing skills [31-37].

A website administered by the nonprofit Motivational Interviewing Network of Trainers provides an international listing of trainers experienced in training medical personnel to use motivational interviewing.

Information is also available in book form on using motivational interviewing in health care [38] and on the development of specific motivational interviewing skills [39].

SOCIETY GUIDELINE LINKS

Links to society and government-sponsored guidelines from selected countries and regions around the world are provided separately. (See "Society guideline links: Opioid use disorder and

withdrawal" and "Society guideline links: Benzodiazepine use disorder and withdrawal" and "Society guideline links: Alcohol use disorders and withdrawal" and "Society guideline links: Stimulant use disorder and withdrawal" and "Society guideline links: Cannabis use disorder and withdrawal".)

SUMMARY AND RECOMMENDATIONS

- Motivational interviewing is a directive, patient-centered approach that aims to help people change behaviors that cause health or social harms. Motivational interviewing is used to enhance a person's intrinsic motivation to change by exploring and resolving ambivalence and by encouraging movement towards living more fully consistent with one's deeper life values and hopes. (See 'Introduction' above.)

- Candidates for motivational interviewing include people across the continuum of unhealthy substance use, from at-risk drinking or drug use to those with severe substance use disorder (SUD). Motivational interviewing has been used for varied age groups, in diverse settings (including primary care, specialty care, and the criminal justice system), and for use of varied substances. (See 'Indications' above.)

- The basic communication style in motivational interviewing (known by the acronym OARS) is composed of:

  - **O**pen questions that encourage further elaboration and consideration.

  - **A**ffirmations that foster positive feelings in the consultation.

  - **R**eflections that indicate that the clinician has heard and accurately understood the patient.

  - **S**ummaries that extend the basic reflections to include a sense of momentum or build interest in changing direction. (See 'Motivational interviewing' above.)

- Principles of motivational interviewing include expressing empathy, developing discrepancy, rolling with resistance, and supporting self-efficacy. (See 'Principles' above.)

- The flow of motivational interviewing involves four processes: engaging, focusing, evoking, and planning. Specific techniques are illustrated for each phase. (See 'Specific techniques' above.)

- In patients with SUDs, we suggest management that includes motivational interviewing, either as monotherapy or in combination with other interventions (**Grade 2B**) rather than management without motivational interviewing. Treatment for specific substances is discussed separately. (See 'Efficacy' above and "Alcohol use disorder: Psychosocial management" and "Brief intervention for unhealthy alcohol and other drug use: Efficacy, adverse effects, and administration" and "Alcohol use disorder: Pharmacologic management" and "Cannabis use disorder: Clinical features, screening, diagnosis, and treatment" and "Stimulant use disorder: Treatment overview" and "Stimulant use disorder: Psychosocial management" and "Opioid use disorder: Pharmacologic management" and "Opioid use disorder: Psychosocial management".)

- Motivational interviewing is generally provided in one to four sessions of 15- to 45-minute duration. A minimum duration of 20 minutes appears to be needed, with greater efficacy associated with more sessions. (See 'Administration' above.)

- In our experience, the best development of motivational interviewing skills occurs through participation in a workshop that includes introduction to motivational interviewing concepts, practicing motivational interviewing skills, and personalized coaching. Information is also available in book form on using motivational interviewing in health care [38] and on the development of specific motivational interviewing skills [39]. (See 'Training' above.)

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